

Cisco ANA 3.7.3 VNE Device Package Installation Guide

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1 Overview: Installing and Uninstalling Device Packages

This VNE Device Package Installation guide is a common guide to install any Cisco ANA 3.7.x Device Package release on ANA 3.7.3 Server.

To install a Device Package (DP), follow these steps:

Step	Description	Described in:
1	Make sure your system meets the prerequisites.	Section 2
2	Copy the downloaded DP file to the proper location.	Section 3
3	Use the ivne script to install the DP.	Section 4
4	Install the DP files.	Section 5
5	(Optional) Verify the DP installation.	Section 6
6	If you did not restart the gateway server as part of Step 4, restart it to apply your changes.	Section 8

To uninstall a DP (perform a rollback to a previous backup), follow these steps:

Step	Description	Described in:
1	Use the ivne script to rollback the DP.	Section 7
2	Restart the gateway server to apply your changes.	Section 8Restarting the Gateway Server

2 Installation Prerequisites

Before installing the Device Package, make sure of the following:

1. Verify that Cisco ANA 3.7.3 is installed on the server .
2. Download the ANA 3.7.x-DPX. tar from the [Cisco ANA Software Download site on Cisco.com](#). Log into Cisco.com and navigate to **Cisco ANA Network Abstraction 3.7 > ANA Independent VNE Drivers**.
3. If your configuration is using the HA/DR (gateway high availability) solution, in the VERITAS Cluster Manager Application, uncheck the critical flag from the Cisco ANA gateway resource.
4. If ANA 3.7.x DP9.0 is installed , ANA Configuration and Image Management 1.2 Patch 2 or later versions to get the latest NCCM fixes. Patch can be downloaded from [Cisco.com](#)

3 Copying the DP File to a Central Location

Create a new directory for the DP and copy the DP file to that new directory:

1. Create a new directory outside of the Cisco ANA home directory. For example, the following creates a directory named VNEDP under /export/home/:

```
% cd /export/home
% mkdir VNEDP
```

- Grant the directory *anauser* permissions. (*anauser* is the UNIX account for the Cisco ANA application.) In this example, *anauser* is **ana373**.

```
% chown ana373:ana VNEDP
```

Note: You may also want to create a backup directory at this time, using the same procedure. For example :

```
% cd /export/home
% mkdir VNEDP-backup
% chown ana373:ana VNEDP-backup
```

- Download the device package from Cisco.com to a central repository server. Using ftp, copy the DP file (for example, Cisco-ANA3.7.x-DPx.tar) into the newly-created directory. In this example, the DP file would exist in the following location:

```
/export/home/VNEDP/Cisco-ANA3.7.x-DPx.tar
```

4 Using the ivne Script

This section provides some general information on the ivne script, which is used to install independent device driver files. We recommend that you use the option that is documented in the installation and rollback steps provided in this document; the other options are described here for your information. For more information on the ivne script, see the [Cisco Active Network Abstraction 3.7.3 Administrator Guide](#).)

#	Option	Description	Use this when...
1	Install independent VNE drivers from a web repository.	Installs drivers from a remote host such as a web server that is providing central support to multiple Cisco ANA gateway servers.	<ul style="list-style-type: none"> You want to install only <i>individual</i> jars files. This option is used when there is no new VNE support
2	Install independent VNE drivers from a local folder.	Installs drivers from a local folder on the gateway server.	<ul style="list-style-type: none"> You want to install only <i>individual</i> jars files. This option is used when there is no new VNE support
3	Install independent VNE drivers from a Device package tar	Installs drivers from the downloaded device package tar on the gateway server, along with any files required for licensing.	<p>Note: We recommend that you use this option.</p> <ul style="list-style-type: none"> You want to install the entire Device Package or individual jar files.
4	Rollback to a previous independent VNE driver installation.	Restores all drivers to a previously backed up driver configuration. (You cannot roll back individual driver files.)	You want to roll back your configuration to a previously-saved backup.
5	List the existing drivers and their versions.	Lists the drivers that exist in the \$ANAHOME/Main/drivers directory on the gateway server.	You want to see the current version of the files that are in \$ANAHOME/Main/drivers.
q	Quit	Exits the ivne script.	You want to quit the script.

5 Installing the Complete DP or Individual Jar Files

You can install the entire DP with all the jar files it contains, or you can install individual jar files as needed. All jar files use the following naming convention:

Vendor-JarType-ANAVersion-VNEJarVersion.jar

JarType can be Modules, Commons, or device-specific. For example:

Cisco-Commons-ANA3.7.x-v1.4.jar
 Cisco-Modules-ANA3.7.x-v1.4.jar
 Cisco-Nexus70xx-ANA3.7.3-v1.0.jar
 Cisco-ISR39xx-ANA3.7.x-v1.2.jar
 Cisco-UBR72xx-ANA3.7.2-v1.0.jar
 Cisco-NCCM_IOX-ANA3.7.3-v1.0.jar

Note:

If you are upgrading from earlier version of DP , perform the following steps before proceeding with DP installation

1. Login as *anauser* to ANA Gateway
2. Go the `$ANAHOME/Main/drivers` directory in the ANA Gateway
3. Delete `Cisco-76xx_65xxIOS-ANA3.7.x-v1.9.jar` , by issuing the below command

```
ANAServer:/export/home/ana373/Main/drivers >> rm Cisco-76xx_65xxIOS-ANA3.7.x-v1.9.jar (
Refer to CSCtw89125 for further details)
```

Note:

`$ANAHOME/Main/drivers` may contain VNE drivers with “3.7.2” or “3.7.3” in the jar filenames. Those drivers were installed during a 3.7.2 or 3.7.3 installation, or by earlier DPs (DP 1.0, 2.0, or 3.0). When newer versions of the jars are released in a DP, they will be replaced with “3.7.x” in the jar filename. From DP 4.0 onwards, the ANA version in the jar file name will be shown as “3.7.x” to indicate the jars can be installed on ANA 3.7.2 or ANA 3.7.3.

To install a DP or individual jar files:

1. Confirm the following:
 - Your system meets the prerequisites listed in Section 2.
 - You have copied the DP file to a central location; see Section 3.
 - The backup directory exists and *anauser* has read-write-execute permissions for the directory. The script will tell you how much space is required. The default backup directory is `$ANAHOME`.
2. Log in to the Cisco ANA gateway server as *anauser*.
3. On the gateway server, go to the `$ANAHOME/Main/drivers` directory. (In this procedure, `$ANAHOME` is `/export/home/ana373`.)

```
% cd $ANAHOME/Main/drivers
```

4. Start the installation script:

```
% ivne
```

The screenshot shows a PuTTY terminal window titled "192.168.117.133 - PuTTY". The terminal displays the "Cisco ANA Independent VNE Driver Installer" menu with the following options:

```

1 Install independent VNE drivers from a web repository.
2 Install independent VNE drivers from a local folder.
3 Install independent VNE drivers from a Device Package tar.
4 Rollback to a previous independent VNE driver installation.
5 List the existing drivers and their versions.
q Quit.

```

Below the menu, the prompt "ana373@anadev-ucs133 [~]%" is visible, followed by a green cursor and the text "Enter.".

Choose option **3** (*Install independent VNE device package*) and press Enter at the prompt. The installation script creates a log and prompts you for a destination folder for a backup of the current VNE driver configuration (so you can rollback to that configuration, if necessary).

```

- Writing log to /export/home/ana373/Main/drivers/ivne-install-log-010711-201419
Backing up the current VNE driver configuration files.
Please select a destination folder for the backup tar file. The folder should have at
least 5016 KB of free space.
Please enter the backup folder path: /export/home/VNEDP-backup
Backing up current drivers to

/export/home/VNEDP-backup/ANA_Drivers_Backup_010711-201901.tar.gz.

```

5. Enter the full pathname to the downloaded DP file (see Section 3).

```
Please enter the full path of the device package tar file: /export/home/VNEDP/Cisco-ANA3.7.x-DPx.tar
```

The script will list the jar files that are contained in the DP:

(This list should match the "List of Latest Driver Files" contained in the DP Readme.)

```
The device package contains the following driver jar files:
```

```

-----
Cisco-100xx-ANA3.7.X-v1.3.jar
Cisco-12xxx-ANA3.7.X-v1.4.jar
Cisco-3400ME-ANA3.7.X-v1.0.jar
Cisco-ISR39xx-ANA3.7.x-v1.2.jar

```

```
Cisco-UBR72xx-ANA3.7.2-v1.0.jar
Cisco-NCCM_IOX-ANA3.7.3-v1.0.jar
....
```

6. Enter the jars you want to install using one of these methods:
 - To enter specific jars, copy (cut and paste) the names after the prompt.
 - To install all jars, enter **ALL**.

```
Please enter the independent VNE driver file name(s): [default All] ALL
Installation started. Please wait...
```

7. If any of the selected drivers depend on other jar files, the script will list them, as in the following example. If you do not answer **yes** to the prompt, the listed jar files will not be installed.

```
Installing Cisco-100xx-ANA3.7.X-v1.3.jar...
Gathering information from /export/home/ana373/Main/drivers/
An upgrade of Cisco-Commons to version 1.4.0.0 is required.
An upgrade of Mib2 to version 1.0.3.0 is required.
An upgrade of Cisco-Modules to version 1.4.0.0 is required.
An upgrade of Cisco-Others to version 1.4.0.0 is required.

Installing Cisco-100xx -
Please note that the following I-VNEs are mandatory and will be installed:
-----
Name                File Name                Version
Mib2                 Mib2-ANA3.7.X-v1.3.jar   1.0.3.0
Cisco-100xx          Cisco-100xx-ANA3.7.X-v1.3.jar 1.3.0.0
Cisco-Commons        Cisco-Commons-ANA3.7.X-v1.4.jar 1.4.0.0
Cisco-Modules        Cisco-Modules-ANA3.7.X-v1.4.jar 1.4.0.0
Cisco-Others         Cisco-Others-ANA3.7.X-v1.4.jar 1.4.0.0
Would you like to continue? (yes/no) [Default: yes] yes
Copied Mib2-ANA3.7.X-v1.3.jar to /export/home/ana373/Main/drivers/
Copied Cisco-100xx-ANA3.7.X-v1.3.jar to /export/home/ana373/Main/drivers/
Copied Cisco-Commons-ANA3.7.X-v1.4.jar to /export/home/ana373/Main/drivers/
Copied Cisco-Modules-ANA3.7.X-v1.4.jar to /export/home/ana373/Main/drivers/
Copied Cisco-Others-ANA3.7.X-v1.4.jar to /export/home/ana373/Main/drivers/
```

Note that if you try to reinstall a VNE driver jar file that has been already updated on the server, you will see a message that says “Installation was partially successful,” because the file already exists. For example:

```
Installing Cisco-NCCM_IOX-ANA3.7.X-v1.0.jar...
Gathering information from /export/home/ana373/Main/drivers/
The same or a newer version of Cisco-NCCM_IOX already exists [current version is:
1.1.0.0].

Installation was partially successful. Would you like to continue? (y or n) [default n]
```

If this occurs, enter **y** to continue with the installation.

8. To apply your changes, the installation script prompts you to restart the Cisco ANA gateway. Enter **yes** at the prompt. (If you enter **no**, you must restart Cisco ANA at a later time or your changes will not be applied. See Section 8.)

```

ANA must be restarted for the changes to apply.
Would you like to restart ANA? (yes,no) [default no] yes
Restarting ANA...
Stopping NCCM DM Server...
- DM server is up, about to shut it down
- Sent graceful shutdown command to the dm Server (pid 9875), waiting for 2 seconds
- Checking if DM server is still up (1st)
- The DM Server is down
AVM unregistered successfully
Stopping AVMs.....Done.
Starting MVM.....Done.
Starting Gateway.....Done.
Independent VNE installation is now complete.

```

6 Verifying the DP Installation

1. Log in to the Cisco ANA gateway server as *anauser*.
2. On the gateway server, go to the `$ANAHOME/Main/drivers` directory. (In this procedure, `$ANAHOME` is `/export/home/ana373`.)

```
% cd $ANAHOME/Main/drivers
```

3. Start the installation script:

```
% ivne
```

The screenshot shows a terminal window titled "192.168.117.133 - PuTTY". The main title of the application is "Cisco ANA Independent VNE Driver Installer". The menu options are:

```

1 Install independent VNE drivers from a web repository.
2 Install independent VNE drivers from a local folder.
3 Install independent VNE drivers from a Device Package tar.
4 Rollback to a previous independent VNE driver installation.
5 List the existing drivers and their versions.
q Quit.

```

At the bottom of the terminal, the prompt is `ana373@anadev-ucs133 [~]%` and a green cursor is positioned over the `Enter` key.

4. Choose option **5** (*List the existing drivers and their versions*) and press Enter at the prompt. The installation script creates a log and lists the drivers that exist in `$ANAHOME/Main/drivers`. (In this procedure, `$ANAHOME` is `/export/home/ana373`.)

Note: Cisco and third party VNE driver files will be listed here. Cisco VNE driver files have a **Cisco-** prefix in the filename.

```

- Writing log to /export/home/ana373/Main/drivers/ivne-install-log-022311-012757
Gathering information from /export/home/ana373/Main/drivers/

```

Name	File Name	Version
isco-NCCM_IOX	Cisco-NCCM_IOX-ANA3.7.3-v1.0.jar	1.1.0.0
Cisco-Nexus50xx	Cisco-Nexus50xx-ANA3.7.x-v1.1.jar	1.1.0.0
Cisco-Nexus70xx	Cisco-Nexus70xx-ANA3.7.3-v1.0.jar	1.3.0.0
Cisco-Others	Cisco-Others-ANA3.7.x-v1.4.jar	1.4.0.0
Cisco-UBR100xx	Cisco-UBR100xx-ANA3.7.2-v1.0.jar	1.0.0.0
Cisco-UBR72xx	Cisco-UBR72xx-ANA3.7.2-v1.0.jar	1.0.0.0
Cisco-ISR39xx	Cisco-ISR39xx-ANA3.7.2-v1.1.jar	1.1.0.0
...		

5. Verify that the correct drivers are listed by checking the “List of Latest Driver files” section in the DP Readme.

7 Uninstalling the Cisco ANA 3.7.x Device Package (Rollback)

The rollback procedure restores the driver configuration files to a previously backed-up version. You will need to provide the full pathname of the backup folder. The rollback script will list the available backups from which you can choose. The rollback procedure consists of two main steps: performing the rollback and verifying that the drivers were removed.

Note: The rollback procedure deletes the VNE driver files under \$ANAHOME/Main/drivers and replaces the files with a backup version. Since the directory contains both Cisco and third-party VNE Drivers, the procedure could affect the third party devices. Therefore you should manually verify the version of any third-party VNE driver files after completing the rollback.

1. Log in to the Cisco ANA gateway server as *anauser*.
2. On the gateway server, go to the \$ANAHOME/Main/drivers directory. (In this procedure, \$ANAHOME is /export/home/ana373.)

```
% cd $ANAHOME/Main/drivers
```

3. Start the installation script:

```
% ivne
```


The screenshot shows a PuTTY terminal window titled "192.168.117.133 - PuTTY". The terminal displays the "Cisco ANA Independent VNE Driver Installer" menu with the following options:

```

1 Install independent VNE drivers from a web repository.
2 Install independent VNE drivers from a local folder.
3 Install independent VNE drivers from a Device Package tar.
4 Rollback to a previous independent VNE driver installation.
5 List the existing drivers and their versions.
q Quit.

```

At the bottom of the terminal, the prompt is "ana373@anadev-ucs133 [~]%" and a green cursor is positioned over the "Enter" key.

- Choose option **4** (*Rollback to a previous independent VNE driver installation*) and press Enter at the prompt. The installation script creates a log and prompts you for the full pathname of the folder that contains the backup file with the desired rollback configuration.

```

Writing log to /export/home/ana373/Main/drivers/ivne-install-log-011111-181726
- Writing log to /export/home/ana373/Main/logs/drivers_rollback-1294750050.log.
Please enter the backup folder: /export/home/VNEDP-backup

```

- To list all backup files that exist in that folder, enter **y** at the prompt:

```

Would you like to view a list of the available files? (y/n) [default n] y

ANA_Drivers_Backup_010711-201901.tar.gz
ANA_Drivers_Backup_020711-180201.tar.gz

```

- Enter (cut and paste) the filename you want to use for the restore operation:

```

Please enter the backup file name: ANA_Drivers_Backup_010711-201901.tar.gz
- Removing contents of /export/home/ana373/Main/drivers. [OK]
- Extracting backup archive under /export/home/ana373/Main/drivers. [OK]
Updating units... Done.
Rollback completed successfully.

```

- Verify the installation. Refer to Section 6 for the procedure.
- Restart the gateway server, as described in Section 8.

8 Restarting the Gateway Server

Restart the Cisco ANA gateway server to apply your changes.

```
% anactl restart
```