

Restoring Network Registrar on a New System Using a Backup Database

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Introduction

This document describes how to restore Cisco CNS Network Registrar on a new hardware system using the backup database from a current or previously used Network Registrar server. Because of the difference in database architecture between versions of Network Registrar, you can only migrate the database between same versions. Once you successfully migrate the database to the new hardware, you can upgrade Network Registrar to a higher version.

Prerequisites

Requirements

Readers of this document should be knowledgeable of the following:

- Familiarity with common administration tasks in Network Registrar
- Network Registrar Command Line Interface
- General Unix or Windows system administration depending on the OS involve.

Components Used

The information in this document is based on the software and hardware versions below.

- Cisco CNS Network Registrar 3.5,5.0 and 5.5.x.
- Operating Systems: Solaris and Windows

The information presented in this document was created from devices in a specific lab environment. All the devices used in this document started with a cleared (default) configuration. If you work in a live network, ensure that you understand the potential impact of any command before you use it.

Conventions

For more information on document conventions, refer to the Cisco Technical Tips Conventions.

Cisco CNS Network Registrar Database Migration

A catastrophic fault on a system running a Network Registrar server can cause the entire state of the Network Registrar server to be lost. In such cases, you must introduce a new hardware system to replace the Network Registrar services.

If you do not want to perform an upgrade on the live production network, you can use this procedure. This procedure installs Network Registrar on a separate machine, upgrades it, and then swaps the same with the production machine.

In order to bring Network Registrar up on a completely new system without losing critical data, you must understand the process.

Setup Requirements

In order to setup Network Registrar on a new system, you must have these:

1. The appropriate operating system (Solaris, HP/UX, AIX, IRIX, or Windows NT) complete with all relevant patches. This operating system must be the same as the one used on the server in production.
2. In order to be compatible, you must have Network Registrar software of the same version as the one on the production server.
3. A copy of all scripts, extension points, and/or related tools that worked with your previous version of Network Registrar server.
4. A copy of the database from the production server, including the server configuration and lease state information existing at the time of the backup.

The files needed are **mcddb.d01**, **mcddb.d02**, **mcddb.d03**, **dhcp.ndb**, **dns.ndb** and files in the **zchk** directory. They are available from these locations on the Network Registrar server, which is used to migrate the data from:

File	UNIX	NT
mcddb.d01, mcddb.d02, and mcddb.d03	/var/nwreg2/data/db.bak	\Program Files\Network
dhcp.ndb	/var/nwreg2/data/dhcp.bak/ndb	Registrar\data\db.bak \Program Files\Network Registrar\data\dhcp.bak\ndb
dns.ndb	/var/nwreg2/data/dns.bak/ndb	\Program Files\Network Registrar\data\dns.bak\ndb
zchk files	/var/nwreg2/data/dns.bak/zchk	\Program Files\Network Registrar\data\dns.bak\zchk

Note: Each version carries files from the previous versions. See the table. Network Registrar version 3.5 only has three **mcddb** files, whereas Network Registrar version 5.0 has those plus **dhcp.ndb**, and Network Registrar 5.5.x has **dhcp.ndb**, **dns.ndb**, **zchk** files and the three **mcddb** files. The rule is that, with the exception of logs, you must copy anything in the **db.bak**, **dns.bak**, **dhcp.bak** back to the primary DB directory for recovery.

Network Registrar Version	Files
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3.5	only three mcddb files
5.0 and later	V 3.5 files plus added dhcp.ndb
5.5 and later	V 5.0 files plus added dns.ndb and zchk files

Note: If you are using only one component of Network Registrar, for example DHCP, ignore the steps for restoration of DNS.

Restoration Procedure

Follow this general process to restore or replace a Network Registrar server:

1. Install the OS on the new hardware platform.
2. Apply appropriate OS patches as specified in the current Network Registrar Release Notes.
 - Note:** See OS documentation for more information on applying patches and patch dependencies.
3. Install Network Registrar, working as root or Administrator, following the instruction from Network Registrar Documentation.
4. Install any scripts, extension points, and related management tools used by and with Network Registrar.
5. Copy or move all the database files mentioned in step 4 in the previous section to the new hardware.
6. Restore the Network Registrar database and start the server, as documented below.

Specific Restoration Steps

These steps are necessary to restore the Network Registrar database:

1. Stop AIC server agent

- ◆ UNIX: `/etc/init.d/aicservagt stop`
- ◆ NT: Use Server Manager to stop AIC Server Agent process.

For example, on Win2k server, click **Start** → **Programs** → **Administrative Tools** → **Component Services** → highlight **AIC Server Agent** → **Right Click** and stop.

2. Verify that Network Registrar is stopped as follows:

- ◆ UNIX:

```
/etc/init.d/aicservagt stop # to ensue no processes are still running (orphan
ps -leaf | grep nwreg      # if so use kill -9 <pid>NT
```

- ◆ NT: Use Server Manager to verify if the AIC Server Agent process is stopped.

3. Copy the files, **mcddb.d01**, **mcddb.d02**, **mcddb.d03** to these locations:

- ◆ UNIX: `/var/nwreg2/data/db`
- ◆ NT: `C:\Program Files\Network Registrar\data\db`

Note: If the db folder already contains the **mcddb.d01**, **mcddb.d02**, or **mcddb.d03** files, overwrite them.

4. Copy **dhcp.ndb** into

- ◆ UNIX: `/var/nwreg2/data/dhcp/ndb`
- ◆ UNIX: `/var/nwreg2/data/dhcp/ndb`

5. Copy **dns.ndb** into

- ◆ UNIX: **/var/nwreg2/data/dns/ndb**
- ◆ NT: **\Program Files\Network Registrar\DATA\dns\ndb**

6. Copy files in the **zchk** directory into

- ◆ UNIX: **/var/nwreg2/data/dns/zchk**
- ◆ NT: **\Program Files\Network Registrar\DATA\DNS\zchk**

Note: If the folder already contains the **dns.ndb** file or **zchk** files, overwrite it. If you are migrating from CNR 5.0, this step is not needed since **dns.ndb** and **zchk** files were not a part of CNR database.

7. Perform these steps:

- ◆ From command line, go to this directory:

- ◇ UNIX: **/var/nwreg2/data/db**
- ◇ NT: **\Program Files\Network Registrar\data\db**

- ◆ Type this command, exactly as shown, from the command line to rebuild the key files:

- ◇ UNIX: **/opt/nwreg2/bin/keybuild /var/nwreg2/data/db/mcddb**
- ◇ NT: **..\..\bin\keybuild mcddb**

Note: This can take several minutes.

8. When the process is complete you see output similar to the following:

```
D:\Program Files\Network Registrar\DATA\DB>..\..\bin\keybuild mcddb
db_VISTA Version 3.20
Key File Build Utility
Copyright (C) 1985-1990 Raima Corporation, All Rights Reserved
initializing key file: mcddb.k01
initializing key file: mcddb.k02
initializing key file: mcddb.k03
processing data file: mcddb.d01, total records =      1800
  record:      1800processing data file: mcddb.d02, total records =      3
  record:         3processing data file: mcddb.d03, total records =      8
  record:         8

key file rebuild completed
```

9. Restart the service:

- ◆ UNIX: **/etc/init.d/aicservagt start**
- ◆ NT: Use Server Manager to start AIC Server Agent process

Related Information

- [Cisco CNS Network Registrar Support Page](#)

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