

# Data marshalling support

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\[cpython-main] [Doc] [c-api]marshal.rst, line 1)**

Unknown directive type "highlight".

```
.. highlight:: c
```

These routines allow C code to work with serialized objects using the same data format as the `mod:`marshal`` module. There are functions to write data into the serialization format, and additional functions that can be used to read the data back. Files used to store marshalled data must be opened in binary mode.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\[cpython-main] [Doc] [c-api]marshal.rst, line 8); [backlink](#)**

Unknown interpreted text role "mod".

Numeric values are stored with the least significant byte first.

The module supports two versions of the data format: version 0 is the historical version, version 1 shares interned strings in the file, and upon unmarshalling. Version 2 uses a binary format for floating point numbers. `Py_MARSHAL_VERSION` indicates the current file format (currently 2).

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\[cpython-main] [Doc] [c-api]marshal.rst, line 22)**

Unknown directive type "c:function".

```
.. c:function:: void PyMarshal_WriteLongToFile(long value, FILE *file, int version)
```

Marshal a `c:type:`long` integer`, `*value*`, to `*file*`. This will only write the least-significant 32 bits of `*value*`; regardless of the size of the native `c:type:`long` type`. `*version*` indicates the file format.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\[cpython-main] [Doc] [c-api]marshal.rst, line 29)**

Unknown directive type "c:function".

```
.. c:function:: void PyMarshal_WriteObjectToFile(PyObject *value, FILE *file, int version)
```

Marshal a Python object, `*value*`, to `*file*`. `*version*` indicates the file format.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\[cpython-main] [Doc] [c-api]marshal.rst, line 35)**

Unknown directive type "c:function".

```
.. c:function:: PyObject* PyMarshal_WriteObjectToString(PyObject *value, int version)
```

Return a bytes object containing the marshalled representation of `*value*`. `*version*` indicates the file format.

The following functions allow marshalled values to be read back in.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\[cpython-main] [Doc] [c-api]marshal.rst, line 44)**

Unknown directive type "c:function".

```
.. c:function:: long PyMarshal_ReadLongFromFile(FILE *file)
```

Return a C `:c:type:`long`` from the data stream in a `:c:type:`FILE*`` opened for reading. Only a 32-bit value can be read in using this function, regardless of the native size of `:c:type:`long``.

On error, sets the appropriate exception (`:exc:`EOFError``) and returns ```-1```.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\cpython-main [Doc] [c-api]marshal.rst, line 54)**

Unknown directive type "c:function".

```
.. c:function:: int PyMarshal_ReadShortFromFile(FILE *file)
```

Return a C `:c:type:`short`` from the data stream in a `:c:type:`FILE*`` opened for reading. Only a 16-bit value can be read in using this function, regardless of the native size of `:c:type:`short``.

On error, sets the appropriate exception (`:exc:`EOFError``) and returns ```-1```.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\cpython-main [Doc] [c-api]marshal.rst, line 64)**

Unknown directive type "c:function".

```
.. c:function:: PyObject* PyMarshal_ReadObjectFromFile(FILE *file)
```

Return a Python object from the data stream in a `:c:type:`FILE*`` opened for reading.

On error, sets the appropriate exception (`:exc:`EOFError``, `:exc:`ValueError`` or `:exc:`TypeError``) and returns ```NULL```.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\cpython-main [Doc] [c-api]marshal.rst, line 73)**

Unknown directive type "c:function".

```
.. c:function:: PyObject* PyMarshal_ReadLastObjectFromFile(FILE *file)
```

Return a Python object from the data stream in a `:c:type:`FILE*`` opened for reading. Unlike `:c:func:`PyMarshal_ReadObjectFromFile``, this function assumes that no further objects will be read from the file, allowing it to aggressively load file data into memory so that the de-serialization can operate from data in memory rather than reading a byte at a time from the file. Only use these variant if you are certain that you won't be reading anything else from the file.

On error, sets the appropriate exception (`:exc:`EOFError``, `:exc:`ValueError`` or `:exc:`TypeError``) and returns ```NULL```.

**System Message: ERROR/3 (D:\onboarding-resources\sample-onboarding-resources\cpython-main\Doc\c-api\cpython-main [Doc] [c-api]marshal.rst, line 87)**

Unknown directive type "c:function".

```
.. c:function:: PyObject* PyMarshal_ReadObjectFromString(const char *data, Py_ssize_t len)
```

Return a Python object from the data stream in a byte buffer containing `*len*` bytes pointed to by `*data*`.

On error, sets the appropriate exception (`:exc:`EOFError``, `:exc:`ValueError`` or `:exc:`TypeError``) and returns ```NULL```.