

Databases Used by Cisco Network Registrar

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Introduction

There are major datastore design differences between the versions of Cisco Network Registrar (NR). This document presents a high level overview of the different datastore locations across all CNR versions.

Note: As a consequence of this evolution in the CNR database structure and datastore locations, CNR databases are not compatible between major versions (3.5, 5.0, 5.5, 6.0, and 6.1). Be sure that the database you restore corresponds to the same CNR version as the one installed on the target server when you carry out restore procedures. To restore individual components of the database (DNS, DHCP data), follow the procedures in the CNR documentation, described under the Database Administration procedures.

Prerequisites

Requirements

There are no specific prerequisites for this document.

Components Used

This document is not restricted to specific software and hardware versions.

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

Conventions

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

Databases in Cisco Network Registrar Versions 1.0 to 3.5.x

Versions 1.0 to 3.5.x contained only one database, MCD (under `.../data/db`), which is organized into the **Config** and **State** areas.

MCD Config Area

The **Config** area contains all the servers individual startup configuration parameters.

For DHCP this includes:

- Startup configuration parameters, defaults, and customized settings
- Scope configurations and policies
- Lease reservations entries
- Client and client-class entry data

For DNS this includes:

- Startup configuration parameters, defaults, and customized settings
- Zone configuration data
- Zone Static Resource Record (RR) entries data

For TFTP this includes:

- Startup configuration parameters, defaults, and customized settings

MCD State Area

For DHCP this includes:

- Active Lease Current State Information

For DNS this includes (as of the addition of DDNS in CNR 2.0):

- Dynamic Resource Record (RR) entries data

For TFTP there is nothing used.

Databases in Cisco Network Registrar Version 5.0.x

As of CNR 5.0, a second database (SleepyCat with files located under `.../dhcp/ndb`) was added to contain the DHCP relevant **Lease State** data. This database provides improved performance over the prior single shared MCD database implementation.

MCD State Area

The **MCD State** area no longer includes the **Lease State** data. It was moved into `.../dhcp/ndb`. Therefore, the MCD database files (`mcddb.d0#`) and MCD backups no longer contain the complete set of DHCP data.

To recreate/restore a complete Cisco NR DHCP Server in version 5.0 or later, you need:

- The three original `mcddb.d0#` files

- The `.../dhcp.bak/ndb` files, corresponding to the SleepyCat leases database

Databases in Cisco Network Registrar Version 5.5.x

As of Cisco NR 5.5, a third database (SleepyCat with files located under `.../dns/ndb`), was added to contain all the DNS relevant **Resource Record State** data. This database provides improved performance over the prior dual shared MCD database, DHCP ndb implementation.

MCD State Area

With respect to CNR 5.0, the **MCD State Area** no longer includes the Dynamic Resource Records data. This data was moved from the MCD and into `.../dns/ndb`. Therefore, the MCD database files (`mcddb.d0#`) and MCD backups no longer contain the complete set of DNS data. This removed all major uses of the **MCD State Area**, except for some simple temporary space data uses.

To recreate/restore a complete Cisco NR DHCP + DNS Server version 5.5 or later, you need:

- The three original `mcddb.d0#` files, corresponding to the MCD database.
- The `.../dhcp.bak/ndb` files, corresponding to the DHCP leases database.
- The `.../dns.bak/ndb` files, with the **DNS Resource Records** state information.

Databases in Cisco Network Registrar Version 6.0.x

The MCD database no longer contains all the static configuration data in version 6.0.x and above. A new database is added in CNR 6.0, the Central Configuration Management (CCM) database, containing part of the static configuration which was before in the MCD database. The files for that database are under `.../ccm/ndb`.

According to the above, the databases present in CNR 6.0.x are:

- MCD database, containing part of the server configuration data.
- CCM database, containing additional configuration data, which is not present in the MCD database.
- The DHCP leases database, with its files kept in the same location as in the older versions.
- The **DNS State** database, with its files kept in the same location as in the older versions.

Databases in Cisco Network Registrar Version 6.1.x

CNR 6.1 comprises two different components, which can be installed together in the same or in separated servers:

- **Regional Management Server:** central repository for IP lease history, subnet utilization, configuration information for the Local Clusters, and other functions.
- **Local Cluster:** standalone DHCP, DNS and TFTP server as it was in older versions.

Regional Management Server

There are five different databases in the Regional Management Server:

- The MCD database, under `.../Regional/data/db`, containing part of the static configuration.
- The CCM database, under `.../Regional/data/ccm`, containing the rest of the static configuration.
- The lease history database, under `.../Regional/data/leasehist`, containing the IP lease history data corresponding to the managed Local Clusters.

- The IP subnet utilization database, under **.../Regional/data/subnetutil**, containing statistics about IP address utilization in the different subnets managed by the Regional Server.
- The replica database, under **.../Regional/data/replica**, containing data about the DNS and DHCP static configuration of the different Local Clusters managed by the Regional Server.

Local Cluster

The databases in the CNR 6.1 Local Cluster component are the same as the databases in CNR 6.0.x in name and number, although the internal database schemas are different. They are located under **.../Local/data**.

Related Information

- **Cisco Network Registrar Support Pages**
 - **Technical Support – Cisco Systems**
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