

NDK: NOVELL Identity Translator Developer Kit

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Novell.



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About This Guide

This guide describes the NIT functions.

- ♦ [Chapter 1, “Overview,” on page 7](#)
- ♦ [Chapter 2, “Functions,” on page 9](#)

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When a single pathname can be written with a backslash for some platforms or a forward slash for other platforms, the pathname is presented with a backslash. Users of platforms that require a forward slash, such as Linux or UNIX, should use forward slashes as required by your software.

1 Overview

- ◆ [Section 1.1, “Components of NIT,” on page 7](#)

OES 2015 includes a new service named Novell Identity Translator (NIT) that dynamically provides user IDs on OES 2015 systems for NSS file access.

1.1 Components of NIT

The Novell Identity Translator includes the following components:

- ◆ [Section 1.1.1, “NIT Daemon,” on page 7](#)
- ◆ [Section 1.1.2, “NIT Configuration Utility,” on page 7](#)

1.1.1 NIT Daemon

nitd

This daemon serves requests from CIFS, NSS, SMS, and other OES services to map and resolve eDirectory and Active Directory user identities as applicable.

1.1.2 NIT Configuration Utility

nitconfig

This tool is used to configure NIT. It allows you to add and modify configuration parameters, and stores them in the `/etc/opt/novell/nit/nitd.conf` file in UTF-8 format.

Each entry occupies a single line in the file. Lines that are blank, or that start with a pound sign (`#`), are ignored.

2 Functions

This section contains the API reference for the Novell® NIT SDK.

- ◆ [“LIBNIT_ADSIDToName” on page 10](#)
- ◆ [“LIBNIT_NameToADSID” on page 12](#)
- ◆ [“LIBNIT_UIDToName” on page 13](#)
- ◆ [“LIBNIT_SIDToString” on page 15](#)
- ◆ [“LIBNIT_StringToSID” on page 16](#)
- ◆ [“LIBNIT_EDIRDNToGUID” on page 17](#)
- ◆ [“LIBNIT_GUIDToEDIRDN” on page 18](#)
- ◆ [“LIBNIT_GUIDToString” on page 19](#)
- ◆ [“LIBNIT_StringToGUID” on page 20](#)

LIBNIT_ADSIDToName

This function returns the user or group name associated with the specified Active Directory SID.

Syntax

```
#include <nitlibext.h>
int LIBNIT_ADSIDToName (
    NIT_SID_t *adsid,
    char **name
)
```

Parameters

adsid

(IN) Specifies the Active Directory SID value.

name

(OUT) Returns the user or group name of the specified Active Directory SID object.

Return Values

0	NIT_SUCCESS	Success
-9001	NITERR_ENTRY_NOTFOUND	Active Directory search returned unexpected results.
-9002	NITERR_ATTRIBUTE_NOTFOUND	Specified SID attribute is not found in the Active Directory.
-9003	NITERR_UIDRANGE_EXHAUSTED	The UID range has been exhausted.
-9004	NITERR_IO_ERROR	Unable to write the NIT configuration file.
-9005	NITERR_PERMISSION_DENIED	Request comes from a non-root user, permission is denied to perform the operation.
-9006	NITERR_NITD_UNAVAILABLE	NIT daemon is not running.
-9007	NITERR_AD_LDAP_TIMEOUT	NIT did not receive an answer from the LDAP server before the timeout interval.
-9008	NITERR_EDIR_ONLY_MODE	NIT runs in eDirectory mode, cannot perform Active Directory search operations.
-9009	NITERR_INSUFFICIENT_BUFFER	The caller has not allocated enough memory.
-9010	NITERR_INSUFFICIENT_MEMORY	There is no enough memory to allocate.
-9011	NITERR_UNKNOWN_ERROR	Cause is unknown.
-9012	NITERR_NO_USER_ACCESS_GROUP	Active Directory universal access group <i>OESAccessGrp</i> is not found.
-9013	NITERR_MANY_USER_ACCESS_GROUP	More than one Active Directory license universal group is found.
-9014	NITERR_INVALID_PARAMETER	The parameters passed are NULL or invalid.
-9016	NITERR_AD_NOT_REACHABLE	Active Directory server is not reachable.

NOTE: Caller has to free the memory pointed by name when no longer required by the application.

LIBNIT_NameToADSID

This function returns the SID associated with the Active Directory user or group name.

Syntax

```
#include <nitlibext.h>
int LIBNIT_NameToADSID (
    char *name,
    NIT_SID_t *adsid
)
```

Parameters

name

(IN) Specifies the Active Directory user or group name.

adsid

(OUT) Returns the SID of the specified Active Directory user or group name.

Return Values

0	NIT_SUCCESS	Success
-9001	NITERR_ENTRY_NOTFOUND	Active Directory search returned unexpected results.
-9002	NITERR_ATTRIBUTE_NOTFOUND	Specified SID attribute is not found in the Active Directory.
-9003	NITERR_UIDRANGE_EXHAUSTED	The UID range has been exhausted.
-9004	NITERR_IO_ERROR	Unable to write the NIT configuration file.
-9005	NITERR_PERMISSION_DENIED	Request comes from a non-root user, permission is denied to perform the operation.
-9006	NITERR_NITD_UNAVAILABLE	NIT daemon is not running.
-9007	NITERR_AD_LDAP_TIMEOUT	NIT did not receive an answer from the LDAP server before the timeout interval.
-9008	NITERR_EDIR_ONLY_MODE	NIT runs in eDirectory mode, cannot perform Active Directory search operations.
-9009	NITERR_INSUFFICIENT_BUFFER	The caller has not allocated enough memory.
-9010	NITERR_INSUFFICIENT_MEMORY	There is no enough memory to allocate.
-9011	NITERR_UNKNOWN_ERROR	Cause is unknown.
-9012	NITERR_NO_USER_ACCESS_GROUP	Active Directory universal access group <i>OESAccessGrp</i> is not found.
-9013	NITERR_MANY_USER_ACCESS_GROUP	More than one Active Directory license universal group is found.
-9014	NITERR_INVALID_PARAMETER	The parameters passed are NULL or invalid.
-9016	NITERR_AD_NOT_REACHABLE	Active Directory server is not reachable.

LIBNIT_UIDToName

This function returns the user name associated with the specified UID.

Syntax

```
#include <nitlibext.h>
int LIBNIT_UIDToName (
    uid_t uid,
    char **name
)
```

Parameters

uid

(IN) Specifies the UID value for the name that is requested.

name

(OUT) Returns the name of the specified eDirectory or Active Directory user. For eDirectory user, the value returned is in FQDN format and for Active Directory user, it is in DomainName/SAMAccountName format.

Return Values

0	NIT_SUCCESS	Success
-9001	NITERR_ENTRY_NOTFOUND	Search returned unexpected results.
-9002	NITERR_ATTRIBUTE_NOTFOUND	Specified UID attribute is not found in the eDirectory or Active Directory.
-9003	NITERR_UIDRANGE_EXHAUSTED	The UID range has been exhausted.
-9004	NITERR_IO_ERROR	Unable to write the NIT configuration file.
-9005	NITERR_PERMISSION_DENIED	Request comes from a non-root user, permission is denied to perform the operation.
-9006	NITERR_NITD_UNAVAILABLE	NIT daemon is not running.
-9007	NITERR_AD_LDAP_TIMEOUT	NIT did not receive an answer from the LDAP server before the timeout interval.
-9008	NITERR_EDIR_ONLY_MODE	NIT runs in eDirectory mode, cannot perform Active Directory search operations.
-9009	NITERR_INSUFFICIENT_BUFFER	The caller has not allocated enough memory.
-9010	NITERR_INSUFFICIENT_MEMORY	There is no enough memory to allocate.
-9011	NITERR_UNKNOWN_ERROR	Cause is unknown.
-9012	NITERR_NO_USER_ACCESS_GROUP	Active Directory universal access group <i>OESAccessGrp</i> is not found.
-9013	NITERR_MANY_USER_ACCESS_GROUP	More than one Active Directory license universal group is found.
-9014	NITERR_INVALID_PARAMETER	The parameters passed are NULL or invalid.

-9016	NITERR_AD_NOT_REACHABLE	Active Directory server is not reachable.
-9017	NITERR_EDIR_NOT_REACHABLE	eDirectory server is not reachable.

NOTE: Caller has to free the memory pointed by name when no longer required by the application.

LIBNIT_SIDToString

This function converts the specified Active Directory SID to a string.

Syntax

```
#include <nitlibext.h>
int LIBNIT_SIDToString (
    const NIT_SID_t *adsid,
    char *sidstr
)
```

Parameters

adsid

(IN) Specifies the Active Directory SID value.

sidstr

(OUT) Returns a '\0' terminated string.

Return Values

0	NIT_SUCCESS	Success
-9014	NITERR_INVALID_PARAMETER	The parameters passed are NULL or invalid.

LIBNIT_StringToSID

This function converts the specified string to Active Directory SID.

Syntax

```
#include <nitlibext.h>
int LIBNIT_StringToSID (
    const char *sidstr,
    NIT_SID_t *adsid
)
```

Parameters

sidstr

(IN) Specifies the string.

adsid

(OUT) Returns the Active Directory SID.

Return Values

0	NIT_SUCCESS	Success
-9014	NITERR_INVALID_PARAMETER	The parameters passed are NULL or invalid.

LIBNIT_EDIRDNToGUID

This function returns the eDirectory GUID associated with the specified eDirectory DN.

Syntax

```
#include <nitlibext.h>
int LIBNIT_EDIRDNToGUID (
    char *edirdn,
    NIT_GUID_t *edirguid
)
```

Parameters

edirdn

(IN) Specifies the eDirectory DN.

edirguid

(OUT) Returns the eDirectory GUID of the specified eDirectory DN.

Return Values

0	NIT_SUCCESS	Success
-9001	NITERR_ENTRY_NOTFOUND	Active Directory search returned unexpected results.
-9003	NITERR_UIDRANGE_EXHAUSTED	The UID range has been exhausted.
-9004	NITERR_IO_ERROR	Unable to write the NIT configuration file.
-9005	NITERR_PERMISSION_DENIED	Request comes from a non-root user, permission is denied to perform the operation.
-9006	NITERR_NITD_UNAVAILABLE	NIT daemon is not running.
-9009	NITERR_INSUFFICIENT_BUFFER	The caller has not allocated enough memory.
-9010	NITERR_INSUFFICIENT_MEMORY	There is no enough memory to allocate.
-9011	NITERR_UNKNOWN_ERROR	Cause is unknown.
-9014	NITERR_INVALID_PARAMETER	The parameters passed are NULL or invalid.
-9017	NITERR_EDIR_NOT_REACHABLE	eDirectory server is not reachable.

LIBNIT_GUIDToEDIRDN

This function returns the eDirectory DN associated with the specified eDirectory GUID.

Syntax

```
#include <nitlibext.h>
int LIBNIT_GUIDToEDIRDN (
    NIT_GUID_t *edirguid,
    char **edirdn
)
```

Parameters

edirguid

(IN) Specifies the eDirectory GUID.

edirdn

(OUT) Returns the eDirectory DN of the specified eDirectory GUID that terminates with '\0'.

Return Values

0	NIT_SUCCESS	Success
-9001	NITERR_ENTRY_NOTFOUND	Active Directory search returned unexpected results.
-9003	NITERR_UIDRANGE_EXHAUSTED	The UID range has been exhausted.
-9004	NITERR_IO_ERROR	Unable to write the NIT configuration file.
-9005	NITERR_PERMISSION_DENIED	Request comes from a non-root user, permission is denied to perform the operation.
-9006	NITERR_NITD_UNAVAILABLE	NIT daemon is not running.
-9009	NITERR_INSUFFICIENT_BUFFER	The caller has not allocated enough memory.
-9010	NITERR_INSUFFICIENT_MEMORY	There is no enough memory to allocate.
-9011	NITERR_UNKNOWN_ERROR	Cause is unknown.
-9014	NITERR_INVALID_PARAMETER	The parameters passed are NULL or invalid.
-9017	NITERR_EDIR_NOT_REACHABLE	eDirectory server is not reachable.

LIBNIT_GUIDToString

This function converts the specified eDirectory GUID to a string.

Syntax

```
#include <nitlibext.h>
int LIBNIT_GUIDToString (
    const NIT_GUID_t *edirguid,
    char *guidstr
)
```

Parameters

edirguid

(IN) Specifies the eDirectory GUID.

guidstr

(OUT) Returns a '\0' terminated string.

Return Values

0	NIT_SUCCESS	Success
-9014	NITERR_INVALID_PARAMETER	The parameters passed are NULL or invalid.

LIBNIT_StringToGUID

This function converts the specified string to eDirectory GUID format.

Syntax

```
#include <nitlibext.h>
int LIBNIT_StringToGUID (
    const char *guidstr,
    NIT_GUID_t *edirguid
)
```

Parameters

guidstr

(IN) Specifies the string.

edirguid

(OUT) Returns the eDirectory GUID of the specified string.

Return Values

0	NIT_SUCCESS	Success
-9014	NITERR_INVALID_PARAMETER	The parameters passed are NULL or invalid.
