# python-cybox Documentation

*Release 2.1.0.12.dev0*

**The MITRE Corporation**

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**Version**: 2.1.0.12.dev0

The python-cybox library provides an API for developing and consuming Cyber Observable eXpression (CybOX) content. Developers can leverage the API to create applications that create, consume, translate, or otherwise work with CybOX content.

# Versions

Each version of python-cybox is designed to work with a single version of the CybOX Language. The table below shows the latest version the library for each version of CybOX.

| CybOX Version | python-cybox Version |
| --- | --- |
| 2.1 | 2.1.0.11 (PyPI) (GitHub) |
| 2.0.1 | 2.0.1.4 (PyPI) (GitHub) |
| 2.0 | 2.0.0.1 (PyPI) (GitHub) |
| 1.0 | 1.0.0b3 (PyPI) (GitHub) |

# Contents

**Version**: 2.1.0.12.dev0

## 2.1 Getting Started with python-cybox

**Note:** The python-cybox library is intended for developers who want to add CybOX support to existing programs or create new programs that handle CybOX content. Experience with Python development is assumed.

Other users should look at existing tools that support CybOX.

Understanding XML, XML Schema, and the CybOX language is also incredibly helpful when using python-cybox in an application.

First, you should follow the *Installation* procedures.

### 2.1.1 Example Scripts

The python-cybox repository contains several example scripts that help illustrate the capabilities of the APIs. These scripts are simple command line utilities that can be executed by passing the name of the script to a Python interpreter.

```
$ python simple_email_instance.py
```

### 2.1.2 Writing Your Own Application

See the *Examples* page for more examples of using python-cybox in your own application.

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## 2.2 Installation

### 2.2.1 Recommended Installation

Use pip:

```
$ pip install cybox
```

You might also want to consider using a virtualenv.

### 2.2.2 Dependencies

The python-cybox library is developed on Python 2.7 and tested against both Python 2.6 and 2.7. Besides the Python Standard Library, python-cybox relies on the following Python libraries:

- lxml - A Pythonic binding for the C libraries **libxml2** and **libxslt**.

- python-dateutil - A library for parsing datetime information.

- importlib (Python 2.6) - Convenience wrappers for __import__().

**Note:** importlib is built into Python 2.7, and is available on PyPI for Python 2.6.

Each of these can be installed with pip or by manually downloading packages from PyPI. On Windows, you will probably have the most luck using pre-compiled binaries for lxml. On Ubuntu (12.04 or 14.04), you should make sure the following packages are installed before attempting to compile lxml from source:

- libxml2-dev

- libxslt1-dev

- zlib1g-dev

### 2.2.3 Manual Installation

If you are unable to use pip, you can also install python-cybox with setuptools. If you don't already have setuptools installed, please install it before continuing.

1. Download and install the *dependencies* above. Although setuptools will generally install dependencies automatically, installing the dependencies manually beforehand helps distinguish errors in dependency installation from errors in python-cybox installation. Make sure you check to ensure the versions you install are compatible with the version of python-cybox you plan to install.

2. Download the desired version of python-cybox from PyPI or the GitHub releases page. The steps below assume you are using the 2.1.0.12.dev0 release.

3. Extract the downloaded file. This will leave you with a directory named cybox-2.1.0.12.dev0.

```
$ tar -zxf cybox-2.1.0.12.dev0.tar.gz
$ ls
cybox-2.1.0.12.dev0 cybox-2.1.0.12.dev0.tar.gz
```

OR

```
$ unzip cybox-2.1.0.12.dev0.zip
$ ls
cybox-2.1.0.12.dev0 cybox-2.1.0.12.dev0.zip
```

4. Run the installation script.

```
$ cd cybox-2.1.0.12.dev0
$ python setup.py install
```

5. Test the installation.

```
$ python
Python 2.7.6 (default, Mar 22 2014, 22:59:56)
[GCC 4.8.2] on linux2
Type "help", "copyright", "credits" or "license" for more information.
>>> import cybox
>>>
```

If you don't see an `ImportError`, the installation was successful.

### 2.2.4 Further Information

If you're new to installing Python packages, you can learn more at the Python Packaging User Guide, specifically the Installing Python Packages section.

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## 2.3 Overview

This page provides a quick overview needed to understand the inner workings of the python-cybox library. If you prefer a more hands-on approach, browse the Examples.

### 2.3.1 CybOX Entities

Each type within CybOX is represented by a class which derives from `cybox.Entity`. In general, there is one Python class per CybOX type, though in some cases classes which would have identical functionality have been reused rather than writing duplicating classes. One example of this is that many enumerated values are implemented using the `cybox.common.properties.String`, since values aren't checked to make sure they are valid enumeration values.

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**Note:** Not all CybOX types have yet been implemented.

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### 2.3.2 Controlled Vocabulary Strings

Controlled Vocabulary strings are a concept originally designed for STIX and adapted for use in CybOX as well. For background, see the STIX documentation. Controlled Vocabulary strings are implemented in the `cybox` Python package very similarly to how they are implemented in the `stix` package, so viewing the python-stix documentation should help explain how to work with CybOX Controlled Vocabulary strings as well. CybOX vocabularies are defined in the `cybox.common.vocabs` module.

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## 2.4 Examples

This page includes some basic examples of creating and parsing CybOX content.

There are a couple things we do in these examples for purposes of demonstration that shouldn't be done in production code:

- When calling `to_xml()`, we use `include_namespaces=False`. This is to make the example output easier to read, but means the resulting output cannot be successfully parsed. The XML parser doesn't know what namespaces to use if they aren't included. In production code, you should explicitly set `include_namespaces` to `True` or omit it entirely (`True` is the default).

- We use `set_id_method(IDGenerator.METHOD_INT)` to make IDs for Objects and Observables easier to read and cross-reference within the XML document. In production code, you should omit this statement, which causes random UUIDs to be created instead, or create explicit IDs yourself for objects and observables.

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### 2.4.1 Creating Objects

The easiest way to create an object is to construct one and then set various properties on it.

```python
from cybox.objects.file_object import File
f = File()
f.file_name = "malware.exe"
f.file_path = "C:\Windows\Temp\malware.exe"
print(f.to_xml(include_namespaces=False, encoding=None))
```

Which outputs:

```xml
<FileObj:FileObjectType xsi:type="FileObj:FileObjectType">
    <FileObj:File_Name>malware.exe</FileObj:File_Name>
    <FileObj:File_Path>C:\Windows\Temp\malware.exe</FileObj:File_Path>
</FileObj:FileObjectType>
```

For some objects, such as the AddressObject, you can pass parameters direcly into the constructor.

```python
from cybox.objects.address_object import Address
a = Address("1.2.3.4", Address.CAT_IPV4)
print(a.to_xml(include_namespaces=False, encoding=None))
```

```xml
<AddressObj:AddressObjectType xsi:type="AddressObj:AddressObjectType" category="ipv4-addr">
    <AddressObj:Address_Value>1.2.3.4</AddressObj:Address_Value>
</AddressObj:AddressObjectType>
```

### 2.4.2 Creating Observables

Full CybOX documents are expected to have `Observables` as the root element. You can pass any object to the `Observables` constructor to generate the proper XML.

```python
from cybox.core import Observables
from cybox.objects.file_object import File
from cybox.utils import IDGenerator, set_id_method
set_id_method(IDGenerator.METHOD_INT)
f = File()
f.file_name = "malware.exe"
f.file_path = "C:\Windows\Temp\malware.exe"
print(Observables(f).to_xml(include_namespaces=False, encoding=None))
```

```xml
<cybox:Observables cybox_major_version="2" cybox_minor_version="1" cybox_update_version="0">
    <cybox:Observable id="example:Observable-1">
        <cybox:Object id="example:File-2">
            <cybox:Properties xsi:type="FileObj:FileObjectType">
                <FileObj:File_Name>malware.exe</FileObj:File_Name>
                <FileObj:File_Path>C:\Windows\Temp\malware.exe</FileObj:File_Path>
            </cybox:Properties>
        </cybox:Object>
    </cybox:Observable>
</cybox:Observables>
```

To include multiple objects as individual Observables within one document, you can pass them as a list to the Observables constructor.

```python
from cybox.core import Observables
from cybox.objects.address_object import Address
from cybox.objects.uri_object import URI
```

```python
from cybox.utils import IDGenerator, set_id_method
set_id_method(IDGenerator.METHOD_INT)
a = Address("1.2.3.4", Address.CAT_IPV4)
u = URI("http://cybox.mitre.org/")
print(Observables([a, u]).to_xml(include_namespaces=False, encoding=None))
```

```xml
<cybox:Observables cybox_major_version="2" cybox_minor_version="1" cybox_update_version="0">
    <cybox:Observable id="example:Observable-1">
        <cybox:Object id="example:Address-2">
            <cybox:Properties xsi:type="AddressObj:AddressObjectType" category="ipv4-addr">
                <AddressObj:Address_Value>1.2.3.4</AddressObj:Address_Value>
            </cybox:Properties>
        </cybox:Object>
    </cybox:Observable>
    <cybox:Observable id="example:Observable-3">
        <cybox:Object id="example:URI-4">
            <cybox:Properties xsi:type="URIObj:URIObjectType">
                <URIObj:Value>http://cybox.mitre.org/</URIObj:Value>
            </cybox:Properties>
        </cybox:Object>
    </cybox:Observable>
</cybox:Observables>
```

### 2.4.3 HTTP Message Body

When outputing XML, by default, reserved XML characters such as < and > are escaped by default.

```python
from cybox.objects.http_session_object import HTTPMessage
m = HTTPMessage()
m.message_body = "<html><title>An HTML page</title><body><p>Body text</p></body></html>"
m.length = len(m.message_body.value)
print(m.to_xml(include_namespaces=False, encoding=None))
```

```xml
<HTTPSessionObj:HTTPMessageType>
    <HTTPSessionObj:Length>69</HTTPSessionObj:Length>
    <HTTPSessionObj:Message_Body>&lt;html&gt;&lt;title&gt;An HTML page&lt;/title&gt;&lt;body&gt;&lt;p
</HTTPSessionObj:HTTPMessageType>
```

When you parse this content, these characters are converted back.

```python
from cybox.bindings.http_session_object import parseString
m2 =  HTTPMessage.from_obj(parseString(m.to_xml(encoding=None)))
print(m2.message_body)
```

```
<html><title>An HTML page</title><body><p>Body text</p></body></html>
```

### 2.4.4 HTTP User Agent

```python
from cybox.objects.http_session_object import *
fields = HTTPRequestHeaderFields()
fields.user_agent = 'Mozilla/5.0 (Windows NT 6.1; Win64; x64; rv:25.0) Gecko/20100101 Firefox/25.0'

header = HTTPRequestHeader()
header.parsed_header = fields
```

```
request = HTTPClientRequest()
request.http_request_header = header

req_res = HTTPRequestResponse()
req_res.http_client_request = request

session = HTTPSession()
session.http_request_response = [req_res]

print(session.to_xml(include_namespaces=False, encoding=None))
```

```
<HTTPSessionObj:HTTPSessionObjectType xsi:type="HTTPSessionObj:HTTPSessionObjectType">
    <HTTPSessionObj:HTTP_Request_Response>
        <HTTPSessionObj:HTTP_Client_Request>
            <HTTPSessionObj:HTTP_Request_Header>
                <HTTPSessionObj:Parsed_Header>
                    <HTTPSessionObj:User_Agent>Mozilla/5.0 (Windows NT 6.1; Win64; x64; rv:25.0) Gec
                </HTTPSessionObj:Parsed_Header>
            </HTTPSessionObj:HTTP_Request_Header>
        </HTTPSessionObj:HTTP_Client_Request>
    </HTTPSessionObj:HTTP_Request_Response>
</HTTPSessionObj:HTTPSessionObjectType>
```

### 2.4.5 Objects with DateTime properties

When setting DateTime properties on objects, you can either use a native Python `datetime.datetime` or a string. The `python-dateutil` library is used to parse strings into dates, so a wide variety of formats is supported.

```python
import datetime
from cybox.objects.email_message_object import EmailMessage
e = EmailMessage()
e.from_ = "spammer@spam.com"
e.subject = "This is not spam"
e.date = datetime.datetime(2012, 1, 17, 8, 35, 6)
print(e.to_xml(include_namespaces=False, encoding=None))
```

```
<EmailMessageObj:EmailMessageObjectType xsi:type="EmailMessageObj:EmailMessageObjectType">
    <EmailMessageObj:Header>
        <EmailMessageObj:From xsi:type="AddressObj:AddressObjectType" category="e-mail">
            <AddressObj:Address_Value>spammer@spam.com</AddressObj:Address_Value>
        </EmailMessageObj:From>
        <EmailMessageObj:Subject>This is not spam</EmailMessageObj:Subject>
        <EmailMessageObj:Date>2012-01-17T08:35:06</EmailMessageObj:Date>
    </EmailMessageObj:Header>
</EmailMessageObj:EmailMessageObjectType>
```

```python
from cybox.objects.email_message_object import EmailMessage
e = EmailMessage()
e.date = "Mon, 14 Oct, 2013 12:32:03 -0500"
print(e.to_xml(include_namespaces=False, encoding=None))
```

```
<EmailMessageObj:EmailMessageObjectType xsi:type="EmailMessageObj:EmailMessageObjectType">
    <EmailMessageObj:Header>
        <EmailMessageObj:Date>2013-10-14T12:32:03-05:00</EmailMessageObj:Date>
    </EmailMessageObj:Header>
</EmailMessageObj:EmailMessageObjectType>
```

### 2.4.6 Hashes

In many cases you can pass a dictionary or a list to create an instance of a CybOX type.

```python
from cybox.common import HashList
h = HashList.from_list([{'type' : 'MD5', 'simple_hash_value' : 'FFFFFF'},
                        {'type' : 'SHA1', 'simple_hash_value' : 'FFFFFF'}])
print(h.to_xml(include_namespaces=False, encoding=None))
```

```xml
<cyboxCommon:HashListType>
    <cyboxCommon:Hash>
        <cyboxCommon:Type>MD5</cyboxCommon:Type>
        <cyboxCommon:Simple_Hash_Value>FFFFFF</cyboxCommon:Simple_Hash_Value>
    </cyboxCommon:Hash>
    <cyboxCommon:Hash>
        <cyboxCommon:Type>SHA1</cyboxCommon:Type>
        <cyboxCommon:Simple_Hash_Value>FFFFFF</cyboxCommon:Simple_Hash_Value>
    </cyboxCommon:Hash>
</cyboxCommon:HashListType>
```

This can easily be incorporated into constructing objects as well.

```python
from cybox.objects.win_file_object import WinFile
f = WinFile()
f.file_name = "foo.exe"
f.drive = "C:\\"
f.hashes = h
print(f.to_xml(include_namespaces=False, encoding=None))
```

```xml
<WinFileObj:WindowsFileObjectType xsi:type="WinFileObj:WindowsFileObjectType">
    <FileObj:File_Name>foo.exe</FileObj:File_Name>
    <FileObj:Hashes>
        <cyboxCommon:Hash>
            <cyboxCommon:Type>MD5</cyboxCommon:Type>
            <cyboxCommon:Simple_Hash_Value>FFFFFF</cyboxCommon:Simple_Hash_Value>
        </cyboxCommon:Hash>
        <cyboxCommon:Hash>
            <cyboxCommon:Type>SHA1</cyboxCommon:Type>
            <cyboxCommon:Simple_Hash_Value>FFFFFF</cyboxCommon:Simple_Hash_Value>
        </cyboxCommon:Hash>
    </FileObj:Hashes>
    <WinFileObj:Drive>C:\</WinFileObj:Drive>
</WinFileObj:WindowsFileObjectType>
```

### 2.4.7 Object Subclasses

The WindowsFile object is a subclass of the File object. As you can see, the correct namepaces for the various properties are set.

```python
from cybox.objects.win_file_object import WinFile
f = WinFile()
f.file_name = "blah.exe"
f.drive = "C:\\"
print(f.to_xml(include_namespaces=False, encoding=None))
```

```xml
<WinFileObj:WindowsFileObjectType xsi:type="WinFileObj:WindowsFileObjectType">
    <FileObj:File_Name>blah.exe</FileObj:File_Name>
```

```
    <WinFileObj:Drive>C:\</WinFileObj:Drive>
</WinFileObj:WindowsFileObjectType>
```

As another example, the WinUser object is a refinement of the UserAccount object, which itself is a refinement of the Account object. As with Hashes, these can be constructed from a dictionary representation.

```python
from cybox.objects.win_user_object import WinUser
winuser_dict = {
    # Account-specific fields
    'disabled': False,
    'domain': 'ADMIN',
    # UserAccount-specific fields
    'password_required': True,
    'full_name': "Steve Ballmer",
    'home_directory': "C:\\Users\\ballmer\\",
    'last_login': "2011-05-12T07:14:01+07:00",
    'username': "ballmer",
    'user_password_age': "P180D",
    # WinUser-specific fields
    'security_id': "S-1-5-21-3623811015-3361044348-30300820-1013",
    'security_type': "SidTypeUser",
    'xsi:type': 'WindowsUserAccountObjectType',
}
print(WinUser.from_dict(winuser_dict).to_xml(include_namespaces=False, encoding=None))
```

```xml
<WinUserAccountObj:WindowsUserAccountObjectType xsi:type="WinUserAccountObj:WindowsUserAccountObjectT
        disabled="false" password_required="true">
    <AccountObj:Domain>ADMIN</AccountObj:Domain>
    <UserAccountObj:Full_Name>Steve Ballmer</UserAccountObj:Full_Name>
    <UserAccountObj:Home_Directory>C:\Users\ballmer\</UserAccountObj:Home_Directory>
    <UserAccountObj:Last_Login>2011-05-12T07:14:01+07:00</UserAccountObj:Last_Login>
    <UserAccountObj:Username>ballmer</UserAccountObj:Username>
    <UserAccountObj:User_Password_Age>P180D</UserAccountObj:User_Password_Age>
    <WinUserAccountObj:Security_ID>S-1-5-21-3623811015-3361044348-30300820-1013</WinUserAccountObj:Se
    <WinUserAccountObj:Security_Type>SidTypeUser</WinUserAccountObj:Security_Type>
</WinUserAccountObj:WindowsUserAccountObjectType>
```

## 2.4.8 ObservableCompositions

```python
from cybox.core import Observable, Observables, ObservableComposition
from cybox.objects.file_object import File
from cybox.objects.process_object import Process
from cybox.utils import IDGenerator, set_id_method
set_id_method(IDGenerator.METHOD_INT)

observables = Observables()

proc = Process.from_dict(
    {"name": "cmd.exe",
     "image_info": {"command_line": "cmd.exe /c blah.bat"}})
proc.name.condition = "Equals"
proc.image_info.command_line.condition = "Contains"
oproc = Observable(proc)
observables.add(oproc)


f = File.from_dict({"file_name": "blah", "file_extension": "bat"})
f.file_name.condition = "Contains"
```

```
f.file_extension.condition = "Equals"
ofile = Observable(f)
observables.add(ofile)

oproc_ref = Observable()
oproc_ref.id_ = None
oproc_ref.idref = oproc.id_

ofile_ref = Observable()
ofile_ref.id_ = None
ofile_ref.idref = ofile.id_

o_comp = ObservableComposition(operator="OR")
o_comp.add(oproc_ref)
o_comp.add(ofile_ref)
observables.add(Observable(o_comp))

print(observables.to_xml(include_namespaces=False, encoding=None))
```

```
<cybox:Observables cybox_major_version="2" cybox_minor_version="1" cybox_update_version="0">
    <cybox:Observable id="example:Observable-1">
        <cybox:Object id="example:Process-2">
            <cybox:Properties xsi:type="ProcessObj:ProcessObjectType">
                <ProcessObj:Name condition="Equals">cmd.exe</ProcessObj:Name>
                <ProcessObj:Image_Info>
                    <ProcessObj:Command_Line condition="Contains">cmd.exe /c blah.bat</ProcessObj:Com
                </ProcessObj:Image_Info>
            </cybox:Properties>
        </cybox:Object>
    </cybox:Observable>
    <cybox:Observable id="example:Observable-3">
        <cybox:Object id="example:File-4">
            <cybox:Properties xsi:type="FileObj:FileObjectType">
                <FileObj:File_Name condition="Contains">blah</FileObj:File_Name>
                <FileObj:File_Extension condition="Equals">bat</FileObj:File_Extension>
            </cybox:Properties>
        </cybox:Object>
    </cybox:Observable>
    <cybox:Observable id="example:Observable-7">
        <cybox:Observable_Composition operator="OR">
            <cybox:Observable idref="example:Observable-1">
            </cybox:Observable>
            <cybox:Observable idref="example:Observable-3">
            </cybox:Observable>
        </cybox:Observable_Composition>
    </cybox:Observable>
</cybox:Observables>
```

### 2.4.9 Parsing example

Just as you can call `to_xml()` to generate XML, you can call `parseString` to parse an XML string.

```
>>> import cybox.bindings.file_object as file_binding
>>> from cybox.objects.file_object import File
>>> a = """
... <FileObj:FileObjectType
...     xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
```

```
...        xmlns:FileObj="http://cybox.mitre.org/objects#FileObject-2"
...        xsi:type="FileObj:FileObjectType">
...        <FileObj:File_Name condition="Contains">bad.exe</FileObj:File_Name>
... </FileObj:FileObjectType>
...    """
>>> file_obj = file_binding.parseString(a)
>>> type(file_obj)
<class 'cybox.bindings.file_object.FileObjectType'>
>>> f = File.from_obj(file_obj)
>>> f.file_name.value
'bad.exe'
>>> str(f.file_name)
'bad.exe'
>>> f.file_name.condition
'Contains'
```

## 2.4.10 Comparisons

CybOX objects can be compared for equality using the standard Python equality operator. By default, every field must be equal between the two objects. However, you can explicitly say that some fields should not be considered.

```python
>>> from cybox.objects.file_object import File

>>> file_1 = File.from_dict({'file_name': 'abcd.dll', 'size_in_bytes': '25556'})
>>> file_2 = File.from_dict({'file_name': 'abcd.dll', 'size_in_bytes': '25556'})
>>> file_3 = File.from_dict({'file_name': 'abcd.dll', 'size_in_bytes': '1337'})

# First, disable the use of ``size_in_bytes`` comparisons.
>>> File.size_in_bytes.comparable = False

>>> file_1 == file_2
True
>>> file_1 == file_3
True

# Now, set it back to True (the default).
>>> File.size_in_bytes.comparable = True

>>> file_1 == file_2
True
>>> file_1 == file_3
False
```

## 2.4.11 Custom Objects

The CybOX Custom Object is used to specify objects which do not have their own object type in CybOX. These objects should be used with care, as they can make interoperability more challenging if both producer and consumer do not agree on the fields used in the Custom object.

```python
from cybox.common.object_properties import CustomProperties, Property
from cybox.objects.custom_object import Custom

c = Custom()

# This should be a QName with a prefix specific to the application
```

```python
# (i.e. not "example"). The prefix should be included in the output
# namespaces.
c.custom_name = "example:OfficePassword"
c.description = "This is a string used as a password to protect an Microsoft Office document."
c.custom_properties = CustomProperties()

p1 = Property()
p1.name = "password"
p1.description = "MS Office encryption password"
p1.value = "SuP3rS3cr3T!"
c.custom_properties.append(p1)

print(c.to_xml(include_namespaces=False, encoding=None))
```

```xml
<CustomObj:CustomObjectType xsi:type="CustomObj:CustomObjectType" custom_name="example:OfficePassword
    <cyboxCommon:Custom_Properties>
        <cyboxCommon:Property name="password" description="MS Office encryption password">SuP3rS3cr3T
    </cyboxCommon:Custom_Properties>
    <CustomObj:Description>This is a string used as a password to protect an Microsoft Office documen
</CustomObj:CustomObjectType>
```

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# 2.5 Contributing

If you notice a bug, have a suggestion for a new feature, or find that that something just isn't behaving the way you'd expect it to, please submit an issue to our issue tracker.

If you'd like to contribute code to our repository, you can do so by issuing a pull request and we will work with you to try and integrate that code into our repository. Users who want to contribute code to the python-cybox repository should be familiar with git and the GitHub pull request process.

# API Reference

**Version**: 2.1.0.12.dev0

## 3.1 API Reference

### 3.1.1 CybOX Common

Modules located in the base `cybox.common` package

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**Note:** Most objects from the CybOX Common schema can be implemented directly from the `cybox.commmon` package, rather than needing to remember which submodule they are defined in.

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#### `cybox.common` package

The *`cybox.common`* module contains classes needed to implement the types found in the CybOX Common schema (cybox_common.xsd). Although the implementation is spread between different modules within the `cybox.common` package, types should be imported directly from this module in case the implementations are reorganized in the future.

In other words, do this:

```python
from cybox.common import String
```

rather than:

```python
from cybox.common.properties import String
```

#### Submodules

**Version**: 2.1.0.12.dev0

**cybox.common.attribute_groups module**   **Version**: 2.1.0.12.dev0

**`cybox.common.byterun` module**

**class** `cybox.common.byterun.`**`ByteRun`**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.ByteRunType`

**`byte_order`**

Type: *`cybox.common.properties.String`*

XML Binding class name: `Byte_Order`

Dictionary key name: `byte_order`

**`byte_run_data`**

XML Binding class name: `Byte_Run_Data`

Dictionary key name: `byte_run_data`

**`file_system_offset`**

Type: *`cybox.common.properties.Integer`*

XML Binding class name: `File_System_Offset`

Dictionary key name: `file_system_offset`

**`hashes`**

Type: *`cybox.common.hashes.HashList`*

XML Binding class name: `Hashes`

Dictionary key name: `hashes`

**`image_offset`**

Type: *`cybox.common.properties.Integer`*

XML Binding class name: `Image_Offset`

Dictionary key name: `image_offset`

**`length`**

Type: *`cybox.common.properties.Integer`*

XML Binding class name: `Length`

Dictionary key name: `length`

**`offset`**

Type: *`cybox.common.properties.Integer`*

XML Binding class name: `Offset`

Dictionary key name: `offset`

**class** `cybox.common.byterun.`**`ByteRuns`**(*args*)

Bases: `cybox.EntityList`

XML binding class: cybox.bindings.cybox_common.ByteRunsType

**Version**: 2.1.0.12.dev0

**cybox.common.contributor module**

class cybox.common.contributor.**Contributor**

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_common.ContributorType

**contribution_location**

XML Binding class name: Contribution_Location

Dictionary key name: contribution_location

**date**

Type: *cybox.common.daterange.DateRange*

XML Binding class name: Date

Dictionary key name: date

**email**

XML Binding class name: Email

Dictionary key name: email

**name**

XML Binding class name: Name

Dictionary key name: name

**organization**

XML Binding class name: Organization

Dictionary key name: organization

**phone**

XML Binding class name: Phone

Dictionary key name: phone

**role**

XML Binding class name: Role

Dictionary key name: role

class cybox.common.contributor.**Personnel**(*args*)

Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox_common.PersonnelType

**Version**: 2.1.0.12.dev0

**cybox.common.data_segment module**
class cybox.common.data_segment.**DataSegment**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.cybox_common.DataSegmentType

    **byte_order**

        Type: *cybox.common.properties.String*
        XML Binding class name: Byte_Order
        Dictionary key name: byte_order

    **data_format**

        XML Binding class name: Data_Format
        Dictionary key name: data_format

    **data_segment**

        Type: *cybox.common.properties.String*
        XML Binding class name: Data_Segment
        Dictionary key name: data_segment

    **data_size**

        Type: *cybox.common.data_segment.DataSize*
        XML Binding class name: Data_Size
        Dictionary key name: data_size

    **id_**

        XML Binding class name: id
        Dictionary key name: id

    **offset**

        Type: *cybox.common.properties.Integer*
        XML Binding class name: Offset
        Dictionary key name: offset

    **search_distance**

        Type: *cybox.common.properties.Integer*
        XML Binding class name: Search_Distance

Dictionary key name: search_distance

**search_within**

Type: *cybox.common.properties.Integer*

XML Binding class name: Search_Within

Dictionary key name: search_within

class cybox.common.data_segment.**DataSize**(*args*, **kwargs*)

Bases: *cybox.common.properties.String*

XML binding class: cybox.bindings.cybox_common.DataSizeType

static **from_dict**(*datasize_dict*)

static **from_obj**(*datasize_obj*)

**is_plain**()

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

**Version**: 2.1.0.12.dev0

**cybox.common.daterange module**

class cybox.common.daterange.**DateRange**

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_common.DateRangeType

**end_date**

Type: *cybox.common.datetimewithprecision.DateWithPrecision*

XML Binding class name: End_Date

Dictionary key name: end_date

**start_date**

Type: *cybox.common.datetimewithprecision.DateWithPrecision*

XML Binding class name: Start_Date

Dictionary key name: start_date

**Version**: 2.1.0.12.dev0

**cybox.common.datetimewithprecision module**

class cybox.common.datetimewithprecision.**DateTimeWithPrecision**(*value=None*, *precision='second'*)

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_common.DateTimeWithPrecisionType

**classmethod from_dict**(*dict_*)

**classmethod from_obj**(*obj*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.common.datetimewithprecision.**DateWithPrecision**(*value=None*,       *precision='day'*)

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_common.DateWithPrecisionType

**classmethod from_dict**(*dict_*)

**classmethod from_obj**(*obj*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

cybox.common.datetimewithprecision.**parse_value**(*value*)

cybox.common.datetimewithprecision.**serialize_value**(*value*)

**Version**: 2.1.0.12.dev0

## cybox.common.digitalsignature module

class cybox.common.digitalsignature.**DigitalSignature**

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_common.DigitalSignatureInfoType

**certificate_issuer**

Type: *cybox.common.properties.String*
XML Binding class name: Certificate_Issuer
Dictionary key name: certificate_issuer

**certificate_subject**

Type: *cybox.common.properties.String*
XML Binding class name: Certificate_Subject
Dictionary key name: certificate_subject

**signature_description**

Type: *cybox.common.properties.String*
XML Binding class name: Signature_Description
Dictionary key name: signature_description

**signature_exists**

XML Binding class name: `signature_exists`

Dictionary key name: `signature_exists`

**signature_verified**

XML Binding class name: `signature_verified`

Dictionary key name: `signature_verified`

class cybox.common.digitalsignature.**DigitalSignatureList**(*args*)

Bases: `cybox.EntityList`

XML binding class: cybox.bindings.cybox_common.DigitalSignaturesType

**Version**: 2.1.0.12.dev0

**cybox.common.environment_variable module**

class cybox.common.environment_variable.**EnvironmentVariable**

Bases: `cybox.Entity`

XML binding class: <undefined>

static **from_dict**(*environment_variable_dict*)

static **from_obj**(*environment_variable_obj*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.common.environment_variable.**EnvironmentVariableList**(*args*)

Bases: `cybox.EntityList`

XML binding class: cybox.bindings.cybox_common.EnvironmentVariableListType

**Version**: 2.1.0.12.dev0

**cybox.common.extracted_features module**

class cybox.common.extracted_features.**CodeSnippets**(*args*)

Bases: `cybox.EntityList`

XML binding class: cybox.bindings.cybox_common.CodeSnippetsType

class cybox.common.extracted_features.**ExtractedFeatures**

Bases: `cybox.Entity`

XML binding class: cybox.bindings.cybox_common.ExtractedFeaturesType

**code_snippets**

> Type: *cybox.common.extracted_features.CodeSnippets*
> XML Binding class name: Code_Snippets
> Dictionary key name: code_snippets

**functions**

> Type: *cybox.common.extracted_features.Functions*
> XML Binding class name: Functions
> Dictionary key name: functions

**imports**

> Type: *cybox.common.extracted_features.Imports*
> XML Binding class name: Imports
> Dictionary key name: imports

**strings**

> Type: *cybox.common.extracted_string.ExtractedStrings*
> XML Binding class name: Strings
> Dictionary key name: strings

class cybox.common.extracted_features.**Functions**(*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.cybox_common.FunctionsType

class cybox.common.extracted_features.**Imports**(*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.cybox_common.ImportsType

Version: 2.1.0.12.dev0

**cybox.common.extracted_string module**

class cybox.common.extracted_string.**ExtractedString**(*string_value=None*)

> Bases: cybox.Entity

> XML binding class: cybox.bindings.cybox_common.ExtractedStringType

**address**

> Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Address`

Dictionary key name: `address`

#### byte_string_value

Type: *`cybox.common.properties.String`*

XML Binding class name: `Byte_String_Value`

Dictionary key name: `byte_string_value`

#### encoding

TypedField subclass for VocabString fields.

Type: *`cybox.common.vocabs.VocabString`*

XML Binding class name: `Encoding`

Dictionary key name: `encoding`

#### english_translation

Type: *`cybox.common.properties.String`*

XML Binding class name: `English_Translation`

Dictionary key name: `english_translation`

#### hashes

Type: *`cybox.common.hashes.HashList`*

XML Binding class name: `Hashes`

Dictionary key name: `hashes`

#### language

Type: *`cybox.common.properties.String`*

XML Binding class name: `Language`

Dictionary key name: `language`

#### length

Type: *`cybox.common.properties.PositiveInteger`*

XML Binding class name: `Length`

Dictionary key name: `length`

#### string_value

Type: *`cybox.common.properties.String`*

XML Binding class name: `String_Value`

Dictionary key name: `string_value`

class cybox.common.extracted_string.**ExtractedStrings**(*args*)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.ExtractedStringsType`

**Version**: 2.1.0.12.dev0

**`cybox.common.hashes` module**

class `cybox.common.hashes.`**`Hash`**(*hash_value=None*, *type_=None*, *exact=False*)

> Bases: `cybox.Entity`

> XML binding class: `cybox.bindings.cybox_common.HashType`

> **`fuzzy_hash_value`**

> > Type: *`cybox.common.properties.String`*
> > XML Binding class name: `Fuzzy_Hash_Value`
> > Dictionary key name: `fuzzy_hash_value`

> **`simple_hash_value`**

> > Type: *`cybox.common.properties.HexBinary`*
> > XML Binding class name: `Simple_Hash_Value`
> > Dictionary key name: `simple_hash_value`

> **`type_`**
> > TypedField subclass for VocabString fields.

> > Type: *`cybox.common.vocabs.VocabString`*
> > XML Binding class name: `Type`
> > Dictionary key name: `type`

class `cybox.common.hashes.`**`HashList`**(*\*args*)

> Bases: `cybox.EntityList`

> XML binding class: `cybox.bindings.cybox_common.HashListType`

**Version**: 2.1.0.12.dev0

**`cybox.common.measuresource` module**

class `cybox.common.measuresource.`**`MeasureSource`**

> Bases: `cybox.Entity`

> XML binding class: `cybox.bindings.cybox_common.MeasureSourceType`

> **`class_`**

> > XML Binding class name: `classxx`
> > Dictionary key name: `class`

**contributors**

Type: *cybox.common.contributor.Personnel*
XML Binding class name: Contributors
Dictionary key name: contributors

**description**

Type: *cybox.common.structured_text.StructuredText*
XML Binding class name: Description
Dictionary key name: description

**information_source_type**
TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*
XML Binding class name: Information_Source_Type
Dictionary key name: information_source_type

**instance**

Type: *cybox.common.object_properties.ObjectProperties*
XML Binding class name: Instance
Dictionary key name: instance

**name**

XML Binding class name: name
Dictionary key name: name

**platform**

Type: *cybox.common.platform_specification.PlatformSpecification*
XML Binding class name: Platform
Dictionary key name: platform

**sighting_count**

XML Binding class name: sighting_count
Dictionary key name: sighting_count

**source_type**

XML Binding class name: source_type
Dictionary key name: source_type

**system**

Type: *cybox.common.object_properties.ObjectProperties*

XML Binding class name: System

Dictionary key name: system

**time**

Type: *cybox.common.time.Time*

XML Binding class name: Time

Dictionary key name: time

**tool_type**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Tool_Type

Dictionary key name: tool_type

**tools**

Type: *cybox.common.tools.ToolInformationList*

XML Binding class name: Tools

Dictionary key name: tools

Version: 2.1.0.12.dev0

## cybox.common.object_properties module

class cybox.common.object_properties.**CustomProperties**(*\*args*)

Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox_common.CustomPropertiesType

class cybox.common.object_properties.**ObjectProperties**

Bases: cybox.Entity

The Cybox ObjectProperties base class.

XML binding class: <undefined>

**add_related**(*related*, *relationship*, *inline=True*)

**custom_properties**

Type: *cybox.common.object_properties.CustomProperties*

XML Binding class name: Custom_Properties

Dictionary key name: custom_properties

classmethod **from_dict**(*defobj_dict*, *defobj=None*)

classmethod **from_obj**(*defobj_obj*, *defobj=None*)

> **object_reference**
>
>> XML Binding class name: object_reference
>> Dictionary key name: object_reference
>
> **to_dict**(*partial_dict=None*)
>
> **to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.common.object_properties.**Property**
    Bases: *cybox.common.properties.String*

> XML binding class: cybox.bindings.cybox_common.PropertyType
>
> static **from_dict**(*property_dict*)
>
> static **from_obj**(*property_obj*)
>
> **is_plain**()
>     Whether the Property can be represented as a single value.
>
> **to_dict**()
>
> **to_obj**(*return_obj=None*, *ns_info=None*)

**Version**: 2.1.0.12.dev0

**cybox.common.platform_specification module**

class cybox.common.platform_specification.**PlatformIdentifier**
    Bases: *cybox.common.properties.String*

> XML binding class: cybox.bindings.cybox_common.PlatformIdentifierType
>
> static **from_dict**(*platform_identifier_dict*)
>
> static **from_obj**(*platform_identifier_obj*)
>
> **to_dict**()
>
> **to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.common.platform_specification.**PlatformSpecification**
    Bases: cybox.Entity

    CybOX Common PlatformSpecification object representation

> XML binding class: <undefined>
>
> static **from_dict**(*platform_specification_dict*)
>
> static **from_obj**(*platform_specification_obj*)
>
> **to_dict**()
>
> **to_obj**(*return_obj=None*, *ns_info=None*)

**Version**: 2.1.0.12.dev0

**cybox.common.properties module**

class cybox.common.properties.**BaseProperty**(*value=None*)

> XML binding class: <undefined>
>
> **is_plain**()
>> Whether the Property can be represented as a single value.
>>
>> The *datatype* can be inferred by the particular BaseProperty subclass, so if *datatype* and *value* are the only non-None properties, the BaseProperty can be represented by a single value rather than a dictionary. This makes the JSON representation simpler without losing any data fidelity.

class cybox.common.properties.**AnyURI**(*value=None*)

> XML binding class: cybox.bindings.cybox_common.AnyURIObjectPropertyType

class cybox.common.properties.**Base64Binary**(*value=None*)

> XML binding class: cybox.bindings.cybox_common.Base64BinaryObjectPropertyType

class cybox.common.properties.**Date**(*value=None*, *precision='day'*)

> XML binding class: cybox.bindings.cybox_common.DateObjectPropertyType

class cybox.common.properties.**DateTime**(*value=None*, *precision='second'*)

> XML binding class: cybox.bindings.cybox_common.DateTimeObjectPropertyType

class cybox.common.properties.**Double**(*value=None*)

> XML binding class: cybox.bindings.cybox_common.DoubleObjectPropertyType

class cybox.common.properties.**Duration**(*value=None*)

> XML binding class: cybox.bindings.cybox_common.DurationObjectPropertyType

class cybox.common.properties.**Float**(*value=None*)

> XML binding class: cybox.bindings.cybox_common.FloatObjectPropertyType

class cybox.common.properties.**HexBinary**(*value=None*)

> XML binding class: cybox.bindings.cybox_common.HexBinaryObjectPropertyType

class cybox.common.properties.**Integer**(*value=None*)

> XML binding class: cybox.bindings.cybox_common.IntegerObjectPropertyType

class cybox.common.properties.**Long**(*value=None*)

> XML binding class: cybox.bindings.cybox_common.LongObjectPropertyType

**class** cybox.common.properties.**Name**(*value=None*)

   XML binding class: cybox.bindings.cybox_common.NameObjectPropertyType

**class** cybox.common.properties.**NonNegativeInteger**(*value=None*)

   XML binding class:
   cybox.bindings.cybox_common.NonNegativeIntegerObjectPropertyType

**class** cybox.common.properties.**PositiveInteger**(*value=None*)

   XML binding class:
   cybox.bindings.cybox_common.PositiveIntegerObjectPropertyType

**class** cybox.common.properties.**String**(*value=None*)

   XML binding class: cybox.bindings.cybox_common.StringObjectPropertyType

**class** cybox.common.properties.**Time**(*value=None*, *precision='second'*)

   XML binding class: cybox.bindings.cybox_common.TimeObjectPropertyType

**class** cybox.common.properties.**UnsignedInteger**(*value=None*)

   XML binding class:
   cybox.bindings.cybox_common.UnsignedIntegerObjectPropertyType

**class** cybox.common.properties.**UnsignedLong**(*value=None*)

   XML binding class: cybox.bindings.cybox_common.UnsignedLongObjectPropertyType

**Version**: 2.1.0.12.dev0

**cybox.common.structured_text module**

**class** cybox.common.structured_text.**StructuredText**(*value=None*)

   Bases: cybox.Entity

   XML binding class: <undefined>

   **classmethod from_dict**(*text_dict*, *text=None*)

   **classmethod from_obj**(*text_obj*, *text=None*)

   **is_plain**()

      Whether this can be represented as a string rather than a dictionary

      Subclasses can override this to include their custom fields in this check:

         return (super(..., self).is_plain() and self.other_field is None)

   **to_dict**()

   **to_obj**(*return_obj=None*, *ns_info=None*)

**Version**: 2.1.0.12.dev0

**`cybox.common.time` module**

class cybox.common.time.**Time**(*start_time=None*,   *end_time=None*,   *produced_time=None*,   *received_time=None*)

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_common.TimeType

**`end_time`**

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*
XML Binding class name: End_Time
Dictionary key name: end_time

**`produced_time`**

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*
XML Binding class name: Produced_Time
Dictionary key name: produced_time

**`received_time`**

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*
XML Binding class name: Received_Time
Dictionary key name: received_time

**`start_time`**

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*
XML Binding class name: Start_Time
Dictionary key name: start_time

**Version**: 2.1.0.12.dev0

**`cybox.common.tools` module**

class cybox.common.tools.**ToolInformation**(*tool_name=None*, *tool_vendor=None*)

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_common.ToolInformationType

static **from_dict**(*toolinfo_dict*, *toolinfo=None*)

static **from_obj**(*toolinfo_obj*, *toolinfo=None*)

**`to_dict`**()

**`to_obj`**(*return_obj=None*, *ns_info=None*)

class cybox.common.tools.**ToolInformationList**(*\*args*)

Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox_common.ToolsInformationType

**Version**: 2.1.0.12.dev0

**`cybox.common.vocabs` module**

class cybox.common.vocabs.**ActionArgumentName**(*value=None*)

    Bases: *[cybox.common.vocabs.VocabString](#)*

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**ActionName**(*value=None*)

    Bases: *[cybox.common.vocabs.VocabString](#)*

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**ActionObjectAssociationType**(*value=None*)

    Bases: *[cybox.common.vocabs.VocabString](#)*

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**ActionRelationshipType**(*value=None*)

    Bases: *[cybox.common.vocabs.VocabString](#)*

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**ActionType**(*value=None*)

    Bases: *[cybox.common.vocabs.VocabString](#)*

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**CharacterEncoding**(*value=None*)

    Bases: *[cybox.common.vocabs.VocabString](#)*

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**EventType**(*value=None*)

    Bases: *[cybox.common.vocabs.VocabString](#)*

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

**class** cybox.common.vocabs.**HashName**(*value=None*)
    Bases: *cybox.common.vocabs.VocabString*

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

**class** cybox.common.vocabs.**InformationSourceType**(*value=None*)
    Bases: *cybox.common.vocabs.VocabString*

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

**class** cybox.common.vocabs.**ObjectRelationship**(*value=None*)
    Bases: *cybox.common.vocabs.VocabString*

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

**class** cybox.common.vocabs.**ObjectState**(*value=None*)
    Bases: *cybox.common.vocabs.VocabString*

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

**class** cybox.common.vocabs.**ToolType**(*value=None*)
    Bases: *cybox.common.vocabs.VocabString*

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

**class** cybox.common.vocabs.**VocabString**(*value=None*)
    Bases: cybox.common.attribute_groups.PatternFieldGroup, cybox.Entity

    XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

    **classmethod from_dict**(*vocab_dict*, *return_obj=None*)

    **classmethod from_obj**(*vocab_obj*, *return_obj=None*)

    **is_plain**()
        Whether the VocabString can be represented as a single value.

    **static lookup_class**(*xsi_type*)

    **to_dict**()

    **to_obj**(*return_obj=None*, *ns_info=None*)

cybox.common.vocabs.**register_vocab**(*cls*)

> Register a VocabString subclass.

> Also, calculate all the permitted values for class being decorated by adding an _ALLOWED_VALUES tuple of all the values of class members beginning with TERM_.

**Version**: 2.1.0.12.dev0

## cybox.common.attribute_groups module

**Version**: 2.1.0.12.dev0

## cybox.common.byterun module

**class** cybox.common.byterun.**ByteRun**

> Bases: cybox.Entity

> XML binding class: cybox.bindings.cybox_common.ByteRunType

> **byte_order**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Byte_Order
> > Dictionary key name: byte_order

> **byte_run_data**

> > XML Binding class name: Byte_Run_Data
> > Dictionary key name: byte_run_data

> **file_system_offset**

> > Type: *cybox.common.properties.Integer*
> > XML Binding class name: File_System_Offset
> > Dictionary key name: file_system_offset

> **hashes**

> > Type: *cybox.common.hashes.HashList*
> > XML Binding class name: Hashes
> > Dictionary key name: hashes

> **image_offset**

> > Type: *cybox.common.properties.Integer*
> > XML Binding class name: Image_Offset
> > Dictionary key name: image_offset

> **length**

Type: *cybox.common.properties.Integer*
XML Binding class name: `Length`
Dictionary key name: `length`

**offset**

Type: *cybox.common.properties.Integer*
XML Binding class name: `Offset`
Dictionary key name: `offset`

class cybox.common.byterun.**ByteRuns**(*args*)
Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox_common.ByteRunsType

**Version**: 2.1.0.12.dev0

## cybox.common.contributor module

class cybox.common.contributor.**Contributor**
Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_common.ContributorType

**contribution_location**

XML Binding class name: `Contribution_Location`
Dictionary key name: `contribution_location`

**date**

Type: *cybox.common.daterange.DateRange*
XML Binding class name: `Date`
Dictionary key name: `date`

**email**

XML Binding class name: `Email`
Dictionary key name: `email`

**name**

XML Binding class name: `Name`
Dictionary key name: `name`

**organization**

XML Binding class name: `Organization`

Dictionary key name: organization

**phone**

XML Binding class name: Phone
Dictionary key name: phone

**role**

XML Binding class name: Role
Dictionary key name: role

**class** cybox.common.contributor.**Personnel**(*\*args*)
Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox_common.PersonnelType

**Version**: 2.1.0.12.dev0

## cybox.common.data_segment module

**class** cybox.common.data_segment.**DataSegment**
Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_common.DataSegmentType

**byte_order**

Type: *cybox.common.properties.String*
XML Binding class name: Byte_Order
Dictionary key name: byte_order

**data_format**

XML Binding class name: Data_Format
Dictionary key name: data_format

**data_segment**

Type: *cybox.common.properties.String*
XML Binding class name: Data_Segment
Dictionary key name: data_segment

**data_size**

Type: *cybox.common.data_segment.DataSize*
XML Binding class name: Data_Size
Dictionary key name: data_size

**id_**

>   XML Binding class name: id
>   Dictionary key name: id

**offset**

>   Type: *cybox.common.properties.Integer*
>   XML Binding class name: Offset
>   Dictionary key name: offset

**search_distance**

>   Type: *cybox.common.properties.Integer*
>   XML Binding class name: Search_Distance
>   Dictionary key name: search_distance

**search_within**

>   Type: *cybox.common.properties.Integer*
>   XML Binding class name: Search_Within
>   Dictionary key name: search_within

**class** cybox.common.data_segment.**DataSize**(*\*args*, *\*\*kwargs*)
>   Bases: *cybox.common.properties.String*


>   XML binding class: cybox.bindings.cybox_common.DataSizeType


>   **static from_dict**(*datasize_dict*)

>   **static from_obj**(*datasize_obj*)

>   **is_plain**()

>   **to_dict**()

>   **to_obj**(*return_obj=None*, *ns_info=None*)

Version: 2.1.0.12.dev0


## cybox.common.daterange module

**class** cybox.common.daterange.**DateRange**
>   Bases: cybox.Entity


>   XML binding class: cybox.bindings.cybox_common.DateRangeType


>   **end_date**

>>   Type: *cybox.common.datetimewithprecision.DateWithPrecision*

XML Binding class name: `End_Date`

Dictionary key name: `end_date`

**start_date**

Type: *[cybox.common.datetimewithprecision.DateWithPrecision](#)*

XML Binding class name: `Start_Date`

Dictionary key name: `start_date`

**Version**: 2.1.0.12.dev0

## cybox.common.datetimewithprecision module

class cybox.common.datetimewithprecision.**DateTimeWithPrecision**(*value=None*, *precision='second'*)

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.DateTimeWithPrecisionType`

classmethod **from_dict**(*dict_*)

classmethod **from_obj**(*obj*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.common.datetimewithprecision.**DateWithPrecision**(*value=None*, *precision='day'*)

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.DateWithPrecisionType`

classmethod **from_dict**(*dict_*)

classmethod **from_obj**(*obj*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

cybox.common.datetimewithprecision.**parse_value**(*value*)

cybox.common.datetimewithprecision.**serialize_value**(*value*)

**Version**: 2.1.0.12.dev0

## cybox.common.digitalsignature module

class cybox.common.digitalsignature.**DigitalSignature**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.DigitalSignatureInfoType`

**certificate_issuer**

> Type: *cybox.common.properties.String*
> XML Binding class name: Certificate_Issuer
> Dictionary key name: certificate_issuer

**certificate_subject**

> Type: *cybox.common.properties.String*
> XML Binding class name: Certificate_Subject
> Dictionary key name: certificate_subject

**signature_description**

> Type: *cybox.common.properties.String*
> XML Binding class name: Signature_Description
> Dictionary key name: signature_description

**signature_exists**

> XML Binding class name: signature_exists
> Dictionary key name: signature_exists

**signature_verified**

> XML Binding class name: signature_verified
> Dictionary key name: signature_verified

class cybox.common.digitalsignature.**DigitalSignatureList**(*args*)
> Bases: cybox.EntityList

> XML binding class: cybox.bindings.cybox_common.DigitalSignaturesType

**Version**: 2.1.0.12.dev0

## cybox.common.environment_variable module

class cybox.common.environment_variable.**EnvironmentVariable**
> Bases: cybox.Entity

> XML binding class: <undefined>

> static **from_dict**(*environment_variable_dict*)

> static **from_obj**(*environment_variable_obj*)

> **to_dict**()

> **to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.common.environment_variable.**EnvironmentVariableList**(*args*)
>   Bases: cybox.EntityList


>   XML binding class: cybox.bindings.cybox_common.EnvironmentVariableListType


**Version**: 2.1.0.12.dev0


## cybox.common.extracted_features module

class cybox.common.extracted_features.**CodeSnippets**(*args*)
>   Bases: cybox.EntityList


>   XML binding class: cybox.bindings.cybox_common.CodeSnippetsType


class cybox.common.extracted_features.**ExtractedFeatures**
>   Bases: cybox.Entity


>   XML binding class: cybox.bindings.cybox_common.ExtractedFeaturesType


>   **code_snippets**


>>   Type: *cybox.common.extracted_features.CodeSnippets*
>>   XML Binding class name: Code_Snippets
>>   Dictionary key name: code_snippets

>   **functions**


>>   Type: *cybox.common.extracted_features.Functions*
>>   XML Binding class name: Functions
>>   Dictionary key name: functions

>   **imports**


>>   Type: *cybox.common.extracted_features.Imports*
>>   XML Binding class name: Imports
>>   Dictionary key name: imports

>   **strings**


>>   Type: *cybox.common.extracted_string.ExtractedStrings*
>>   XML Binding class name: Strings
>>   Dictionary key name: strings

class cybox.common.extracted_features.**Functions**(*args*)
>   Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox_common.FunctionsType

class cybox.common.extracted_features.**Imports**(*args*)
> Bases: cybox.EntityList

> XML binding class: cybox.bindings.cybox_common.ImportsType

**Version**: 2.1.0.12.dev0

### cybox.common.extracted_string module

class cybox.common.extracted_string.**ExtractedString**(*string_value=None*)
> Bases: cybox.Entity

> XML binding class: cybox.bindings.cybox_common.ExtractedStringType

> **address**

>> Type: *cybox.common.properties.HexBinary*
>> XML Binding class name: Address
>> Dictionary key name: address

> **byte_string_value**

>> Type: *cybox.common.properties.String*
>> XML Binding class name: Byte_String_Value
>> Dictionary key name: byte_string_value

> **encoding**
> TypedField subclass for VocabString fields.

>> Type: *cybox.common.vocabs.VocabString*
>> XML Binding class name: Encoding
>> Dictionary key name: encoding

> **english_translation**

>> Type: *cybox.common.properties.String*
>> XML Binding class name: English_Translation
>> Dictionary key name: english_translation

> **hashes**

>> Type: *cybox.common.hashes.HashList*

---

XML Binding class name: `Hashes`

Dictionary key name: `hashes`

**language**

Type: *[cybox.common.properties.String](#)*

XML Binding class name: `Language`

Dictionary key name: `language`

**length**

Type: *[cybox.common.properties.PositiveInteger](#)*

XML Binding class name: `Length`

Dictionary key name: `length`

**string_value**

Type: *[cybox.common.properties.String](#)*

XML Binding class name: `String_Value`

Dictionary key name: `string_value`

class cybox.common.extracted_string.**ExtractedStrings**(*\*args*)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.cybox_common.ExtractedStringsType`

**Version**: 2.1.0.12.dev0

## `cybox.common.hashes` module

class cybox.common.hashes.**Hash**(*hash_value=None*, *type_=None*, *exact=False*)

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.cybox_common.HashType`

**fuzzy_hash_value**

Type: *[cybox.common.properties.String](#)*

XML Binding class name: `Fuzzy_Hash_Value`

Dictionary key name: `fuzzy_hash_value`

**simple_hash_value**

Type: *[cybox.common.properties.HexBinary](#)*

XML Binding class name: `Simple_Hash_Value`

Dictionary key name: `simple_hash_value`

**type_**
> TypedField subclass for VocabString fields.

>> Type: *cybox.common.vocabs.VocabString*
>> XML Binding class name: `Type`
>> Dictionary key name: `type`

**class** cybox.common.hashes.**HashList**(*\*args*)
> Bases: `cybox.EntityList`

> XML binding class: `cybox.bindings.cybox_common.HashListType`

**Version**: 2.1.0.12.dev0

## cybox.common.measuresource module

**class** cybox.common.measuresource.**MeasureSource**
> Bases: `cybox.Entity`

> XML binding class: `cybox.bindings.cybox_common.MeasureSourceType`

> **class_**

>> XML Binding class name: `classxx`
>> Dictionary key name: `class`

> **contributors**

>> Type: *cybox.common.contributor.Personnel*
>> XML Binding class name: `Contributors`
>> Dictionary key name: `contributors`

> **description**

>> Type: *cybox.common.structured_text.StructuredText*
>> XML Binding class name: `Description`
>> Dictionary key name: `description`

> **information_source_type**
>> TypedField subclass for VocabString fields.

>> Type: *cybox.common.vocabs.VocabString*
>> XML Binding class name: `Information_Source_Type`
>> Dictionary key name: `information_source_type`

**instance**

>   Type: *cybox.common.object_properties.ObjectProperties*
>   XML Binding class name: Instance
>   Dictionary key name: instance

**name**

>   XML Binding class name: name
>   Dictionary key name: name

**platform**

>   Type: *cybox.common.platform_specification.PlatformSpecification*
>   XML Binding class name: Platform
>   Dictionary key name: platform

**sighting_count**

>   XML Binding class name: sighting_count
>   Dictionary key name: sighting_count

**source_type**

>   XML Binding class name: source_type
>   Dictionary key name: source_type

**system**

>   Type: *cybox.common.object_properties.ObjectProperties*
>   XML Binding class name: System
>   Dictionary key name: system

**time**

>   Type: *cybox.common.time.Time*
>   XML Binding class name: Time
>   Dictionary key name: time

**tool_type**
TypedField subclass for VocabString fields.

>   Type: *cybox.common.vocabs.VocabString*
>   XML Binding class name: Tool_Type
>   Dictionary key name: tool_type

**tools**

>   Type: *cybox.common.tools.ToolInformationList*

XML Binding class name: `Tools`
Dictionary key name: `tools`

**Version**: 2.1.0.12.dev0

### cybox.common.object_properties module

**class** cybox.common.object_properties.**CustomProperties**(*\*args*)
    Bases: `cybox.EntityList`

    XML binding class: cybox.bindings.cybox_common.CustomPropertiesType

**class** cybox.common.object_properties.**ObjectProperties**
    Bases: `cybox.Entity`

    The Cybox ObjectProperties base class.

    XML binding class: <undefined>

    **add_related**(*related*, *relationship*, *inline=True*)

    **custom_properties**

        Type: *[cybox.common.object_properties.CustomProperties](#)*
        XML Binding class name: `Custom_Properties`
        Dictionary key name: `custom_properties`

    **classmethod from_dict**(*defobj_dict*, *defobj=None*)

    **classmethod from_obj**(*defobj_obj*, *defobj=None*)

    **object_reference**

        XML Binding class name: `object_reference`
        Dictionary key name: `object_reference`

    **to_dict**(*partial_dict=None*)

    **to_obj**(*return_obj=None*, *ns_info=None*)

**class** cybox.common.object_properties.**Property**
    Bases: *[cybox.common.properties.String](#)*

    XML binding class: cybox.bindings.cybox_common.PropertyType

    **static from_dict**(*property_dict*)

    **static from_obj**(*property_obj*)

    **is_plain**()
        Whether the Property can be represented as a single value.

> **to_dict**()
>
> **to_obj**(*return_obj=None*, *ns_info=None*)

**Version**: 2.1.0.12.dev0

## cybox.common.platform_specification module

**class** cybox.common.platform_specification.**PlatformIdentifier**
> Bases: *cybox.common.properties.String*

> XML binding class: cybox.bindings.cybox_common.PlatformIdentifierType

> **static from_dict**(*platform_identifier_dict*)

> **static from_obj**(*platform_identifier_obj*)

> **to_dict**()

> **to_obj**(*return_obj=None*, *ns_info=None*)

**class** cybox.common.platform_specification.**PlatformSpecification**
> Bases: cybox.Entity

> CybOX Common PlatformSpecification object representation

> XML binding class: <undefined>

> **static from_dict**(*platform_specification_dict*)

> **static from_obj**(*platform_specification_obj*)

> **to_dict**()

> **to_obj**(*return_obj=None*, *ns_info=None*)

**Version**: 2.1.0.12.dev0

## cybox.common.properties module

**class** cybox.common.properties.**BaseProperty**(*value=None*)

> XML binding class: <undefined>

> **is_plain**()
> > Whether the Property can be represented as a single value.
> >
> > The *datatype* can be inferred by the particular BaseProperty subclass, so if *datatype* and *value* are the only non-None properties, the BaseProperty can be represented by a single value rather than a dictionary. This makes the JSON representation simpler without losing any data fidelity.

**class** cybox.common.properties.**AnyURI**(*value=None*)

> XML binding class: cybox.bindings.cybox_common.AnyURIObjectPropertyType

**class** cybox.common.properties.**Base64Binary**(*value=None*)

    XML binding class: cybox.bindings.cybox_common.Base64BinaryObjectPropertyType

**class** cybox.common.properties.**Date**(*value=None*, *precision='day'*)

    XML binding class: cybox.bindings.cybox_common.DateObjectPropertyType

**class** cybox.common.properties.**DateTime**(*value=None*, *precision='second'*)

    XML binding class: cybox.bindings.cybox_common.DateTimeObjectPropertyType

**class** cybox.common.properties.**Double**(*value=None*)

    XML binding class: cybox.bindings.cybox_common.DoubleObjectPropertyType

**class** cybox.common.properties.**Duration**(*value=None*)

    XML binding class: cybox.bindings.cybox_common.DurationObjectPropertyType

**class** cybox.common.properties.**Float**(*value=None*)

    XML binding class: cybox.bindings.cybox_common.FloatObjectPropertyType

**class** cybox.common.properties.**HexBinary**(*value=None*)

    XML binding class: cybox.bindings.cybox_common.HexBinaryObjectPropertyType

**class** cybox.common.properties.**Integer**(*value=None*)

    XML binding class: cybox.bindings.cybox_common.IntegerObjectPropertyType

**class** cybox.common.properties.**Long**(*value=None*)

    XML binding class: cybox.bindings.cybox_common.LongObjectPropertyType

**class** cybox.common.properties.**Name**(*value=None*)

    XML binding class: cybox.bindings.cybox_common.NameObjectPropertyType

**class** cybox.common.properties.**NonNegativeInteger**(*value=None*)

    XML binding class:
    cybox.bindings.cybox_common.NonNegativeIntegerObjectPropertyType

**class** cybox.common.properties.**PositiveInteger**(*value=None*)

    XML binding class:
    cybox.bindings.cybox_common.PositiveIntegerObjectPropertyType

**class** cybox.common.properties.**String**(*value=None*)

    XML binding class: cybox.bindings.cybox_common.StringObjectPropertyType

**class** cybox.common.properties.**Time**(*value=None*, *precision='second'*)

> XML binding class: cybox.bindings.cybox_common.TimeObjectPropertyType

**class** cybox.common.properties.**UnsignedInteger**(*value=None*)

> XML binding class:
> cybox.bindings.cybox_common.UnsignedIntegerObjectPropertyType

**class** cybox.common.properties.**UnsignedLong**(*value=None*)

> XML binding class: cybox.bindings.cybox_common.UnsignedLongObjectPropertyType

**Version**: 2.1.0.12.dev0

## cybox.common.structured_text module

**class** cybox.common.structured_text.**StructuredText**(*value=None*)
> Bases: cybox.Entity

> XML binding class: <undefined>

> **classmethod from_dict**(*text_dict*, *text=None*)

> **classmethod from_obj**(*text_obj*, *text=None*)

> **is_plain**()
>> Whether this can be represented as a string rather than a dictionary

>> Subclasses can override this to include their custom fields in this check:

>>> return (super(..., self).is_plain() and self.other_field is None)

> **to_dict**()

> **to_obj**(*return_obj=None*, *ns_info=None*)

**Version**: 2.1.0.12.dev0

## cybox.common.time module

**class** cybox.common.time.**Time**(*start_time=None*, *end_time=None*, *produced_time=None*, *received_time=None*)
> Bases: cybox.Entity

> XML binding class: cybox.bindings.cybox_common.TimeType

> **end_time**

>> Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*
>> XML Binding class name: End_Time

Dictionary key name: end_time

### produced_time

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*
XML Binding class name: Produced_Time
Dictionary key name: produced_time

### received_time

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*
XML Binding class name: Received_Time
Dictionary key name: received_time

### start_time

Type: *cybox.common.datetimewithprecision.DateTimeWithPrecision*
XML Binding class name: Start_Time
Dictionary key name: start_time

**Version**: 2.1.0.12.dev0

## cybox.common.tools module

class cybox.common.tools.**ToolInformation**(*tool_name=None*, *tool_vendor=None*)
Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_common.ToolInformationType

static **from_dict**(*toolinfo_dict*, *toolinfo=None*)

static **from_obj**(*toolinfo_obj*, *toolinfo=None*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.common.tools.**ToolInformationList**(*\*args*)
Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox_common.ToolsInformationType

**Version**: 2.1.0.12.dev0

## cybox.common.vocabs module

class cybox.common.vocabs.**ActionArgumentName**(*value=None*)
Bases: *cybox.common.vocabs.VocabString*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**ActionName**(*value=None*)
    Bases: *[cybox.common.vocabs.VocabString](#)*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**ActionObjectAssociationType**(*value=None*)
    Bases: *[cybox.common.vocabs.VocabString](#)*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**ActionRelationshipType**(*value=None*)
    Bases: *[cybox.common.vocabs.VocabString](#)*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**ActionType**(*value=None*)
    Bases: *[cybox.common.vocabs.VocabString](#)*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**CharacterEncoding**(*value=None*)
    Bases: *[cybox.common.vocabs.VocabString](#)*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**EventType**(*value=None*)
    Bases: *[cybox.common.vocabs.VocabString](#)*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**HashName**(*value=None*)
    Bases: *[cybox.common.vocabs.VocabString](#)*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

class cybox.common.vocabs.**InformationSourceType**(*value=None*)
    Bases: *[cybox.common.vocabs.VocabString](#)*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

**class** cybox.common.vocabs.**ObjectRelationship**(*value=None*)
  Bases: *cybox.common.vocabs.VocabString*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

**class** cybox.common.vocabs.**ObjectState**(*value=None*)
  Bases: *cybox.common.vocabs.VocabString*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

**class** cybox.common.vocabs.**ToolType**(*value=None*)
  Bases: *cybox.common.vocabs.VocabString*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

**class** cybox.common.vocabs.**VocabString**(*value=None*)
  Bases: cybox.common.attribute_groups.PatternFieldGroup, cybox.Entity

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

  **classmethod from_dict**(*vocab_dict*, *return_obj=None*)

  **classmethod from_obj**(*vocab_obj*, *return_obj=None*)

  **is_plain**()
    Whether the VocabString can be represented as a single value.

  **static lookup_class**(*xsi_type*)

  **to_dict**()

  **to_obj**(*return_obj=None*, *ns_info=None*)

cybox.common.vocabs.**register_vocab**(*cls*)
  Register a VocabString subclass.

  Also, calculate all the permitted values for class being decorated by adding an __ALLOWED_VALUES tuple of all the values of class members beginning with TERM_.

### 3.1.2 CyBOX Core

Modules located in the base cybox.core package

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**Note:** Most objects from the CybOX Core schema can be implemented directly from the cybox.core package, rather than needing to remember which submodule they are defined in.

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**Version**: 2.1.0.12.dev0

[**cybox.core** package](#)

[**Submodules**](#)

**Version**: 2.1.0.12.dev0

**cybox.core.action module**

class cybox.core.action.**Action**

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_core.ActionType

**action_aliases**

Type: [*cybox.core.action.ActionAliases*](#)
XML Binding class name: Action_Aliases
Dictionary key name: action_aliases

**action_arguments**

Type: [*cybox.core.action.ActionArguments*](#)
XML Binding class name: Action_Arguments
Dictionary key name: action_arguments

**action_status**

XML Binding class name: action_status
Dictionary key name: action_status

**associated_objects**

Type: [*cybox.core.action.AssociatedObjects*](#)
XML Binding class name: Associated_Objects
Dictionary key name: associated_objects

**context**

XML Binding class name: context
Dictionary key name: context

**description**

Type: [*cybox.common.structured_text.StructuredText*](#)
XML Binding class name: Description
Dictionary key name: description

**discovery_method**

Type: *cybox.common.measuresource.MeasureSource*
XML Binding class name: `Discovery_Method`
Dictionary key name: `discovery_method`

**frequency**

Type: *cybox.core.frequency.Frequency*
XML Binding class name: `Frequency`
Dictionary key name: `frequency`

**id_**

XML Binding class name: `id`
Dictionary key name: `id`

**idref**

XML Binding class name: `idref`
Dictionary key name: `idref`

**name**
TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*
XML Binding class name: `Name`
Dictionary key name: `name`

**ordinal_position**

XML Binding class name: `ordinal_position`
Dictionary key name: `ordinal_position`

**relationships**

Type: *cybox.core.action.ActionRelationships*
XML Binding class name: `Relationships`
Dictionary key name: `relationships`

**timestamp**

XML Binding class name: `timestamp`
Dictionary key name: `timestamp`

**type_**
TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

> XML Binding class name: `Type`
> Dictionary key name: `type`

**class** cybox.core.action.**ActionAliases**(*\*args*)

    Bases: `cybox.EntityList`

    XML binding class: `cybox.bindings.cybox_core.ActionAliasesType`

**class** cybox.core.action.**ActionArgument**

    Bases: `cybox.Entity`

    XML binding class: `cybox.bindings.cybox_core.ActionArgumentType`

    **argument_name**

        TypedField subclass for VocabString fields.

        Type: *[cybox.common.vocabs.VocabString](#)*
        XML Binding class name: `Argument_Name`
        Dictionary key name: `argument_name`

    **argument_value**

        XML Binding class name: `Argument_Value`
        Dictionary key name: `argument_value`

**class** cybox.core.action.**ActionArguments**(*\*args*)

    Bases: `cybox.EntityList`

    XML binding class: `cybox.bindings.cybox_core.ActionArgumentsType`

**class** cybox.core.action.**ActionRelationship**

    Bases: `cybox.Entity`

    XML binding class: <undefined>

    **static from_dict**(*action_relationship_dict*)

    **static from_obj**(*action_relationship_obj*)

    **to_dict**()

    **to_obj**(*return_obj=None*, *ns_info=None*)

**class** cybox.core.action.**ActionRelationships**(*\*args*)

    Bases: `cybox.EntityList`

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**3.1. API Reference**                             **55**

XML binding class: cybox.bindings.cybox_core.ActionRelationshipsType

**class** cybox.core.action.**Actions**(*\*args*)
    Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox_core.ActionsType

**class** cybox.core.action.**AssociatedObjects**(*\*args*)
    Bases: cybox.EntityList

XML binding class: cybox.bindings.cybox_core.AssociatedObjectsType

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**cybox.core.action_reference module**    CybOX Action Reference Class

**class** cybox.core.action_reference.**ActionReference**(*action_id=None*)
    Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_core.ActionReferenceType

**action_id**

XML Binding class name: action_id
Dictionary key name: action_id

Version: 2.1.0.12.dev0

**cybox.core.associated_object module**
**class** cybox.core.associated_object.**AssociatedObject**(*defined_object=None*, *type_=None*,
                                                            *association_type=None*)
    Bases: *cybox.core.object.Object*

The CybOX Associated Object element.

Currently only supports the id, association_type and ObjectProperties properties

XML binding class: <undefined>

**static from_dict**(*object_dict*)

**static from_obj**(*object_obj*)

**superclass**
    alias of Object | XML binding class: <undefined>

**to_dict**()

> **to_obj**(*return_obj=None*, *ns_info=None*)

**Version**: 2.1.0.12.dev0

**cybox.core.event module**

**class** cybox.core.event.**Event**

> Bases: cybox.Entity

> XML binding class: cybox.bindings.cybox_core.EventType

> **actions**
>
> > Type: *cybox.core.action.Actions*
> > XML Binding class name: Actions
> > Dictionary key name: actions
>
> **description**
>
> > Type: *cybox.common.structured_text.StructuredText*
> > XML Binding class name: Description
> > Dictionary key name: description
>
> **event**
>
> > (List of values permitted)
> > Type: *cybox.core.event.Event*
> > XML Binding class name: Event
> > Dictionary key name: event
>
> **frequency**
>
> > Type: *cybox.core.frequency.Frequency*
> > XML Binding class name: Frequency
> > Dictionary key name: frequency
>
> **id_**
>
> > XML Binding class name: id
> > Dictionary key name: id
>
> **idref**
>
> > XML Binding class name: idref
> > Dictionary key name: idref
>
> **observation_method**
>
> > Type: *cybox.common.measuresource.MeasureSource*
> > XML Binding class name: Observation_Method
> > Dictionary key name: observation_method

**type_**
> TypedField subclass for VocabString fields.

> Type: *cybox.common.vocabs.VocabString*
> XML Binding class name: Type
> Dictionary key name: type

**Version**: 2.1.0.12.dev0

## cybox.core.frequency module

class cybox.core.frequency.**Frequency**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.cybox_core.FrequencyType

> **rate**

>> XML Binding class name: rate
>> Dictionary key name: rate

> **scale**

>> XML Binding class name: scale
>> Dictionary key name: scale

> **trend**

>> XML Binding class name: trend
>> Dictionary key name: trend

> **units**

>> XML Binding class name: units
>> Dictionary key name: units

**Version**: 2.1.0.12.dev0

## cybox.core.object module

class cybox.core.object.**DomainSpecificObjectProperties**
> Bases: cybox.Entity

> The Cybox DomainSpecificObjectProperties base class.

> XML binding class: <undefined>

> static **from_dict**(*domain_specific_properties_dict*)

> static **from_obj**(*domain_specific_properties_obj*)

> **to_dict**(*partial_dict=None*)
>> Populate an existing dictionary.
>>
>> Note that this is different than to_dict() on most other CybOX types.
>
> **to_obj**(*return_obj=None*, *ns_info=None*)
>> Populate an existing bindings object.
>>
>> Note that this is different than to_obj() on most other CybOX types.

class cybox.core.object.**Object**(*properties=None*, *type_=None*)

> Bases: cybox.Entity
>
> The CybOX Object element.
>
> Currently only supports the following data members: - id_ - idref - properties - related_objects
>
> XML binding class: <undefined>
>
> **add_related**(*related*, *relationship*, *inline=True*)
>
> static **from_dict**(*object_dict*, *obj=None*)
>
> static **from_obj**(*object_obj*, *obj=None*)
>
> **to_dict**()
>
> **to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.core.object.**RelatedObject**(*\*args*, *\*\*kwargs*)

> Bases: *cybox.core.object.Object*
>
> XML binding class: <undefined>
>
> static **from_dict**(*relobj_dict*)
>
> static **from_obj**(*relobj_obj*)
>
> **get_properties**()
>
> **to_dict**()
>
> **to_obj**(*return_obj=None*, *ns_info=None*)

cybox.core.object.**add_external_class**(*klass*, *name=None*)

> Adds a class implementation to this binding's globals() dict.
>
> These classes can be used to implement Properties, Domain_Specific_Object_Properties, or Defined_Effect fields on an Object.
>
>> **Parameters**
>>
>> - **klass** (*class*) – Python class that implements the new type
>>
>> - **name** (*str*) – The name of the class, as it will appear in XML documents to be parsed. Defaults to klass.\_\_name\_\_.

**Version**: 2.1.0.12.dev0

**`cybox.core.observable` module**

**class** `cybox.core.observable.`**`Keywords`**(*\*args*)

    Bases: `cybox.EntityList`

    XML binding class: `cybox.bindings.cybox_core.KeywordsType`

**class** `cybox.core.observable.`**`Observable`**(*item=None*, *id_=None*, *idref=None*, *title=None*, *description=None*)

    Bases: `cybox.Entity`

    A single Observable.

    XML binding class: <undefined>

    **`add_keyword`**(*value*)

    **static** **`from_dict`**(*observable_dict*)

    **static** **`from_obj`**(*observable_obj*)

    **`to_dict`**()

    **`to_obj`**(*return_obj=None*, *ns_info=None*)

**class** `cybox.core.observable.`**`ObservableComposition`**(*operator='AND'*, *observables=None*)

    Bases: `cybox.Entity`

    The ObservableCompositionType entity defines a logical compositions of CybOX Observables. The combinatorial behavior is derived from the operator property.

    XML binding class: <undefined>

    **`add`**(*observable*)

    **static** **`from_dict`**(*observable_comp_dict*)

    **static** **`from_obj`**(*observable_comp_obj*)

    **`to_dict`**()

    **`to_obj`**(*return_obj=None*, *ns_info=None*)

**class** `cybox.core.observable.`**`Observables`**(*observables=None*)

    Bases: `cybox.EntityList`

    The root CybOX Observables object.

    Pools are not currently supported.

    XML binding class: <undefined>

    **`add`**(*observable*)

    **static** **`from_dict`**(*observables_dict*)

static **from_obj**(*observables_obj*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

**Version**: 2.1.0.12.dev0

### cybox.core.action module

class cybox.core.action.**Action**

    Bases: cybox.Entity

    XML binding class: cybox.bindings.cybox_core.ActionType

    **action_aliases**

        Type: *[cybox.core.action.ActionAliases](#)*
        XML Binding class name: Action_Aliases
        Dictionary key name: action_aliases

    **action_arguments**

        Type: *[cybox.core.action.ActionArguments](#)*
        XML Binding class name: Action_Arguments
        Dictionary key name: action_arguments

    **action_status**

        XML Binding class name: action_status
        Dictionary key name: action_status

    **associated_objects**

        Type: *[cybox.core.action.AssociatedObjects](#)*
        XML Binding class name: Associated_Objects
        Dictionary key name: associated_objects

    **context**

        XML Binding class name: context
        Dictionary key name: context

    **description**

        Type: *[cybox.common.structured_text.StructuredText](#)*
        XML Binding class name: Description
        Dictionary key name: description

    **discovery_method**

Type: *cybox.common.measuresource.MeasureSource*
XML Binding class name: `Discovery_Method`
Dictionary key name: `discovery_method`

**frequency**

Type: *cybox.core.frequency.Frequency*
XML Binding class name: `Frequency`
Dictionary key name: `frequency`

**id_**

XML Binding class name: `id`
Dictionary key name: `id`

**idref**

XML Binding class name: `idref`
Dictionary key name: `idref`

**name**
TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*
XML Binding class name: `Name`
Dictionary key name: `name`

**ordinal_position**

XML Binding class name: `ordinal_position`
Dictionary key name: `ordinal_position`

**relationships**

Type: *cybox.core.action.ActionRelationships*
XML Binding class name: `Relationships`
Dictionary key name: `relationships`

**timestamp**

XML Binding class name: `timestamp`
Dictionary key name: `timestamp`

**type_**
TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*
XML Binding class name: `Type`
Dictionary key name: `type`

**class** cybox.core.action.**ActionAliases**(*\*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.cybox_core.ActionAliasesType

**class** cybox.core.action.**ActionArgument**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.cybox_core.ActionArgumentType

    **argument_name**
        TypedField subclass for VocabString fields.

        Type: *[cybox.common.vocabs.VocabString](#)*
        XML Binding class name: Argument_Name
        Dictionary key name: argument_name

    **argument_value**

        XML Binding class name: Argument_Value
        Dictionary key name: argument_value

**class** cybox.core.action.**ActionArguments**(*\*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.cybox_core.ActionArgumentsType

**class** cybox.core.action.**ActionRelationship**
    Bases: cybox.Entity

    XML binding class: <undefined>

    **static from_dict**(*action_relationship_dict*)

    **static from_obj**(*action_relationship_obj*)

    **to_dict**()

    **to_obj**(*return_obj=None*, *ns_info=None*)

**class** cybox.core.action.**ActionRelationships**(*\*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.cybox_core.ActionRelationshipsType

**class** cybox.core.action.**Actions**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.cybox_core.ActionsType

**class** cybox.core.action.**AssociatedObjects**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.cybox_core.AssociatedObjectsType

**Version**: 2.1.0.12.dev0

## cybox.core.action_reference module

CybOX Action Reference Class

**class** cybox.core.action_reference.**ActionReference**(*action_id=None*)
    Bases: cybox.Entity

    XML binding class: cybox.bindings.cybox_core.ActionReferenceType

    **action_id**

        XML Binding class name: action_id
        Dictionary key name: action_id

**Version**: 2.1.0.12.dev0

## cybox.core.associated_object module

**class** cybox.core.associated_object.**AssociatedObject**(*defined_object=None*, *type_=None*, *association_type=None*)
    Bases: *cybox.core.object.Object*

    The CybOX Associated Object element.

    Currently only supports the id, association_type and ObjectProperties properties

    XML binding class: <undefined>

    **static from_dict**(*object_dict*)

    **static from_obj**(*object_obj*)

    **superclass**
        alias of Object | XML binding class: <undefined>

    **to_dict**()

> **to_obj**(*return_obj=None*, *ns_info=None*)

**Version**: 2.1.0.12.dev0

## cybox.core.event module

**class** cybox.core.event.**Event**

> Bases: cybox.Entity

> XML binding class: cybox.bindings.cybox_core.EventType

> **actions**
>
> > Type: *cybox.core.action.Actions*
> > XML Binding class name: Actions
> > Dictionary key name: actions
>
> **description**
>
> > Type: *cybox.common.structured_text.StructuredText*
> > XML Binding class name: Description
> > Dictionary key name: description
>
> **event**
>
> > (List of values permitted)
> > Type: *cybox.core.event.Event*
> > XML Binding class name: Event
> > Dictionary key name: event
>
> **frequency**
>
> > Type: *cybox.core.frequency.Frequency*
> > XML Binding class name: Frequency
> > Dictionary key name: frequency
>
> **id_**
>
> > XML Binding class name: id
> > Dictionary key name: id
>
> **idref**
>
> > XML Binding class name: idref
> > Dictionary key name: idref
>
> **observation_method**
>
> > Type: *cybox.common.measuresource.MeasureSource*

XML Binding class name: Observation_Method

Dictionary key name: observation_method

**type_**

TypedField subclass for VocabString fields.

Type: *cybox.common.vocabs.VocabString*

XML Binding class name: Type

Dictionary key name: type

Version: 2.1.0.12.dev0

## cybox.core.frequency module

class cybox.core.frequency.**Frequency**

Bases: cybox.Entity

XML binding class: cybox.bindings.cybox_core.FrequencyType

**rate**

XML Binding class name: rate

Dictionary key name: rate

**scale**

XML Binding class name: scale

Dictionary key name: scale

**trend**

XML Binding class name: trend

Dictionary key name: trend

**units**

XML Binding class name: units

Dictionary key name: units

Version: 2.1.0.12.dev0

## cybox.core.object module

class cybox.core.object.**DomainSpecificObjectProperties**

Bases: cybox.Entity

The Cybox DomainSpecificObjectProperties base class.

XML binding class: <undefined>

> **static from_dict**(*domain_specific_properties_dict*)

> **static from_obj**(*domain_specific_properties_obj*)

> **to_dict**(*partial_dict=None*)
>> Populate an existing dictionary.
>>
>> Note that this is different than to_dict() on most other CybOX types.

> **to_obj**(*return_obj=None*, *ns_info=None*)
>> Populate an existing bindings object.
>>
>> Note that this is different than to_obj() on most other CybOX types.

**class** cybox.core.object.**Object**(*properties=None*, *type_=None*)
> Bases: cybox.Entity

> The CybOX Object element.

> Currently only supports the following data members: - id_ - idref - properties - related_objects

> XML binding class: <undefined>

> **add_related**(*related*, *relationship*, *inline=True*)

> **static from_dict**(*object_dict*, *obj=None*)

> **static from_obj**(*object_obj*, *obj=None*)

> **to_dict**()

> **to_obj**(*return_obj=None*, *ns_info=None*)

**class** cybox.core.object.**RelatedObject**(*\*args*, *\*\*kwargs*)
> Bases: *cybox.core.object.Object*

> XML binding class: <undefined>

> **static from_dict**(*relobj_dict*)

> **static from_obj**(*relobj_obj*)

> **get_properties**()

> **to_dict**()

> **to_obj**(*return_obj=None*, *ns_info=None*)

cybox.core.object.**add_external_class**(*klass*, *name=None*)
> Adds a class implementation to this binding's globals() dict.

> These classes can be used to implement Properties, Domain_Specific_Object_Properties, or Defined_Effect fields on an Object.

>> **Parameters**

>>> • **klass** (*class*) – Python class that implements the new type

- **name** (*str*) – The name of the class, as it will appear in XML documents to be parsed. Defaults to klass.__name__.

**Version**: 2.1.0.12.dev0

## `cybox.core.observable` module

class cybox.core.observable.**Keywords**(*\*args*)

   Bases: cybox.EntityList

   XML binding class: cybox.bindings.cybox_core.KeywordsType

class cybox.core.observable.**Observable**(*item=None*, *id_=None*, *idref=None*, *title=None*, *description=None*)

   Bases: cybox.Entity

   A single Observable.

   XML binding class: <undefined>

   **add_keyword**(*value*)

   static **from_dict**(*observable_dict*)

   static **from_obj**(*observable_obj*)

   **to_dict**()

   **to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.core.observable.**ObservableComposition**(*operator='AND'*, *observables=None*)

   Bases: cybox.Entity

   The ObservableCompositionType entity defines a logical compositions of CybOX Observables. The combinatorial behavior is derived from the operator property.

   XML binding class: <undefined>

   **add**(*observable*)

   static **from_dict**(*observable_comp_dict*)

   static **from_obj**(*observable_comp_obj*)

   **to_dict**()

   **to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.core.observable.**Observables**(*observables=None*)

   Bases: cybox.EntityList

   The root CybOX Observables object.

   Pools are not currently supported.

---

XML binding class: <undefined>

**add**(*observable*)

static **from_dict**(*observables_dict*)

static **from_obj**(*observables_obj*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

## 3.1.3 CybOX Objects

Modules located in the base `cybox.objects` package

**Version**: 2.1.0.12.dev0

### cybox.objects **package**

### Submodules

**Version**: 2.1.0.12.dev0

**cybox.objects.account_object module**
class cybox.objects.account_object.**Account**
    Bases: *cybox.common.object_properties.ObjectProperties*

    XML binding class: cybox.bindings.account_object.AccountObjectType

    **authentication**

        (List of values permitted)
        Type: *cybox.objects.account_object.Authentication*
        XML Binding class name: Authentication
        Dictionary key name: authentication

    **creation_date**

        Type: *cybox.common.properties.DateTime*
        XML Binding class name: Creation_Date
        Dictionary key name: creation_date

    **description**

        Type: *cybox.common.properties.String*
        XML Binding class name: Description
        Dictionary key name: description

**disabled**

> XML Binding class name: disabled
>
> Dictionary key name: disabled

**domain**

> Type: *cybox.common.properties.String*
>
> XML Binding class name: Domain
>
> Dictionary key name: domain

**last_accessed_time**

> Type: *cybox.common.properties.DateTime*
>
> XML Binding class name: Last_Accessed_Time
>
> Dictionary key name: last_accessed_time

**locked_out**

> XML Binding class name: locked_out
>
> Dictionary key name: locked_out

**modified_date**

> Type: *cybox.common.properties.DateTime*
>
> XML Binding class name: Modified_Date
>
> Dictionary key name: modified_date

class cybox.objects.account_object.**Authentication**

> Bases: cybox.Entity

> XML binding class: cybox.bindings.account_object.AuthenticationType

**authentication_data**

> Type: *cybox.common.properties.String*
>
> XML Binding class name: Authentication_Data
>
> Dictionary key name: authentication_data

**authentication_token_protection_mechanism**
TypedField subclass for VocabString fields.

> Type: *cybox.common.vocabs.VocabString*
>
> XML Binding class name: Authentication_Token_Protection_Mechanism
>
> Dictionary key name: authentication_token_protection_mechanism

**authentication_type**
TypedField subclass for VocabString fields.

Type: *[cybox.common.vocabs.VocabString](#)*

XML Binding class name: `Authentication_Type`

Dictionary key name: `authentication_type`

### structured_authentication_mechanism

Type: *[cybox.objects.account_object.StructuredAuthenticationMechanism](#)*

XML Binding class name: `Structured_Authentication_Mechanism`

Dictionary key name: `structured_authentication_mechanism`

class cybox.objects.account_object.**StructuredAuthenticationMechanism**

Bases: `cybox.Entity`

XML binding class:
`cybox.bindings.account_object.StructuredAuthenticationMechanismType`

### description

Type: *[cybox.common.properties.String](#)*

XML Binding class name: `Description`

Dictionary key name: `description`

**Version**: 2.1.0.12.dev0

**cybox.objects.address_object module**

class cybox.objects.address_object.**Address**(*address_value=None*, *category=None*)

Bases: *[cybox.common.object_properties.ObjectProperties](#)*

XML binding class: cybox.bindings.address_object.AddressObjectType

### address_value

Type: *[cybox.common.properties.String](#)*

XML Binding class name: `Address_Value`

Dictionary key name: `address_value`

### category

XML Binding class name: `category`

Dictionary key name: `category`

### is_destination

XML Binding class name: `is_destination`

Dictionary key name: `is_destination`

**is_source**

> XML Binding class name: is_source
>
> Dictionary key name: is_source

**is_spoofed**

> XML Binding class name: is_spoofed
>
> Dictionary key name: is_spoofed

**vlan_name**

> Type: *cybox.common.properties.String*
>
> XML Binding class name: VLAN_Name
>
> Dictionary key name: vlan_name

**vlan_num**

> Type: *cybox.common.properties.Integer*
>
> XML Binding class name: VLAN_Num
>
> Dictionary key name: vlan_num

class cybox.objects.address_object.**EmailAddress**(*addr_string=None*)

> Bases: *cybox.objects.address_object.Address*

Convenience class for creating email addresses.

Note that this is not an actual CybOX type.

> XML binding class: cybox.bindings.address_object.AddressObjectType

> classmethod **istypeof**(*obj*)

**Version**: 2.1.0.12.dev0

**cybox.objects.api_object module**

class cybox.objects.api_object.**API**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.api_object.APIObjectType

**address**

> Type: *cybox.common.properties.HexBinary*
>
> XML Binding class name: Address
>
> Dictionary key name: address

**description**

> Type: *cybox.common.structured_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

### function_name

Type: *cybox.common.properties.String*

XML Binding class name: Function_Name

Dictionary key name: function_name

### normalized_function_name

Type: *cybox.common.properties.String*

XML Binding class name: Normalized_Function_Name

Dictionary key name: normalized_function_name

### platform

Type: *cybox.common.platform_specification.PlatformSpecification*

XML Binding class name: Platform

Dictionary key name: platform

**Version**: 2.1.0.12.dev0

**cybox.objects.archive_file_object module**

class cybox.objects.archive_file_object.**ArchiveFile**

Bases: *cybox.objects.file_object.File*

XML binding class: cybox.bindings.file_object.FileObjectType

### archive_format

Type: *cybox.common.properties.String*

XML Binding class name: Archive_Format

Dictionary key name: archive_format

### archived_file

(List of values permitted)

Type: *cybox.objects.file_object.File*

XML Binding class name: Archived_File

Dictionary key name: archived_file

### comment

Type: *cybox.common.properties.String*

XML Binding class name: Comment

Dictionary key name: comment

### decryption_key

> Type: *cybox.common.properties.String*
> XML Binding class name: Decryption_Key
> Dictionary key name: decryption_key

### encryption_algorithm

> Type: *cybox.common.properties.String*
> XML Binding class name: Encryption_Algorithm
> Dictionary key name: encryption_algorithm

### file_count

> Type: *cybox.common.properties.Integer*
> XML Binding class name: File_Count
> Dictionary key name: file_count

### version

> Type: *cybox.common.properties.String*
> XML Binding class name: Version
> Dictionary key name: version

Version: 2.1.0.12.dev0

### cybox.objects.artifact_object module

class cybox.objects.artifact_object.**Artifact**(*data=None*, *type_=None*)

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: <undefined>

> static **from_dict**(*artifact_dict*)

> static **from_obj**(*artifact_obj*)

> **to_dict**()

> **to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.objects.artifact_object.**Base64Encoding**

> Bases: *cybox.objects.artifact_object.Encoding*

> XML binding class: <undefined>

> **pack**(*data*)

> **unpack**(*packed_data*)

class cybox.objects.artifact_object.**Bz2Compression**

> Bases: *cybox.objects.artifact_object.Compression*

> XML binding class: <undefined>

**pack**(*data*)

**unpack**(*packed_data*)

class cybox.objects.artifact_object.**Compression**(*compression_mechanism=None*)
Bases: *[cybox.objects.artifact_object.Packaging](#)*

A Compression packaging layer

Currently only zlib and bz2 are supported. Also, compression_mechanism_ref is not currently supported.

XML binding class: <undefined>

static **from_dict**(*compression_dict*)

static **from_obj**(*compression_obj*)

static **get_object**(*mechanism*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.objects.artifact_object.**Encoding**
Bases: *[cybox.objects.artifact_object.Packaging](#)*

An encoding packaging layer.

Currently only base64 with a standard alphabet is supported.

XML binding class: <undefined>

static **from_dict**(*encoding_dict*)

static **from_obj**(*encoding_obj*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.objects.artifact_object.**Encryption**(*encryption_mechanism=None*,     *encryption_key=None*)
Bases: *[cybox.objects.artifact_object.Packaging](#)*

An encryption packaging layer.

XML binding class: <undefined>

static **from_dict**(*encryption_dict*)

static **from_obj**(*encryption_obj*)

static **get_object**(*mechanism*, *key*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

**class** cybox.objects.artifact_object.**Packaging**

   Bases: cybox.Entity

   An individual packaging layer.

   XML binding class: <undefined>

   **pack**(*data*)

      This should accept byte data and return byte data

   **unpack**(*packed_data*)

      This should accept byte data and return byte data

**class** cybox.objects.artifact_object.**PasswordProtectedZipEncryption**(*key*)

   Bases: *cybox.objects.artifact_object.Encryption*

   XML binding class: <undefined>

   **unpack**(*packed_data*)

**class** cybox.objects.artifact_object.**RawArtifact**(*value=None*)

   Bases: *cybox.common.properties.String*

   XML binding class: cybox.bindings.artifact_object.RawArtifactType

   **byte_order**

      XML Binding class name: byte_order
      Dictionary key name: byte_order

**class** cybox.objects.artifact_object.**XOREncryption**(*key*)

   Bases: *cybox.objects.artifact_object.Encryption*

   XML binding class: <undefined>

   **pack**(*data*)

   **unpack**(*packed_data*)

**class** cybox.objects.artifact_object.**ZlibCompression**

   Bases: *cybox.objects.artifact_object.Compression*

   XML binding class: <undefined>

   **pack**(*data*)

   **unpack**(*packed_data*)

**Version**: 2.1.0.12.dev0

## cybox.objects.as_object module

cybox.objects.as_object.**AS**

    alias of *[AutonomousSystem](#)* | XML binding class: cybox.bindings.as_object.ASObjectType

class cybox.objects.as_object.**AutonomousSystem**

    Bases: *[cybox.common.object_properties.ObjectProperties](#)*

    XML binding class: cybox.bindings.as_object.ASObjectType

    **handle**

        Type: *[cybox.common.properties.String](#)*
        XML Binding class name: Handle
        Dictionary key name: handle

    **name**

        Type: *[cybox.common.properties.String](#)*
        XML Binding class name: Name
        Dictionary key name: name

    **number**

        Type: *[cybox.common.properties.NonNegativeInteger](#)*
        XML Binding class name: Number
        Dictionary key name: number

    **regional_internet_registry**

        Type: *[cybox.common.properties.String](#)*
        XML Binding class name: Regional_Internet_Registry
        Dictionary key name: regional_internet_registry

**Version**: 2.1.0.12.dev0

## cybox.objects.arp_cache_object module

class cybox.objects.arp_cache_object.**ARPCache**

    Bases: *[cybox.common.object_properties.ObjectProperties](#)*

    XML binding class: cybox.bindings.arp_cache_object.ARPCacheObjectType

    **arp_cache_entry**

        (List of values permitted)
        Type: *[cybox.objects.arp_cache_object.ARPCacheEntry](#)*
        XML Binding class name: ARP_Cache_Entry

Dictionary key name: `arp_cache_entry`

**class** cybox.objects.arp_cache_object.**ARPCacheEntry**

Bases: `cybox.Entity`

XML binding class: cybox.bindings.arp_cache_object.ARPCacheEntryType

**ip_address**

Type: *cybox.objects.address_object.Address*

XML Binding class name: `IP_Address`

Dictionary key name: `ip_address`

**network_interface**

Type: *cybox.objects.system_object.NetworkInterface*

XML Binding class name: `Network_Interface`

Dictionary key name: `network_interface`

**physical_address**

Type: *cybox.common.properties.String*

XML Binding class name: `Physical_Address`

Dictionary key name: `physical_address`

**type_**

Type: *cybox.common.properties.String*

XML Binding class name: `Type`

Dictionary key name: `type`

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**cybox.objects.code_object module**

**class** cybox.objects.code_object.**Code**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.code_object.CodeObjectType

**code_language**

Type: *cybox.common.properties.String*

XML Binding class name: `Code_Language`

Dictionary key name: `code_language`

**code_segment**

Type: *cybox.common.properties.String*

XML Binding class name: Code_Segment

Dictionary key name: code_segment

**code_segment_xor**

Type: *cybox.objects.code_object.CodeSegmentXOR*

XML Binding class name: Code_Segment_XOR

Dictionary key name: code_segment_xor

**description**

Type: *cybox.common.structured_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

**digital_signatures**

Type: *cybox.common.digitalsignature.DigitalSignatureList*

XML Binding class name: Digital_Signatures

Dictionary key name: digital_signatures

**discovery_method**

Type: *cybox.common.measuresource.MeasureSource*

XML Binding class name: Discovery_Method

Dictionary key name: discovery_method

**extracted_features**

Type: *cybox.common.extracted_features.ExtractedFeatures*

XML Binding class name: Extracted_Features

Dictionary key name: extracted_features

**processor_family**

(List of values permitted)

Type: *cybox.common.properties.String*

XML Binding class name: Processor_Family

Dictionary key name: processor_family

**purpose**

Type: *cybox.common.properties.String*

XML Binding class name: Purpose

Dictionary key name: purpose

**start_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Start_Address

Dictionary key name: start_address

**targeted_platforms**

> Type: *cybox.objects.code_object.TargetedPlatforms*
> XML Binding class name: `Targeted_Platforms`
> Dictionary key name: `targeted_platforms`

**type_**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Type`
> Dictionary key name: `type`

class cybox.objects.code_object.**CodeSegmentXOR**(*value=None*)
> Bases: *cybox.common.properties.String*

> XML binding class: cybox.bindings.code_object.CodeSegmentXORType

**xor_pattern**

> XML Binding class name: `xor_pattern`
> Dictionary key name: `xor_pattern`

class cybox.objects.code_object.**TargetedPlatforms**(*\*args*)
> Bases: cybox.EntityList

> XML binding class: cybox.bindings.code_object.TargetedPlatformsType

**Version**: 2.1.0.12.dev0

**cybox.objects.device_object module**
class cybox.objects.device_object.**Device**
> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.device_object.DeviceObjectType

**description**

> Type: *cybox.common.structured_text.StructuredText*
> XML Binding class name: `Description`
> Dictionary key name: `description`

**device_type**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Device_Type`
> Dictionary key name: `device_type`

**firmware_version**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Firmware_Version`
> Dictionary key name: `firmware_version`

**manufacturer**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Manufacturer`
> Dictionary key name: `manufacturer`

**model**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Model`
> Dictionary key name: `model`

**serial_number**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Serial_Number`
> Dictionary key name: `serial_number`

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**cybox.objects.disk_object module**

class cybox.objects.disk_object.**Disk**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.disk_object.DiskObjectType

**disk_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Disk_Name`
> Dictionary key name: `disk_name`

**disk_size**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: `Disk_Size`
> Dictionary key name: `disk_size`

**free_space**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: `Free_Space`
> Dictionary key name: `free_space`

**partition_list**

> Type: *cybox.objects.disk_object.PartitionList*
> XML Binding class name: `Partition_List`
> Dictionary key name: `partition_list`

**type**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Type`
> Dictionary key name: `type`

class cybox.objects.disk_object.**PartitionList**(*args*)

> Bases: `cybox.EntityList`

> XML binding class: `cybox.bindings.disk_object.PartitionListType`

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**cybox.objects.disk_partition_object module**

class cybox.objects.disk_partition_object.**DiskPartition**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: `cybox.bindings.disk_partition_object.DiskPartitionObjectType`

**created**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Created`
> Dictionary key name: `created`

**device_name**

> Type: *cybox.common.properties.Name*
> XML Binding class name: `Device_Name`
> Dictionary key name: `device_name`

**mount_point**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Mount_Point`
> Dictionary key name: `mount_point`

**partition_id**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: `Partition_ID`

Dictionary key name: partition_id

### partition_length

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: Partition_Length
Dictionary key name: partition_length

### partition_offset

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: Partition_Offset
Dictionary key name: partition_offset

### space_left

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: Space_Left
Dictionary key name: space_left

### space_used

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: Space_Used
Dictionary key name: space_used

### total_space

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: Total_Space
Dictionary key name: total_space

### type

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: Type
Dictionary key name: type

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**cybox.objects.dns_cache_object module**

class cybox.objects.dns_cache_object.**DNSCache**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.dns_cache_object.DNSCacheObjectType

### dns_cache_entry

(List of values permitted)
Type: *cybox.objects.dns_cache_object.DNSCacheEntry*

XML Binding class name: DNS_Cache_Entry

Dictionary key name: dns_cache_entry

**class** cybox.objects.dns_cache_object.**DNSCacheEntry**

Bases: cybox.Entity

XML binding class: cybox.bindings.dns_cache_object.DNSCacheEntryType

**dns_entry**

Type: *cybox.objects.dns_record_object.DNSRecord*

XML Binding class name: DNS_Entry

Dictionary key name: dns_entry

**ttl**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: TTL

Dictionary key name: ttl

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**cybox.objects.dns_query_object module**

**class** cybox.objects.dns_query_object.**DNSQuery**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.dns_query_object.DNSQueryObjectType

**additional_records**

Type: *cybox.objects.dns_query_object.DNSResourceRecords*

XML Binding class name: Additional_Records

Dictionary key name: additional_records

**answer_resource_records**

Type: *cybox.objects.dns_query_object.DNSResourceRecords*

XML Binding class name: Answer_Resource_Records

Dictionary key name: answer_resource_records

**authority_resource_records**

Type: *cybox.objects.dns_query_object.DNSResourceRecords*

XML Binding class name: Authority_Resource_Records

Dictionary key name: authority_resource_records

**date_ran**

Type: *cybox.common.properties.DateTime*

XML Binding class name: `Date_Ran`

Dictionary key name: `date_ran`

**question**

Type: *cybox.objects.dns_query_object.DNSQuestion*

XML Binding class name: `Question`

Dictionary key name: `question`

**service_used**

Type: *cybox.common.properties.String*

XML Binding class name: `Service_Used`

Dictionary key name: `service_used`

**successful**

XML Binding class name: `successful`

Dictionary key name: `successful`

**transaction_id**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Transaction_ID`

Dictionary key name: `transaction_id`

**class** cybox.objects.dns_query_object.**DNSQuestion**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.dns_query_object.DNSQuestionType`

**qclass**

Type: *cybox.common.properties.String*

XML Binding class name: `QClass`

Dictionary key name: `qclass`

**qname**

Type: *cybox.objects.uri_object.URI*

XML Binding class name: `QName`

Dictionary key name: `qname`

**qtype**

Type: *cybox.common.properties.String*

XML Binding class name: `QType`

Dictionary key name: `qtype`

**class** cybox.objects.dns_query_object.**DNSResourceRecords**(*\*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.dns_query_object.DNSResourceRecordsType

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**cybox.objects.dns_record_object module**
**class** cybox.objects.dns_record_object.**DNSRecord**
    Bases: *[cybox.common.object_properties.ObjectProperties](#)*

    XML binding class: cybox.bindings.dns_record_object.DNSRecordObjectType

    **address_class**

        Type: *[cybox.common.properties.String](#)*
        XML Binding class name: Address_Class
        Dictionary key name: address_class

    **data_length**

        Type: *[cybox.common.properties.Integer](#)*
        XML Binding class name: Data_Length
        Dictionary key name: data_length

    **description**

        Type: *[cybox.common.structured_text.StructuredText](#)*
        XML Binding class name: Description
        Dictionary key name: description

    **domain_name**

        Type: *[cybox.objects.uri_object.URI](#)*
        XML Binding class name: Domain_Name
        Dictionary key name: domain_name

    **entry_type**

        Type: *[cybox.common.properties.String](#)*
        XML Binding class name: Entry_Type
        Dictionary key name: entry_type

    **flags**

        Type: *[cybox.common.properties.HexBinary](#)*
        XML Binding class name: Flags

Dictionary key name: `flags`

**ip_address**

    Type: *cybox.objects.address_object.Address*
XML Binding class name: `IP_Address`
Dictionary key name: `ip_address`

**queried_date**

    Type: *cybox.common.properties.DateTime*
XML Binding class name: `Queried_Date`
Dictionary key name: `queried_date`

**record_data**

    XML Binding class name: `Record_Data`
Dictionary key name: `record_data`

**record_name**

    Type: *cybox.common.properties.String*
XML Binding class name: `Record_Name`
Dictionary key name: `record_name`

**record_type**

    Type: *cybox.common.properties.String*
XML Binding class name: `Record_Type`
Dictionary key name: `record_type`

**ttl**

    Type: *cybox.common.properties.Integer*
XML Binding class name: `TTL`
Dictionary key name: `ttl`

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**cybox.objects.domain_name_object module**

class cybox.objects.domain_name_object.**DomainName**

    Bases: *cybox.common.object_properties.ObjectProperties*

    XML binding class: `cybox.bindings.domain_name_object.DomainNameObjectType`

**type_**

    XML Binding class name: `type_`
Dictionary key name: `type`

> **value**
>
>> Type: *cybox.common.properties.String*
>> XML Binding class name: `Value`
>> Dictionary key name: `value`

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**cybox.objects.email_message_object module**

**class** cybox.objects.email_message_object.**AttachmentReference**(*object_reference=None*)

> Bases: cybox.ObjectReference

> XML binding class: cybox.bindings.email_message_object.AttachmentReferenceType

**class** cybox.objects.email_message_object.**Attachments**(*\*args*)

> Bases: cybox.ReferenceList

> XML binding class: cybox.bindings.email_message_object.AttachmentsType

**class** cybox.objects.email_message_object.**EmailHeader**

> Bases: cybox.Entity

> XML binding class: cybox.bindings.email_message_object.EmailHeaderType

> **bcc**
>
>> Type: *cybox.objects.email_message_object.EmailRecipients*
>> XML Binding class name: `BCC`
>> Dictionary key name: `bcc`

> **boundary**
>
>> Type: *cybox.common.properties.String*
>> XML Binding class name: `Boundary`
>> Dictionary key name: `boundary`

> **cc**
>
>> Type: *cybox.objects.email_message_object.EmailRecipients*
>> XML Binding class name: `CC`
>> Dictionary key name: `cc`

> **content_type**
>
>> Type: *cybox.common.properties.String*
>> XML Binding class name: `Content_Type`

Dictionary key name: content_type

**date**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Date
Dictionary key name: date

**errors_to**

Type: *cybox.common.properties.String*
XML Binding class name: Errors_To
Dictionary key name: errors_to

**from_**

Type: *cybox.objects.address_object.EmailAddress*
XML Binding class name: From
Dictionary key name: from

**in_reply_to**

Type: *cybox.common.properties.String*
XML Binding class name: In_Reply_To
Dictionary key name: in_reply_to

**message_id**

Type: *cybox.common.properties.String*
XML Binding class name: Message_ID
Dictionary key name: message_id

**mime_version**

Type: *cybox.common.properties.String*
XML Binding class name: MIME_Version
Dictionary key name: mime_version

**precedence**

Type: *cybox.common.properties.String*
XML Binding class name: Precedence
Dictionary key name: precedence

**received_lines**

Type: *cybox.objects.email_message_object.ReceivedLineList*
XML Binding class name: Received_Lines
Dictionary key name: received_lines

**reply_to**

Type: *cybox.objects.address_object.EmailAddress*
XML Binding class name: Reply_To
Dictionary key name: reply_to

**sender**

Type: *cybox.objects.address_object.EmailAddress*
XML Binding class name: Sender
Dictionary key name: sender

**subject**

Type: *cybox.common.properties.String*
XML Binding class name: Subject
Dictionary key name: subject

**to**

Type: *cybox.objects.email_message_object.EmailRecipients*
XML Binding class name: To
Dictionary key name: to

**user_agent**

Type: *cybox.common.properties.String*
XML Binding class name: User_Agent
Dictionary key name: user_agent

**x_mailer**

Type: *cybox.common.properties.String*
XML Binding class name: X_Mailer
Dictionary key name: x_mailer

**x_originating_ip**

Type: *cybox.objects.address_object.Address*
XML Binding class name: X_Originating_IP
Dictionary key name: x_originating_ip

**x_priority**

Type: *cybox.common.properties.PositiveInteger*
XML Binding class name: X_Priority
Dictionary key name: x_priority

class cybox.objects.email_message_object.**EmailMessage**
Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.email_message_object.EmailMessageObjectType

**attachments**

> Type: *cybox.objects.email_message_object.Attachments*
> XML Binding class name: Attachments
> Dictionary key name: attachments

**email_server**

> Type: *cybox.common.properties.String*
> XML Binding class name: Email_Server
> Dictionary key name: email_server

**header**

> Type: *cybox.objects.email_message_object.EmailHeader*
> XML Binding class name: Header
> Dictionary key name: header

**links**

> Type: *cybox.objects.email_message_object.Links*
> XML Binding class name: Links
> Dictionary key name: links

**raw_body**

> Type: *cybox.common.properties.String*
> XML Binding class name: Raw_Body
> Dictionary key name: raw_body

**raw_header**

> Type: *cybox.common.properties.String*
> XML Binding class name: Raw_Header
> Dictionary key name: raw_header

class cybox.objects.email_message_object.**EmailRecipients**(*args*)
> Bases: cybox.EntityList

> XML binding class: cybox.bindings.email_message_object.EmailRecipientsType

class cybox.objects.email_message_object.**LinkReference**(*object_reference=None*)
> Bases: cybox.ObjectReference

> XML binding class: cybox.bindings.email_message_object.LinkReferenceType

class cybox.objects.email_message_object.**Links**(*args*)
> Bases: cybox.ReferenceList

XML binding class: cybox.bindings.email_message_object.LinksType

**class** cybox.objects.email_message_object.**ReceivedLine**

    Bases: cybox.Entity

    XML binding class: cybox.bindings.email_message_object.EmailReceivedLineType

    **by**

        Type: *cybox.common.properties.String*

        XML Binding class name: By

        Dictionary key name: by

    **for_**

        Type: *cybox.common.properties.String*

        XML Binding class name: For

        Dictionary key name: for

    **from_**

        Type: *cybox.common.properties.String*

        XML Binding class name: From

        Dictionary key name: from

    **id_**

        Type: *cybox.common.properties.String*

        XML Binding class name: ID

        Dictionary key name: id

    **timestamp**

        Type: *cybox.common.properties.DateTime*

        XML Binding class name: Timestamp

        Dictionary key name: timestamp

    **via**

        Type: *cybox.common.properties.String*

        XML Binding class name: Via

        Dictionary key name: via

    **with_**

        Type: *cybox.common.properties.String*

        XML Binding class name: With

        Dictionary key name: with

class cybox.objects.email_message_object.**ReceivedLineList**(*args*)

> Bases: cybox.EntityList

> XML binding class:
> cybox.bindings.email_message_object.EmailReceivedLineListType

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**cybox.objects.file_object module**

class cybox.objects.file_object.**EPJumpCode**

> Bases: cybox.Entity

> XML binding class: cybox.bindings.file_object.EPJumpCodeType

> **depth**

>> Type: *cybox.common.properties.Integer*
>> XML Binding class name: Depth
>> Dictionary key name: depth

> **opcodes**

>> Type: *cybox.common.properties.String*
>> XML Binding class name: Opcodes
>> Dictionary key name: opcodes

class cybox.objects.file_object.**EntryPointSignature**

> Bases: cybox.Entity

> XML binding class: cybox.bindings.file_object.EntryPointSignatureType

> **name**

>> Type: *cybox.common.properties.String*
>> XML Binding class name: Name
>> Dictionary key name: name

> **type_**

>> Type: *cybox.common.properties.String*
>> XML Binding class name: Type
>> Dictionary key name: type

class cybox.objects.file_object.**EntryPointSignatureList**(*args*)

> Bases: cybox.EntityList

XML binding class: cybox.bindings.file_object.EntryPointSignatureListType

**class** cybox.objects.file_object.**File**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.file_object.FileObjectType

**accessed_time**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Accessed_Time
Dictionary key name: accessed_time

**add_hash**(*hash_*)

**byte_runs**

Type: *cybox.common.byterun.ByteRuns*
XML Binding class name: Byte_Runs
Dictionary key name: byte_runs

**compression_comment**

Type: *cybox.common.properties.String*
XML Binding class name: Compression_Comment
Dictionary key name: compression_comment

**compression_method**

Type: *cybox.common.properties.String*
XML Binding class name: Compression_Method
Dictionary key name: compression_method

**compression_version**

Type: *cybox.common.properties.String*
XML Binding class name: Compression_Version
Dictionary key name: compression_version

**created_time**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Created_Time
Dictionary key name: created_time

**decryption_key**

Type: *cybox.common.properties.String*
XML Binding class name: Decryption_Key

Dictionary key name: decryption_key

**device_path**

Type: *cybox.common.properties.String*
XML Binding class name: Device_Path
Dictionary key name: device_path

**digital_signatures**

Type: *cybox.common.digitalsignature.DigitalSignatureList*
XML Binding class name: Digital_Signatures
Dictionary key name: digital_signatures

**encryption_algorithm**

Type: *cybox.common.properties.String*
XML Binding class name: Encryption_Algorithm
Dictionary key name: encryption_algorithm

**extracted_features**

Type: *cybox.common.extracted_features.ExtractedFeatures*
XML Binding class name: Extracted_Features
Dictionary key name: extracted_features

**file_attributes_list**

Type: *cybox.objects.file_object.FileAttribute*
XML Binding class name: File_Attributes_List
Dictionary key name: file_attributes_list

**file_extension**

Type: *cybox.common.properties.String*
XML Binding class name: File_Extension
Dictionary key name: file_extension

**file_format**

Type: *cybox.common.properties.String*
XML Binding class name: File_Format
Dictionary key name: file_format

**file_name**

Type: *cybox.common.properties.String*
XML Binding class name: File_Name
Dictionary key name: file_name

**file_path**

> Type: *cybox.objects.file_object.FilePath*
> XML Binding class name: File_Path
> Dictionary key name: file_path

**full_path**

> Type: *cybox.common.properties.String*
> XML Binding class name: Full_Path
> Dictionary key name: full_path

**hashes**

> Type: *cybox.common.hashes.HashList*
> XML Binding class name: Hashes
> Dictionary key name: hashes

**is_masqueraded**

> XML Binding class name: is_masqueraded
> Dictionary key name: is_masqueraded

**is_packed**

> XML Binding class name: is_packed
> Dictionary key name: is_packed

**magic_number**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Magic_Number
> Dictionary key name: magic_number

**modified_time**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: Modified_Time
> Dictionary key name: modified_time

**packer_list**

> Type: *cybox.objects.file_object.PackerList*
> XML Binding class name: Packer_List
> Dictionary key name: packer_list

**peak_entropy**

> Type: *cybox.common.properties.Double*
> XML Binding class name: Peak_Entropy
> Dictionary key name: peak_entropy

**permissions**

Type: *cybox.objects.file_object.FilePermissions*
XML Binding class name: `Permissions`
Dictionary key name: `permissions`

**size_in_bytes**

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: `Size_In_Bytes`
Dictionary key name: `size_in_bytes`

**sym_links**

Type: *cybox.objects.file_object.SymLinksList*
XML Binding class name: `Sym_Links`
Dictionary key name: `sym_links`

**user_owner**

Type: *cybox.common.properties.String*
XML Binding class name: `User_Owner`
Dictionary key name: `user_owner`

class cybox.objects.file_object.**FileAttribute**
Bases: cybox.Entity

An abstract class for file attributes.

XML binding class: <undefined>

class cybox.objects.file_object.**FilePath**(*args*, *\*\*kwargs*)
Bases: *cybox.common.properties.String*

XML binding class: cybox.bindings.file_object.FilePathType

static **from_dict**(*filepath_dict*)

static **from_obj**(*filepath_obj*)

**is_plain**()

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.objects.file_object.**FilePermissions**
Bases: cybox.Entity

An abstract class for file permissions.

XML binding class: <undefined>

**class** cybox.objects.file_object.**Packer**

    Bases: cybox.Entity

    XML binding class: cybox.bindings.file_object.PackerType

    **detected_entrypoint_signatures**

        Type: *cybox.objects.file_object.EntryPointSignatureList*
        XML Binding class name: Detected_Entrypoint_Signatures
        Dictionary key name: detected_entrypoint_signatures

    **entry_point**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Entry_Point
        Dictionary key name: entry_point

    **ep_jump_codes**

        Type: *cybox.objects.file_object.EPJumpCode*
        XML Binding class name: EP_Jump_Codes
        Dictionary key name: ep_jump_codes

    **name**

        Type: *cybox.common.properties.String*
        XML Binding class name: Name
        Dictionary key name: name

    **signature**

        Type: *cybox.common.properties.String*
        XML Binding class name: Signature
        Dictionary key name: signature

    **type_**

        Type: *cybox.common.properties.String*
        XML Binding class name: Type
        Dictionary key name: type

    **version**

        Type: *cybox.common.properties.String*
        XML Binding class name: Version
        Dictionary key name: version

**class** cybox.objects.file_object.**PackerList**(*args*)

    Bases: cybox.EntityList

XML binding class: cybox.bindings.file_object.PackerListType

class cybox.objects.file_object.**SymLinksList**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.file_object.SymLinksListType

Version: 2.1.0.12.dev0

**cybox.objects.gui_dialogbox_object module**
class cybox.objects.gui_dialogbox_object.**GUIDialogbox**
    Bases: *cybox.objects.gui_object.GUI*

    XML binding class: cybox.bindings.gui_dialogbox_object.GUIDialogboxObjectType

    **box_caption**

        Type: *cybox.common.properties.String*
        XML Binding class name: Box_Caption
        Dictionary key name: box_caption

    **box_text**

        Type: *cybox.common.properties.String*
        XML Binding class name: Box_Text
        Dictionary key name: box_text
Version: 2.1.0.12.dev0

**cybox.objects.gui_object module**
class cybox.objects.gui_object.**GUI**
    Bases: *cybox.common.object_properties.ObjectProperties*

    XML binding class: cybox.bindings.gui_object.GUIObjectType

    **height**

        Type: *cybox.common.properties.Integer*
        XML Binding class name: Height
        Dictionary key name: height

    **width**

        Type: *cybox.common.properties.Integer*
        XML Binding class name: Width

Dictionary key name: `width`

**Version**: 2.1.0.12.dev0

**`cybox.objects.gui_window_object` module**

class cybox.objects.gui_window_object.**GUIWindow**

   Bases: *`cybox.objects.gui_object.GUI`*

   XML binding class: cybox.bindings.gui_window_object.GUIWindowObjectType

   **`owner_window`**

      Type: *`cybox.common.properties.String`*
      XML Binding class name: `Owner_Window`
      Dictionary key name: `owner_window`

   **`parent_window`**

      Type: *`cybox.common.properties.String`*
      XML Binding class name: `Parent_Window`
      Dictionary key name: `parent_window`

   **`window_display_name`**

      Type: *`cybox.common.properties.String`*
      XML Binding class name: `Window_Display_Name`
      Dictionary key name: `window_display_name`

**Version**: 2.1.0.12.dev0

**`cybox.objects.hostname_object` module**

class cybox.objects.hostname_object.**Hostname**

   Bases: *`cybox.common.object_properties.ObjectProperties`*

   XML binding class: cybox.bindings.hostname_object.HostnameObjectType

   **`hostname_value`**

      Type: *`cybox.common.properties.String`*
      XML Binding class name: `Hostname_Value`
      Dictionary key name: `hostname_value`

   **`is_domain_name`**

      XML Binding class name: `is_domain_name`
      Dictionary key name: `is_domain_name`

   **`naming_system`**

(List of values permitted)

Type: *cybox.common.properties.String*

XML Binding class name: Naming_System

Dictionary key name: naming_system

**Version**: 2.1.0.12.dev0

**cybox.objects.http_session_object module**

class cybox.objects.http_session_object.**HTTPClientRequest**

Bases: cybox.Entity

XML binding class: cybox.bindings.http_session_object.HTTPClientRequestType

**http_message_body**

Type: *cybox.objects.http_session_object.HTTPMessage*

XML Binding class name: HTTP_Message_Body

Dictionary key name: http_message_body

**http_request_header**

Type: *cybox.objects.http_session_object.HTTPRequestHeader*

XML Binding class name: HTTP_Request_Header

Dictionary key name: http_request_header

**http_request_line**

Type: *cybox.objects.http_session_object.HTTPRequestLine*

XML Binding class name: HTTP_Request_Line

Dictionary key name: http_request_line

class cybox.objects.http_session_object.**HTTPMessage**

Bases: cybox.Entity

XML binding class: cybox.bindings.http_session_object.HTTPMessageType

**length**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Length

Dictionary key name: length

**message_body**

Type: *cybox.common.properties.String*

XML Binding class name: Message_Body

Dictionary key name: message_body

**class** cybox.objects.http_session_object.**HTTPRequestHeader**

  Bases: cybox.Entity

  XML binding class: cybox.bindings.http_session_object.HTTPRequestHeaderType

  **parsed_header**

    Type: *cybox.objects.http_session_object.HTTPRequestHeaderFields*
    XML Binding class name: Parsed_Header
    Dictionary key name: parsed_header

  **raw_header**

    Type: *cybox.common.properties.String*
    XML Binding class name: Raw_Header
    Dictionary key name: raw_header

**class** cybox.objects.http_session_object.**HTTPRequestHeaderFields**

  Bases: cybox.Entity

  XML binding class:
  cybox.bindings.http_session_object.HTTPRequestHeaderFieldsType

  **accept**

    Type: *cybox.common.properties.String*
    XML Binding class name: Accept
    Dictionary key name: accept

  **accept_charset**

    Type: *cybox.common.properties.String*
    XML Binding class name: Accept_Charset
    Dictionary key name: accept_charset

  **accept_datetime**

    Type: *cybox.common.properties.String*
    XML Binding class name: Accept_Datetime
    Dictionary key name: accept_datetime

  **accept_encoding**

    Type: *cybox.common.properties.String*
    XML Binding class name: Accept_Encoding
    Dictionary key name: accept_encoding

**accept_language**

> Type: *cybox.common.properties.String*
> XML Binding class name: Accept_Language
> Dictionary key name: accept_language

**authorization**

> Type: *cybox.common.properties.String*
> XML Binding class name: Authorization
> Dictionary key name: authorization

**cache_control**

> Type: *cybox.common.properties.String*
> XML Binding class name: Cache_Control
> Dictionary key name: cache_control

**connection**

> Type: *cybox.common.properties.String*
> XML Binding class name: Connection
> Dictionary key name: connection

**content_length**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Content_Length
> Dictionary key name: content_length

**content_md5**

> Type: *cybox.common.properties.String*
> XML Binding class name: Content_MD5
> Dictionary key name: content_md5

**content_type**

> Type: *cybox.common.properties.String*
> XML Binding class name: Content_Type
> Dictionary key name: content_type

**cookie**

> Type: *cybox.common.properties.String*
> XML Binding class name: Cookie
> Dictionary key name: cookie

**date**

> Type: *cybox.common.properties.DateTime*

XML Binding class name: `Date`

Dictionary key name: `date`

**dnt**

Type: *cybox.common.properties.String*

XML Binding class name: `DNT`

Dictionary key name: `dnt`

**expect**

Type: *cybox.common.properties.String*

XML Binding class name: `Expect`

Dictionary key name: `expect`

**from_**

Type: *cybox.objects.address_object.EmailAddress*

XML Binding class name: `From`

Dictionary key name: `from`

**host**

Type: *cybox.objects.http_session_object.HostField*

XML Binding class name: `Host`

Dictionary key name: `host`

**if_match**

Type: *cybox.common.properties.String*

XML Binding class name: `If_Match`

Dictionary key name: `if_match`

**if_modified_since**

Type: *cybox.common.properties.DateTime*

XML Binding class name: `If_Modified_Since`

Dictionary key name: `if_modified_since`

**if_none_match**

Type: *cybox.common.properties.String*

XML Binding class name: `If_None_Match`

Dictionary key name: `if_none_match`

**if_range**

Type: *cybox.common.properties.String*

XML Binding class name: `If_Range`

Dictionary key name: `if_range`

**if_unmodified_since**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: If_Unmodified_Since
> Dictionary key name: if_unmodified_since

**max_forwards**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Max_Forwards
> Dictionary key name: max_forwards

**pragma**

> Type: *cybox.common.properties.String*
> XML Binding class name: Pragma
> Dictionary key name: pragma

**proxy_authorization**

> Type: *cybox.common.properties.String*
> XML Binding class name: Proxy_Authorization
> Dictionary key name: proxy_authorization

**range_**

> Type: *cybox.common.properties.String*
> XML Binding class name: Range
> Dictionary key name: range

**referer**

> Type: *cybox.objects.uri_object.URI*
> XML Binding class name: Referer
> Dictionary key name: referer

**te**

> Type: *cybox.common.properties.String*
> XML Binding class name: TE
> Dictionary key name: te

**user_agent**

> Type: *cybox.common.properties.String*
> XML Binding class name: User_Agent
> Dictionary key name: user_agent

**via**

> Type: *cybox.common.properties.String*

> > XML Binding class name: `Via`
> >
> > Dictionary key name: `via`

> **warning**

> > Type: *`cybox.common.properties.String`*
> >
> > XML Binding class name: `Warning`
> >
> > Dictionary key name: `warning`

> **x_att_deviceid**

> > Type: *`cybox.common.properties.String`*
> >
> > XML Binding class name: `X_ATT_DeviceId`
> >
> > Dictionary key name: `x_att_deviceid`

> **x_forwarded_for**

> > Type: *`cybox.common.properties.String`*
> >
> > XML Binding class name: `X_Forwarded_For`
> >
> > Dictionary key name: `x_forwarded_for`

> **x_forwarded_proto**

> > Type: *`cybox.common.properties.String`*
> >
> > XML Binding class name: `X_Forwarded_Proto`
> >
> > Dictionary key name: `x_forwarded_proto`

> **x_requested_with**

> > Type: *`cybox.common.properties.String`*
> >
> > XML Binding class name: `X_Requested_With`
> >
> > Dictionary key name: `x_requested_with`

> **x_wap_profile**

> > Type: *`cybox.objects.uri_object.URI`*
> >
> > XML Binding class name: `X_Wap_Profile`
> >
> > Dictionary key name: `x_wap_profile`

class `cybox.objects.http_session_object.`**`HTTPRequestLine`**

> Bases: `cybox.Entity`

> XML binding class: `cybox.bindings.http_session_object.HTTPRequestLineType`

> **http_method**

> > Type: *`cybox.common.properties.String`*
> >
> > XML Binding class name: `HTTP_Method`
> >
> > Dictionary key name: `http_method`

**value**

> Type: *cybox.common.properties.String*
> XML Binding class name: Value
> Dictionary key name: value

**version**

> Type: *cybox.common.properties.String*
> XML Binding class name: Version
> Dictionary key name: version

**class** cybox.objects.http_session_object.**HTTPRequestResponse**
    Bases: cybox.Entity

XML binding class: cybox.bindings.http_session_object.HTTPRequestResponseType

**http_client_request**

> Type: *cybox.objects.http_session_object.HTTPClientRequest*
> XML Binding class name: HTTP_Client_Request
> Dictionary key name: http_client_request

**http_provisional_server_response**

> Type: *cybox.objects.http_session_object.HTTPServerResponse*
> XML Binding class name: HTTP_Provisional_Server_Response
> Dictionary key name: http_provisional_server_response

**http_server_response**

> Type: *cybox.objects.http_session_object.HTTPServerResponse*
> XML Binding class name: HTTP_Server_Response
> Dictionary key name: http_server_response

**ordinal_position**

> XML Binding class name: ordinal_position
> Dictionary key name: ordinal_position

**class** cybox.objects.http_session_object.**HTTPResponseHeader**
    Bases: cybox.Entity

XML binding class: cybox.bindings.http_session_object.HTTPResponseHeaderType

**parsed_header**

> Type: *cybox.objects.http_session_object.HTTPResponseHeaderFields*

> > XML Binding class name: `Parsed_Header`
> >
> > Dictionary key name: `parsed_header`
>
> **raw_header**
>
> > Type: *`cybox.common.properties.String`*
> >
> > XML Binding class name: `Raw_Header`
> >
> > Dictionary key name: `raw_header`

class cybox.objects.http_session_object.**HTTPResponseHeaderFields**

> Bases: `cybox.Entity`
>
> XML binding class:
> `cybox.bindings.http_session_object.HTTPResponseHeaderFieldsType`
>
> **accept_ranges**
>
> > Type: *`cybox.common.properties.String`*
> >
> > XML Binding class name: `Accept_Ranges`
> >
> > Dictionary key name: `accept_ranges`
>
> **access_control_allow_origin**
>
> > Type: *`cybox.common.properties.String`*
> >
> > XML Binding class name: `Access_Control_Allow_Origin`
> >
> > Dictionary key name: `access_control_allow_origin`
>
> **age**
>
> > Type: *`cybox.common.properties.Integer`*
> >
> > XML Binding class name: `Age`
> >
> > Dictionary key name: `age`
>
> **cache_control**
>
> > Type: *`cybox.common.properties.String`*
> >
> > XML Binding class name: `Cache_Control`
> >
> > Dictionary key name: `cache_control`
>
> **connection**
>
> > Type: *`cybox.common.properties.String`*
> >
> > XML Binding class name: `Connection`
> >
> > Dictionary key name: `connection`
>
> **content_disposition**
>
> > Type: *`cybox.common.properties.String`*
> >
> > XML Binding class name: `Content_Disposition`
> >
> > Dictionary key name: `content_disposition`

**content_encoding**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Content_Encoding`
>   Dictionary key name: `content_encoding`

**content_language**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Content_Language`
>   Dictionary key name: `content_language`

**content_length**

>   Type: *cybox.common.properties.Integer*
>   XML Binding class name: `Content_Length`
>   Dictionary key name: `content_length`

**content_location**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Content_Location`
>   Dictionary key name: `content_location`

**content_md5**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Content_MD5`
>   Dictionary key name: `content_md5`

**content_range**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Content_Range`
>   Dictionary key name: `content_range`

**content_type**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Content_Type`
>   Dictionary key name: `content_type`

**date**

>   Type: *cybox.common.properties.DateTime*
>   XML Binding class name: `Date`
>   Dictionary key name: `date`

**etag**

>   Type: *cybox.common.properties.String*

XML Binding class name: `ETag`
Dictionary key name: `etag`

**expires**

Type: *`cybox.common.properties.DateTime`*
XML Binding class name: `Expires`
Dictionary key name: `expires`

**last_modified**

Type: *`cybox.common.properties.DateTime`*
XML Binding class name: `Last_Modified`
Dictionary key name: `last_modified`

**link**

Type: *`cybox.common.properties.String`*
XML Binding class name: `Link`
Dictionary key name: `link`

**location**

Type: *`cybox.objects.uri_object.URI`*
XML Binding class name: `Location`
Dictionary key name: `location`

**p3p**

Type: *`cybox.common.properties.String`*
XML Binding class name: `P3P`
Dictionary key name: `p3p`

**pragma**

Type: *`cybox.common.properties.String`*
XML Binding class name: `Pragma`
Dictionary key name: `pragma`

**proxy_authenticate**

Type: *`cybox.common.properties.String`*
XML Binding class name: `Proxy_Authenticate`
Dictionary key name: `proxy_authenticate`

**refresh**

Type: *`cybox.common.properties.String`*
XML Binding class name: `Refresh`
Dictionary key name: `refresh`

**retry_after**

>   Type: *cybox.common.properties.Integer*
>   XML Binding class name: `Retry_After`
>   Dictionary key name: `retry_after`

**server**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Server`
>   Dictionary key name: `server`

**set_cookie**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Set_Cookie`
>   Dictionary key name: `set_cookie`

**strict_transport_security**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Strict_Transport_Security`
>   Dictionary key name: `strict_transport_security`

**trailer**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Trailer`
>   Dictionary key name: `trailer`

**transfer_encoding**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Transfer_Encoding`
>   Dictionary key name: `transfer_encoding`

**vary**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Vary`
>   Dictionary key name: `vary`

**via**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: `Via`
>   Dictionary key name: `via`

**warning**

>   Type: *cybox.common.properties.String*

XML Binding class name: `Warning`
Dictionary key name: `warning`

### www_authenticate

Type: *cybox.common.properties.String*
XML Binding class name: WWW_Authenticate
Dictionary key name: www_authenticate

### x_content_type_options

Type: *cybox.common.properties.String*
XML Binding class name: X_Content_Type_Options
Dictionary key name: x_content_type_options

### x_frame_options

Type: *cybox.common.properties.String*
XML Binding class name: X_Frame_Options
Dictionary key name: x_frame_options

### x_powered_by

Type: *cybox.common.properties.String*
XML Binding class name: X_Powered_By
Dictionary key name: x_powered_by

### x_ua_compatible

Type: *cybox.common.properties.String*
XML Binding class name: X_UA_Compatible
Dictionary key name: x_ua_compatible

### x_xss_protection

Type: *cybox.common.properties.String*
XML Binding class name: X_XSS_Protection
Dictionary key name: x_xss_protection

class cybox.objects.http_session_object.**HTTPServerResponse**
Bases: cybox.Entity

XML binding class: cybox.bindings.http_session_object.HTTPServerResponseType

### http_message_body

Type: *cybox.objects.http_session_object.HTTPMessage*
XML Binding class name: HTTP_Message_Body
Dictionary key name: http_message_body

**http_response_header**

> Type: *cybox.objects.http_session_object.HTTPResponseHeader*
> XML Binding class name: HTTP_Response_Header
> Dictionary key name: http_response_header

**http_status_line**

> Type: *cybox.objects.http_session_object.HTTPStatusLine*
> XML Binding class name: HTTP_Status_Line
> Dictionary key name: http_status_line

**class** cybox.objects.http_session_object.**HTTPSession**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.http_session_object.HTTPSessionObjectType

**http_request_response**

> (List of values permitted)
> Type: *cybox.objects.http_session_object.HTTPRequestResponse*
> XML Binding class name: HTTP_Request_Response
> Dictionary key name: http_request_response

**class** cybox.objects.http_session_object.**HTTPStatusLine**
    Bases: cybox.Entity

XML binding class: cybox.bindings.http_session_object.HTTPStatusLineType

**reason_phrase**

> Type: *cybox.common.properties.String*
> XML Binding class name: Reason_Phrase
> Dictionary key name: reason_phrase

**status_code**

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: Status_Code
> Dictionary key name: status_code

**version**

> Type: *cybox.common.properties.String*
> XML Binding class name: Version
> Dictionary key name: version

**class** cybox.objects.http_session_object.**HostField**

> Bases: cybox.Entity

> XML binding class: cybox.bindings.http_session_object.HostFieldType

> > **domain_name**

> > > Type: *cybox.objects.uri_object.URI*
> > > XML Binding class name: Domain_Name
> > > Dictionary key name: domain_name

> > **port**

> > > Type: *cybox.objects.port_object.Port*
> > > XML Binding class name: Port
> > > Dictionary key name: port

**Version**: 2.1.0.12.dev0

**cybox.objects.image_file_object module**

**class** cybox.objects.image_file_object.**ImageFile**

> Bases: *cybox.objects.file_object.File*

> XML binding class: cybox.bindings.file_object.FileObjectType

> > **bits_per_pixel**

> > > Type: *cybox.common.properties.PositiveInteger*
> > > XML Binding class name: Bits_Per_Pixel
> > > Dictionary key name: bits_per_pixel

> > **compression_algorithm**

> > > Type: *cybox.common.properties.String*
> > > XML Binding class name: Compression_Algorithm
> > > Dictionary key name: compression_algorithm

> > **image_file_format**

> > > Type: *cybox.common.properties.String*
> > > XML Binding class name: Image_File_Format
> > > Dictionary key name: image_file_format

> > **image_height**

> > > Type: *cybox.common.properties.Integer*
> > > XML Binding class name: Image_Height

Dictionary key name: image_height

**image_is_compressed**

XML Binding class name: image_is_compressed

Dictionary key name: image_is_compressed

**image_width**

Type: *cybox.common.properties.Integer*

XML Binding class name: Image_Width

Dictionary key name: image_width

**Version**: 2.1.0.12.dev0

**cybox.objects.library_object module**

class cybox.objects.library_object.**Library**

    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.library_object.LibraryObjectType

**base_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Base_Address

Dictionary key name: base_address

**extracted_features**

Type: *cybox.common.extracted_features.ExtractedFeatures*

XML Binding class name: Extracted_Features

Dictionary key name: extracted_features

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**path**

Type: *cybox.common.properties.String*

XML Binding class name: Path

Dictionary key name: path

**size**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Size

Dictionary key name: size

**type_**

> Type: *cybox.common.properties.String*
> XML Binding class name: Type
> Dictionary key name: type

**version**

> Type: *cybox.common.properties.String*
> XML Binding class name: Version
> Dictionary key name: version

**Version**: 2.1.0.12.dev0

## cybox.objects.link_object module

class cybox.objects.link_object.**Link**(*value=None*, *type_=None*)
> Bases: *cybox.objects.uri_object.URI*

> XML binding class: cybox.bindings.link_object.LinkObjectType

**url_label**

> Type: *cybox.common.properties.String*
> XML Binding class name: URL_Label
> Dictionary key name: url_label

**Version**: 2.1.0.12.dev0

## cybox.objects.linux_package_object module

class cybox.objects.linux_package_object.**LinuxPackage**
> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.linux_package_object.LinuxPackageObjectType

**architecture**
> TypedField subclass for VocabString fields.

> Type: *cybox.common.vocabs.VocabString*
> XML Binding class name: Architecture
> Dictionary key name: architecture

**category**

> Type: *cybox.common.properties.String*
> XML Binding class name: Category
> Dictionary key name: category

**description**

>  Type: *cybox.common.properties.String*
>  XML Binding class name: `Description`
>  Dictionary key name: `description`

**epoch**

>  Type: *cybox.common.properties.String*
>  XML Binding class name: `Epoch`
>  Dictionary key name: `epoch`

**evr**

>  Type: *cybox.common.properties.String*
>  XML Binding class name: `EVR`
>  Dictionary key name: `evr`

**name**

>  Type: *cybox.common.properties.String*
>  XML Binding class name: `Name`
>  Dictionary key name: `name`

**release**

>  Type: *cybox.common.properties.String*
>  XML Binding class name: `Release`
>  Dictionary key name: `release`

**vendor**

>  Type: *cybox.common.properties.String*
>  XML Binding class name: `Vendor`
>  Dictionary key name: `vendor`

**version**

>  Type: *cybox.common.properties.String*
>  XML Binding class name: `Version`
>  Dictionary key name: `version`

class cybox.objects.linux_package_object.**LinuxPackageArchitecture**(*value=None*)
>  Bases: *cybox.common.vocabs.VocabString*

>  XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

**Version**: 2.1.0.12.dev0

**cybox.objects.memory_object module**
class cybox.objects.memory_object.**Memory**

    Bases: *cybox.common.object_properties.ObjectProperties*

    XML binding class: cybox.bindings.memory_object.MemoryObjectType

    **block_type**

        Type: *cybox.common.properties.String*
        XML Binding class name: Block_Type
        Dictionary key name: block_type

    **extracted_features**

        Type: *cybox.common.extracted_features.ExtractedFeatures*
        XML Binding class name: Extracted_Features
        Dictionary key name: extracted_features

    **hashes**

        Type: *cybox.common.hashes.HashList*
        XML Binding class name: Hashes
        Dictionary key name: hashes

    **is_injected**

        XML Binding class name: is_injected
        Dictionary key name: is_injected

    **is_mapped**

        XML Binding class name: is_mapped
        Dictionary key name: is_mapped

    **is_protected**

        XML Binding class name: is_protected
        Dictionary key name: is_protected

    **is_volatile**

        XML Binding class name: is_volatile
        Dictionary key name: is_volatile

    **memory_source**

        Type: *cybox.common.properties.String*
        XML Binding class name: Memory_Source
        Dictionary key name: memory_source

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**region_end_address**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Region_End_Address
> Dictionary key name: region_end_address

**region_size**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Region_Size
> Dictionary key name: region_size

**region_start_address**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Region_Start_Address
> Dictionary key name: region_start_address

**Version**: 2.1.0.12.dev0

**cybox.objects.mutex_object module**

class cybox.objects.mutex_object.**Mutex**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.mutex_object.MutexObjectType

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**named**

> XML Binding class name: named
> Dictionary key name: named

**Version**: 2.1.0.12.dev0

**cybox.objects.network_connection_object module**

class cybox.objects.network_connection_object.**Layer7Connections**

> Bases: cybox.Entity

XML binding class:
cybox.bindings.network_connection_object.Layer7ConnectionsType

### dns_query

(List of values permitted)
Type: *cybox.objects.dns_query_object.DNSQuery*
XML Binding class name: DNS_Query
Dictionary key name: dns_query

### http_session

Type: *cybox.objects.http_session_object.HTTPSession*
XML Binding class name: HTTP_Session
Dictionary key name: http_session

class cybox.objects.network_connection_object.**NetworkConnection**
Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class:
cybox.bindings.network_connection_object.NetworkConnectionObjectType

### creation_time

Type: *cybox.common.properties.DateTime*
XML Binding class name: Creation_Time
Dictionary key name: creation_time

### destination_socket_address

Type: *cybox.objects.socket_address_object.SocketAddress*
XML Binding class name: Destination_Socket_Address
Dictionary key name: destination_socket_address

### destination_tcp_state

XML Binding class name: Destination_TCP_State
Dictionary key name: destination_tcp_state

### layer3_protocol

Type: *cybox.common.properties.String*
XML Binding class name: Layer3_Protocol
Dictionary key name: layer3_protocol

### layer4_protocol

Type: *cybox.common.properties.String*
XML Binding class name: Layer4_Protocol

Dictionary key name: layer4_protocol

**layer7_connections**

Type: *cybox.objects.network_connection_object.Layer7Connections*
XML Binding class name: Layer7_Connections
Dictionary key name: layer7_connections

**layer7_protocol**

Type: *cybox.common.properties.String*
XML Binding class name: Layer7_Protocol
Dictionary key name: layer7_protocol

**source_socket_address**

Type: *cybox.objects.socket_address_object.SocketAddress*
XML Binding class name: Source_Socket_Address
Dictionary key name: source_socket_address

**source_tcp_state**

XML Binding class name: Source_TCP_State
Dictionary key name: source_tcp_state

**tls_used**

XML Binding class name: tls_used
Dictionary key name: tls_used

**Version**: 2.1.0.12.dev0

**cybox.objects.network_packet_object module**
class cybox.objects.network_packet_object.**ARP**
    Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.ARPType

**hardware_addr_size**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Hardware_Addr_Size
Dictionary key name: hardware_addr_size

**hardware_addr_type**

Type: *cybox.common.properties.String*
XML Binding class name: Hardware_Addr_Type
Dictionary key name: hardware_addr_type

**op_type**

> Type: *cybox.common.properties.String*
> XML Binding class name: Op_Type
> Dictionary key name: op_type

**proto_addr_size**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Proto_Addr_Size
> Dictionary key name: proto_addr_size

**proto_addr_type**

> Type: *cybox.common.properties.String*
> XML Binding class name: Proto_Addr_Type
> Dictionary key name: proto_addr_type

**recip_hardware_addr**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: Recip_Hardware_Addr
> Dictionary key name: recip_hardware_addr

**recip_protocol_addr**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: Recip_Protocol_Addr
> Dictionary key name: recip_protocol_addr

**sender_hardware_addr**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: Sender_Hardware_Addr
> Dictionary key name: sender_hardware_addr

**sender_protocol_addr**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: Sender_Protocol_Addr
> Dictionary key name: sender_protocol_addr

**class** cybox.objects.network_packet_object.**AuthenticationHeader**
> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.network_packet_object.AuthenticationHeaderType

**Authentication_Data**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `Authentication_Data`
Dictionary key name: `authentication_data`

### header_ext_len

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `Header_Ext_Len`
Dictionary key name: `header_ext_len`

### next_header

Type: *cybox.common.properties.String*
XML Binding class name: `Next_Header`
Dictionary key name: `next_header`

### security_parameters_index

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `Security_Parameters_Index`
Dictionary key name: `security_parameters_index`

### sequence_number

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `Sequence_Number`
Dictionary key name: `sequence_number`

class cybox.objects.network_packet_object.**DestinationOptions**
Bases: `cybox.objects.network_packet_object._IPv6ExtHeader`

XML binding class: `cybox.bindings.network_packet_object.DestinationOptionsType`

class cybox.objects.network_packet_object.**EncapsulatingSecurityPayload**
Bases: `cybox.Entity`

XML binding class:
`cybox.bindings.network_packet_object.EncapsulatingSecurityPayloadType`

### authentication_data

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `Authentication_Data`
Dictionary key name: `authentication_data`

### next_header

Type: *cybox.common.properties.String*

XML Binding class name: Next_Header

Dictionary key name: next_header

**padding**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Padding

Dictionary key name: padding

**padding_len**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Padding_Len

Dictionary key name: padding_len

**payload_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Payload_Data

Dictionary key name: payload_data

**security_parameters_index**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Security_Parameters_Index

Dictionary key name: security_parameters_index

**sequence_number**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Sequence_Number

Dictionary key name: sequence_number

**class** cybox.objects.network_packet_object.**EthernetHeader**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.EthernetHeaderType

**checksum**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Checksum

Dictionary key name: checksum

**destination_mac_addr**

Type: *cybox.objects.address_object.Address*

XML Binding class name: Destination_MAC_Addr

Dictionary key name: destination_mac_addr

**source_mac_addr**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: Source_MAC_Addr
> Dictionary key name: source_mac_addr

**type_or_length**

> Type: *cybox.objects.network_packet_object.TypeLength*
> XML Binding class name: Type_Or_Length
> Dictionary key name: type_or_length

**class** cybox.objects.network_packet_object.**EthernetInterface**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.EthernetInterfaceType

**ethernet_header**

> Type: *cybox.objects.network_packet_object.EthernetHeader*
> XML Binding class name: Ethernet_Header
> Dictionary key name: ethernet_header

**class** cybox.objects.network_packet_object.**Fragment**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.FragmentType

**fragment**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Fragment
> Dictionary key name: fragment

**fragment_header**

> Type: *cybox.objects.network_packet_object.FragmentHeader*
> XML Binding class name: Fragment_Header
> Dictionary key name: fragment_header

**class** cybox.objects.network_packet_object.**FragmentHeader**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.FragmentHeaderType

**fragment_offset**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Fragment_Offset
> Dictionary key name: fragment_offset

**identification**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Identification
> Dictionary key name: identification

**m_flag**

> Type: *cybox.common.properties.String*
> XML Binding class name: M_Flag
> Dictionary key name: m_flag

**next_header**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Next_Header
> Dictionary key name: next_header

**class** cybox.objects.network_packet_object.**FragmentationRequired**
> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.network_packet_object.FragmentationRequiredType

> **fragmentation_required**

> > XML Binding class name: Fragmentation_Required
> > Dictionary key name: fragmentation_required

> **next_hop_mtu**

> > Type: *cybox.common.properties.HexBinary*
> > XML Binding class name: Next_Hop_MTU
> > Dictionary key name: next_hop_mtu

**class** cybox.objects.network_packet_object.**HopByHopOptions**
> Bases: cybox.objects.network_packet_object._IPv6ExtHeader

> XML binding class: cybox.bindings.network_packet_object.HopByHopOptionsType

**class** cybox.objects.network_packet_object.**ICMPv4AddressMaskReply**
> Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.ICMPv4AddressMaskReplyType

### **address_mask**

Type: *cybox.objects.address_object.Address*
XML Binding class name: Address_Mask
Dictionary key name: address_mask

### **address_mask_reply**

XML Binding class name: Address_Mask_Reply
Dictionary key name: address_mask_reply

class cybox.objects.network_packet_object.**ICMPv4AddressMaskRequest**
    Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.ICMPv4AddressMaskRequestType

### **address_mask**

Type: *cybox.objects.address_object.Address*
XML Binding class name: Address_Mask
Dictionary key name: address_mask

### **address_mask_request**

XML Binding class name: Address_Mask_Request
Dictionary key name: address_mask_request

class cybox.objects.network_packet_object.**ICMPv4DestinationUnreachable**
    Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.ICMPv4DestinationUnreachableType

### **communication_administratively_prohibited**

XML Binding class name: Communication_Administratively_Prohibited
Dictionary key name: communication_administratively_prohibited

### **destination_host_unknown**

XML Binding class name: Destination_Host_Unknown
Dictionary key name: destination_host_unknown

**destination_host_unreachable**

> XML Binding class name: `Destination_Host_Unreachable`
> Dictionary key name: `destination_host_unreachable`

**destination_network_unknown**

> XML Binding class name: `Destination_Network_Unknown`
> Dictionary key name: `destination_network_unknown`

**destination_network_unreachable**

> XML Binding class name: `Destination_Network_Unreachable`
> Dictionary key name: `destination_network_unreachable`

**destination_port_unreachable**

> XML Binding class name: `Destination_Port_Unreachable`
> Dictionary key name: `destination_port_unreachable`

**destination_protocol_unreachable**

> XML Binding class name: `Destination_Protocol_Unreachable`
> Dictionary key name: `destination_protocol_unreachable`

**fragmentation_required**

> Type: *cybox.objects.network_packet_object.FragmentationRequired*
> XML Binding class name: `Fragmentation_Required`
> Dictionary key name: `fragmentation_required`

**host_administratively_prohibited**

> XML Binding class name: `Host_Administratively_Prohibited`
> Dictionary key name: `host_administratively_prohibited`

**host_precedence_violation**

> XML Binding class name: `Host_Precedence_Violation`
> Dictionary key name: `host_precedence_violation`

**host_unreachable_for_tos**

> XML Binding class name: `Host_Unreachable_For_TOS`
> Dictionary key name: `host_unreachable_for_tos`

**network_administratively_prohibited**

> XML Binding class name: `Network_Administratively_Prohibited`
> Dictionary key name: `network_administratively_prohibited`

**network_unreachable_for_tos**

> XML Binding class name: `Network_Unreachable_For_TOS`
> Dictionary key name: `network_unreachable_for_tos`

**precedence_cutoff_in_effect**

> XML Binding class name: `Precedence_Cutoff_In_Effect`
> Dictionary key name: `precedence_cutoff_in_effect`

**source_host_isolated**

> XML Binding class name: `Source_Host_Isolated`
> Dictionary key name: `source_host_isolated`

**source_route_failed**

> XML Binding class name: `Source_Route_Failed`
> Dictionary key name: `source_route_failed`

class cybox.objects.network_packet_object.**ICMPv4EchoReply**
    Bases: cybox.objects.network_packet_object._ICMPEchoReply

> XML binding class: cybox.bindings.network_packet_object.ICMPv4EchoReplyType

class cybox.objects.network_packet_object.**ICMPv4EchoRequest**
    Bases: cybox.objects.network_packet_object._ICMPEchoRequest

> XML binding class: cybox.bindings.network_packet_object.ICMPv4EchoRequestType

class cybox.objects.network_packet_object.**ICMPv4ErrorMessage**
    Bases: cybox.Entity

> XML binding class: cybox.bindings.network_packet_object.ICMPv4ErrorMessageType

**destination_unreachable**

> Type: *cybox.objects.network_packet_object.ICMPv4DestinationUnreachable*
> XML Binding class name: `Destination_Unreachable`
> Dictionary key name: `destination_unreachable`

**error_msg_content**

> Type: *cybox.objects.network_packet_object.ICMPv4ErrorMessageContent*
> XML Binding class name: `Error_Msg_Content`
> Dictionary key name: `error_msg_content`

**redirect_message**

>    Type: *cybox.objects.network_packet_object.ICMPv4RedirectMessage*
>    XML Binding class name: Redirect_Message
>    Dictionary key name: redirect_message

**source_quench**

>    Type: *cybox.objects.network_packet_object.ICMPv4SourceQuench*
>    XML Binding class name: Source_Quench
>    Dictionary key name: source_quench

**time_exceeded**

>    Type: *cybox.objects.network_packet_object.ICMPv4TimeExceeded*
>    XML Binding class name: Time_Exceeded
>    Dictionary key name: time_exceeded

**class** cybox.objects.network_packet_object.**ICMPv4ErrorMessageContent**
>    Bases: cybox.Entity

>    XML binding class:
>    cybox.bindings.network_packet_object.ICMPv4ErrorMessageContentType

**first_eight_bytes**

>    Type: *cybox.common.properties.HexBinary*
>    XML Binding class name: First_Eight_Bytes
>    Dictionary key name: first_eight_bytes

**ip_header**

>    Type: *cybox.objects.network_packet_object.IPv4Header*
>    XML Binding class name: IP_Header
>    Dictionary key name: ip_header

**class** cybox.objects.network_packet_object.**ICMPv4Header**
>    Bases: cybox.objects.network_packet_object._ICMPHeader

>    XML binding class: cybox.bindings.network_packet_object.ICMPv4HeaderType

**class** cybox.objects.network_packet_object.**ICMPv4InfoMessage**
>    Bases: cybox.Entity

>    XML binding class: cybox.bindings.network_packet_object.ICMPv4InfoMessageType

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**address_mask_reply**

> Type: *cybox.objects.network_packet_object.ICMPv4AddressMaskReply*
> XML Binding class name: Address_Mask_Reply
> Dictionary key name: address_mask_reply

**address_mask_request**

> Type: *cybox.objects.network_packet_object.ICMPv4AddressMaskRequest*
> XML Binding class name: Address_Mask_Request
> Dictionary key name: address_mask_request

**echo_reply**

> Type: *cybox.objects.network_packet_object.ICMPv4EchoReply*
> XML Binding class name: Echo_Reply
> Dictionary key name: echo_reply

**echo_request**

> Type: *cybox.objects.network_packet_object.ICMPv4EchoRequest*
> XML Binding class name: Echo_Request
> Dictionary key name: echo_request

**info_msg_content**

> Type: *cybox.objects.network_packet_object.ICMPv4InfoMessageContent*
> XML Binding class name: Info_Msg_Content
> Dictionary key name: info_msg_content

**timestamp_reply**

> Type: *cybox.objects.network_packet_object.ICMPv4TimestampReply*
> XML Binding class name: Timestamp_Reply
> Dictionary key name: timestamp_reply

**timestamp_request**

> Type: *cybox.objects.network_packet_object.ICMPv4TimestampRequest*
> XML Binding class name: Timestamp_Request
> Dictionary key name: timestamp_request

class cybox.objects.network_packet_object.**ICMPv4InfoMessageContent**
    Bases: cybox.objects.network_packet_object._ICMPInfoMessageContent


    XML binding class:
    cybox.bindings.network_packet_object.ICMPv4InfoMessageContentType


class cybox.objects.network_packet_object.**ICMPv4Packet**
    Bases: cybox.Entity

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XML binding class: cybox.bindings.network_packet_object.ICMPv4PacketType

### error_msg

Type: *cybox.objects.network_packet_object.ICMPv4ErrorMessage*
XML Binding class name: Error_Msg
Dictionary key name: error_msg

### icmpv4_header

Type: *cybox.objects.network_packet_object.ICMPv4Header*
XML Binding class name: ICMPv4_Header
Dictionary key name: icmpv4_header

### info_msg

Type: *cybox.objects.network_packet_object.ICMPv4InfoMessage*
XML Binding class name: Info_Msg
Dictionary key name: info_msg

### traceroute

Type: *cybox.objects.network_packet_object.ICMPv4Traceroute*
XML Binding class name: Traceroute
Dictionary key name: traceroute

class cybox.objects.network_packet_object.**ICMPv4RedirectMessage**
Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.ICMPv4RedirectMessageType

### host_redirect

XML Binding class name: Host_Redirect
Dictionary key name: host_redirect

### ip_address

Type: *cybox.objects.address_object.Address*
XML Binding class name: IP_Address
Dictionary key name: ip_address

### network_redirect

XML Binding class name: Network_Redirect
Dictionary key name: network_redirect

**tos_host_redirect**

> XML Binding class name: `ToS_Host_Redirect`
> Dictionary key name: `tos_host_redirect`

**tos_network_redirect**

> XML Binding class name: `ToS_Network_Redirect`
> Dictionary key name: `tos_network_redirect`

class cybox.objects.network_packet_object.**ICMPv4SourceQuench**
    Bases: `cybox.Entity`

XML binding class: cybox.bindings.network_packet_object.ICMPv4SourceQuenchType

**source_quench**

> XML Binding class name: `Source_Quench`
> Dictionary key name: `source_quench`

class cybox.objects.network_packet_object.**ICMPv4TimeExceeded**
    Bases: `cybox.Entity`

XML binding class: cybox.bindings.network_packet_object.ICMPv4TimeExceededType

**frag_reassembly_time_exceeded**

> XML Binding class name: `Frag_Reassembly_Time_Exceeded`
> Dictionary key name: `frag_reassembly_time_exceeded`

**ttl_exceeded_in_transit**

> XML Binding class name: `TTL_Exceeded_In_Transit`
> Dictionary key name: `ttl_exceeded_in_transit`

class cybox.objects.network_packet_object.**ICMPv4TimestampReply**
    Bases: `cybox.Entity`

XML binding class:
cybox.bindings.network_packet_object.ICMPv4TimestampReplyType

**originate_timestamp**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: `Originate_Timestamp`
> Dictionary key name: `originate_timestamp`

**receive_timestamp**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: Receive_Timestamp
> Dictionary key name: receive_timestamp

**timestamp_reply**

> XML Binding class name: Timestamp_Reply
> Dictionary key name: timestamp_reply

**transmit_timestamp**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: Transmit_Timestamp
> Dictionary key name: transmit_timestamp

class cybox.objects.network_packet_object.**ICMPv4TimestampRequest**
> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.network_packet_object.ICMPv4TimestampRequestType

**originate_timestamp**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: Originate_Timestamp
> Dictionary key name: originate_timestamp

**timestamp**

> XML Binding class name: Timestamp
> Dictionary key name: timestamp

class cybox.objects.network_packet_object.**ICMPv4Traceroute**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.network_packet_object.ICMPv4TracerouteType

**identifier**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Identifier
> Dictionary key name: identifier

**outbound_hop_count**

> Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Outbound_Hop_Count`

Dictionary key name: `outbound_hop_count`

**outbound_packet_forward_success**

XML Binding class name: `Outbound_Packet_Forward_Success`

Dictionary key name: `outbound_packet_forward_success`

**outbound_packet_no_route**

XML Binding class name: `Outbound_Packet_no_Route`

Dictionary key name: `outbound_packet_no_route`

**output_link_mtu**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Output_Link_MTU`

Dictionary key name: `output_link_mtu`

**output_link_speed**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Output_Link_Speed`

Dictionary key name: `output_link_speed`

**return_hop_count**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Return_Hop_Count`

Dictionary key name: `return_hop_count`

class cybox.objects.network_packet_object.**ICMPv6DestinationUnreachable**

Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.ICMPv6DestinationUnreachableType

**address_unreachable**

XML Binding class name: `Address_Unreachable`

Dictionary key name: `address_unreachable`

**beyond_scope**

XML Binding class name: `Beyond_Scope`

Dictionary key name: `beyond_scope`

**comm_prohibited**

XML Binding class name: `Comm_Prohibited`

Dictionary key name: `comm_prohibited`

**`no_route`**

XML Binding class name: `No_Route`
Dictionary key name: `no_route`

**`port_unreachable`**

XML Binding class name: `Port_Unreachable`
Dictionary key name: `port_unreachable`

**`reject_route`**

XML Binding class name: `Reject_Route`
Dictionary key name: `reject_route`

**`src_addr_failed_policy`**

XML Binding class name: `Src_Addr_Failed_Policy`
Dictionary key name: `src_addr_failed_policy`

class cybox.objects.network_packet_object.**ICMPv6EchoReply**
    Bases: cybox.objects.network_packet_object._ICMPEchoReply

XML binding class: cybox.bindings.network_packet_object.ICMPv6EchoReplyType

class cybox.objects.network_packet_object.**ICMPv6EchoRequest**
    Bases: cybox.objects.network_packet_object._ICMPEchoRequest

XML binding class: cybox.bindings.network_packet_object.ICMPv6EchoRequestType

class cybox.objects.network_packet_object.**ICMPv6ErrorMessage**
    Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.ICMPv6ErrorMessageType

**`destination_unreachable`**

Type: *cybox.objects.network_packet_object.ICMPv6DestinationUnreachable*
XML Binding class name: `Destination_Unreachable`
Dictionary key name: `destination_unreachable`

**`invoking_packet`**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `Invoking_Packet`

Dictionary key name: invoking_packet

### packet_too_big

Type: *cybox.objects.network_packet_object.ICMPv6PacketTooBig*
XML Binding class name: Packet_Too_Big
Dictionary key name: packet_too_big

### parameter_problem

Type: *cybox.objects.network_packet_object.ICMPv6ParameterProblem*
XML Binding class name: Parameter_Problem
Dictionary key name: parameter_problem

### time_exceeded

Type: *cybox.objects.network_packet_object.ICMPv6TimeExceeded*
XML Binding class name: Time_Exceeded
Dictionary key name: time_exceeded

class cybox.objects.network_packet_object.**ICMPv6Header**
    Bases: cybox.objects.network_packet_object._ICMPHeader

    XML binding class: cybox.bindings.network_packet_object.ICMPv6HeaderType

class cybox.objects.network_packet_object.**ICMPv6InfoMessage**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.ICMPv6InfoMessageType

### echo_reply

Type: *cybox.objects.network_packet_object.ICMPv6EchoReply*
XML Binding class name: Echo_Reply
Dictionary key name: echo_reply

### echo_request

Type: *cybox.objects.network_packet_object.ICMPv6EchoRequest*
XML Binding class name: Echo_Request
Dictionary key name: echo_request

### info_msg_content

Type: *cybox.objects.network_packet_object.ICMPv6InfoMessageContent*
XML Binding class name: Info_Msg_Content
Dictionary key name: info_msg_content

class cybox.objects.network_packet_object.**ICMPv6InfoMessageContent**
    Bases: cybox.objects.network_packet_object._ICMPInfoMessageContent

    XML binding class:
    cybox.bindings.network_packet_object.ICMPv6InfoMessageContentType

class cybox.objects.network_packet_object.**ICMPv6Packet**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.ICMPv6PacketType

    **error_msg**

        Type: *cybox.objects.network_packet_object.ICMPv6ErrorMessage*
        XML Binding class name: Error_Msg
        Dictionary key name: error_msg

    **icmpv6_header**

        Type: *cybox.objects.network_packet_object.ICMPv6Header*
        XML Binding class name: ICMPv6_Header
        Dictionary key name: icmpv6_header

    **info_msg**

        Type: *cybox.objects.network_packet_object.ICMPv6InfoMessage*
        XML Binding class name: Info_Msg
        Dictionary key name: info_msg

class cybox.objects.network_packet_object.**ICMPv6PacketTooBig**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.ICMPv6PacketTooBigType

    **mtu**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: MTU
        Dictionary key name: mtu

    **packet_too_big**

        XML Binding class name: Packet_Too_Big
        Dictionary key name: packet_too_big

class cybox.objects.network_packet_object.**ICMPv6ParameterProblem**
    Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.ICMPv6ParameterProblemType

**erroneous_header_field**

> XML Binding class name: Erroneous_Header_Field
> Dictionary key name: erroneous_header_field

**pointer**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Pointer
> Dictionary key name: pointer

**unrecognized_ipv6_option**

> XML Binding class name: Unrecognized_IPv6_Option
> Dictionary key name: unrecognized_ipv6_option

**unrecognized_next_header_type**

> XML Binding class name: Unrecognized_Next_Header_Type
> Dictionary key name: unrecognized_next_header_type

class cybox.objects.network_packet_object.**ICMPv6TimeExceeded**
> Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.ICMPv6TimeExceededType

**fragment_reassem_time_exceeded**

> XML Binding class name: Fragment_Reassem_Time_Exceeded
> Dictionary key name: fragment_reassem_time_exceeded

**hop_limit_exceeded**

> XML Binding class name: Hop_Limit_Exceeded
> Dictionary key name: hop_limit_exceeded

class cybox.objects.network_packet_object.**IPv4Flags**
> Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.IPv4FlagsType

**do_not_fragment**

> Type: *cybox.common.properties.String*

XML Binding class name: `Do_Not_Fragment`

Dictionary key name: `do_not_fragment`

### more_fragments

Type: *`cybox.common.properties.String`*

XML Binding class name: `More_Fragments`

Dictionary key name: `more_fragments`

### reserved

Type: *`cybox.common.properties.Integer`*

XML Binding class name: `Reserved`

Dictionary key name: `reserved`

**class** cybox.objects.network_packet_object.**IPv4Header**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.IPv4HeaderType`

### checksum

Type: *`cybox.common.properties.HexBinary`*

XML Binding class name: `Checksum`

Dictionary key name: `checksum`

### dest_ipv4_addr

Type: *`cybox.objects.address_object.Address`*

XML Binding class name: `Dest_IPv4_Addr`

Dictionary key name: `dest_ipv4_addr`

### dscp

Type: *`cybox.common.properties.HexBinary`*

XML Binding class name: `DSCP`

Dictionary key name: `dscp`

### ecn

Type: *`cybox.common.properties.HexBinary`*

XML Binding class name: `ECN`

Dictionary key name: `ecn`

### flags

Type: *`cybox.objects.network_packet_object.IPv4Flags`*

XML Binding class name: `Flags`

Dictionary key name: `flags`

**fragment_offset**

>   Type: *cybox.common.properties.HexBinary*
>   XML Binding class name: Fragment_Offset
>   Dictionary key name: fragment_offset

**header_length**

>   Type: *cybox.common.properties.Integer*
>   XML Binding class name: Header_Length
>   Dictionary key name: header_length

**identification**

>   Type: *cybox.common.properties.PositiveInteger*
>   XML Binding class name: Identification
>   Dictionary key name: identification

**ip_version**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: IP_Version
>   Dictionary key name: ip_version

**option**

>   (List of values permitted)
>   Type: *cybox.objects.network_packet_object.IPv4Option*
>   XML Binding class name: Option
>   Dictionary key name: option

**protocol**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Protocol
>   Dictionary key name: protocol

**src_ipv4_addr**

>   Type: *cybox.objects.address_object.Address*
>   XML Binding class name: Src_IPv4_Addr
>   Dictionary key name: src_ipv4_addr

**total_length**

>   Type: *cybox.common.properties.HexBinary*
>   XML Binding class name: Total_Length
>   Dictionary key name: total_length

**ttl**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: TTL
Dictionary key name: `ttl`

**class** cybox.objects.network_packet_object.**IPv4Option**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.IPv4OptionType

**class_**

Type: *cybox.common.properties.String*
XML Binding class name: Class
Dictionary key name: `class`

**copy_flag**

Type: *cybox.common.properties.String*
XML Binding class name: Copy_Flag
Dictionary key name: `copy_flag`

**option**

Type: *cybox.common.properties.String*
XML Binding class name: Option
Dictionary key name: `option`

**class** cybox.objects.network_packet_object.**IPv4Packet**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.IPv4PacketType

**data**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Data
Dictionary key name: `data`

**ipv4_header**

Type: *cybox.objects.network_packet_object.IPv4Header*
XML Binding class name: IPv4_Header
Dictionary key name: `ipv4_header`

**class** cybox.objects.network_packet_object.**IPv6ExtHeader**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.IPv6ExtHeaderType

**authentication_header**

Type: *cybox.objects.network_packet_object.AuthenticationHeader*
XML Binding class name: Authentication_Header
Dictionary key name: authentication_header

**destination_options**

(List of values permitted)
Type: *cybox.objects.network_packet_object.DestinationOptions*
XML Binding class name: Destination_Options
Dictionary key name: destination_options

**encapsulating_security_payload**

Type: *cybox.objects.network_packet_object.EncapsulatingSecurityPayload*
XML Binding class name: Encapsulating_Security_Payload
Dictionary key name: encapsulating_security_payload

**fragment**

Type: *cybox.objects.network_packet_object.Fragment*
XML Binding class name: Fragment
Dictionary key name: fragment

**hop_by_hop_options**

Type: *cybox.objects.network_packet_object.HopByHopOptions*
XML Binding class name: Hop_by_Hop_Options
Dictionary key name: hop_by_hop_options

**routing**

Type: *cybox.objects.network_packet_object.Routing*
XML Binding class name: Routing
Dictionary key name: routing

class cybox.objects.network_packet_object.**IPv6Header**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.IPv6HeaderType

**dest_ipv6_addr**

Type: *cybox.objects.address_object.Address*
XML Binding class name: Dest_IPv6_Addr
Dictionary key name: dest_ipv6_addr

**flow_label**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Flow_Label
> Dictionary key name: flow_label

### ip_version

> Type: *cybox.common.properties.String*
> XML Binding class name: IP_Version
> Dictionary key name: ip_version

### next_header

> Type: *cybox.common.properties.String*
> XML Binding class name: Next_Header
> Dictionary key name: next_header

### payload_length

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Payload_Length
> Dictionary key name: payload_length

### src_ipv6_addr

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: Src_IPv6_Addr
> Dictionary key name: src_ipv6_addr

### traffic_class

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Traffic_Class
> Dictionary key name: traffic_class

### ttl

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: TTL
> Dictionary key name: ttl

class cybox.objects.network_packet_object.**IPv6Option**
    Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.IPv6OptionType

### do_not_recogn_action

> Type: *cybox.common.properties.String*
> XML Binding class name: Do_Not_Recogn_Action

Dictionary key name: do_not_recogn_action

**option_byte**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Option_Byte
Dictionary key name: option_byte

**packet_change**

Type: *cybox.common.properties.String*
XML Binding class name: Packet_Change
Dictionary key name: packet_change

class cybox.objects.network_packet_object.**IPv6Packet**
 Bases: cybox.Entity

 XML binding class: cybox.bindings.network_packet_object.IPv6PacketType

**data**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Data
Dictionary key name: data

**ext_headers**

(List of values permitted)
Type: *cybox.objects.network_packet_object.IPv6ExtHeader*
XML Binding class name: Ext_Headers
Dictionary key name: ext_headers

**ipv6_header**

Type: *cybox.objects.network_packet_object.IPv6Header*
XML Binding class name: IPv6_Header
Dictionary key name: ipv6_header

class cybox.objects.network_packet_object.**InternetLayer**
 Bases: cybox.Entity

 XML binding class: cybox.bindings.network_packet_object.InternetLayerType

**icmpv4**

Type: *cybox.objects.network_packet_object.ICMPv4Packet*
XML Binding class name: ICMPv4
Dictionary key name: icmpv4

**icmpv6**

Type: *cybox.objects.network_packet_object.ICMPv6Packet*
XML Binding class name: ICMPv6
Dictionary key name: icmpv6

**ipv4**

Type: *cybox.objects.network_packet_object.IPv4Packet*
XML Binding class name: IPv4
Dictionary key name: ipv4

**ipv6**

Type: *cybox.objects.network_packet_object.IPv6Packet*
XML Binding class name: IPv6
Dictionary key name: ipv6

class cybox.objects.network_packet_object.**LinkLayer**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.LinkLayerType

    **logical_protocls**

    Type: *cybox.objects.network_packet_object.LogicalProtocol*
    XML Binding class name: Logical_Protocols
    Dictionary key name: logical_protocols

    **physical_interface**

    Type: *cybox.objects.network_packet_object.PhysicalInterface*
    XML Binding class name: Physical_Interface
    Dictionary key name: physical_interface

class cybox.objects.network_packet_object.**LogicalProtocol**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.LogicalProtocolType

    **arp_rarp**

    Type: *cybox.objects.network_packet_object.ARP*
    XML Binding class name: ARP_RARP
    Dictionary key name: arp_rarp

    **ndp**

Type: *cybox.objects.network_packet_object.NDP*
XML Binding class name: NDP
Dictionary key name: ndp

**class** cybox.objects.network_packet_object.**NDP**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.NDPType

    **icmpv6_header**

        Type: *cybox.objects.network_packet_object.ICMPv6Header*
        XML Binding class name: ICMPv6_Header
        Dictionary key name: icmpv6_header

    **neighbor_advertisement**

        Type: *cybox.objects.network_packet_object.NeighborAdvertisement*
        XML Binding class name: Neighbor_Advertisement
        Dictionary key name: neighbor_advertisement

    **neighbor_solicitation**

        Type: *cybox.objects.network_packet_object.NeighborSolicitation*
        XML Binding class name: Neighbor_Solicitation
        Dictionary key name: neighbor_solicitation

    **redirect**

        Type: *cybox.objects.network_packet_object.Redirect*
        XML Binding class name: Redirect
        Dictionary key name: redirect

    **router_advertisement**

        Type: *cybox.objects.network_packet_object.RouterAdvertisement*
        XML Binding class name: Router_Advertisement
        Dictionary key name: router_advertisement

    **router_solicitation**

        Type: *cybox.objects.network_packet_object.RouterSolicitation*
        XML Binding class name: Router_Solicitation
        Dictionary key name: router_solicitation

**class** cybox.objects.network_packet_object.**NDPLinkAddr**
    Bases: cybox.Entity

    Abstract Type

XML binding class: cybox.bindings.network_packet_object.NDPLinkAddrType

> **length**

>> Type: *cybox.common.properties.Integer*
>> XML Binding class name: Length
>> Dictionary key name: length

> **link_layer_mac_addr**

>> Type: *cybox.objects.address_object.Address*
>> XML Binding class name: Link_Layer_MAC_Addr
>> Dictionary key name: link_layer_mac_addr

class cybox.objects.network_packet_object.**NDPMTU**
> Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.NDPMTUType

> **length**

>> Type: *cybox.common.properties.Integer*
>> XML Binding class name: Length
>> Dictionary key name: length

> **mtu**

>> Type: *cybox.common.properties.Integer*
>> XML Binding class name: MTU
>> Dictionary key name: mtu

class cybox.objects.network_packet_object.**NDPPrefixInfo**
> Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.NDPPrefixInfoType

> **addr_config_flag**

>> XML Binding class name: addr_config_flag
>> Dictionary key name: addr_config_flag

> **length**

>> Type: *cybox.common.properties.Integer*
>> XML Binding class name: Length
>> Dictionary key name: length

---

**link_flag**

>   XML Binding class name: `link_flag`
>   Dictionary key name: `link_flag`

**preferred_lifetime**

>   Type: *cybox.common.properties.Integer*
>   XML Binding class name: `Preferred_Lifetime`
>   Dictionary key name: `preferred_lifetime`

**prefix**

>   Type: *cybox.objects.network_packet_object.Prefix*
>   XML Binding class name: `Prefix`
>   Dictionary key name: `prefix`

**prefix_length**

>   Type: *cybox.common.properties.Integer*
>   XML Binding class name: `Prefix_Length`
>   Dictionary key name: `prefix_length`

**valid_lifetime**

>   Type: *cybox.common.properties.Integer*
>   XML Binding class name: `Valid_Lifetime`
>   Dictionary key name: `valid_lifetime`

class cybox.objects.network_packet_object.**NDPRedirectedHeader**
>   Bases: `cybox.Entity`

>   XML binding class: cybox.bindings.network_packet_object.NDPRedirectedHeaderType

**ipheader_and_data**

>   Type: *cybox.common.properties.HexBinary*
>   XML Binding class name: `IPHeader_And_Data`
>   Dictionary key name: `ipheader_and_data`

**length**

>   Type: *cybox.common.properties.Integer*
>   XML Binding class name: `Length`
>   Dictionary key name: `length`

class cybox.objects.network_packet_object.**NeighborAdvertisement**
>   Bases: `cybox.Entity`

XML binding class:
cybox.bindings.network_packet_object.NeighborAdvertisementType

**options**

> Type: *cybox.objects.network_packet_object.NeighborOptions*
> XML Binding class name: Options
> Dictionary key name: options

**override_flag**

> XML Binding class name: override_flag
> Dictionary key name: override_flag

**router_flag**

> XML Binding class name: router_flag
> Dictionary key name: router_flag

**solicited_flag**

> XML Binding class name: solicited_flag
> Dictionary key name: solicited_flag

**target_ipv6_addr**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: Target_IPv6_Addr
> Dictionary key name: target_ipv6_addr

class cybox.objects.network_packet_object.**NeighborOptions**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.network_packet_object.NeighborOptionsType

**target_link_addr**

> Type: *cybox.objects.network_packet_object.NDPLinkAddr*
> XML Binding class name: Target_Link_Addr
> Dictionary key name: target_link_addr

class cybox.objects.network_packet_object.**NeighborSolicitation**
> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.network_packet_object.NeighborSolicitationType

**options**

> Type: *cybox.objects.network_packet_object.NeighborSolicitationOptions*
> XML Binding class name: Options
> Dictionary key name: options

**target_ipv6_addr**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: Target_IPv6_Addr
> Dictionary key name: target_ipv6_addr

class cybox.objects.network_packet_object.**NeighborSolicitationOptions**
    Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.NeighborSolicitationOptionsType

**src_link_addr**

> Type: *cybox.objects.network_packet_object.NDPLinkAddr*
> XML Binding class name: Src_Link_Addr
> Dictionary key name: src_link_addr

class cybox.objects.network_packet_object.**NetworkPacket**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.network_packet_object.NetworkPacketObjectType

**internet_layer**

> Type: *cybox.objects.network_packet_object.InternetLayer*
> XML Binding class name: Internet_Layer
> Dictionary key name: internet_layer

**link_layer**

> Type: *cybox.objects.network_packet_object.LinkLayer*
> XML Binding class name: Link_Layer
> Dictionary key name: link_layer

**transport_layer**

> Type: *cybox.objects.network_packet_object.TransportLayer*
> XML Binding class name: Transport_Layer
> Dictionary key name: transport_layer

**class** cybox.objects.network_packet_object.**OptionData**

    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.OptionDataType

    **option_data_len**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Option_Data_Len
        Dictionary key name: option_data_len

    **option_type**

        Type: *cybox.objects.network_packet_object.IPv6Option*
        XML Binding class name: Option_Type
        Dictionary key name: option_type

    **pad1**

        Type: *cybox.objects.network_packet_object.Pad1*
        XML Binding class name: Pad1
        Dictionary key name: pad1

    **padn**

        Type: *cybox.objects.network_packet_object.PadN*
        XML Binding class name: PadN
        Dictionary key name: padn

**class** cybox.objects.network_packet_object.**Pad1**

    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.Pad1Type

    **octet**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Octet
        Dictionary key name: octet

**class** cybox.objects.network_packet_object.**PadN**

    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.PadNType

**octet**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Octet
> Dictionary key name: octet

**option_data**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Option_Data
> Dictionary key name: option_data

**option_data_length**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Option_Data_Length
> Dictionary key name: option_data_length

class cybox.objects.network_packet_object.**PhysicalInterface**
    Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.PhysicalInterfaceType

**ethernet**

> Type: *cybox.objects.network_packet_object.EthernetInterface*
> XML Binding class name: Ethernet
> Dictionary key name: ethernet

class cybox.objects.network_packet_object.**Prefix**
    Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.PrefixType

**ip_addr_prefix**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: IP_Addr_Prefix
> Dictionary key name: ip_addr_prefix

**ipv6_addr**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: IPv6_Addr
> Dictionary key name: ipv6_addr

class cybox.objects.network_packet_object.**Redirect**
    Bases: cybox.Entity

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XML binding class: cybox.bindings.network_packet_object.RedirectType

### dest_ipv6_addr

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: Dest_IPv6_Addr
> Dictionary key name: dest_ipv6_addr

### options

> Type: *cybox.objects.network_packet_object.RedirectOptions*
> XML Binding class name: Options
> Dictionary key name: options

### target_ipv6_addr

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: Target_IPv6_Addr
> Dictionary key name: target_ipv6_addr

class cybox.objects.network_packet_object.**RedirectOptions**
> Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.NeighborOptionsType

### redirected_header

> Type: *cybox.objects.network_packet_object.NDPRedirectedHeader*
> XML Binding class name: Redirected_Header
> Dictionary key name: redirected_header

### target_link_addr

> Type: *cybox.objects.network_packet_object.NDPLinkAddr*
> XML Binding class name: Target_Link_Addr
> Dictionary key name: target_link_addr

class cybox.objects.network_packet_object.**RouterAdvertisement**
> Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.RouterAdvertisementType

### cur_hop_limit

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Cur_Hop_Limit
> Dictionary key name: cur_hop_limit

> **managed_address_config_flag**
>
>> XML Binding class name: managed_address_config_flag
>>
>> Dictionary key name: managed_address_config_flag
>
> **options**
>
>> Type: *cybox.objects.network_packet_object.RouterAdvertisementOptions*
>>
>> XML Binding class name: Options
>>
>> Dictionary key name: options
>
> **other_config_flag**
>
>> XML Binding class name: other_config_flag
>>
>> Dictionary key name: other_config_flag
>
> **reachable_time**
>
>> Type: *cybox.common.properties.Integer*
>>
>> XML Binding class name: Reachable_Time
>>
>> Dictionary key name: reachable_time
>
> **retrans_timer**
>
>> Type: *cybox.common.properties.Integer*
>>
>> XML Binding class name: Retrans_Timer
>>
>> Dictionary key name: retrans_timer
>
> **router_lifetime**
>
>> Type: *cybox.common.properties.Integer*
>>
>> XML Binding class name: Router_Lifetime
>>
>> Dictionary key name: router_lifetime

class cybox.objects.network_packet_object.**RouterAdvertisementOptions**

> Bases: cybox.Entity
>
> XML binding class:
> cybox.bindings.network_packet_object.RouterAdvertisementOptionsType
>
> **mtu**
>
>> Type: *cybox.objects.network_packet_object.NDPMTU*
>>
>> XML Binding class name: MTU
>>
>> Dictionary key name: mtu
>
> **prefix_info**
>
>> Type: *cybox.objects.network_packet_object.NDPPrefixInfo*

XML Binding class name: Prefix_Info

Dictionary key name: prefix_info

**src_link_addr**

Type: *cybox.objects.network_packet_object.NDPLinkAddr*

XML Binding class name: Src_Link_Addr

Dictionary key name: src_link_addr

class cybox.objects.network_packet_object.**RouterSolicitation**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.RouterSolicitationType

**options**

(List of values permitted)

Type: *cybox.objects.network_packet_object.RouterSolicitationOptions*

XML Binding class name: Options

Dictionary key name: options

class cybox.objects.network_packet_object.**RouterSolicitationOptions**

Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.RouterSolicitationOptionsType

**src_link_addr**

Type: *cybox.objects.network_packet_object.NDPLinkAddr*

XML Binding class name: Src_Link_Addr

Dictionary key name: src_link_addr

class cybox.objects.network_packet_object.**Routing**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.RoutingType

**header_ext_len**

Type: *cybox.common.properties.Integer*

XML Binding class name: Header_Ext_Len

Dictionary key name: header_ext_len

**next_header**

---

Type: *cybox.common.properties.String*
XML Binding class name: Next_Header
Dictionary key name: next_header

**routing_type**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Routing_Type
Dictionary key name: routing_type

**segments_left**

Type: *cybox.common.properties.Integer*
XML Binding class name: Segments_Left
Dictionary key name: segments_left

**type_specific_data**

Type: *cybox.common.properties.String*
XML Binding class name: Type_Specific_Data
Dictionary key name: type_specific_data

class cybox.objects.network_packet_object.**TCP**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.TCPType

    **data**

    Type: *cybox.common.data_segment.DataSegment*
    XML Binding class name: Data
    Dictionary key name: data

    **options**

    Type: *cybox.common.properties.HexBinary*
    XML Binding class name: Options
    Dictionary key name: options

    **tcp_header**

    Type: *cybox.objects.network_packet_object.TCPHeader*
    XML Binding class name: TCP_Header
    Dictionary key name: tcp_header

class cybox.objects.network_packet_object.**TCPFlags**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.TCPFlagsType

**ack**

> XML Binding class name: ack
> Dictionary key name: ack

**cwr**

> XML Binding class name: cwr
> Dictionary key name: cwr

**ece**

> XML Binding class name: ece
> Dictionary key name: ece

**fin**

> XML Binding class name: fin
> Dictionary key name: fin

**ns**

> XML Binding class name: ns
> Dictionary key name: ns

**psh**

> XML Binding class name: psh
> Dictionary key name: psh

**rst**

> XML Binding class name: rst
> Dictionary key name: rst

**syn**

> XML Binding class name: syn
> Dictionary key name: syn

**urg**

> XML Binding class name: urg
> Dictionary key name: urg

class cybox.objects.network_packet_object.**TCPHeader**
    Bases: cybox.Entity


    XML binding class: cybox.bindings.network_packet_object.TCPHeaderType

---

**ack_num**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: ACK_Num
> Dictionary key name: ack_num

**checksum**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Checksum
> Dictionary key name: checksum

**data_offset**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Data_Offset
> Dictionary key name: data_offset

**dest_port**

> Type: *cybox.objects.port_object.Port*
> XML Binding class name: Dest_Port
> Dictionary key name: dest_port

**reserved**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Reserved
> Dictionary key name: reserved

**seq_num**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Seq_Num
> Dictionary key name: seq_num

**src_port**

> Type: *cybox.objects.port_object.Port*
> XML Binding class name: Src_Port
> Dictionary key name: src_port

**tcp_flags**

> Type: *cybox.objects.network_packet_object.TCPFlags*
> XML Binding class name: TCP_Flags
> Dictionary key name: tcp_flags

**urg_ptr**

> Type: *cybox.common.properties.HexBinary*

XML Binding class name: Urg_Ptr

Dictionary key name: urg_ptr

### window

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Window

Dictionary key name: window

class cybox.objects.network_packet_object.**TransportLayer**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.TransportLayerType

### tcp

Type: *cybox.objects.network_packet_object.TCP*

XML Binding class name: TCP

Dictionary key name: tcp

### udp

Type: *cybox.objects.network_packet_object.UDP*

XML Binding class name: UDP

Dictionary key name: udp

class cybox.objects.network_packet_object.**TypeLength**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.TypeLengthType

### internet_layer_type

Type: *cybox.common.properties.String*

XML Binding class name: Internet_Layer_Type

Dictionary key name: internet_layer_type

### length

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Length

Dictionary key name: length

class cybox.objects.network_packet_object.**UDP**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.UDPType

**data**

> Type: *cybox.common.data_segment.DataSegment*
> XML Binding class name: `Data`
> Dictionary key name: `data`

**udp_header**

> Type: *cybox.objects.network_packet_object.UDPHeader*
> XML Binding class name: `UDP_Header`
> Dictionary key name: `udp_header`

class cybox.objects.network_packet_object.**UDPHeader**
    Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.UDPHeaderType`

**checksum**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: `Checksum`
> Dictionary key name: `checksum`

**destport**

> Type: *cybox.objects.port_object.Port*
> XML Binding class name: `DestPort`
> Dictionary key name: `destport`

**length**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: `Length`
> Dictionary key name: `length`

**srcport**

> Type: *cybox.objects.port_object.Port*
> XML Binding class name: `SrcPort`
> Dictionary key name: `srcport`

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**cybox.objects.network_route_entry_object module**
class cybox.objects.network_route_entry_object.**NetworkRouteEntry**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class:
`cybox.bindings.network_route_entry_object.NetworkRouteEntryObjectType`

### destination_address

> Type: *`cybox.objects.address_object.Address`*
> XML Binding class name: `Destination_Address`
> Dictionary key name: `destination_address`

### gateway_address

> Type: *`cybox.objects.address_object.Address`*
> XML Binding class name: `Gateway_Address`
> Dictionary key name: `gateway_address`

### interface

> Type: *`cybox.common.properties.String`*
> XML Binding class name: `Interface`
> Dictionary key name: `interface`

### is_autoconfigure_address

> XML Binding class name: `is_autoconfigure_address`
> Dictionary key name: `is_autoconfigure_address`

### is_immortal

> XML Binding class name: `is_immortal`
> Dictionary key name: `is_immortal`

### is_ipv6

> XML Binding class name: `is_ipv6`
> Dictionary key name: `is_ipv6`

### is_loopback

> XML Binding class name: `is_loopback`
> Dictionary key name: `is_loopback`

### is_publish

> XML Binding class name: `is_publish`
> Dictionary key name: `is_publish`

### metric

> Type: *`cybox.common.properties.UnsignedLong`*
> XML Binding class name: `Metric`

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Dictionary key name: `metric`

**netmask**

Type: *cybox.objects.address_object.Address*
XML Binding class name: `Netmask`
Dictionary key name: `netmask`

**origin**

Type: *cybox.objects.address_object.Address*
XML Binding class name: `Origin`
Dictionary key name: `origin`

**preferred_lifetime**

Type: *cybox.common.properties.Duration*
XML Binding class name: `Preferred_Lifetime`
Dictionary key name: `preferred_lifetime`

**protocol**

Type: *cybox.common.properties.String*
XML Binding class name: `Protocol`
Dictionary key name: `protocol`

**route_age**

Type: *cybox.common.properties.Duration*
XML Binding class name: `Route_Age`
Dictionary key name: `route_age`

**type_**

Type: *cybox.common.properties.String*
XML Binding class name: `Type`
Dictionary key name: `type`

**valid_lifetime**

Type: *cybox.common.properties.Duration*
XML Binding class name: `Valid_Lifetime`
Dictionary key name: `valid_lifetime`

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**cybox.objects.network_route_object module**

class cybox.objects.network_route_object.**NetRoute**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.network_route_object.NetRouteObjectType

**description**

> Type: *cybox.common.structured_text.StructuredText*
> XML Binding class name: `Description`
> Dictionary key name: `description`

**is_autoconfigure_address**

> XML Binding class name: `is_autoconfigure_address`
> Dictionary key name: `is_autoconfigure_address`

**is_immortal**

> XML Binding class name: `is_immortal`
> Dictionary key name: `is_immortal`

**is_ipv6**

> XML Binding class name: `is_ipv6`
> Dictionary key name: `is_ipv6`

**is_loopback**

> XML Binding class name: `is_loopback`
> Dictionary key name: `is_loopback`

**is_publish**

> XML Binding class name: `is_publish`
> Dictionary key name: `is_publish`

**network_route_entries**

> Type: *cybox.objects.network_route_object.NetworkRouteEntries*
> XML Binding class name: `Network_Route_Entries`
> Dictionary key name: `network_route_entries`

**preferred_lifetime**

> Type: *cybox.common.properties.Duration*
> XML Binding class name: `Preferred_Lifetime`
> Dictionary key name: `preferred_lifetime`

**route_age**

> Type: *cybox.common.properties.Duration*
> XML Binding class name: `Route_Age`
> Dictionary key name: `route_age`

**valid_lifetime**

Type: *cybox.common.properties.Duration*

XML Binding class name: Valid_Lifetime

Dictionary key name: valid_lifetime

class cybox.objects.network_route_object.**NetworkRouteEntries**(*\*args*)

Bases: cybox.EntityList

XML binding class: cybox.bindings.network_route_object.NetworkRouteEntriesType

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**cybox.objects.network_socket_object module**

class cybox.objects.network_socket_object.**NetworkSocket**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.network_socket_object.NetworkSocketObjectType

**address_family**

Type: *cybox.common.properties.String*

XML Binding class name: Address_Family

Dictionary key name: address_family

**domain**

Type: *cybox.common.properties.String*

XML Binding class name: Domain

Dictionary key name: domain

**is_blocking**

XML Binding class name: is_blocking

Dictionary key name: is_blocking

**is_listening**

XML Binding class name: is_listening

Dictionary key name: is_listening

**local_address**

Type: *cybox.objects.socket_address_object.SocketAddress*

XML Binding class name: Local_Address

Dictionary key name: local_address

**options**

Type: *cybox.objects.network_socket_object.SocketOptions*

XML Binding class name: `Options`

Dictionary key name: `options`

**protocol**

Type: *[cybox.common.properties.String](#)*

XML Binding class name: `Protocol`

Dictionary key name: `protocol`

**remote_address**

Type: *[cybox.objects.socket_address_object.SocketAddress](#)*

XML Binding class name: `Remote_Address`

Dictionary key name: `remote_address`

**socket_descriptor**

Type: *[cybox.common.properties.NonNegativeInteger](#)*

XML Binding class name: `Socket_Descriptor`

Dictionary key name: `socket_descriptor`

**type_**

Type: *[cybox.common.properties.String](#)*

XML Binding class name: `Type`

Dictionary key name: `type`

class cybox.objects.network_socket_object.**SocketOptions**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_socket_object.SocketOptionsType`

**ip_multicast_if**

Type: *[cybox.common.properties.String](#)*

XML Binding class name: `IP_MULTICAST_IF`

Dictionary key name: `ip_multicast_if`

**ip_multicast_if2**

Type: *[cybox.common.properties.String](#)*

XML Binding class name: `IP_MULTICAST_IF2`

Dictionary key name: `ip_multicast_if2`

**ip_multicast_loop**

XML Binding class name: `IP_MULTICAST_LOOP`

Dictionary key name: `ip_multicast_loop`

**ip_tos**

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> Type: *cybox.common.properties.String*
> XML Binding class name: IP_TOS
> Dictionary key name: ip_tos

**so_broadcast**

> XML Binding class name: SO_BROADCAST
> Dictionary key name: so_broadcast

**so_conditional_accept**

> XML Binding class name: SO_CONDITIONAL_ACCEPT
> Dictionary key name: so_conditional_accept

**so_debug**

> XML Binding class name: SO_DEBUG
> Dictionary key name: so_debug

**so_dontlinger**

> XML Binding class name: SO_DONTLINGER
> Dictionary key name: so_dontlinger

**so_dontroute**

> XML Binding class name: SO_DONTROUTE
> Dictionary key name: so_dontroute

**so_group_priority**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: SO_GROUP_PRIORITY
> Dictionary key name: so_group_priority

**so_keepalive**

> XML Binding class name: SO_KEEPALIVE
> Dictionary key name: so_keepalive

**so_linger**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: SO_LINGER
> Dictionary key name: so_linger

**so_oobinline**

> XML Binding class name: SO_OOBINLINE
> Dictionary key name: so_oobinline

**so_rcvbuf**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: SO_RCVBUF
> Dictionary key name: so_rcvbuf

**so_rcvtimeo**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: SO_RCVTIMEO
> Dictionary key name: so_rcvtimeo

**so_reuseaddr**

> XML Binding class name: SO_REUSEADDR
> Dictionary key name: so_reuseaddr

**so_sndbuf**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: SO_SNDBUF
> Dictionary key name: so_sndbuf

**so_sndtimeo**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: SO_SNDTIMEO
> Dictionary key name: so_sndtimeo

**so_timeout**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: SO_TIMEOUT
> Dictionary key name: so_timeout

**so_update_accept_context**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: SO_UPDATE_ACCEPT_CONTEXT
> Dictionary key name: so_update_accept_context

**tcp_nodelay**

> XML Binding class name: TCP_NODELAY
> Dictionary key name: tcp_nodelay

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**cybox.objects.network_subnet_object module**

class cybox.objects.network_subnet_object.**NetworkSubnet**
> Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.network_subnet_object.NetworkSubnetObjectType

**description**

> Type: *cybox.common.structured_text.StructuredText*
> XML Binding class name: Description
> Dictionary key name: description

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**number_of_ip_addresses**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Number_Of_IP_Addresses
> Dictionary key name: number_of_ip_addresses

**routes**

> Type: *cybox.objects.network_subnet_object.Routes*
> XML Binding class name: Routes
> Dictionary key name: routes

class cybox.objects.network_subnet_object.**Routes**(*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.network_subnet_object.RoutesType

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**cybox.objects.pdf_file_object module**

class cybox.objects.pdf_file_object.**PDFDocumentInformationDictionary**

> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.pdf_file_object.PDFDocumentInformationDictionaryType

**author**

> Type: *cybox.common.properties.String*
> XML Binding class name: Author
> Dictionary key name: author

**creationdate**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: CreationDate
> Dictionary key name: creationdate

**creator**

> Type: *cybox.common.properties.String*
> XML Binding class name: Creator
> Dictionary key name: creator

**keywords**

> Type: *cybox.common.properties.String*
> XML Binding class name: Keywords
> Dictionary key name: keywords

**moddate**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: ModDate
> Dictionary key name: moddate

**producer**

> Type: *cybox.common.properties.String*
> XML Binding class name: Producer
> Dictionary key name: producer

**subject**

> Type: *cybox.common.properties.String*
> XML Binding class name: Subject
> Dictionary key name: subject

**title**

> Type: *cybox.common.properties.String*
> XML Binding class name: Title
> Dictionary key name: title

**trapped**

> Type: *cybox.common.properties.String*
> XML Binding class name: Trapped
> Dictionary key name: trapped

**class** cybox.objects.pdf_file_object.**PDFFile**
> Bases: *cybox.objects.file_object.File*

XML binding class: cybox.bindings.pdf_file_object.PDFFileObjectType

**metadata**

> Type: *cybox.objects.pdf_file_object.PDFFileMetadata*
> XML Binding class name: Metadata
> Dictionary key name: metadata

**version**

> Type: *cybox.common.properties.Double*
> XML Binding class name: Version
> Dictionary key name: version

**class** cybox.objects.pdf_file_object.**PDFFileMetadata**
    Bases: cybox.Entity

XML binding class: cybox.bindings.pdf_file_object.PDFFileMetadataType

**document_information_dictionary**

> Type: *cybox.objects.pdf_file_object.PDFDocumentInformationDictionary*
> XML Binding class name: Document_Information_Dictionary
> Dictionary key name: document_information_dictionary

**encrypted**

> XML Binding class name: encrypted
> Dictionary key name: encrypted

**keyword_counts**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCounts*
> XML Binding class name: Keyword_Counts
> Dictionary key name: keyword_counts

**number_of_cross_reference_tables**

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: Number_Of_Cross_Reference_Tables
> Dictionary key name: number_of_cross_reference_tables

**number_of_indirect_objects**

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: Number_Of_Indirect_Objects
> Dictionary key name: number_of_indirect_objects

**number_of_trailers**

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: Number_Of_Trailers
> Dictionary key name: number_of_trailers

**optimized**

> XML Binding class name: optimized
> Dictionary key name: optimized

class cybox.objects.pdf_file_object.**PDFKeywordCount**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.pdf_file_object.PDFKeywordCountType

**non_obfuscated_count**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Non_Obfuscated_Count
> Dictionary key name: non_obfuscated_count

**obfuscated_count**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Obfuscated_Count
> Dictionary key name: obfuscated_count

class cybox.objects.pdf_file_object.**PDFKeywordCounts**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.pdf_file_object.PDFKeywordCountsType

**aa_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: AA_Count
> Dictionary key name: aa_count

**ascii85decode_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: ASCII85Decode_Count
> Dictionary key name: ascii85decode_count

**asciihexdecode_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*

XML Binding class name: `ASCIIHexDecode_Count`

Dictionary key name: `asciihexdecode_count`

**ccittfaxdecode_count**

Type: *`cybox.objects.pdf_file_object.PDFKeywordCount`*

XML Binding class name: `CCITTFaxDecode_Count`

Dictionary key name: `ccittfaxdecode_count`

**dctdecode_count**

Type: *`cybox.objects.pdf_file_object.PDFKeywordCount`*

XML Binding class name: `DCTDecode_Count`

Dictionary key name: `dctdecode_count`

**encrypt_count**

Type: *`cybox.objects.pdf_file_object.PDFKeywordCount`*

XML Binding class name: `Encrypt_Count`

Dictionary key name: `encrypt_count`

**flatedecode_count**

Type: *`cybox.objects.pdf_file_object.PDFKeywordCount`*

XML Binding class name: `FlateDecode_Count`

Dictionary key name: `flatedecode_count`

**javascript_count**

Type: *`cybox.objects.pdf_file_object.PDFKeywordCount`*

XML Binding class name: `JavaScript_Count`

Dictionary key name: `javascript_count`

**jbig2decode_count**

Type: *`cybox.objects.pdf_file_object.PDFKeywordCount`*

XML Binding class name: `JBIG2Decode_Count`

Dictionary key name: `jbig2decode_count`

**js_count**

Type: *`cybox.objects.pdf_file_object.PDFKeywordCount`*

XML Binding class name: `JS_Count`

Dictionary key name: `js_count`

**launch_count**

Type: *`cybox.objects.pdf_file_object.PDFKeywordCount`*

XML Binding class name: `Launch_Count`

Dictionary key name: `launch_count`

**lzwdecode_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: LZWDecode_Count
> Dictionary key name: lzwdecode_count

**objstm_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: ObjStm_Count
> Dictionary key name: objstm_count

**openaction_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: OpenAction_Count
> Dictionary key name: openaction_count

**page_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: Page_Count
> Dictionary key name: page_count

**richmedia_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: RichMedia_Count
> Dictionary key name: richmedia_count

**runlengthdecode_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: RunLengthDecode_Count
> Dictionary key name: runlengthdecode_count

**xfa_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: XFA_Count
> Dictionary key name: xfa_count

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**cybox.objects.pipe_object module**

class cybox.objects.pipe_object.**Pipe**
    Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.pipe_object.PipeObjectType

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**named**

> XML Binding class name: named
> Dictionary key name: named

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**cybox.objects.port_object module**

class cybox.objects.port_object.**Port**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.port_object.PortObjectType

**layer4_protocol**

> Type: *cybox.common.properties.String*
> XML Binding class name: Layer4_Protocol
> Dictionary key name: layer4_protocol

**port_value**

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: Port_Value
> Dictionary key name: port_value

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**cybox.objects.process_object module**

class cybox.objects.process_object.**ArgumentList**(*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.process_object.ArgumentListType

class cybox.objects.process_object.**ChildPIDList**(*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.process_object.ChildPIDListType

class cybox.objects.process_object.**ImageInfo**

> Bases: cybox.Entity

XML binding class: cybox.bindings.process_object.ImageInfoType

**command_line**

Type: *cybox.common.properties.String*
XML Binding class name: Command_Line
Dictionary key name: command_line

**current_directory**

Type: *cybox.common.properties.String*
XML Binding class name: Current_Directory
Dictionary key name: current_directory

**file_name**

Type: *cybox.common.properties.String*
XML Binding class name: File_Name
Dictionary key name: file_name

**path**

Type: *cybox.common.properties.String*
XML Binding class name: Path
Dictionary key name: path

class cybox.objects.process_object.**NetworkConnectionList**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.process_object.NetworkConnectionListType

class cybox.objects.process_object.**PortList**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.process_object.PortListType

class cybox.objects.process_object.**Process**
    Bases: *cybox.common.object_properties.ObjectProperties*

    XML binding class: cybox.bindings.process_object.ProcessObjectType

    **argument_list**

    Type: *cybox.objects.process_object.ArgumentList*
    XML Binding class name: Argument_List

Dictionary key name: argument_list

**child_pid_list**

Type: *cybox.objects.process_object.ChildPIDList*
XML Binding class name: Child_PID_List
Dictionary key name: child_pid_list

**creation_time**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Creation_Time
Dictionary key name: creation_time

**environment_variable_list**

Type: *cybox.common.environment_variable.EnvironmentVariableList*
XML Binding class name: Environment_Variable_List
Dictionary key name: environment_variable_list

**extracted_features**

Type: *cybox.common.extracted_features.ExtractedFeatures*
XML Binding class name: Extracted_Features
Dictionary key name: extracted_features

**image_info**

Type: *cybox.objects.process_object.ImageInfo*
XML Binding class name: Image_Info
Dictionary key name: image_info

**is_hidden**

XML Binding class name: is_hidden
Dictionary key name: is_hidden

**kernel_time**

Type: *cybox.common.properties.Duration*
XML Binding class name: Kernel_Time
Dictionary key name: kernel_time

**name**

Type: *cybox.common.properties.String*
XML Binding class name: Name
Dictionary key name: name

**network_connection_list**

Type: *cybox.objects.process_object.NetworkConnectionList*

XML Binding class name: Network_Connection_List

Dictionary key name: network_connection_list

**parent_pid**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Parent_PID

Dictionary key name: parent_pid

**pid**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: PID

Dictionary key name: pid

**port_list**

Type: *cybox.objects.process_object.PortList*

XML Binding class name: Port_List

Dictionary key name: port_list

**start_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Start_Time

Dictionary key name: start_time

**user_time**

Type: *cybox.common.properties.Duration*

XML Binding class name: User_Time

Dictionary key name: user_time

**username**

Type: *cybox.common.properties.String*

XML Binding class name: Username

Dictionary key name: username

**Version**: 2.1.0.12.dev0

**cybox.objects.product_object module**

class cybox.objects.product_object.**Product**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.product_object.ProductObjectType

**edition**

Type: *cybox.common.properties.String*

XML Binding class name: Edition

Dictionary key name: edition

### language

Type: *cybox.common.properties.String*

XML Binding class name: Language

Dictionary key name: language

### product

Type: *cybox.common.properties.String*

XML Binding class name: Product

Dictionary key name: product

### update

Type: *cybox.common.properties.String*

XML Binding class name: Update

Dictionary key name: update

### vendor

Type: *cybox.common.properties.String*

XML Binding class name: Vendor

Dictionary key name: vendor

### version

Type: *cybox.common.properties.String*

XML Binding class name: Version

Dictionary key name: version

Version: 2.1.0.12.dev0

**cybox.objects.semaphore_object module**

class cybox.objects.semaphore_object.**Semaphore**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.semaphore_object.SemaphoreObjectType

### current_count

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: Current_Count

Dictionary key name: current_count

### maximum_count

> Type: *cybox.common.properties.PositiveInteger*
>
> XML Binding class name: `Maximum_Count`
>
> Dictionary key name: `maximum_count`

**name**

> Type: *cybox.common.properties.String*
>
> XML Binding class name: `Name`
>
> Dictionary key name: `name`

**named**

> XML Binding class name: `named`
>
> Dictionary key name: `named`

**Version**: 2.1.0.12.dev0

**cybox.objects.socket_address_object module**

class cybox.objects.socket_address_object.**SocketAddress**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.socket_address_object.SocketAddressObjectType

**hostname**

> Type: *cybox.objects.hostname_object.Hostname*
>
> XML Binding class name: `Hostname`
>
> Dictionary key name: `hostname`

**ip_address**

> Type: *cybox.objects.address_object.Address*
>
> XML Binding class name: `IP_Address`
>
> Dictionary key name: `ip_address`

**port**

> Type: *cybox.objects.port_object.Port*
>
> XML Binding class name: `Port`
>
> Dictionary key name: `port`

**Version**: 2.1.0.12.dev0

**cybox.objects.sms_message_object module**

class cybox.objects.sms_message_object.**SMSMessage**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.sms_message_object.SMSMessageObjectType

**bits_per_character**

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: `Bits_Per_Character`
> Dictionary key name: `bits_per_character`

**body**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Body`
> Dictionary key name: `body`

**encoding**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Encoding`
> Dictionary key name: `encoding`

**is_premium**

> XML Binding class name: `is_premium`
> Dictionary key name: `is_premium`

**length**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: `Length`
> Dictionary key name: `length`

**recipient_phone_number**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Recipient_Phone_Number`
> Dictionary key name: `recipient_phone_number`

**sender_phone_number**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Sender_Phone_Number`
> Dictionary key name: `sender_phone_number`

**sent_datetime**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: `Sent_DateTime`
> Dictionary key name: `sent_datetime`

**size**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: `Size`

Dictionary key name: `size`

**user_data_header**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `User_Data_Header`

Dictionary key name: `user_data_header`

Version: 2.1.0.12.dev0

## cybox.objects.system_object module

class cybox.objects.system_object.**BIOSInfo**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.system_object.BIOSInfoType`

**bios_date**

Type: *cybox.common.properties.Date*

XML Binding class name: `BIOS_Date`

Dictionary key name: `bios_date`

**bios_manufacturer**

Type: *cybox.common.properties.String*

XML Binding class name: `BIOS_Manufacturer`

Dictionary key name: `bios_manufacturer`

**bios_release_date**

Type: *cybox.common.properties.Date*

XML Binding class name: `BIOS_Release_Date`

Dictionary key name: `bios_release_date`

**bios_serial_number**

Type: *cybox.common.properties.String*

XML Binding class name: `BIOS_Serial_Number`

Dictionary key name: `bios_serial_number`

**bios_version**

Type: *cybox.common.properties.String*

XML Binding class name: `BIOS_Version`

Dictionary key name: `bios_version`

class cybox.objects.system_object.**DHCPServerList**(*args*)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.system_object.DHCPServerListType`

**class** cybox.objects.system_object.**IPGatewayList**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.system_object.IPGatewayListType

**class** cybox.objects.system_object.**IPInfo**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.system_object.IPInfoType

    **ip_address**

        Type: *cybox.objects.address_object.Address*
        XML Binding class name: IP_Address
        Dictionary key name: ip_address

    **subnet_mask**

        Type: *cybox.objects.address_object.Address*
        XML Binding class name: Subnet_Mask
        Dictionary key name: subnet_mask

**class** cybox.objects.system_object.**IPInfoList**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.system_object.IPInfoListType

**class** cybox.objects.system_object.**NetworkInterface**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.system_object.NetworkInterfaceType

    **adapter**

        Type: *cybox.common.properties.String*
        XML Binding class name: Adapter
        Dictionary key name: adapter

    **description**

        Type: *cybox.common.properties.String*
        XML Binding class name: Description
        Dictionary key name: description

> **dhcp_lease_expires**
>
>> Type: *cybox.common.properties.DateTime*
>> XML Binding class name: DHCP_Lease_Expires
>> Dictionary key name: dhcp_lease_expires
>
> **dhcp_lease_obtained**
>
>> Type: *cybox.common.properties.DateTime*
>> XML Binding class name: DHCP_Lease_Obtained
>> Dictionary key name: dhcp_lease_obtained
>
> **dhcp_server_list**
>
>> Type: *cybox.objects.system_object.DHCPServerList*
>> XML Binding class name: DHCP_Server_List
>> Dictionary key name: dhcp_server_list
>
> **ip_gateway_list**
>
>> Type: *cybox.objects.system_object.IPGatewayList*
>> XML Binding class name: IP_Gateway_List
>> Dictionary key name: ip_gateway_list
>
> **ip_list**
>
>> Type: *cybox.objects.system_object.IPInfoList*
>> XML Binding class name: IP_List
>> Dictionary key name: ip_list
>
> **mac**
>
>> Type: *cybox.common.properties.String*
>> XML Binding class name: MAC
>> Dictionary key name: mac

class cybox.objects.system_object.**NetworkInterfaceList**(*args*)

> Bases: cybox.EntityList
>
> XML binding class: cybox.bindings.system_object.NetworkInterfaceListType

class cybox.objects.system_object.**OS**

> Bases: cybox.Entity
>
> XML binding class: cybox.bindings.system_object.OSType
>
> **bitness**

> Type: *[cybox.common.properties.String](#)*
> XML Binding class name: `Bitness`
> Dictionary key name: `bitness`

**build_number**

> Type: *[cybox.common.properties.String](#)*
> XML Binding class name: `Build_Number`
> Dictionary key name: `build_number`

**environment_variable_list**

> Type: *[cybox.common.environment_variable.EnvironmentVariableList](#)*
> XML Binding class name: `Environment_Variable_List`
> Dictionary key name: `environment_variable_list`

**install_date**

> Type: *[cybox.common.properties.Date](#)*
> XML Binding class name: `Install_Date`
> Dictionary key name: `install_date`

**patch_level**

> Type: *[cybox.common.properties.String](#)*
> XML Binding class name: `Patch_Level`
> Dictionary key name: `patch_level`

**platform**

> Type: *[cybox.common.platform_specification.PlatformSpecification](#)*
> XML Binding class name: `Platform`
> Dictionary key name: `platform`

class cybox.objects.system_object.**System**
> Bases: *[cybox.common.object_properties.ObjectProperties](#)*

XML binding class: cybox.bindings.system_object.SystemObjectType

**available_physical_memory**

> Type: *[cybox.common.properties.UnsignedLong](#)*
> XML Binding class name: `Available_Physical_Memory`
> Dictionary key name: `available_physical_memory`

**bios_info**

> Type: *[cybox.objects.system_object.BIOSInfo](#)*
> XML Binding class name: `BIOS_Info`

Dictionary key name: bios_info

**date**

>   Type: *cybox.common.properties.Date*
>   XML Binding class name: Date
>   Dictionary key name: date

**hostname**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Hostname
>   Dictionary key name: hostname

**local_time**

>   Type: *cybox.common.properties.Time*
>   XML Binding class name: Local_Time
>   Dictionary key name: local_time

**network_interface_list**

>   Type: *cybox.objects.system_object.NetworkInterfaceList*
>   XML Binding class name: Network_Interface_List
>   Dictionary key name: network_interface_list

**os**

>   Type: *cybox.objects.system_object.OS*
>   XML Binding class name: OS
>   Dictionary key name: os

**processor**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Processor
>   Dictionary key name: processor

**system_time**

>   Type: *cybox.common.properties.Time*
>   XML Binding class name: System_Time
>   Dictionary key name: system_time

**timezone_dst**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Timezone_DST
>   Dictionary key name: timezone_dst

**timezone_standard**

Type: *cybox.common.properties.String*

XML Binding class name: Timezone_Standard

Dictionary key name: timezone_standard

### total_physical_memory

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Total_Physical_Memory

Dictionary key name: total_physical_memory

### uptime

Type: *cybox.common.properties.Duration*

XML Binding class name: Uptime

Dictionary key name: uptime

### username

Type: *cybox.common.properties.String*

XML Binding class name: Username

Dictionary key name: username

**Version**: 2.1.0.12.dev0

### cybox.objects.uri_object module

class cybox.objects.uri_object.**URI**(*value=None*, *type_=None*)

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.uri_object.URIObjectType

### type_

XML Binding class name: type_

Dictionary key name: type

### value

Type: *cybox.common.properties.AnyURI*

XML Binding class name: Value

Dictionary key name: value

**Version**: 2.1.0.12.dev0

### cybox.objects.user_account_object module

class cybox.objects.user_account_object.**Group**

Bases: cybox.Entity

An abstract class for account groups.

XML binding class: <undefined>

**class** cybox.objects.user_account_object.**GroupList**(*\*args*)
　　Bases: cybox.EntityList


　　XML binding class: cybox.bindings.user_account_object.GroupListType


**class** cybox.objects.user_account_object.**Privilege**
　　Bases: cybox.Entity

　　An abstract class for account privileges.


　　XML binding class: <undefined>


**class** cybox.objects.user_account_object.**PrivilegeList**(*\*args*)
　　Bases: cybox.EntityList


　　XML binding class: cybox.bindings.user_account_object.PrivilegeListType


**class** cybox.objects.user_account_object.**UserAccount**
　　Bases: *cybox.objects.account_object.Account*


　　XML binding class: cybox.bindings.user_account_object.UserAccountObjectType


　　**full_name**


　　　　Type: *cybox.common.properties.String*
　　　　XML Binding class name: Full_Name
　　　　Dictionary key name: full_name

　　**group_list**


　　　　Type: *cybox.objects.user_account_object.GroupList*
　　　　XML Binding class name: Group_List
　　　　Dictionary key name: group_list

　　**home_directory**


　　　　Type: *cybox.common.properties.String*
　　　　XML Binding class name: Home_Directory
　　　　Dictionary key name: home_directory

　　**last_login**


　　　　Type: *cybox.common.properties.DateTime*
　　　　XML Binding class name: Last_Login
　　　　Dictionary key name: last_login

**password_required**

> XML Binding class name: password_required
> Dictionary key name: password_required

**privilege_list**

> Type: *cybox.objects.user_account_object.PrivilegeList*
> XML Binding class name: Privilege_List
> Dictionary key name: privilege_list

**script_path**

> Type: *cybox.common.properties.String*
> XML Binding class name: Script_Path
> Dictionary key name: script_path

**user_password_age**

> Type: *cybox.common.properties.Duration*
> XML Binding class name: User_Password_Age
> Dictionary key name: user_password_age

**username**

> Type: *cybox.common.properties.String*
> XML Binding class name: Username
> Dictionary key name: username

**Version**: 2.1.0.12.dev0

**cybox.objects.volume_object module**

class cybox.objects.volume_object.**FileSystemFlagList**(*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.volume_object.FileSystemFlagListType

class cybox.objects.volume_object.**Volume**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.volume_object.VolumeObjectType

**actual_available_allocation_units**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Actual_Available_Allocation_Units
> Dictionary key name: actual_available_allocation_units

**bytes_per_sector**

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: Bytes_Per_Sector
> Dictionary key name: bytes_per_sector

**creation_time**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: Creation_Time
> Dictionary key name: creation_time

**device_path**

> Type: *cybox.common.properties.String*
> XML Binding class name: Device_Path
> Dictionary key name: device_path

**file_system_flag_list**

> Type: *cybox.objects.volume_object.FileSystemFlagList*
> XML Binding class name: File_System_Flag_List
> Dictionary key name: file_system_flag_list

**file_system_type**

> Type: *cybox.common.properties.String*
> XML Binding class name: File_System_Type
> Dictionary key name: file_system_type

**is_mounted**

> XML Binding class name: is_mounted
> Dictionary key name: is_mounted

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**sectors_per_allocation_unit**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: Sectors_Per_Allocation_Unit
> Dictionary key name: sectors_per_allocation_unit

**serial_number**

> Type: *cybox.common.properties.String*
> XML Binding class name: Serial_Number

Dictionary key name: serial_number

**total_allocation_units**

Type: *[cybox.common.properties.UnsignedLong](#)*
XML Binding class name: Total_Allocation_Units
Dictionary key name: total_allocation_units

**Version**: 2.1.0.12.dev0

**cybox.objects.whois_object module**
class cybox.objects.whois_object.**WhoisContact**
Bases: cybox.Entity

XML binding class: cybox.bindings.whois_object.WhoisContactType

**address**

Type: *[cybox.common.properties.String](#)*
XML Binding class name: Address
Dictionary key name: address

**contact_id**

Type: *[cybox.common.properties.String](#)*
XML Binding class name: Contact_ID
Dictionary key name: contact_id

**contact_type**

XML Binding class name: contact_type
Dictionary key name: contact_type

**email_address**

Type: *[cybox.objects.address_object.EmailAddress](#)*
XML Binding class name: Email_Address
Dictionary key name: email_address

**fax_number**

Type: *[cybox.common.properties.String](#)*
XML Binding class name: Fax_Number
Dictionary key name: fax_number

**name**

Type: *[cybox.common.properties.String](#)*
XML Binding class name: Name

Dictionary key name: name

**organization**

Type: *cybox.common.properties.String*
XML Binding class name: Organization
Dictionary key name: organization

**phone_number**

Type: *cybox.common.properties.String*
XML Binding class name: Phone_Number
Dictionary key name: phone_number

class cybox.objects.whois_object.**WhoisContacts**(*args*)
Bases: cybox.EntityList

XML binding class: cybox.bindings.whois_object.WhoisContactsType

class cybox.objects.whois_object.**WhoisEntry**
Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.whois_object.WhoisObjectType

**contact_info**

Type: *cybox.objects.whois_object.WhoisContact*
XML Binding class name: Contact_Info
Dictionary key name: contact_info

**creation_date**

Type: *cybox.common.properties.Date*
XML Binding class name: Creation_Date
Dictionary key name: creation_date

**dnssec**

XML Binding class name: DNSSEC
Dictionary key name: dnssec

**domain_id**

Type: *cybox.common.properties.String*
XML Binding class name: Domain_ID
Dictionary key name: domain_id

**domain_name**

Type: *cybox.objects.uri_object.URI*
XML Binding class name: Domain_Name
Dictionary key name: domain_name

**expiration_date**

Type: *cybox.common.properties.Date*
XML Binding class name: Expiration_Date
Dictionary key name: expiration_date

**ip_address**

Type: *cybox.objects.address_object.Address*
XML Binding class name: IP_Address
Dictionary key name: ip_address

**lookup_date**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Lookup_Date
Dictionary key name: lookup_date

**nameservers**

Type: *cybox.objects.whois_object.WhoisNameservers*
XML Binding class name: Nameservers
Dictionary key name: nameservers

**regional_internet_registry**

Type: *cybox.common.properties.String*
XML Binding class name: Regional_Internet_Registry
Dictionary key name: regional_internet_registry

**registrants**

Type: *cybox.objects.whois_object.WhoisRegistrants*
XML Binding class name: Registrants
Dictionary key name: registrants

**registrar_info**

Type: *cybox.objects.whois_object.WhoisRegistrar*
XML Binding class name: Registrar_Info
Dictionary key name: registrar_info

**remarks**

Type: *cybox.common.properties.String*
XML Binding class name: Remarks
Dictionary key name: remarks

**server_name**

>
> Type: *cybox.objects.uri_object.URI*
> XML Binding class name: Server_Name
> Dictionary key name: server_name

**sponsoring_registrar**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Sponsoring_Registrar
> Dictionary key name: sponsoring_registrar

**status**

>
> Type: *cybox.objects.whois_object.WhoisStatuses*
> XML Binding class name: Status
> Dictionary key name: status

**updated_date**

>
> Type: *cybox.common.properties.Date*
> XML Binding class name: Updated_Date
> Dictionary key name: updated_date

**class** cybox.objects.whois_object.**WhoisNameservers**(*args*)
>    Bases: cybox.EntityList

>
>    XML binding class: cybox.bindings.whois_object.WhoisNameserversType

**class** cybox.objects.whois_object.**WhoisRegistrant**
>    Bases: *cybox.objects.whois_object.WhoisContact*

>
>    XML binding class: cybox.bindings.whois_object.WhoisRegistrantInfoType

>    **registrant_id**

>    >
>    > Type: *cybox.common.properties.String*
>    > XML Binding class name: Registrant_ID
>    > Dictionary key name: registrant_id

**class** cybox.objects.whois_object.**WhoisRegistrants**(*args*)
>    Bases: cybox.EntityList

>
>    XML binding class: cybox.bindings.whois_object.WhoisRegistrantsType

**class** cybox.objects.whois_object.**WhoisRegistrar**
    Bases: cybox.Entity

XML binding class: cybox.bindings.whois_object.WhoisRegistrarInfoType

**address**

> Type: *cybox.common.properties.String*
> XML Binding class name: Address
> Dictionary key name: address

**contacts**

> Type: *cybox.objects.whois_object.WhoisContacts*
> XML Binding class name: Contacts
> Dictionary key name: contacts

**email_address**

> Type: *cybox.objects.address_object.EmailAddress*
> XML Binding class name: Email_Address
> Dictionary key name: email_address

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**phone_number**

> Type: *cybox.common.properties.String*
> XML Binding class name: Phone_Number
> Dictionary key name: phone_number

**referral_url**

> Type: *cybox.objects.uri_object.URI*
> XML Binding class name: Referral_URL
> Dictionary key name: referral_url

**registrar_guid**

> Type: *cybox.common.properties.String*
> XML Binding class name: Registrar_GUID
> Dictionary key name: registrar_guid

**registrar_id**

Type: *cybox.common.properties.String*

XML Binding class name: Registrar_ID

Dictionary key name: registrar_id

### whois_server

Type: *cybox.objects.uri_object.URI*

XML Binding class name: Whois_Server

Dictionary key name: whois_server

class cybox.objects.whois_object.**WhoisStatus**(*value=None*)

Bases: *cybox.common.properties.BaseProperty*

XML binding class: cybox.bindings.whois_object.WhoisStatusType

class cybox.objects.whois_object.**WhoisStatuses**(*\*args*)

Bases: cybox.EntityList

XML binding class: cybox.bindings.whois_object.WhoisStatusesType

**Version**: 2.1.0.12.dev0

### cybox.objects.win_computer_account_object module

class cybox.objects.win_computer_account_object.**FullyQualifiedName**

Bases: cybox.Entity

XML binding class:
cybox.bindings.win_computer_account_object.FullyQualifiedNameType

### full_name

Type: *cybox.common.properties.String*

XML Binding class name: Full_Name

Dictionary key name: full_name

### netbeui_name

Type: *cybox.common.properties.String*

XML Binding class name: NetBEUI_Name

Dictionary key name: netbeui_name

class cybox.objects.win_computer_account_object.**Kerberos**

Bases: cybox.Entity

XML binding class: cybox.bindings.win_computer_account_object.KerberosType

---

**delegation**

> Type: *cybox.objects.win_computer_account_object.KerberosDelegation*
> XML Binding class name: Delegation
> Dictionary key name: delegation

**ticket**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Ticket
> Dictionary key name: ticket

**class** cybox.objects.win_computer_account_object.**KerberosDelegation**
> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.win_computer_account_object.KerberosDelegationType

**bitmask**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Bitmask
> Dictionary key name: bitmask

**service**

> Type: *cybox.objects.win_computer_account_object.KerberosService*
> XML Binding class name: Service
> Dictionary key name: service

**class** cybox.objects.win_computer_account_object.**KerberosService**
> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.win_computer_account_object.KerberosServiceType

**computer**

> Type: *cybox.common.properties.String*
> XML Binding class name: Computer
> Dictionary key name: computer

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**port**

> Type: *cybox.objects.port_object.Port*
> XML Binding class name: Port
> Dictionary key name: port

**user**

> Type: *cybox.common.properties.String*
> XML Binding class name: User
> Dictionary key name: user

**class** cybox.objects.win_computer_account_object.**WinComputerAccount**
> Bases: *cybox.objects.account_object.Account*


> XML binding class:
> cybox.bindings.win_computer_account_object.WindowsComputerAccountObjectType


**fully_qualified_name**

> Type: *cybox.objects.win_computer_account_object.FullyQualifiedName*
> XML Binding class name: Fully_Qualified_Name
> Dictionary key name: fully_qualified_name

**kerberos**

> Type: *cybox.objects.win_computer_account_object.Kerberos*
> XML Binding class name: Kerberos
> Dictionary key name: kerberos

**security_id**

> Type: *cybox.common.properties.String*
> XML Binding class name: Security_ID
> Dictionary key name: security_id

**type_**

> Type: *cybox.common.properties.String*
> XML Binding class name: Type
> Dictionary key name: type

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**cybox.objects.win_critical_section_object module**
**class** cybox.objects.win_critical_section_object.**WinCriticalSection**
> Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class:
cybox.bindings.win_critical_section_object.WindowsCriticalSectionObjectType

### address

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Address
> Dictionary key name: address

### spin_count

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Spin_Count
> Dictionary key name: spin_count

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**cybox.objects.win_driver_object module**

**class** cybox.objects.win_driver_object.**DeviceObjectList**(*args*)
> Bases: cybox.EntityList

> XML binding class: cybox.bindings.win_driver_object.DeviceObjectListType

**class** cybox.objects.win_driver_object.**DeviceObjectStruct**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_driver_object.DeviceObjectStructType

### attached_device_name

> Type: *cybox.common.properties.String*
> XML Binding class name: Attached_Device_Name
> Dictionary key name: attached_device_name

### attached_device_object

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Attached_Device_Object
> Dictionary key name: attached_device_object

### attached_to_device_name

> Type: *cybox.common.properties.String*
> XML Binding class name: Attached_To_Device_Name
> Dictionary key name: attached_to_device_name

### attached_to_device_object

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: `Attached_To_Device_Object`
Dictionary key name: `attached_to_device_object`

**attached_to_driver_name**

Type: *cybox.common.properties.String*
XML Binding class name: `Attached_To_Driver_Name`
Dictionary key name: `attached_to_driver_name`

**attached_to_driver_object**

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: `Attached_To_Driver_Object`
Dictionary key name: `attached_to_driver_object`

**device_name**

Type: *cybox.common.properties.String*
XML Binding class name: `Device_Name`
Dictionary key name: `device_name`

**device_object**

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: `Device_Object`
Dictionary key name: `device_object`

class cybox.objects.win_driver_object.**WinDriver**
    Bases: *cybox.objects.win_executable_file_object.WinExecutableFile*

XML binding class: cybox.bindings.win_driver_object.WindowsDriverObjectType

**device_object_list**

Type: *cybox.objects.win_driver_object.DeviceObjectList*
XML Binding class name: `Device_Object_List`
Dictionary key name: `device_object_list`

**driver_init**

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: `Driver_Init`
Dictionary key name: `driver_init`

**driver_name**

Type: *cybox.common.properties.String*
XML Binding class name: `Driver_Name`

Dictionary key name: `driver_name`

**driver_object_address**

Type: *`cybox.common.properties.HexBinary`*
XML Binding class name: `Driver_Object_Address`
Dictionary key name: `driver_object_address`

**driver_start_io**

Type: *`cybox.common.properties.HexBinary`*
XML Binding class name: `Driver_Start_IO`
Dictionary key name: `driver_start_io`

**driver_unload**

Type: *`cybox.common.properties.HexBinary`*
XML Binding class name: `Driver_Unload`
Dictionary key name: `driver_unload`

**image_base**

Type: *`cybox.common.properties.HexBinary`*
XML Binding class name: `Image_Base`
Dictionary key name: `image_base`

**image_size**

Type: *`cybox.common.properties.HexBinary`*
XML Binding class name: `Image_Size`
Dictionary key name: `image_size`

**irp_mj_cleanup**

Type: *`cybox.common.properties.UnsignedLong`*
XML Binding class name: `IRP_MJ_CLEANUP`
Dictionary key name: `irp_mj_cleanup`

**irp_mj_close**

Type: *`cybox.common.properties.UnsignedLong`*
XML Binding class name: `IRP_MJ_CLOSE`
Dictionary key name: `irp_mj_close`

**irp_mj_create**

Type: *`cybox.common.properties.UnsignedLong`*
XML Binding class name: `IRP_MJ_CREATE`
Dictionary key name: `irp_mj_create`

**irp_mj_create_mailslot**

> > Type: *cybox.common.properties.UnsignedLong*
> > XML Binding class name: IRP_MJ_CREATE_MAILSLOT
> > Dictionary key name: irp_mj_create_mailslot

> **irp_mj_create_named_pipe**

> > Type: *cybox.common.properties.UnsignedLong*
> > XML Binding class name: IRP_MJ_CREATE_NAMED_PIPE
> > Dictionary key name: irp_mj_create_named_pipe

> **irp_mj_device_change**

> > Type: *cybox.common.properties.UnsignedLong*
> > XML Binding class name: IRP_MJ_DEVICE_CHANGE
> > Dictionary key name: irp_mj_device_change

> **irp_mj_device_control**

> > Type: *cybox.common.properties.UnsignedLong*
> > XML Binding class name: IRP_MJ_DEVICE_CONTROL
> > Dictionary key name: irp_mj_device_control

> **irp_mj_directory_control**

> > Type: *cybox.common.properties.UnsignedLong*
> > XML Binding class name: IRP_MJ_DIRECTORY_CONTROL
> > Dictionary key name: irp_mj_directory_control

> **irp_mj_file_system_control**

> > Type: *cybox.common.properties.UnsignedLong*
> > XML Binding class name: IRP_MJ_FILE_SYSTEM_CONTROL
> > Dictionary key name: irp_mj_file_system_control

> **irp_mj_flush_buffers**

> > Type: *cybox.common.properties.UnsignedLong*
> > XML Binding class name: IRP_MJ_FLUSH_BUFFERS
> > Dictionary key name: irp_mj_flush_buffers

> **irp_mj_internal_device_control**

> > Type: *cybox.common.properties.UnsignedLong*
> > XML Binding class name: IRP_MJ_INTERNAL_DEVICE_CONTROL
> > Dictionary key name: irp_mj_internal_device_control

> **irp_mj_lock_control**

> > Type: *cybox.common.properties.UnsignedLong*
> > XML Binding class name: IRP_MJ_LOCK_CONTROL
> > Dictionary key name: irp_mj_lock_control

**irp_mj_pnp**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_PNP
> Dictionary key name: irp_mj_pnp

**irp_mj_power**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_POWER
> Dictionary key name: irp_mj_power

**irp_mj_query_ea**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_QUERY_EA
> Dictionary key name: irp_mj_query_ea

**irp_mj_query_information**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_QUERY_INFORMATION
> Dictionary key name: irp_mj_query_information

**irp_mj_query_quota**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_QUERY_QUOTA
> Dictionary key name: irp_mj_query_quota

**irp_mj_query_security**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_QUERY_SECURITY
> Dictionary key name: irp_mj_query_security

**irp_mj_query_volume_information**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_QUERY_VOLUME_INFORMATION
> Dictionary key name: irp_mj_query_volume_information

**irp_mj_read**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_READ
> Dictionary key name: irp_mj_read

**irp_mj_set_ea**

> Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_SET_EA

Dictionary key name: irp_mj_set_ea

### irp_mj_set_information

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_SET_INFORMATION

Dictionary key name: irp_mj_set_information

### irp_mj_set_quota

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_SET_QUOTA

Dictionary key name: irp_mj_set_quota

### irp_mj_set_security

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_SET_SECURITY

Dictionary key name: irp_mj_set_security

### irp_mj_set_volume_information

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_SET_VOLUME_INFORMATION

Dictionary key name: irp_mj_set_volume_information

### irp_mj_shutdown

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_SHUTDOWN

Dictionary key name: irp_mj_shutdown

### irp_mj_system_control

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_SYSTEM_CONTROL

Dictionary key name: irp_mj_system_control

### irp_mj_write

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_WRITE

Dictionary key name: irp_mj_write

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## cybox.objects.win_event_log_object module

class cybox.objects.win_event_log_object.**UnformattedMessageList**(*args*)

Bases: cybox.EntityList

XML binding class:
cybox.bindings.win_event_log_object.UnformattedMessageListType

**class** cybox.objects.win_event_log_object.**WinEventLog**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class:
cybox.bindings.win_event_log_object.WindowsEventLogObjectType

**blob**

Type: *cybox.common.properties.Base64Binary*
XML Binding class name: Blob
Dictionary key name: blob

**category**

Type: *cybox.common.properties.String*
XML Binding class name: Category
Dictionary key name: category

**category_num**

Type: *cybox.common.properties.Long*
XML Binding class name: Category_Num
Dictionary key name: category_num

**correlation_activity_id**

Type: *cybox.common.properties.String*
XML Binding class name: Correlation_Activity_ID
Dictionary key name: correlation_activity_id

**correlation_related_activity_id**

Type: *cybox.common.properties.String*
XML Binding class name: Correlation_Related_Activity_ID
Dictionary key name: correlation_related_activity_id

**eid**

Type: *cybox.common.properties.Long*
XML Binding class name: EID
Dictionary key name: eid

**execution_process_id**

Type: *cybox.common.properties.String*
XML Binding class name: Execution_Process_ID

Dictionary key name: execution_process_id

**execution_thread_id**

Type: *cybox.common.properties.String*
XML Binding class name: Execution_Thread_ID
Dictionary key name: execution_thread_id

**generation_time**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Generation_Time
Dictionary key name: generation_time

**index**

Type: *cybox.common.properties.Long*
XML Binding class name: Index
Dictionary key name: index

**log**

Type: *cybox.common.properties.String*
XML Binding class name: Log
Dictionary key name: log

**machine**

Type: *cybox.common.properties.String*
XML Binding class name: Machine
Dictionary key name: machine

**message**

Type: *cybox.common.properties.String*
XML Binding class name: Message
Dictionary key name: message

**reserved**

Type: *cybox.common.properties.Long*
XML Binding class name: Reserved
Dictionary key name: reserved

**source**

Type: *cybox.common.properties.String*
XML Binding class name: Source
Dictionary key name: source

**type**

Type: *cybox.common.properties.String*
XML Binding class name: Type
Dictionary key name: type

### unformatted_message_list

Type: *cybox.objects.win_event_log_object.UnformattedMessageList*
XML Binding class name: Unformatted_Message_List
Dictionary key name: unformatted_message_list

### user

Type: *cybox.common.properties.String*
XML Binding class name: User
Dictionary key name: user

### write_time

Type: *cybox.common.properties.DateTime*
XML Binding class name: Write_Time
Dictionary key name: write_time

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**cybox.objects.win_event_object module**
class cybox.objects.win_event_object.**WinEvent**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.win_event_object.WindowsEventObjectType

### handle

Type: *cybox.objects.win_handle_object.WinHandle*
XML Binding class name: Handle
Dictionary key name: handle

### name

Type: *cybox.common.properties.String*
XML Binding class name: Name
Dictionary key name: name

### type_

Type: *cybox.common.properties.String*
XML Binding class name: Type
Dictionary key name: type

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**cybox.objects.win_executable_file_object module**
class cybox.objects.win_executable_file_object.**DOSHeader**
    Bases: cybox.Entity


XML binding class: cybox.bindings.win_executable_file_object.DOSHeaderType


   **e_cblp**


       Type: *cybox.common.properties.HexBinary*
       XML Binding class name: e_cblp
       Dictionary key name: e_cblp

   **e_cp**


       Type: *cybox.common.properties.HexBinary*
       XML Binding class name: e_cp
       Dictionary key name: e_cp

   **e_cparhdr**


       Type: *cybox.common.properties.HexBinary*
       XML Binding class name: e_cparhdr
       Dictionary key name: e_cparhdr

   **e_crlc**


       Type: *cybox.common.properties.HexBinary*
       XML Binding class name: e_crlc
       Dictionary key name: e_crlc

   **e_cs**


       Type: *cybox.common.properties.HexBinary*
       XML Binding class name: e_cs
       Dictionary key name: e_cs

   **e_csum**


       Type: *cybox.common.properties.HexBinary*
       XML Binding class name: e_csum
       Dictionary key name: e_csum

   **e_ip**


       Type: *cybox.common.properties.HexBinary*
       XML Binding class name: e_ip
       Dictionary key name: e_ip

   **e_lfanew**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_lfanew
Dictionary key name: e_lfanew

**e_lfarlc**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_lfarlc
Dictionary key name: e_lfarlc

**e_magic**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_magic
Dictionary key name: e_magic

**e_maxalloc**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_maxalloc
Dictionary key name: e_maxalloc

**e_minalloc**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_minalloc
Dictionary key name: e_minalloc

**e_oemid**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_oemid
Dictionary key name: e_oemid

**e_oeminfo**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_oeminfo
Dictionary key name: e_oeminfo

**e_ovro**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_ovro
Dictionary key name: e_ovro

**e_sp**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_sp
Dictionary key name: e_sp

**e_ss**

>   Type: *cybox.common.properties.HexBinary*
>   XML Binding class name: e_ss
>   Dictionary key name: e_ss

**hashes**

>   Type: *cybox.common.hashes.HashList*
>   XML Binding class name: Hashes
>   Dictionary key name: hashes

**reserved2**

>   Type: *cybox.common.properties.HexBinary*
>   XML Binding class name: reserved2
>   Dictionary key name: reserved2

class cybox.objects.win_executable_file_object.**DataDirectory**
>   Bases: cybox.Entity

>   XML binding class: cybox.bindings.win_executable_file_object.DataDirectoryType

**architecture**

>   Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
>   XML Binding class name: Architecture
>   Dictionary key name: architecture

**base_relocation_table**

>   Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
>   XML Binding class name: Base_Relocation_Table
>   Dictionary key name: base_relocation_table

**bound_import**

>   Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
>   XML Binding class name: Bound_Import
>   Dictionary key name: bound_import

**certificate_table**

>   Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
>   XML Binding class name: Certificate_Table
>   Dictionary key name: certificate_table

**clr_runtime_header**

>   Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*

XML Binding class name: `CLR_Runtime_Header`

Dictionary key name: `clr_runtime_header`

**debug**

Type: *`cybox.objects.win_executable_file_object.PEDataDirectoryStruct`*

XML Binding class name: `Debug`

Dictionary key name: `debug`

**delay_import_descriptor**

Type: *`cybox.objects.win_executable_file_object.PEDataDirectoryStruct`*

XML Binding class name: `Delay_Import_Descriptor`

Dictionary key name: `delay_import_descriptor`

**exception_table**

Type: *`cybox.objects.win_executable_file_object.PEDataDirectoryStruct`*

XML Binding class name: `Exception_Table`

Dictionary key name: `exception_table`

**export_table**

Type: *`cybox.objects.win_executable_file_object.PEDataDirectoryStruct`*

XML Binding class name: `Export_Table`

Dictionary key name: `export_table`

**global_ptr**

Type: *`cybox.objects.win_executable_file_object.PEDataDirectoryStruct`*

XML Binding class name: `Global_Ptr`

Dictionary key name: `global_ptr`

**import_address_table**

Type: *`cybox.objects.win_executable_file_object.PEDataDirectoryStruct`*

XML Binding class name: `Import_Address_Table`

Dictionary key name: `import_address_table`

**import_table**

Type: *`cybox.objects.win_executable_file_object.PEDataDirectoryStruct`*

XML Binding class name: `Import_Table`

Dictionary key name: `import_table`

**load_config_table**

Type: *`cybox.objects.win_executable_file_object.PEDataDirectoryStruct`*

XML Binding class name: `Load_Config_Table`

Dictionary key name: `load_config_table`

**reserved**

> Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
> XML Binding class name: `Reserved`
> Dictionary key name: `reserved`

**resource_table**

> Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
> XML Binding class name: `Resource_Table`
> Dictionary key name: `resource_table`

**tls_table**

> Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
> XML Binding class name: `Tls_Table`
> Dictionary key name: `tls_table`

**class** cybox.objects.win_executable_file_object.**Entropy**
> Bases: `cybox.Entity`

> XML binding class: `cybox.bindings.win_executable_file_object.EntropyType`

**max**

> Type: *cybox.common.properties.Float*
> XML Binding class name: `Max`
> Dictionary key name: `max`

**min**

> Type: *cybox.common.properties.Float*
> XML Binding class name: `Min`
> Dictionary key name: `min`

**value**

> Type: *cybox.common.properties.Float*
> XML Binding class name: `Value`
> Dictionary key name: `value`

**class** cybox.objects.win_executable_file_object.**PEBuildInformation**
> Bases: `cybox.Entity`

> XML binding class:
> `cybox.bindings.win_executable_file_object.PEBuildInformationType`

**compiler_name**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Compiler_Name
> Dictionary key name: compiler_name

**compiler_version**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Compiler_Version
> Dictionary key name: compiler_version

**linker_name**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Linker_Name
> Dictionary key name: linker_name

**linker_version**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Linker_Version
> Dictionary key name: linker_version

class cybox.objects.win_executable_file_object.**PEChecksum**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_executable_file_object.PEChecksumType

**pe_computed_api**

>
> Type: *cybox.common.properties.Long*
> XML Binding class name: PE_Computed_API
> Dictionary key name: pe_computed_api

**pe_file_api**

>
> Type: *cybox.common.properties.Long*
> XML Binding class name: PE_File_API
> Dictionary key name: pe_file_api

**pe_file_raw**

>
> Type: *cybox.common.properties.Long*
> XML Binding class name: PE_File_Raw
> Dictionary key name: pe_file_raw

class cybox.objects.win_executable_file_object.**PEDataDirectoryStruct**
> Bases: cybox.Entity

XML binding class:
cybox.bindings.win_executable_file_object.PEDataDirectoryStructType

### size

Type: *cybox.common.properties.NonNegativeInteger*
XML Binding class name: Size
Dictionary key name: size

### virtual_address

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Virtual_Address
Dictionary key name: virtual_address

class cybox.objects.win_executable_file_object.**PEExportedFunction**
Bases: cybox.Entity

XML binding class:
cybox.bindings.win_executable_file_object.PEExportedFunctionType

### entry_point

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Entry_Point
Dictionary key name: entry_point

### function_name

Type: *cybox.common.properties.String*
XML Binding class name: Function_Name
Dictionary key name: function_name

### ordinal

Type: *cybox.common.properties.NonNegativeInteger*
XML Binding class name: Ordinal
Dictionary key name: ordinal

class cybox.objects.win_executable_file_object.**PEExportedFunctions**(*args*)
Bases: cybox.EntityList

XML binding class:
cybox.bindings.win_executable_file_object.PEExportedFunctionsType

class cybox.objects.win_executable_file_object.**PEExports**
Bases: cybox.Entity

---

XML binding class: cybox.bindings.win_executable_file_object.PEExportsType

**exported_functions**

Type: *cybox.objects.win_executable_file_object.PEExportedFunctions*
XML Binding class name: Exported_Functions
Dictionary key name: exported_functions

**exports_time_stamp**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Exports_Time_Stamp
Dictionary key name: exports_time_stamp

**name**

Type: *cybox.common.properties.String*
XML Binding class name: Name
Dictionary key name: name

**number_of_addresses**

Type: *cybox.common.properties.Long*
XML Binding class name: Number_Of_Addresses
Dictionary key name: number_of_addresses

**number_of_functions**

Type: *cybox.common.properties.Integer*
XML Binding class name: Number_Of_Functions
Dictionary key name: number_of_functions

**number_of_names**

Type: *cybox.common.properties.Long*
XML Binding class name: Number_Of_Names
Dictionary key name: number_of_names

class cybox.objects.win_executable_file_object.**PEFileHeader**
Bases: cybox.Entity

XML binding class: cybox.bindings.win_executable_file_object.PEFileHeaderType

**characteristics**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Characteristics
Dictionary key name: characteristics

**hashes**

> Type: *cybox.common.hashes.HashList*
> XML Binding class name: Hashes
> Dictionary key name: hashes

**machine**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Machine
> Dictionary key name: machine

**number_of_sections**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Number_Of_Sections
> Dictionary key name: number_of_sections

**number_of_symbols**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Number_Of_Symbols
> Dictionary key name: number_of_symbols

**pointer_to_symbol_table**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Pointer_To_Symbol_Table
> Dictionary key name: pointer_to_symbol_table

**size_of_optional_header**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Size_Of_Optional_Header
> Dictionary key name: size_of_optional_header

**time_date_stamp**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Time_Date_Stamp
> Dictionary key name: time_date_stamp

class cybox.objects.win_executable_file_object.**PEHeaders**
    Bases: cybox.Entity


XML binding class: cybox.bindings.win_executable_file_object.PEHeadersType


**dos_header**

Type: *cybox.objects.win_executable_file_object.DOSHeader*
XML Binding class name: DOS_Header
Dictionary key name: dos_header

**entropy**

Type: *cybox.objects.win_executable_file_object.Entropy*
XML Binding class name: Entropy
Dictionary key name: entropy

**file_header**

Type: *cybox.objects.win_executable_file_object.PEFileHeader*
XML Binding class name: File_Header
Dictionary key name: file_header

**hashes**

Type: *cybox.common.hashes.HashList*
XML Binding class name: Hashes
Dictionary key name: hashes

**optional_header**

Type: *cybox.objects.win_executable_file_object.PEOptionalHeader*
XML Binding class name: Optional_Header
Dictionary key name: optional_header

**signature**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Signature
Dictionary key name: signature

class cybox.objects.win_executable_file_object.**PEImport**
    Bases: cybox.Entity

XML binding class: cybox.bindings.win_executable_file_object.PEImportType

**delay_load**

XML Binding class name: delay_load
Dictionary key name: delay_load

**file_name**

Type: *cybox.common.properties.String*
XML Binding class name: File_Name
Dictionary key name: file_name

**imported_functions**

> Type: *cybox.objects.win_executable_file_object.PEImportedFunctions*
> XML Binding class name: Imported_Functions
> Dictionary key name: imported_functions

**initially_visible**

> XML Binding class name: initially_visible
> Dictionary key name: initially_visible

**virtual_address**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Virtual_Address
> Dictionary key name: virtual_address

class cybox.objects.win_executable_file_object.**PEImportList**(*args*)
> Bases: cybox.EntityList

> XML binding class: cybox.bindings.win_executable_file_object.PEImportListType

class cybox.objects.win_executable_file_object.**PEImportedFunction**
> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.win_executable_file_object.PEImportedFunctionType

**bound**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Bound
> Dictionary key name: bound

**function_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Function_Name
> Dictionary key name: function_name

**hint**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Hint
> Dictionary key name: hint

**ordinal**

Type: *cybox.common.properties.NonNegativeInteger*
XML Binding class name: Ordinal
Dictionary key name: ordinal

**virtual_address**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Virtual_Address
Dictionary key name: virtual_address

class cybox.objects.win_executable_file_object.**PEImportedFunctions**(*args*)
Bases: cybox.EntityList

XML binding class:
cybox.bindings.win_executable_file_object.PEImportedFunctionsType

class cybox.objects.win_executable_file_object.**PEOptionalHeader**
Bases: cybox.Entity

XML binding class:
cybox.bindings.win_executable_file_object.PEOptionalHeaderType

**address_of_entry_point**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Address_Of_Entry_Point
Dictionary key name: address_of_entry_point

**base_of_code**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Base_Of_Code
Dictionary key name: base_of_code

**base_of_data**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Base_Of_Data
Dictionary key name: base_of_data

**checksum**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Checksum
Dictionary key name: checksum

**data_directory**

Type: *cybox.objects.win_executable_file_object.DataDirectory*
XML Binding class name: `Data_Directory`
Dictionary key name: `data_directory`

### dll_characteristics

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `DLL_Characteristics`
Dictionary key name: `dll_characteristics`

### file_alignment

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `File_Alignment`
Dictionary key name: `file_alignment`

### hashes

Type: *cybox.common.hashes.HashList*
XML Binding class name: `Hashes`
Dictionary key name: `hashes`

### image_base

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `Image_Base`
Dictionary key name: `image_base`

### loader_flags

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `Loader_Flags`
Dictionary key name: `loader_flags`

### magic

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `Magic`
Dictionary key name: `magic`

### major_image_version

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `Major_Image_Version`
Dictionary key name: `major_image_version`

### major_linker_version

Type: *cybox.common.properties.HexBinary*
XML Binding class name: `Major_Linker_Version`
Dictionary key name: `major_linker_version`

**major_os_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Major_OS_Version
> Dictionary key name: major_os_version

**major_subsystem_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Major_Subsystem_Version
> Dictionary key name: major_subsystem_version

**minor_image_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Minor_Image_Version
> Dictionary key name: minor_image_version

**minor_linker_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Minor_Linker_Version
> Dictionary key name: minor_linker_version

**minor_os_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Minor_OS_Version
> Dictionary key name: minor_os_version

**minor_subsystem_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Minor_Subsystem_Version
> Dictionary key name: minor_subsystem_version

**number_of_rva_and_sizes**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Number_Of_Rva_And_Sizes
> Dictionary key name: number_of_rva_and_sizes

**section_alignment**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Section_Alignment
> Dictionary key name: section_alignment

**size_of_code**

> Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Code

Dictionary key name: size_of_code

**size_of_headers**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Headers

Dictionary key name: size_of_headers

**size_of_heap_commit**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Heap_Commit

Dictionary key name: size_of_heap_commit

**size_of_heap_reserve**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Heap_Reserve

Dictionary key name: size_of_heap_reserve

**size_of_image**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Image

Dictionary key name: size_of_image

**size_of_initialized_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Initialized_Data

Dictionary key name: size_of_initialized_data

**size_of_stack_commit**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Stack_Commit

Dictionary key name: size_of_stack_commit

**size_of_stack_reserve**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Stack_Reserve

Dictionary key name: size_of_stack_reserve

**size_of_uninitialized_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Uninitialized_Data

Dictionary key name: size_of_uninitialized_data

**subsystem**

> Type: *[cybox.common.properties.HexBinary](#)*
> XML Binding class name: `Subsystem`
> Dictionary key name: `subsystem`

**win32_version_value**

> Type: *[cybox.common.properties.HexBinary](#)*
> XML Binding class name: `Win32_Version_Value`
> Dictionary key name: `win32_version_value`

class `cybox.objects.win_executable_file_object.`**`PEResource`**
   Bases: `cybox.Entity`

   XML binding class: `cybox.bindings.win_executable_file_object.PEResourceType`

   **data**

   > Type: *[cybox.common.properties.String](#)*
   > XML Binding class name: `Data`
   > Dictionary key name: `data`

   **hashes**

   > Type: *[cybox.common.hashes.HashList](#)*
   > XML Binding class name: `Hashes`
   > Dictionary key name: `hashes`

   **language**

   > Type: *[cybox.common.properties.String](#)*
   > XML Binding class name: `Language`
   > Dictionary key name: `language`

   **name**

   > Type: *[cybox.common.properties.String](#)*
   > XML Binding class name: `Name`
   > Dictionary key name: `name`

   **size**

   > Type: *[cybox.common.properties.PositiveInteger](#)*
   > XML Binding class name: `Size`
   > Dictionary key name: `size`

   **sub_language**

Type: *cybox.common.properties.String*
XML Binding class name: Sub_Language
Dictionary key name: sub_language

**type_**

Type: *cybox.common.properties.String*
XML Binding class name: Type
Dictionary key name: type

**virtual_address**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Virtual_Address
Dictionary key name: virtual_address

class cybox.objects.win_executable_file_object.**PEResourceList**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.win_executable_file_object.PEResourceListType

    static **from_list**(*pe_resource_list*)

class cybox.objects.win_executable_file_object.**PESection**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.win_executable_file_object.PESectionType

    **data_hashes**

    Type: *cybox.common.hashes.HashList*
    XML Binding class name: Data_Hashes
    Dictionary key name: data_hashes

    **entropy**

    Type: *cybox.objects.win_executable_file_object.Entropy*
    XML Binding class name: Entropy
    Dictionary key name: entropy

    **header_hashes**

    Type: *cybox.common.hashes.HashList*
    XML Binding class name: Header_Hashes
    Dictionary key name: header_hashes

    **section_header**

    Type: *cybox.objects.win_executable_file_object.PESectionHeaderStruct*

XML Binding class name: Section_Header

Dictionary key name: section_header

class cybox.objects.win_executable_file_object.**PESectionHeaderStruct**

Bases: cybox.Entity

XML binding class:
cybox.bindings.win_executable_file_object.PESectionHeaderStructType

**characteristics**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Characteristics

Dictionary key name: characteristics

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**number_of_linenumbers**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Number_Of_Linenumbers

Dictionary key name: number_of_linenumbers

**number_of_relocations**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Number_Of_Relocations

Dictionary key name: number_of_relocations

**pointer_to_linenumbers**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Pointer_To_Linenumbers

Dictionary key name: pointer_to_linenumbers

**pointer_to_raw_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Pointer_To_Raw_Data

Dictionary key name: pointer_to_raw_data

**pointer_to_relocations**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Pointer_To_Relocations

Dictionary key name: pointer_to_relocations

**size_of_raw_data**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Size_Of_Raw_Data
> Dictionary key name: size_of_raw_data

**virtual_address**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Virtual_Address
> Dictionary key name: virtual_address

**virtual_size**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Virtual_Size
> Dictionary key name: virtual_size

class cybox.objects.win_executable_file_object.**PESectionList**(*args*)
> Bases: cybox.EntityList

> XML binding class: cybox.bindings.win_executable_file_object.PESectionListType

class cybox.objects.win_executable_file_object.**PEVersionInfoResource**
> Bases: *cybox.objects.win_executable_file_object.PEResource*

> XML binding class:
> cybox.bindings.win_executable_file_object.PEVersionInfoResourceType

**comments**

> Type: *cybox.common.properties.String*
> XML Binding class name: Comments
> Dictionary key name: comments

**companyname**

> Type: *cybox.common.properties.String*
> XML Binding class name: CompanyName
> Dictionary key name: companyname

**filedescription**

> Type: *cybox.common.properties.String*
> XML Binding class name: FileDescription
> Dictionary key name: filedescription

**fileversion**

> Type: *cybox.common.properties.String*
> XML Binding class name: `FileVersion`
> Dictionary key name: `fileversion`

**internalname**

> Type: *cybox.common.properties.String*
> XML Binding class name: `InternalName`
> Dictionary key name: `internalname`

static **keyword_test**(*pe_resource_dict*)

**langid**

> Type: *cybox.common.properties.String*
> XML Binding class name: `LangID`
> Dictionary key name: `langid`

**legalcopyright**

> Type: *cybox.common.properties.String*
> XML Binding class name: `LegalCopyright`
> Dictionary key name: `legalcopyright`

**legaltrademarks**

> Type: *cybox.common.properties.String*
> XML Binding class name: `LegalTrademarks`
> Dictionary key name: `legaltrademarks`

**originalfilename**

> Type: *cybox.common.properties.String*
> XML Binding class name: `OriginalFilename`
> Dictionary key name: `originalfilename`

**privatebuild**

> Type: *cybox.common.properties.String*
> XML Binding class name: `PrivateBuild`
> Dictionary key name: `privatebuild`

**productname**

> Type: *cybox.common.properties.String*
> XML Binding class name: `ProductName`
> Dictionary key name: `productname`

**productversion**

Type: *cybox.common.properties.String*
XML Binding class name: ProductVersion
Dictionary key name: productversion

**specialbuild**

Type: *cybox.common.properties.String*
XML Binding class name: SpecialBuild
Dictionary key name: specialbuild

class cybox.objects.win_executable_file_object.**WinExecutableFile**
Bases: *cybox.objects.win_file_object.WinFile*

XML binding class:
cybox.bindings.win_executable_file_object.WindowsExecutableFileObjectType

**build_information**

Type: *cybox.objects.win_executable_file_object.PEBuildInformation*
XML Binding class name: Build_Information
Dictionary key name: build_information

**digital_signature**

Type: *cybox.common.digitalsignature.DigitalSignature*
XML Binding class name: Digital_Signature
Dictionary key name: digital_signature

**exports**

Type: *cybox.objects.win_executable_file_object.PEExports*
XML Binding class name: Exports
Dictionary key name: exports

**extraneous_bytes**

Type: *cybox.common.properties.Integer*
XML Binding class name: Extraneous_Bytes
Dictionary key name: extraneous_bytes

**headers**

Type: *cybox.objects.win_executable_file_object.PEHeaders*
XML Binding class name: Headers
Dictionary key name: headers

**imports**

Type: *cybox.objects.win_executable_file_object.PEImportList*
XML Binding class name: Imports

Dictionary key name: `imports`

**pe_checksum**

Type: *cybox.objects.win_executable_file_object.PEChecksum*
XML Binding class name: `PE_Checksum`
Dictionary key name: `pe_checksum`

**resources**

Type: *cybox.objects.win_executable_file_object.PEResourceList*
XML Binding class name: `Resources`
Dictionary key name: `resources`

**sections**

Type: *cybox.objects.win_executable_file_object.PESectionList*
XML Binding class name: `Sections`
Dictionary key name: `sections`

**type_**

Type: *cybox.common.properties.String*
XML Binding class name: `Type`
Dictionary key name: `type`

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**cybox.objects.win_file_object module**
class cybox.objects.win_file_object.**Stream**
    Bases: `cybox.Entity`

    XML binding class: `cybox.bindings.win_file_object.StreamObjectType`

    **hashes**

        (List of values permitted)
        Type: *cybox.common.hashes.Hash*
        XML Binding class name: `Hash`
        Dictionary key name: `hashes`

    **name**

        Type: *cybox.common.properties.String*
        XML Binding class name: `Name`
        Dictionary key name: `name`

    **size_in_bytes**

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: Size_In_Bytes
Dictionary key name: size_in_bytes

class cybox.objects.win_file_object.**StreamList**(*args*)

Bases: cybox.EntityList

XML binding class: cybox.bindings.win_file_object.StreamListType

class cybox.objects.win_file_object.**WinFile**

Bases: *cybox.objects.file_object.File*

XML binding class: cybox.bindings.win_file_object.WindowsFileObjectType

**drive**

Type: *cybox.common.properties.String*
XML Binding class name: Drive
Dictionary key name: drive

**file_attributes_list**

Type: *cybox.objects.win_file_object.WindowsFileAttributes*
XML Binding class name: File_Attributes_List
Dictionary key name: file_attributes_list

**filename_accessed_time**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Filename_Accessed_Time
Dictionary key name: filename_accessed_time

**filename_created_time**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Filename_Created_Time
Dictionary key name: filename_created_time

**filename_modified_time**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Filename_Modified_Time
Dictionary key name: filename_modified_time

**privilege_list**

Type: *cybox.objects.win_file_object.WindowsFilePermissions*
XML Binding class name: Permissions

Dictionary key name: permissions

**security_id**

Type: *cybox.common.properties.String*
XML Binding class name: Security_ID
Dictionary key name: security_id

**security_type**

Type: *cybox.common.properties.String*
XML Binding class name: Security_Type
Dictionary key name: security_type

**stream_list**

Type: *cybox.objects.win_file_object.StreamList*
XML Binding class name: Stream_List
Dictionary key name: stream_list

class cybox.objects.win_file_object.**WindowsFileAttribute**(*value=None*)
    Bases: *cybox.common.properties.String*

    XML binding class: cybox.bindings.win_file_object.WindowsFileAttributeType

class cybox.objects.win_file_object.**WindowsFileAttributes**(*\*args*)
    Bases: *cybox.objects.file_object.FileAttribute*, cybox.EntityList

    XML binding class: cybox.bindings.win_file_object.WindowsFileAttributesType

class cybox.objects.win_file_object.**WindowsFilePermissions**
    Bases: *cybox.objects.file_object.FilePermissions*, cybox.Entity

    XML binding class: cybox.bindings.win_file_object.WindowsFilePermissionsType

    **full_control**

        XML Binding class name: Full_Control
        Dictionary key name: full_control

    **modify**

        XML Binding class name: Modify
        Dictionary key name: modify

    **read**

XML Binding class name: Read
Dictionary key name: read

### read_and_execute

XML Binding class name: Read_And_Execute
Dictionary key name: read_and_execute

### write

XML Binding class name: Write
Dictionary key name: write

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### cybox.objects.win_filemapping_object module

class cybox.objects.win_filemapping_object.**WinFilemapping**

   Bases: *cybox.common.object_properties.ObjectProperties*

   XML binding class:
   cybox.bindings.win_filemapping_object.WindowsFilemappingObjectType

### actual_size

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: Actual_Size
Dictionary key name: actual_size

### file_handle

Type: *cybox.objects.win_handle_object.WinHandle*
XML Binding class name: File_Handle
Dictionary key name: file_handle

### handle

Type: *cybox.objects.win_handle_object.WinHandle*
XML Binding class name: Handle
Dictionary key name: handle

### maximum_size

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: Maximum_Size
Dictionary key name: maximum_size

### name

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

### page_protection_attribute

(List of values permitted)

Type: *cybox.common.properties.String*

XML Binding class name: Page_Protection_Attribute

Dictionary key name: page_protection_attribute

### page_protection_value

Type: *cybox.common.properties.String*

XML Binding class name: Page_Protection_Value

Dictionary key name: page_protection_value

### security_attributes

Type: *cybox.common.properties.String*

XML Binding class name: Security_Attributes

Dictionary key name: security_attributes

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**cybox.objects.win_handle_object module**

class cybox.objects.win_handle_object.**WinHandle**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.win_handle_object.WindowsHandleObjectType

### access_mask

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Access_Mask

Dictionary key name: access_mask

### id_

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: ID

Dictionary key name: id

### name

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

### object_address

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: `Object_Address`
> Dictionary key name: `object_address`

### pointer_count

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: `Pointer_Count`
> Dictionary key name: `pointer_count`

### type_

> Type: *cybox.common.properties.String*
> XML Binding class name: `Type`
> Dictionary key name: `type`

class cybox.objects.win_handle_object.**WinHandleList**(*args*)
> Bases: `cybox.EntityList`

> XML binding class: `cybox.bindings.win_handle_object.WindowsHandleListType`

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### cybox.objects.win_hook_object module

class cybox.objects.win_hook_object.**WinHook**
> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: `cybox.bindings.win_hook_object.WindowsHookObjectType`

### handle

> Type: *cybox.objects.win_handle_object.WinHandle*
> XML Binding class name: `Handle`
> Dictionary key name: `handle`

### hooking_function_name

> Type: *cybox.common.properties.String*
> XML Binding class name: `Hooking_Function_Name`
> Dictionary key name: `hooking_function_name`

### hooking_module

> Type: *cybox.objects.library_object.Library*
> XML Binding class name: `Hooking_Module`
> Dictionary key name: `hooking_module`

**thread_id**

>> Type: *[cybox.common.properties.NonNegativeInteger](#)*
>> XML Binding class name: `Thread_ID`
>> Dictionary key name: `thread_id`

**type_**

>> Type: *[cybox.common.properties.String](#)*
>> XML Binding class name: `Type`
>> Dictionary key name: `type`

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**cybox.objects.win_kernel_object module**

**class** `cybox.objects.win_kernel_object.`**IDTEntry**
>  Bases: `cybox.Entity`

>  XML binding class: `cybox.bindings.win_kernel_object.IDTEntryType`

>  **offset_high**

>> Type: *[cybox.common.properties.HexBinary](#)*
>> XML Binding class name: `Offset_High`
>> Dictionary key name: `offset_high`

>  **offset_low**

>> Type: *[cybox.common.properties.HexBinary](#)*
>> XML Binding class name: `Offset_Low`
>> Dictionary key name: `offset_low`

>  **offset_middle**

>> Type: *[cybox.common.properties.HexBinary](#)*
>> XML Binding class name: `Offset_Middle`
>> Dictionary key name: `offset_middle`

>  **selector**

>> Type: *[cybox.common.properties.HexBinary](#)*
>> XML Binding class name: `Selector`
>> Dictionary key name: `selector`

>  **type_attr**

>> Type: *[cybox.common.properties.HexBinary](#)*
>> XML Binding class name: `Type_Attr`
>> Dictionary key name: `type_attr`

**class** cybox.objects.win_kernel_object.**IDTEntryList**(*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.win_kernel_object.IDTEntryListType

**class** cybox.objects.win_kernel_object.**SSDTEntry**

> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_kernel_object.SSDTEntryType

> **argument_table_base**

> > Type: *cybox.common.properties.HexBinary*
> > XML Binding class name: Argument_Table_Base
> > Dictionary key name: argument_table_base

> **hooked**

> > XML Binding class name: hooked
> > Dictionary key name: hooked

> **number_of_services**

> > Type: *cybox.common.properties.NonNegativeInteger*
> > XML Binding class name: Number_Of_Services
> > Dictionary key name: number_of_services

> **service_counter_table_base**

> > Type: *cybox.common.properties.HexBinary*
> > XML Binding class name: Service_Counter_Table_Base
> > Dictionary key name: service_counter_table_base

> **service_table_base**

> > Type: *cybox.common.properties.HexBinary*
> > XML Binding class name: Service_Table_Base
> > Dictionary key name: service_table_base

**class** cybox.objects.win_kernel_object.**SSDTEntryList**(*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.win_kernel_object.SSDTEntryListType

**class** cybox.objects.win_kernel_object.**WinKernel**

> Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.win_kernel_object.WindowsKernelObjectType

**idt**

> Type: *cybox.objects.win_kernel_object.IDTEntryList*
> XML Binding class name: IDT
> Dictionary key name: idt

**ssdt**

> Type: *cybox.objects.win_kernel_object.SSDTEntryList*
> XML Binding class name: SSDT
> Dictionary key name: ssdt

**Version**: 2.1.0.12.dev0

**cybox.objects.win_kernel_hook_object module**
class cybox.objects.win_kernel_hook_object.**WinKernelHook**
> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class:
> cybox.bindings.win_kernel_hook_object.WindowsKernelHookObjectType

**digital_signature_hooked**

> Type: *cybox.common.digitalsignature.DigitalSignature*
> XML Binding class name: Digital_Signature_Hooked
> Dictionary key name: digital_signature_hooked

**digital_signature_hooking**

> Type: *cybox.common.digitalsignature.DigitalSignature*
> XML Binding class name: Digital_Signature_Hooking
> Dictionary key name: digital_signature_hooking

**hook_description**

> Type: *cybox.common.properties.String*
> XML Binding class name: Hook_Description
> Dictionary key name: hook_description

**hooked_function**

> Type: *cybox.common.properties.String*
> XML Binding class name: Hooked_Function
> Dictionary key name: hooked_function

**hooked_module**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Hooked_Module
>   Dictionary key name: hooked_module

**hooking_address**

>   Type: *cybox.common.properties.UnsignedLong*
>   XML Binding class name: Hooking_Address
>   Dictionary key name: hooking_address

**hooking_module**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Hooking_Module
>   Dictionary key name: hooking_module

**type_**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Type
>   Dictionary key name: type

**Version**: 2.1.0.12.dev0

**cybox.objects.win_mailslot_object module**

class cybox.objects.win_mailslot_object.**WinMailslot**

>   Bases: *cybox.common.object_properties.ObjectProperties*

>   XML binding class: cybox.bindings.win_mailslot_object.WindowsMailslotObjectType

**handle**

>   Type: *cybox.objects.win_handle_object.WinHandle*
>   XML Binding class name: Handle
>   Dictionary key name: handle

**max_message_size**

>   Type: *cybox.common.properties.NonNegativeInteger*
>   XML Binding class name: Max_Message_Size
>   Dictionary key name: max_message_size

**name**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Name
>   Dictionary key name: name

**read_timeout**

>   Type: *cybox.common.properties.NonNegativeInteger*
>   XML Binding class name: Read_Timeout
>   Dictionary key name: read_timeout

**security_attributes**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Security_Attributes
>   Dictionary key name: security_attributes

**Version**: 2.1.0.12.dev0

**cybox.objects.win_memory_page_region_object module**

class cybox.objects.win_memory_page_region_object.**WinMemoryPageRegion**

>   Bases: *cybox.objects.memory_object.Memory*

>   XML binding class:
>   cybox.bindings.win_memory_page_region_object.WindowsMemoryPageRegionObjectType

**allocation_base_address**

>   Type: *cybox.common.properties.HexBinary*
>   XML Binding class name: Allocation_Base_Address
>   Dictionary key name: allocation_base_address

**allocation_protect**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Allocation_Protect
>   Dictionary key name: allocation_protect

**block_type**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Block_Type
>   Dictionary key name: block_type

**extracted_features**

>   Type: *cybox.common.extracted_features.ExtractedFeatures*
>   XML Binding class name: Extracted_Features
>   Dictionary key name: extracted_features

**hashes**

>   Type: *cybox.common.hashes.HashList*
>   XML Binding class name: Hashes

Dictionary key name: `hashes`

**is_injected**

XML Binding class name: `is_injected`

Dictionary key name: `is_injected`

**is_mapped**

XML Binding class name: `is_mapped`

Dictionary key name: `is_mapped`

**is_protected**

XML Binding class name: `is_protected`

Dictionary key name: `is_protected`

**is_volatile**

XML Binding class name: `is_volatile`

Dictionary key name: `is_volatile`

**memory_source**

Type: *cybox.common.properties.String*

XML Binding class name: `Memory_Source`

Dictionary key name: `memory_source`

**name**

Type: *cybox.common.properties.String*

XML Binding class name: `Name`

Dictionary key name: `name`

**protect**

Type: *cybox.common.properties.String*

XML Binding class name: `Protect`

Dictionary key name: `protect`

**region_end_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Region_End_Address`

Dictionary key name: `region_end_address`

**region_size**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: `Region_Size`

Dictionary key name: `region_size`

**region_start_address**

>   Type: *cybox.common.properties.HexBinary*
>   XML Binding class name: Region_Start_Address
>   Dictionary key name: region_start_address

**state**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: State
>   Dictionary key name: state

**type_**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Type
>   Dictionary key name: type

**Version**: 2.1.0.12.dev0

## cybox.objects.win_mutex_object module

class cybox.objects.win_mutex_object.**WinMutex**
>   Bases: *cybox.objects.mutex_object.Mutex*

>   XML binding class: cybox.bindings.win_mutex_object.WindowsMutexObjectType

**handle**

>   Type: *cybox.objects.win_handle_object.WinHandle*
>   XML Binding class name: Handle
>   Dictionary key name: handle

**security_attributes**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Security_Attributes
>   Dictionary key name: security_attributes

**Version**: 2.1.0.12.dev0

## cybox.objects.win_network_route_entry_object module

class cybox.objects.win_network_route_entry_object.**WinNetworkRouteEntry**
>   Bases: *cybox.objects.network_route_entry_object.NetworkRouteEntry*

>   XML binding class:
>   cybox.bindings.win_network_route_entry_object.WindowsNetworkRouteEntryObjectType

**nl_route_origin**

> Type: *cybox.common.properties.String*
> XML Binding class name: NL_ROUTE_ORIGIN
> Dictionary key name: nl_route_origin

**nl_route_protocol**

> Type: *cybox.common.properties.String*
> XML Binding class name: NL_ROUTE_PROTOCOL
> Dictionary key name: nl_route_protocol

**Version**: 2.1.0.12.dev0

**cybox.objects.win_network_share_object module**

class cybox.objects.win_network_share_object.**WinNetworkShare**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class:
> cybox.bindings.win_network_share_object.WindowsNetworkShareObjectType

**access_all**

> XML Binding class name: ACCESS_ALL
> Dictionary key name: access_all

**access_atrib**

> XML Binding class name: ACCESS_ATRIB
> Dictionary key name: access_atrib

**access_create**

> XML Binding class name: ACCESS_CREATE
> Dictionary key name: access_create

**access_delete**

> XML Binding class name: ACCESS_DELETE
> Dictionary key name: access_delete

**access_exec**

> XML Binding class name: ACCESS_EXEC
> Dictionary key name: access_exec

**access_perm**

> XML Binding class name: ACCESS_PERM
> Dictionary key name: access_perm

**access_read**

> XML Binding class name: ACCESS_READ
> Dictionary key name: access_read

**access_write**

> XML Binding class name: ACCESS_WRITE
> Dictionary key name: access_write

**current_uses**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Current_Uses
> Dictionary key name: current_uses

**local_path**

> Type: *cybox.common.properties.String*
> XML Binding class name: Local_Path
> Dictionary key name: local_path

**max_uses**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Max_Uses
> Dictionary key name: max_uses

**netname**

> Type: *cybox.common.properties.String*
> XML Binding class name: Netname
> Dictionary key name: netname

**type**

> Type: *cybox.common.properties.String*
> XML Binding class name: Type
> Dictionary key name: type

**Version**: 2.1.0.12.dev0

**cybox.objects.win_pipe_object module**

class cybox.objects.win_pipe_object.**WinPipe**

> Bases: *cybox.objects.pipe_object.Pipe*

> XML binding class: cybox.bindings.win_pipe_object.WindowsPipeObjectType

**default_time_out**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Default_Time_Out
> Dictionary key name: default_time_out

### handle

> Type: *cybox.objects.win_handle_object.WinHandle*
> XML Binding class name: Handle
> Dictionary key name: handle

### in_buffer_size

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: In_Buffer_Size
> Dictionary key name: in_buffer_size

### max_instances

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Max_Instances
> Dictionary key name: max_instances

### open_mode

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Open_Mode
> Dictionary key name: open_mode

### out_buffer_size

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Out_Buffer_Size
> Dictionary key name: out_buffer_size

### pipe_mode

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Pipe_Mode
> Dictionary key name: pipe_mode

### security_attributes

> Type: *cybox.common.properties.String*
> XML Binding class name: Security_Attributes
> Dictionary key name: security_attributes

**Version**: 2.1.0.12.dev0

**cybox.objects.win_prefetch_object module**

class cybox.objects.win_prefetch_object.**AccessedDirectoryList**(*args*)

> Bases: cybox.EntityList

XML binding class: cybox.bindings.win_prefetch_object.AccessedDirectoryListType

class cybox.objects.win_prefetch_object.**AccessedFileList**(*args*)
    Bases: cybox.EntityList


    XML binding class: cybox.bindings.win_prefetch_object.AccessedFileListType


class cybox.objects.win_prefetch_object.**Volume**(*args*)
    Bases: cybox.EntityList


    XML binding class: cybox.bindings.win_prefetch_object.VolumeType


    **deviceitem**


        Type: *cybox.objects.device_object.Device*
        XML Binding class name: DeviceItem
        Dictionary key name: deviceitem

    **volumeitem**


        Type: *cybox.objects.win_volume_object.WinVolume*
        XML Binding class name: VolumeItem
        Dictionary key name: volumeitem

class cybox.objects.win_prefetch_object.**WinPrefetch**
    Bases: *cybox.common.object_properties.ObjectProperties*


    XML binding class: cybox.bindings.win_prefetch_object.WindowsPrefetchObjectType


    **accessed_directory_list**


        Type: *cybox.objects.win_prefetch_object.AccessedDirectoryList*
        XML Binding class name: Accessed_Directory_List
        Dictionary key name: accessed_directory_list

    **accessed_file_list**


        Type: *cybox.objects.win_prefetch_object.AccessedFileList*
        XML Binding class name: Accessed_File_List
        Dictionary key name: accessed_file_list

    **application_file_name**


        Type: *cybox.common.properties.String*
        XML Binding class name: Application_File_Name

Dictionary key name: application_file_name

**first_run**

Type: *cybox.common.properties.DateTime*
XML Binding class name: First_Run
Dictionary key name: first_run

**last_run**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Last_Run
Dictionary key name: last_run

**prefetch_hash**

Type: *cybox.common.properties.String*
XML Binding class name: Prefetch_Hash
Dictionary key name: prefetch_hash

**times_executed**

Type: *cybox.common.properties.Long*
XML Binding class name: Times_Executed
Dictionary key name: times_executed

**volume**

Type: *cybox.objects.win_volume_object.WinVolume*
XML Binding class name: Volume
Dictionary key name: volume

**Version**: 2.1.0.12.dev0

**cybox.objects.win_process_object module**
class cybox.objects.win_process_object.**MemorySectionList**(*\*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.win_process_object.MemorySectionListType

class cybox.objects.win_process_object.**StartupInfo**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.win_process_object.StartupInfoType

    **dwfillattribute**

        Type: *cybox.common.properties.Integer*

XML Binding class name: `dwFillAttribute`

Dictionary key name: `dwfillattribute`

**dwflags**

Type: *cybox.common.properties.Integer*

XML Binding class name: `dwFlags`

Dictionary key name: `dwflags`

**dwx**

Type: *cybox.common.properties.Integer*

XML Binding class name: `dwX`

Dictionary key name: `dwx`

**dwxcountchars**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: `dwXCountChars`

Dictionary key name: `dwxcountchars`

**dwxsize**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: `dwXSize`

Dictionary key name: `dwxsize`

**dwy**

Type: *cybox.common.properties.Integer*

XML Binding class name: `dwY`

Dictionary key name: `dwy`

**dwycountchars**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: `dwYCountChars`

Dictionary key name: `dwycountchars`

**dwysize**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: `dwYSize`

Dictionary key name: `dwysize`

**hstderror**

Type: *cybox.objects.win_handle_object.WinHandle*

XML Binding class name: `hStdError`

Dictionary key name: `hstderror`

**hstdinput**

> Type: *cybox.objects.win_handle_object.WinHandle*
> XML Binding class name: hStdInput
> Dictionary key name: hstdinput

**hstdoutput**

> Type: *cybox.objects.win_handle_object.WinHandle*
> XML Binding class name: hStdOutput
> Dictionary key name: hstdoutput

**lpdesktop**

> Type: *cybox.common.properties.String*
> XML Binding class name: lpDesktop
> Dictionary key name: lpdesktop

**lptitle**

> Type: *cybox.common.properties.String*
> XML Binding class name: lpTitle
> Dictionary key name: lptitle

**wshowwindow**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: wShowWindow
> Dictionary key name: wshowwindow

**class** cybox.objects.win_process_object.**WinProcess**
> Bases: *cybox.objects.process_object.Process*

> XML binding class: cybox.bindings.win_process_object.WindowsProcessObjectType

**aslr_enabled**

> XML Binding class name: aslr_enabled
> Dictionary key name: aslr_enabled

**dep_enabled**

> XML Binding class name: dep_enabled
> Dictionary key name: dep_enabled

**handle_list**

> Type: *cybox.objects.win_handle_object.WinHandleList*
> XML Binding class name: Handle_List

Dictionary key name: `handle_list`

**priority**

Type: *cybox.common.properties.String*
XML Binding class name: `Priority`
Dictionary key name: `priority`

**section_list**

Type: *cybox.objects.win_process_object.MemorySectionList*
XML Binding class name: `Section_List`
Dictionary key name: `section_list`

**security_id**

Type: *cybox.common.properties.String*
XML Binding class name: `Security_ID`
Dictionary key name: `security_id`

**security_type**

Type: *cybox.common.properties.String*
XML Binding class name: `Security_Type`
Dictionary key name: `security_type`

**startup_info**

Type: *cybox.objects.win_process_object.StartupInfo*
XML Binding class name: `Startup_Info`
Dictionary key name: `startup_info`

**thread**

(List of values permitted)
Type: *cybox.objects.win_thread_object.WinThread*
XML Binding class name: `Thread`
Dictionary key name: `thread`

**window_title**

Type: *cybox.common.properties.String*
XML Binding class name: `Window_Title`
Dictionary key name: `window_title`

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**cybox.objects.win_registry_key_object module**
class cybox.objects.win_registry_key_object.**RegistrySubkeys**(*args*)
    Bases: cybox.EntityList

XML binding class: cybox.bindings.win_registry_key_object.RegistrySubkeysType

**class** cybox.objects.win_registry_key_object.**RegistryValue**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.win_registry_key_object.RegistryValueType

    **byte_runs**

        Type: *cybox.common.byterun.ByteRuns*
        XML Binding class name: Byte_Runs
        Dictionary key name: byte_runs

    **data**

        Type: *cybox.common.properties.String*
        XML Binding class name: Data
        Dictionary key name: data

    **datatype**

        Type: *cybox.common.properties.String*
        XML Binding class name: Datatype
        Dictionary key name: datatype

    **name**

        Type: *cybox.common.properties.String*
        XML Binding class name: Name
        Dictionary key name: name

**class** cybox.objects.win_registry_key_object.**RegistryValues**(*\*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.win_registry_key_object.RegistryValuesType

**class** cybox.objects.win_registry_key_object.**WinRegistryKey**
    Bases: *cybox.common.object_properties.ObjectProperties*

    XML binding class:
    cybox.bindings.win_registry_key_object.WindowsRegistryKeyObjectType

    **byte_runs**

        Type: *cybox.common.byterun.ByteRuns*
        XML Binding class name: Byte_Runs

Dictionary key name: byte_runs

**creator_username**

Type: *cybox.common.properties.String*
XML Binding class name: Creator_Username
Dictionary key name: creator_username

**handle_list**

Type: *cybox.objects.win_handle_object.WinHandleList*
XML Binding class name: Handle_List
Dictionary key name: handle_list

**hive**

Type: *cybox.common.properties.String*
XML Binding class name: Hive
Dictionary key name: hive

**key**

Type: *cybox.common.properties.String*
XML Binding class name: Key
Dictionary key name: key

**modified_time**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Modified_Time
Dictionary key name: modified_time

**number_subkeys**

Type: *cybox.common.properties.UnsignedInteger*
XML Binding class name: Number_Subkeys
Dictionary key name: number_subkeys

**number_values**

Type: *cybox.common.properties.UnsignedInteger*
XML Binding class name: Number_Values
Dictionary key name: number_values

**subkeys**

Type: *cybox.objects.win_registry_key_object.RegistrySubkeys*
XML Binding class name: Subkeys
Dictionary key name: subkeys

**values**

Type: *cybox.objects.win_registry_key_object.RegistryValues*
XML Binding class name: `Values`
Dictionary key name: `values`

**Version**: 2.1.0.12.dev0

**cybox.objects.win_service_object module**

class cybox.objects.win_service_object.**ServiceDescriptionList**(*args*)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_service_object.ServiceDescriptionListType`

class cybox.objects.win_service_object.**WinService**

Bases: *cybox.objects.win_process_object.WinProcess*

XML binding class: `cybox.bindings.win_service_object.WindowsServiceObjectType`

**description_list**

Type: *cybox.objects.win_service_object.ServiceDescriptionList*
XML Binding class name: `Description_List`
Dictionary key name: `description_list`

**display_name**

Type: *cybox.common.properties.String*
XML Binding class name: `Display_Name`
Dictionary key name: `display_name`

**group_name**

Type: *cybox.common.properties.String*
XML Binding class name: `Group_Name`
Dictionary key name: `group_name`

**service_dll**

Type: *cybox.common.properties.String*
XML Binding class name: `Service_DLL`
Dictionary key name: `service_dll`

**service_dll_certificate_issuer**

Type: *cybox.common.properties.String*
XML Binding class name: `Service_DLL_Certificate_Issuer`
Dictionary key name: `service_dll_certificate_issuer`

**service_dll_certificate_subject**

Type: *cybox.common.properties.String*
XML Binding class name: Service_DLL_Certificate_Subject
Dictionary key name: service_dll_certificate_subject

**service_dll_hashes**

Type: *cybox.common.hashes.HashList*
XML Binding class name: Service_DLL_Hashes
Dictionary key name: service_dll_hashes

**service_dll_signature_description**

Type: *cybox.common.properties.String*
XML Binding class name: Service_DLL_Signature_Description
Dictionary key name: service_dll_signature_description

**service_dll_signature_exists**

XML Binding class name: service_dll_signature_exists
Dictionary key name: service_dll_signature_exists

**service_dll_signature_verified**

XML Binding class name: service_dll_signature_verified
Dictionary key name: service_dll_signature_verified

**service_name**

Type: *cybox.common.properties.String*
XML Binding class name: Service_Name
Dictionary key name: service_name

**service_status**

Type: *cybox.common.properties.String*
XML Binding class name: Service_Status
Dictionary key name: service_status

**service_type**

Type: *cybox.common.properties.String*
XML Binding class name: Service_Type
Dictionary key name: service_type

**started_as**

Type: *cybox.common.properties.String*
XML Binding class name: Started_As
Dictionary key name: started_as

>   **startup_command_line**
>
>   > Type: *cybox.common.properties.String*
>   > XML Binding class name: Startup_Command_Line
>   > Dictionary key name: startup_command_line
>
>   **startup_type**
>
>   > Type: *cybox.common.properties.String*
>   > XML Binding class name: Startup_Type
>   > Dictionary key name: startup_type

**Version**: 2.1.0.12.dev0

## cybox.objects.win_semaphore_object module

class cybox.objects.win_semaphore_object.**WinSemaphore**

>   Bases: *cybox.objects.semaphore_object.Semaphore*
>
>   XML binding class:
>   cybox.bindings.win_semaphore_object.WindowsSemaphoreObjectType
>
>   **handle**
>
>   > Type: *cybox.objects.win_handle_object.WinHandle*
>   > XML Binding class name: Handle
>   > Dictionary key name: handle
>
>   **security_attributes**
>
>   > Type: *cybox.common.properties.String*
>   > XML Binding class name: Security_Attributes
>   > Dictionary key name: security_attributes

**Version**: 2.1.0.12.dev0

## cybox.objects.win_system_object module

class cybox.objects.win_system_object.**GlobalFlag**

>   Bases: cybox.Entity
>
>   XML binding class: cybox.bindings.win_system_object.GlobalFlagType
>
>   **abbreviation**
>
>   > Type: *cybox.common.properties.String*
>   > XML Binding class name: Abbreviation
>   > Dictionary key name: abbreviation

**destination**

>    Type: *cybox.common.properties.String*
>    XML Binding class name: `Destination`
>    Dictionary key name: `destination`

**hexadecimal_value**

>    Type: *cybox.common.properties.HexBinary*
>    XML Binding class name: `Hexadecimal_Value`
>    Dictionary key name: `hexadecimal_value`

**symbolic_name**

>    Type: *cybox.common.properties.String*
>    XML Binding class name: `Symbolic_Name`
>    Dictionary key name: `symbolic_name`

**class** cybox.objects.win_system_object.**GlobalFlagList**(*args*)

>    Bases: `cybox.EntityList`

>    XML binding class: `cybox.bindings.win_system_object.GlobalFlagListType`

**class** cybox.objects.win_system_object.**WinSystem**

>    Bases: *cybox.objects.system_object.System*

>    XML binding class: `cybox.bindings.win_system_object.WindowsSystemObjectType`

**domain**

>    (List of values permitted)
>    Type: *cybox.common.properties.String*
>    XML Binding class name: `Domain`
>    Dictionary key name: `domain`

**global_flag_list**

>    Type: *cybox.objects.win_system_object.GlobalFlagList*
>    XML Binding class name: `Global_Flag_List`
>    Dictionary key name: `global_flag_list`

**netbios_name**

>    Type: *cybox.common.properties.String*
>    XML Binding class name: `NetBIOS_Name`
>    Dictionary key name: `netbios_name`

**open_handle_list**

> Type: *cybox.objects.win_handle_object.WinHandleList*
> XML Binding class name: Open_Handle_List
> Dictionary key name: open_handle_list

**product_id**

> Type: *cybox.common.properties.String*
> XML Binding class name: Product_ID
> Dictionary key name: product_id

**product_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Product_Name
> Dictionary key name: product_name

**registered_organization**

> Type: *cybox.common.properties.String*
> XML Binding class name: Registered_Organization
> Dictionary key name: registered_organization

**registered_owner**

> Type: *cybox.common.properties.String*
> XML Binding class name: Registered_Owner
> Dictionary key name: registered_owner

**windows_directory**

> Type: *cybox.common.properties.String*
> XML Binding class name: Windows_Directory
> Dictionary key name: windows_directory

**windows_system_directory**

> Type: *cybox.common.properties.String*
> XML Binding class name: Windows_System_Directory
> Dictionary key name: windows_system_directory

**windows_temp_directory**

> Type: *cybox.common.properties.String*
> XML Binding class name: Windows_Temp_Directory
> Dictionary key name: windows_temp_directory

**Version**: 2.1.0.12.dev0

**cybox.objects.win_system_restore_object module**
class cybox.objects.win_system_restore_object.**HiveList**(*\*args*)
    Bases: cybox.EntityList


    XML binding class: cybox.bindings.win_system_restore_object.HiveListType


class cybox.objects.win_system_restore_object.**WinSystemRestore**
    Bases: *[cybox.common.object_properties.ObjectProperties](#)*


    XML binding class:
    cybox.bindings.win_system_restore_object.WindowsSystemRestoreObjectType


    **acl_change_sid**


        Type: *[cybox.common.properties.String](#)*
        XML Binding class name: ACL_Change_SID
        Dictionary key name: acl_change_sid

    **acl_change_username**


        Type: *[cybox.common.properties.String](#)*
        XML Binding class name: ACL_Change_Username
        Dictionary key name: acl_change_username

    **backup_file_name**


        Type: *[cybox.common.properties.String](#)*
        XML Binding class name: Backup_File_Name
        Dictionary key name: backup_file_name

    **change_event**


        Type: *[cybox.common.properties.String](#)*
        XML Binding class name: Change_Event
        Dictionary key name: change_event

    **changelog_entry_flags**


        Type: *[cybox.common.properties.String](#)*
        XML Binding class name: ChangeLog_Entry_Flags
        Dictionary key name: changelog_entry_flags

    **changelog_entry_sequence_number**


        Type: *[cybox.common.properties.Long](#)*
        XML Binding class name: ChangeLog_Entry_Sequence_Number
        Dictionary key name: changelog_entry_sequence_number

**changelog_entry_type**

> Type: *cybox.common.properties.String*
> XML Binding class name: `ChangeLog_Entry_Type`
> Dictionary key name: `changelog_entry_type`

**created**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: `Created`
> Dictionary key name: `created`

**file_attributes**

> Type: *cybox.common.properties.String*
> XML Binding class name: `File_Attributes`
> Dictionary key name: `file_attributes`

**new_file_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: `New_File_Name`
> Dictionary key name: `new_file_name`

**original_file_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Original_File_Name`
> Dictionary key name: `original_file_name`

**original_short_file_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Original_Short_File_Name`
> Dictionary key name: `original_short_file_name`

**process_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Process_Name`
> Dictionary key name: `process_name`

**registry_hive_list**

> Type: *cybox.objects.win_system_restore_object.HiveList*
> XML Binding class name: `Registry_Hive_List`
> Dictionary key name: `registry_hive_list`

**restore_point_description**

> Type: *cybox.common.properties.String*

XML Binding class name: Restore_Point_Description

Dictionary key name: restore_point_description

### restore_point_full_path

Type: *cybox.common.properties.String*

XML Binding class name: Restore_Point_Full_Path

Dictionary key name: restore_point_full_path

### restore_point_name

Type: *cybox.common.properties.String*

XML Binding class name: Restore_Point_Name

Dictionary key name: restore_point_name

### restore_point_type

Type: *cybox.common.properties.String*

XML Binding class name: Restore_Point_Type

Dictionary key name: restore_point_type

**Version**: 2.1.0.12.dev0

**cybox.objects.win_task_object module**

class cybox.objects.win_task_object.**IComHandlerAction**

Bases: cybox.Entity

XML binding class: cybox.bindings.win_task_object.IComHandlerActionType

### com_class_id

Type: *cybox.common.properties.String*

XML Binding class name: COM_Class_ID

Dictionary key name: com_class_id

### com_data

Type: *cybox.common.properties.String*

XML Binding class name: COM_Data

Dictionary key name: com_data

class cybox.objects.win_task_object.**IExecAction**

Bases: cybox.Entity

XML binding class: cybox.bindings.win_task_object.IExecActionType

### exec_arguments

Type: *cybox.common.properties.String*
XML Binding class name: Exec_Arguments
Dictionary key name: exec_arguments

### exec_program_hashes

Type: *cybox.common.hashes.HashList*
XML Binding class name: Exec_Program_Hashes
Dictionary key name: exec_program_hashes

### exec_program_path

Type: *cybox.common.properties.String*
XML Binding class name: Exec_Program_Path
Dictionary key name: exec_program_path

### exec_working_directory

Type: *cybox.common.properties.String*
XML Binding class name: Exec_Working_Directory
Dictionary key name: exec_working_directory

class cybox.objects.win_task_object.**IShowMessageAction**
Bases: cybox.Entity

XML binding class: cybox.bindings.win_task_object.IShowMessageActionType

### show_message_body

Type: *cybox.common.properties.String*
XML Binding class name: Show_Message_Body
Dictionary key name: show_message_body

### show_message_title

Type: *cybox.common.properties.String*
XML Binding class name: Show_Message_Title
Dictionary key name: show_message_title

class cybox.objects.win_task_object.**TaskAction**
Bases: cybox.Entity

XML binding class: cybox.bindings.win_task_object.TaskActionType

### action_id

Type: *cybox.common.properties.String*
XML Binding class name: Action_ID

Dictionary key name: action_id

### action_type

Type: *cybox.common.properties.String*
XML Binding class name: Action_Type
Dictionary key name: action_type

### icomhandleraction

Type: *cybox.objects.win_task_object.IComHandlerAction*
XML Binding class name: IComHandlerAction
Dictionary key name: icomhandleraction

### iemailaction

Type: *cybox.objects.email_message_object.EmailMessage*
XML Binding class name: IEmailAction
Dictionary key name: iemailaction

### iexecaction

Type: *cybox.objects.win_task_object.IExecAction*
XML Binding class name: IExecAction
Dictionary key name: iexecaction

### ishowmessageaction

Type: *cybox.objects.win_task_object.IShowMessageAction*
XML Binding class name: IShowMessageAction
Dictionary key name: ishowmessageaction

class cybox.objects.win_task_object.**TaskActionList**(*\*args*)
Bases: cybox.EntityList

XML binding class: cybox.bindings.win_task_object.TaskActionListType

class cybox.objects.win_task_object.**Trigger**
Bases: cybox.Entity

XML binding class: cybox.bindings.win_task_object.TriggerType

### trigger_begin

Type: *cybox.common.properties.DateTime*
XML Binding class name: Trigger_Begin
Dictionary key name: trigger_begin

**trigger_delay**

>    Type: *cybox.common.properties.Duration*
>    XML Binding class name: Trigger_Delay
>    Dictionary key name: trigger_delay

**trigger_end**

>    Type: *cybox.common.properties.DateTime*
>    XML Binding class name: Trigger_End
>    Dictionary key name: trigger_end

**trigger_frequency**

>    Type: *cybox.common.properties.String*
>    XML Binding class name: Trigger_Frequency
>    Dictionary key name: trigger_frequency

**trigger_max_run_time**

>    Type: *cybox.common.properties.Duration*
>    XML Binding class name: Trigger_Max_Run_Time
>    Dictionary key name: trigger_max_run_time

**trigger_session_change_type**

>    Type: *cybox.common.properties.String*
>    XML Binding class name: Trigger_Session_Change_Type
>    Dictionary key name: trigger_session_change_type

**trigger_type**

>    Type: *cybox.common.properties.String*
>    XML Binding class name: Trigger_Type
>    Dictionary key name: trigger_type

class cybox.objects.win_task_object.**TriggerList**(*args*)
>    Bases: cybox.EntityList

>    XML binding class: cybox.bindings.win_task_object.TriggerListType

class cybox.objects.win_task_object.**WinTask**
>    Bases: *cybox.common.object_properties.ObjectProperties*

>    XML binding class: cybox.bindings.win_task_object.WindowsTaskObjectType

>    **account_logon_type**

Type: *cybox.common.properties.String*
XML Binding class name: Account_Logon_Type
Dictionary key name: account_logon_type

**account_name**

Type: *cybox.common.properties.String*
XML Binding class name: Account_Name
Dictionary key name: account_name

**account_run_level**

Type: *cybox.common.properties.String*
XML Binding class name: Account_Run_Level
Dictionary key name: account_run_level

**action_list**

Type: *cybox.objects.win_task_object.TaskActionList*
XML Binding class name: Action_List
Dictionary key name: action_list

**application_name**

Type: *cybox.common.properties.String*
XML Binding class name: Application_Name
Dictionary key name: application_name

**comment**

Type: *cybox.common.properties.String*
XML Binding class name: Comment
Dictionary key name: comment

**creation_date**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Creation_Date
Dictionary key name: creation_date

**creator**

Type: *cybox.common.properties.String*
XML Binding class name: Creator
Dictionary key name: creator

**exit_code**

Type: *cybox.common.properties.Long*
XML Binding class name: Exit_Code
Dictionary key name: exit_code

**flags**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Flags
>   Dictionary key name: flags

**max_run_time**

>   Type: *cybox.common.properties.UnsignedLong*
>   XML Binding class name: Max_Run_Time
>   Dictionary key name: max_run_time

**most_recent_run_time**

>   Type: *cybox.common.properties.DateTime*
>   XML Binding class name: Most_Recent_Run_Time
>   Dictionary key name: most_recent_run_time

**name**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Name
>   Dictionary key name: name

**next_run_time**

>   Type: *cybox.common.properties.DateTime*
>   XML Binding class name: Next_Run_Time
>   Dictionary key name: next_run_time

**parameters**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Parameters
>   Dictionary key name: parameters

**priority**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Priority
>   Dictionary key name: priority

**status**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Status
>   Dictionary key name: status

**trigger_list**

>   Type: *cybox.objects.win_task_object.TriggerList*

XML Binding class name: Trigger_List

Dictionary key name: trigger_list

### work_item_data

Type: *cybox.common.properties.Base64Binary*

XML Binding class name: Work_Item_Data

Dictionary key name: work_item_data

### working_directory

Type: *cybox.common.properties.String*

XML Binding class name: Working_Directory

Dictionary key name: working_directory

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## cybox.objects.win_thread_object module

class cybox.objects.win_thread_object.**WinThread**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.win_thread_object.WindowsThreadObjectType

### context

Type: *cybox.common.properties.String*

XML Binding class name: Context

Dictionary key name: context

### creation_flags

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Creation_Flags

Dictionary key name: creation_flags

### creation_time

Type: *cybox.common.properties.DateTime*

XML Binding class name: Creation_Time

Dictionary key name: creation_time

### handle

Type: *cybox.objects.win_handle_object.WinHandle*

XML Binding class name: Handle

Dictionary key name: handle

### parameter_address

> > Type: *cybox.common.properties.HexBinary*
> > XML Binding class name: Parameter_Address
> > Dictionary key name: parameter_address

> **priority**

> > Type: *cybox.common.properties.UnsignedInteger*
> > XML Binding class name: Priority
> > Dictionary key name: priority

> **running_status**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Running_Status
> > Dictionary key name: running_status

> **security_attributes**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Security_Attributes
> > Dictionary key name: security_attributes

> **stack_size**

> > Type: *cybox.common.properties.NonNegativeInteger*
> > XML Binding class name: Stack_Size
> > Dictionary key name: stack_size

> **start_address**

> > Type: *cybox.common.properties.HexBinary*
> > XML Binding class name: Start_Address
> > Dictionary key name: start_address

> **thread_id**

> > Type: *cybox.common.properties.NonNegativeInteger*
> > XML Binding class name: Thread_ID
> > Dictionary key name: thread_id

**Version**: 2.1.0.12.dev0

**cybox.objects.win_user_object module**

class cybox.objects.win_user_object.**WinGroup**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_user_account_object.WindowsGroupType

> **name**

Type: *`cybox.common.properties.String`*
XML Binding class name: `Name`
Dictionary key name: `name`

class cybox.objects.win_user_object.**WinGroupList**(*args*)
    Bases: *`cybox.objects.user_account_object.GroupList`*

    XML binding class: cybox.bindings.user_account_object.GroupListType

class cybox.objects.win_user_object.**WinPrivilege**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.win_user_account_object.WindowsPrivilegeType

    **user_right**

        Type: *`cybox.common.properties.String`*
        XML Binding class name: `User_Right`
        Dictionary key name: `user_right`

class cybox.objects.win_user_object.**WinPrivilegeList**(*args*)
    Bases: *`cybox.objects.user_account_object.PrivilegeList`*

    XML binding class: cybox.bindings.user_account_object.PrivilegeListType

class cybox.objects.win_user_object.**WinUser**
    Bases: *`cybox.objects.user_account_object.UserAccount`*

    XML binding class:
    cybox.bindings.win_user_account_object.WindowsUserAccountObjectType

    **group_list**

        Type: *`cybox.objects.win_user_object.WinGroupList`*
        XML Binding class name: `Group_List`
        Dictionary key name: `group_list`

    **privilege_list**

        Type: *`cybox.objects.win_user_object.WinPrivilegeList`*
        XML Binding class name: `Privilege_List`
        Dictionary key name: `privilege_list`

    **security_id**

> Type: *cybox.common.properties.String*
> XML Binding class name: Security_ID
> Dictionary key name: security_id

> **security_type**

>> Type: *cybox.common.properties.String*
>> XML Binding class name: Security_Type
>> Dictionary key name: security_type

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**cybox.objects.win_volume_object module**

class cybox.objects.win_volume_object.**WinVolume**

> Bases: *cybox.objects.volume_object.Volume*

> XML binding class: cybox.bindings.win_volume_object.WindowsVolumeObjectType

> **attributes_list**

>> Type: *cybox.objects.win_volume_object.WindowsVolumeAttributesList*
>> XML Binding class name: Attributes_List
>> Dictionary key name: attributes_list

> **drive_Type**

>> Type: *cybox.common.properties.String*
>> XML Binding class name: Drive_Type
>> Dictionary key name: drive_type

> **drive_letter**

>> Type: *cybox.common.properties.String*
>> XML Binding class name: Drive_Letter
>> Dictionary key name: drive_letter

class cybox.objects.win_volume_object.**WindowsVolumeAttributesList**(*args*)

> Bases: cybox.EntityList

> XML binding class:
> cybox.bindings.win_volume_object.WindowsVolumeAttributesListType

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**cybox.objects.win_waitable_timer_object module**

class cybox.objects.win_waitable_timer_object.**WinWaitableTimer**

> Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class:
`cybox.bindings.win_waitable_timer_object.WindowsWaitableTimerObjectType`

#### name

> Type: *`cybox.common.properties.String`*
> XML Binding class name: `Name`
> Dictionary key name: `name`

#### security_attributes

> Type: *`cybox.common.properties.String`*
> XML Binding class name: `Security_Attributes`
> Dictionary key name: `security_attributes`

#### type_

> Type: *`cybox.common.properties.String`*
> XML Binding class name: `Type`
> Dictionary key name: `type`

**Version**: 2.1.0.12.dev0

### cybox.objects.x509_certificate_object module

class cybox.objects.x509_certificate_object.**RSAPublicKey**
> Bases: `cybox.Entity`

> XML binding class: `cybox.bindings.x509_certificate_object.RSAPublicKeyType`

#### exponent

> Type: *`cybox.common.properties.Integer`*
> XML Binding class name: `Exponent`
> Dictionary key name: `exponent`

#### modulus

> Type: *`cybox.common.properties.String`*
> XML Binding class name: `Modulus`
> Dictionary key name: `modulus`

class cybox.objects.x509_certificate_object.**SubjectPublicKey**
> Bases: `cybox.Entity`

> XML binding class: `cybox.bindings.x509_certificate_object.SubjectPublicKeyType`

#### public_key_algorithm

Type: *cybox.common.properties.String*
XML Binding class name: `Public_Key_Algorithm`
Dictionary key name: `public_key_algorithm`

**rsa_public_key**

Type: *cybox.objects.x509_certificate_object.RSAPublicKey*
XML Binding class name: `RSA_Public_Key`
Dictionary key name: `rsa_public_key`

class cybox.objects.x509_certificate_object.**Validity**
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.x509_certificate_object.ValidityType`

**not_after**

Type: *cybox.common.properties.DateTime*
XML Binding class name: `Not_After`
Dictionary key name: `not_after`

**not_before**

Type: *cybox.common.properties.DateTime*
XML Binding class name: `Not_Before`
Dictionary key name: `not_before`

class cybox.objects.x509_certificate_object.**X509Cert**
Bases: `cybox.Entity`

XML binding class:
`cybox.bindings.x509_certificate_object.X509CertificateContentsType`

**issuer**

Type: *cybox.common.properties.String*
XML Binding class name: `Issuer`
Dictionary key name: `issuer`

**non_standard_extensions**

Type: *cybox.objects.x509_certificate_object.X509NonStandardExtensions*
XML Binding class name: `Non_Standard_Extensions`
Dictionary key name: `non_standard_extensions`

**serial_number**

Type: *cybox.common.properties.String*

XML Binding class name: `Serial_Number`

Dictionary key name: `serial_number`

### signature_algorithm

Type: [`cybox.common.properties.String`](#)

XML Binding class name: `Signature_Algorithm`

Dictionary key name: `signature_algorithm`

### standard_extensions

Type: [`cybox.objects.x509_certificate_object.X509V3Extensions`](#)

XML Binding class name: `Standard_Extensions`

Dictionary key name: `standard_extensions`

### subject

Type: [`cybox.common.properties.String`](#)

XML Binding class name: `Subject`

Dictionary key name: `subject`

### subject_public_key

Type: [`cybox.objects.x509_certificate_object.SubjectPublicKey`](#)

XML Binding class name: `Subject_Public_Key`

Dictionary key name: `subject_public_key`

### validity

Type: [`cybox.objects.x509_certificate_object.Validity`](#)

XML Binding class name: `Validity`

Dictionary key name: `validity`

### version

Type: [`cybox.common.properties.Integer`](#)

XML Binding class name: `Version`

Dictionary key name: `version`

**class** cybox.objects.x509_certificate_object.**X509Certificate**

Bases: [`cybox.common.object_properties.ObjectProperties`](#)

XML binding class:
cybox.bindings.x509_certificate_object.X509CertificateObjectType

### certificate

Type: [`cybox.objects.x509_certificate_object.X509Cert`](#)

XML Binding class name: `Certificate`

Dictionary key name: `certificate`

**certificate_signature**

> Type: *cybox.objects.x509_certificate_object.X509CertificateSignature*
> XML Binding class name: Certificate_Signature
> Dictionary key name: certificate_signature

**raw_certificate**

> Type: *cybox.common.properties.String*
> XML Binding class name: Raw_Certificate
> Dictionary key name: raw_certificate

class cybox.objects.x509_certificate_object.**X509CertificateSignature**
> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.x509_certificate_object.X509CertificateSignatureType

> **signature**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Signature
> > Dictionary key name: signature

> **signature_algorithm**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Signature_Algorithm
> > Dictionary key name: signature_algorithm

class cybox.objects.x509_certificate_object.**X509NonStandardExtensions**
> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.x509_certificate_object.X509NonStandardExtensionsType

> **netscape_certificate_type**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Netscape_Certificate_Type
> > Dictionary key name: netscape_certificate_type

> **netscape_comment**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Netscape_Comment
> > Dictionary key name: netscape_comment

**old_authority_key_identifier**

> Type: *cybox.common.properties.String*
> XML Binding class name: Old_Authority_Key_Identifier
> Dictionary key name: old_authority_key_identifier

**old_primary_key_attributes**

> Type: *cybox.common.properties.String*
> XML Binding class name: Old_Primary_Key_Attributes
> Dictionary key name: old_primary_key_attributes

**class** cybox.objects.x509_certificate_object.**X509V3Extensions**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.x509_certificate_object.X509V3ExtensionsType

**authority_key_identifier**

> Type: *cybox.common.properties.String*
> XML Binding class name: Authority_Key_Identifier
> Dictionary key name: authority_key_identifier

**basic_constraints**

> Type: *cybox.common.properties.String*
> XML Binding class name: Basic_Constraints
> Dictionary key name: basic_constraints

**certificate_policies**

> Type: *cybox.common.properties.String*
> XML Binding class name: Certificate_Policies
> Dictionary key name: certificate_policies

**crl_distribution_points**

> Type: *cybox.common.properties.String*
> XML Binding class name: CRL_Distribution_Points
> Dictionary key name: crl_distribution_points

**extended_key_usage**

> Type: *cybox.common.properties.String*
> XML Binding class name: Extended_Key_Usage
> Dictionary key name: extended_key_usage

**inhibit_any_policy**

Type: *cybox.common.properties.NonNegativeInteger*
XML Binding class name: Inhibit_Any_Policy
Dictionary key name: inhibit_any_policy

**issuer_alternative_name**

Type: *cybox.common.properties.String*
XML Binding class name: Issuer_Alternative_Name
Dictionary key name: issuer_alternative_name

**key_usage**

Type: *cybox.common.properties.String*
XML Binding class name: Key_Usage
Dictionary key name: key_usage

**name_constraints**

Type: *cybox.common.properties.String*
XML Binding class name: Name_Constraints
Dictionary key name: name_constraints

**policy_constraints**

Type: *cybox.common.properties.String*
XML Binding class name: Policy_Constraints
Dictionary key name: policy_constraints

**policy_mappings**

Type: *cybox.common.properties.String*
XML Binding class name: Policy_Mappings
Dictionary key name: policy_mappings

**private_key_usage_period**

Type: *cybox.objects.x509_certificate_object.Validity*
XML Binding class name: Private_Key_Usage_Period
Dictionary key name: private_key_usage_period

**subject_alternative_name**

Type: *cybox.common.properties.String*
XML Binding class name: Subject_Alternative_Name
Dictionary key name: subject_alternative_name

**subject_directory_attributes**

Type: *cybox.common.properties.String*
XML Binding class name: Subject_Directory_Attributes
Dictionary key name: subject_directory_attributes

**subject_key_identifier**

> Type: *cybox.common.properties.String*
> XML Binding class name: Subject_Key_Identifier
> Dictionary key name: subject_key_identifier

## Module contents

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### cybox.objects.account_object module

class cybox.objects.account_object.**Account**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.account_object.AccountObjectType

> **authentication**
>
> > (List of values permitted)
> > Type: *cybox.objects.account_object.Authentication*
> > XML Binding class name: Authentication
> > Dictionary key name: authentication
>
> **creation_date**
>
> > Type: *cybox.common.properties.DateTime*
> > XML Binding class name: Creation_Date
> > Dictionary key name: creation_date
>
> **description**
>
> > Type: *cybox.common.properties.String*
> > XML Binding class name: Description
> > Dictionary key name: description
>
> **disabled**
>
> > XML Binding class name: disabled
> > Dictionary key name: disabled
>
> **domain**
>
> > Type: *cybox.common.properties.String*
> > XML Binding class name: Domain
> > Dictionary key name: domain

**last_accessed_time**

>    Type: *cybox.common.properties.DateTime*
>    XML Binding class name: Last_Accessed_Time
>    Dictionary key name: last_accessed_time

**locked_out**

>    XML Binding class name: locked_out
>    Dictionary key name: locked_out

**modified_date**

>    Type: *cybox.common.properties.DateTime*
>    XML Binding class name: Modified_Date
>    Dictionary key name: modified_date

class cybox.objects.account_object.**Authentication**

>    Bases: cybox.Entity

>    XML binding class: cybox.bindings.account_object.AuthenticationType

**authentication_data**

>    Type: *cybox.common.properties.String*
>    XML Binding class name: Authentication_Data
>    Dictionary key name: authentication_data

**authentication_token_protection_mechanism**
>    TypedField subclass for VocabString fields.

>    Type: *cybox.common.vocabs.VocabString*
>    XML Binding class name: Authentication_Token_Protection_Mechanism
>    Dictionary key name: authentication_token_protection_mechanism

**authentication_type**
>    TypedField subclass for VocabString fields.

>    Type: *cybox.common.vocabs.VocabString*
>    XML Binding class name: Authentication_Type
>    Dictionary key name: authentication_type

**structured_authentication_mechanism**

>    Type: *cybox.objects.account_object.StructuredAuthenticationMechanism*
>    XML Binding class name: Structured_Authentication_Mechanism

Dictionary key name: `structured_authentication_mechanism`

class cybox.objects.account_object.**StructuredAuthenticationMechanism**
    Bases: `cybox.Entity`

XML binding class:
`cybox.bindings.account_object.StructuredAuthenticationMechanismType`

**description**

    Type: *[cybox.common.properties.String](cybox.common.properties.String)*
    XML Binding class name: `Description`
    Dictionary key name: `description`

**Version**: 2.1.0.12.dev0

## cybox.objects.address_object module

class cybox.objects.address_object.**Address**(*address_value=None*, *category=None*)
    Bases: *[cybox.common.object_properties.ObjectProperties](cybox.common.object_properties.ObjectProperties)*

XML binding class: `cybox.bindings.address_object.AddressObjectType`

**address_value**

    Type: *[cybox.common.properties.String](cybox.common.properties.String)*
    XML Binding class name: `Address_Value`
    Dictionary key name: `address_value`

**category**

    XML Binding class name: `category`
    Dictionary key name: `category`

**is_destination**

    XML Binding class name: `is_destination`
    Dictionary key name: `is_destination`

**is_source**

    XML Binding class name: `is_source`
    Dictionary key name: `is_source`

**is_spoofed**

    XML Binding class name: `is_spoofed`
    Dictionary key name: `is_spoofed`

> **vlan_name**
>
> > Type: *cybox.common.properties.String*
> > XML Binding class name: VLAN_Name
> > Dictionary key name: vlan_name
>
> **vlan_num**
>
> > Type: *cybox.common.properties.Integer*
> > XML Binding class name: VLAN_Num
> > Dictionary key name: vlan_num

**class** cybox.objects.address_object.**EmailAddress**(*addr_string=None*)
> Bases: *cybox.objects.address_object.Address*

> Convenience class for creating email addresses.

> Note that this is not an actual CybOX type.

> XML binding class: cybox.bindings.address_object.AddressObjectType

> **classmethod istypeof**(*obj*)

**Version**: 2.1.0.12.dev0

## cybox.objects.api_object module

**class** cybox.objects.api_object.**API**
> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.api_object.APIObjectType

> **address**
>
> > Type: *cybox.common.properties.HexBinary*
> > XML Binding class name: Address
> > Dictionary key name: address
>
> **description**
>
> > Type: *cybox.common.structured_text.StructuredText*
> > XML Binding class name: Description
> > Dictionary key name: description
>
> **function_name**
>
> > Type: *cybox.common.properties.String*
> > XML Binding class name: Function_Name
> > Dictionary key name: function_name

**normalized_function_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Normalized_Function_Name
> Dictionary key name: normalized_function_name

**platform**

> Type: *cybox.common.platform_specification.PlatformSpecification*
> XML Binding class name: Platform
> Dictionary key name: platform

**Version**: 2.1.0.12.dev0

### cybox.objects.archive_file_object **module**

**class** cybox.objects.archive_file_object.**ArchiveFile**
> Bases: *cybox.objects.file_object.File*

> XML binding class: cybox.bindings.file_object.FileObjectType

**archive_format**

> Type: *cybox.common.properties.String*
> XML Binding class name: Archive_Format
> Dictionary key name: archive_format

**archived_file**

> (List of values permitted)
> Type: *cybox.objects.file_object.File*
> XML Binding class name: Archived_File
> Dictionary key name: archived_file

**comment**

> Type: *cybox.common.properties.String*
> XML Binding class name: Comment
> Dictionary key name: comment

**decryption_key**

> Type: *cybox.common.properties.String*
> XML Binding class name: Decryption_Key
> Dictionary key name: decryption_key

**encryption_algorithm**

> Type: *cybox.common.properties.String*

XML Binding class name: `Encryption_Algorithm`

Dictionary key name: `encryption_algorithm`

### **file_count**

Type: *`cybox.common.properties.Integer`*

XML Binding class name: `File_Count`

Dictionary key name: `file_count`

### **version**

Type: *`cybox.common.properties.String`*

XML Binding class name: `Version`

Dictionary key name: `version`

**Version**: 2.1.0.12.dev0

## cybox.objects.arp_cache_object module

class cybox.objects.arp_cache_object.**ARPCache**

Bases: *`cybox.common.object_properties.ObjectProperties`*

XML binding class: `cybox.bindings.arp_cache_object.ARPCacheObjectType`

### **arp_cache_entry**

(List of values permitted)

Type: *`cybox.objects.arp_cache_object.ARPCacheEntry`*

XML Binding class name: `ARP_Cache_Entry`

Dictionary key name: `arp_cache_entry`

class cybox.objects.arp_cache_object.**ARPCacheEntry**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.arp_cache_object.ARPCacheEntryType`

### **ip_address**

Type: *`cybox.objects.address_object.Address`*

XML Binding class name: `IP_Address`

Dictionary key name: `ip_address`

### **network_interface**

Type: *`cybox.objects.system_object.NetworkInterface`*

XML Binding class name: `Network_Interface`

Dictionary key name: `network_interface`

---

**physical_address**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Physical_Address`
> Dictionary key name: `physical_address`

**type_**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Type`
> Dictionary key name: `type`

**Version**: 2.1.0.12.dev0

## cybox.objects.artifact_object module

class cybox.objects.artifact_object.**Artifact**(*data=None*, *type_=None*)
> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: <undefined>

> static **from_dict**(*artifact_dict*)

> static **from_obj**(*artifact_obj*)

> **to_dict**()

> **to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.objects.artifact_object.**Base64Encoding**
> Bases: *cybox.objects.artifact_object.Encoding*

> XML binding class: <undefined>

> **pack**(*data*)

> **unpack**(*packed_data*)

class cybox.objects.artifact_object.**Bz2Compression**
> Bases: *cybox.objects.artifact_object.Compression*

> XML binding class: <undefined>

> **pack**(*data*)

> **unpack**(*packed_data*)

class cybox.objects.artifact_object.**Compression**(*compression_mechanism=None*)
> Bases: *cybox.objects.artifact_object.Packaging*

A Compression packaging layer

Currently only zlib and bz2 are supported. Also, compression_mechanism_ref is not currently supported.

XML binding class: <undefined>

static **from_dict**(*compression_dict*)

static **from_obj**(*compression_obj*)

static **get_object**(*mechanism*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.objects.artifact_object.**Encoding**
    Bases: *cybox.objects.artifact_object.Packaging*

An encoding packaging layer.

Currently only base64 with a standard alphabet is supported.

XML binding class: <undefined>

static **from_dict**(*encoding_dict*)

static **from_obj**(*encoding_obj*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.objects.artifact_object.**Encryption**(*encryption_mechanism=None*, *encryption_key=None*)
    Bases: *cybox.objects.artifact_object.Packaging*

An encryption packaging layer.

XML binding class: <undefined>

static **from_dict**(*encryption_dict*)

static **from_obj**(*encryption_obj*)

static **get_object**(*mechanism*, *key*)

**to_dict**()

**to_obj**(*return_obj=None*, *ns_info=None*)

class cybox.objects.artifact_object.**Packaging**
    Bases: cybox.Entity

An individual packaging layer.

XML binding class: <undefined>

**pack**(*data*)
> This should accept byte data and return byte data

**unpack**(*packed_data*)
> This should accept byte data and return byte data

class cybox.objects.artifact_object.**PasswordProtectedZipEncryption**(*key*)
> Bases: *cybox.objects.artifact_object.Encryption*

> XML binding class: <undefined>

> **unpack**(*packed_data*)

class cybox.objects.artifact_object.**RawArtifact**(*value=None*)
> Bases: *cybox.common.properties.String*

> XML binding class: cybox.bindings.artifact_object.RawArtifactType

> **byte_order**

>> XML Binding class name: byte_order
>> Dictionary key name: byte_order

class cybox.objects.artifact_object.**XOREncryption**(*key*)
> Bases: *cybox.objects.artifact_object.Encryption*

> XML binding class: <undefined>

> **pack**(*data*)

> **unpack**(*packed_data*)

class cybox.objects.artifact_object.**ZlibCompression**
> Bases: *cybox.objects.artifact_object.Compression*

> XML binding class: <undefined>

> **pack**(*data*)

> **unpack**(*packed_data*)

**Version**: 2.1.0.12.dev0

## cybox.objects.as_object module

cybox.objects.as_object.**AS**
> alias of *AutonomousSystem* | XML binding class: cybox.bindings.as_object.ASObjectType

**class** cybox.objects.as_object.**AutonomousSystem**
    Bases: *cybox.common.object_properties.ObjectProperties*

    XML binding class: cybox.bindings.as_object.ASObjectType

    **handle**

        Type: *cybox.common.properties.String*
        XML Binding class name: Handle
        Dictionary key name: handle

    **name**

        Type: *cybox.common.properties.String*
        XML Binding class name: Name
        Dictionary key name: name

    **number**

        Type: *cybox.common.properties.NonNegativeInteger*
        XML Binding class name: Number
        Dictionary key name: number

    **regional_internet_registry**

        Type: *cybox.common.properties.String*
        XML Binding class name: Regional_Internet_Registry
        Dictionary key name: regional_internet_registry

**Version**: 2.1.0.12.dev0

## cybox.objects.code_object module

**class** cybox.objects.code_object.**Code**
    Bases: *cybox.common.object_properties.ObjectProperties*

    XML binding class: cybox.bindings.code_object.CodeObjectType

    **code_language**

        Type: *cybox.common.properties.String*
        XML Binding class name: Code_Language
        Dictionary key name: code_language

    **code_segment**

        Type: *cybox.common.properties.String*

XML Binding class name: Code_Segment

Dictionary key name: code_segment

**code_segment_xor**

Type: *cybox.objects.code_object.CodeSegmentXOR*

XML Binding class name: Code_Segment_XOR

Dictionary key name: code_segment_xor

**description**

Type: *cybox.common.structured_text.StructuredText*

XML Binding class name: Description

Dictionary key name: description

**digital_signatures**

Type: *cybox.common.digitalsignature.DigitalSignatureList*

XML Binding class name: Digital_Signatures

Dictionary key name: digital_signatures

**discovery_method**

Type: *cybox.common.measuresource.MeasureSource*

XML Binding class name: Discovery_Method

Dictionary key name: discovery_method

**extracted_features**

Type: *cybox.common.extracted_features.ExtractedFeatures*

XML Binding class name: Extracted_Features

Dictionary key name: extracted_features

**processor_family**

(List of values permitted)

Type: *cybox.common.properties.String*

XML Binding class name: Processor_Family

Dictionary key name: processor_family

**purpose**

Type: *cybox.common.properties.String*

XML Binding class name: Purpose

Dictionary key name: purpose

**start_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Start_Address

Dictionary key name: start_address

**targeted_platforms**

> Type: *cybox.objects.code_object.TargetedPlatforms*
> XML Binding class name: `Targeted_Platforms`
> Dictionary key name: `targeted_platforms`

**type_**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Type`
> Dictionary key name: `type`

class cybox.objects.code_object.**CodeSegmentXOR**(*value=None*)
    Bases: *cybox.common.properties.String*

> XML binding class: cybox.bindings.code_object.CodeSegmentXORType

**xor_pattern**

> XML Binding class name: `xor_pattern`
> Dictionary key name: `xor_pattern`

class cybox.objects.code_object.**TargetedPlatforms**(*\*args*)
    Bases: cybox.EntityList

> XML binding class: cybox.bindings.code_object.TargetedPlatformsType

**Version**: 2.1.0.12.dev0

## cybox.objects.device_object module

class cybox.objects.device_object.**Device**
    Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.device_object.DeviceObjectType

**description**

> Type: *cybox.common.structured_text.StructuredText*
> XML Binding class name: `Description`
> Dictionary key name: `description`

**device_type**

> Type: *cybox.common.properties.String*

XML Binding class name: `Device_Type`

Dictionary key name: `device_type`

#### firmware_version

Type: *cybox.common.properties.String*

XML Binding class name: `Firmware_Version`

Dictionary key name: `firmware_version`

#### manufacturer

Type: *cybox.common.properties.String*

XML Binding class name: `Manufacturer`

Dictionary key name: `manufacturer`

#### model

Type: *cybox.common.properties.String*

XML Binding class name: `Model`

Dictionary key name: `model`

#### serial_number

Type: *cybox.common.properties.String*

XML Binding class name: `Serial_Number`

Dictionary key name: `serial_number`

Version: 2.1.0.12.dev0

### cybox.objects.disk_object module

class cybox.objects.disk_object.**Disk**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: `cybox.bindings.disk_object.DiskObjectType`

#### disk_name

Type: *cybox.common.properties.String*

XML Binding class name: `Disk_Name`

Dictionary key name: `disk_name`

#### disk_size

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: `Disk_Size`

Dictionary key name: `disk_size`

#### free_space

>> Type: *cybox.common.properties.UnsignedLong*
>> XML Binding class name: Free_Space
>> Dictionary key name: free_space

> **partition_list**

>> Type: *cybox.objects.disk_object.PartitionList*
>> XML Binding class name: Partition_List
>> Dictionary key name: partition_list

> **type**

>> Type: *cybox.common.properties.String*
>> XML Binding class name: Type
>> Dictionary key name: type

class cybox.objects.disk_object.**PartitionList**(*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.disk_object.PartitionListType

**Version**: 2.1.0.12.dev0

## cybox.objects.disk_partition_object module

class cybox.objects.disk_partition_object.**DiskPartition**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.disk_partition_object.DiskPartitionObjectType

> **created**

>> Type: *cybox.common.properties.String*
>> XML Binding class name: Created
>> Dictionary key name: created

> **device_name**

>> Type: *cybox.common.properties.Name*
>> XML Binding class name: Device_Name
>> Dictionary key name: device_name

> **mount_point**

>> Type: *cybox.common.properties.String*
>> XML Binding class name: Mount_Point
>> Dictionary key name: mount_point

**partition_id**

> Type: *[cybox.common.properties.Integer](#)*
> XML Binding class name: `Partition_ID`
> Dictionary key name: `partition_id`

**partition_length**

> Type: *[cybox.common.properties.UnsignedLong](#)*
> XML Binding class name: `Partition_Length`
> Dictionary key name: `partition_length`

**partition_offset**

> Type: *[cybox.common.properties.UnsignedLong](#)*
> XML Binding class name: `Partition_Offset`
> Dictionary key name: `partition_offset`

**space_left**

> Type: *[cybox.common.properties.UnsignedLong](#)*
> XML Binding class name: `Space_Left`
> Dictionary key name: `space_left`

**space_used**

> Type: *[cybox.common.properties.UnsignedLong](#)*
> XML Binding class name: `Space_Used`
> Dictionary key name: `space_used`

**total_space**

> Type: *[cybox.common.properties.UnsignedLong](#)*
> XML Binding class name: `Total_Space`
> Dictionary key name: `total_space`

**type**

> Type: *[cybox.common.properties.UnsignedLong](#)*
> XML Binding class name: `Type`
> Dictionary key name: `type`

**Version**: 2.1.0.12.dev0

## cybox.objects.dns_cache_object module

class cybox.objects.dns_cache_object.**DNSCache**
> Bases: *[cybox.common.object_properties.ObjectProperties](#)*

> XML binding class: cybox.bindings.dns_cache_object.DNSCacheObjectType

**dns_cache_entry**

(List of values permitted)

Type: *cybox.objects.dns_cache_object.DNSCacheEntry*

XML Binding class name: DNS_Cache_Entry

Dictionary key name: dns_cache_entry

class cybox.objects.dns_cache_object.**DNSCacheEntry**

Bases: cybox.Entity

XML binding class: cybox.bindings.dns_cache_object.DNSCacheEntryType

**dns_entry**

Type: *cybox.objects.dns_record_object.DNSRecord*

XML Binding class name: DNS_Entry

Dictionary key name: dns_entry

**ttl**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: TTL

Dictionary key name: ttl

**Version**: 2.1.0.12.dev0

## cybox.objects.dns_query_object module

class cybox.objects.dns_query_object.**DNSQuery**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.dns_query_object.DNSQueryObjectType

**additional_records**

Type: *cybox.objects.dns_query_object.DNSResourceRecords*

XML Binding class name: Additional_Records

Dictionary key name: additional_records

**answer_resource_records**

Type: *cybox.objects.dns_query_object.DNSResourceRecords*

XML Binding class name: Answer_Resource_Records

Dictionary key name: answer_resource_records

**authority_resource_records**

Type: *cybox.objects.dns_query_object.DNSResourceRecords*
XML Binding class name: Authority_Resource_Records
Dictionary key name: authority_resource_records

### date_ran

Type: *cybox.common.properties.DateTime*
XML Binding class name: Date_Ran
Dictionary key name: date_ran

### question

Type: *cybox.objects.dns_query_object.DNSQuestion*
XML Binding class name: Question
Dictionary key name: question

### service_used

Type: *cybox.common.properties.String*
XML Binding class name: Service_Used
Dictionary key name: service_used

### successful

XML Binding class name: successful
Dictionary key name: successful

### transaction_id

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Transaction_ID
Dictionary key name: transaction_id

**class** cybox.objects.dns_query_object.**DNSQuestion**
Bases: cybox.Entity

XML binding class: cybox.bindings.dns_query_object.DNSQuestionType

### qclass

Type: *cybox.common.properties.String*
XML Binding class name: QClass
Dictionary key name: qclass

### qname

Type: *cybox.objects.uri_object.URI*
XML Binding class name: QName
Dictionary key name: qname

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**qtype**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: QType
> Dictionary key name: qtype

class cybox.objects.dns_query_object.**DNSResourceRecords**(*\*args*)
> Bases: cybox.EntityList


> XML binding class: cybox.bindings.dns_query_object.DNSResourceRecordsType


**Version**: 2.1.0.12.dev0


## cybox.objects.dns_record_object module

class cybox.objects.dns_record_object.**DNSRecord**
> Bases: *cybox.common.object_properties.ObjectProperties*


> XML binding class: cybox.bindings.dns_record_object.DNSRecordObjectType


**address_class**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Address_Class
> Dictionary key name: address_class

**data_length**

>
> Type: *cybox.common.properties.Integer*
> XML Binding class name: Data_Length
> Dictionary key name: data_length

**description**

>
> Type: *cybox.common.structured_text.StructuredText*
> XML Binding class name: Description
> Dictionary key name: description

**domain_name**

>
> Type: *cybox.objects.uri_object.URI*
> XML Binding class name: Domain_Name
> Dictionary key name: domain_name

**entry_type**

>
> Type: *cybox.common.properties.String*

XML Binding class name: `Entry_Type`

Dictionary key name: `entry_type`

**flags**

Type: *[cybox.common.properties.HexBinary](cybox.common.properties.HexBinary)*

XML Binding class name: `Flags`

Dictionary key name: `flags`

**ip_address**

Type: *[cybox.objects.address_object.Address](cybox.objects.address_object.Address)*

XML Binding class name: `IP_Address`

Dictionary key name: `ip_address`

**queried_date**

Type: *[cybox.common.properties.DateTime](cybox.common.properties.DateTime)*

XML Binding class name: `Queried_Date`

Dictionary key name: `queried_date`

**record_data**

XML Binding class name: `Record_Data`

Dictionary key name: `record_data`

**record_name**

Type: *[cybox.common.properties.String](cybox.common.properties.String)*

XML Binding class name: `Record_Name`

Dictionary key name: `record_name`

**record_type**

Type: *[cybox.common.properties.String](cybox.common.properties.String)*

XML Binding class name: `Record_Type`

Dictionary key name: `record_type`

**ttl**

Type: *[cybox.common.properties.Integer](cybox.common.properties.Integer)*

XML Binding class name: `TTL`

Dictionary key name: `ttl`

**Version**: 2.1.0.12.dev0

### cybox.objects.domain_name_object module

class cybox.objects.domain_name_object.**DomainName**

Bases: *[cybox.common.object_properties.ObjectProperties](cybox.common.object_properties.ObjectProperties)*

XML binding class: cybox.bindings.domain_name_object.DomainNameObjectType

**type_**

XML Binding class name: type_

Dictionary key name: type

**value**

Type: *cybox.common.properties.String*

XML Binding class name: Value

Dictionary key name: value

**Version**: 2.1.0.12.dev0

## cybox.objects.email_message_object module

class cybox.objects.email_message_object.**AttachmentReference**(*object_reference=None*)

Bases: cybox.ObjectReference

XML binding class: cybox.bindings.email_message_object.AttachmentReferenceType

class cybox.objects.email_message_object.**Attachments**(*\*args*)

Bases: cybox.ReferenceList

XML binding class: cybox.bindings.email_message_object.AttachmentsType

class cybox.objects.email_message_object.**EmailHeader**

Bases: cybox.Entity

XML binding class: cybox.bindings.email_message_object.EmailHeaderType

**bcc**

Type: *cybox.objects.email_message_object.EmailRecipients*

XML Binding class name: BCC

Dictionary key name: bcc

**boundary**

Type: *cybox.common.properties.String*

XML Binding class name: Boundary

Dictionary key name: boundary

**cc**

>   Type: *cybox.objects.email_message_object.EmailRecipients*
>   XML Binding class name: CC
>   Dictionary key name: cc

**content_type**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Content_Type
>   Dictionary key name: content_type

**date**

>   Type: *cybox.common.properties.DateTime*
>   XML Binding class name: Date
>   Dictionary key name: date

**errors_to**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Errors_To
>   Dictionary key name: errors_to

**from_**

>   Type: *cybox.objects.address_object.EmailAddress*
>   XML Binding class name: From
>   Dictionary key name: from

**in_reply_to**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: In_Reply_To
>   Dictionary key name: in_reply_to

**message_id**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Message_ID
>   Dictionary key name: message_id

**mime_version**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: MIME_Version
>   Dictionary key name: mime_version

**precedence**

>   Type: *cybox.common.properties.String*

XML Binding class name: `Precedence`

Dictionary key name: `precedence`

**received_lines**

Type: *[cybox.objects.email_message_object.ReceivedLineList](cybox.objects.email_message_object.ReceivedLineList)*

XML Binding class name: `Received_Lines`

Dictionary key name: `received_lines`

**reply_to**

Type: *[cybox.objects.address_object.EmailAddress](cybox.objects.address_object.EmailAddress)*

XML Binding class name: `Reply_To`

Dictionary key name: `reply_to`

**sender**

Type: *[cybox.objects.address_object.EmailAddress](cybox.objects.address_object.EmailAddress)*

XML Binding class name: `Sender`

Dictionary key name: `sender`

**subject**

Type: *[cybox.common.properties.String](cybox.common.properties.String)*

XML Binding class name: `Subject`

Dictionary key name: `subject`

**to**

Type: *[cybox.objects.email_message_object.EmailRecipients](cybox.objects.email_message_object.EmailRecipients)*

XML Binding class name: `To`

Dictionary key name: `to`

**user_agent**

Type: *[cybox.common.properties.String](cybox.common.properties.String)*

XML Binding class name: `User_Agent`

Dictionary key name: `user_agent`

**x_mailer**

Type: *[cybox.common.properties.String](cybox.common.properties.String)*

XML Binding class name: `X_Mailer`

Dictionary key name: `x_mailer`

**x_originating_ip**

Type: *[cybox.objects.address_object.Address](cybox.objects.address_object.Address)*

XML Binding class name: `X_Originating_IP`

Dictionary key name: `x_originating_ip`

**x_priority**

>
> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: X_Priority
> Dictionary key name: x_priority

class cybox.objects.email_message_object.**EmailMessage**
Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.email_message_object.EmailMessageObjectType

**attachments**

>
> Type: *cybox.objects.email_message_object.Attachments*
> XML Binding class name: Attachments
> Dictionary key name: attachments

**email_server**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Email_Server
> Dictionary key name: email_server

**header**

>
> Type: *cybox.objects.email_message_object.EmailHeader*
> XML Binding class name: Header
> Dictionary key name: header

**links**

>
> Type: *cybox.objects.email_message_object.Links*
> XML Binding class name: Links
> Dictionary key name: links

**raw_body**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Raw_Body
> Dictionary key name: raw_body

**raw_header**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Raw_Header
> Dictionary key name: raw_header

class cybox.objects.email_message_object.**EmailRecipients**(*args*)
Bases: cybox.EntityList

XML binding class: cybox.bindings.email_message_object.EmailRecipientsType

class cybox.objects.email_message_object.**LinkReference**(*object_reference=None*)
 Bases: cybox.ObjectReference

 XML binding class: cybox.bindings.email_message_object.LinkReferenceType

class cybox.objects.email_message_object.**Links**(*\*args*)
 Bases: cybox.ReferenceList

 XML binding class: cybox.bindings.email_message_object.LinksType

class cybox.objects.email_message_object.**ReceivedLine**
 Bases: cybox.Entity

 XML binding class: cybox.bindings.email_message_object.EmailReceivedLineType

 **by**

  Type: *cybox.common.properties.String*
  XML Binding class name: By
  Dictionary key name: by

 **for_**

  Type: *cybox.common.properties.String*
  XML Binding class name: For
  Dictionary key name: for

 **from_**

  Type: *cybox.common.properties.String*
  XML Binding class name: From
  Dictionary key name: from

 **id_**

  Type: *cybox.common.properties.String*
  XML Binding class name: ID
  Dictionary key name: id

 **timestamp**

  Type: *cybox.common.properties.DateTime*
  XML Binding class name: Timestamp

Dictionary key name: timestamp

**via**

Type: *cybox.common.properties.String*
XML Binding class name: Via
Dictionary key name: via

**with_**

Type: *cybox.common.properties.String*
XML Binding class name: With
Dictionary key name: with

class cybox.objects.email_message_object.**ReceivedLineList**(*args*)
Bases: cybox.EntityList

XML binding class:
cybox.bindings.email_message_object.EmailReceivedLineListType

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## cybox.objects.file_object module

class cybox.objects.file_object.**EPJumpCode**
Bases: cybox.Entity

XML binding class: cybox.bindings.file_object.EPJumpCodeType

**depth**

Type: *cybox.common.properties.Integer*
XML Binding class name: Depth
Dictionary key name: depth

**opcodes**

Type: *cybox.common.properties.String*
XML Binding class name: Opcodes
Dictionary key name: opcodes

class cybox.objects.file_object.**EntryPointSignature**
Bases: cybox.Entity

XML binding class: cybox.bindings.file_object.EntryPointSignatureType

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**type_**

> Type: *cybox.common.properties.String*
> XML Binding class name: Type
> Dictionary key name: type

**class** cybox.objects.file_object.**EntryPointSignatureList**(*\*args*)
    Bases: cybox.EntityList

XML binding class: cybox.bindings.file_object.EntryPointSignatureListType

**class** cybox.objects.file_object.**File**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.file_object.FileObjectType

**accessed_time**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: Accessed_Time
> Dictionary key name: accessed_time

**add_hash**(*hash_*)

**byte_runs**

> Type: *cybox.common.byterun.ByteRuns*
> XML Binding class name: Byte_Runs
> Dictionary key name: byte_runs

**compression_comment**

> Type: *cybox.common.properties.String*
> XML Binding class name: Compression_Comment
> Dictionary key name: compression_comment

**compression_method**

> Type: *cybox.common.properties.String*
> XML Binding class name: Compression_Method
> Dictionary key name: compression_method

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**compression_version**

> Type: *cybox.common.properties.String*
> XML Binding class name: Compression_Version
> Dictionary key name: compression_version

**created_time**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: Created_Time
> Dictionary key name: created_time

**decryption_key**

> Type: *cybox.common.properties.String*
> XML Binding class name: Decryption_Key
> Dictionary key name: decryption_key

**device_path**

> Type: *cybox.common.properties.String*
> XML Binding class name: Device_Path
> Dictionary key name: device_path

**digital_signatures**

> Type: *cybox.common.digitalsignature.DigitalSignatureList*
> XML Binding class name: Digital_Signatures
> Dictionary key name: digital_signatures

**encryption_algorithm**

> Type: *cybox.common.properties.String*
> XML Binding class name: Encryption_Algorithm
> Dictionary key name: encryption_algorithm

**extracted_features**

> Type: *cybox.common.extracted_features.ExtractedFeatures*
> XML Binding class name: Extracted_Features
> Dictionary key name: extracted_features

**file_attributes_list**

> Type: *cybox.objects.file_object.FileAttribute*
> XML Binding class name: File_Attributes_List
> Dictionary key name: file_attributes_list

**file_extension**

> Type: *cybox.common.properties.String*

XML Binding class name: File_Extension

Dictionary key name: file_extension

**file_format**

Type: *cybox.common.properties.String*

XML Binding class name: File_Format

Dictionary key name: file_format

**file_name**

Type: *cybox.common.properties.String*

XML Binding class name: File_Name

Dictionary key name: file_name

**file_path**

Type: *cybox.objects.file_object.FilePath*

XML Binding class name: File_Path

Dictionary key name: file_path

**full_path**

Type: *cybox.common.properties.String*

XML Binding class name: Full_Path

Dictionary key name: full_path

**hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

**is_masqueraded**

XML Binding class name: is_masqueraded

Dictionary key name: is_masqueraded

**is_packed**

XML Binding class name: is_packed

Dictionary key name: is_packed

**magic_number**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Magic_Number

Dictionary key name: magic_number

**modified_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Modified_Time

Dictionary key name: modified_time

**packer_list**

Type: *cybox.objects.file_object.PackerList*

XML Binding class name: Packer_List

Dictionary key name: packer_list

**peak_entropy**

Type: *cybox.common.properties.Double*

XML Binding class name: Peak_Entropy

Dictionary key name: peak_entropy

**permissions**

Type: *cybox.objects.file_object.FilePermissions*

XML Binding class name: Permissions

Dictionary key name: permissions

**size_in_bytes**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Size_In_Bytes

Dictionary key name: size_in_bytes

**sym_links**

Type: *cybox.objects.file_object.SymLinksList*

XML Binding class name: Sym_Links

Dictionary key name: sym_links

**user_owner**

Type: *cybox.common.properties.String*

XML Binding class name: User_Owner

Dictionary key name: user_owner

class cybox.objects.file_object.**FileAttribute**

Bases: cybox.Entity

An abstract class for file attributes.

XML binding class: <undefined>

class cybox.objects.file_object.**FilePath**(*args*, *\*\*kwargs*)

Bases: *cybox.common.properties.String*

XML binding class: cybox.bindings.file_object.FilePathType

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static **from_dict** (*filepath_dict*)

static **from_obj** (*filepath_obj*)

**is_plain** ()

**to_dict** ()

**to_obj** (*return_obj=None*, *ns_info=None*)

class cybox.objects.file_object.**FilePermissions**
    Bases: cybox.Entity

    An abstract class for file permissions.

    XML binding class: <undefined>

class cybox.objects.file_object.**Packer**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.file_object.PackerType

    **detected_entrypoint_signatures**

        Type: *cybox.objects.file_object.EntryPointSignatureList*
        XML Binding class name: Detected_Entrypoint_Signatures
        Dictionary key name: detected_entrypoint_signatures

    **entry_point**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Entry_Point
        Dictionary key name: entry_point

    **ep_jump_codes**

        Type: *cybox.objects.file_object.EPJumpCode*
        XML Binding class name: EP_Jump_Codes
        Dictionary key name: ep_jump_codes

    **name**

        Type: *cybox.common.properties.String*
        XML Binding class name: Name
        Dictionary key name: name

    **signature**

        Type: *cybox.common.properties.String*
        XML Binding class name: Signature
        Dictionary key name: signature

**type_**

> Type: *cybox.common.properties.String*
> XML Binding class name: Type
> Dictionary key name: type

**version**

> Type: *cybox.common.properties.String*
> XML Binding class name: Version
> Dictionary key name: version

class cybox.objects.file_object.**PackerList**(*\*args*)
    Bases: cybox.EntityList

> XML binding class: cybox.bindings.file_object.PackerListType

class cybox.objects.file_object.**SymLinksList**(*\*args*)
    Bases: cybox.EntityList

> XML binding class: cybox.bindings.file_object.SymLinksListType

**Version**: 2.1.0.12.dev0

### cybox.objects.gui_dialogbox_object module

class cybox.objects.gui_dialogbox_object.**GUIDialogbox**
    Bases: *cybox.objects.gui_object.GUI*

> XML binding class: cybox.bindings.gui_dialogbox_object.GUIDialogboxObjectType

**box_caption**

> Type: *cybox.common.properties.String*
> XML Binding class name: Box_Caption
> Dictionary key name: box_caption

**box_text**

> Type: *cybox.common.properties.String*
> XML Binding class name: Box_Text
> Dictionary key name: box_text

**Version**: 2.1.0.12.dev0

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**`cybox.objects.gui_object` module**

**class** `cybox.objects.gui_object.`**`GUI`**
    Bases: *`cybox.common.object_properties.ObjectProperties`*

    XML binding class: `cybox.bindings.gui_object.GUIObjectType`

    **`height`**

        Type: *`cybox.common.properties.Integer`*
        XML Binding class name: `Height`
        Dictionary key name: `height`

    **`width`**

        Type: *`cybox.common.properties.Integer`*
        XML Binding class name: `Width`
        Dictionary key name: `width`

**Version**: 2.1.0.12.dev0

**`cybox.objects.gui_window_object` module**

**class** `cybox.objects.gui_window_object.`**`GUIWindow`**
    Bases: *`cybox.objects.gui_object.GUI`*

    XML binding class: `cybox.bindings.gui_window_object.GUIWindowObjectType`

    **`owner_window`**

        Type: *`cybox.common.properties.String`*
        XML Binding class name: `Owner_Window`
        Dictionary key name: `owner_window`

    **`parent_window`**

        Type: *`cybox.common.properties.String`*
        XML Binding class name: `Parent_Window`
        Dictionary key name: `parent_window`

    **`window_display_name`**

        Type: *`cybox.common.properties.String`*
        XML Binding class name: `Window_Display_Name`
        Dictionary key name: `window_display_name`

**Version**: 2.1.0.12.dev0

**cybox.objects.hostname_object module**

**class** cybox.objects.hostname_object.**Hostname**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.hostname_object.HostnameObjectType

**hostname_value**

Type: *cybox.common.properties.String*
XML Binding class name: Hostname_Value
Dictionary key name: hostname_value

**is_domain_name**

XML Binding class name: is_domain_name
Dictionary key name: is_domain_name

**naming_system**

(List of values permitted)
Type: *cybox.common.properties.String*
XML Binding class name: Naming_System
Dictionary key name: naming_system

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**cybox.objects.http_session_object module**

**class** cybox.objects.http_session_object.**HTTPClientRequest**

Bases: cybox.Entity

XML binding class: cybox.bindings.http_session_object.HTTPClientRequestType

**http_message_body**

Type: *cybox.objects.http_session_object.HTTPMessage*
XML Binding class name: HTTP_Message_Body
Dictionary key name: http_message_body

**http_request_header**

Type: *cybox.objects.http_session_object.HTTPRequestHeader*
XML Binding class name: HTTP_Request_Header
Dictionary key name: http_request_header

**http_request_line**

Type: *cybox.objects.http_session_object.HTTPRequestLine*
XML Binding class name: `HTTP_Request_Line`
Dictionary key name: `http_request_line`

class cybox.objects.http_session_object.**HTTPMessage**
    Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPMessageType`

**length**

Type: *cybox.common.properties.PositiveInteger*
XML Binding class name: `Length`
Dictionary key name: `length`

**message_body**

Type: *cybox.common.properties.String*
XML Binding class name: `Message_Body`
Dictionary key name: `message_body`

class cybox.objects.http_session_object.**HTTPRequestHeader**
    Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPRequestHeaderType`

**parsed_header**

Type: *cybox.objects.http_session_object.HTTPRequestHeaderFields*
XML Binding class name: `Parsed_Header`
Dictionary key name: `parsed_header`

**raw_header**

Type: *cybox.common.properties.String*
XML Binding class name: `Raw_Header`
Dictionary key name: `raw_header`

class cybox.objects.http_session_object.**HTTPRequestHeaderFields**
    Bases: `cybox.Entity`

XML binding class:
cybox.bindings.http_session_object.HTTPRequestHeaderFieldsType

**accept**

Type: *cybox.common.properties.String*

XML Binding class name: Accept

Dictionary key name: accept

**accept_charset**

Type: *cybox.common.properties.String*

XML Binding class name: Accept_Charset

Dictionary key name: accept_charset

**accept_datetime**

Type: *cybox.common.properties.String*

XML Binding class name: Accept_Datetime

Dictionary key name: accept_datetime

**accept_encoding**

Type: *cybox.common.properties.String*

XML Binding class name: Accept_Encoding

Dictionary key name: accept_encoding

**accept_language**

Type: *cybox.common.properties.String*

XML Binding class name: Accept_Language

Dictionary key name: accept_language

**authorization**

Type: *cybox.common.properties.String*

XML Binding class name: Authorization

Dictionary key name: authorization

**cache_control**

Type: *cybox.common.properties.String*

XML Binding class name: Cache_Control

Dictionary key name: cache_control

**connection**

Type: *cybox.common.properties.String*

XML Binding class name: Connection

Dictionary key name: connection

**content_length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Content_Length

Dictionary key name: content_length

**content_md5**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Content_MD5
>   Dictionary key name: content_md5

**content_type**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Content_Type
>   Dictionary key name: content_type

**cookie**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Cookie
>   Dictionary key name: cookie

**date**

>   Type: *cybox.common.properties.DateTime*
>   XML Binding class name: Date
>   Dictionary key name: date

**dnt**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: DNT
>   Dictionary key name: dnt

**expect**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Expect
>   Dictionary key name: expect

**from_**

>   Type: *cybox.objects.address_object.EmailAddress*
>   XML Binding class name: From
>   Dictionary key name: from

**host**

>   Type: *cybox.objects.http_session_object.HostField*
>   XML Binding class name: Host
>   Dictionary key name: host

**if_match**

>   Type: *cybox.common.properties.String*

XML Binding class name: If_Match

Dictionary key name: if_match

**if_modified_since**

Type: *cybox.common.properties.DateTime*

XML Binding class name: If_Modified_Since

Dictionary key name: if_modified_since

**if_none_match**

Type: *cybox.common.properties.String*

XML Binding class name: If_None_Match

Dictionary key name: if_none_match

**if_range**

Type: *cybox.common.properties.String*

XML Binding class name: If_Range

Dictionary key name: if_range

**if_unmodified_since**

Type: *cybox.common.properties.DateTime*

XML Binding class name: If_Unmodified_Since

Dictionary key name: if_unmodified_since

**max_forwards**

Type: *cybox.common.properties.Integer*

XML Binding class name: Max_Forwards

Dictionary key name: max_forwards

**pragma**

Type: *cybox.common.properties.String*

XML Binding class name: Pragma

Dictionary key name: pragma

**proxy_authorization**

Type: *cybox.common.properties.String*

XML Binding class name: Proxy_Authorization

Dictionary key name: proxy_authorization

**range_**

Type: *cybox.common.properties.String*

XML Binding class name: Range

Dictionary key name: range

**referer**

> Type: *cybox.objects.uri_object.URI*
> XML Binding class name: Referer
> Dictionary key name: referer

**te**

> Type: *cybox.common.properties.String*
> XML Binding class name: TE
> Dictionary key name: te

**user_agent**

> Type: *cybox.common.properties.String*
> XML Binding class name: User_Agent
> Dictionary key name: user_agent

**via**

> Type: *cybox.common.properties.String*
> XML Binding class name: Via
> Dictionary key name: via

**warning**

> Type: *cybox.common.properties.String*
> XML Binding class name: Warning
> Dictionary key name: warning

**x_att_deviceid**

> Type: *cybox.common.properties.String*
> XML Binding class name: X_ATT_DeviceId
> Dictionary key name: x_att_deviceid

**x_forwarded_for**

> Type: *cybox.common.properties.String*
> XML Binding class name: X_Forwarded_For
> Dictionary key name: x_forwarded_for

**x_forwarded_proto**

> Type: *cybox.common.properties.String*
> XML Binding class name: X_Forwarded_Proto
> Dictionary key name: x_forwarded_proto

**x_requested_with**

> Type: *cybox.common.properties.String*

XML Binding class name: `X_Requested_With`

Dictionary key name: `x_requested_with`

### x_wap_profile

Type: *`cybox.objects.uri_object.URI`*

XML Binding class name: `X_Wap_Profile`

Dictionary key name: `x_wap_profile`

class cybox.objects.http_session_object.**HTTPRequestLine**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPRequestLineType`

### http_method

Type: *`cybox.common.properties.String`*

XML Binding class name: `HTTP_Method`

Dictionary key name: `http_method`

### value

Type: *`cybox.common.properties.String`*

XML Binding class name: `Value`

Dictionary key name: `value`

### version

Type: *`cybox.common.properties.String`*

XML Binding class name: `Version`

Dictionary key name: `version`

class cybox.objects.http_session_object.**HTTPRequestResponse**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.http_session_object.HTTPRequestResponseType`

### http_client_request

Type: *`cybox.objects.http_session_object.HTTPClientRequest`*

XML Binding class name: `HTTP_Client_Request`

Dictionary key name: `http_client_request`

### http_provisional_server_response

Type: *`cybox.objects.http_session_object.HTTPServerResponse`*

XML Binding class name: `HTTP_Provisional_Server_Response`

Dictionary key name: `http_provisional_server_response`

**http_server_response**

> Type: *cybox.objects.http_session_object.HTTPServerResponse*
> XML Binding class name: HTTP_Server_Response
> Dictionary key name: http_server_response

**ordinal_position**

> XML Binding class name: ordinal_position
> Dictionary key name: ordinal_position

class cybox.objects.http_session_object.**HTTPResponseHeader**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.http_session_object.HTTPResponseHeaderType

**parsed_header**

> Type: *cybox.objects.http_session_object.HTTPResponseHeaderFields*
> XML Binding class name: Parsed_Header
> Dictionary key name: parsed_header

**raw_header**

> Type: *cybox.common.properties.String*
> XML Binding class name: Raw_Header
> Dictionary key name: raw_header

class cybox.objects.http_session_object.**HTTPResponseHeaderFields**
> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.http_session_object.HTTPResponseHeaderFieldsType

**accept_ranges**

> Type: *cybox.common.properties.String*
> XML Binding class name: Accept_Ranges
> Dictionary key name: accept_ranges

**access_control_allow_origin**

> Type: *cybox.common.properties.String*
> XML Binding class name: Access_Control_Allow_Origin
> Dictionary key name: access_control_allow_origin

**age**

Type: *cybox.common.properties.Integer*
XML Binding class name: Age
Dictionary key name: age

**cache_control**

Type: *cybox.common.properties.String*
XML Binding class name: Cache_Control
Dictionary key name: cache_control

**connection**

Type: *cybox.common.properties.String*
XML Binding class name: Connection
Dictionary key name: connection

**content_disposition**

Type: *cybox.common.properties.String*
XML Binding class name: Content_Disposition
Dictionary key name: content_disposition

**content_encoding**

Type: *cybox.common.properties.String*
XML Binding class name: Content_Encoding
Dictionary key name: content_encoding

**content_language**

Type: *cybox.common.properties.String*
XML Binding class name: Content_Language
Dictionary key name: content_language

**content_length**

Type: *cybox.common.properties.Integer*
XML Binding class name: Content_Length
Dictionary key name: content_length

**content_location**

Type: *cybox.common.properties.String*
XML Binding class name: Content_Location
Dictionary key name: content_location

**content_md5**

Type: *cybox.common.properties.String*
XML Binding class name: Content_MD5
Dictionary key name: content_md5

**content_range**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Content_Range
>   Dictionary key name: content_range

**content_type**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Content_Type
>   Dictionary key name: content_type

**date**

>   Type: *cybox.common.properties.DateTime*
>   XML Binding class name: Date
>   Dictionary key name: date

**etag**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: ETag
>   Dictionary key name: etag

**expires**

>   Type: *cybox.common.properties.DateTime*
>   XML Binding class name: Expires
>   Dictionary key name: expires

**last_modified**

>   Type: *cybox.common.properties.DateTime*
>   XML Binding class name: Last_Modified
>   Dictionary key name: last_modified

**link**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Link
>   Dictionary key name: link

**location**

>   Type: *cybox.objects.uri_object.URI*
>   XML Binding class name: Location
>   Dictionary key name: location

**p3p**

>   Type: *cybox.common.properties.String*

XML Binding class name: `P3P`

Dictionary key name: `p3p`

**pragma**

Type: *cybox.common.properties.String*

XML Binding class name: `Pragma`

Dictionary key name: `pragma`

**proxy_authenticate**

Type: *cybox.common.properties.String*

XML Binding class name: `Proxy_Authenticate`

Dictionary key name: `proxy_authenticate`

**refresh**

Type: *cybox.common.properties.String*

XML Binding class name: `Refresh`

Dictionary key name: `refresh`

**retry_after**

Type: *cybox.common.properties.Integer*

XML Binding class name: `Retry_After`

Dictionary key name: `retry_after`

**server**

Type: *cybox.common.properties.String*

XML Binding class name: `Server`

Dictionary key name: `server`

**set_cookie**

Type: *cybox.common.properties.String*

XML Binding class name: `Set_Cookie`

Dictionary key name: `set_cookie`

**strict_transport_security**

Type: *cybox.common.properties.String*

XML Binding class name: `Strict_Transport_Security`

Dictionary key name: `strict_transport_security`

**trailer**

Type: *cybox.common.properties.String*

XML Binding class name: `Trailer`

Dictionary key name: `trailer`

**transfer_encoding**

> Type: *cybox.common.properties.String*
> XML Binding class name: Transfer_Encoding
> Dictionary key name: transfer_encoding

**vary**

> Type: *cybox.common.properties.String*
> XML Binding class name: Vary
> Dictionary key name: vary

**via**

> Type: *cybox.common.properties.String*
> XML Binding class name: Via
> Dictionary key name: via

**warning**

> Type: *cybox.common.properties.String*
> XML Binding class name: Warning
> Dictionary key name: warning

**www_authenticate**

> Type: *cybox.common.properties.String*
> XML Binding class name: WWW_Authenticate
> Dictionary key name: www_authenticate

**x_content_type_options**

> Type: *cybox.common.properties.String*
> XML Binding class name: X_Content_Type_Options
> Dictionary key name: x_content_type_options

**x_frame_options**

> Type: *cybox.common.properties.String*
> XML Binding class name: X_Frame_Options
> Dictionary key name: x_frame_options

**x_powered_by**

> Type: *cybox.common.properties.String*
> XML Binding class name: X_Powered_By
> Dictionary key name: x_powered_by

**x_ua_compatible**

> Type: *cybox.common.properties.String*

XML Binding class name: X_UA_Compatible

Dictionary key name: x_ua_compatible

### x_xss_protection

Type: *cybox.common.properties.String*

XML Binding class name: X_XSS_Protection

Dictionary key name: x_xss_protection

**class** cybox.objects.http_session_object.**HTTPServerResponse**

Bases: cybox.Entity

XML binding class: cybox.bindings.http_session_object.HTTPServerResponseType

### http_message_body

Type: *cybox.objects.http_session_object.HTTPMessage*

XML Binding class name: HTTP_Message_Body

Dictionary key name: http_message_body

### http_response_header

Type: *cybox.objects.http_session_object.HTTPResponseHeader*

XML Binding class name: HTTP_Response_Header

Dictionary key name: http_response_header

### http_status_line

Type: *cybox.objects.http_session_object.HTTPStatusLine*

XML Binding class name: HTTP_Status_Line

Dictionary key name: http_status_line

**class** cybox.objects.http_session_object.**HTTPSession**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.http_session_object.HTTPSessionObjectType

### http_request_response

(List of values permitted)

Type: *cybox.objects.http_session_object.HTTPRequestResponse*

XML Binding class name: HTTP_Request_Response

Dictionary key name: http_request_response

**class** cybox.objects.http_session_object.**HTTPStatusLine**

Bases: cybox.Entity

XML binding class: cybox.bindings.http_session_object.HTTPStatusLineType

> **reason_phrase**
>
>> Type: *cybox.common.properties.String*
>> XML Binding class name: Reason_Phrase
>> Dictionary key name: reason_phrase
>
> **status_code**
>
>> Type: *cybox.common.properties.PositiveInteger*
>> XML Binding class name: Status_Code
>> Dictionary key name: status_code
>
> **version**
>
>> Type: *cybox.common.properties.String*
>> XML Binding class name: Version
>> Dictionary key name: version

**class** cybox.objects.http_session_object.**HostField**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.http_session_object.HostFieldType

> **domain_name**
>
>> Type: *cybox.objects.uri_object.URI*
>> XML Binding class name: Domain_Name
>> Dictionary key name: domain_name
>
> **port**
>
>> Type: *cybox.objects.port_object.Port*
>> XML Binding class name: Port
>> Dictionary key name: port

**Version**: 2.1.0.12.dev0

## cybox.objects.image_file_object module

**class** cybox.objects.image_file_object.**ImageFile**
> Bases: *cybox.objects.file_object.File*

> XML binding class: cybox.bindings.file_object.FileObjectType

> **bits_per_pixel**
>
>> Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: `Bits_Per_Pixel`

Dictionary key name: `bits_per_pixel`

### compression_algorithm

Type: *`cybox.common.properties.String`*

XML Binding class name: `Compression_Algorithm`

Dictionary key name: `compression_algorithm`

### image_file_format

Type: *`cybox.common.properties.String`*

XML Binding class name: `Image_File_Format`

Dictionary key name: `image_file_format`

### image_height

Type: *`cybox.common.properties.Integer`*

XML Binding class name: `Image_Height`

Dictionary key name: `image_height`

### image_is_compressed

XML Binding class name: `image_is_compressed`

Dictionary key name: `image_is_compressed`

### image_width

Type: *`cybox.common.properties.Integer`*

XML Binding class name: `Image_Width`

Dictionary key name: `image_width`

**Version**: 2.1.0.12.dev0

## cybox.objects.library_object module

class cybox.objects.library_object.**Library**

Bases: *`cybox.common.object_properties.ObjectProperties`*

XML binding class: `cybox.bindings.library_object.LibraryObjectType`

### base_address

Type: *`cybox.common.properties.HexBinary`*

XML Binding class name: `Base_Address`

Dictionary key name: `base_address`

### extracted_features

> > Type: *cybox.common.extracted_features.ExtractedFeatures*
> > XML Binding class name: `Extracted_Features`
> > Dictionary key name: `extracted_features`

> **name**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: `Name`
> > Dictionary key name: `name`

> **path**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: `Path`
> > Dictionary key name: `path`

> **size**

> > Type: *cybox.common.properties.UnsignedLong*
> > XML Binding class name: `Size`
> > Dictionary key name: `size`

> **type_**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: `Type`
> > Dictionary key name: `type`

> **version**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: `Version`
> > Dictionary key name: `version`

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### cybox.objects.link_object module

class cybox.objects.link_object.**Link**(*value=None*, *type_=None*)
> Bases: *cybox.objects.uri_object.URI*

> XML binding class: `cybox.bindings.link_object.LinkObjectType`

> **url_label**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: `URL_Label`
> > Dictionary key name: `url_label`

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**`cybox.objects.linux_package_object`** module

**class** `cybox.objects.linux_package_object.`**`LinuxPackage`**
    Bases: [`cybox.common.object_properties.ObjectProperties`](#)

XML binding class: `cybox.bindings.linux_package_object.LinuxPackageObjectType`

**`architecture`**
    TypedField subclass for VocabString fields.

Type: [`cybox.common.vocabs.VocabString`](#)
XML Binding class name: `Architecture`
Dictionary key name: `architecture`

**`category`**

Type: [`cybox.common.properties.String`](#)
XML Binding class name: `Category`
Dictionary key name: `category`

**`description`**

Type: [`cybox.common.properties.String`](#)
XML Binding class name: `Description`
Dictionary key name: `description`

**`epoch`**

Type: [`cybox.common.properties.String`](#)
XML Binding class name: `Epoch`
Dictionary key name: `epoch`

**`evr`**

Type: [`cybox.common.properties.String`](#)
XML Binding class name: `EVR`
Dictionary key name: `evr`

**`name`**

Type: [`cybox.common.properties.String`](#)
XML Binding class name: `Name`
Dictionary key name: `name`

**`release`**

Type: [`cybox.common.properties.String`](#)

XML Binding class name: `Release`

Dictionary key name: `release`

### vendor

Type: *[cybox.common.properties.String](cybox.common.properties.String)*

XML Binding class name: `Vendor`

Dictionary key name: `vendor`

### version

Type: *[cybox.common.properties.String](cybox.common.properties.String)*

XML Binding class name: `Version`

Dictionary key name: `version`

class cybox.objects.linux_package_object.**LinuxPackageArchitecture**(*value=None*)

Bases: *[cybox.common.vocabs.VocabString](cybox.common.vocabs.VocabString)*

XML binding class: cybox.bindings.cybox_common.ControlledVocabularyStringType

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## cybox.objects.memory_object module

class cybox.objects.memory_object.**Memory**

Bases: *[cybox.common.object_properties.ObjectProperties](cybox.common.object_properties.ObjectProperties)*

XML binding class: cybox.bindings.memory_object.MemoryObjectType

### block_type

Type: *[cybox.common.properties.String](cybox.common.properties.String)*

XML Binding class name: `Block_Type`

Dictionary key name: `block_type`

### extracted_features

Type: *[cybox.common.extracted_features.ExtractedFeatures](cybox.common.extracted_features.ExtractedFeatures)*

XML Binding class name: `Extracted_Features`

Dictionary key name: `extracted_features`

### hashes

Type: *[cybox.common.hashes.HashList](cybox.common.hashes.HashList)*

XML Binding class name: `Hashes`

Dictionary key name: `hashes`

**is_injected**

> XML Binding class name: is_injected
> Dictionary key name: is_injected

**is_mapped**

> XML Binding class name: is_mapped
> Dictionary key name: is_mapped

**is_protected**

> XML Binding class name: is_protected
> Dictionary key name: is_protected

**is_volatile**

> XML Binding class name: is_volatile
> Dictionary key name: is_volatile

**memory_source**

> Type: *cybox.common.properties.String*
> XML Binding class name: Memory_Source
> Dictionary key name: memory_source

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**region_end_address**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Region_End_Address
> Dictionary key name: region_end_address

**region_size**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Region_Size
> Dictionary key name: region_size

**region_start_address**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Region_Start_Address
> Dictionary key name: region_start_address

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**`cybox.objects.mutex_object` module**

class cybox.objects.mutex_object.**Mutex**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.mutex_object.MutexObjectType

> **name**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Name
> > Dictionary key name: name

> **named**

> > XML Binding class name: named
> > Dictionary key name: named

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**`cybox.objects.network_connection_object` module**

class cybox.objects.network_connection_object.**Layer7Connections**

> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.network_connection_object.Layer7ConnectionsType

> **dns_query**

> > (List of values permitted)
> > Type: *cybox.objects.dns_query_object.DNSQuery*
> > XML Binding class name: DNS_Query
> > Dictionary key name: dns_query

> **http_session**

> > Type: *cybox.objects.http_session_object.HTTPSession*
> > XML Binding class name: HTTP_Session
> > Dictionary key name: http_session

class cybox.objects.network_connection_object.**NetworkConnection**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class:
> cybox.bindings.network_connection_object.NetworkConnectionObjectType

**creation_time**

>   Type: *cybox.common.properties.DateTime*
>   XML Binding class name: Creation_Time
>   Dictionary key name: creation_time

**destination_socket_address**

>   Type: *cybox.objects.socket_address_object.SocketAddress*
>   XML Binding class name: Destination_Socket_Address
>   Dictionary key name: destination_socket_address

**destination_tcp_state**

>   XML Binding class name: Destination_TCP_State
>   Dictionary key name: destination_tcp_state

**layer3_protocol**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Layer3_Protocol
>   Dictionary key name: layer3_protocol

**layer4_protocol**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Layer4_Protocol
>   Dictionary key name: layer4_protocol

**layer7_connections**

>   Type: *cybox.objects.network_connection_object.Layer7Connections*
>   XML Binding class name: Layer7_Connections
>   Dictionary key name: layer7_connections

**layer7_protocol**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Layer7_Protocol
>   Dictionary key name: layer7_protocol

**source_socket_address**

>   Type: *cybox.objects.socket_address_object.SocketAddress*
>   XML Binding class name: Source_Socket_Address
>   Dictionary key name: source_socket_address

**source_tcp_state**

>   XML Binding class name: Source_TCP_State
>   Dictionary key name: source_tcp_state

**tls_used**

> XML Binding class name: tls_used
> Dictionary key name: tls_used

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## cybox.objects.network_packet_object module

class cybox.objects.network_packet_object.**ARP**
> Bases: cybox.Entity


> XML binding class: cybox.bindings.network_packet_object.ARPType


**hardware_addr_size**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Hardware_Addr_Size
> Dictionary key name: hardware_addr_size

**hardware_addr_type**

> Type: *cybox.common.properties.String*
> XML Binding class name: Hardware_Addr_Type
> Dictionary key name: hardware_addr_type

**op_type**

> Type: *cybox.common.properties.String*
> XML Binding class name: Op_Type
> Dictionary key name: op_type

**proto_addr_size**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Proto_Addr_Size
> Dictionary key name: proto_addr_size

**proto_addr_type**

> Type: *cybox.common.properties.String*
> XML Binding class name: Proto_Addr_Type
> Dictionary key name: proto_addr_type

**recip_hardware_addr**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: Recip_Hardware_Addr
> Dictionary key name: recip_hardware_addr

**recip_protocol_addr**

>  Type: *cybox.objects.address_object.Address*
>  XML Binding class name: Recip_Protocol_Addr
>  Dictionary key name: recip_protocol_addr

**sender_hardware_addr**

>  Type: *cybox.objects.address_object.Address*
>  XML Binding class name: Sender_Hardware_Addr
>  Dictionary key name: sender_hardware_addr

**sender_protocol_addr**

>  Type: *cybox.objects.address_object.Address*
>  XML Binding class name: Sender_Protocol_Addr
>  Dictionary key name: sender_protocol_addr

class cybox.objects.network_packet_object.**AuthenticationHeader**
>  Bases: cybox.Entity

>  XML binding class:
>  cybox.bindings.network_packet_object.AuthenticationHeaderType

**Authentication_Data**

>  Type: *cybox.common.properties.HexBinary*
>  XML Binding class name: Authentication_Data
>  Dictionary key name: authentication_data

**header_ext_len**

>  Type: *cybox.common.properties.HexBinary*
>  XML Binding class name: Header_Ext_Len
>  Dictionary key name: header_ext_len

**next_header**

>  Type: *cybox.common.properties.String*
>  XML Binding class name: Next_Header
>  Dictionary key name: next_header

**security_parameters_index**

>  Type: *cybox.common.properties.HexBinary*
>  XML Binding class name: Security_Parameters_Index
>  Dictionary key name: security_parameters_index

**sequence_number**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Sequence_Number
Dictionary key name: sequence_number

**class** cybox.objects.network_packet_object.**DestinationOptions**
Bases: cybox.objects.network_packet_object._IPv6ExtHeader

XML binding class: cybox.bindings.network_packet_object.DestinationOptionsType

**class** cybox.objects.network_packet_object.**EncapsulatingSecurityPayload**
Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.EncapsulatingSecurityPayloadType

**authentication_data**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Authentication_Data
Dictionary key name: authentication_data

**next_header**

Type: *cybox.common.properties.String*
XML Binding class name: Next_Header
Dictionary key name: next_header

**padding**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Padding
Dictionary key name: padding

**padding_len**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Padding_Len
Dictionary key name: padding_len

**payload_data**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Payload_Data
Dictionary key name: payload_data

**security_parameters_index**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Security_Parameters_Index

Dictionary key name: security_parameters_index

**sequence_number**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Sequence_Number

Dictionary key name: sequence_number

class cybox.objects.network_packet_object.**EthernetHeader**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.EthernetHeaderType

**checksum**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Checksum

Dictionary key name: checksum

**destination_mac_addr**

Type: *cybox.objects.address_object.Address*

XML Binding class name: Destination_MAC_Addr

Dictionary key name: destination_mac_addr

**source_mac_addr**

Type: *cybox.objects.address_object.Address*

XML Binding class name: Source_MAC_Addr

Dictionary key name: source_mac_addr

**type_or_length**

Type: *cybox.objects.network_packet_object.TypeLength*

XML Binding class name: Type_Or_Length

Dictionary key name: type_or_length

class cybox.objects.network_packet_object.**EthernetInterface**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.EthernetInterfaceType

**ethernet_header**

Type: *cybox.objects.network_packet_object.EthernetHeader*

XML Binding class name: Ethernet_Header

Dictionary key name: ethernet_header

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**class** cybox.objects.network_packet_object.**Fragment**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.FragmentType

    **fragment**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Fragment
        Dictionary key name: fragment

    **fragment_header**

        Type: *cybox.objects.network_packet_object.FragmentHeader*
        XML Binding class name: Fragment_Header
        Dictionary key name: fragment_header

**class** cybox.objects.network_packet_object.**FragmentHeader**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.FragmentHeaderType

    **fragment_offset**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Fragment_Offset
        Dictionary key name: fragment_offset

    **identification**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Identification
        Dictionary key name: identification

    **m_flag**

        Type: *cybox.common.properties.String*
        XML Binding class name: M_Flag
        Dictionary key name: m_flag

    **next_header**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Next_Header
        Dictionary key name: next_header

**class** cybox.objects.network_packet_object.**FragmentationRequired**
    Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.FragmentationRequiredType

**fragmentation_required**

> XML Binding class name: Fragmentation_Required
> Dictionary key name: fragmentation_required

**next_hop_mtu**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Next_Hop_MTU
> Dictionary key name: next_hop_mtu

class cybox.objects.network_packet_object.**HopByHopOptions**
    Bases: cybox.objects.network_packet_object._IPv6ExtHeader

XML binding class: cybox.bindings.network_packet_object.HopByHopOptionsType

class cybox.objects.network_packet_object.**ICMPv4AddressMaskReply**
    Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.ICMPv4AddressMaskReplyType

**address_mask**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: Address_Mask
> Dictionary key name: address_mask

**address_mask_reply**

> XML Binding class name: Address_Mask_Reply
> Dictionary key name: address_mask_reply

class cybox.objects.network_packet_object.**ICMPv4AddressMaskRequest**
    Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.ICMPv4AddressMaskRequestType

**address_mask**

> Type: *cybox.objects.address_object.Address*

XML Binding class name: Address_Mask

Dictionary key name: address_mask

**address_mask_request**

XML Binding class name: Address_Mask_Request

Dictionary key name: address_mask_request

class cybox.objects.network_packet_object.**ICMPv4DestinationUnreachable**

Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.ICMPv4DestinationUnreachableType

**communication_administratively_prohibited**

XML Binding class name: Communication_Administratively_Prohibited

Dictionary key name: communication_administratively_prohibited

**destination_host_unknown**

XML Binding class name: Destination_Host_Unknown

Dictionary key name: destination_host_unknown

**destination_host_unreachable**

XML Binding class name: Destination_Host_Unreachable

Dictionary key name: destination_host_unreachable

**destination_network_unknown**

XML Binding class name: Destination_Network_Unknown

Dictionary key name: destination_network_unknown

**destination_network_unreachable**

XML Binding class name: Destination_Network_Unreachable

Dictionary key name: destination_network_unreachable

**destination_port_unreachable**

XML Binding class name: Destination_Port_Unreachable

Dictionary key name: destination_port_unreachable

**destination_protocol_unreachable**

XML Binding class name: Destination_Protocol_Unreachable

Dictionary key name: destination_protocol_unreachable

**fragmentation_required**

Type: *cybox.objects.network_packet_object.FragmentationRequired*
XML Binding class name: `Fragmentation_Required`
Dictionary key name: `fragmentation_required`

### host_administratively_prohibited

XML Binding class name: `Host_Administratively_Prohibited`
Dictionary key name: `host_administratively_prohibited`

### host_precedence_violation

XML Binding class name: `Host_Precedence_Violation`
Dictionary key name: `host_precedence_violation`

### host_unreachable_for_tos

XML Binding class name: `Host_Unreachable_For_TOS`
Dictionary key name: `host_unreachable_for_tos`

### network_administratively_prohibited

XML Binding class name: `Network_Administratively_Prohibited`
Dictionary key name: `network_administratively_prohibited`

### network_unreachable_for_tos

XML Binding class name: `Network_Unreachable_For_TOS`
Dictionary key name: `network_unreachable_for_tos`

### precedence_cutoff_in_effect

XML Binding class name: `Precedence_Cutoff_In_Effect`
Dictionary key name: `precedence_cutoff_in_effect`

### source_host_isolated

XML Binding class name: `Source_Host_Isolated`
Dictionary key name: `source_host_isolated`

### source_route_failed

XML Binding class name: `Source_Route_Failed`
Dictionary key name: `source_route_failed`

class cybox.objects.network_packet_object.**ICMPv4EchoReply**
    Bases: cybox.objects.network_packet_object._ICMPEchoReply

XML binding class: cybox.bindings.network_packet_object.ICMPv4EchoReplyType

class cybox.objects.network_packet_object.**ICMPv4EchoRequest**
    Bases: cybox.objects.network_packet_object._ICMPEchoRequest

XML binding class: cybox.bindings.network_packet_object.ICMPv4EchoRequestType

**class** cybox.objects.network_packet_object.**ICMPv4ErrorMessage**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.ICMPv4ErrorMessageType

**destination_unreachable**

Type: *cybox.objects.network_packet_object.ICMPv4DestinationUnreachable*
XML Binding class name: Destination_Unreachable
Dictionary key name: destination_unreachable

**error_msg_content**

Type: *cybox.objects.network_packet_object.ICMPv4ErrorMessageContent*
XML Binding class name: Error_Msg_Content
Dictionary key name: error_msg_content

**redirect_message**

Type: *cybox.objects.network_packet_object.ICMPv4RedirectMessage*
XML Binding class name: Redirect_Message
Dictionary key name: redirect_message

**source_quench**

Type: *cybox.objects.network_packet_object.ICMPv4SourceQuench*
XML Binding class name: Source_Quench
Dictionary key name: source_quench

**time_exceeded**

Type: *cybox.objects.network_packet_object.ICMPv4TimeExceeded*
XML Binding class name: Time_Exceeded
Dictionary key name: time_exceeded

**class** cybox.objects.network_packet_object.**ICMPv4ErrorMessageContent**
Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.ICMPv4ErrorMessageContentType

**first_eight_bytes**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: First_Eight_Bytes

Dictionary key name: `first_eight_bytes`

**ip_header**

Type: *`cybox.objects.network_packet_object.IPv4Header`*
XML Binding class name: `IP_Header`
Dictionary key name: `ip_header`

class cybox.objects.network_packet_object.**ICMPv4Header**
Bases: cybox.objects.network_packet_object._ICMPHeader

XML binding class: cybox.bindings.network_packet_object.ICMPv4HeaderType

class cybox.objects.network_packet_object.**ICMPv4InfoMessage**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.ICMPv4InfoMessageType

**address_mask_reply**

Type: *`cybox.objects.network_packet_object.ICMPv4AddressMaskReply`*
XML Binding class name: `Address_Mask_Reply`
Dictionary key name: `address_mask_reply`

**address_mask_request**

Type: *`cybox.objects.network_packet_object.ICMPv4AddressMaskRequest`*
XML Binding class name: `Address_Mask_Request`
Dictionary key name: `address_mask_request`

**echo_reply**

Type: *`cybox.objects.network_packet_object.ICMPv4EchoReply`*
XML Binding class name: `Echo_Reply`
Dictionary key name: `echo_reply`

**echo_request**

Type: *`cybox.objects.network_packet_object.ICMPv4EchoRequest`*
XML Binding class name: `Echo_Request`
Dictionary key name: `echo_request`

**info_msg_content**

Type: *`cybox.objects.network_packet_object.ICMPv4InfoMessageContent`*
XML Binding class name: `Info_Msg_Content`
Dictionary key name: `info_msg_content`

**timestamp_reply**

> Type: *cybox.objects.network_packet_object.ICMPv4TimestampReply*
> XML Binding class name: Timestamp_Reply
> Dictionary key name: timestamp_reply

**timestamp_request**

> Type: *cybox.objects.network_packet_object.ICMPv4TimestampRequest*
> XML Binding class name: Timestamp_Request
> Dictionary key name: timestamp_request

class cybox.objects.network_packet_object.**ICMPv4InfoMessageContent**
    Bases: cybox.objects.network_packet_object._ICMPInfoMessageContent

    XML binding class:
    cybox.bindings.network_packet_object.ICMPv4InfoMessageContentType

class cybox.objects.network_packet_object.**ICMPv4Packet**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.ICMPv4PacketType

    **error_msg**

    > Type: *cybox.objects.network_packet_object.ICMPv4ErrorMessage*
    > XML Binding class name: Error_Msg
    > Dictionary key name: error_msg

    **icmpv4_header**

    > Type: *cybox.objects.network_packet_object.ICMPv4Header*
    > XML Binding class name: ICMPv4_Header
    > Dictionary key name: icmpv4_header

    **info_msg**

    > Type: *cybox.objects.network_packet_object.ICMPv4InfoMessage*
    > XML Binding class name: Info_Msg
    > Dictionary key name: info_msg

    **traceroute**

    > Type: *cybox.objects.network_packet_object.ICMPv4Traceroute*
    > XML Binding class name: Traceroute
    > Dictionary key name: traceroute

**class** cybox.objects.network_packet_object.**ICMPv4RedirectMessage**

Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.ICMPv4RedirectMessageType

**host_redirect**

XML Binding class name: Host_Redirect

Dictionary key name: host_redirect

**ip_address**

Type: *cybox.objects.address_object.Address*

XML Binding class name: IP_Address

Dictionary key name: ip_address

**network_redirect**

XML Binding class name: Network_Redirect

Dictionary key name: network_redirect

**tos_host_redirect**

XML Binding class name: ToS_Host_Redirect

Dictionary key name: tos_host_redirect

**tos_network_redirect**

XML Binding class name: ToS_Network_Redirect

Dictionary key name: tos_network_redirect

**class** cybox.objects.network_packet_object.**ICMPv4SourceQuench**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.ICMPv4SourceQuenchType

**source_quench**

XML Binding class name: Source_Quench

Dictionary key name: source_quench

**class** cybox.objects.network_packet_object.**ICMPv4TimeExceeded**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.ICMPv4TimeExceededType

**frag_reassembly_time_exceeded**

> XML Binding class name: Frag_Reassembly_Time_Exceeded
> Dictionary key name: frag_reassembly_time_exceeded

**ttl_exceeded_in_transit**

> XML Binding class name: TTL_Exceeded_In_Transit
> Dictionary key name: ttl_exceeded_in_transit

class cybox.objects.network_packet_object.**ICMPv4TimestampReply**
    Bases: cybox.Entity

> XML binding class:
> cybox.bindings.network_packet_object.ICMPv4TimestampReplyType

**originate_timestamp**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: Originate_Timestamp
> Dictionary key name: originate_timestamp

**receive_timestamp**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: Receive_Timestamp
> Dictionary key name: receive_timestamp

**timestamp_reply**

> XML Binding class name: Timestamp_Reply
> Dictionary key name: timestamp_reply

**transmit_timestamp**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: Transmit_Timestamp
> Dictionary key name: transmit_timestamp

class cybox.objects.network_packet_object.**ICMPv4TimestampRequest**
    Bases: cybox.Entity

> XML binding class:
> cybox.bindings.network_packet_object.ICMPv4TimestampRequestType

**originate_timestamp**

> Type: *cybox.common.properties.UnsignedInteger*

---

XML Binding class name: `Originate_Timestamp`

Dictionary key name: `originate_timestamp`

**timestamp**

XML Binding class name: `Timestamp`

Dictionary key name: `timestamp`

class cybox.objects.network_packet_object.**ICMPv4Traceroute**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.ICMPv4TracerouteType`

**identifier**

Type: [*cybox.common.properties.HexBinary*](#)

XML Binding class name: `Identifier`

Dictionary key name: `identifier`

**outbound_hop_count**

Type: [*cybox.common.properties.HexBinary*](#)

XML Binding class name: `Outbound_Hop_Count`

Dictionary key name: `outbound_hop_count`

**outbound_packet_forward_success**

XML Binding class name: `Outbound_Packet_Forward_Success`

Dictionary key name: `outbound_packet_forward_success`

**outbound_packet_no_route**

XML Binding class name: `Outbound_Packet_no_Route`

Dictionary key name: `outbound_packet_no_route`

**output_link_mtu**

Type: [*cybox.common.properties.HexBinary*](#)

XML Binding class name: `Output_Link_MTU`

Dictionary key name: `output_link_mtu`

**output_link_speed**

Type: [*cybox.common.properties.HexBinary*](#)

XML Binding class name: `Output_Link_Speed`

Dictionary key name: `output_link_speed`

**return_hop_count**

Type: [*cybox.common.properties.HexBinary*](#)

XML Binding class name: Return_Hop_Count

Dictionary key name: return_hop_count

class cybox.objects.network_packet_object.**ICMPv6DestinationUnreachable**

> Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.ICMPv6DestinationUnreachableType

**address_unreachable**

> XML Binding class name: Address_Unreachable
>
> Dictionary key name: address_unreachable

**beyond_scope**

> XML Binding class name: Beyond_Scope
>
> Dictionary key name: beyond_scope

**comm_prohibited**

> XML Binding class name: Comm_Prohibited
>
> Dictionary key name: comm_prohibited

**no_route**

> XML Binding class name: No_Route
>
> Dictionary key name: no_route

**port_unreachable**

> XML Binding class name: Port_Unreachable
>
> Dictionary key name: port_unreachable

**reject_route**

> XML Binding class name: Reject_Route
>
> Dictionary key name: reject_route

**src_addr_failed_policy**

> XML Binding class name: Src_Addr_Failed_Policy
>
> Dictionary key name: src_addr_failed_policy

class cybox.objects.network_packet_object.**ICMPv6EchoReply**

> Bases: cybox.objects.network_packet_object._ICMPEchoReply

XML binding class: cybox.bindings.network_packet_object.ICMPv6EchoReplyType

---

**class** cybox.objects.network_packet_object.**ICMPv6EchoRequest**
    Bases: cybox.objects.network_packet_object._ICMPEchoRequest

    XML binding class: cybox.bindings.network_packet_object.ICMPv6EchoRequestType

**class** cybox.objects.network_packet_object.**ICMPv6ErrorMessage**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.ICMPv6ErrorMessageType

    **destination_unreachable**

        Type: *cybox.objects.network_packet_object.ICMPv6DestinationUnreachable*
        XML Binding class name: Destination_Unreachable
        Dictionary key name: destination_unreachable

    **invoking_packet**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Invoking_Packet
        Dictionary key name: invoking_packet

    **packet_too_big**

        Type: *cybox.objects.network_packet_object.ICMPv6PacketTooBig*
        XML Binding class name: Packet_Too_Big
        Dictionary key name: packet_too_big

    **parameter_problem**

        Type: *cybox.objects.network_packet_object.ICMPv6ParameterProblem*
        XML Binding class name: Parameter_Problem
        Dictionary key name: parameter_problem

    **time_exceeded**

        Type: *cybox.objects.network_packet_object.ICMPv6TimeExceeded*
        XML Binding class name: Time_Exceeded
        Dictionary key name: time_exceeded

**class** cybox.objects.network_packet_object.**ICMPv6Header**
    Bases: cybox.objects.network_packet_object._ICMPHeader

    XML binding class: cybox.bindings.network_packet_object.ICMPv6HeaderType

**class** cybox.objects.network_packet_object.**ICMPv6InfoMessage**
    Bases: cybox.Entity


XML binding class: cybox.bindings.network_packet_object.ICMPv6InfoMessageType


**echo_reply**


Type: *cybox.objects.network_packet_object.ICMPv6EchoReply*
XML Binding class name: Echo_Reply
Dictionary key name: echo_reply

**echo_request**


Type: *cybox.objects.network_packet_object.ICMPv6EchoRequest*
XML Binding class name: Echo_Request
Dictionary key name: echo_request

**info_msg_content**


Type: *cybox.objects.network_packet_object.ICMPv6InfoMessageContent*
XML Binding class name: Info_Msg_Content
Dictionary key name: info_msg_content

**class** cybox.objects.network_packet_object.**ICMPv6InfoMessageContent**
    Bases: cybox.objects.network_packet_object._ICMPInfoMessageContent


XML binding class:
cybox.bindings.network_packet_object.ICMPv6InfoMessageContentType


**class** cybox.objects.network_packet_object.**ICMPv6Packet**
    Bases: cybox.Entity


XML binding class: cybox.bindings.network_packet_object.ICMPv6PacketType


**error_msg**


Type: *cybox.objects.network_packet_object.ICMPv6ErrorMessage*
XML Binding class name: Error_Msg
Dictionary key name: error_msg

**icmpv6_header**


Type: *cybox.objects.network_packet_object.ICMPv6Header*
XML Binding class name: ICMPv6_Header
Dictionary key name: icmpv6_header

**info_msg**

>
> Type: *cybox.objects.network_packet_object.ICMPv6InfoMessage*
> XML Binding class name: `Info_Msg`
> Dictionary key name: `info_msg`

class cybox.objects.network_packet_object.**ICMPv6PacketTooBig**
  Bases: `cybox.Entity`


  XML binding class: `cybox.bindings.network_packet_object.ICMPv6PacketTooBigType`


  **mtu**

  >
  > Type: *cybox.common.properties.HexBinary*
  > XML Binding class name: `MTU`
  > Dictionary key name: `mtu`

  **packet_too_big**

  >
  > XML Binding class name: `Packet_Too_Big`
  > Dictionary key name: `packet_too_big`

class cybox.objects.network_packet_object.**ICMPv6ParameterProblem**
  Bases: `cybox.Entity`


  XML binding class:
  `cybox.bindings.network_packet_object.ICMPv6ParameterProblemType`


  **erroneous_header_field**

  >
  > XML Binding class name: `Erroneous_Header_Field`
  > Dictionary key name: `erroneous_header_field`

  **pointer**

  >
  > Type: *cybox.common.properties.HexBinary*
  > XML Binding class name: `Pointer`
  > Dictionary key name: `pointer`

  **unrecognized_ipv6_option**

  >
  > XML Binding class name: `Unrecognized_IPv6_Option`
  > Dictionary key name: `unrecognized_ipv6_option`

  **unrecognized_next_header_type**

  >
  > XML Binding class name: `Unrecognized_Next_Header_Type`
  > Dictionary key name: `unrecognized_next_header_type`

**class** cybox.objects.network_packet_object.**ICMPv6TimeExceeded**
    Bases: cybox.Entity


    XML binding class: cybox.bindings.network_packet_object.ICMPv6TimeExceededType


    **fragment_reassem_time_exceeded**

        XML Binding class name: Fragment_Reassem_Time_Exceeded
        Dictionary key name: fragment_reassem_time_exceeded

    **hop_limit_exceeded**

        XML Binding class name: Hop_Limit_Exceeded
        Dictionary key name: hop_limit_exceeded

**class** cybox.objects.network_packet_object.**IPv4Flags**
    Bases: cybox.Entity


    XML binding class: cybox.bindings.network_packet_object.IPv4FlagsType


    **do_not_fragment**

        Type: *cybox.common.properties.String*
        XML Binding class name: Do_Not_Fragment
        Dictionary key name: do_not_fragment

    **more_fragments**

        Type: *cybox.common.properties.String*
        XML Binding class name: More_Fragments
        Dictionary key name: more_fragments

    **reserved**

        Type: *cybox.common.properties.Integer*
        XML Binding class name: Reserved
        Dictionary key name: reserved

**class** cybox.objects.network_packet_object.**IPv4Header**
    Bases: cybox.Entity


    XML binding class: cybox.bindings.network_packet_object.IPv4HeaderType


    **checksum**

        Type: *cybox.common.properties.HexBinary*

XML Binding class name: Checksum

Dictionary key name: checksum

**dest_ipv4_addr**

Type: *cybox.objects.address_object.Address*

XML Binding class name: Dest_IPv4_Addr

Dictionary key name: dest_ipv4_addr

**dscp**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: DSCP

Dictionary key name: dscp

**ecn**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: ECN

Dictionary key name: ecn

**flags**

Type: *cybox.objects.network_packet_object.IPv4Flags*

XML Binding class name: Flags

Dictionary key name: flags

**fragment_offset**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Fragment_Offset

Dictionary key name: fragment_offset

**header_length**

Type: *cybox.common.properties.Integer*

XML Binding class name: Header_Length

Dictionary key name: header_length

**identification**

Type: *cybox.common.properties.PositiveInteger*

XML Binding class name: Identification

Dictionary key name: identification

**ip_version**

Type: *cybox.common.properties.String*

XML Binding class name: IP_Version

Dictionary key name: ip_version

**option**

>(List of values permitted)
>
>Type: *cybox.objects.network_packet_object.IPv4Option*
>
>XML Binding class name: Option
>
>Dictionary key name: option

**protocol**

>Type: *cybox.common.properties.String*
>
>XML Binding class name: Protocol
>
>Dictionary key name: protocol

**src_ipv4_addr**

>Type: *cybox.objects.address_object.Address*
>
>XML Binding class name: Src_IPv4_Addr
>
>Dictionary key name: src_ipv4_addr

**total_length**

>Type: *cybox.common.properties.HexBinary*
>
>XML Binding class name: Total_Length
>
>Dictionary key name: total_length

**ttl**

>Type: *cybox.common.properties.HexBinary*
>
>XML Binding class name: TTL
>
>Dictionary key name: ttl

class cybox.objects.network_packet_object.**IPv4Option**

>Bases: cybox.Entity

>XML binding class: cybox.bindings.network_packet_object.IPv4OptionType

**class_**

>Type: *cybox.common.properties.String*
>
>XML Binding class name: Class
>
>Dictionary key name: class

**copy_flag**

>Type: *cybox.common.properties.String*
>
>XML Binding class name: Copy_Flag
>
>Dictionary key name: copy_flag

**option**

Type: *cybox.common.properties.String*
XML Binding class name: `Option`
Dictionary key name: `option`

**class** cybox.objects.network_packet_object.**IPv4Packet**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.IPv4PacketType

    **data**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: `Data`
        Dictionary key name: `data`

    **ipv4_header**

        Type: *cybox.objects.network_packet_object.IPv4Header*
        XML Binding class name: `IPv4_Header`
        Dictionary key name: `ipv4_header`

**class** cybox.objects.network_packet_object.**IPv6ExtHeader**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.IPv6ExtHeaderType

    **authentication_header**

        Type: *cybox.objects.network_packet_object.AuthenticationHeader*
        XML Binding class name: `Authentication_Header`
        Dictionary key name: `authentication_header`

    **destination_options**

        (List of values permitted)
        Type: *cybox.objects.network_packet_object.DestinationOptions*
        XML Binding class name: `Destination_Options`
        Dictionary key name: `destination_options`

    **encapsulating_security_payload**

        Type: *cybox.objects.network_packet_object.EncapsulatingSecurityPayload*
        XML Binding class name: `Encapsulating_Security_Payload`
        Dictionary key name: `encapsulating_security_payload`

    **fragment**

        Type: *cybox.objects.network_packet_object.Fragment*

XML Binding class name: Fragment

Dictionary key name: fragment

### **hop_by_hop_options**

Type: *cybox.objects.network_packet_object.HopByHopOptions*

XML Binding class name: Hop_by_Hop_Options

Dictionary key name: hop_by_hop_options

### **routing**

Type: *cybox.objects.network_packet_object.Routing*

XML Binding class name: Routing

Dictionary key name: routing

class cybox.objects.network_packet_object.**IPv6Header**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.IPv6HeaderType

### **dest_ipv6_addr**

Type: *cybox.objects.address_object.Address*

XML Binding class name: Dest_IPv6_Addr

Dictionary key name: dest_ipv6_addr

### **flow_label**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Flow_Label

Dictionary key name: flow_label

### **ip_version**

Type: *cybox.common.properties.String*

XML Binding class name: IP_Version

Dictionary key name: ip_version

### **next_header**

Type: *cybox.common.properties.String*

XML Binding class name: Next_Header

Dictionary key name: next_header

### **payload_length**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Payload_Length

Dictionary key name: payload_length

**src_ipv6_addr**

>    Type: *cybox.objects.address_object.Address*
>    XML Binding class name: Src_IPv6_Addr
>    Dictionary key name: src_ipv6_addr

**traffic_class**

>    Type: *cybox.common.properties.HexBinary*
>    XML Binding class name: Traffic_Class
>    Dictionary key name: traffic_class

**ttl**

>    Type: *cybox.common.properties.PositiveInteger*
>    XML Binding class name: TTL
>    Dictionary key name: ttl

class cybox.objects.network_packet_object.**IPv6Option**
>    Bases: cybox.Entity

>    XML binding class: cybox.bindings.network_packet_object.IPv6OptionType

**do_not_recogn_action**

>    Type: *cybox.common.properties.String*
>    XML Binding class name: Do_Not_Recogn_Action
>    Dictionary key name: do_not_recogn_action

**option_byte**

>    Type: *cybox.common.properties.HexBinary*
>    XML Binding class name: Option_Byte
>    Dictionary key name: option_byte

**packet_change**

>    Type: *cybox.common.properties.String*
>    XML Binding class name: Packet_Change
>    Dictionary key name: packet_change

class cybox.objects.network_packet_object.**IPv6Packet**
>    Bases: cybox.Entity

>    XML binding class: cybox.bindings.network_packet_object.IPv6PacketType

**data**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Data
Dictionary key name: data

### ext_headers

(List of values permitted)
Type: *cybox.objects.network_packet_object.IPv6ExtHeader*
XML Binding class name: Ext_Headers
Dictionary key name: ext_headers

### ipv6_header

Type: *cybox.objects.network_packet_object.IPv6Header*
XML Binding class name: IPv6_Header
Dictionary key name: ipv6_header

**class** cybox.objects.network_packet_object.**InternetLayer**
    Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.InternetLayerType

### icmpv4

Type: *cybox.objects.network_packet_object.ICMPv4Packet*
XML Binding class name: ICMPv4
Dictionary key name: icmpv4

### icmpv6

Type: *cybox.objects.network_packet_object.ICMPv6Packet*
XML Binding class name: ICMPv6
Dictionary key name: icmpv6

### ipv4

Type: *cybox.objects.network_packet_object.IPv4Packet*
XML Binding class name: IPv4
Dictionary key name: ipv4

### ipv6

Type: *cybox.objects.network_packet_object.IPv6Packet*
XML Binding class name: IPv6
Dictionary key name: ipv6

**class** cybox.objects.network_packet_object.**LinkLayer**
    Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.LinkLayerType

**logical_protocls**

> Type: *cybox.objects.network_packet_object.LogicalProtocol*
> XML Binding class name: Logical_Protocols
> Dictionary key name: logical_protocols

**physical_interface**

> Type: *cybox.objects.network_packet_object.PhysicalInterface*
> XML Binding class name: Physical_Interface
> Dictionary key name: physical_interface

class cybox.objects.network_packet_object.**LogicalProtocol**
> Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.LogicalProtocolType

**arp_rarp**

> Type: *cybox.objects.network_packet_object.ARP*
> XML Binding class name: ARP_RARP
> Dictionary key name: arp_rarp

**ndp**

> Type: *cybox.objects.network_packet_object.NDP*
> XML Binding class name: NDP
> Dictionary key name: ndp

class cybox.objects.network_packet_object.**NDP**
> Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.NDPType

**icmpv6_header**

> Type: *cybox.objects.network_packet_object.ICMPv6Header*
> XML Binding class name: ICMPv6_Header
> Dictionary key name: icmpv6_header

**neighbor_advertisement**

> Type: *cybox.objects.network_packet_object.NeighborAdvertisement*
> XML Binding class name: Neighbor_Advertisement
> Dictionary key name: neighbor_advertisement

**neighbor_solicitation**

Type: *cybox.objects.network_packet_object.NeighborSolicitation*
XML Binding class name: Neighbor_Solicitation
Dictionary key name: neighbor_solicitation

**redirect**

Type: *cybox.objects.network_packet_object.Redirect*
XML Binding class name: Redirect
Dictionary key name: redirect

**router_advertisement**

Type: *cybox.objects.network_packet_object.RouterAdvertisement*
XML Binding class name: Router_Advertisement
Dictionary key name: router_advertisement

**router_solicitation**

Type: *cybox.objects.network_packet_object.RouterSolicitation*
XML Binding class name: Router_Solicitation
Dictionary key name: router_solicitation

**class** cybox.objects.network_packet_object.**NDPLinkAddr**
Bases: cybox.Entity

Abstract Type

XML binding class: cybox.bindings.network_packet_object.NDPLinkAddrType

**length**

Type: *cybox.common.properties.Integer*
XML Binding class name: Length
Dictionary key name: length

**link_layer_mac_addr**

Type: *cybox.objects.address_object.Address*
XML Binding class name: Link_Layer_MAC_Addr
Dictionary key name: link_layer_mac_addr

**class** cybox.objects.network_packet_object.**NDPMTU**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.NDPMTUType

**length**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Length
> Dictionary key name: length

**mtu**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: MTU
> Dictionary key name: mtu

class cybox.objects.network_packet_object.**NDPPrefixInfo**
    Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.NDPPrefixInfoType

**addr_config_flag**

> XML Binding class name: addr_config_flag
> Dictionary key name: addr_config_flag

**length**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Length
> Dictionary key name: length

**link_flag**

> XML Binding class name: link_flag
> Dictionary key name: link_flag

**preferred_lifetime**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Preferred_Lifetime
> Dictionary key name: preferred_lifetime

**prefix**

> Type: *cybox.objects.network_packet_object.Prefix*
> XML Binding class name: Prefix
> Dictionary key name: prefix

**prefix_length**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Prefix_Length

Dictionary key name: prefix_length

**valid_lifetime**

Type: *cybox.common.properties.Integer*
XML Binding class name: Valid_Lifetime
Dictionary key name: valid_lifetime

class cybox.objects.network_packet_object.**NDPRedirectedHeader**
    Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.NDPRedirectedHeaderType

**ipheader_and_data**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: IPHeader_And_Data
Dictionary key name: ipheader_and_data

**length**

Type: *cybox.common.properties.Integer*
XML Binding class name: Length
Dictionary key name: length

class cybox.objects.network_packet_object.**NeighborAdvertisement**
    Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.NeighborAdvertisementType

**options**

Type: *cybox.objects.network_packet_object.NeighborOptions*
XML Binding class name: Options
Dictionary key name: options

**override_flag**

XML Binding class name: override_flag
Dictionary key name: override_flag

**router_flag**

XML Binding class name: router_flag
Dictionary key name: router_flag

**solicited_flag**

XML Binding class name: solicited_flag

Dictionary key name: solicited_flag

**target_ipv6_addr**

Type: *cybox.objects.address_object.Address*

XML Binding class name: Target_IPv6_Addr

Dictionary key name: target_ipv6_addr

class cybox.objects.network_packet_object.**NeighborOptions**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.NeighborOptionsType

**target_link_addr**

Type: *cybox.objects.network_packet_object.NDPLinkAddr*

XML Binding class name: Target_Link_Addr

Dictionary key name: target_link_addr

class cybox.objects.network_packet_object.**NeighborSolicitation**

Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.NeighborSolicitationType

**options**

Type: *cybox.objects.network_packet_object.NeighborSolicitationOptions*

XML Binding class name: Options

Dictionary key name: options

**target_ipv6_addr**

Type: *cybox.objects.address_object.Address*

XML Binding class name: Target_IPv6_Addr

Dictionary key name: target_ipv6_addr

class cybox.objects.network_packet_object.**NeighborSolicitationOptions**

Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.NeighborSolicitationOptionsType

**src_link_addr**

Type: *cybox.objects.network_packet_object.NDPLinkAddr*

XML Binding class name: Src_Link_Addr

Dictionary key name: src_link_addr

class cybox.objects.network_packet_object.**NetworkPacket**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.network_packet_object.NetworkPacketObjectType

**internet_layer**

Type: *cybox.objects.network_packet_object.InternetLayer*

XML Binding class name: Internet_Layer

Dictionary key name: internet_layer

**link_layer**

Type: *cybox.objects.network_packet_object.LinkLayer*

XML Binding class name: Link_Layer

Dictionary key name: link_layer

**transport_layer**

Type: *cybox.objects.network_packet_object.TransportLayer*

XML Binding class name: Transport_Layer

Dictionary key name: transport_layer

class cybox.objects.network_packet_object.**OptionData**

Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.OptionDataType

**option_data_len**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Option_Data_Len

Dictionary key name: option_data_len

**option_type**

Type: *cybox.objects.network_packet_object.IPv6Option*

XML Binding class name: Option_Type

Dictionary key name: option_type

**pad1**

Type: *cybox.objects.network_packet_object.Pad1*

XML Binding class name: Pad1

Dictionary key name: pad1

**padn**

> Type: *cybox.objects.network_packet_object.PadN*
> XML Binding class name: PadN
> Dictionary key name: padn

**class** cybox.objects.network_packet_object.**Pad1**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.network_packet_object.Pad1Type

**octet**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Octet
> Dictionary key name: octet

**class** cybox.objects.network_packet_object.**PadN**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.network_packet_object.PadNType

**octet**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Octet
> Dictionary key name: octet

**option_data**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Option_Data
> Dictionary key name: option_data

**option_data_length**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Option_Data_Length
> Dictionary key name: option_data_length

**class** cybox.objects.network_packet_object.**PhysicalInterface**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.network_packet_object.PhysicalInterfaceType

**ethernet**

> Type: *cybox.objects.network_packet_object.EthernetInterface*
> XML Binding class name: `Ethernet`
> Dictionary key name: `ethernet`

**class** `cybox.objects.network_packet_object.`**`Prefix`**
> Bases: `cybox.Entity`

> XML binding class: `cybox.bindings.network_packet_object.PrefixType`

> **ip_addr_prefix**

> > Type: *cybox.objects.address_object.Address*
> > XML Binding class name: `IP_Addr_Prefix`
> > Dictionary key name: `ip_addr_prefix`

> **ipv6_addr**

> > Type: *cybox.objects.address_object.Address*
> > XML Binding class name: `IPv6_Addr`
> > Dictionary key name: `ipv6_addr`

**class** `cybox.objects.network_packet_object.`**`Redirect`**
> Bases: `cybox.Entity`

> XML binding class: `cybox.bindings.network_packet_object.RedirectType`

> **dest_ipv6_addr**

> > Type: *cybox.objects.address_object.Address*
> > XML Binding class name: `Dest_IPv6_Addr`
> > Dictionary key name: `dest_ipv6_addr`

> **options**

> > Type: *cybox.objects.network_packet_object.RedirectOptions*
> > XML Binding class name: `Options`
> > Dictionary key name: `options`

> **target_ipv6_addr**

> > Type: *cybox.objects.address_object.Address*
> > XML Binding class name: `Target_IPv6_Addr`
> > Dictionary key name: `target_ipv6_addr`

**class** `cybox.objects.network_packet_object.`**`RedirectOptions`**
> Bases: `cybox.Entity`

XML binding class: cybox.bindings.network_packet_object.NeighborOptionsType

### redirected_header

Type: *[cybox.objects.network_packet_object.NDPRedirectedHeader](#)*
XML Binding class name: Redirected_Header
Dictionary key name: redirected_header

### target_link_addr

Type: *[cybox.objects.network_packet_object.NDPLinkAddr](#)*
XML Binding class name: Target_Link_Addr
Dictionary key name: target_link_addr

**class** cybox.objects.network_packet_object.**RouterAdvertisement**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.RouterAdvertisementType

### cur_hop_limit

Type: *[cybox.common.properties.Integer](#)*
XML Binding class name: Cur_Hop_Limit
Dictionary key name: cur_hop_limit

### managed_address_config_flag

XML Binding class name: managed_address_config_flag
Dictionary key name: managed_address_config_flag

### options

Type: *[cybox.objects.network_packet_object.RouterAdvertisementOptions](#)*
XML Binding class name: Options
Dictionary key name: options

### other_config_flag

XML Binding class name: other_config_flag
Dictionary key name: other_config_flag

### reachable_time

Type: *[cybox.common.properties.Integer](#)*
XML Binding class name: Reachable_Time
Dictionary key name: reachable_time

### retrans_timer

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Retrans_Timer
> Dictionary key name: retrans_timer

**router_lifetime**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Router_Lifetime
> Dictionary key name: router_lifetime

class cybox.objects.network_packet_object.**RouterAdvertisementOptions**
    Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.RouterAdvertisementOptionsType

**mtu**

> Type: *cybox.objects.network_packet_object.NDPMTU*
> XML Binding class name: MTU
> Dictionary key name: mtu

**prefix_info**

> Type: *cybox.objects.network_packet_object.NDPPrefixInfo*
> XML Binding class name: Prefix_Info
> Dictionary key name: prefix_info

**src_link_addr**

> Type: *cybox.objects.network_packet_object.NDPLinkAddr*
> XML Binding class name: Src_Link_Addr
> Dictionary key name: src_link_addr

class cybox.objects.network_packet_object.**RouterSolicitation**
    Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.RouterSolicitationType

**options**

> (List of values permitted)
> Type: *cybox.objects.network_packet_object.RouterSolicitationOptions*
> XML Binding class name: Options
> Dictionary key name: options

class cybox.objects.network_packet_object.**RouterSolicitationOptions**
    Bases: cybox.Entity

XML binding class:
cybox.bindings.network_packet_object.RouterSolicitationOptionsType

### src_link_addr

> Type: *cybox.objects.network_packet_object.NDPLinkAddr*
> XML Binding class name: Src_Link_Addr
> Dictionary key name: src_link_addr

class cybox.objects.network_packet_object.**Routing**
    Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.RoutingType

### header_ext_len

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Header_Ext_Len
> Dictionary key name: header_ext_len

### next_header

> Type: *cybox.common.properties.String*
> XML Binding class name: Next_Header
> Dictionary key name: next_header

### routing_type

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Routing_Type
> Dictionary key name: routing_type

### segments_left

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Segments_Left
> Dictionary key name: segments_left

### type_specific_data

> Type: *cybox.common.properties.String*
> XML Binding class name: Type_Specific_Data
> Dictionary key name: type_specific_data

class cybox.objects.network_packet_object.**TCP**
    Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.TCPType

---

**data**

> Type: *cybox.common.data_segment.DataSegment*
> XML Binding class name: Data
> Dictionary key name: data

**options**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Options
> Dictionary key name: options

**tcp_header**

> Type: *cybox.objects.network_packet_object.TCPHeader*
> XML Binding class name: TCP_Header
> Dictionary key name: tcp_header

class cybox.objects.network_packet_object.**TCPFlags**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.TCPFlagsType

**ack**

> XML Binding class name: ack
> Dictionary key name: ack

**cwr**

> XML Binding class name: cwr
> Dictionary key name: cwr

**ece**

> XML Binding class name: ece
> Dictionary key name: ece

**fin**

> XML Binding class name: fin
> Dictionary key name: fin

**ns**

> XML Binding class name: ns
> Dictionary key name: ns

**psh**

XML Binding class name: psh
Dictionary key name: psh

**rst**

XML Binding class name: rst
Dictionary key name: rst

**syn**

XML Binding class name: syn
Dictionary key name: syn

**urg**

XML Binding class name: urg
Dictionary key name: urg

class cybox.objects.network_packet_object.**TCPHeader**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_packet_object.TCPHeaderType

**ack_num**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: ACK_Num
Dictionary key name: ack_num

**checksum**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Checksum
Dictionary key name: checksum

**data_offset**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Data_Offset
Dictionary key name: data_offset

**dest_port**

Type: *cybox.objects.port_object.Port*
XML Binding class name: Dest_Port
Dictionary key name: dest_port

**reserved**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: `Reserved`

Dictionary key name: `reserved`

**seq_num**

Type: *`cybox.common.properties.HexBinary`*

XML Binding class name: `Seq_Num`

Dictionary key name: `seq_num`

**src_port**

Type: *`cybox.objects.port_object.Port`*

XML Binding class name: `Src_Port`

Dictionary key name: `src_port`

**tcp_flags**

Type: *`cybox.objects.network_packet_object.TCPFlags`*

XML Binding class name: `TCP_Flags`

Dictionary key name: `tcp_flags`

**urg_ptr**

Type: *`cybox.common.properties.HexBinary`*

XML Binding class name: `Urg_Ptr`

Dictionary key name: `urg_ptr`

**window**

Type: *`cybox.common.properties.HexBinary`*

XML Binding class name: `Window`

Dictionary key name: `window`

**class** `cybox.objects.network_packet_object.`**`TransportLayer`**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.network_packet_object.TransportLayerType`

**tcp**

Type: *`cybox.objects.network_packet_object.TCP`*

XML Binding class name: `TCP`

Dictionary key name: `tcp`

**udp**

Type: *`cybox.objects.network_packet_object.UDP`*

XML Binding class name: `UDP`

Dictionary key name: `udp`

**class** cybox.objects.network_packet_object.**TypeLength**

    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.TypeLengthType

    **internet_layer_type**

        Type: *cybox.common.properties.String*
        XML Binding class name: Internet_Layer_Type
        Dictionary key name: internet_layer_type

    **length**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Length
        Dictionary key name: length

**class** cybox.objects.network_packet_object.**UDP**

    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.UDPType

    **data**

        Type: *cybox.common.data_segment.DataSegment*
        XML Binding class name: Data
        Dictionary key name: data

    **udp_header**

        Type: *cybox.objects.network_packet_object.UDPHeader*
        XML Binding class name: UDP_Header
        Dictionary key name: udp_header

**class** cybox.objects.network_packet_object.**UDPHeader**

    Bases: cybox.Entity

    XML binding class: cybox.bindings.network_packet_object.UDPHeaderType

    **checksum**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Checksum
        Dictionary key name: checksum

**destport**

> Type: *cybox.objects.port_object.Port*
> XML Binding class name: DestPort
> Dictionary key name: destport

**length**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Length
> Dictionary key name: length

**srcport**

> Type: *cybox.objects.port_object.Port*
> XML Binding class name: SrcPort
> Dictionary key name: srcport

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## cybox.objects.network_route_entry_object module

**class** cybox.objects.network_route_entry_object.**NetworkRouteEntry**
> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class:
> cybox.bindings.network_route_entry_object.NetworkRouteEntryObjectType

> **destination_address**

> > Type: *cybox.objects.address_object.Address*
> > XML Binding class name: Destination_Address
> > Dictionary key name: destination_address

> **gateway_address**

> > Type: *cybox.objects.address_object.Address*
> > XML Binding class name: Gateway_Address
> > Dictionary key name: gateway_address

> **interface**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Interface
> > Dictionary key name: interface

> **is_autoconfigure_address**

> > XML Binding class name: is_autoconfigure_address

Dictionary key name: `is_autoconfigure_address`

**is_immortal**

XML Binding class name: `is_immortal`

Dictionary key name: `is_immortal`

**is_ipv6**

XML Binding class name: `is_ipv6`

Dictionary key name: `is_ipv6`

**is_loopback**

XML Binding class name: `is_loopback`

Dictionary key name: `is_loopback`

**is_publish**

XML Binding class name: `is_publish`

Dictionary key name: `is_publish`

**metric**

Type: *[cybox.common.properties.UnsignedLong](#)*

XML Binding class name: `Metric`

Dictionary key name: `metric`

**netmask**

Type: *[cybox.objects.address_object.Address](#)*

XML Binding class name: `Netmask`

Dictionary key name: `netmask`

**origin**

Type: *[cybox.objects.address_object.Address](#)*

XML Binding class name: `Origin`

Dictionary key name: `origin`

**preferred_lifetime**

Type: *[cybox.common.properties.Duration](#)*

XML Binding class name: `Preferred_Lifetime`

Dictionary key name: `preferred_lifetime`

**protocol**

Type: *[cybox.common.properties.String](#)*

XML Binding class name: `Protocol`

Dictionary key name: `protocol`

**route_age**

>     Type: *cybox.common.properties.Duration*
>     XML Binding class name: Route_Age
>     Dictionary key name: route_age

**type_**

>     Type: *cybox.common.properties.String*
>     XML Binding class name: Type
>     Dictionary key name: type

**valid_lifetime**

>     Type: *cybox.common.properties.Duration*
>     XML Binding class name: Valid_Lifetime
>     Dictionary key name: valid_lifetime

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## cybox.objects.network_route_object module

class cybox.objects.network_route_object.**NetRoute**
     Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.network_route_object.NetRouteObjectType

**description**

>     Type: *cybox.common.structured_text.StructuredText*
>     XML Binding class name: Description
>     Dictionary key name: description

**is_autoconfigure_address**

>     XML Binding class name: is_autoconfigure_address
>     Dictionary key name: is_autoconfigure_address

**is_immortal**

>     XML Binding class name: is_immortal
>     Dictionary key name: is_immortal

**is_ipv6**

>     XML Binding class name: is_ipv6
>     Dictionary key name: is_ipv6

**is_loopback**

XML Binding class name: `is_loopback`

Dictionary key name: `is_loopback`

#### is_publish

XML Binding class name: `is_publish`

Dictionary key name: `is_publish`

#### network_route_entries

Type: *[cybox.objects.network_route_object.NetworkRouteEntries](#)*

XML Binding class name: `Network_Route_Entries`

Dictionary key name: `network_route_entries`

#### preferred_lifetime

Type: *[cybox.common.properties.Duration](#)*

XML Binding class name: `Preferred_Lifetime`

Dictionary key name: `preferred_lifetime`

#### route_age

Type: *[cybox.common.properties.Duration](#)*

XML Binding class name: `Route_Age`

Dictionary key name: `route_age`

#### valid_lifetime

Type: *[cybox.common.properties.Duration](#)*

XML Binding class name: `Valid_Lifetime`

Dictionary key name: `valid_lifetime`

class cybox.objects.network_route_object.**NetworkRouteEntries**(*args*)

Bases: cybox.EntityList

XML binding class: cybox.bindings.network_route_object.NetworkRouteEntriesType

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## cybox.objects.network_socket_object module

class cybox.objects.network_socket_object.**NetworkSocket**

Bases: *[cybox.common.object_properties.ObjectProperties](#)*

XML binding class: cybox.bindings.network_socket_object.NetworkSocketObjectType

#### address_family

Type: *cybox.common.properties.String*

XML Binding class name: Address_Family

Dictionary key name: address_family

### domain

Type: *cybox.common.properties.String*

XML Binding class name: Domain

Dictionary key name: domain

### is_blocking

XML Binding class name: is_blocking

Dictionary key name: is_blocking

### is_listening

XML Binding class name: is_listening

Dictionary key name: is_listening

### local_address

Type: *cybox.objects.socket_address_object.SocketAddress*

XML Binding class name: Local_Address

Dictionary key name: local_address

### options

Type: *cybox.objects.network_socket_object.SocketOptions*

XML Binding class name: Options

Dictionary key name: options

### protocol

Type: *cybox.common.properties.String*

XML Binding class name: Protocol

Dictionary key name: protocol

### remote_address

Type: *cybox.objects.socket_address_object.SocketAddress*

XML Binding class name: Remote_Address

Dictionary key name: remote_address

### socket_descriptor

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Socket_Descriptor

Dictionary key name: socket_descriptor

### type_

Type: *cybox.common.properties.String*
XML Binding class name: Type
Dictionary key name: type

**class** cybox.objects.network_socket_object.**SocketOptions**
Bases: cybox.Entity

XML binding class: cybox.bindings.network_socket_object.SocketOptionsType

**ip_multicast_if**

Type: *cybox.common.properties.String*
XML Binding class name: IP_MULTICAST_IF
Dictionary key name: ip_multicast_if

**ip_multicast_if2**

Type: *cybox.common.properties.String*
XML Binding class name: IP_MULTICAST_IF2
Dictionary key name: ip_multicast_if2

**ip_multicast_loop**

XML Binding class name: IP_MULTICAST_LOOP
Dictionary key name: ip_multicast_loop

**ip_tos**

Type: *cybox.common.properties.String*
XML Binding class name: IP_TOS
Dictionary key name: ip_tos

**so_broadcast**

XML Binding class name: SO_BROADCAST
Dictionary key name: so_broadcast

**so_conditional_accept**

XML Binding class name: SO_CONDITIONAL_ACCEPT
Dictionary key name: so_conditional_accept

**so_debug**

XML Binding class name: SO_DEBUG
Dictionary key name: so_debug

**so_dontlinger**

XML Binding class name: SO_DONTLINGER

Dictionary key name: so_dontlinger

**so_dontroute**

XML Binding class name: SO_DONTROUTE

Dictionary key name: so_dontroute

**so_group_priority**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO_GROUP_PRIORITY

Dictionary key name: so_group_priority

**so_keepalive**

XML Binding class name: SO_KEEPALIVE

Dictionary key name: so_keepalive

**so_linger**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO_LINGER

Dictionary key name: so_linger

**so_oobinline**

XML Binding class name: SO_OOBINLINE

Dictionary key name: so_oobinline

**so_rcvbuf**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO_RCVBUF

Dictionary key name: so_rcvbuf

**so_rcvtimeo**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO_RCVTIMEO

Dictionary key name: so_rcvtimeo

**so_reuseaddr**

XML Binding class name: SO_REUSEADDR

Dictionary key name: so_reuseaddr

**so_sndbuf**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: SO_SNDBUF

Dictionary key name: so_sndbuf

**so_sndtimeo**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: SO_SNDTIMEO
> Dictionary key name: so_sndtimeo

**so_timeout**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: SO_TIMEOUT
> Dictionary key name: so_timeout

**so_update_accept_context**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: SO_UPDATE_ACCEPT_CONTEXT
> Dictionary key name: so_update_accept_context

**tcp_nodelay**

> XML Binding class name: TCP_NODELAY
> Dictionary key name: tcp_nodelay

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## cybox.objects.network_subnet_object module

class cybox.objects.network_subnet_object.**NetworkSubnet**
> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.network_subnet_object.NetworkSubnetObjectType

**description**

> Type: *cybox.common.structured_text.StructuredText*
> XML Binding class name: Description
> Dictionary key name: description

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**number_of_ip_addresses**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: Number_Of_IP_Addresses
> Dictionary key name: number_of_ip_addresses

**routes**

> Type: *cybox.objects.network_subnet_object.Routes*
> XML Binding class name: `Routes`
> Dictionary key name: `routes`

class cybox.objects.network_subnet_object.**Routes**(*\*args*)
> Bases: `cybox.EntityList`


> XML binding class: `cybox.bindings.network_subnet_object.RoutesType`


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## cybox.objects.pdf_file_object module

class cybox.objects.pdf_file_object.**PDFDocumentInformationDictionary**
> Bases: `cybox.Entity`


> XML binding class:
> `cybox.bindings.pdf_file_object.PDFDocumentInformationDictionaryType`


**author**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Author`
> Dictionary key name: `author`

**creationdate**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: `CreationDate`
> Dictionary key name: `creationdate`

**creator**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Creator`
> Dictionary key name: `creator`

**keywords**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Keywords`
> Dictionary key name: `keywords`

**moddate**

Type: *cybox.common.properties.DateTime*
XML Binding class name: ModDate
Dictionary key name: moddate

### producer

Type: *cybox.common.properties.String*
XML Binding class name: Producer
Dictionary key name: producer

### subject

Type: *cybox.common.properties.String*
XML Binding class name: Subject
Dictionary key name: subject

### title

Type: *cybox.common.properties.String*
XML Binding class name: Title
Dictionary key name: title

### trapped

Type: *cybox.common.properties.String*
XML Binding class name: Trapped
Dictionary key name: trapped

**class** cybox.objects.pdf_file_object.**PDFFile**
Bases: *cybox.objects.file_object.File*

XML binding class: cybox.bindings.pdf_file_object.PDFFileObjectType

### metadata

Type: *cybox.objects.pdf_file_object.PDFFileMetadata*
XML Binding class name: Metadata
Dictionary key name: metadata

### version

Type: *cybox.common.properties.Double*
XML Binding class name: Version
Dictionary key name: version

**class** cybox.objects.pdf_file_object.**PDFFileMetadata**
Bases: cybox.Entity

XML binding class: cybox.bindings.pdf_file_object.PDFFileMetadataType

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**document_information_dictionary**

> Type: *cybox.objects.pdf_file_object.PDFDocumentInformationDictionary*
> XML Binding class name: Document_Information_Dictionary
> Dictionary key name: document_information_dictionary

**encrypted**

> XML Binding class name: encrypted
> Dictionary key name: encrypted

**keyword_counts**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCounts*
> XML Binding class name: Keyword_Counts
> Dictionary key name: keyword_counts

**number_of_cross_reference_tables**

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: Number_Of_Cross_Reference_Tables
> Dictionary key name: number_of_cross_reference_tables

**number_of_indirect_objects**

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: Number_Of_Indirect_Objects
> Dictionary key name: number_of_indirect_objects

**number_of_trailers**

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: Number_Of_Trailers
> Dictionary key name: number_of_trailers

**optimized**

> XML Binding class name: optimized
> Dictionary key name: optimized

class cybox.objects.pdf_file_object.**PDFKeywordCount**
    Bases: cybox.Entity

XML binding class: cybox.bindings.pdf_file_object.PDFKeywordCountType

**non_obfuscated_count**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Non_Obfuscated_Count

Dictionary key name: non_obfuscated_count

**obfuscated_count**

Type: *cybox.common.properties.NonNegativeInteger*
XML Binding class name: Obfuscated_Count
Dictionary key name: obfuscated_count

**class** cybox.objects.pdf_file_object.**PDFKeywordCounts**
    Bases: cybox.Entity

XML binding class: cybox.bindings.pdf_file_object.PDFKeywordCountsType

**aa_count**

Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
XML Binding class name: AA_Count
Dictionary key name: aa_count

**ascii85decode_count**

Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
XML Binding class name: ASCII85Decode_Count
Dictionary key name: ascii85decode_count

**asciihexdecode_count**

Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
XML Binding class name: ASCIIHexDecode_Count
Dictionary key name: asciihexdecode_count

**ccittfaxdecode_count**

Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
XML Binding class name: CCITTFaxDecode_Count
Dictionary key name: ccittfaxdecode_count

**dctdecode_count**

Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
XML Binding class name: DCTDecode_Count
Dictionary key name: dctdecode_count

**encrypt_count**

Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
XML Binding class name: Encrypt_Count
Dictionary key name: encrypt_count

**flatedecode_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: `FlateDecode_Count`
> Dictionary key name: `flatedecode_count`

**javascript_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: `JavaScript_Count`
> Dictionary key name: `javascript_count`

**jbig2decode_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: `JBIG2Decode_Count`
> Dictionary key name: `jbig2decode_count`

**js_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: `JS_Count`
> Dictionary key name: `js_count`

**launch_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: `Launch_Count`
> Dictionary key name: `launch_count`

**lzwdecode_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: `LZWDecode_Count`
> Dictionary key name: `lzwdecode_count`

**objstm_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: `ObjStm_Count`
> Dictionary key name: `objstm_count`

**openaction_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*
> XML Binding class name: `OpenAction_Count`
> Dictionary key name: `openaction_count`

**page_count**

> Type: *cybox.objects.pdf_file_object.PDFKeywordCount*

XML Binding class name: Page_Count

Dictionary key name: page_count

**richmedia_count**

Type: *cybox.objects.pdf_file_object.PDFKeywordCount*

XML Binding class name: RichMedia_Count

Dictionary key name: richmedia_count

**runlengthdecode_count**

Type: *cybox.objects.pdf_file_object.PDFKeywordCount*

XML Binding class name: RunLengthDecode_Count

Dictionary key name: runlengthdecode_count

**xfa_count**

Type: *cybox.objects.pdf_file_object.PDFKeywordCount*

XML Binding class name: XFA_Count

Dictionary key name: xfa_count

**Version**: 2.1.0.12.dev0

## cybox.objects.pipe_object module

class cybox.objects.pipe_object.**Pipe**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.pipe_object.PipeObjectType

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**named**

XML Binding class name: named

Dictionary key name: named

**Version**: 2.1.0.12.dev0

## cybox.objects.port_object module

class cybox.objects.port_object.**Port**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.port_object.PortObjectType

> **layer4_protocol**
>
> > Type: *cybox.common.properties.String*
> > XML Binding class name: Layer4_Protocol
> > Dictionary key name: layer4_protocol
>
> **port_value**
>
> > Type: *cybox.common.properties.PositiveInteger*
> > XML Binding class name: Port_Value
> > Dictionary key name: port_value

**Version**: 2.1.0.12.dev0

## cybox.objects.process_object module

class cybox.objects.process_object.**ArgumentList**(*args*)
> Bases: cybox.EntityList
>
>
> XML binding class: cybox.bindings.process_object.ArgumentListType

class cybox.objects.process_object.**ChildPIDList**(*args*)
> Bases: cybox.EntityList
>
>
> XML binding class: cybox.bindings.process_object.ChildPIDListType

class cybox.objects.process_object.**ImageInfo**
> Bases: cybox.Entity
>
>
> XML binding class: cybox.bindings.process_object.ImageInfoType
>
>
> **command_line**
>
> > Type: *cybox.common.properties.String*
> > XML Binding class name: Command_Line
> > Dictionary key name: command_line
>
> **current_directory**
>
> > Type: *cybox.common.properties.String*
> > XML Binding class name: Current_Directory
> > Dictionary key name: current_directory
>
> **file_name**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: `File_Name`
> > Dictionary key name: `file_name`

> **path**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: `Path`
> > Dictionary key name: `path`

class cybox.objects.process_object.**NetworkConnectionList**(*args*)
> Bases: `cybox.EntityList`

> XML binding class: `cybox.bindings.process_object.NetworkConnectionListType`

class cybox.objects.process_object.**PortList**(*args*)
> Bases: `cybox.EntityList`

> XML binding class: `cybox.bindings.process_object.PortListType`

class cybox.objects.process_object.**Process**
> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: `cybox.bindings.process_object.ProcessObjectType`

> **argument_list**

> > Type: *cybox.objects.process_object.ArgumentList*
> > XML Binding class name: `Argument_List`
> > Dictionary key name: `argument_list`

> **child_pid_list**

> > Type: *cybox.objects.process_object.ChildPIDList*
> > XML Binding class name: `Child_PID_List`
> > Dictionary key name: `child_pid_list`

> **creation_time**

> > Type: *cybox.common.properties.DateTime*
> > XML Binding class name: `Creation_Time`
> > Dictionary key name: `creation_time`

> **environment_variable_list**

> > Type: *cybox.common.environment_variable.EnvironmentVariableList*

XML Binding class name: `Environment_Variable_List`

Dictionary key name: `environment_variable_list`

**extracted_features**

Type: *cybox.common.extracted_features.ExtractedFeatures*

XML Binding class name: `Extracted_Features`

Dictionary key name: `extracted_features`

**image_info**

Type: *cybox.objects.process_object.ImageInfo*

XML Binding class name: `Image_Info`

Dictionary key name: `image_info`

**is_hidden**

XML Binding class name: `is_hidden`

Dictionary key name: `is_hidden`

**kernel_time**

Type: *cybox.common.properties.Duration*

XML Binding class name: `Kernel_Time`

Dictionary key name: `kernel_time`

**name**

Type: *cybox.common.properties.String*

XML Binding class name: `Name`

Dictionary key name: `name`

**network_connection_list**

Type: *cybox.objects.process_object.NetworkConnectionList*

XML Binding class name: `Network_Connection_List`

Dictionary key name: `network_connection_list`

**parent_pid**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: `Parent_PID`

Dictionary key name: `parent_pid`

**pid**

Type: *cybox.common.properties.UnsignedInteger*

XML Binding class name: `PID`

Dictionary key name: `pid`

**port_list**

Type: *cybox.objects.process_object.PortList*
XML Binding class name: `Port_List`
Dictionary key name: `port_list`

### start_time

Type: *cybox.common.properties.DateTime*
XML Binding class name: `Start_Time`
Dictionary key name: `start_time`

### user_time

Type: *cybox.common.properties.Duration*
XML Binding class name: `User_Time`
Dictionary key name: `user_time`

### username

Type: *cybox.common.properties.String*
XML Binding class name: `Username`
Dictionary key name: `username`

**Version**: 2.1.0.12.dev0

## cybox.objects.product_object module

class cybox.objects.product_object.**Product**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.product_object.ProductObjectType

### edition

Type: *cybox.common.properties.String*
XML Binding class name: `Edition`
Dictionary key name: `edition`

### language

Type: *cybox.common.properties.String*
XML Binding class name: `Language`
Dictionary key name: `language`

### product

Type: *cybox.common.properties.String*
XML Binding class name: `Product`
Dictionary key name: `product`

**update**

> Type: *cybox.common.properties.String*
> XML Binding class name: Update
> Dictionary key name: update

**vendor**

> Type: *cybox.common.properties.String*
> XML Binding class name: Vendor
> Dictionary key name: vendor

**version**

> Type: *cybox.common.properties.String*
> XML Binding class name: Version
> Dictionary key name: version

**Version**: 2.1.0.12.dev0

## cybox.objects.semaphore_object module

**class** cybox.objects.semaphore_object.**Semaphore**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.semaphore_object.SemaphoreObjectType

**current_count**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: Current_Count
> Dictionary key name: current_count

**maximum_count**

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: Maximum_Count
> Dictionary key name: maximum_count

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**named**

> XML Binding class name: named
> Dictionary key name: named

**Version**: 2.1.0.12.dev0

**class** cybox.objects.sms_message_object.**SMSMessage**

    Bases: *cybox.common.object_properties.ObjectProperties*

    XML binding class: cybox.bindings.sms_message_object.SMSMessageObjectType

    **bits_per_character**

        Type: *cybox.common.properties.PositiveInteger*
        XML Binding class name: Bits_Per_Character
        Dictionary key name: bits_per_character

    **body**

        Type: *cybox.common.properties.String*
        XML Binding class name: Body
        Dictionary key name: body

    **encoding**

        Type: *cybox.common.properties.String*
        XML Binding class name: Encoding
        Dictionary key name: encoding

    **is_premium**

        XML Binding class name: is_premium
        Dictionary key name: is_premium

    **length**

        Type: *cybox.common.properties.Integer*
        XML Binding class name: Length
        Dictionary key name: length

    **recipient_phone_number**

        Type: *cybox.common.properties.String*
        XML Binding class name: Recipient_Phone_Number
        Dictionary key name: recipient_phone_number

    **sender_phone_number**

        Type: *cybox.common.properties.String*
        XML Binding class name: Sender_Phone_Number
        Dictionary key name: sender_phone_number

**sent_datetime**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: `Sent_DateTime`
> Dictionary key name: `sent_datetime`

**size**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: `Size`
> Dictionary key name: `size`

**user_data_header**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: `User_Data_Header`
> Dictionary key name: `user_data_header`

**Version**: 2.1.0.12.dev0

## cybox.objects.socket_address_object module

**class** cybox.objects.socket_address_object.**SocketAddress**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.socket_address_object.SocketAddressObjectType

**hostname**

> Type: *cybox.objects.hostname_object.Hostname*
> XML Binding class name: `Hostname`
> Dictionary key name: `hostname`

**ip_address**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: `IP_Address`
> Dictionary key name: `ip_address`

**port**

> Type: *cybox.objects.port_object.Port*
> XML Binding class name: `Port`
> Dictionary key name: `port`

**Version**: 2.1.0.12.dev0

**`cybox.objects.system_object`** module

**class** `cybox.objects.system_object.`**`BIOSInfo`**

> Bases: `cybox.Entity`

> XML binding class: `cybox.bindings.system_object.BIOSInfoType`

> **`bios_date`**

>> Type: *`cybox.common.properties.Date`*
>> XML Binding class name: `BIOS_Date`
>> Dictionary key name: `bios_date`

> **`bios_manufacturer`**

>> Type: *`cybox.common.properties.String`*
>> XML Binding class name: `BIOS_Manufacturer`
>> Dictionary key name: `bios_manufacturer`

> **`bios_release_date`**

>> Type: *`cybox.common.properties.Date`*
>> XML Binding class name: `BIOS_Release_Date`
>> Dictionary key name: `bios_release_date`

> **`bios_serial_number`**

>> Type: *`cybox.common.properties.String`*
>> XML Binding class name: `BIOS_Serial_Number`
>> Dictionary key name: `bios_serial_number`

> **`bios_version`**

>> Type: *`cybox.common.properties.String`*
>> XML Binding class name: `BIOS_Version`
>> Dictionary key name: `bios_version`

**class** `cybox.objects.system_object.`**`DHCPServerList`**(*args*)

> Bases: `cybox.EntityList`

> XML binding class: `cybox.bindings.system_object.DHCPServerListType`

**class** `cybox.objects.system_object.`**`IPGatewayList`**(*args*)

> Bases: `cybox.EntityList`

> XML binding class: `cybox.bindings.system_object.IPGatewayListType`

**class** cybox.objects.system_object.**IPInfo**

Bases: cybox.Entity

XML binding class: cybox.bindings.system_object.IPInfoType

**ip_address**

Type: *cybox.objects.address_object.Address*

XML Binding class name: IP_Address

Dictionary key name: ip_address

**subnet_mask**

Type: *cybox.objects.address_object.Address*

XML Binding class name: Subnet_Mask

Dictionary key name: subnet_mask

**class** cybox.objects.system_object.**IPInfoList**(*args*)

Bases: cybox.EntityList

XML binding class: cybox.bindings.system_object.IPInfoListType

**class** cybox.objects.system_object.**NetworkInterface**

Bases: cybox.Entity

XML binding class: cybox.bindings.system_object.NetworkInterfaceType

**adapter**

Type: *cybox.common.properties.String*

XML Binding class name: Adapter

Dictionary key name: adapter

**description**

Type: *cybox.common.properties.String*

XML Binding class name: Description

Dictionary key name: description

**dhcp_lease_expires**

Type: *cybox.common.properties.DateTime*

XML Binding class name: DHCP_Lease_Expires

Dictionary key name: dhcp_lease_expires

**dhcp_lease_obtained**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: DHCP_Lease_Obtained
> Dictionary key name: dhcp_lease_obtained

**dhcp_server_list**

> Type: *cybox.objects.system_object.DHCPServerList*
> XML Binding class name: DHCP_Server_List
> Dictionary key name: dhcp_server_list

**ip_gateway_list**

> Type: *cybox.objects.system_object.IPGatewayList*
> XML Binding class name: IP_Gateway_List
> Dictionary key name: ip_gateway_list

**ip_list**

> Type: *cybox.objects.system_object.IPInfoList*
> XML Binding class name: IP_List
> Dictionary key name: ip_list

**mac**

> Type: *cybox.common.properties.String*
> XML Binding class name: MAC
> Dictionary key name: mac

class cybox.objects.system_object.**NetworkInterfaceList**(*args*)
    Bases: cybox.EntityList

   XML binding class: cybox.bindings.system_object.NetworkInterfaceListType

class cybox.objects.system_object.**OS**
    Bases: cybox.Entity

   XML binding class: cybox.bindings.system_object.OSType

**bitness**

> Type: *cybox.common.properties.String*
> XML Binding class name: Bitness
> Dictionary key name: bitness

**build_number**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Build_Number
> > Dictionary key name: build_number

> **environment_variable_list**

> > Type: *cybox.common.environment_variable.EnvironmentVariableList*
> > XML Binding class name: Environment_Variable_List
> > Dictionary key name: environment_variable_list

> **install_date**

> > Type: *cybox.common.properties.Date*
> > XML Binding class name: Install_Date
> > Dictionary key name: install_date

> **patch_level**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Patch_Level
> > Dictionary key name: patch_level

> **platform**

> > Type: *cybox.common.platform_specification.PlatformSpecification*
> > XML Binding class name: Platform
> > Dictionary key name: platform

**class** cybox.objects.system_object.**System**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.system_object.SystemObjectType

> **available_physical_memory**

> > Type: *cybox.common.properties.UnsignedLong*
> > XML Binding class name: Available_Physical_Memory
> > Dictionary key name: available_physical_memory

> **bios_info**

> > Type: *cybox.objects.system_object.BIOSInfo*
> > XML Binding class name: BIOS_Info
> > Dictionary key name: bios_info

> **date**

> > Type: *cybox.common.properties.Date*
> > XML Binding class name: Date

Dictionary key name: date

**hostname**

Type: *cybox.common.properties.String*
XML Binding class name: Hostname
Dictionary key name: hostname

**local_time**

Type: *cybox.common.properties.Time*
XML Binding class name: Local_Time
Dictionary key name: local_time

**network_interface_list**

Type: *cybox.objects.system_object.NetworkInterfaceList*
XML Binding class name: Network_Interface_List
Dictionary key name: network_interface_list

**os**

Type: *cybox.objects.system_object.OS*
XML Binding class name: OS
Dictionary key name: os

**processor**

Type: *cybox.common.properties.String*
XML Binding class name: Processor
Dictionary key name: processor

**system_time**

Type: *cybox.common.properties.Time*
XML Binding class name: System_Time
Dictionary key name: system_time

**timezone_dst**

Type: *cybox.common.properties.String*
XML Binding class name: Timezone_DST
Dictionary key name: timezone_dst

**timezone_standard**

Type: *cybox.common.properties.String*
XML Binding class name: Timezone_Standard
Dictionary key name: timezone_standard

**total_physical_memory**

        Type: *cybox.common.properties.UnsignedLong*
        XML Binding class name: `Total_Physical_Memory`
        Dictionary key name: `total_physical_memory`

    **uptime**

        Type: *cybox.common.properties.Duration*
        XML Binding class name: `Uptime`
        Dictionary key name: `uptime`

    **username**

        Type: *cybox.common.properties.String*
        XML Binding class name: `Username`
        Dictionary key name: `username`

**Version**: 2.1.0.12.dev0

## cybox.objects.uri_object module

**class** cybox.objects.uri_object.**URI**(*value=None*, *type_=None*)
    Bases: *cybox.common.object_properties.ObjectProperties*

    XML binding class: `cybox.bindings.uri_object.URIObjectType`

    **type_**

        XML Binding class name: `type_`
        Dictionary key name: `type`

    **value**

        Type: *cybox.common.properties.AnyURI*
        XML Binding class name: `Value`
        Dictionary key name: `value`

**Version**: 2.1.0.12.dev0

## cybox.objects.user_account_object module

**class** cybox.objects.user_account_object.**Group**
    Bases: `cybox.Entity`

    An abstract class for account groups.

    XML binding class: <undefined>

**class** cybox.objects.user_account_object.**GroupList**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.user_account_object.GroupListType

**class** cybox.objects.user_account_object.**Privilege**
    Bases: cybox.Entity

    An abstract class for account privileges.

    XML binding class: <undefined>

**class** cybox.objects.user_account_object.**PrivilegeList**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.user_account_object.PrivilegeListType

**class** cybox.objects.user_account_object.**UserAccount**
    Bases: *cybox.objects.account_object.Account*

    XML binding class: cybox.bindings.user_account_object.UserAccountObjectType

    **full_name**

        Type: *cybox.common.properties.String*
        XML Binding class name: Full_Name
        Dictionary key name: full_name

    **group_list**

        Type: *cybox.objects.user_account_object.GroupList*
        XML Binding class name: Group_List
        Dictionary key name: group_list

    **home_directory**

        Type: *cybox.common.properties.String*
        XML Binding class name: Home_Directory
        Dictionary key name: home_directory

    **last_login**

        Type: *cybox.common.properties.DateTime*
        XML Binding class name: Last_Login
        Dictionary key name: last_login

**password_required**

> XML Binding class name: password_required
> Dictionary key name: password_required

**privilege_list**

> Type: *cybox.objects.user_account_object.PrivilegeList*
> XML Binding class name: Privilege_List
> Dictionary key name: privilege_list

**script_path**

> Type: *cybox.common.properties.String*
> XML Binding class name: Script_Path
> Dictionary key name: script_path

**user_password_age**

> Type: *cybox.common.properties.Duration*
> XML Binding class name: User_Password_Age
> Dictionary key name: user_password_age

**username**

> Type: *cybox.common.properties.String*
> XML Binding class name: Username
> Dictionary key name: username

**Version**: 2.1.0.12.dev0

## cybox.objects.volume_object module

class cybox.objects.volume_object.**FileSystemFlagList**(*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.volume_object.FileSystemFlagListType

class cybox.objects.volume_object.**Volume**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.volume_object.VolumeObjectType

> **actual_available_allocation_units**

> > Type: *cybox.common.properties.UnsignedLong*
> > XML Binding class name: Actual_Available_Allocation_Units

Dictionary key name: actual_available_allocation_units

**bytes_per_sector**

Type: *cybox.common.properties.PositiveInteger*
XML Binding class name: Bytes_Per_Sector
Dictionary key name: bytes_per_sector

**creation_time**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Creation_Time
Dictionary key name: creation_time

**device_path**

Type: *cybox.common.properties.String*
XML Binding class name: Device_Path
Dictionary key name: device_path

**file_system_flag_list**

Type: *cybox.objects.volume_object.FileSystemFlagList*
XML Binding class name: File_System_Flag_List
Dictionary key name: file_system_flag_list

**file_system_type**

Type: *cybox.common.properties.String*
XML Binding class name: File_System_Type
Dictionary key name: file_system_type

**is_mounted**

XML Binding class name: is_mounted
Dictionary key name: is_mounted

**name**

Type: *cybox.common.properties.String*
XML Binding class name: Name
Dictionary key name: name

**sectors_per_allocation_unit**

Type: *cybox.common.properties.UnsignedInteger*
XML Binding class name: Sectors_Per_Allocation_Unit
Dictionary key name: sectors_per_allocation_unit

**serial_number**

Type: *cybox.common.properties.String*

XML Binding class name: `Serial_Number`

Dictionary key name: `serial_number`

### total_allocation_units

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: `Total_Allocation_Units`

Dictionary key name: `total_allocation_units`

**Version**: 2.1.0.12.dev0

## cybox.objects.whois_object module

class cybox.objects.whois_object.**WhoisContact**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.whois_object.WhoisContactType`

### address

Type: *cybox.common.properties.String*

XML Binding class name: `Address`

Dictionary key name: `address`

### contact_id

Type: *cybox.common.properties.String*

XML Binding class name: `Contact_ID`

Dictionary key name: `contact_id`

### contact_type

XML Binding class name: `contact_type`

Dictionary key name: `contact_type`

### email_address

Type: *cybox.objects.address_object.EmailAddress*

XML Binding class name: `Email_Address`

Dictionary key name: `email_address`

### fax_number

Type: *cybox.common.properties.String*

XML Binding class name: `Fax_Number`

Dictionary key name: `fax_number`

### name

> > > Type: *cybox.common.properties.String*
> > > XML Binding class name: Name
> > > Dictionary key name: name

> > **organization**

> > > Type: *cybox.common.properties.String*
> > > XML Binding class name: Organization
> > > Dictionary key name: organization

> > **phone_number**

> > > Type: *cybox.common.properties.String*
> > > XML Binding class name: Phone_Number
> > > Dictionary key name: phone_number

class cybox.objects.whois_object.**WhoisContacts**(*\*args*)
> Bases: cybox.EntityList

> XML binding class: cybox.bindings.whois_object.WhoisContactsType

class cybox.objects.whois_object.**WhoisEntry**
> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.whois_object.WhoisObjectType

> > **contact_info**

> > > Type: *cybox.objects.whois_object.WhoisContact*
> > > XML Binding class name: Contact_Info
> > > Dictionary key name: contact_info

> > **creation_date**

> > > Type: *cybox.common.properties.Date*
> > > XML Binding class name: Creation_Date
> > > Dictionary key name: creation_date

> > **dnssec**

> > > XML Binding class name: DNSSEC
> > > Dictionary key name: dnssec

> > **domain_id**

> > > Type: *cybox.common.properties.String*
> > > XML Binding class name: Domain_ID
> > > Dictionary key name: domain_id

**domain_name**

> Type: *cybox.objects.uri_object.URI*
> XML Binding class name: Domain_Name
> Dictionary key name: domain_name

**expiration_date**

> Type: *cybox.common.properties.Date*
> XML Binding class name: Expiration_Date
> Dictionary key name: expiration_date

**ip_address**

> Type: *cybox.objects.address_object.Address*
> XML Binding class name: IP_Address
> Dictionary key name: ip_address

**lookup_date**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: Lookup_Date
> Dictionary key name: lookup_date

**nameservers**

> Type: *cybox.objects.whois_object.WhoisNameservers*
> XML Binding class name: Nameservers
> Dictionary key name: nameservers

**regional_internet_registry**

> Type: *cybox.common.properties.String*
> XML Binding class name: Regional_Internet_Registry
> Dictionary key name: regional_internet_registry

**registrants**

> Type: *cybox.objects.whois_object.WhoisRegistrants*
> XML Binding class name: Registrants
> Dictionary key name: registrants

**registrar_info**

> Type: *cybox.objects.whois_object.WhoisRegistrar*
> XML Binding class name: Registrar_Info
> Dictionary key name: registrar_info

**remarks**

> Type: *cybox.common.properties.String*

XML Binding class name: `Remarks`

Dictionary key name: `remarks`

### server_name

Type: [`cybox.objects.uri_object.URI`](#)

XML Binding class name: `Server_Name`

Dictionary key name: `server_name`

### sponsoring_registrar

Type: [`cybox.common.properties.String`](#)

XML Binding class name: `Sponsoring_Registrar`

Dictionary key name: `sponsoring_registrar`

### status

Type: [`cybox.objects.whois_object.WhoisStatuses`](#)

XML Binding class name: `Status`

Dictionary key name: `status`

### updated_date

Type: [`cybox.common.properties.Date`](#)

XML Binding class name: `Updated_Date`

Dictionary key name: `updated_date`

class cybox.objects.whois_object.**WhoisNameservers**(*args*)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.whois_object.WhoisNameserversType`

class cybox.objects.whois_object.**WhoisRegistrant**

Bases: [`cybox.objects.whois_object.WhoisContact`](#)

XML binding class: `cybox.bindings.whois_object.WhoisRegistrantInfoType`

### registrant_id

Type: [`cybox.common.properties.String`](#)

XML Binding class name: `Registrant_ID`

Dictionary key name: `registrant_id`

class cybox.objects.whois_object.**WhoisRegistrants**(*args*)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.whois_object.WhoisRegistrantsType`

**class** cybox.objects.whois_object.**WhoisRegistrar**

Bases: cybox.Entity

XML binding class: cybox.bindings.whois_object.WhoisRegistrarInfoType

**address**

Type: *cybox.common.properties.String*
XML Binding class name: Address
Dictionary key name: address

**contacts**

Type: *cybox.objects.whois_object.WhoisContacts*
XML Binding class name: Contacts
Dictionary key name: contacts

**email_address**

Type: *cybox.objects.address_object.EmailAddress*
XML Binding class name: Email_Address
Dictionary key name: email_address

**name**

Type: *cybox.common.properties.String*
XML Binding class name: Name
Dictionary key name: name

**phone_number**

Type: *cybox.common.properties.String*
XML Binding class name: Phone_Number
Dictionary key name: phone_number

**referral_url**

Type: *cybox.objects.uri_object.URI*
XML Binding class name: Referral_URL
Dictionary key name: referral_url

**registrar_guid**

Type: *cybox.common.properties.String*
XML Binding class name: Registrar_GUID
Dictionary key name: registrar_guid

**registrar_id**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Registrar_ID
> > Dictionary key name: registrar_id

> **whois_server**

> > Type: *cybox.objects.uri_object.URI*
> > XML Binding class name: Whois_Server
> > Dictionary key name: whois_server

class cybox.objects.whois_object.**WhoisStatus**(*value=None*)
> Bases: *cybox.common.properties.BaseProperty*

> XML binding class: cybox.bindings.whois_object.WhoisStatusType

class cybox.objects.whois_object.**WhoisStatuses**(*\*args*)
> Bases: cybox.EntityList

> XML binding class: cybox.bindings.whois_object.WhoisStatusesType

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## cybox.objects.win_computer_account_object module

class cybox.objects.win_computer_account_object.**FullyQualifiedName**
> Bases: cybox.Entity

> XML binding class:
> cybox.bindings.win_computer_account_object.FullyQualifiedNameType

> **full_name**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: Full_Name
> > Dictionary key name: full_name

> **netbeui_name**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: NetBEUI_Name
> > Dictionary key name: netbeui_name

class cybox.objects.win_computer_account_object.**Kerberos**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_computer_account_object.KerberosType

**delegation**

> Type: *cybox.objects.win_computer_account_object.KerberosDelegation*
> XML Binding class name: `Delegation`
> Dictionary key name: `delegation`

**ticket**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: `Ticket`
> Dictionary key name: `ticket`

**class** cybox.objects.win_computer_account_object.**KerberosDelegation**
    Bases: `cybox.Entity`

    XML binding class:
    `cybox.bindings.win_computer_account_object.KerberosDelegationType`

**bitmask**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: `Bitmask`
> Dictionary key name: `bitmask`

**service**

> Type: *cybox.objects.win_computer_account_object.KerberosService*
> XML Binding class name: `Service`
> Dictionary key name: `service`

**class** cybox.objects.win_computer_account_object.**KerberosService**
    Bases: `cybox.Entity`

    XML binding class:
    `cybox.bindings.win_computer_account_object.KerberosServiceType`

**computer**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Computer`
> Dictionary key name: `computer`

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Name`
> Dictionary key name: `name`

**port**

> Type: *cybox.objects.port_object.Port*
> XML Binding class name: Port
> Dictionary key name: port

**user**

> Type: *cybox.common.properties.String*
> XML Binding class name: User
> Dictionary key name: user

class cybox.objects.win_computer_account_object.**WinComputerAccount**
    Bases: *cybox.objects.account_object.Account*


    XML binding class:
    cybox.bindings.win_computer_account_object.WindowsComputerAccountObjectType


**fully_qualified_name**

> Type: *cybox.objects.win_computer_account_object.FullyQualifiedName*
> XML Binding class name: Fully_Qualified_Name
> Dictionary key name: fully_qualified_name

**kerberos**

> Type: *cybox.objects.win_computer_account_object.Kerberos*
> XML Binding class name: Kerberos
> Dictionary key name: kerberos

**security_id**

> Type: *cybox.common.properties.String*
> XML Binding class name: Security_ID
> Dictionary key name: security_id

**type_**

> Type: *cybox.common.properties.String*
> XML Binding class name: Type
> Dictionary key name: type

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**cybox.objects.win_critical_section_object module**

class cybox.objects.win_critical_section_object.**WinCriticalSection**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class:
cybox.bindings.win_critical_section_object.WindowsCriticalSectionObjectType

> **address**
>
>> Type: *cybox.common.properties.HexBinary*
>> XML Binding class name: Address
>> Dictionary key name: address
>
> **spin_count**
>
>> Type: *cybox.common.properties.NonNegativeInteger*
>> XML Binding class name: Spin_Count
>> Dictionary key name: spin_count

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## cybox.objects.win_driver_object module

class cybox.objects.win_driver_object.**DeviceObjectList**(*args*)
> Bases: cybox.EntityList

> XML binding class: cybox.bindings.win_driver_object.DeviceObjectListType

class cybox.objects.win_driver_object.**DeviceObjectStruct**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_driver_object.DeviceObjectStructType

> **attached_device_name**
>
>> Type: *cybox.common.properties.String*
>> XML Binding class name: Attached_Device_Name
>> Dictionary key name: attached_device_name
>
> **attached_device_object**
>
>> Type: *cybox.common.properties.UnsignedLong*
>> XML Binding class name: Attached_Device_Object
>> Dictionary key name: attached_device_object
>
> **attached_to_device_name**
>
>> Type: *cybox.common.properties.String*
>> XML Binding class name: Attached_To_Device_Name
>> Dictionary key name: attached_to_device_name

**attached_to_device_object**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Attached_To_Device_Object
> Dictionary key name: attached_to_device_object

**attached_to_driver_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Attached_To_Driver_Name
> Dictionary key name: attached_to_driver_name

**attached_to_driver_object**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Attached_To_Driver_Object
> Dictionary key name: attached_to_driver_object

**device_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Device_Name
> Dictionary key name: device_name

**device_object**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Device_Object
> Dictionary key name: device_object

**class** cybox.objects.win_driver_object.**WinDriver**
    Bases: *cybox.objects.win_executable_file_object.WinExecutableFile*

XML binding class: cybox.bindings.win_driver_object.WindowsDriverObjectType

**device_object_list**

> Type: *cybox.objects.win_driver_object.DeviceObjectList*
> XML Binding class name: Device_Object_List
> Dictionary key name: device_object_list

**driver_init**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Driver_Init
> Dictionary key name: driver_init

**driver_name**

Type: *cybox.common.properties.String*
XML Binding class name: Driver_Name
Dictionary key name: driver_name

### driver_object_address

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Driver_Object_Address
Dictionary key name: driver_object_address

### driver_start_io

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Driver_Start_IO
Dictionary key name: driver_start_io

### driver_unload

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Driver_Unload
Dictionary key name: driver_unload

### image_base

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Image_Base
Dictionary key name: image_base

### image_size

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Image_Size
Dictionary key name: image_size

### irp_mj_cleanup

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: IRP_MJ_CLEANUP
Dictionary key name: irp_mj_cleanup

### irp_mj_close

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: IRP_MJ_CLOSE
Dictionary key name: irp_mj_close

### irp_mj_create

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: IRP_MJ_CREATE
Dictionary key name: irp_mj_create

**irp_mj_create_mailslot**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_CREATE_MAILSLOT
> Dictionary key name: irp_mj_create_mailslot

**irp_mj_create_named_pipe**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_CREATE_NAMED_PIPE
> Dictionary key name: irp_mj_create_named_pipe

**irp_mj_device_change**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_DEVICE_CHANGE
> Dictionary key name: irp_mj_device_change

**irp_mj_device_control**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_DEVICE_CONTROL
> Dictionary key name: irp_mj_device_control

**irp_mj_directory_control**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_DIRECTORY_CONTROL
> Dictionary key name: irp_mj_directory_control

**irp_mj_file_system_control**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_FILE_SYSTEM_CONTROL
> Dictionary key name: irp_mj_file_system_control

**irp_mj_flush_buffers**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_FLUSH_BUFFERS
> Dictionary key name: irp_mj_flush_buffers

**irp_mj_internal_device_control**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_INTERNAL_DEVICE_CONTROL
> Dictionary key name: irp_mj_internal_device_control

**irp_mj_lock_control**

> Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_LOCK_CONTROL

Dictionary key name: irp_mj_lock_control

**irp_mj_pnp**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_PNP

Dictionary key name: irp_mj_pnp

**irp_mj_power**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_POWER

Dictionary key name: irp_mj_power

**irp_mj_query_ea**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_QUERY_EA

Dictionary key name: irp_mj_query_ea

**irp_mj_query_information**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_QUERY_INFORMATION

Dictionary key name: irp_mj_query_information

**irp_mj_query_quota**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_QUERY_QUOTA

Dictionary key name: irp_mj_query_quota

**irp_mj_query_security**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_QUERY_SECURITY

Dictionary key name: irp_mj_query_security

**irp_mj_query_volume_information**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_QUERY_VOLUME_INFORMATION

Dictionary key name: irp_mj_query_volume_information

**irp_mj_read**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: IRP_MJ_READ

Dictionary key name: irp_mj_read

**irp_mj_set_ea**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_SET_EA
> Dictionary key name: irp_mj_set_ea

**irp_mj_set_information**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_SET_INFORMATION
> Dictionary key name: irp_mj_set_information

**irp_mj_set_quota**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_SET_QUOTA
> Dictionary key name: irp_mj_set_quota

**irp_mj_set_security**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_SET_SECURITY
> Dictionary key name: irp_mj_set_security

**irp_mj_set_volume_information**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_SET_VOLUME_INFORMATION
> Dictionary key name: irp_mj_set_volume_information

**irp_mj_shutdown**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_SHUTDOWN
> Dictionary key name: irp_mj_shutdown

**irp_mj_system_control**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_SYSTEM_CONTROL
> Dictionary key name: irp_mj_system_control

**irp_mj_write**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: IRP_MJ_WRITE
> Dictionary key name: irp_mj_write

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### cybox.objects.win_event_log_object module

**class** cybox.objects.win_event_log_object.**UnformattedMessageList**(*args*)
Bases: cybox.EntityList


XML binding class:
cybox.bindings.win_event_log_object.UnformattedMessageListType


**class** cybox.objects.win_event_log_object.**WinEventLog**
Bases: *cybox.common.object_properties.ObjectProperties*


XML binding class:
cybox.bindings.win_event_log_object.WindowsEventLogObjectType


**blob**


Type: *cybox.common.properties.Base64Binary*
XML Binding class name: Blob
Dictionary key name: blob

**category**


Type: *cybox.common.properties.String*
XML Binding class name: Category
Dictionary key name: category

**category_num**


Type: *cybox.common.properties.Long*
XML Binding class name: Category_Num
Dictionary key name: category_num

**correlation_activity_id**


Type: *cybox.common.properties.String*
XML Binding class name: Correlation_Activity_ID
Dictionary key name: correlation_activity_id

**correlation_related_activity_id**


Type: *cybox.common.properties.String*
XML Binding class name: Correlation_Related_Activity_ID
Dictionary key name: correlation_related_activity_id

**eid**


Type: *cybox.common.properties.Long*
XML Binding class name: EID

Dictionary key name: `eid`

### execution_process_id

Type: *`cybox.common.properties.String`*
XML Binding class name: `Execution_Process_ID`
Dictionary key name: `execution_process_id`

### execution_thread_id

Type: *`cybox.common.properties.String`*
XML Binding class name: `Execution_Thread_ID`
Dictionary key name: `execution_thread_id`

### generation_time

Type: *`cybox.common.properties.DateTime`*
XML Binding class name: `Generation_Time`
Dictionary key name: `generation_time`

### index

Type: *`cybox.common.properties.Long`*
XML Binding class name: `Index`
Dictionary key name: `index`

### log

Type: *`cybox.common.properties.String`*
XML Binding class name: `Log`
Dictionary key name: `log`

### machine

Type: *`cybox.common.properties.String`*
XML Binding class name: `Machine`
Dictionary key name: `machine`

### message

Type: *`cybox.common.properties.String`*
XML Binding class name: `Message`
Dictionary key name: `message`

### reserved

Type: *`cybox.common.properties.Long`*
XML Binding class name: `Reserved`
Dictionary key name: `reserved`

### source

Type: *cybox.common.properties.String*
XML Binding class name: Source
Dictionary key name: source

### type

Type: *cybox.common.properties.String*
XML Binding class name: Type
Dictionary key name: type

### unformatted_message_list

Type: *cybox.objects.win_event_log_object.UnformattedMessageList*
XML Binding class name: Unformatted_Message_List
Dictionary key name: unformatted_message_list

### user

Type: *cybox.common.properties.String*
XML Binding class name: User
Dictionary key name: user

### write_time

Type: *cybox.common.properties.DateTime*
XML Binding class name: Write_Time
Dictionary key name: write_time

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## cybox.objects.win_event_object module

class cybox.objects.win_event_object.**WinEvent**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.win_event_object.WindowsEventObjectType

### handle

Type: *cybox.objects.win_handle_object.WinHandle*
XML Binding class name: Handle
Dictionary key name: handle

### name

Type: *cybox.common.properties.String*
XML Binding class name: Name
Dictionary key name: name

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**type_**

> Type: *cybox.common.properties.String*
> XML Binding class name: Type
> Dictionary key name: type

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## cybox.objects.win_executable_file_object module

class cybox.objects.win_executable_file_object.**DOSHeader**

> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_executable_file_object.DOSHeaderType

**e_cblp**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: e_cblp
> Dictionary key name: e_cblp

**e_cp**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: e_cp
> Dictionary key name: e_cp

**e_cparhdr**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: e_cparhdr
> Dictionary key name: e_cparhdr

**e_crlc**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: e_crlc
> Dictionary key name: e_crlc

**e_cs**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: e_cs
> Dictionary key name: e_cs

**e_csum**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: e_csum

Dictionary key name: e_csum

**e_ip**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_ip
Dictionary key name: e_ip

**e_lfanew**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_lfanew
Dictionary key name: e_lfanew

**e_lfarlc**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_lfarlc
Dictionary key name: e_lfarlc

**e_magic**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_magic
Dictionary key name: e_magic

**e_maxalloc**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_maxalloc
Dictionary key name: e_maxalloc

**e_minalloc**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_minalloc
Dictionary key name: e_minalloc

**e_oemid**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_oemid
Dictionary key name: e_oemid

**e_oeminfo**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_oeminfo
Dictionary key name: e_oeminfo

**e_ovro**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_ovro
Dictionary key name: e_ovro

**e_sp**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_sp
Dictionary key name: e_sp

**e_ss**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: e_ss
Dictionary key name: e_ss

**hashes**

Type: *cybox.common.hashes.HashList*
XML Binding class name: Hashes
Dictionary key name: hashes

**reserved2**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: reserved2
Dictionary key name: reserved2

class cybox.objects.win_executable_file_object.**DataDirectory**
    Bases: cybox.Entity

XML binding class: cybox.bindings.win_executable_file_object.DataDirectoryType

**architecture**

Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
XML Binding class name: Architecture
Dictionary key name: architecture

**base_relocation_table**

Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
XML Binding class name: Base_Relocation_Table
Dictionary key name: base_relocation_table

**bound_import**

Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
XML Binding class name: Bound_Import

Dictionary key name: bound_import

**certificate_table**

Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
XML Binding class name: Certificate_Table
Dictionary key name: certificate_table

**clr_runtime_header**

Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
XML Binding class name: CLR_Runtime_Header
Dictionary key name: clr_runtime_header

**debug**

Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
XML Binding class name: Debug
Dictionary key name: debug

**delay_import_descriptor**

Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
XML Binding class name: Delay_Import_Descriptor
Dictionary key name: delay_import_descriptor

**exception_table**

Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
XML Binding class name: Exception_Table
Dictionary key name: exception_table

**export_table**

Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
XML Binding class name: Export_Table
Dictionary key name: export_table

**global_ptr**

Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
XML Binding class name: Global_Ptr
Dictionary key name: global_ptr

**import_address_table**

Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
XML Binding class name: Import_Address_Table
Dictionary key name: import_address_table

**import_table**

> > Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
> > XML Binding class name: Import_Table
> > Dictionary key name: import_table

> **load_config_table**

> > Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
> > XML Binding class name: Load_Config_Table
> > Dictionary key name: load_config_table

> **reserved**

> > Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
> > XML Binding class name: Reserved
> > Dictionary key name: reserved

> **resource_table**

> > Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
> > XML Binding class name: Resource_Table
> > Dictionary key name: resource_table

> **tls_table**

> > Type: *cybox.objects.win_executable_file_object.PEDataDirectoryStruct*
> > XML Binding class name: Tls_Table
> > Dictionary key name: tls_table

**class** cybox.objects.win_executable_file_object.**Entropy**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_executable_file_object.EntropyType

> **max**

> > Type: *cybox.common.properties.Float*
> > XML Binding class name: Max
> > Dictionary key name: max

> **min**

> > Type: *cybox.common.properties.Float*
> > XML Binding class name: Min
> > Dictionary key name: min

> **value**

> > Type: *cybox.common.properties.Float*
> > XML Binding class name: Value

Dictionary key name: `value`

**class** `cybox.objects.win_executable_file_object.`**`PEBuildInformation`**
    Bases: `cybox.Entity`

XML binding class:
`cybox.bindings.win_executable_file_object.PEBuildInformationType`

**compiler_name**

Type: *`cybox.common.properties.String`*
XML Binding class name: `Compiler_Name`
Dictionary key name: `compiler_name`

**compiler_version**

Type: *`cybox.common.properties.String`*
XML Binding class name: `Compiler_Version`
Dictionary key name: `compiler_version`

**linker_name**

Type: *`cybox.common.properties.String`*
XML Binding class name: `Linker_Name`
Dictionary key name: `linker_name`

**linker_version**

Type: *`cybox.common.properties.String`*
XML Binding class name: `Linker_Version`
Dictionary key name: `linker_version`

**class** `cybox.objects.win_executable_file_object.`**`PEChecksum`**
    Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PEChecksumType`

**pe_computed_api**

Type: *`cybox.common.properties.Long`*
XML Binding class name: `PE_Computed_API`
Dictionary key name: `pe_computed_api`

**pe_file_api**

Type: *`cybox.common.properties.Long`*
XML Binding class name: `PE_File_API`
Dictionary key name: `pe_file_api`

**pe_file_raw**

> Type: *cybox.common.properties.Long*
> XML Binding class name: PE_File_Raw
> Dictionary key name: pe_file_raw

class cybox.objects.win_executable_file_object.**PEDataDirectoryStruct**
    Bases: cybox.Entity

XML binding class:
cybox.bindings.win_executable_file_object.PEDataDirectoryStructType

**size**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Size
> Dictionary key name: size

**virtual_address**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Virtual_Address
> Dictionary key name: virtual_address

class cybox.objects.win_executable_file_object.**PEExportedFunction**
    Bases: cybox.Entity

XML binding class:
cybox.bindings.win_executable_file_object.PEExportedFunctionType

**entry_point**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Entry_Point
> Dictionary key name: entry_point

**function_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Function_Name
> Dictionary key name: function_name

**ordinal**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Ordinal
> Dictionary key name: ordinal

---

**class** cybox.objects.win_executable_file_object.**PEExportedFunctions**(*\*args*)
    Bases: cybox.EntityList


    XML binding class:
    cybox.bindings.win_executable_file_object.PEExportedFunctionsType


**class** cybox.objects.win_executable_file_object.**PEExports**
    Bases: cybox.Entity


    XML binding class: cybox.bindings.win_executable_file_object.PEExportsType


    **exported_functions**


        Type: *cybox.objects.win_executable_file_object.PEExportedFunctions*
        XML Binding class name: Exported_Functions
        Dictionary key name: exported_functions

    **exports_time_stamp**


        Type: *cybox.common.properties.DateTime*
        XML Binding class name: Exports_Time_Stamp
        Dictionary key name: exports_time_stamp

    **name**


        Type: *cybox.common.properties.String*
        XML Binding class name: Name
        Dictionary key name: name

    **number_of_addresses**


        Type: *cybox.common.properties.Long*
        XML Binding class name: Number_Of_Addresses
        Dictionary key name: number_of_addresses

    **number_of_functions**


        Type: *cybox.common.properties.Integer*
        XML Binding class name: Number_Of_Functions
        Dictionary key name: number_of_functions

    **number_of_names**


        Type: *cybox.common.properties.Long*
        XML Binding class name: Number_Of_Names
        Dictionary key name: number_of_names

**class** cybox.objects.win_executable_file_object.**PEFileHeader**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.win_executable_file_object.PEFileHeaderType

    **characteristics**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Characteristics
        Dictionary key name: characteristics

    **hashes**

        Type: *cybox.common.hashes.HashList*
        XML Binding class name: Hashes
        Dictionary key name: hashes

    **machine**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Machine
        Dictionary key name: machine

    **number_of_sections**

        Type: *cybox.common.properties.NonNegativeInteger*
        XML Binding class name: Number_Of_Sections
        Dictionary key name: number_of_sections

    **number_of_symbols**

        Type: *cybox.common.properties.NonNegativeInteger*
        XML Binding class name: Number_Of_Symbols
        Dictionary key name: number_of_symbols

    **pointer_to_symbol_table**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Pointer_To_Symbol_Table
        Dictionary key name: pointer_to_symbol_table

    **size_of_optional_header**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Size_Of_Optional_Header
        Dictionary key name: size_of_optional_header

    **time_date_stamp**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Time_Date_Stamp
Dictionary key name: time_date_stamp

**class** cybox.objects.win_executable_file_object.**PEHeaders**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.win_executable_file_object.PEHeadersType

    **dos_header**

        Type: *cybox.objects.win_executable_file_object.DOSHeader*
        XML Binding class name: DOS_Header
        Dictionary key name: dos_header

    **entropy**

        Type: *cybox.objects.win_executable_file_object.Entropy*
        XML Binding class name: Entropy
        Dictionary key name: entropy

    **file_header**

        Type: *cybox.objects.win_executable_file_object.PEFileHeader*
        XML Binding class name: File_Header
        Dictionary key name: file_header

    **hashes**

        Type: *cybox.common.hashes.HashList*
        XML Binding class name: Hashes
        Dictionary key name: hashes

    **optional_header**

        Type: *cybox.objects.win_executable_file_object.PEOptionalHeader*
        XML Binding class name: Optional_Header
        Dictionary key name: optional_header

    **signature**

        Type: *cybox.common.properties.HexBinary*
        XML Binding class name: Signature
        Dictionary key name: signature

**class** cybox.objects.win_executable_file_object.**PEImport**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.win_executable_file_object.PEImportType

**delay_load**

>   XML Binding class name: delay_load
>   Dictionary key name: delay_load

**file_name**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: File_Name
>   Dictionary key name: file_name

**imported_functions**

>   Type: *cybox.objects.win_executable_file_object.PEImportedFunctions*
>   XML Binding class name: Imported_Functions
>   Dictionary key name: imported_functions

**initially_visible**

>   XML Binding class name: initially_visible
>   Dictionary key name: initially_visible

**virtual_address**

>   Type: *cybox.common.properties.HexBinary*
>   XML Binding class name: Virtual_Address
>   Dictionary key name: virtual_address

class cybox.objects.win_executable_file_object.**PEImportList**(*args*)
>   Bases: cybox.EntityList

>   XML binding class: cybox.bindings.win_executable_file_object.PEImportListType

class cybox.objects.win_executable_file_object.**PEImportedFunction**
>   Bases: cybox.Entity

>   XML binding class:
>   cybox.bindings.win_executable_file_object.PEImportedFunctionType

**bound**

>   Type: *cybox.common.properties.HexBinary*
>   XML Binding class name: Bound
>   Dictionary key name: bound

**function_name**

>   Type: *cybox.common.properties.String*

XML Binding class name: Function_Name

Dictionary key name: function_name

**hint**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Hint

Dictionary key name: hint

**ordinal**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Ordinal

Dictionary key name: ordinal

**virtual_address**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Virtual_Address

Dictionary key name: virtual_address

class cybox.objects.win_executable_file_object.**PEImportedFunctions**(*args*)

Bases: cybox.EntityList

XML binding class:
cybox.bindings.win_executable_file_object.PEImportedFunctionsType

class cybox.objects.win_executable_file_object.**PEOptionalHeader**

Bases: cybox.Entity

XML binding class:
cybox.bindings.win_executable_file_object.PEOptionalHeaderType

**address_of_entry_point**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Address_Of_Entry_Point

Dictionary key name: address_of_entry_point

**base_of_code**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Base_Of_Code

Dictionary key name: base_of_code

**base_of_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Base_Of_Data

Dictionary key name: base_of_data

**checksum**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Checksum

Dictionary key name: checksum

**data_directory**

Type: *cybox.objects.win_executable_file_object.DataDirectory*

XML Binding class name: Data_Directory

Dictionary key name: data_directory

**dll_characteristics**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: DLL_Characteristics

Dictionary key name: dll_characteristics

**file_alignment**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: File_Alignment

Dictionary key name: file_alignment

**hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Hashes

Dictionary key name: hashes

**image_base**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Image_Base

Dictionary key name: image_base

**loader_flags**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Loader_Flags

Dictionary key name: loader_flags

**magic**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Magic

Dictionary key name: magic

**major_image_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Major_Image_Version
> Dictionary key name: major_image_version

**major_linker_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Major_Linker_Version
> Dictionary key name: major_linker_version

**major_os_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Major_OS_Version
> Dictionary key name: major_os_version

**major_subsystem_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Major_Subsystem_Version
> Dictionary key name: major_subsystem_version

**minor_image_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Minor_Image_Version
> Dictionary key name: minor_image_version

**minor_linker_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Minor_Linker_Version
> Dictionary key name: minor_linker_version

**minor_os_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Minor_OS_Version
> Dictionary key name: minor_os_version

**minor_subsystem_version**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Minor_Subsystem_Version
> Dictionary key name: minor_subsystem_version

**number_of_rva_and_sizes**

> Type: *cybox.common.properties.HexBinary*

XML Binding class name: Number_Of_Rva_And_Sizes

Dictionary key name: number_of_rva_and_sizes

**section_alignment**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Section_Alignment

Dictionary key name: section_alignment

**size_of_code**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Code

Dictionary key name: size_of_code

**size_of_headers**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Headers

Dictionary key name: size_of_headers

**size_of_heap_commit**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Heap_Commit

Dictionary key name: size_of_heap_commit

**size_of_heap_reserve**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Heap_Reserve

Dictionary key name: size_of_heap_reserve

**size_of_image**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Image

Dictionary key name: size_of_image

**size_of_initialized_data**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Initialized_Data

Dictionary key name: size_of_initialized_data

**size_of_stack_commit**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Size_Of_Stack_Commit

Dictionary key name: size_of_stack_commit

**size_of_stack_reserve**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Size_Of_Stack_Reserve
> Dictionary key name: size_of_stack_reserve

**size_of_uninitialized_data**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Size_Of_Uninitialized_Data
> Dictionary key name: size_of_uninitialized_data

**subsystem**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Subsystem
> Dictionary key name: subsystem

**win32_version_value**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Win32_Version_Value
> Dictionary key name: win32_version_value

**class** cybox.objects.win_executable_file_object.**PEResource**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_executable_file_object.PEResourceType

**data**

> Type: *cybox.common.properties.String*
> XML Binding class name: Data
> Dictionary key name: data

**hashes**

> Type: *cybox.common.hashes.HashList*
> XML Binding class name: Hashes
> Dictionary key name: hashes

**language**

> Type: *cybox.common.properties.String*
> XML Binding class name: Language
> Dictionary key name: language

**name**

Type: [*cybox.common.properties.String*](#)
XML Binding class name: `Name`
Dictionary key name: `name`

**size**

Type: [*cybox.common.properties.PositiveInteger*](#)
XML Binding class name: `Size`
Dictionary key name: `size`

**sub_language**

Type: [*cybox.common.properties.String*](#)
XML Binding class name: `Sub_Language`
Dictionary key name: `sub_language`

**type_**

Type: [*cybox.common.properties.String*](#)
XML Binding class name: `Type`
Dictionary key name: `type`

**virtual_address**

Type: [*cybox.common.properties.HexBinary*](#)
XML Binding class name: `Virtual_Address`
Dictionary key name: `virtual_address`

**class** cybox.objects.win_executable_file_object.**PEResourceList**(*\*args*)
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_executable_file_object.PEResourceListType`

static **from_list**(*pe_resource_list*)

**class** cybox.objects.win_executable_file_object.**PESection**
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_executable_file_object.PESectionType`

**data_hashes**

Type: [*cybox.common.hashes.HashList*](#)
XML Binding class name: `Data_Hashes`
Dictionary key name: `data_hashes`

**entropy**

Type: [*cybox.objects.win_executable_file_object.Entropy*](#)

XML Binding class name: Entropy

Dictionary key name: entropy

**header_hashes**

Type: *cybox.common.hashes.HashList*

XML Binding class name: Header_Hashes

Dictionary key name: header_hashes

**section_header**

Type: *cybox.objects.win_executable_file_object.PESectionHeaderStruct*

XML Binding class name: Section_Header

Dictionary key name: section_header

**class** cybox.objects.win_executable_file_object.**PESectionHeaderStruct**

Bases: cybox.Entity

XML binding class:
cybox.bindings.win_executable_file_object.PESectionHeaderStructType

**characteristics**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Characteristics

Dictionary key name: characteristics

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**number_of_linenumbers**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Number_Of_Linenumbers

Dictionary key name: number_of_linenumbers

**number_of_relocations**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Number_Of_Relocations

Dictionary key name: number_of_relocations

**pointer_to_linenumbers**

Type: *cybox.common.properties.HexBinary*

XML Binding class name: Pointer_To_Linenumbers

Dictionary key name: pointer_to_linenumbers

**pointer_to_raw_data**

>    Type: *cybox.common.properties.HexBinary*
>    XML Binding class name: `Pointer_To_Raw_Data`
>    Dictionary key name: `pointer_to_raw_data`

**pointer_to_relocations**

>    Type: *cybox.common.properties.HexBinary*
>    XML Binding class name: `Pointer_To_Relocations`
>    Dictionary key name: `pointer_to_relocations`

**size_of_raw_data**

>    Type: *cybox.common.properties.HexBinary*
>    XML Binding class name: `Size_Of_Raw_Data`
>    Dictionary key name: `size_of_raw_data`

**virtual_address**

>    Type: *cybox.common.properties.HexBinary*
>    XML Binding class name: `Virtual_Address`
>    Dictionary key name: `virtual_address`

**virtual_size**

>    Type: *cybox.common.properties.HexBinary*
>    XML Binding class name: `Virtual_Size`
>    Dictionary key name: `virtual_size`

**class** cybox.objects.win_executable_file_object.**PESectionList**(*\*args*)
> Bases: `cybox.EntityList`

> XML binding class: `cybox.bindings.win_executable_file_object.PESectionListType`

**class** cybox.objects.win_executable_file_object.**PEVersionInfoResource**
> Bases: *cybox.objects.win_executable_file_object.PEResource*

> XML binding class:
> `cybox.bindings.win_executable_file_object.PEVersionInfoResourceType`

**comments**

>    Type: *cybox.common.properties.String*
>    XML Binding class name: `Comments`
>    Dictionary key name: `comments`

**companyname**

> Type: *cybox.common.properties.String*
> XML Binding class name: CompanyName
> Dictionary key name: companyname

**filedescription**

> Type: *cybox.common.properties.String*
> XML Binding class name: FileDescription
> Dictionary key name: filedescription

**fileversion**

> Type: *cybox.common.properties.String*
> XML Binding class name: FileVersion
> Dictionary key name: fileversion

**internalname**

> Type: *cybox.common.properties.String*
> XML Binding class name: InternalName
> Dictionary key name: internalname

static **keyword_test**(*pe_resource_dict*)

**langid**

> Type: *cybox.common.properties.String*
> XML Binding class name: LangID
> Dictionary key name: langid

**legalcopyright**

> Type: *cybox.common.properties.String*
> XML Binding class name: LegalCopyright
> Dictionary key name: legalcopyright

**legaltrademarks**

> Type: *cybox.common.properties.String*
> XML Binding class name: LegalTrademarks
> Dictionary key name: legaltrademarks

**originalfilename**

> Type: *cybox.common.properties.String*
> XML Binding class name: OriginalFilename
> Dictionary key name: originalfilename

**privatebuild**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: `PrivateBuild`
> > Dictionary key name: `privatebuild`

> **productname**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: `ProductName`
> > Dictionary key name: `productname`

> **productversion**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: `ProductVersion`
> > Dictionary key name: `productversion`

> **specialbuild**

> > Type: *cybox.common.properties.String*
> > XML Binding class name: `SpecialBuild`
> > Dictionary key name: `specialbuild`

**class** cybox.objects.win_executable_file_object.**WinExecutableFile**
> Bases: *cybox.objects.win_file_object.WinFile*

> XML binding class:
> cybox.bindings.win_executable_file_object.WindowsExecutableFileObjectType

> **build_information**

> > Type: *cybox.objects.win_executable_file_object.PEBuildInformation*
> > XML Binding class name: `Build_Information`
> > Dictionary key name: `build_information`

> **digital_signature**

> > Type: *cybox.common.digitalsignature.DigitalSignature*
> > XML Binding class name: `Digital_Signature`
> > Dictionary key name: `digital_signature`

> **exports**

> > Type: *cybox.objects.win_executable_file_object.PEExports*
> > XML Binding class name: `Exports`
> > Dictionary key name: `exports`

> **extraneous_bytes**

> > Type: *cybox.common.properties.Integer*
> > XML Binding class name: `Extraneous_Bytes`

Dictionary key name: extraneous_bytes

**headers**

Type: *cybox.objects.win_executable_file_object.PEHeaders*
XML Binding class name: Headers
Dictionary key name: headers

**imports**

Type: *cybox.objects.win_executable_file_object.PEImportList*
XML Binding class name: Imports
Dictionary key name: imports

**pe_checksum**

Type: *cybox.objects.win_executable_file_object.PEChecksum*
XML Binding class name: PE_Checksum
Dictionary key name: pe_checksum

**resources**

Type: *cybox.objects.win_executable_file_object.PEResourceList*
XML Binding class name: Resources
Dictionary key name: resources

**sections**

Type: *cybox.objects.win_executable_file_object.PESectionList*
XML Binding class name: Sections
Dictionary key name: sections

**type_**

Type: *cybox.common.properties.String*
XML Binding class name: Type
Dictionary key name: type

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## cybox.objects.win_file_object module

class cybox.objects.win_file_object.**Stream**
    Bases: cybox.Entity

    XML binding class: cybox.bindings.win_file_object.StreamObjectType

    **hashes**

(List of values permitted)

Type: *cybox.common.hashes.Hash*

XML Binding class name: Hash

Dictionary key name: hashes

**name**

Type: *cybox.common.properties.String*

XML Binding class name: Name

Dictionary key name: name

**size_in_bytes**

Type: *cybox.common.properties.UnsignedLong*

XML Binding class name: Size_In_Bytes

Dictionary key name: size_in_bytes

class cybox.objects.win_file_object.**StreamList**(*args*)

Bases: cybox.EntityList

XML binding class: cybox.bindings.win_file_object.StreamListType

class cybox.objects.win_file_object.**WinFile**

Bases: *cybox.objects.file_object.File*

XML binding class: cybox.bindings.win_file_object.WindowsFileObjectType

**drive**

Type: *cybox.common.properties.String*

XML Binding class name: Drive

Dictionary key name: drive

**file_attributes_list**

Type: *cybox.objects.win_file_object.WindowsFileAttributes*

XML Binding class name: File_Attributes_List

Dictionary key name: file_attributes_list

**filename_accessed_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Filename_Accessed_Time

Dictionary key name: filename_accessed_time

**filename_created_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Filename_Created_Time

Dictionary key name: filename_created_time

**filename_modified_time**

Type: *cybox.common.properties.DateTime*

XML Binding class name: Filename_Modified_Time

Dictionary key name: filename_modified_time

**privilege_list**

Type: *cybox.objects.win_file_object.WindowsFilePermissions*

XML Binding class name: Permissions

Dictionary key name: permissions

**security_id**

Type: *cybox.common.properties.String*

XML Binding class name: Security_ID

Dictionary key name: security_id

**security_type**

Type: *cybox.common.properties.String*

XML Binding class name: Security_Type

Dictionary key name: security_type

**stream_list**

Type: *cybox.objects.win_file_object.StreamList*

XML Binding class name: Stream_List

Dictionary key name: stream_list

class cybox.objects.win_file_object.**WindowsFileAttribute**(*value=None*)

Bases: *cybox.common.properties.String*

XML binding class: cybox.bindings.win_file_object.WindowsFileAttributeType

class cybox.objects.win_file_object.**WindowsFileAttributes**(*\*args*)

Bases: *cybox.objects.file_object.FileAttribute*, cybox.EntityList

XML binding class: cybox.bindings.win_file_object.WindowsFileAttributesType

class cybox.objects.win_file_object.**WindowsFilePermissions**

Bases: *cybox.objects.file_object.FilePermissions*, cybox.Entity

XML binding class: cybox.bindings.win_file_object.WindowsFilePermissionsType

**full_control**

> XML Binding class name: Full_Control
>
> Dictionary key name: full_control

**modify**

> XML Binding class name: Modify
>
> Dictionary key name: modify

**read**

> XML Binding class name: Read
>
> Dictionary key name: read

**read_and_execute**

> XML Binding class name: Read_And_Execute
>
> Dictionary key name: read_and_execute

**write**

> XML Binding class name: Write
>
> Dictionary key name: write

**Version**: 2.1.0.12.dev0

### cybox.objects.win_filemapping_object module

class cybox.objects.win_filemapping_object.**WinFilemapping**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class:
> cybox.bindings.win_filemapping_object.WindowsFilemappingObjectType

> **actual_size**
>
> > Type: *cybox.common.properties.UnsignedLong*
> >
> > XML Binding class name: Actual_Size
> >
> > Dictionary key name: actual_size
>
> **file_handle**
>
> > Type: *cybox.objects.win_handle_object.WinHandle*
> >
> > XML Binding class name: File_Handle
> >
> > Dictionary key name: file_handle
>
> **handle**

Type: *cybox.objects.win_handle_object.WinHandle*
XML Binding class name: Handle
Dictionary key name: handle

### maximum_size

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: Maximum_Size
Dictionary key name: maximum_size

### name

Type: *cybox.common.properties.String*
XML Binding class name: Name
Dictionary key name: name

### page_protection_attribute

(List of values permitted)
Type: *cybox.common.properties.String*
XML Binding class name: Page_Protection_Attribute
Dictionary key name: page_protection_attribute

### page_protection_value

Type: *cybox.common.properties.String*
XML Binding class name: Page_Protection_Value
Dictionary key name: page_protection_value

### security_attributes

Type: *cybox.common.properties.String*
XML Binding class name: Security_Attributes
Dictionary key name: security_attributes

**Version**: 2.1.0.12.dev0

## cybox.objects.win_handle_object module

class cybox.objects.win_handle_object.**WinHandle**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.win_handle_object.WindowsHandleObjectType

### access_mask

Type: *cybox.common.properties.UnsignedLong*
XML Binding class name: Access_Mask
Dictionary key name: access_mask

**id_**

> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: ID
> Dictionary key name: id

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**object_address**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Object_Address
> Dictionary key name: object_address

**pointer_count**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Pointer_Count
> Dictionary key name: pointer_count

**type_**

> Type: *cybox.common.properties.String*
> XML Binding class name: Type
> Dictionary key name: type

**class** cybox.objects.win_handle_object.**WinHandleList**(*\*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.win_handle_object.WindowsHandleListType

**Version**: 2.1.0.12.dev0

## cybox.objects.win_hook_object module

**class** cybox.objects.win_hook_object.**WinHook**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.win_hook_object.WindowsHookObjectType

**handle**

> Type: *cybox.objects.win_handle_object.WinHandle*

XML Binding class name: `Handle`

Dictionary key name: `handle`

**hooking_function_name**

Type: *cybox.common.properties.String*

XML Binding class name: `Hooking_Function_Name`

Dictionary key name: `hooking_function_name`

**hooking_module**

Type: *cybox.objects.library_object.Library*

XML Binding class name: `Hooking_Module`

Dictionary key name: `hooking_module`

**thread_id**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: `Thread_ID`

Dictionary key name: `thread_id`

**type_**

Type: *cybox.common.properties.String*

XML Binding class name: `Type`

Dictionary key name: `type`

**Version**: 2.1.0.12.dev0

## cybox.objects.win_kernel_hook_object module

class cybox.objects.win_kernel_hook_object.**WinKernelHook**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class:
cybox.bindings.win_kernel_hook_object.WindowsKernelHookObjectType

**digital_signature_hooked**

Type: *cybox.common.digitalsignature.DigitalSignature*

XML Binding class name: `Digital_Signature_Hooked`

Dictionary key name: `digital_signature_hooked`

**digital_signature_hooking**

Type: *cybox.common.digitalsignature.DigitalSignature*

XML Binding class name: `Digital_Signature_Hooking`

Dictionary key name: `digital_signature_hooking`

**hook_description**

> Type: *cybox.common.properties.String*
> XML Binding class name: Hook_Description
> Dictionary key name: hook_description

**hooked_function**

> Type: *cybox.common.properties.String*
> XML Binding class name: Hooked_Function
> Dictionary key name: hooked_function

**hooked_module**

> Type: *cybox.common.properties.String*
> XML Binding class name: Hooked_Module
> Dictionary key name: hooked_module

**hooking_address**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Hooking_Address
> Dictionary key name: hooking_address

**hooking_module**

> Type: *cybox.common.properties.String*
> XML Binding class name: Hooking_Module
> Dictionary key name: hooking_module

**type_**

> Type: *cybox.common.properties.String*
> XML Binding class name: Type
> Dictionary key name: type

**Version**: 2.1.0.12.dev0

## cybox.objects.win_kernel_object module

class cybox.objects.win_kernel_object.**IDTEntry**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_kernel_object.IDTEntryType

**offset_high**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Offset_High

> Dictionary key name: offset_high

> **offset_low**

>> Type: *cybox.common.properties.HexBinary*
>> XML Binding class name: Offset_Low
>> Dictionary key name: offset_low

> **offset_middle**

>> Type: *cybox.common.properties.HexBinary*
>> XML Binding class name: Offset_Middle
>> Dictionary key name: offset_middle

> **selector**

>> Type: *cybox.common.properties.HexBinary*
>> XML Binding class name: Selector
>> Dictionary key name: selector

> **type_attr**

>> Type: *cybox.common.properties.HexBinary*
>> XML Binding class name: Type_Attr
>> Dictionary key name: type_attr

**class** cybox.objects.win_kernel_object.**IDTEntryList**(*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.win_kernel_object.IDTEntryListType

**class** cybox.objects.win_kernel_object.**SSDTEntry**

> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_kernel_object.SSDTEntryType

> **argument_table_base**

>> Type: *cybox.common.properties.HexBinary*
>> XML Binding class name: Argument_Table_Base
>> Dictionary key name: argument_table_base

> **hooked**

>> XML Binding class name: hooked
>> Dictionary key name: hooked

> **number_of_services**

>> Type: *cybox.common.properties.NonNegativeInteger*
>> XML Binding class name: Number_Of_Services
>> Dictionary key name: number_of_services

> **service_counter_table_base**

>> Type: *cybox.common.properties.HexBinary*
>> XML Binding class name: Service_Counter_Table_Base
>> Dictionary key name: service_counter_table_base

> **service_table_base**

>> Type: *cybox.common.properties.HexBinary*
>> XML Binding class name: Service_Table_Base
>> Dictionary key name: service_table_base

**class** cybox.objects.win_kernel_object.**SSDTEntryList**(*args*)

> Bases: cybox.EntityList

> XML binding class: cybox.bindings.win_kernel_object.SSDTEntryListType

**class** cybox.objects.win_kernel_object.**WinKernel**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.win_kernel_object.WindowsKernelObjectType

> **idt**

>> Type: *cybox.objects.win_kernel_object.IDTEntryList*
>> XML Binding class name: IDT
>> Dictionary key name: idt

> **ssdt**

>> Type: *cybox.objects.win_kernel_object.SSDTEntryList*
>> XML Binding class name: SSDT
>> Dictionary key name: ssdt

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## cybox.objects.win_mailslot_object module

**class** cybox.objects.win_mailslot_object.**WinMailslot**

> Bases: *cybox.common.object_properties.ObjectProperties*

> XML binding class: cybox.bindings.win_mailslot_object.WindowsMailslotObjectType

**handle**

> Type: *cybox.objects.win_handle_object.WinHandle*
> XML Binding class name: Handle
> Dictionary key name: handle

**max_message_size**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Max_Message_Size
> Dictionary key name: max_message_size

**name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Name
> Dictionary key name: name

**read_timeout**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Read_Timeout
> Dictionary key name: read_timeout

**security_attributes**

> Type: *cybox.common.properties.String*
> XML Binding class name: Security_Attributes
> Dictionary key name: security_attributes

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## cybox.objects.win_memory_page_region_object module

class cybox.objects.win_memory_page_region_object.**WinMemoryPageRegion**
> Bases: *cybox.objects.memory_object.Memory*

> XML binding class:
> cybox.bindings.win_memory_page_region_object.WindowsMemoryPageRegionObjectType

**allocation_base_address**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Allocation_Base_Address
> Dictionary key name: allocation_base_address

**allocation_protect**

> Type: *cybox.common.properties.String*

XML Binding class name: `Allocation_Protect`

Dictionary key name: `allocation_protect`

**block_type**

Type: *`cybox.common.properties.String`*

XML Binding class name: `Block_Type`

Dictionary key name: `block_type`

**extracted_features**

Type: *`cybox.common.extracted_features.ExtractedFeatures`*

XML Binding class name: `Extracted_Features`

Dictionary key name: `extracted_features`

**hashes**

Type: *`cybox.common.hashes.HashList`*

XML Binding class name: `Hashes`

Dictionary key name: `hashes`

**is_injected**

XML Binding class name: `is_injected`

Dictionary key name: `is_injected`

**is_mapped**

XML Binding class name: `is_mapped`

Dictionary key name: `is_mapped`

**is_protected**

XML Binding class name: `is_protected`

Dictionary key name: `is_protected`

**is_volatile**

XML Binding class name: `is_volatile`

Dictionary key name: `is_volatile`

**memory_source**

Type: *`cybox.common.properties.String`*

XML Binding class name: `Memory_Source`

Dictionary key name: `memory_source`

**name**

Type: *`cybox.common.properties.String`*

XML Binding class name: `Name`

Dictionary key name: `name`

**protect**

> Type: *cybox.common.properties.String*
> XML Binding class name: Protect
> Dictionary key name: protect

**region_end_address**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Region_End_Address
> Dictionary key name: region_end_address

**region_size**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Region_Size
> Dictionary key name: region_size

**region_start_address**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Region_Start_Address
> Dictionary key name: region_start_address

**state**

> Type: *cybox.common.properties.String*
> XML Binding class name: State
> Dictionary key name: state

**type_**

> Type: *cybox.common.properties.String*
> XML Binding class name: Type
> Dictionary key name: type

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## cybox.objects.win_mutex_object module

class cybox.objects.win_mutex_object.**WinMutex**
> Bases: *cybox.objects.mutex_object.Mutex*

> XML binding class: cybox.bindings.win_mutex_object.WindowsMutexObjectType

**handle**

> Type: *cybox.objects.win_handle_object.WinHandle*
> XML Binding class name: Handle

Dictionary key name: handle

### security_attributes

Type: *cybox.common.properties.String*
XML Binding class name: Security_Attributes
Dictionary key name: security_attributes

**Version**: 2.1.0.12.dev0

## cybox.objects.win_network_route_entry_object module

class cybox.objects.win_network_route_entry_object.**WinNetworkRouteEntry**
    Bases: *cybox.objects.network_route_entry_object.NetworkRouteEntry*

XML binding class:
cybox.bindings.win_network_route_entry_object.WindowsNetworkRouteEntryObjectType

### nl_route_origin

Type: *cybox.common.properties.String*
XML Binding class name: NL_ROUTE_ORIGIN
Dictionary key name: nl_route_origin

### nl_route_protocol

Type: *cybox.common.properties.String*
XML Binding class name: NL_ROUTE_PROTOCOL
Dictionary key name: nl_route_protocol

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## cybox.objects.win_network_share_object module

class cybox.objects.win_network_share_object.**WinNetworkShare**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class:
cybox.bindings.win_network_share_object.WindowsNetworkShareObjectType

### access_all

XML Binding class name: ACCESS_ALL
Dictionary key name: access_all

### access_atrib

XML Binding class name: ACCESS_ATRIB

Dictionary key name: access_atrib

**access_create**

XML Binding class name: ACCESS_CREATE

Dictionary key name: access_create

**access_delete**

XML Binding class name: ACCESS_DELETE

Dictionary key name: access_delete

**access_exec**

XML Binding class name: ACCESS_EXEC

Dictionary key name: access_exec

**access_perm**

XML Binding class name: ACCESS_PERM

Dictionary key name: access_perm

**access_read**

XML Binding class name: ACCESS_READ

Dictionary key name: access_read

**access_write**

XML Binding class name: ACCESS_WRITE

Dictionary key name: access_write

**current_uses**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Current_Uses

Dictionary key name: current_uses

**local_path**

Type: *cybox.common.properties.String*

XML Binding class name: Local_Path

Dictionary key name: local_path

**max_uses**

Type: *cybox.common.properties.NonNegativeInteger*

XML Binding class name: Max_Uses

Dictionary key name: max_uses

**netname**

> Type: *cybox.common.properties.String*
> XML Binding class name: Netname
> Dictionary key name: netname

**type**

> Type: *cybox.common.properties.String*
> XML Binding class name: Type
> Dictionary key name: type

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## cybox.objects.win_pipe_object module

class cybox.objects.win_pipe_object.**WinPipe**

> Bases: *cybox.objects.pipe_object.Pipe*

> XML binding class: cybox.bindings.win_pipe_object.WindowsPipeObjectType

**default_time_out**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Default_Time_Out
> Dictionary key name: default_time_out

**handle**

> Type: *cybox.objects.win_handle_object.WinHandle*
> XML Binding class name: Handle
> Dictionary key name: handle

**in_buffer_size**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: In_Buffer_Size
> Dictionary key name: in_buffer_size

**max_instances**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: Max_Instances
> Dictionary key name: max_instances

**open_mode**

> Type: *cybox.common.properties.HexBinary*
> XML Binding class name: Open_Mode

Dictionary key name: open_mode

**out_buffer_size**

Type: *cybox.common.properties.NonNegativeInteger*
XML Binding class name: Out_Buffer_Size
Dictionary key name: out_buffer_size

**pipe_mode**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Pipe_Mode
Dictionary key name: pipe_mode

**security_attributes**

Type: *cybox.common.properties.String*
XML Binding class name: Security_Attributes
Dictionary key name: security_attributes

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**cybox.objects.win_prefetch_object module**

class cybox.objects.win_prefetch_object.**AccessedDirectoryList**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.win_prefetch_object.AccessedDirectoryListType

class cybox.objects.win_prefetch_object.**AccessedFileList**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.win_prefetch_object.AccessedFileListType

class cybox.objects.win_prefetch_object.**Volume**(*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.win_prefetch_object.VolumeType

    **deviceitem**

        Type: *cybox.objects.device_object.Device*
        XML Binding class name: DeviceItem
        Dictionary key name: deviceitem

    **volumeitem**

Type: *cybox.objects.win_volume_object.WinVolume*
XML Binding class name: `VolumeItem`
Dictionary key name: `volumeitem`

**class** cybox.objects.win_prefetch_object.**WinPrefetch**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.win_prefetch_object.WindowsPrefetchObjectType

**accessed_directory_list**

Type: *cybox.objects.win_prefetch_object.AccessedDirectoryList*
XML Binding class name: `Accessed_Directory_List`
Dictionary key name: `accessed_directory_list`

**accessed_file_list**

Type: *cybox.objects.win_prefetch_object.AccessedFileList*
XML Binding class name: `Accessed_File_List`
Dictionary key name: `accessed_file_list`

**application_file_name**

Type: *cybox.common.properties.String*
XML Binding class name: `Application_File_Name`
Dictionary key name: `application_file_name`

**first_run**

Type: *cybox.common.properties.DateTime*
XML Binding class name: `First_Run`
Dictionary key name: `first_run`

**last_run**

Type: *cybox.common.properties.DateTime*
XML Binding class name: `Last_Run`
Dictionary key name: `last_run`

**prefetch_hash**

Type: *cybox.common.properties.String*
XML Binding class name: `Prefetch_Hash`
Dictionary key name: `prefetch_hash`

**times_executed**

Type: *cybox.common.properties.Long*
XML Binding class name: `Times_Executed`

> Dictionary key name: times_executed

**volume**

> Type: *cybox.objects.win_volume_object.WinVolume*
> XML Binding class name: Volume
> Dictionary key name: volume

**Version**: 2.1.0.12.dev0

## cybox.objects.win_process_object module

class cybox.objects.win_process_object.**MemorySectionList**(*args*)
    Bases: cybox.EntityList

> XML binding class: cybox.bindings.win_process_object.MemorySectionListType

class cybox.objects.win_process_object.**StartupInfo**
    Bases: cybox.Entity

> XML binding class: cybox.bindings.win_process_object.StartupInfoType

**dwfillattribute**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: dwFillAttribute
> Dictionary key name: dwfillattribute

**dwflags**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: dwFlags
> Dictionary key name: dwflags

**dwx**

> Type: *cybox.common.properties.Integer*
> XML Binding class name: dwX
> Dictionary key name: dwx

**dwxcountchars**

> Type: *cybox.common.properties.PositiveInteger*
> XML Binding class name: dwXCountChars
> Dictionary key name: dwxcountchars

**dwxsize**

Type: *cybox.common.properties.PositiveInteger*
XML Binding class name: dwXSize
Dictionary key name: dwxsize

**dwy**

Type: *cybox.common.properties.Integer*
XML Binding class name: dwY
Dictionary key name: dwy

**dwycountchars**

Type: *cybox.common.properties.PositiveInteger*
XML Binding class name: dwYCountChars
Dictionary key name: dwycountchars

**dwysize**

Type: *cybox.common.properties.PositiveInteger*
XML Binding class name: dwYSize
Dictionary key name: dwysize

**hstderror**

Type: *cybox.objects.win_handle_object.WinHandle*
XML Binding class name: hStdError
Dictionary key name: hstderror

**hstdinput**

Type: *cybox.objects.win_handle_object.WinHandle*
XML Binding class name: hStdInput
Dictionary key name: hstdinput

**hstdoutput**

Type: *cybox.objects.win_handle_object.WinHandle*
XML Binding class name: hStdOutput
Dictionary key name: hstdoutput

**lpdesktop**

Type: *cybox.common.properties.String*
XML Binding class name: lpDesktop
Dictionary key name: lpdesktop

**lptitle**

Type: *cybox.common.properties.String*
XML Binding class name: lpTitle
Dictionary key name: lptitle

**wshowwindow**

>
> Type: *cybox.common.properties.Integer*
> XML Binding class name: wShowWindow
> Dictionary key name: wshowwindow

**class** cybox.objects.win_process_object.**WinProcess**

>
> Bases: *cybox.objects.process_object.Process*

>
> XML binding class: cybox.bindings.win_process_object.WindowsProcessObjectType

**aslr_enabled**

>
> XML Binding class name: aslr_enabled
> Dictionary key name: aslr_enabled

**dep_enabled**

>
> XML Binding class name: dep_enabled
> Dictionary key name: dep_enabled

**handle_list**

>
> Type: *cybox.objects.win_handle_object.WinHandleList*
> XML Binding class name: Handle_List
> Dictionary key name: handle_list

**priority**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Priority
> Dictionary key name: priority

**section_list**

>
> Type: *cybox.objects.win_process_object.MemorySectionList*
> XML Binding class name: Section_List
> Dictionary key name: section_list

**security_id**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Security_ID
> Dictionary key name: security_id

**security_type**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Security_Type

Dictionary key name: `security_type`

**startup_info**

Type: *cybox.objects.win_process_object.StartupInfo*
XML Binding class name: `Startup_Info`
Dictionary key name: `startup_info`

**thread**

(List of values permitted)
Type: *cybox.objects.win_thread_object.WinThread*
XML Binding class name: `Thread`
Dictionary key name: `thread`

**window_title**

Type: *cybox.common.properties.String*
XML Binding class name: `Window_Title`
Dictionary key name: `window_title`

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## cybox.objects.win_registry_key_object module

class cybox.objects.win_registry_key_object.**RegistrySubkeys**(*\*args*)
Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_registry_key_object.RegistrySubkeysType`

class cybox.objects.win_registry_key_object.**RegistryValue**
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_registry_key_object.RegistryValueType`

**byte_runs**

Type: *cybox.common.byterun.ByteRuns*
XML Binding class name: `Byte_Runs`
Dictionary key name: `byte_runs`

**data**

Type: *cybox.common.properties.String*
XML Binding class name: `Data`
Dictionary key name: `data`

**datatype**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Datatype
>   Dictionary key name: datatype

**name**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Name
>   Dictionary key name: name

class cybox.objects.win_registry_key_object.**RegistryValues**(*args*)
>   Bases: cybox.EntityList


>   XML binding class: cybox.bindings.win_registry_key_object.RegistryValuesType


class cybox.objects.win_registry_key_object.**WinRegistryKey**
>   Bases: *cybox.common.object_properties.ObjectProperties*


>   XML binding class:
>   cybox.bindings.win_registry_key_object.WindowsRegistryKeyObjectType


**byte_runs**

>   Type: *cybox.common.byterun.ByteRuns*
>   XML Binding class name: Byte_Runs
>   Dictionary key name: byte_runs

**creator_username**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Creator_Username
>   Dictionary key name: creator_username

**handle_list**

>   Type: *cybox.objects.win_handle_object.WinHandleList*
>   XML Binding class name: Handle_List
>   Dictionary key name: handle_list

**hive**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Hive
>   Dictionary key name: hive

**key**

>
> Type: *cybox.common.properties.String*
> XML Binding class name: Key
> Dictionary key name: key

**modified_time**

>
> Type: *cybox.common.properties.DateTime*
> XML Binding class name: Modified_Time
> Dictionary key name: modified_time

**number_subkeys**

>
> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: Number_Subkeys
> Dictionary key name: number_subkeys

**number_values**

>
> Type: *cybox.common.properties.UnsignedInteger*
> XML Binding class name: Number_Values
> Dictionary key name: number_values

**subkeys**

>
> Type: *cybox.objects.win_registry_key_object.RegistrySubkeys*
> XML Binding class name: Subkeys
> Dictionary key name: subkeys

**values**

>
> Type: *cybox.objects.win_registry_key_object.RegistryValues*
> XML Binding class name: Values
> Dictionary key name: values

**Version**: 2.1.0.12.dev0

### cybox.objects.win_semaphore_object **module**

class cybox.objects.win_semaphore_object.**WinSemaphore**
> Bases: *cybox.objects.semaphore_object.Semaphore*

> XML binding class:
> cybox.bindings.win_semaphore_object.WindowsSemaphoreObjectType

> **handle**
>
> > Type: *cybox.objects.win_handle_object.WinHandle*

XML Binding class name: `Handle`

Dictionary key name: `handle`

### security_attributes

Type: *[cybox.common.properties.String](cybox.common.properties.String)*

XML Binding class name: `Security_Attributes`

Dictionary key name: `security_attributes`

**Version**: 2.1.0.12.dev0

## cybox.objects.win_service_object module

**class** cybox.objects.win_service_object.**ServiceDescriptionList**(*\*args*)

Bases: `cybox.EntityList`

XML binding class: `cybox.bindings.win_service_object.ServiceDescriptionListType`

**class** cybox.objects.win_service_object.**WinService**

Bases: *[cybox.objects.win_process_object.WinProcess](cybox.objects.win_process_object.WinProcess)*

XML binding class: `cybox.bindings.win_service_object.WindowsServiceObjectType`

### description_list

Type: *[cybox.objects.win_service_object.ServiceDescriptionList](cybox.objects.win_service_object.ServiceDescriptionList)*

XML Binding class name: `Description_List`

Dictionary key name: `description_list`

### display_name

Type: *[cybox.common.properties.String](cybox.common.properties.String)*

XML Binding class name: `Display_Name`

Dictionary key name: `display_name`

### group_name

Type: *[cybox.common.properties.String](cybox.common.properties.String)*

XML Binding class name: `Group_Name`

Dictionary key name: `group_name`

### service_dll

Type: *[cybox.common.properties.String](cybox.common.properties.String)*

XML Binding class name: `Service_DLL`

Dictionary key name: `service_dll`

**service_dll_certificate_issuer**

   Type: *cybox.common.properties.String*
   XML Binding class name: `Service_DLL_Certificate_Issuer`
   Dictionary key name: `service_dll_certificate_issuer`

**service_dll_certificate_subject**

   Type: *cybox.common.properties.String*
   XML Binding class name: `Service_DLL_Certificate_Subject`
   Dictionary key name: `service_dll_certificate_subject`

**service_dll_hashes**

   Type: *cybox.common.hashes.HashList*
   XML Binding class name: `Service_DLL_Hashes`
   Dictionary key name: `service_dll_hashes`

**service_dll_signature_description**

   Type: *cybox.common.properties.String*
   XML Binding class name: `Service_DLL_Signature_Description`
   Dictionary key name: `service_dll_signature_description`

**service_dll_signature_exists**

   XML Binding class name: `service_dll_signature_exists`
   Dictionary key name: `service_dll_signature_exists`

**service_dll_signature_verified**

   XML Binding class name: `service_dll_signature_verified`
   Dictionary key name: `service_dll_signature_verified`

**service_name**

   Type: *cybox.common.properties.String*
   XML Binding class name: `Service_Name`
   Dictionary key name: `service_name`

**service_status**

   Type: *cybox.common.properties.String*
   XML Binding class name: `Service_Status`
   Dictionary key name: `service_status`

**service_type**

   Type: *cybox.common.properties.String*
   XML Binding class name: `Service_Type`
   Dictionary key name: `service_type`

**started_as**

Type: *cybox.common.properties.String*
XML Binding class name: Started_As
Dictionary key name: started_as

**startup_command_line**

Type: *cybox.common.properties.String*
XML Binding class name: Startup_Command_Line
Dictionary key name: startup_command_line

**startup_type**

Type: *cybox.common.properties.String*
XML Binding class name: Startup_Type
Dictionary key name: startup_type

**Version**: 2.1.0.12.dev0

## cybox.objects.win_system_object module

class cybox.objects.win_system_object.**GlobalFlag**
    Bases: cybox.Entity

XML binding class: cybox.bindings.win_system_object.GlobalFlagType

**abbreviation**

Type: *cybox.common.properties.String*
XML Binding class name: Abbreviation
Dictionary key name: abbreviation

**destination**

Type: *cybox.common.properties.String*
XML Binding class name: Destination
Dictionary key name: destination

**hexadecimal_value**

Type: *cybox.common.properties.HexBinary*
XML Binding class name: Hexadecimal_Value
Dictionary key name: hexadecimal_value

**symbolic_name**

Type: *cybox.common.properties.String*
XML Binding class name: Symbolic_Name

Dictionary key name: symbolic_name

**class** cybox.objects.win_system_object.**GlobalFlagList**(*\*args*)

Bases: cybox.EntityList

XML binding class: cybox.bindings.win_system_object.GlobalFlagListType

**class** cybox.objects.win_system_object.**WinSystem**

Bases: *cybox.objects.system_object.System*

XML binding class: cybox.bindings.win_system_object.WindowsSystemObjectType

**domain**

(List of values permitted)

Type: *cybox.common.properties.String*

XML Binding class name: Domain

Dictionary key name: domain

**global_flag_list**

Type: *cybox.objects.win_system_object.GlobalFlagList*

XML Binding class name: Global_Flag_List

Dictionary key name: global_flag_list

**netbios_name**

Type: *cybox.common.properties.String*

XML Binding class name: NetBIOS_Name

Dictionary key name: netbios_name

**open_handle_list**

Type: *cybox.objects.win_handle_object.WinHandleList*

XML Binding class name: Open_Handle_List

Dictionary key name: open_handle_list

**product_id**

Type: *cybox.common.properties.String*

XML Binding class name: Product_ID

Dictionary key name: product_id

**product_name**

Type: *cybox.common.properties.String*

XML Binding class name: Product_Name

Dictionary key name: product_name

**registered_organization**

> Type: *cybox.common.properties.String*
> XML Binding class name: Registered_Organization
> Dictionary key name: registered_organization

**registered_owner**

> Type: *cybox.common.properties.String*
> XML Binding class name: Registered_Owner
> Dictionary key name: registered_owner

**windows_directory**

> Type: *cybox.common.properties.String*
> XML Binding class name: Windows_Directory
> Dictionary key name: windows_directory

**windows_system_directory**

> Type: *cybox.common.properties.String*
> XML Binding class name: Windows_System_Directory
> Dictionary key name: windows_system_directory

**windows_temp_directory**

> Type: *cybox.common.properties.String*
> XML Binding class name: Windows_Temp_Directory
> Dictionary key name: windows_temp_directory

**Version**: 2.1.0.12.dev0

## cybox.objects.win_system_restore_object module

class cybox.objects.win_system_restore_object.**HiveList**(*\*args*)
    Bases: cybox.EntityList

    XML binding class: cybox.bindings.win_system_restore_object.HiveListType

class cybox.objects.win_system_restore_object.**WinSystemRestore**
    Bases: *cybox.common.object_properties.ObjectProperties*

    XML binding class:
    cybox.bindings.win_system_restore_object.WindowsSystemRestoreObjectType

    **acl_change_sid**

> Type: *cybox.common.properties.String*
> XML Binding class name: ACL_Change_SID
> Dictionary key name: acl_change_sid

**acl_change_username**

> Type: *cybox.common.properties.String*
> XML Binding class name: ACL_Change_Username
> Dictionary key name: acl_change_username

**backup_file_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Backup_File_Name
> Dictionary key name: backup_file_name

**change_event**

> Type: *cybox.common.properties.String*
> XML Binding class name: Change_Event
> Dictionary key name: change_event

**changelog_entry_flags**

> Type: *cybox.common.properties.String*
> XML Binding class name: ChangeLog_Entry_Flags
> Dictionary key name: changelog_entry_flags

**changelog_entry_sequence_number**

> Type: *cybox.common.properties.Long*
> XML Binding class name: ChangeLog_Entry_Sequence_Number
> Dictionary key name: changelog_entry_sequence_number

**changelog_entry_type**

> Type: *cybox.common.properties.String*
> XML Binding class name: ChangeLog_Entry_Type
> Dictionary key name: changelog_entry_type

**created**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: Created
> Dictionary key name: created

**file_attributes**

> Type: *cybox.common.properties.String*
> XML Binding class name: File_Attributes
> Dictionary key name: file_attributes

**new_file_name**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: New_File_Name
>   Dictionary key name: new_file_name

**original_file_name**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Original_File_Name
>   Dictionary key name: original_file_name

**original_short_file_name**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Original_Short_File_Name
>   Dictionary key name: original_short_file_name

**process_name**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Process_Name
>   Dictionary key name: process_name

**registry_hive_list**

>   Type: *cybox.objects.win_system_restore_object.HiveList*
>   XML Binding class name: Registry_Hive_List
>   Dictionary key name: registry_hive_list

**restore_point_description**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Restore_Point_Description
>   Dictionary key name: restore_point_description

**restore_point_full_path**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Restore_Point_Full_Path
>   Dictionary key name: restore_point_full_path

**restore_point_name**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Restore_Point_Name
>   Dictionary key name: restore_point_name

**restore_point_type**

>   Type: *cybox.common.properties.String*

XML Binding class name: `Restore_Point_Type`

Dictionary key name: `restore_point_type`

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## `cybox.objects.win_task_object` module

**class** `cybox.objects.win_task_object.`**`IComHandlerAction`**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_task_object.IComHandlerActionType`

**`com_class_id`**

Type: *`cybox.common.properties.String`*

XML Binding class name: `COM_Class_ID`

Dictionary key name: `com_class_id`

**`com_data`**

Type: *`cybox.common.properties.String`*

XML Binding class name: `COM_Data`

Dictionary key name: `com_data`

**class** `cybox.objects.win_task_object.`**`IExecAction`**

Bases: `cybox.Entity`

XML binding class: `cybox.bindings.win_task_object.IExecActionType`

**`exec_arguments`**

Type: *`cybox.common.properties.String`*

XML Binding class name: `Exec_Arguments`

Dictionary key name: `exec_arguments`

**`exec_program_hashes`**

Type: *`cybox.common.hashes.HashList`*

XML Binding class name: `Exec_Program_Hashes`

Dictionary key name: `exec_program_hashes`

**`exec_program_path`**

Type: *`cybox.common.properties.String`*

XML Binding class name: `Exec_Program_Path`

Dictionary key name: `exec_program_path`

**exec_working_directory**

> Type: *cybox.common.properties.String*
> XML Binding class name: Exec_Working_Directory
> Dictionary key name: exec_working_directory

class cybox.objects.win_task_object.**IShowMessageAction**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_task_object.IShowMessageActionType

**show_message_body**

> Type: *cybox.common.properties.String*
> XML Binding class name: Show_Message_Body
> Dictionary key name: show_message_body

**show_message_title**

> Type: *cybox.common.properties.String*
> XML Binding class name: Show_Message_Title
> Dictionary key name: show_message_title

class cybox.objects.win_task_object.**TaskAction**
> Bases: cybox.Entity

> XML binding class: cybox.bindings.win_task_object.TaskActionType

**action_id**

> Type: *cybox.common.properties.String*
> XML Binding class name: Action_ID
> Dictionary key name: action_id

**action_type**

> Type: *cybox.common.properties.String*
> XML Binding class name: Action_Type
> Dictionary key name: action_type

**icomhandleraction**

> Type: *cybox.objects.win_task_object.IComHandlerAction*
> XML Binding class name: IComHandlerAction
> Dictionary key name: icomhandleraction

**iemailaction**

Type: *cybox.objects.email_message_object.EmailMessage*
XML Binding class name: IEmailAction
Dictionary key name: iemailaction

### iexecaction

Type: *cybox.objects.win_task_object.IExecAction*
XML Binding class name: IExecAction
Dictionary key name: iexecaction

### ishowmessageaction

Type: *cybox.objects.win_task_object.IShowMessageAction*
XML Binding class name: IShowMessageAction
Dictionary key name: ishowmessageaction

class cybox.objects.win_task_object.**TaskActionList**(*args*)
Bases: cybox.EntityList

XML binding class: cybox.bindings.win_task_object.TaskActionListType

class cybox.objects.win_task_object.**Trigger**
Bases: cybox.Entity

XML binding class: cybox.bindings.win_task_object.TriggerType

### trigger_begin

Type: *cybox.common.properties.DateTime*
XML Binding class name: Trigger_Begin
Dictionary key name: trigger_begin

### trigger_delay

Type: *cybox.common.properties.Duration*
XML Binding class name: Trigger_Delay
Dictionary key name: trigger_delay

### trigger_end

Type: *cybox.common.properties.DateTime*
XML Binding class name: Trigger_End
Dictionary key name: trigger_end

### trigger_frequency

Type: *cybox.common.properties.String*
XML Binding class name: Trigger_Frequency

Dictionary key name: trigger_frequency

**trigger_max_run_time**

Type: *cybox.common.properties.Duration*
XML Binding class name: Trigger_Max_Run_Time
Dictionary key name: trigger_max_run_time

**trigger_session_change_type**

Type: *cybox.common.properties.String*
XML Binding class name: Trigger_Session_Change_Type
Dictionary key name: trigger_session_change_type

**trigger_type**

Type: *cybox.common.properties.String*
XML Binding class name: Trigger_Type
Dictionary key name: trigger_type

class cybox.objects.win_task_object.**TriggerList**(*args*)
    Bases: cybox.EntityList

XML binding class: cybox.bindings.win_task_object.TriggerListType

class cybox.objects.win_task_object.**WinTask**
    Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class: cybox.bindings.win_task_object.WindowsTaskObjectType

**account_logon_type**

Type: *cybox.common.properties.String*
XML Binding class name: Account_Logon_Type
Dictionary key name: account_logon_type

**account_name**

Type: *cybox.common.properties.String*
XML Binding class name: Account_Name
Dictionary key name: account_name

**account_run_level**

Type: *cybox.common.properties.String*
XML Binding class name: Account_Run_Level
Dictionary key name: account_run_level

**action_list**

> Type: *cybox.objects.win_task_object.TaskActionList*
> XML Binding class name: Action_List
> Dictionary key name: action_list

**application_name**

> Type: *cybox.common.properties.String*
> XML Binding class name: Application_Name
> Dictionary key name: application_name

**comment**

> Type: *cybox.common.properties.String*
> XML Binding class name: Comment
> Dictionary key name: comment

**creation_date**

> Type: *cybox.common.properties.DateTime*
> XML Binding class name: Creation_Date
> Dictionary key name: creation_date

**creator**

> Type: *cybox.common.properties.String*
> XML Binding class name: Creator
> Dictionary key name: creator

**exit_code**

> Type: *cybox.common.properties.Long*
> XML Binding class name: Exit_Code
> Dictionary key name: exit_code

**flags**

> Type: *cybox.common.properties.String*
> XML Binding class name: Flags
> Dictionary key name: flags

**max_run_time**

> Type: *cybox.common.properties.UnsignedLong*
> XML Binding class name: Max_Run_Time
> Dictionary key name: max_run_time

**most_recent_run_time**

> Type: *cybox.common.properties.DateTime*

> XML Binding class name: `Most_Recent_Run_Time`
>
> Dictionary key name: `most_recent_run_time`

**name**

> Type: *cybox.common.properties.String*
>
> XML Binding class name: `Name`
>
> Dictionary key name: `name`

**next_run_time**

> Type: *cybox.common.properties.DateTime*
>
> XML Binding class name: `Next_Run_Time`
>
> Dictionary key name: `next_run_time`

**parameters**

> Type: *cybox.common.properties.String*
>
> XML Binding class name: `Parameters`
>
> Dictionary key name: `parameters`

**priority**

> Type: *cybox.common.properties.String*
>
> XML Binding class name: `Priority`
>
> Dictionary key name: `priority`

**status**

> Type: *cybox.common.properties.String*
>
> XML Binding class name: `Status`
>
> Dictionary key name: `status`

**trigger_list**

> Type: *cybox.objects.win_task_object.TriggerList*
>
> XML Binding class name: `Trigger_List`
>
> Dictionary key name: `trigger_list`

**work_item_data**

> Type: *cybox.common.properties.Base64Binary*
>
> XML Binding class name: `Work_Item_Data`
>
> Dictionary key name: `work_item_data`

**working_directory**

> Type: *cybox.common.properties.String*
>
> XML Binding class name: `Working_Directory`
>
> Dictionary key name: `working_directory`

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**`cybox.objects.win_thread_object`** module

**class** cybox.objects.win_thread_object.**WinThread**
> Bases: *`cybox.common.object_properties.ObjectProperties`*

> XML binding class: cybox.bindings.win_thread_object.WindowsThreadObjectType

> **context**

>> Type: *`cybox.common.properties.String`*
>> XML Binding class name: Context
>> Dictionary key name: context

> **creation_flags**

>> Type: *`cybox.common.properties.HexBinary`*
>> XML Binding class name: Creation_Flags
>> Dictionary key name: creation_flags

> **creation_time**

>> Type: *`cybox.common.properties.DateTime`*
>> XML Binding class name: Creation_Time
>> Dictionary key name: creation_time

> **handle**

>> Type: *`cybox.objects.win_handle_object.WinHandle`*
>> XML Binding class name: Handle
>> Dictionary key name: handle

> **parameter_address**

>> Type: *`cybox.common.properties.HexBinary`*
>> XML Binding class name: Parameter_Address
>> Dictionary key name: parameter_address

> **priority**

>> Type: *`cybox.common.properties.UnsignedInteger`*
>> XML Binding class name: Priority
>> Dictionary key name: priority

> **running_status**

>> Type: *`cybox.common.properties.String`*
>> XML Binding class name: Running_Status
>> Dictionary key name: running_status

**security_attributes**

>   Type: *cybox.common.properties.String*
>   XML Binding class name: Security_Attributes
>   Dictionary key name: security_attributes

**stack_size**

>   Type: *cybox.common.properties.NonNegativeInteger*
>   XML Binding class name: Stack_Size
>   Dictionary key name: stack_size

**start_address**

>   Type: *cybox.common.properties.HexBinary*
>   XML Binding class name: Start_Address
>   Dictionary key name: start_address

**thread_id**

>   Type: *cybox.common.properties.NonNegativeInteger*
>   XML Binding class name: Thread_ID
>   Dictionary key name: thread_id

**Version**: 2.1.0.12.dev0

## cybox.objects.win_user_object module

class cybox.objects.win_user_object.**WinGroup**
>   Bases: cybox.Entity

>   XML binding class: cybox.bindings.win_user_account_object.WindowsGroupType

>   **name**

>   >   Type: *cybox.common.properties.String*
>   >   XML Binding class name: Name
>   >   Dictionary key name: name

class cybox.objects.win_user_object.**WinGroupList**(*args*)
>   Bases: *cybox.objects.user_account_object.GroupList*

>   XML binding class: cybox.bindings.user_account_object.GroupListType

class cybox.objects.win_user_object.**WinPrivilege**
>   Bases: cybox.Entity

XML binding class: cybox.bindings.win_user_account_object.WindowsPrivilegeType

### user_right

> Type: *cybox.common.properties.String*
> XML Binding class name: User_Right
> Dictionary key name: user_right

**class** cybox.objects.win_user_object.**WinPrivilegeList**(*\*args*)
> Bases: *cybox.objects.user_account_object.PrivilegeList*

> XML binding class: cybox.bindings.user_account_object.PrivilegeListType

**class** cybox.objects.win_user_object.**WinUser**
> Bases: *cybox.objects.user_account_object.UserAccount*

> XML binding class:
> cybox.bindings.win_user_account_object.WindowsUserAccountObjectType

### group_list

> Type: *cybox.objects.win_user_object.WinGroupList*
> XML Binding class name: Group_List
> Dictionary key name: group_list

### privilege_list

> Type: *cybox.objects.win_user_object.WinPrivilegeList*
> XML Binding class name: Privilege_List
> Dictionary key name: privilege_list

### security_id

> Type: *cybox.common.properties.String*
> XML Binding class name: Security_ID
> Dictionary key name: security_id

### security_type

> Type: *cybox.common.properties.String*
> XML Binding class name: Security_Type
> Dictionary key name: security_type

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**cybox.objects.win_volume_object module**

**class** cybox.objects.win_volume_object.**WinVolume**
    Bases: *cybox.objects.volume_object.Volume*

    XML binding class: cybox.bindings.win_volume_object.WindowsVolumeObjectType

    **attributes_list**

        Type: *cybox.objects.win_volume_object.WindowsVolumeAttributesList*
        XML Binding class name: Attributes_List
        Dictionary key name: attributes_list

    **drive_Type**

        Type: *cybox.common.properties.String*
        XML Binding class name: Drive_Type
        Dictionary key name: drive_type

    **drive_letter**

        Type: *cybox.common.properties.String*
        XML Binding class name: Drive_Letter
        Dictionary key name: drive_letter

**class** cybox.objects.win_volume_object.**WindowsVolumeAttributesList**(*args*)
    Bases: cybox.EntityList

    XML binding class:
    cybox.bindings.win_volume_object.WindowsVolumeAttributesListType

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**cybox.objects.win_waitable_timer_object module**

**class** cybox.objects.win_waitable_timer_object.**WinWaitableTimer**
    Bases: *cybox.common.object_properties.ObjectProperties*

    XML binding class:
    cybox.bindings.win_waitable_timer_object.WindowsWaitableTimerObjectType

    **name**

        Type: *cybox.common.properties.String*
        XML Binding class name: Name

Dictionary key name: `name`

**security_attributes**

Type: *cybox.common.properties.String*
XML Binding class name: `Security_Attributes`
Dictionary key name: `security_attributes`

**type_**

Type: *cybox.common.properties.String*
XML Binding class name: `Type`
Dictionary key name: `type`

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## cybox.objects.x509_certificate_object module

class cybox.objects.x509_certificate_object.**RSAPublicKey**
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.x509_certificate_object.RSAPublicKeyType`

**exponent**

Type: *cybox.common.properties.Integer*
XML Binding class name: `Exponent`
Dictionary key name: `exponent`

**modulus**

Type: *cybox.common.properties.String*
XML Binding class name: `Modulus`
Dictionary key name: `modulus`

class cybox.objects.x509_certificate_object.**SubjectPublicKey**
Bases: `cybox.Entity`

XML binding class: `cybox.bindings.x509_certificate_object.SubjectPublicKeyType`

**public_key_algorithm**

Type: *cybox.common.properties.String*
XML Binding class name: `Public_Key_Algorithm`
Dictionary key name: `public_key_algorithm`

**rsa_public_key**

Type: *cybox.objects.x509_certificate_object.RSAPublicKey*
XML Binding class name: RSA_Public_Key
Dictionary key name: rsa_public_key

**class** cybox.objects.x509_certificate_object.**Validity**
Bases: cybox.Entity

XML binding class: cybox.bindings.x509_certificate_object.ValidityType

**not_after**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Not_After
Dictionary key name: not_after

**not_before**

Type: *cybox.common.properties.DateTime*
XML Binding class name: Not_Before
Dictionary key name: not_before

**class** cybox.objects.x509_certificate_object.**X509Cert**
Bases: cybox.Entity

XML binding class:
cybox.bindings.x509_certificate_object.X509CertificateContentsType

**issuer**

Type: *cybox.common.properties.String*
XML Binding class name: Issuer
Dictionary key name: issuer

**non_standard_extensions**

Type: *cybox.objects.x509_certificate_object.X509NonStandardExtensions*
XML Binding class name: Non_Standard_Extensions
Dictionary key name: non_standard_extensions

**serial_number**

Type: *cybox.common.properties.String*
XML Binding class name: Serial_Number
Dictionary key name: serial_number

**signature_algorithm**

Type: *cybox.common.properties.String*

---

XML Binding class name: Signature_Algorithm

Dictionary key name: signature_algorithm

**standard_extensions**

Type: *cybox.objects.x509_certificate_object.X509V3Extensions*

XML Binding class name: Standard_Extensions

Dictionary key name: standard_extensions

**subject**

Type: *cybox.common.properties.String*

XML Binding class name: Subject

Dictionary key name: subject

**subject_public_key**

Type: *cybox.objects.x509_certificate_object.SubjectPublicKey*

XML Binding class name: Subject_Public_Key

Dictionary key name: subject_public_key

**validity**

Type: *cybox.objects.x509_certificate_object.Validity*

XML Binding class name: Validity

Dictionary key name: validity

**version**

Type: *cybox.common.properties.Integer*

XML Binding class name: Version

Dictionary key name: version

class cybox.objects.x509_certificate_object.**X509Certificate**

Bases: *cybox.common.object_properties.ObjectProperties*

XML binding class:
cybox.bindings.x509_certificate_object.X509CertificateObjectType

**certificate**

Type: *cybox.objects.x509_certificate_object.X509Cert*

XML Binding class name: Certificate

Dictionary key name: certificate

**certificate_signature**

Type: *cybox.objects.x509_certificate_object.X509CertificateSignature*

XML Binding class name: Certificate_Signature

Dictionary key name: certificate_signature

**raw_certificate**

> Type: *cybox.common.properties.String*
> XML Binding class name: Raw_Certificate
> Dictionary key name: raw_certificate

class cybox.objects.x509_certificate_object.**X509CertificateSignature**
> Bases: cybox.Entity


> XML binding class:
> cybox.bindings.x509_certificate_object.X509CertificateSignatureType


**signature**

> Type: *cybox.common.properties.String*
> XML Binding class name: Signature
> Dictionary key name: signature

**signature_algorithm**

> Type: *cybox.common.properties.String*
> XML Binding class name: Signature_Algorithm
> Dictionary key name: signature_algorithm

class cybox.objects.x509_certificate_object.**X509NonStandardExtensions**
> Bases: cybox.Entity


> XML binding class:
> cybox.bindings.x509_certificate_object.X509NonStandardExtensionsType


**netscape_certificate_type**

> Type: *cybox.common.properties.String*
> XML Binding class name: Netscape_Certificate_Type
> Dictionary key name: netscape_certificate_type

**netscape_comment**

> Type: *cybox.common.properties.String*
> XML Binding class name: Netscape_Comment
> Dictionary key name: netscape_comment

**old_authority_key_identifier**

> Type: *cybox.common.properties.String*
> XML Binding class name: Old_Authority_Key_Identifier
> Dictionary key name: old_authority_key_identifier

---

**old_primary_key_attributes**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Old_Primary_Key_Attributes`
> Dictionary key name: `old_primary_key_attributes`

class cybox.objects.x509_certificate_object.**X509V3Extensions**
 Bases: cybox.Entity

XML binding class: `cybox.bindings.x509_certificate_object.X509V3ExtensionsType`

**authority_key_identifier**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Authority_Key_Identifier`
> Dictionary key name: `authority_key_identifier`

**basic_constraints**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Basic_Constraints`
> Dictionary key name: `basic_constraints`

**certificate_policies**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Certificate_Policies`
> Dictionary key name: `certificate_policies`

**crl_distribution_points**

> Type: *cybox.common.properties.String*
> XML Binding class name: `CRL_Distribution_Points`
> Dictionary key name: `crl_distribution_points`

**extended_key_usage**

> Type: *cybox.common.properties.String*
> XML Binding class name: `Extended_Key_Usage`
> Dictionary key name: `extended_key_usage`

**inhibit_any_policy**

> Type: *cybox.common.properties.NonNegativeInteger*
> XML Binding class name: `Inhibit_Any_Policy`
> Dictionary key name: `inhibit_any_policy`

**issuer_alternative_name**

Type: *cybox.common.properties.String*
XML Binding class name: Issuer_Alternative_Name
Dictionary key name: issuer_alternative_name

**key_usage**

Type: *cybox.common.properties.String*
XML Binding class name: Key_Usage
Dictionary key name: key_usage

**name_constraints**

Type: *cybox.common.properties.String*
XML Binding class name: Name_Constraints
Dictionary key name: name_constraints

**policy_constraints**

Type: *cybox.common.properties.String*
XML Binding class name: Policy_Constraints
Dictionary key name: policy_constraints

**policy_mappings**

Type: *cybox.common.properties.String*
XML Binding class name: Policy_Mappings
Dictionary key name: policy_mappings

**private_key_usage_period**

Type: *cybox.objects.x509_certificate_object.Validity*
XML Binding class name: Private_Key_Usage_Period
Dictionary key name: private_key_usage_period

**subject_alternative_name**

Type: *cybox.common.properties.String*
XML Binding class name: Subject_Alternative_Name
Dictionary key name: subject_alternative_name

**subject_directory_attributes**

Type: *cybox.common.properties.String*
XML Binding class name: Subject_Directory_Attributes
Dictionary key name: subject_directory_attributes

**subject_key_identifier**

Type: *cybox.common.properties.String*
XML Binding class name: Subject_Key_Identifier
Dictionary key name: subject_key_identifier

### 3.1.4 Utility Classes and Functions

**Version**: 2.1.0.12.dev0

#### `cybox.utils` package

#### Submodules

**Version**: 2.1.0.12.dev0

#### `cybox.utils.autoentity` module

cybox.utils.autoentity.**make_class_ref**(*cls*)

cybox.utils.autoentity.**setup**(*app*)

**Version**: 2.1.0.12.dev0

#### `cybox.utils.caches` module

**exception** cybox.utils.caches.**CacheMiss**

    Bases: `exceptions.Exception`

    Item was not found in a cache.

cybox.utils.caches.**cache_clear**()

    Clear the global cache

cybox.utils.caches.**cache_count**()

    Get the number of items in the global cache

cybox.utils.caches.**cache_get**(*id_*)

    Retrieve a value from the global cache

cybox.utils.caches.**cache_put**(*value*, *id_=None*)

    Save a value in the global cache

**Version**: 2.1.0.12.dev0

#### `cybox.utils.idgen` module    Methods for generating IDs for Objects and Observables

**exception** cybox.utils.idgen.**InvalidMethodError**(*method*)

    Bases: `exceptions.ValueError`

cybox.utils.idgen.**set_id_namespace**(*namespace*)

    Set the namespace for the module-level ID Generator

cybox.utils.idgen.**set_id_method**(*method*)

    Set the method for the module-level ID Generator

cybox.utils.idgen.**create_id**(*prefix=None*)

    Create an ID using the module-level ID Generator

**Version**: 2.1.0.12.dev0

#### `cybox.utils.nsparser` module

**exception** cybox.utils.nsparser.**UnknownObjectType**

    Bases: `exceptions.Exception`

**Module contents**

Common utility methods

cybox.utils.**denormalize_from_xml**(*value*, *delimiter*)

cybox.utils.**get_class_for_object_type**(*object_type*)

cybox.utils.**normalize_to_xml**(*value*, *delimiter*)

cybox.utils.**unwrap_cdata**(*value*)
    Remove CDATA wrapping from *value* if present

cybox.utils.**wrap_cdata**(*value*)

**Version**: 2.1.0.12.dev0

**cybox.utils.autoentity module**

cybox.utils.autoentity.**make_class_ref**(*cls*)

cybox.utils.autoentity.**setup**(*app*)

**Version**: 2.1.0.12.dev0

**cybox.utils.caches module**

**exception** cybox.utils.caches.**CacheMiss**
    Bases: exceptions.Exception

    Item was not found in a cache.

cybox.utils.caches.**cache_clear**()
    Clear the global cache

cybox.utils.caches.**cache_count**()
    Get the number of items in the global cache

cybox.utils.caches.**cache_get**(*id_*)
    Retrieve a value from the global cache

cybox.utils.caches.**cache_put**(*value*, *id_=None*)
    Save a value in the global cache

**Version**: 2.1.0.12.dev0

**cybox.utils.idgen module**

Methods for generating IDs for Objects and Observables

**exception** cybox.utils.idgen.**InvalidMethodError**(*method*)
    Bases: exceptions.ValueError

cybox.utils.idgen.**set_id_namespace**(*namespace*)
    Set the namespace for the module-level ID Generator

cybox.utils.idgen.**set_id_method**(*method*)
    Set the method for the module-level ID Generator

cybox.utils.idgen.**create_id**(*prefix=None*)
    Create an ID using the module-level ID Generator

**Version**: 2.1.0.12.dev0

### cybox.utils.nsparser module

**exception** cybox.utils.nsparser.**UnknownObjectType**

   Bases: `exceptions.Exception`

## 3.1.5 CybOX Helper module

**Version**: 2.1.0.12.dev0

### cybox.helper module

CybOX Common Indicator API

An api for creating observables for common indicators: ipv4 addresses, domain names, file hashes, and urls.

cybox.helper.**create_domain_name_observable**(*domain_name*)

   Create a CybOX Observable representing a domain name.

cybox.helper.**create_email_address_observable**(*email_address*)

   Create a CybOX Observable representing an IPv4 address

cybox.helper.**create_file_hash_observable**(*fn*, *hash_value*)

   Create a CybOX Observable representing a file hash.

cybox.helper.**create_ipv4_list_observables**(*list_ipv4_addresses*)

   Create a list of CybOX Observables, each representing an IPv4 address

cybox.helper.**create_ipv4_observable**(*ipv4_address*)

   Create a CybOX Observable representing an IPv4 address

cybox.helper.**create_url_observable**(*url*)

**Version**: 2.1.0.12.dev0

# 3.2 API Coverage

The *python-cybox* APIs currently provide partial coverage of all CybOX-defined constructs. Development is ongoing toward the goal of providing full CybOX language support in the APIs. Until such time that full coverage is provided, an overview of which constructs are available in these APIs will be maintained below.

## 3.2.1 CybOX Features

| CybOX Construct | API Coverage | Documentation |
| --- | --- | --- |
| Composite Observable | Full | *cybox.core.observable.ObservableComposition* |
| Event | Partial | *cybox.core.event.Event* |
| Object | Partial | *cybox.core.object.Object* |
| Observables | Partial | *cybox.core.observable.Observables* |
| Observable | Partial | *cybox.core.observable.Observable* |
| Relationships | Partial | |

## 3.2.2 CybOX Objects

| CybOX Construct | API Coverage | Documentation |
|---|---|---|
| Account Object | Full | *cybox.objects.account_object.Account* |
| Address Object | Full | *cybox.objects.address_object.Address* |
| API Object | Full | *cybox.objects.api_object.API* |
| Archive File Object | Full | *cybox.objects.archive_file_object.ArchiveFile* |
| ARP Cache Object | Full | *cybox.objects.arp_cache_object.ARPCache* |
| Artifact Object | Full | *cybox.objects.artifact_object.Artifact* |
| AS Object | Full | *cybox.objects.as_object.AutonomousSystem* |
| Code Object | Full | *cybox.objects.code_object.Code* |
| Custom Object | × None | |
| Device Object | Full | *cybox.objects.device_object.Device* |
| Disk Object | Full | *cybox.objects.disk_object.Disk* |
| Disk Partition Object | Full | *cybox.objects.disk_partition_object.DiskPartition* |
| DNS Cache Object | Full | *cybox.objects.dns_cache_object.DNSCache* |
| DNS Query Object | Full | *cybox.objects.dns_query_object.DNSQuery* |
| DNS Record Object | Full | *cybox.objects.dns_record_object.DNSRecord* |
| Domain Name Object | Full | *cybox.objects.domain_name_object.DomainName* |
| Email Message Object | Full | *cybox.objects.email_message_object.EmailMessage* |
| File Object | Full | *cybox.objects.file_object.File* |
| GUI Dialogbox Object | Full | *cybox.objects.gui_dialogbox_object.GUIDialogbox* |
| GUI Object | Full | *cybox.objects.gui_object.GUI* |
| GUI Window Object | Full | *cybox.objects.gui_window_object.GUIWindow* |
| HTTP Session Object | Full | *cybox.objects.http_session_object.HTTPSession* |
| Hostname Object | Full | *cybox.objects.hostname_object.Hostname* |
| Image File Object | Full | *cybox.objects.image_file_object.ImageFile* |
| Library Object | Full | *cybox.objects.library_object.Library* |
| Link Object | Full | *cybox.objects.link_object.Link* |
| Linux Package Object | Full | *cybox.objects.linux_package_object.LinuxPackage* |
| Memory Object | Full | *cybox.objects.memory_object.Memory* |
| Mutex Object | Full | *cybox.objects.mutex_object.Mutex* |
| Network Connection Object | Full | *cybox.objects.network_connection_object.NetworkConne* |
| Network Flow Object | × None | |
| Network Packet Object | Full | *cybox.objects.network_packet_object.NetworkPacket* |
| Network Route Entry Object | Full | *cybox.objects.network_route_entry_object.NetworkRout* |
| Network Route Object | Full | *cybox.objects.network_route_object.NetRoute* |
| Network Socket Object | Full | *cybox.objects.network_socket_object.NetworkSocket* |
| Network Subnet Object | Full | *cybox.objects.network_subnet_object.NetworkSubnet* |
| PDF File Object | Partial | *cybox.objects.pdf_file_object.PDFFile* |
| Pipe Object | Full | *cybox.objects.pipe_object.Pipe* |
| Port Object | Full | *cybox.objects.port_object.Port* |
| Process Object | Full | *cybox.objects.process_object.Process* |
| Product Object | Full | *cybox.objects.product_object.Product* |
| Semaphore Object | Full | *cybox.objects.semaphore_object.Semaphore* |
| SMS Message Object | Full | *cybox.objects.sms_message_object.SMSMessage* |
| Socket Address Object | Full | *cybox.objects.socket_address_object.SocketAddress* |
| System Object | Partial | *cybox.objects.system_object.System* |
| URI Object | Full | *cybox.objects.uri_object.URI* |
| URL History Object | × None | |
| Unix File Object | × None | |

Table 3.1 – continued from previous page

| CybOX Construct | API Coverage | Documentation |
|---|---|---|
| Unix Network Route Entry Object | × None | |
| Unix Pipe Object | × None | |
| Unix Process Object | × None | |
| Unix User Account Object | × None | |
| Unix Volume Object | × None | |
| User Account Object | Full | *cybox.objects.user_account_object.UserAccount* |
| User Session Object | × None | |
| Volume Object | Full | *cybox.objects.volume_object.Volume* |
| Whois Object | Full | *cybox.objects.whois_object.WhoisEntry* |
| Win Computer Account Object | Full | *cybox.objects.win_computer_account_object.WinCompute* |
| Win Critical Section Object | Full | *cybox.objects.win_critical_section_object.WinCritica* |
| Win Driver Object | Full | *cybox.objects.win_driver_object.WinDriver* |
| Win Event Log Object | Full | *cybox.objects.win_event_log_object.WinEventLog* |
| Win Event Object | Full | *cybox.objects.win_event_object.WinEvent* |
| Win Executable File Object | Full | *cybox.objects.win_executable_file_object.WinExecutab* |
| Win File Object | Full | *cybox.objects.win_file_object.WinFile* |
| Win Filemapping Object | Full | *cybox.objects.win_filemapping_object.WinFilemapping* |
| Win Handle Object | Full | *cybox.objects.win_handle_object.WinHandle* |
| Win Hook Object | Full | *cybox.objects.win_hook_object.WinHook* |
| Win Kernel Hook Object | Full | *cybox.objects.win_kernel_hook_object.WinKernelHook* |
| Win Kernel Object | Full | *cybox.objects.win_kernel_object.WinKernel* |
| Win Mailslot Object | Full | *cybox.objects.win_mailslot_object.WinMailslot* |
| Win Memory Page Region Object | Full | *cybox.objects.win_memory_page_region_object.WinMemor* |
| Win Mutex Object | Full | *cybox.objects.win_mutex_object.WinMutex* |
| Win Network Route Entry Object | Full | *cybox.objects.win_network_route_entry_object.WinNetw* |
| Win Network Share Object | Full | *cybox.objects.win_network_share_object.WinNetworkSha* |
| Win Pipe Object | Full | *cybox.objects.win_pipe_object.WinPipe* |
| Win Prefetch Object | Full | *cybox.objects.win_prefetch_object.WinPrefetch* |
| Win Process Object | Full | *cybox.objects.win_process_object.WinProcess* |
| Win Registry Key Object | Full | *cybox.objects.win_registry_key_object.WinRegistryKey* |
| Win Semaphore Object | Full | *cybox.objects.win_semaphore_object.WinSemaphore* |
| Win Service Object | Full | *cybox.objects.win_service_object.WinService* |
| Win System Object | Full | *cybox.objects.win_system_object.WinSystem* |
| Win System Restore Object | Full | *cybox.objects.win_system_restore_object.WinSystemRes* |
| Win Task Object | Full | *cybox.objects.win_task_object.WinTask* |
| Win Thread Object | Full | *cybox.objects.win_thread_object.WinThread* |
| Win User Account Object | Full | *cybox.objects.win_user_object.WinUser* |
| Win Volume Object | Full | *cybox.objects.win_volume_object.WinVolume* |
| Win Waitable Timer Object | Full | *cybox.objects.win_waitable_timer_object.WinWaitable* |
| X509 Certificate Object | Full | *cybox.objects.x509_certificate_object.X509Certificat* |

### 3.2.3 CybOX Vocabularies

| CybOX Construct | API Coverage | Documentation |
| --- | --- | --- |
| ActionArgumentNameVocab-1.0 | Full | *cybox.common.vocabs.ActionArgumentName* |
| ActionNameVocab-1.0 | × None *(replaced by version 1.1)* | |
| ActionNameVocab-1.1 | Full | *cybox.common.vocabs.ActionName* |
| ActionObjectAssociationTypeVocab-1.0 | Full | cybox.common.vocabs.AssociationType |
| ActionRelationshipTypeVocab-1.0 | × None | |
| ActionTypeVocab-1.0 | Full | *cybox.common.vocabs.ActionType* |
| CharacterEncodingVocab-1.0 | Full | *cybox.common.vocabs.CharacterEncoding* |
| EventTypeVocab-1.0 | × None *(replaced by version 1.0.1)* | |
| EventTypeVocab-1.0.1 | Full | *cybox.common.vocabs.EventType* |
| HashNameVocab-1.0 | Full | *cybox.common.vocabs.HashName* |
| InformationSourceTypeVocab-1.0 | Full | *cybox.common.vocabs.InformationSourceType* |
| ObjectRelationshipVocab-1.0 | × None *(replaced by version 1.1)* | |
| ObjectRelationshipVocab-1.1 | Full | *cybox.common.vocabs.ObjectRelationship* |
| ObjectStateVocab-1.0 | × None | |
| ToolTypeVocab-1.0 | × None *(replaced by version 1.1)* | |
| ToolTypeVocab-1.1 | Full | *cybox.common.vocabs.ToolType* |

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