## **RETURN CODES**

Last Modified on 03/23/2016 4:00 pm CDT

- C/C++
- .Net

The NumXL different functions attempt to return the most relevant status code to the operation. In C/C++, the status codes (e.g. error codes) are defined in **SFMacros.h** file as preprocessor macros.

By definition, the zero value is used for success (NDK\_SUCCESS), and negative numbers for error codes (e.g. NDK\_FAILED). This leaves us with the flexibility to use positive numbers for additional success information (e.g. warning codes)

```
///< SUCCESS return code.
#define NDK SUCCESS
                                     0
#define NDK_FAILED
                                    - 1
                                          ///< FAILED: Internal error occurred
#define NDK_SDK_UNINITIALIZED
                                    -10 ///< FAILED: The API NDK_INIT has not
yet been called
#define NDK_LOG_UNINITIALIZED
                                    -11 ///< FAILED: The API NDK_LOG_INIT has
not yet been called
#define NDK_LUC_UNINITIALIZED
                                    -12 ///< FAILED: The API NDK_LUC_INIT has
not yet been called
#define NDK_DBM_UNINITIALIZED
                                    -13 ///< FAILED: The API NDK_DBM_INIT has
not yet been called
#define NDK MSG UNINITIALIZED
                                    -14 ///< FAILED: The API NDK MSG INIT has
not yet been called
#define NDK LOG INIT FAILED
                                    -20
                                          ///< FAILED: The logging system failed
during initialization, check the configuration settings
#define NDK DB INIT FAILED
                                    -21
                                          ///< FAILED: Missing or failed to open
the database file
#define NDK LUC INIT FAILED
                                    -22
                                          ///< FAILED: Missing or failed to open
the database file
// Initialization error codes
#define NDK_MISSING_CONF
                                    - 100
                                           ///< FAILED: The configuration file
is missing
#define NDK BAD CONF
                                    -101
                                           ///< FAILED: Access denied or
corrupted file
#define NDK_CONF_DATAPATH_INVALID
                                    - 102
                                           ///< FAILED: Invalid datapath value
in the configuration file
#define NDK_DATAPATH_INVALID
                                    - 103
                                           ///< FAILED: failed to
```

```
retrieve/construct a temp path for logs and intermediate calculation
#define NDK_CONF_PRODID_INVALID
                                    -104
                                           ///< FAILED: Invalid value for
[GLOBALS][PRODUCTID] entry in the conf file
#define NDK LOGFILE INUSE
                                    - 105
                                           ///< FAILED: Failed to open the
logfile for writing (permission error or file in use)
#define NDK_MISSING_APP_ARG
                                    - 106
                                           ///< FAILED: invalid or Null argument
(e.g. AppName for return value)
#define NDK_MISSING_LICENSE_KEY
                                    - 107
                                           ///< FAILED: The product license ket
is invalid
#define NDK_INVALID_LICENSE_KEY
                                    -108
                                           ///< FAILED: The product license ket
is invalid
#define NDK INACTIVE LICENSE KEY
                                    - 109
                                           ///< FAILED: The license key has yet
to be activated
#define NDK INVALID KEY CODE
                                           ///< FAILED: The license key and code
                                    -110
are not valid
                                           ///< FAILED: The license key has
#define NDK EXPIRED LICENSE KEY
                                    -111
expired
#define NDK LOW LICENSE LEVEL
                                    -112
                                           ///< FAILED: The required license
level is not met by current license
// Runtime error codes
#define NDK INVALID_ARG
                                    -300 ///< FAILED: an input argument with
unexpected or invalid value.
#define NDK LENGTH ERROR
                                    -301 ///< FAILED: The user's buffer is not
big enough or Insufficient input data
#define NDK INVALID VALUE
                                    -302 ///< FAILED: Invalid value of an
argument
#define NDK EMPTY TIME SERIES
                                    -303 ///< FAILED: number of non-missing
values is zero
#define NDK ZERO INVALID VARIANCE
                                    -304 ///< FAILED: number of non-missing
values is zero
#define NDK CALIBRATION ERROR
                                    -305 ///< FAILED: The Optimizer failed to
converge to a unique solution.
#define NDK INVALID MODEL
                                    -306 ///< FAILED: The model's parameters
values did not pass the stability test.
#define NDK INSUFFICIENT OBS
                                    -307 ///< FAILED: The number of non-missing
observations is not sufficient to carry on the requested function
// Implementation status
#define NDK NOTSUPPORTED
                                         ///< FAILED: The required operation is
                                    -400
not currently implemented/supported
// Warnings codes
#define NDK RET NAN
                                    100 ///< WARNING: The function returns an
invalid (i.e. missing) value
```

```
#define NDK SKIP INIT
                                    105 ///< WARNING: The DLL is already
initialize, skipping !
#define NDK_KEY_IN_GRACE_PEROID
                                    1000 ///< INFORMATION: the trial license
key is in the 7-day grace period
#define NDK_KEY_IN_TRIAL_PEROID
                                    1005 ///< INFORMATION: the trial license
key is in the free trial period
#define NDK_KEY_NOT_IN_TRIAL_PEROID 1010 ///< INFORMATION: the trial license
key is not in the free trial period
#define NDK_PERP_KEY_ACTIVE
                                    1015 ///< INFORMATION: the perpetual
license key is activated
#define NDK PERP KEY INACTIVE
                                    1020 ///< INFORMATION: the perpetual
license key is not activated
#define NDK SUB KEY ACTIVE
                                    1025 ///< INFORMATION: the subscription
license key is activated
#define NDK SUB KEY INACTIVE
                                    1030 ///< INFORMATION: the subscription
license key is not activated
```

The functions in .Net Wrapper attempt to return the most relevant status code to the operation. The Wrapper library define an enumeration type - NDK\_RETCODE (in NumXLAPI namespace) to capture those values returned by NumXL C- APIs.

```
namespace NumXLAPI
{
 /// <summary>
  /// Defines the possible API return values.
  /// </summary>
  public enum NDK RETCODE
  {
    /// <summary> SUCCESS </summary>
    NDK SUCCESS =
    /// <summary> FAILED: Internal error occured </summary>
    NDK FAILED =
    // TRUE/FALSE aliases
    /// <summary> SUCCESS: return value is TRUE. </summary>
    NDK TRUE=
                                  0,
    /// <summary> SUCCESS: return value is FALSE. </summary>
    NDK FALSE
                                  1.
    /// <summary> FAILED: The API NDK INIT has not yet been called. </summary>
    NDK SDK UNINITIALIZED =
                                 -10,
    ///<summary> FAILED: The API NDK INIT has not yet been called</summary>
    NDK LOG UNINITIALIZED=
                                 -11,
```

```
///<summary> FAILED: The API NDK INIT has not yet been called</summary>
    NDK LUC UNINITIALIZED=
                                 -12 ,
    ///<summary> FAILED: The API NDK INIT has not yet been called</summary>
    NDK DBM UNINITIALIZED=
                                 - 13
    ///<summary> FAILED: The logging system failed during initialization, check
the configuration settings</summary>
    NDK LOG INIT FAILED=
                                 -20,
    ///<summary> FAILED: Missing or failed to open the database file</summary>
    NDK DB INIT FAILED=
                                 -21,
    ///<summary> FAILED: Missing or failed to open the database file</summary>
    NDK LUC INIT FAILED=
                                 -22,
    // Initialization error codes
    ///<summary> FAILED: The configuration file is missing</summary>
    NDK MISSING CONF=
                                 - 100
    ///<summary> FAILED: Access denied or corrupted file</summary>
    NDK BAD CONF=
                                 -101,
    ///<summary> FAILED: Invalid datapath value in the configuration
file</summary>
    NDK CONF DATAPATH INVALID=
                                 -102,
    ///<summary> FAILED: failed to retrieve/construct a temp path for logs and
intermediate calculation </summary>
    NDK DATAPATH INVALID=
                                 -103,
    ///<summary> FAILED: Invalid value for [GLOBALS][PRODUCTID] entry in the
conf file</summary>
    NDK CONF PRODID INVALID=
                                 -104,
    ///<summary> FAILED: Failed to open the logfile for writing (permission
error or file in use)</summary>
    NDK LOGFILE INUSE=
                                 -105,
    ///<summary> FAILED: invalid or Null argument (e.g. AppName for return
value)</summary>
    NDK MISSING APP ARG=
                                 -106,
    ///<summary> FAILED: The product license ket is invalid</summary>
    NDK MISSING LICENSE KEY=
                                 -107,
    ///<summary> FAILED: The product license ket is invalid</summary>
    NDK INVALID LICENSE KEY=
                                 -108,
    ///<summary> FAILED: The license key has yet to be activated</summary>
    NDK INACTIVE LICENSE KEY=
                                 -109,
    ///<summary> FAILED: The license key and code are not valid</summary>
    NDK INVALID KEY CODE=
                                 -110,
    ///<summary> FAILED: The license key has expired</summary>
    NDK EXPIRED LICENSE KEY=
                                 -111,
    ///<summary> FAILED: The required license level is not met by current
license</summary>
    NDK LOW LICENSE LEVEL=
                                 -112,
```

```
// Runtime error codes
    ///<summary> FAILED: an input argument with unexpected or invalid
value.</summary>
    NDK INVALID ARG=
                                 -300,
   ///<summary> FAILED: The user's buffer is not big enough or Insufficient
input data</summary>
   NDK LENGTH ERROR=
                                 -301,
    ///<summary> FAILED: Invalid value of an argument</summary>
    NDK INVALID VALUE=
                                 -302,
    ///<summary> FAILED: number of non-missing values is zero</summary>
    NDK EMPTY TIME SERIES=
                                 -303,
    ///<summary> FAILED: number of non-missing values is zero</summary>
    NDK ZERO INVALID VARIANCE=
                                 -304,
    ///<summary> FAILED: The optimizer failed to converge to a unique
solution.
   NDK CALIBRATION ERROR=
                                 -305,
    ///<summary> FAILED: The model's parameters values did not pass the
stability test.</summary>
    NDK INVALID MODEL=
                                 -306,
   ///<summary> FAILED: The number of non-missing observations is not
sufficient to carry on the requested function. </summary>
    NDK INSUFFICIENT OBS=
                                 -307,
    // Implementation status
    ///<summary> FAILED: The required operation is not currently
implemented/supported</summary>
    NDK NOTSUPPORTED
                                 -400,
    // Warnings codes
    ///<summary> WARNING: The function returns an invalid (i.e. missing)
value</summary>
   NDK RET_NAN
                                 100,
    ///<summary> WARNING: The DLL is already initialize, skipping !</summary>
    NDK SKIP_INIT
                                 105,
   ///<summary> INFORMATION: the trial license key is in the 7-day grace
period</summary>
   NDK KEY IN GRACE PEROD
                           =
                                 1000,
   ///<summary> INFORMATION: the trial license key is in the free trial
period</summary>
    NDK_KEY_IN_TRIAL_PEROD =
                                 1005,
    ///<summary> INFORMATION: the trial license key is not in the free trial
period</summary>
    NDK KEY NOT IN TRIAL PEROD = 1010,
    ///<summary> INFORMATION: the perpetual license key is activated</summary>
```

```
NDK_PERP_KEY_ACTIVE
                                 1015,
   ///<summary> INFORMATION: the perpetual license key is not
activated</summary>
    NDK_PERP_KEY_INACTIVE =
                                 1020,
    ///<summary> INFORMATION: the subscription license key is
activated</summary>
    NDK_SUB_KEY_ACTIVE=
                                 1025,
    ///<summary> INFORMATION: the subscription license key is not activated.
</summary>
    NDK_SUB_KEY_INACTIVE=
                                 1030,
 }
}
```

## See Also

[template("related")]