



# Release Notes for Cisco Network Data Analyzer Release 3.0(3)

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These release notes contain platform and system requirements and instructions for installing and setting up Release 3.0(3) of the Cisco Network Data Analyzer.

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# Platforms Supported

The Cisco Network Data Analyzer (referred to here as the Analyzer) is supported on the following platforms:

- Solaris Version 2.5.1 and Version 2.6
- HP-UX Version 11.0

The Analyzer Display module also runs on Windows NT Version 4.0.

# Workstation Requirements

## Hardware Requirements

The Analyzer requires the following hardware:

- DisplayServer host machine (Solaris or HP-UX):
  - 256 MB of physical memory (RAM)
  - 400 MB of free logical memory
- Solaris:
  - 70 MB of free disk space for tar and uncompressed installation files (which you can delete after installation)
  - 50 MB of free disk space for the installed Analyzer executables
- HP-UX:
  - 120 MB of free disk space for tar and uncompressed installation files (which you can delete after installation)
  - 75 MB of free disk space for the installed Analyzer executables
- Analyzer Display module executables running on a PC:
  - 25 MB of free disk space
  - Pentium class 166-MHz CPU with 64 MB or more of physical memory (RAM)

## Software Requirements

The Analyzer requires the following software:

- The Bourne sh shell (/bin/sh) must be available for execution.
- The following standard utility programs must be in /usr/bin or /bin, or must be set in each user's \$PATH environment variable:
  - awk
  - cat
  - cd
  - chmod
  - echo

- expr
- kill
- ls
- mkdir
- nohup
- ps
- pwd
- rm
- sed
- touch
- unalias
- wc
- whoami

## Installing and Starting the Analyzer for the First Time

To install and start the Analyzer, perform the following steps:

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**Step 1** Log in to the workstation as root.

```
$ su root
password: <password>
```

**Step 2** Untar the tar file.

```
Solaris: # tar -xvf NDA3_0.SOL.tar
HPUX: # tar -xvf NDA3_0.HP_11.tar
```

**Step 3** Run the installation script and answer all questions.



**Note**

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The installation process prompts you to start the Analyzer user interface. Before you start the installation script, enable remote X connections to your workstation by an **xhost +** command.

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```
Solaris: # ./NDA3_0.setup.sh ./NDA3_0.SOL.Z
HPUX: # ./NDA3_0.setup.sh ./NDA3_0.HP_11.Z
```

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To install the Analyzer Display module on Windows NT, perform the following steps:

- Step 1** Set protections on the NFADisplay directory and all of its subdirectories by entering the following command at the root level:

```
# chmod -R 777 /opt/CSCOnfa/NFADisplay
```

- Step 2** Copy the /opt/CSCOnfa/NFADisplay directory and all of its subdirectories and files to the target directory on your PC. If desired, you can use the Tar command and WINZIP for this process.



**Note**

Do not use FTP for the copy because recursiveness of the copy and all subdirectories is not guaranteed.

## Stopping and Restarting the Analyzer Servers

To stop or restart the Analyzer servers (UtilityServer and DisplayServer), perform the following steps:

- Step 1** Log in as root.

```
$ su root
password: <password>
```

- Step 2** Stop or restart the servers.

- a. To stop the Analyzer servers, run the stop.All shell script:

```
# /opt/CSCOnfa/stop.All
```

- b. To restart the Analyzer servers, run the start.All shell script:

```
# /opt/CSCOnfa/start.All
```

## Starting the Analyzer Display Module

To start the user interface, enter the appropriate command:

```
Solaris: # /opt/CSCOnfa/NFADisplay/bin/start.Display
```

```
HPUX: # /opt/CSCOnfa/NFADisplay/bin/start.Display
```

```
Windows NT: c:\NFADisplay\bin>startPC_Display
```

## New Features for Release 3.0

This section describes new features for Release 3.0 of the Analyzer.

- NetFlow FlowCollector Control—You can use the Analyzer to create, modify, and delete collections on remote machines running Release 3.0 of the FlowCollector.



Note

The Analyzer works best if you run the FlowCollector in Release 3.0 mode. The FlowCollector's default mode is set to **NFC20\_COMPATIBLE\_MODE yes**. To run the FlowCollector in Release 3.0 mode, stop the FlowCollector, change the setting in the `nf.resources` file to **NFC20\_COMPATIBLE\_MODE no**, and restart the FlowCollector.



Note

To avoid having to log on to a FlowCollector each time you want to modify a NetFlow configuration, run the FlowCollector gateway program (NFCGW) with the `PROGRAMFLAGS` switch set to **-i** (dash, lowercase i).

- Traffic matrix statistics (TMS) control—You can use the Analyzer to create and delete TMS data collections on UtilityServers. This capability requires that routers be running IOS Release 12.0(6)T or 12.0(5)S.
- Router configuration for data export—You can use the Analyzer to set up collection parameters for exporting NetFlow or TMS data from routers.
- On-router aggregation schemes—You can use the Analyzer to set up routers to collect and display data for five new on-router aggregation schemes. These on-router aggregation schemes require that routers have DNS names and be running IOS Release 12.0(3)T or Release 12.0(6)S.
- Online help system—You can use Netscape Version 4.5 or Internet Explorer Version 5 as the Web browser for viewing the Analyzer help system.

## New Features for Release 3.0(2)

Release 3.0(2) of the Analyzer has these new features:

- Support—The Analyzer is supported on HPUX Version 11.0.
- Compressed data files—The Analyzer can read compressed files that the FlowCollector created. NetFlow collection control can also set or unset compression.
- Traffic Matrix Statistics (TMS) histogram charts—Histogram charts can be generated for traffic matrix statistics data.

## New Features for Release 3.0(3)

Release 3.0(3) of the Analyzer has these new features:

- Additional aggregation schemes—The Analyzer now supports DetailCallRecord, ASHostMatrix, HostMatrixInterface, and ASPort.
- Search feature—In the Analyzer's Search window you can now search by IP address, AS numbers, or port identifiers. Previously, you could search only by IP address.

- Export data in HTML format—You can export the contents of the displayed aggregation scheme in HTML format to a file that can be viewed in table format in a Web browser. Previously, you could export data only in CSV format.
- Export data is available from the Search window—The results of the Search operation can now be exported to a file in CSV or HTML format.

## Operating Suggestions

Here are some suggestions for using the Analyzer:

- To run the Display module from a Windows NT platform, use this procedure:
  - a. Set protections on the NFADisplay directory and all of its subdirectories by entering the following command at the route level:
 

```
# chmod -R 777 /opt/CSCOnfa/NFADisplay
```
  - b. Copy the /opt/CSCOnfa/NFADisplay directory and all of its subdirectories and files to the target directory on your PC. If desired, you can use Tar and WINZIP for this process.




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**Note** Do not use FTP for the copy because recursiveness of the copy and all subdirectories is not guaranteed.

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- c. Change directory (**cd**) to NFADisplay/bin
  - d. Enter **startPC\_Display.bat**.
- Make sure one UtilityServer at a time is collecting TMS data from a given router.
  - If you are working in the AS Drill Down window and the Search window, you must use the DetailASMatrix aggregation scheme.
  - Use the Router Configuration option on the Tools menu to configure TMS data collection, and then use the TMS Collection Control window to start a collection on the UtilityServer.
  - The router configuration process recognizes only those routers that have DNS entries. A workaround for this is to edit the copy of the router configuration file that you make available to the Analyzer so that the file includes the router's IP address for the host name.

Example:

```
hostname 172.23.249.99
```

- If the UtilityServer is stopped and then restarted, TMS collections are not resumed.
- To enable the router configuration process to reread the router configuration files, restart the Display module.
- To navigate in the router-based aggregations table in the RouterConfig window, do the following:
  - To advance to the next cell, press **Tab**.
  - To advance to the next row, press **Return**.
- To display the Contents, Index, and Search functions of online Help, enable Java and Javascript in your browser. In Netscape, use the Advanced option under **Edit > Preferences**.

# Known Bugs and Restrictions for Release 3.0

This section describes known bugs and restrictions for Release 3.0 of the Analyzer.

- The UtilityServer might fail to start. When this happens, wait 3 to 4 minutes and try to restart the UtilityServer by executing the start.UtilityServer script.
- If you cannot invoke the Analyzer Help system while running under Windows NT, do the following:
  - a. Open Windows Explorer.
  - b. Find the script startPC\_Display in the NFADisplay\bin directory.
  - c. Click the right mouse button over the script and select **Edit**. An editor window appears with the script in it.
  - d. Move the mouse over the icon that corresponds to your Internet browser.
  - e. Click the right mouse button and select **Properties**.
  - f. Go to the field labeled **Target**, press the right mouse button, and select **Copy**.
  - g. Go to the editor window. Place the cursor after the **-browser** command line option.
  - h. Delete the argument that follows the **-browser** command line option.
  - i. Select **Edit** and **Paste**. This places the correct browser path\program name in your script. Make sure that the path\program name is enclosed within quotes.
  - j. Select **File** and **Save**.
  - k. Run the script.
- If a window is blank or all blue/grey, resize the window or minimize the window and then restore it.
- If the Display module runs out of memory, an **Out of Memory** message appears on the terminal window from which the Analyzer was invoked. If that happens, edit the start\_Display file and place the -mx option before the Java call, as shown below:

```
/opt/CSCOnfa/NFADisplay/RunTimeJava/bin/java -mx128 -cp ...
```

- RouterConfig cannot configure routers that prompt for a user name or contain an “enable secret” password.
- TMS collections are not resumed if the UtilityServer is stopped and then restarted.
- If you cannot change the TMS internal/external setting for the router interfaces, the IOS software on the selected router does not support that functionality.
- If you delete a TMS collection, you must wait approximately 15 seconds before starting a new collection on that router. Otherwise, a **router in use** error message is displayed.
- Although the Display module can run on a UNIX platform and can send output to an X server running on a PC using an X windows emulator, this configuration is not supported.
- The Display module does not run under OpenWindows unless OpenWindows is installed with the motif libraries.
- During the installation of NDA on HP-UX, after you answer **y** to **Do you want to start the servers?**, ignore the syntax error message regarding the following:

```
/opt/CSCOnfa/NFAUtility/bin/start.UtilityServer [90]:  
Syntax error
```

The Analyzer servers were successfully started.

## Corrected Release 3.0 Bugs and Restrictions

The following bugs and restrictions from Release 3.0 are corrected in Release 3.0(3) of the Analyzer:

- A request for topN = 10000 caused the Analyzer to try to retrieve all data. That could cause an “Out of Memory” exception to occur.
- If a data set contained an extremely large Total Flow Count (that is, greater than 2147483647), a NumberFormatException error occurred.

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