

How to Remove GHOST Dynamic Resource Records

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Introduction

Lease and dynamic address assignments come from the Domain Name System (DNS). If a network administrator decides to manually configure the dynamic IP address assignment as a static address, the process creates both static and dynamic resource records (RRs) merged into the DNS database.

When static and dynamic RRs exist for the same name, query responses are wrong because they are based on the wrong type of record. The server responds to queries with an undesirable address.

When the network administrator finds the problem, he often tries to remedy it with deletion of the original dynamic registration. This can cause a situation known as a ghost record (registered customers only) .

Note: This situation is not likely to occur in version 5.0, which includes automatic checks and cleanup.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on Cisco Network Registrar (CNR) versions 3.5 and later.

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

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

How to Remove Dynamic Resource Records

This document provides four procedures by which to remove dynamic RRs:

- Procedure for CNR 3.5
- Procedure for CNR 5.0
- Procedure for CNR 5.5 and Later
- Procedure to Clear Individual Ghost Record Entries

If you have only a few ghost records, follow the Procedure to Clear Individual Ghost Record Entries to remove them one-by-one.

Procedure for CNR 3.5

Without a software upgrade to version 5.0, you must force the server:

1. Not to use its private storage and prevent merged dynamic and static records.
2. To load all the data in the course of configuration so that it does not defer the load. By doing this, you delete the conflicting dynamic data that conflicts when shadowed by a static name.

To accomplish these tasks, begin at the command line prompt and complete these steps:

1. To start **NRCMD**, issue the command:

```
nrcmd
```

2. Issue the command:

```
session set visibility=3
```

3. Issue the command:

```
dns disable auth-reconnect
```

4. Issue the command:

```
dns disable defer-zone-load
```

5. Issue the command:

```
dns reload
```

The server synchronously reloads all data from MCD and removes dynamic names that conflict before the **reload** command returns.

Note: This process may take a while, especially if there are many zones or they are very large, and DNS is down while the process runs.

All dynamic RRs that conflict and are deleted in the course of this process are logged as shown here:

```
WARNING Config 0 Found name conflict on name NAME.  
Name exists in both config and state, removing state  
(dynamically added) records.
```

6. When the reload operation is complete, continue. Issue the command:

```
dns enable defer-zone-load
```

7. Issue the command:

```
dns enable auth-reconnect
```

8. Quit **NRCMD**.

Procedure for CNR 5.0

When you upgrade to version 5.0, **auth.db** might contain static–dynamic RRs in RR name sets. The server might not automatically correct this situation. When the server receives an administrative configuration that pertains to an RR name set, it corrects the problem. However, other RR name sets that contain similar errors remain uncorrected.

After you upgrade to version 5.0, complete these steps:

1. To start **NRCMD**, issue the command:

```
nrcmd
```

2. Issue the command:

```
session set visibility=3
```

3. Issue the command:

```
dns disable auth-reconnect
```

4. Issue the command:

```
dns reload
```

Note: This process may take a while, especially if there are many zones or they are very large, and DNS is down while the process runs.

5. Issue the command:

```
dns enable auth-reconnect
```

This command fully populates **auth.db** from MCD and removes the dynamic–static conflicts.

6. Quit **NRCMD**.

Procedure for CNR 5.5 and Later

The database structure for DNS changes in CNR 5.5. Cisco keeps dynamic RR entries in several different databases:

- authoritative zone database
- changeset database
- zone checkpoint datastore

In order to remove the dynamic RRs from all of these locations, complete these steps:

1. To start **NRCMD**, issue the command:

```
nrcmd
```

2. Issue the command:

```
session set visibility=3
```

3. Issue the command:

```
dns set full-reload-recovery-options=remove-dynamic-rrs
```

4. Issue the command:

- `dns reload`
5. Issue the command:

- `dns set full-reload-recovery-options=abort-on-error`
6. Quit **NRCMD**.

Note: This process cleans all dynamic RRs, not just the ghost records. The DHCP server must resubmit all the dynamic RRs afterward.

Procedure to Clear Individual Ghost Record Entries

Complete these steps to clear individual ghost record entries:

1. To release the corresponding lease, instruct the client to issue the **ipconfig /release** command. .
2. The DHCP server removes the dynamic name.
3. To start NRCMD, issue the command:

`nrcmd`

4. To force an **AXFR** on the secondary databases, issue the command:

`zone secondary zone name forceXfer secondary`

This action propagates the deletion of the dynamic name to the secondary databases. This action removes the ghost record. Repeat these steps for each ghost record entry.

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