

:mod:`winreg` --- Windows registry access

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 1); [backlink](#)

Unknown interpreted text role "mod".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 4)

Unknown directive type "module".

```
.. module:: winreg
   :platform: Windows
   :synopsis: Routines and objects for manipulating the Windows registry.
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 8)

Unknown directive type "sectionauthor".

```
.. sectionauthor:: Mark Hammond <MarkH@ActiveState.com>
```

These functions expose the Windows registry API to Python. Instead of using an integer as the registry handle, a `ref`handle object` `<handle-object>` is used to ensure that the handles are closed correctly, even if the programmer neglects to explicitly close them.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 12); [backlink](#)

Unknown interpreted text role "ref".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 19)

Unknown directive type "versionchanged".

```
.. versionchanged:: 3.3
   Several functions in this module used to raise a
   :exc:`WindowsError`, which is now an alias of :exc:`OSError`.
```

Functions

This module offers the following functions:

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Unknown directive type "function".

```
.. function:: CloseKey(hkey)
```

Closes a previously opened registry key. The `*hkey*` argument specifies a previously opened key.

```
.. note::
```

If `*hkey*` is not closed using this method (or via `:meth:`hkey.Close()` `<PyHKEY.Close>`), it is closed when the `*hkey*` object is destroyed by Python.

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Unknown directive type "function".

```
.. function:: ConnectRegistry(computer_name, key)
```

Establishes a connection to a predefined registry handle on another computer, and returns a :ref:`handle object <handle-object>`.

computer_name is the name of the remote computer, of the form ``r"\computername"``. If ``None``, the local computer is used.

key is the predefined handle to connect to.

The return value is the handle of the opened key. If the function fails, an :exc:`OSError` exception is raised.

```
.. audit-event:: winreg.ConnectRegistry computer_name,key winreg.ConnectRegistry
```

```
.. versionchanged:: 3.3
```

See :ref:`above <exception-changed>`.

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Unknown directive type "function".

```
.. function:: CreateKey(key, sub_key)
```

Creates or opens the specified key, returning a :ref:`handle object <handle-object>`.

key is an already open key, or one of the predefined :ref:`HKEY_* constants <hkey-constants>`.

sub_key is a string that names the key this method opens or creates.

If *key* is one of the predefined keys, *sub_key* may be ``None``. In that case, the handle returned is the same key handle passed in to the function.

If the key already exists, this function opens the existing key.

The return value is the handle of the opened key. If the function fails, an :exc:`OSError` exception is raised.

```
.. audit-event:: winreg.CreateKey key,sub_key,access winreg.CreateKey
```

```
.. audit-event:: winreg.OpenKey/result key winreg.CreateKey
```

```
.. versionchanged:: 3.3
```

See :ref:`above <exception-changed>`.

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Unknown directive type "function".

```
.. function:: CreateKeyEx(key, sub_key, reserved=0, access=KEY_WRITE)
```

Creates or opens the specified key, returning a :ref:`handle object <handle-object>`.

key is an already open key, or one of the predefined :ref:`HKEY_* constants <hkey-constants>`.

sub_key is a string that names the key this method opens or creates.

reserved is a reserved integer, and must be zero. The default is zero.

access is an integer that specifies an access mask that describes the desired security access for the key. Default is :const:`KEY_WRITE`. See :ref:`Access Rights <access-rights>` for other allowed values.

If *key* is one of the predefined keys, *sub_key* may be ``None``. In that case, the handle returned is the same key handle passed in to the function.

If the key already exists, this function opens the existing key.

The return value is the handle of the opened key. If the function fails, an :exc:`OSError` exception is raised.

```
.. audit-event:: winreg.CreateKey key,sub_key,access winreg.CreateKeyEx

.. audit-event:: winreg.OpenKey/result key winreg.CreateKeyEx

.. versionadded:: 3.2

.. versionchanged:: 3.3
   See :ref:`above <exception-changed>`.
```

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Unknown directive type "function".

```
.. function:: DeleteKey(key, sub_key)

   Deletes the specified key.

   *key* is an already open key, or one of the predefined
   :ref:`HKEY_* constants <hkey-constants>`.

   *sub_key* is a string that must be a subkey of the key identified by the *key*
   parameter. This value must not be ``None``, and the key may not have subkeys.

   *This method can not delete keys with subkeys.*

   If the method succeeds, the entire key, including all of its values, is removed.
   If the method fails, an :exc:`OSError` exception is raised.

.. audit-event:: winreg.DeleteKey key,sub_key,access winreg.DeleteKey

.. versionchanged:: 3.3
   See :ref:`above <exception-changed>`.
```

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Unknown directive type "function".

```
.. function:: DeleteKeyEx(key, sub_key, access=KEY_WOW64_64KEY, reserved=0)

   Deletes the specified key.

.. note::
   The :func:`DeleteKeyEx` function is implemented with the RegDeleteKeyEx
   Windows API function, which is specific to 64-bit versions of Windows.
   See the `RegDeleteKeyEx documentation
   <https://msdn.microsoft.com/en-us/library/ms724847%28VS.85%29.aspx>`_.

   *key* is an already open key, or one of the predefined
   :ref:`HKEY_* constants <hkey-constants>`.

   *sub_key* is a string that must be a subkey of the key identified by the
   *key* parameter. This value must not be ``None``, and the key may not have
   subkeys.

   *reserved* is a reserved integer, and must be zero. The default is zero.

   *access* is an integer that specifies an access mask that describes the desired
   security access for the key. Default is :const:`KEY_WOW64_64KEY`. See
   :ref:`Access Rights <access-rights>` for other allowed values.

   *This method can not delete keys with subkeys.*

   If the method succeeds, the entire key, including all of its values, is
   removed. If the method fails, an :exc:`OSError` exception is raised.

   On unsupported Windows versions, :exc:`NotImplementedError` is raised.

.. audit-event:: winreg.DeleteKey key,sub_key,access winreg.DeleteKeyEx
```

```
.. versionadded:: 3.2

.. versionchanged:: 3.3
   See :ref:`above <exception-changed>`.
```

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Unknown directive type "function".

```
.. function:: DeleteValue(key, value)

Removes a named value from a registry key.

*key* is an already open key, or one of the predefined
:ref:`HKEY_* constants <hkey-constants>`.

*value* is a string that identifies the value to remove.

.. audit-event:: winreg.DeleteValue key,value winreg.DeleteValue
```

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Unknown directive type "function".

```
.. function:: EnumKey(key, index)

Enumerates subkeys of an open registry key, returning a string.

*key* is an already open key, or one of the predefined
:ref:`HKEY_* constants <hkey-constants>`.

*index* is an integer that identifies the index of the key to retrieve.

The function retrieves the name of one subkey each time it is called. It is
typically called repeatedly until an :exc:`OSError` exception is
raised, indicating, no more values are available.

.. audit-event:: winreg.EnumKey key,index winreg.EnumKey

.. versionchanged:: 3.3
   See :ref:`above <exception-changed>`.
```

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Unknown directive type "function".

```
.. function:: EnumValue(key, index)

Enumerates values of an open registry key, returning a tuple.

*key* is an already open key, or one of the predefined
:ref:`HKEY_* constants <hkey-constants>`.

*index* is an integer that identifies the index of the value to retrieve.

The function retrieves the name of one subkey each time it is called. It is
typically called repeatedly, until an :exc:`OSError` exception is
raised, indicating no more values.

The result is a tuple of 3 items:

+-----+-----+
| Index | Meaning |
+=====+=====+
| ``0`` | A string that identifies the value name |
+-----+-----+
| ``1`` | An object that holds the value data, and |
|       | whose type depends on the underlying |
|       | registry type |
```

```
+-----+-----+
| ``2`` | An integer that identifies the type of the |
|       | value data (see table in docs for         |
|       | :meth:`SetValueEx`)                           |
+-----+-----+
```

```
.. audit-event:: winreg.EnumValue key,index winreg.EnumValue

.. versionchanged:: 3.3
   See :ref:`above <exception-changed>`.
```

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Unknown directive type "index".

```
.. index::
   single: % (percent); environment variables expansion (Windows)
```

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Unknown directive type "function".

```
.. function:: ExpandEnvironmentStrings(str)

   Expands environment variable placeholders ``%NAME%`` in strings like
   :const:`REG_EXPAND_SZ`::

       >>> ExpandEnvironmentStrings('%windir%')
       'C:\\Windows'

.. audit-event:: winreg.ExpandEnvironmentStrings str winreg.ExpandEnvironmentStrings
```

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Unknown directive type "function".

```
.. function:: FlushKey(key)

   Writes all the attributes of a key to the registry.

   *key* is an already open key, or one of the predefined
   :ref:`HKEY_* constants <hkey-constants>`.

   It is not necessary to call :func:`FlushKey` to change a key. Registry changes are
   flushed to disk by the registry using its lazy flusher. Registry changes are
   also flushed to disk at system shutdown. Unlike :func:`CloseKey`, the
   :func:`FlushKey` method returns only when all the data has been written to the
   registry. An application should only call :func:`FlushKey` if it requires
   absolute certainty that registry changes are on disk.

.. note::

   If you don't know whether a :func:`FlushKey` call is required, it probably
   isn't.
```

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Unknown directive type "function".

```
.. function:: LoadKey(key, sub_key, file_name)

   Creates a subkey under the specified key and stores registration information
   from a specified file into that subkey.

   *key* is a handle returned by :func:`ConnectRegistry` or one of the constants
   :const:`HKEY_USERS` or :const:`HKEY_LOCAL_MACHINE`.
```

`*sub_key*` is a string that identifies the subkey to load.

`*file_name*` is the name of the file to load registry data from. This file must have been created with the `:func:`SaveKey`` function. Under the file allocation table (FAT) file system, the filename may not have an extension.

A call to `:func:`LoadKey`` fails if the calling process does not have the `:const:`SE RESTORE PRIVILEGE`` privilege. Note that privileges are different from permissions -- see the ``RegLoadKey`` documentation <https://msdn.microsoft.com/en-us/library/ms724889%28v=VS.85%29.aspx> for more details.

If `*key*` is a handle returned by `:func:`ConnectRegistry``, then the path specified in `*file_name*` is relative to the remote computer.

```
.. audit-event:: winreg.LoadKey key,sub_key,file_name winreg.LoadKey
```

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Unknown directive type "function".

```
.. function:: OpenKey(key, sub_key, reserved=0, access=KEY_READ)
               OpenKeyEx(key, sub_key, reserved=0, access=KEY_READ)
```

Opens the specified key, returning a `:ref:`handle object``.

`*key*` is an already open key, or one of the predefined `:ref:`HKEY_*` constants`.

`*sub_key*` is a string that identifies the sub_key to open.

`*reserved*` is a reserved integer, and must be zero. The default is zero.

`*access*` is an integer that specifies an access mask that describes the desired security access for the key. Default is `:const:`KEY_READ``. See `:ref:`Access Rights`` for other allowed values.

The result is a new handle to the specified key.

If the function fails, `:exc:`OSError`` is raised.

```
.. audit-event:: winreg.OpenKey key,sub_key,access winreg.OpenKey

.. audit-event:: winreg.OpenKey/result key winreg.OpenKey

.. versionchanged:: 3.2
   Allow the use of named arguments.

.. versionchanged:: 3.3
   See :ref:`above` <exception-changed>`.
```

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Unknown directive type "function".

```
.. function:: QueryInfoKey(key)
```

Returns information about a key, as a tuple.

`*key*` is an already open key, or one of the predefined `:ref:`HKEY_*` constants`.

The result is a tuple of 3 items:

Index	Meaning
0	An integer giving the number of sub keys this key has.
1	An integer giving the number of values this key has.

```
+-----+-----+
| ``2`` | An integer giving when the key was last |
|       | modified (if available) as 100's of       |
|       | nanoseconds since Jan 1, 1601.             |
+-----+-----+
```

```
.. audit-event:: winreg.QueryInfoKey key winreg.QueryInfoKey
```

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Unknown directive type "function".

```
.. function:: QueryValue(key, sub_key)
```

Retrieves the unnamed value for a key, as a string.

key is an already open key, or one of the predefined
:ref:`HKEY_* constants <hkey-constants>`.

sub_key is a string that holds the name of the subkey with which the value is associated. If this parameter is ``None`` or empty, the function retrieves the value set by the :func:`SetValue` method for the key identified by *key*.

Values in the registry have name, type, and data components. This method retrieves the data for a key's first value that has a ``NULL`` name. But the underlying API call doesn't return the type, so always use :func:`QueryValueEx` if possible.

```
.. audit-event:: winreg.QueryValue key,sub_key,value_name winreg.QueryValue
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 383)

Unknown directive type "function".

```
.. function:: QueryValueEx(key, value_name)
```

Retrieves the type and data for a specified value name associated with an open registry key.

key is an already open key, or one of the predefined
:ref:`HKEY_* constants <hkey-constants>`.

value_name is a string indicating the value to query.

The result is a tuple of 2 items:

```
+-----+-----+
| Index | Meaning |
+-----+-----+
| ``0`` | The value of the registry item. |
+-----+-----+
| ``1`` | An integer giving the registry type for |
|       | this value (see table in docs for |
|       | :meth:`SetValueEx`) |
+-----+-----+
```

```
.. audit-event:: winreg.QueryValue key,sub_key,value_name winreg.QueryValueEx
```

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Unknown directive type "function".

```
.. function:: SaveKey(key, file_name)
```

Saves the specified key, and all its subkeys to the specified file.

key is an already open key, or one of the predefined
:ref:`HKEY_* constants <hkey-constants>`.

`*file_name*` is the name of the file to save registry data to. This file cannot already exist. If this filename includes an extension, it cannot be used on file allocation table (FAT) file systems by the `:meth:`LoadKey`` method.

If `*key*` represents a key on a remote computer, the path described by `*file_name*` is relative to the remote computer. The caller of this method must possess the `:const:`SeBackupPrivilege`` security privilege. Note that privileges are different than permissions -- see the ``Conflicts Between User Rights and Permissions`` documentation <https://msdn.microsoft.com/en-us/library/ms724878%28v=VS.85%29.aspx> for more details.

This function passes ``NULL`` for `*security_attributes*` to the API.

```
.. audit-event:: winreg.SaveKey key,file_name winreg.SaveKey
```

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Unknown directive type "function".

```
.. function:: SetValue(key, sub_key, type, value)
```

Associates a value with a specified key.

`*key*` is an already open key, or one of the predefined `:ref:`HKEY_`` constants `<hkey-constants>`.

`*sub_key*` is a string that names the subkey with which the value is associated.

`*type*` is an integer that specifies the type of the data. Currently this must be `:const:`REG_SZ``, meaning only strings are supported. Use the `:func:`SetValueEx`` function for support for other data types.

`*value*` is a string that specifies the new value.

If the key specified by the `*sub_key*` parameter does not exist, the `SetValue` function creates it.

Value lengths are limited by available memory. Long values (more than 2048 bytes) should be stored as files with the filenames stored in the configuration registry. This helps the registry perform efficiently.

The key identified by the `*key*` parameter must have been opened with `:const:`KEY_SET_VALUE`` access.

```
.. audit-event:: winreg.SetValue key,sub_key,type,value winreg.SetValue
```

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Unknown directive type "function".

```
.. function:: SetValueEx(key, value_name, reserved, type, value)
```

Stores data in the value field of an open registry key.

`*key*` is an already open key, or one of the predefined `:ref:`HKEY_`` constants `<hkey-constants>`.

`*value_name*` is a string that names the subkey with which the value is associated.

`*reserved*` can be anything -- zero is always passed to the API.

`*type*` is an integer that specifies the type of the data. See `:ref:`Value Types <value-types>`` for the available types.

`*value*` is a string that specifies the new value.

This method can also set additional value and type information for the specified key. The key identified by the `key` parameter must have been opened with `:const:`KEY_SET_VALUE`` access.

To open the key, use the `:func:`CreateKey`` or `:func:`OpenKey`` methods.

Value lengths are limited by available memory. Long values (more than 2048 bytes) should be stored as files with the filenames stored in the configuration registry. This helps the registry perform efficiently.

```
.. audit-event:: winreg.SetValue key,sub_key,type,value winreg.SetValueEx
```

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Unknown directive type "function".

```
.. function:: DisableReflectionKey(key)
```

Disables registry reflection for 32-bit processes running on a 64-bit operating system.

key is an already open key, or one of the predefined `:ref:`HKEY_*`` constants `<hkey-constants>`.

Will generally raise `:exc:`NotImplementedError`` if executed on a 32-bit operating system.

If the key is not on the reflection list, the function succeeds but has no effect. Disabling reflection for a key does not affect reflection of any subkeys.

```
.. audit-event:: winreg.DisableReflectionKey key winreg.DisableReflectionKey
```

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Unknown directive type "function".

```
.. function:: EnableReflectionKey(key)
```

Restores registry reflection for the specified disabled key.

key is an already open key, or one of the predefined `:ref:`HKEY_*`` constants `<hkey-constants>`.

Will generally raise `:exc:`NotImplementedError`` if executed on a 32-bit operating system.

Restoring reflection for a key does not affect reflection of any subkeys.

```
.. audit-event:: winreg.EnableReflectionKey key winreg.EnableReflectionKey
```

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Unknown directive type "function".

```
.. function:: QueryReflectionKey(key)
```

Determines the reflection state for the specified key.

key is an already open key, or one of the predefined `:ref:`HKEY_*`` constants `<hkey-constants>`.

Returns ```True``` if reflection is disabled.

Will generally raise `:exc:`NotImplementedError`` if executed on a 32-bit operating system.

```
.. audit-event:: winreg.QueryReflectionKey key winreg.QueryReflectionKey
```

The following constants are defined for use in many `mod: '_winreg'` functions.

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Unknown interpreted text role "mod".

HKEY_* Constants

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Unknown directive type "data".

```
.. data:: HKEY_CLASSES_ROOT
```

Registry entries subordinate to this key define types (or classes) of documents and the properties associated with those types. Shell and COM applications use the information stored under this key.

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Unknown directive type "data".

```
.. data:: HKEY_CURRENT_USER
```

Registry entries subordinate to this key define the preferences of the current user. These preferences include the settings of environment variables, data about program groups, colors, printers, network connections, and application preferences.

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Unknown directive type "data".

```
.. data:: HKEY_LOCAL_MACHINE
```

Registry entries subordinate to this key define the physical state of the computer, including data about the bus type, system memory, and installed hardware and software.

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Unknown directive type "data".

```
.. data:: HKEY_USERS
```

Registry entries subordinate to this key define the default user configuration for new users on the local computer and the user configuration for the current user.

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Unknown directive type "data".

```
.. data:: HKEY_PERFORMANCE_DATA
```

Registry entries subordinate to this key allow you to access performance data. The data is not actually stored in the registry; the registry functions cause the system to collect the data from its source.

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Unknown directive type "data".

```
.. data:: HKEY_CURRENT_CONFIG
```

Contains information about the current hardware profile of the local computer system.

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Unknown directive type "data".

```
.. data:: HKEY_DYN_DATA
```

This key is not used in versions of Windows after 98.

Access Rights

For more information, see [Registry Key Security and Access](#).

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Unknown directive type "data".

```
.. data:: KEY_ALL_ACCESS
```

Combines the STANDARD_RIGHTS_REQUIRED, :const:`KEY_QUERY_VALUE`, :const:`KEY_SET_VALUE`, :const:`KEY_CREATE_SUB_KEY`, :const:`KEY_ENUMERATE_SUB_KEYS`, :const:`KEY_NOTIFY`, and :const:`KEY_CREATE_LINK` access rights.

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Unknown directive type "data".

```
.. data:: KEY_WRITE
```

Combines the STANDARD_RIGHTS_WRITE, :const:`KEY_SET_VALUE`, and :const:`KEY_CREATE_SUB_KEY` access rights.

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Unknown directive type "data".

```
.. data:: KEY_READ
```

Combines the STANDARD_RIGHTS_READ, :const:`KEY_QUERY_VALUE`, :const:`KEY_ENUMERATE_SUB_KEYS`, and :const:`KEY_NOTIFY` values.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 620)

Unknown directive type "data".

```
.. data:: KEY_EXECUTE
```

Equivalent to :const:`KEY_READ`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 624)

Unknown directive type "data".

```
.. data:: KEY_QUERY_VALUE
```

Required to query the values of a registry key.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 628)

Unknown directive type "data".

```
.. data:: KEY_SET_VALUE
```

Required to create, delete, or set a registry value.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 632)

Unknown directive type "data".

```
.. data:: KEY_CREATE_SUB_KEY
```

Required to create a subkey of a registry key.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 636)

Unknown directive type "data".

```
.. data:: KEY_ENUMERATE_SUB_KEYS
```

Required to enumerate the subkeys of a registry key.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 640)

Unknown directive type "data".

```
.. data:: KEY_NOTIFY
```

Required to request change notifications for a registry key or for subkeys of a registry key.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 645)

Unknown directive type "data".

```
.. data:: KEY_CREATE_LINK
```

Reserved for system use.

64-bit Specific

For more information, see [Accessing an Alternate Registry View](#).

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 658)

Unknown directive type "data".

```
.. data:: KEY_WOW64_64KEY
```

Indicates that an application on 64-bit Windows should operate on the 64-bit registry view.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 663)

Unknown directive type "data".

```
.. data:: KEY_WOW64_32KEY
```

Indicates that an application on 64-bit Windows should operate on the 32-bit registry view.

Value Types

For more information, see [Registry Value Types](#).

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 677)

Unknown directive type "data".

```
.. data:: REG_BINARY
```

Binary data in any form.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 681)

Unknown directive type "data".

```
.. data:: REG_DWORD
```

32-bit number.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 685)

Unknown directive type "data".

```
.. data:: REG_DWORD_LITTLE_ENDIAN
```

A 32-bit number in little-endian format. Equivalent to :const:`REG_DWORD`.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 689)

Unknown directive type "data".

```
.. data:: REG_DWORD_BIG_ENDIAN
```

A 32-bit number in big-endian format.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 693)

Unknown directive type "data".

```
.. data:: REG_EXPAND_SZ
```

Null-terminated string containing references to environment variables (``%PATH%``).

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 698)

Unknown directive type "data".

```
.. data:: REG_LINK
```

A Unicode symbolic link.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 702)

Unknown directive type "data".

```
.. data:: REG_MULTI_SZ
```

A sequence of null-terminated strings, terminated by two null characters.
(Python handles this termination automatically.)

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 707)

Unknown directive type "data".

```
.. data:: REG_NONE
```

No defined value type.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 711)

Unknown directive type "data".

```
.. data:: REG_QWORD
```

A 64-bit number.

```
.. versionadded:: 3.6
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 717)

Unknown directive type "data".

```
.. data:: REG_QWORD_LITTLE_ENDIAN
```

A 64-bit number in little-endian format. Equivalent to :const:`REG_QWORD`.

```
.. versionadded:: 3.6
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 723)

Unknown directive type "data".

```
.. data:: REG_RESOURCE_LIST
```

A device-driver resource list.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 727)

Unknown directive type "data".

```
.. data:: REG_FULL_RESOURCE_DESCRIPTOR
```

A hardware setting.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 731)

Unknown directive type "data".

```
.. data:: REG_RESOURCE_REQUIREMENTS_LIST
```

A hardware resource list.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 735)

Unknown directive type "data".

```
.. data:: REG_SZ
```

A null-terminated string.

Registry Handle Objects

This object wraps a Windows HKEY object, automatically closing it when the object is destroyed. To guarantee cleanup, you can call either the `meth:~PyHKEY.Close` method on the object, or the `func:CloseKey` function.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 745); [backlink](#)

Unknown interpreted text role "meth".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 745); [backlink](#)

Unknown interpreted text role "func".

All registry functions in this module return one of these objects.

All registry functions in this module which accept a handle object also accept an integer, however, use of the handle object is encouraged.

Handle objects provide semantics for `meth:__bool__` -- thus

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 754); [backlink](#)

Unknown interpreted text role "meth".

```
if handle:
    print("Yes")
```

will print `Yes` if the handle is currently valid (has not been closed or detached).

The object also support comparison semantics, so handle objects will compare true if they both reference the same underlying Windows handle value.

Handle objects can be converted to an integer (e.g., using the built-in `func:int` function), in which case the underlying Windows handle value is returned. You can also use the `meth:~PyHKEY.Detach` method to return the integer handle, and also disconnect the Windows handle from the handle object.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 765); [backlink](#)

Unknown interpreted text role "func".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 765); [backlink](#)

Unknown interpreted text role "meth".

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 771)

Unknown directive type "method".

```
.. method:: PyHKEY.Close()
```

Closes the underlying Windows handle.

If the handle is already closed, no error is raised.

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 778)

Unknown directive type "method".

```
.. method:: PyHKEY.Detach()
```

Detaches the Windows handle from the handle object.

The result is an integer that holds the value of the handle before it is detached. If the handle is already detached or closed, this will return zero.

After calling this function, the handle is effectively invalidated, but the handle is not closed. You would call this function when you need the underlying Win32 handle to exist beyond the lifetime of the handle object.

```
.. audit-event:: winreg.PyHKEY.Detach key winreg.PyHKEY.Detach
```

System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\library\ (cpython-main) (Doc) (library)winreg.rst, line 793)

Unknown directive type "method".

```
.. method:: PyHKEY.__enter__()  
           PyHKEY.__exit__(*exc_info)
```

The HKEY object implements :meth:`~object.__enter__` and :meth:`~object.__exit__` and thus supports the context protocol for the :keyword:`with` statement::

```
with OpenKey(HKEY_LOCAL_MACHINE, "foo") as key:  
    ... # work with key
```

will automatically close *key* when control leaves the :keyword:`with` block.