Backup and Restore Procedure
# Table of Contents

1. **Introduction** ........................................................................................................... 7

2. **Backing up Configuration** .................................................................................... 9
   2.1 Backing up Device Configuration through Web Interface ........................................ 9
   2.2 Backing up Device Configuration through CLI ...................................................... 10
      2.2.1 Backing Up Configuration on a Data-enabled Device ........................................ 10
      2.2.2 Backing Up Configuration on a Voice-enabled Device ........................................ 10
   2.3 Backing Up EMS Configuration Before Upgrade .................................................. 12
      2.3.1 Changing Scheduled Backup Time ........................................................................ 12
      2.3.2 Collecting EMS Logs ............................................................................................. 13

3. **Restoring Configuration** ...................................................................................... 15
   3.1 Restoring Device Configuration through Web Interface ........................................ 15
   3.2 Restoring Device Configuration through CLI ......................................................... 16
      3.2.1 Restoring Configuration on a Data-enabled Device ............................................. 16
      3.2.2 Restoring Configuration on a Voice-enabled Device ............................................. 16
   3.3 Restoring EMS Configuration After Upgrade ........................................................ 18
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Abbreviations and Terminology

Each abbreviation, unless widely used, is spelled out in full when first used.

Document Revision Record

<table>
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<tr>
<th>LTRT</th>
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Documentation Feedback

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1 Introduction

This document describes the procedures for backing up and restoring your device's configuration settings.

It is important to back up your configuration on a regular basis in case you need to restore configuration if, for example, any of the following scenarios occurs:

- Your device has a hardware fault that requires it to be replaced entirely.
- A hardware component on the device is faulty (e.g., CPU).
- Firmware upgrade failure
- Undesired configuration upgrade or failure.

Note:

- It is your responsibility to save the backup configuration files after every configuration change made on the device.
- It is your responsibility to back up your existing configuration and firmware files to a safe location on your network before upgrading the device.
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2  Backing up Configuration

You can save a copy of the device's current configuration settings as a file on a local PC server. This can be used as a backup file for your configuration. The saved file includes only parameters that were modified and parameters with other than default values.

You can also save (create) the current configuration as a configuration file on the device's flash memory and send it to a user-defined URL of a remote server (TFTP or HTTP/S) or to a USB device. The configuration settings in the file are based only on CLI commands. For more information, refer to the CLI Reference Manual.

This chapter describes how to backup the configuration through one of the following management interfaces:

- Web interface (see Section 2.1)
- CLI (see Section 2.2)
- EMS (see Section 2.3)

Note:

- Make sure you have a backup copy of all auxiliary files (e.g., CPT and Dial Plan files) before you upload them to the device.
- If you do not have a backup of the device's cmp file on your PC, you must open a service request to receive it.
- In case of outage due to hardware upgrade or replacement or disaster, use the BootP tool to connect directly to the device from a PC. A trained technician should be present on the local site for performing this task.
- If you do not have the BootP tool on your site, open a service request to receive it.

2.1 Backing up Device Configuration through Web Interface

The Web interface allows you to back up the device's configuration as an ini file or a CLI-based file (CLI script) in a folder on the PC client running the Web interface.

To back up the configuration:

1. Open the Configuration File page:
   - Toolbar: From the Actions drop-down menu, choose Configuration File.

Figure 2-1: Backing up Configuration through Web Interface
2. Click one of the following buttons:
   - **Save INI File**: saves the configuration as an ini file.
   - **Save CLI Script File**: saves the configuration as a CLI-based file.

### 2.2 Backing up Device Configuration through CLI

The CLI allows you to back up the device's configuration as a CLI-based file (CLI command settings). You can back up the CLI-based file to any of the following locations:

- Remote server (HTTP, HTTPS or TFTP)
- USB stick

**Note:** The USB stick is only applicable to devices that provide USB support.

The procedures below describes how to back up the devices configuration using CLI on a data-enabled and voice-enabled device.

#### 2.2.1 Backing Up Configuration on a Data-enabled Device

This section describes how to back up the devices configuration on a data-enabled device.

➢ **To back up the configuration using CLI on a data-enabled device:**

1. Establish a CLI serial connection with the device (e.g., Telnet).
2. Log in to the CLI.
   
   **Username:** Admin  
   **Password:** < Password >
3. Access the Enable mode.
   
   ```
   > enable  
   **Password:** < Enable mode password >
   ```
4. Enter the following command:
   
   ```
   # copy cli-script to { < URL > | usb: //< File Name > }  
   source data interface <interface type> <interface id>
   ```

#### 2.2.2 Backing Up Configuration on a Voice-enabled Device

This section describes how to back up the devices configuration on a voice-enabled device.

➢ **To back up the configuration using CLI on a voice-enabled device:**

1. Establish a CLI serial connection with the device (e.g., Telnet).
2. Log in to the CLI.
   
   **Username:** Admin  
   **Password:** < Password >
3. Access the Enable mode.
   
   ```
   > enable  
   **Password:** < Enable mode password >
   ```
4. Enter the following command:
```
# copy cli-script to { < URL > | usb:///< File Name > }
```

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<td></td>
<td>• TFTP</td>
</tr>
<tr>
<td>usb:///&lt; File Name&gt;</td>
<td>Backs up the configuration to the USB stick connected to the device.</td>
</tr>
<tr>
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<td>Specifies the source CPU to copy from (default data).</td>
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<tr>
<td>interface</td>
<td>Specifies the source interface to bind to.</td>
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<td>PPPoE interface ID [1-3]</td>
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</tr>
<tr>
<td>vlan</td>
<td>Vlan ID [1-3999]</td>
</tr>
<tr>
<td>loopback</td>
<td>Loopback ID [1-5]</td>
</tr>
<tr>
<td>bvi</td>
<td>Bridge interface [1-255]</td>
</tr>
</tbody>
</table>
2.3 Backing Up EMS Configuration Before Upgrade

Before upgrading the EMS server, it is highly recommended to backup the EMS server database. There are two main backup processes that run on the EMS server:

- **Weekly backup:** runs once a week at a pre-configured date & time (default is Saturday 02:00). In this process, the whole database is backed up into several "RMAN" files that are located in /data/NBIF/emsBackup/RmanBackup directory. In addition, many other configuration and software files are backed up to a TAR file in the /data/NBIF/emsBackup directory. In general, this TAR file contains the entire /data/NBIF directory's content (except 'emsBackup' directory), EMS Software Manager content and server_xxx directory’s content.

  To change the weekly backup’s time and date, see Section 2.3.1 below.

- **Daily backup:** runs daily except on the scheduled week day (see above). The daily backup process backs up the last 24 hours. There are no changes in the TAR file in this process.

  **Warning:** The Backup process does not backup configurations performed using EMS Server Manager, such as networking and security.

It is highly recommended to maintain all backup files on an external machine. These files can be transferred outside the server directly from their default location by SCP or SFTP client using 'acems' user. These backup files are as follows:

- /data/NBIF/emsBackup/emsServerBackup_<time&date>.tar file
- All files in /data/NBIF/emsBackup/RmanBackup directory (including control.ctl and init.ora files)

2.3.1 Changing Scheduled Backup Time

This step describes how to reschedule the backup time.

- **To reschedule backup time:**
  
  1. From the Application Maintenance menu, choose Change Schedule Backup Time.
  2. Choose the day of the week that you wish to perform the backup.
  3. Copy all files in /data/NBIF/emsBackup/RmanBackup/ directory to an external machine.

  Where <time&date> is only an example; replace this path with your filename.
2.3.2 Collecting EMS Logs

It is recommended to collect EMS logs before upgrading or re-configuring the EMS server. This enables you to restore the MG tree.

➢ To collect logs:

1. From the EMS Server Management root menu, choose Collect Logs, and then press Enter; the EMS server commences the log collection process:

   Figure 2-2: EMS Server Manager – Collect Logs

![Collecting logs
Collecting EMS Server logs...
Collecting OS logs...
Collecting Oracle DB logs...
Collecting hardware configuration...
Collecting OS configuration...
Collecting Rman Log Files
Collecting Tomcat Log Files
Collecting Installtion Log Files
Collecting Yafic Scan Files
Collecting GeneralInfo
Collecting Topology File
Packing TAR file...
   adding: logs.tar (deflated 83%)
Logs can be found in /home/acems/logs.tar.zip

This process can take a few minutes. Once the file generation has completed, a message is displayed on the screen informing you that a Diagnostic tar file has been created and the location of the tar file:

Figure 2-3: TAR File Location

![Collecting logs
Collecting EMS Server logs...
Collecting OS logs...
Collecting Oracle DB logs...
Collecting hardware configuration...
Collecting OS configuration...
Collecting Rman Log Files
Collecting Tomcat Log Files
Collecting Installtion Log Files
Collecting Yafic Scan Files
Collecting GeneralInfo
No file not found
Packing TAR file...
   updating: home/acems/logs.tar (deflated 95%)
The diagnostics TAR file can be found in /home/acems/logs.tar
Press Enter to continue]
2. The MGs Topology list containing all the devices in the MG Tree is found in the following file:
/data/NBIF/topology/MGsTopologyList.csv
An example of this file is shown in the figure below:

Figure 2-4: MGs Topology List
3 Restoring Configuration

You can restore the configuration through one of the following management interfaces:

- Web interface (see below)
- CLI (see Section 3.2)
- EMS (see Section 3.3)

Warning:

- When restoring an ini file, the device resets for the settings to take effect.
- When loading an ini file using the Configuration File page, parameters not included in the ini file are reset to default settings.

3.1 Restoring Device Configuration through Web Interface

The Web interface allows you to restore the device's configuration as an ini file or a CLI-based file (CLI script) from the folder on the PC client running the Web interface, by uploading an ini file or CLI-based file.

Warning: When restoring an ini file using the Configuration File page, parameters excluded from the ini file return to default settings. If you want to keep the device's current configuration settings and apply the settings specified in the ini file, load the file through the Auxiliary Files page.

➢ To restore the configuration file:

1. Open the Configuration File page:
   - Toolbar: From the Actions drop-down menu, choose Configuration File.

   Figure 3-1: Loading INI File using Configuration File Page

   ![Configuration File Page](image)

   The device will perform a reset after loading the INI file.

2. Click one of the following buttons:
   - Load INI File: restores the configuration from the ini file.
   - Load CLI Script File: restores the configuration from the CLI-based file.
3.2 Restoring Device Configuration through CLI

The CLI allows you to restore the device’s configuration as a CLI-based file (CLI command settings). You can restore the CLI-based file from any of the following locations:

- Remote server (HTTP, HTTPS or TFTP)
- USB stick

Note: The USB stick is only applicable to devices that provide USB support.

The procedures below describe how to restore the devices configuration using CLI on the following platforms:

- Data-enabled device (see Section 3.2.1)
- Voice-enabled device (see Section 3.2.2)

3.2.1 Restoring Configuration on a Data-enabled Device

This section describes how to restore the devices configuration on a data-enabled device.

To restore the configuration using CLI on a data-enabled device:

1. Establish a CLI serial connection with the device (e.g., Telnet).
2. Log in to the CLI.
   
   Username: Admin
   
   Password: < Password >

3. Access the Enable mode.
   
   > enable
   
   Password: < Enable mode password >

4. Enter the following command:
   
   # copy cli-script from { < URL > | usb: //< File Name >} source data interface <interface type> <interface id>

3.2.2 Restoring Configuration on a Voice-enabled Device

This section describes how to restore the devices configuration on a voice-enabled device.

To restore the configuration using CLI on a voice-enabled device:

1. Establish a CLI serial connection with the device (e.g., Telnet).
2. Log in to the CLI.
   
   Username: Admin
   
   Password: < Password >

3. Access the Enable mode.
   
   > enable
   
   Password: < Enable mode password >
4. Enter the following command:

```
# copy cli-script from { < URL > | usb:///< File Name > }
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3.3 Restoring EMS Configuration After Upgrade

This section describes how to restore the EMS server after it has been upgraded. This can be done on the original machine from which the backup files were created or on any other machine.

Note:
- If you’re running the restore process on a different machine, its disk size should be the same as the original machine from which the backup files were taken.
- Restore actions can be performed only with backup files which were previously created in the same EMS version.
- If you are restoring to a new machine, make sure that you have purchased a new license file machine ID. AudioCodes customer support will assist you to obtain a new license prior to the restore process.

➢ To restore the EMS server:
1. Install (or upgrade) EMS to the same version from which the backup files were created. The Linux version must also be identical between the source and target machines.
2. Use the EMS Server Management utility to perform all the required configurations, such as Networking and Security, as was previously configured on the source machine.
3. Make sure all server processes are up in EMS Server Manager / Status menu and the server functions properly.
4. Copy all backup files to /data/NBIF directory by SCP or SFTP client using the 'acems' user.
5. In EMS Server Manager, go to the Application Maintenance menu and select the Restore option.
6. Follow the instructions during the process.
7. After the restore process has completed, you will be asked to reboot the machine.
8. If you installed custom certificates prior to the restore, you must reinstall these certificates.
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