EMC® VNX® Series

Version VNX1, VNX2

Using ntxmap for CIFS User Mapping on VNX

P/N 300-015-117 REV. 03

EMC²®

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CONTENTS

Preface

As part of an effort to improve and enhance the performance and capabilities of its product lines, EMC periodically releases revisions of its hardware and software. Therefore, some functions described in this document may not be supported by all versions of the software or hardware currently in use. For the most up-to-date information on product features, refer to your product release notes.

If a product does not function properly or does not function as described in this document, please contact your EMC representative.

Special notice conventions used in this document
EMC uses the following conventions for special notices:

⚠ **DANGER**

Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠**WARNING**

Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION**

Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

Addresses practices not related to personal injury.

Note

Presents information that is important, but not hazard-related.

Where to get help
EMC support, product, and licensing information can be obtained as follows:

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Note

Do not request a specific support representative unless one has already been assigned to your particular system problem.

Your comments

Your suggestions will help us continue to improve the accuracy, organization, and overall quality of the user publications.

Please send your opinion of this document to:

```
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```

CHAPTER 1

Introduction

In a multiprotocol VNX environment, when a Microsoft Windows user wants to access a UNIX resource, or a UNIX user wants to access a Windows resource, the username must be mapped in the same way in each environment; otherwise, the mapping cannot occur and the user is denied access to the resource.

However, you might want to map Windows and UNIX users who are identified differently in each environment. The EMC VNX ntxmap feature allows you to define explicit mappings between such Windows and UNIX usernames. Concepts on page 11 provides more information.

This document is part of the VNX information set and is intended for system administrators responsible for configuring and managing Windows user mapping in an environment where the users are identified differently on Windows and UNIX platforms.

Topics included are:

System requirements

describes the EMC® VNX® software, hardware, network, and storage configurations.

Table 1 System requirements

Software	File OE version 7.1 and later
Hardware	No specific hardware requirements.
Network	Windows 2000, Windows Server 2003, or Windows NT domain. You must configure the domains with: - Windows 2000 or Windows Server 2003 domains: - Active Directory - Kerberos or NT Lan Manager (NTLMSSP) - DNS - NTP - Windows NT domains: - NT Lan Manager (NTLM) - WINS
Storage	Follow the procedures in *Managing a Multiprotocol Environment on VNX* to configure the VNX storage requirements. The ntcred mount option should be set to use the NT credential cache. Ensure that the security mode for CIFS is not set to UNIX or SHARE on the Data Mover. Verify that sufficient space is available in the root file system. Contact your EMC Customer Support Representative for assistance with determining size requirements.

Restrictions

The ntxmap.conf file is a text file that is sequentially parsed for every mapping request. If the mapping entries exceed 1,000, EMC recommends that you do not use ntxmap. More than 1,000 user mapping entries can lead to authentication latency issues, and potentially impact the Windows user login and work sessions.

User interface choices

This document describes how to configure ntxmap by using the command line interface (CLI). You cannot use other VNX management applications to configure ntxmap.

Related information

For additional information related to the features and functionality described in this document:

- *VNX Command Line Interface Reference for File*

- *Celerra Network Server Error Messages Guide*
- *Parameters Guide for VNX*
- *Configuring Events and Notifications on VNX for File*
- *Configuring VNX User Mapping*
- *Configuring VNX Naming Services*
- *Installing Management Applications on VNX for File*
- *Managing a Multiprotocol Environment on VNX*
- *Configuring and Managing CIFS on VNX*
- Online VNX for file man pages
- *Using NTMigrate with VNX*
- Using Windows Administrative Tools on VNX

EMC VNX documentation on EMC Online Support

The complete set of EMC VNX series customer publications is available on EMC Online Support. To search for technical documentation, go to http://Support.EMC.com. After logging in to the website, click **Support by Product** and type **VNX series** in the Find a Product text box. Then search for the specific feature required.

VNX wizards

Unisphere software provides wizards for performing setup and configuration tasks. The Unisphere online help provides more details on the wizards.

CHAPTER 2

Concepts

The ntxmap feature supports mapping requirements in a multiprotocol environment, where the Windows and UNIX users are identified differently. The ntxmap.conf file is used to relate the different usernames.

Note

In a multiprotocol environment, ntxmap is used only for users who cannot be mapped by using another user mapping method. A typical VNX configuration might include a few users who are mapped by using the ntxmap.conf file, and others who are mapped by using another user mapping method appropriate for that configuration.

Configuring VNX User Mapping provides information on the user mapping methods best suited for your VNX environment.

Topics included are:

ntxmap mapping methods

The ntxmap feature uses two user mapping methods:

- Windows credentials mapping
- UNIX-to-Windows mapping

Note

If the ntxmap.conf file does not exist or is unable to provide a mapping, the Data Mover then uses the user mapping method configured for its environment.

Windows credential mapping

Typically, if SID mapping is required, the Data Mover searches for a corresponding unique UID that has the same username.

In Windows credentials mapping, the ntxmap.conf file first provides the mapped UNIX name, if one is available. The Data Mover then uses the user mapping method configured for its environment to search for a UID that corresponds to the mapped name provided by ntxmap, instead of searching for a UID that corresponds to the Windows username.

When a Windows user logs in and requests a UNIX resource:

1. The user logs in to the Data Mover and provides a Windows credential, which includes the SID, domain, and Windows username.

2. The Data Mover uses the domain and Windows username to query the ntxmap.conf file for a corresponding mapped UNIX name, if one is available.

   Note

   A mapped name is found if the domain and Windows username match the domain and username in a mapping entry created in the ntxmap.conf file. The domain name must be the NETBIOS domain name, in uppercase. If the domain in the mapping rule is empty or is specified as "*", any user domain is valid. The username is not case-sensitive for mapping. However, the UNIX name is case-sensitive. The first entry that matches the mapping is used.

3. If a mapped UNIX name is available, the Data Mover uses the user mapping method configured for its environment to search for a UID and GIDs that correspond to the mapped name.

4. In addition, if the Windows acl.extendExtraGid parameter is set, the Windows user groups are merged with the UNIX secondary groups and added to the list of GIDs in the Windows credentials.

Example scenario
This example shows how Windows credentials mapping works. The ntxmap.conf file contains this mapping rule:

INTGW2K3:WINuser:=:UNIXuser

When the user WINuser of domain INTGW2K3 logs in to the Data Mover, the Windows credential contains the SID, UID, and GIDs associated with UNIXuser. The UID and GIDs are retrieved by using the user mapping method configured for that environment. Each time the user uses a resource, access is granted by checking the user access rights (SID, UID, and GIDs) against the resource's access rights.

> **Note**
>
> *Configuring VNX User Mapping* provides information on the user mapping methods best suited for your VNX environment.

UNIX-to-Windows mapping

> **Note**
>
> In UNIX-to-Windows mapping methods, the SID is retrieved from the UNIX UID.

Typically, the Data Mover searches for a UNIX username. The domain name is added to the UNIX name and the domain controller is requested to provide the corresponding SID.

In UNIX to Windows mapping, the ntxmap.conf mapping file provides the domain and username.

When a UNIX user logs in and requests a Windows resource:

1. The UNIX authentication procedure provides the UID and GIDs for the UNIX username.

2. The Data Mover uses the UID-to-UNIX name resolution mechanism to get the UNIX name.

3. With the UNIX name provided, the Data Mover queries the ntxmap.conf file for a mapped Windows NT name and its domain name. A mapped Windows NT name is found if the UNIX name in the mapping entry matches the UNIX name (case-sensitive) of the user.

4. Using the mapped Windows name, the Data Mover queries the domain controller for the corresponding SID mapping.

   > **Note**
   >
   > If the domain name is empty, the default domain name of the Data Mover is used to query the domain controller.

5. The retrieved UID and SID are used to grant access to the resources.

6. In addition, if the Windows acl.extendExtraGid parameter is set, the Windows user groups are merged with the UNIX secondary groups, and added to the list of GIDs for the UNIX user. The UID, the SIDs, and the GIDs for this user are then cached locally, and are used for subsequent requests. Each mapping entry in the cache has an expiry period. When the expiry period is over, the entry is automatically deleted.

Example scenario
This mapping rule explains how the UNIX to Windows mapping works. The ntxmap.conf file contains this:

INTGW2K3:WINuser:=:UNIXuser

When the user UNIXuser requests resources, SIDs of the user WINuser of domain INTGW2K3 are mapped to the UNIX user's UID. Each time the user uses a resource, access is granted by checking the user access rights (SID, UID, and GIDs) against the resource's access rights.

> **Note**
>
> *Configuring VNX User Mapping* provides information on the user mapping methods best suited for your VNX environment.

Windows user mapping rule

The Windows user mapping rule is stored in the /.etc/ntxmap.conf file in the Data Mover, and uses the following syntax:

```
domain : user : direction : unix_user
```

where:

- `domain` is the user's domain. It refers to the NetBIOS name, and is written in uppercase. Empty domain names are allowed except for bidirectional mapping. If an empty domain name is used, only the username is checked for the mapping match. Domain names can contain the asterisk (*) wildcard.

- `user` is the user's Windows name, and is not case-sensitive.

- `direction` indicates how the mapping rule applies:

  - = indicates that the rule applies in both directions (bidirectional). For systems running version 6.0 and later, this bidirectional rule is valid for mapping from Windows to UNIX and from UNIX to Windows. When using the = direction option, wildcards and substitution sequences are not allowed in `domain`, `user`, and `unix_user` names. Empty domain names are also not allowed.

  - > indicates that the rule only applies for mapping from Windows to UNIX. Wildcard is not allowed in `unix_user` name. Substitution sequences <d> and <u> are not allowed in the `domain` and `user` names, but are allowed in the `unix_user` name.

  - < indicates that the rule only applies for mapping from UNIX to Windows. Wildcard is not allowed in the `domain` and `user` names. Substitution sequence <d> is not allowed in `domain` and `user` names because UNIX systems do not use a domain. Substitution sequences <d> and <u> are not allowed in `unix_user` name.

- `unix_user` indicates the user's UNIX name, and is case-sensitive.

Create the ntxmap.conf file on page 18 and Modify the ntxmap.conf file on page 19 provide more information.

Note

Comments are allowed in the ntxmap.conf file. A comment line starts with "#".

Domain name syntax

Empty domain names are allowed except for bidirectional mapping. If an empty domain name is used, only the username is checked for the mapping match.

The domain name can contain the asterisk (*) wildcard. For example:

`domain1*:cifsuser:>:unixuser`	`cifsuser` from any domain name that starts with `domain1` is mapped to the `unixuser` UNIX name.
`*abc:cifsuser:>:unixuser`	`cifsuser` from any domain that ends with `abc` is mapped to the `unixuser` UNIX name.

For the < direction option, the domain name can contain the special substitution sequence <u>. Each occurrence of <u> is replaced by the UNIX user. For example:

`<u>:cifsuser:<:*`	any `unixuser` UNIX name is mapped to `cifsuser` in domain `unixuser`.

CIFS user syntax

A CIFS user can contain the asterisk (*) wildcard. For example:

`cifsdomain:*:>:unixuser`	any CIFS user in the `cifsdomain` domain is mapped to the `unixuser` UNIX name.
`cifsdomain:abc*:>:unixuser`	any CIFS user with a name that starts with `abc` is mapped to the `unixuser` UNIX name.
`cifsdomain:*def:>:unixuser`	any CIFS user with a name that ends with `def` is mapped to the `unixuser` UNIX name.

For the < direction option, a CIFS user can contain the special substitution sequence <u>. Each occurrence of <u> is replaced by the CIFS user. For example:

`cifsdomain:*:>:<u>`	any CIFS user is mapped to the same UNIX name.
`cifsdomain:<u>:<:*`	any UNIX name is mapped to the same CIFS name.

UNIX name syntax

A UNIX name can contain the asterisk (*) wildcard. For example:

`cifsdomain:cifsuser:<:*`	any UNIX name is mapped to `cifsuser` in the `cifsdomain` domain.

For the > direction option, the UNIX name can contain the special substitution sequences of <d> and <u>. Each occurrence of <d> is replaced by the domain name, and each occurrence of <u> is replaced by the Windows username:

`*:*:>:<d>.<u>`	`cifsuser` in the `cifsdomain` domain is mapped to the `cifsuser.cifsdomain` UNIX name.
`*:cifsuser:>:<d>.<u>`	`cifsuser` in the `cifsdomain1` domain is mapped to the `cifsdomain1.cifsuser` UNIX name, and `cifsuser` in `cifsdomain2` is mapped to the `cifsdomain2.cifsuser` UNIX name.

ntxmap mapping examples

Mapping examples on page 15 provides rules and examples of the ntxmap mappings for different users.

Table 2 Mapping examples

Rules	Examples
A Windows user with a domain name	INTGW2K3:user1:=:unixname1

Table 2 Mapping examples (continued)

Rules	Examples
A Windows user of any domain	*:user2:=:unixname2
A Windows user with name containing a blank character	INTGW2K3:user :uixname2 #windows user is "user "
A Windows user with name containing a UTF8 character	INTGWK3:useré:unixname3
Windows to UNIX mapping	domain1:user1:›:unixuser1
UNIX to Windows mapping	domain2:user2:‹:unixuser2
Empty domain where a user from any domain is mapped to "unixuser4"	:user4:›:unixuser4
Any user with a domain that ends with "domain6" and any username that ends with "user6" is mapped to "unixuser6"	*domain6:*user6:›:unixuser6
The UNIX name is "unixuser7.Mydomain"	Mydomain:user7:›unixuser7.‹d›
For "domain8", the UNIX name is "domain8unixuser8"	*:user7:›:‹d›unixuser8
For Windows user "user9", the UNIX name becomes "wuser9"	Mydomain:*:›:w‹u›
If the UNIX name is "user10", the Windows user is "uuser10" and the Windows domain is "Mydomain"	Mydomain:u‹u›:‹:*

Secure mapping and ntxmap

When ntxmap is enabled, the mapping mechanism first refers to the ntxmap rules before using secmap. The mapping provided by ntxmap replaces any previous secmap cache for a user, which was created by another user mapping method. Any existing entry in secmap for this user either gets updated with the new information, or a new ntxmap mapping is cached.

Secmap is queried for ntxmap users only if the ntxmap.conf file is unavailable, empty, or unable to provide a mapping.

Configuring ntxmap for Windows user mapping

VNX does not provide a default ntxmap.conf file. You must use a text editor to create the file on the Control Station, define the mapping rules, and add the mappings. Then copy the file to the /.etc directory of the Data Mover's root file system. After you have copied the file to this location, it can be used automatically.

It is recommended that you copy the edited files to every Data Mover. Maintaining the file on one Data Mover might add latency to the authentication process and slow down the connection response time.

CHAPTER 3

Configuring

The tasks to configure ntxmap are:

Create the ntxmap.conf file

Procedure

1. Use any text editor, such as vi, to create a bidirectional ntxmap mapping for Windows users by using the following rule syntax:

   domain : *user* : *direction* : *unix_user*
   where:

   domain = the user's domain; it refers to the NetBIOS name, and is case-sensitive

   ---

   Note

   Empty domain names are allowed except for bidirectional mapping. If an empty domain name is used, only the username is checked for the mapping match. A domain value of "*" is equivalent to an empty domain.

   ---

   user = user's Windows name; this name is case-sensitive

   direction = how the mapping rule applies:

   - = indicates that the rule applies in both direction (bidirectional). For systems running version 6.0 and later, this bidirectional rule is valid for mapping from Windows to UNIX and from UNIX to Windows. When using the = direction option, wildcards and substitution sequences are not allowed in `domain`, `user`, and `unix_user` names. Empty domain names are also not allowed.

   - > indicates that the rule only applies for mapping from Windows to UNIX. Wildcard is not allowed in `unix_user` name. Substitution sequences <d> and <u> are not allowed in the domain and user names, but are allowed in the `unix_user` name .

   - < indicates that the rule only applies for mapping from UNIX to Windows. Wildcard is not allowed in the domain and user names. Substitution sequence <d> is not allowed in domain and user names because UNIX systems do not use a domain. Substitution sequences <d> and <u> are not allowed in `unix_user` name. For example, rule `domain:user:<:unixname<u>` is not allowed.

   unix_user = case-sensitive UNIX name of the user

   Note

   The rule syntax for a domain, user, and unix_user includes: ASCII characters, blank characters, and UTF8 characters. Add UTF8 characters by using an editor that allows you to insert UTF8 characters. For example, a rule containing UTF8 characters is:
   `Domain:useréàè€:=:unixuser`

   Note

   Domains and usernames are case-insensitive. "*" for domain means any domain is valid. A "#" character at the beginning of the line is a comment. A comment can be added at the end of the line by using "#" followed by the comment.

   ---

   provides more information on mappings.

2. Save the ntxmap.conf file.

3. Copy the ntxmap.conf file from the Control Station to the Data Mover by using this command syntax:

```
$ server_file <movername> -put ntxmap.conf ntxmap.conf
```
where:

‹movername› = name of the Data Mover on which the file is to be copied

Example:

To copy the ntxmap.conf file from the Control Station to the Data Mover, type:

`$ server_file server_2 -put ntxmap.conf ntxmap.conf`

Output:

```
server_2: done
```

Note

The modified ntxmap.conf file is used automatically after it is placed in the /.etc directory of the Data Mover's root file system.

Modify the ntxmap.conf file

Procedure

1. Copy the ntxmap.conf file from the Data Mover to the Control Station by using this command syntax:

```
$ server_file <movername> -get ntxmap.conf ntxmap.conf
```
where:

‹movername› = name of the Data Mover from which the file is being copied

Example:

To copy the ntxmap.conf file from the Control Station to the Data Mover, type:

`$ server_file server_2 -get ntxmap.conf ntxmap.conf`

Output:

```
server_2: done
```

2. Use any text editor, such as vi, and edit the ntxmap.conf file to add, delete, or modify mapping entries.

   The file format includes the following rule syntax for a bidirectional mapping for each Windows user:

   ```
   domain : user : direction : unix_user
   ```

Note

The rule syntax for a domain, user, and unix_user includes: ASCII characters, blank characters, and UTF8 characters. Add UTF8 characters by using an editor that allows you to insert UTF8 characters. For example, a rule containing UTF8 characters is:
`Domain:useréàè€:=:unixuser`

Note

Domains and usernames are case-insensitive. "*" for domain means any domain is valid. A "#" character at the beginning of the line is a comment. A comment can be added at the end of the line by using "#" followed by the comment.

provides more information on bidirectional mappings.

3. Save the ntxmap.conf file.

4. Copy the ntxmap.conf file from the Control Station to the Data Mover by using this command syntax:

   `$ server_file <movername> -put ntxmap.conf ntxmap.conf`
   where:

   <movername> = name of the Data Mover to which the file is being copied

   Example:

   To copy the ntxmap.conf file from the Control Station to the Data Mover, type:

   $ server_file server_2 -put ntxmap.conf ntxmap.conf
   Output:

   ```
   server_2: done
   ```

Note

The modified ntxmap.conf file is used automatically after it is placed in the /.etc directory of the Data Mover's root file system.

Note

There is a risk of temporary inconsistency while the file is being moved, especially if the file is too large. provides more information.

CHAPTER 4

Managing

The ntxmap management tasks are:

Verify the ntxmap.conf file

Procedure

1. To verify only the syntax of the rules in the ntxmap.conf file, use this command syntax:

   ```
   $ server_checkup <movername> -test CIFS -subtest ntxmap
   ```
   where:

   ‹movername› = name of the Data Mover

   Example:

   To verify only the syntax of the rules in ntxmap.conf file on server_2, type:

   `$ server_checkup server_2 -test CIFS -subtest ntxmap`
   Output:

   ```
   server_2:
   --------------------------Checks-------------------------------
   Component CIFS:
   Ntxmap : Checking the ntxmap configuration file...............Pass
   ```

Verify the CIFS configuration

Procedure

1. To verify the CIFS configuration, including the syntax of the mapping rules in the ntxmap.conf file, use this command syntax:

   ```
   $ server_checkup<movername> -test CIFS
   ```
   where:

   ‹movername› = name of the Data Mover.

   Example:

   To check the CIFS configuration, including the syntax of the rules in the ntxmap.conf file, on server_2, type:

   `$ server_checkup server_2 -test CIFS`
   Output:

   ```
   server_2:
   --------------------------Checks-------------------------------
   Component CIFS:
   ACL : Checking the number of ACLs per file system..............Pass
   Connection: Checking the load of CIFS TCP connections..........Pass
   Credential: Checking the validity of credentials...............Pass
   DC : Checking the connectivity and configuration of Domain
   Controlle......................................................Pass
   DFS : Checking the DFS configuration files and DFS registry....Pass
   DNS : Checking the DNS configuration and connectivity to DNS
   servers........................................................Fail
   EventLog : Checking the configuration of Windows Event Logs....Pass
   FS_Type : Checking if all file systems are in the DIR3 format..Pass
   GPO : Checking the GPO configuration...........................Pass
   HomeDir : Checking the configuration of home directory shares..Pass
   I18N : Checking the I18N mode and the Unicode/UTF8 translation
   tables.........................................................Pass
   Kerberos : Checking password updates for Kerberos..............Pass
   LDAP : Checking the LDAP configuration.........................Pass
   LocalGrp : Checking the database configuration of local groups.Pass
   ```

```
NIS : Checking the connectivity to the NIS servers.............Pass
NS : Checking the naming services configuration................Pass
NTP : Checking the connectivity to the NTP servers.............Pass
Ntxmap : Checking the ntxmap configuration file...............Pass
Secmap : Checking the SECMAP database..........................Pass
Security : Checking the CIFS security settings.................Pass
Server : Checking the CIFS file servers configuration.........Pass
Share : Checking the network shares database...................Pass
SmbList : Checking the range availability of SMB IDs...........Pass
Threads : Checking for CIFS blocked threads....................Pass
UM_Client : Checking the connectivity to usermapper servers....Pass
UM_Server : Checking the usermapper server database............Pass
UnsupOS : Checking for unsupported client network operating
systems.......................................................Pass
UnsupProto: Checking for unsupported client network protocols..Pass
VC : Checking the configuration of Virus Checker servers.......Pass
WINS : Checking the connectivity to WINS servers...............Pass
```

Note

A result with a '*' means that some tests were not executed. Use the -full option to run them.

Verify the ntxmap mappings

Using this procedure, you can compare each line of the output with the ntxmap.conf file to ensure that the mapping is correct.

Procedure

1. To verify the existing ntxmap mappings, use this command syntax:

   $ server_cifssupport<*movername*> -secmap -list
   where:

   ‹movername› = name of the Data Mover

   Example:

   To verify the existing ntxmap mappings on server_2, type:

   $ server_cifssupport server_2 -secmap -list
   Output:

```
server_2 : done
SECMAP USER MAPPING TABLE
UID    Origin      Date                     Name
  SID
692    ntxmap      Wed Dec 26 14:15:14 2007 INTGW2K3\administrator
  S-1-5-15-56db7d78-9b661160-9e19279b-1f4

SECMAP GROUP MAPPING TABLE

GID    Origin      Date                     Name
  SID
32769  usermapper  Wed May 30 15:45:47 2007 INTGW2K3\Domain Admins
  S-1-5-15-56db7d78-9b661160-9e19279b-200
32773  usermapper  Wed May 30 15:48:21 2007 INTGW2K3\Domain Users
  S-1-5-15-56db7d78-9b661160-9e19279b-201
32774  usermapper  Wed May 30 15:48:21 2007 INTGW2K3\Domain Guests
  S-1-5-15-56db7d78-9b661160-9e19279b-202
32791  usermapper  Fri Sep 14 11:36:51 2007 INTGW2K3\Domain
Computers
  S-1-5-15-56db7d78-9b661160-9e19279b-203
32770  usermapper  Wed May 30 15:48:21 2007 INTGW2K3\Domain
```

```
Controllers
  S-1-5-15-56db7d78-9b661160-9e19279b-204
32777  usermapper  Wed May 30 15:48:21 2007 INTGW2K3\Schema Admins
  S-1-5-15-56db7d78-9b661160-9e19279b-206
32778  usermapper  Wed May 30 15:48:21 2007 INTGW2K3\Enterprise
Admins
  S-1-5-15-56db7d78-9b661160-9e19279b-207
32775  usermapper  Wed May 30 15:48:21 2007 INTGW2K3\Group Policy
Creator
  S-1-5-15-56db7d78-9b661160-9e19279b-208
32788  usermapper  Wed Sep 12 17:48:34 2007 INTGW2K3\adfs_test
  S-1-5-15-56db7d78-9b661160-9e19279b-c47
32790  usermapper  Fri Sep 14 16:10:56 2007 INTGW2K3\rmagroup
  S-1-5-15-56db7d78-9b661160-9e19279b-c4b
32792  usermapper  Tue Sep 25 19:13:19 2007 INTGW2K3\sambausers
  S-1-5-15-56db7d78-9b661160-9e19279b-c51
32771  usermapper  Wed May 30 15:48:21 2007 INTGW2K3\Exchange
Domain Servers
  S-1-5-15-56db7d78-9b661160-9e19279b-494
32772  usermapper  Wed May 30 15:48:21 2007 INTGW2K3\Exchange
Enterprise Ser
  S-1-5-15-56db7d78-9b661160-9e19279b-495
32776  usermapper  Wed May 30 15:48:21 2007 INTGW2K3\Exchange
Services
  S-1-5-15-56db7d78-9b661160-9e19279b-49b
32789  usermapper  Wed Sep 12 17:48:34 2007 INTGW2K3\gg1
  S-1-5-15-56db7d78-9b661160-9e19279b-4a7
32779  usermapper  Wed May 30 15:48:21 2007 INTGW2K3\PasswordProp
Deny
  S-1-5-15-56db7d78-9b661160-9e19279b-4ac
```

Disable ntxmap

Procedure

1. Using any text editor, create an empty file on the Control Station.

   Example:

   To create ntxmap_empty.conf file by using a text editor, type:

   $ vi ntxmap_empty.conf

2. Save the empty file.

3. Copy the empty file on the Data Mover by using the following command syntax:

   $ server_file *<movername>* -put *<filename>* ntxmap.conf
   where:

   ‹movername› = name of the Data Mover to which the file is being copied

   ‹filename› = name of the empty file

   Example:

   To copy the ntxmap_empty.conf file from the Control Station to the Data Mover, type:

   $ server_file server_2 -put ntxmap_empty.conf ntxmap.conf
   Output:

   ```
   server_2: done
   ```

4. Delete the existing ntxmap mappings in secmap cache by using the following command syntax:

   $ server_cifssupport *<movername>* -secmap -delete -name
   <username> -domain *<domain name>*

where:

‹movername› = name of the Data Mover

‹username› = name of the user

‹domain name› = name of the domain

Example:

To delete the existing ntxmap mapping in secmap, for the user WINuser of domain INTGW2K3, on server_2, type:

$ server_cifssupport server_2 -secmap -delete -name WINuser -domain
INTGW2K3
Output:

```
server_2: done
```

CHAPTER 5

Troubleshooting

As part of an effort to continuously improve and enhance the performance and capabilities of its product lines, EMC periodically releases new versions of its hardware and software. Therefore, some functions described in this document may not be supported by all versions of the software or hardware currently in use. For the most up-to-date information on product features, refer to your product release notes.

If a product does not function properly or does not function as described in this document, contact your EMC Customer Support Representative.

Problem Resolution Roadmap for VNX contains additional information about using EMC Online Support and resolving problems.

Topics included in this chapter are:

EMC E-Lab Interoperability Navigator

The EMC E-Lab™ Interoperability Navigator is a searchable, web-based application that provides access to EMC interoperability support matrices. It is available on EMC Online Support at http://Support.EMC.com. After logging in, in the right pane under **Product and Support Tools**, click **E-Lab Navigator**.

Error messages

All event, alert, and status messages provide detailed information and recommended actions to help you troubleshoot the situation.

To view message details, use any of these methods:

- Unisphere software:
  - Right-click an event, alert, or status message and select to view Event Details, Alert Details, or Status Details.
- CLI:
  - Type nas_message -info ‹MessageID›, where ‹MessageID› is the message identification number.
- *Celerra Error Messages Guide*:
  - Use this guide to locate information about messages that are in the earlier-release message format.
- EMC Online Support:
  - Use the text from the error message's brief description or the message's ID to search the Knowledgebase on EMC Online Support. After logging in to EMC Online Support, locate the applicable **Support by Product** page, and search for the error message.

EMC Training and Professional Services

EMC Customer Education courses help you learn how EMC storage products work together within your environment to maximize your entire infrastructure investment. EMC Customer Education features online and hands-on training in state-of-the-art labs conveniently located throughout the world. EMC customer training courses are developed and delivered by EMC experts. Go to EMC Online Support at http://Support.EMC.com for course and registration information.

EMC Professional Services can help you implement your system efficiently. Consultants evaluate your business, IT processes, and technology, and recommend ways that you can leverage your information for the most benefit. From business plan to implementation, you get the experience and expertise that you need without straining your IT staff or hiring and training new personnel. Contact your EMC Customer Support Representative for more information.

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