



NetFlow Integrator™ Standard

Installation and Administration Guide

Version 2.4.2 (Build 2.4.2.0.11)

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Contents

- Overview 3**
 - How NetFlow Integrator Works 3
 - How NFI Updater Works 3
- Before You Begin 4**
 - Pre-Installation Checklist..... 4
 - Supported Platforms 4
- NetFlow Integrator Installation 5**
 - Virtual Appliance 5
 - Installation 5
 - Upgrade..... 6
 - Removal 6
 - Linux..... 6
 - Installation 6
 - Upgrade..... 7
 - Removal 8
 - Windows..... 9
 - Installation 9
 - Upgrade..... 9
 - Removal 10
- NetFlow Integrator Set Up 11**
 - Launch the NetFlow Integrator Web UI..... 11
 - Login and Change Password 11
- Getting Started 12**
 - Step 1. Apply your License 12
 - Step 2. Start NetFlow Integrator 12
 - Step 3. Update Input and Output 12
 - Input Summary 12
 - Output Summary 13
 - Step 4. Enable and configure Modules 13
- Administration 14**
 - Home..... 14
 - Starting and Stopping NetFlow Integrator 14
 - Input Summary 14
 - Output Summary 15
 - Modules Summary 15
 - Data Sets Summary 16
 - Status 17
 - Advanced 18
 - Output..... 18
 - Services..... 18
 - IPv4 Address to Host Name Translation 18
 - Modules state persistence support 18
 - Original Flow Data Converter Service 18
 - SNMP Data Retrieval Service 18
 - Admin 21

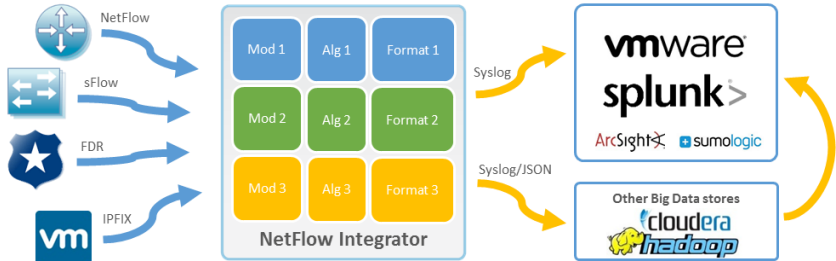
Change Password	21
Active Directory Authentication	22
Active Directory Authentication	22
Forgot Password	22
Licensing	23
License Details	23
Apply a License	23
Server Configuration Parameters	24
Updater Installation and Administration	25
Linux	25
Installation	25
Upgrade	26
Removal	26
Administration	27
Windows	27
Installation	27
Upgrade	28
Removal	28
Administration	28

Overview

How NetFlow Integrator Works

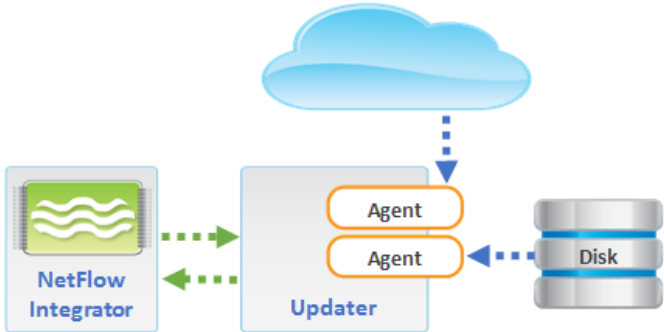
NetFlow Integrator (NFI) is a software-only processing engine for network flow data (NetFlow, IPFIX, sFlow, etc.). **It is not a NetFlow collector.**

NetFlow Integrator accepts network flow data from network devices (routers, switches, firewalls), applies map-reduce algorithms to the data to extract the information needed to address desired use cases, converts the processed data to syslog (or other formats such as JSON), then sends that useful information to your visualization platform or SIEM (e.g. VMware vRealize Log Insight, VMware vRealize Operations, or Splunk Enterprise).



How NFI Updater Works

NFI Updater is a remote component which serves as a knowledge base of information outside of the NetFlow domain. Its task is to provide NetFlow Integrator with information generally unavailable in the data streams supplied by NetFlow/IPFIX exporters.



Updater is comprised of a Platform and a collection of Agents each of which is designed to obtain information of a certain kind. The Platform provides a common interface for the Agents' configuration and data exchange and serves as a conduit for delivering information collected by the Agents to the NetFlow Integrator.

Typically Updater is installed on a separate server with access to the internet.

Before You Begin

Pre-Installation Checklist

Please be sure to have the following before you begin the installation of the NetFlow Integrator software:

- ✓ Installation Prerequisites – You have to login as **root** for Linux and **administrator** for Windows installations and updates.
- ✓ License – A license from NetFlow Logic sales is required before you can begin using NetFlow Integrator software. Please contact sales@netflowlogic.com for a license.
- ✓ Network Device - Please refer to the “Configuring NetFlow Data Export” section in your Cisco (or other) device documentation.

Supported Platforms

You can install the NetFlow Integrator virtual appliance or software on a platform with the following specifications.

Specification	Details
Supported Platforms	<ul style="list-style-type: none">• VMware ESXi 5.x and above• Linux kernel 2.6+ on CentOS 5.5, 6.5, 7 - Debian 6.0 - RHEL 5.5, 6.5, 7 - SUSE ES 11• Windows 2008 R2, 2012, and 2012 R2 (64-bit)
CPU, Memory, Disk Space (minimums)	<ul style="list-style-type: none">• CPU: 8 CPU cores (Intel)• Memory: 16 GB• Disk space: 2GB

NetFlow Integrator Installation

Virtual Appliance

Installation

To Begin the installation of the NetFlow Integrator Virtual Appliance, perform the following:

1. Import the virtual appliance .ova into your hypervisor
2. Follow the steps provided by your hypervisor to complete the import. If you need to assign a manual IP address for networking, follow the steps below:
 - a. Login directly or SSH into the imported virtual appliance or SSH using the default root password

Login: **root** Password: **changeme**

- b. Open and edit `/etc/sysconfig/network-scripts/ifcfg-eth0` and add the IP address information for your network following the example below

Example:

```
DEVICE=eth0
HWADDR=00:1f:29:c3:22:16
BOOTPROTO=static
NM_CONTROLLED=yes
ONBOOT=yes
IPADDR=10.5.0.6
NETMASK=255.255.255.0
```

- c. Open and edit `/etc/sysconfig/network` and add your network hostname and gateway information for your network following the example below

Example:

```
NETWORKING=yes
HOSTNAME=hostname.org
GATEWAY=10.5.0.1
```

- d. Open and edit `/etc/resolv.conf/` and add your network DNS information for your network following the example below

Example:

```
nameserver 10.5.1.1
nameserver 10.5.1.2
```

- e. Open a shell prompt and enter the following command to restart network services

```
/etc/init.d/network restart
```

Upgrade

To Begin the upgrade of NetFlow Integrator Virtual Appliance, perform the following:

1. Open a web browser and go to the NetFlow Integrator URL, entering the NetFlow Integrator hostname or IP address

Example: `https://<hostname>:8443`

2. Click on the 'Stop' button at the top of the page to stop the server



The 'Play' button will turn grey indicating that the NetFlow Integrator has stopped

1. Login directly or SSH and copy the new installation file into the `/opt` installation directory
2. RPM the NetFlow Integrator for Linux installation file into the `/opt` installation directory

```
rpm -Uhv <RPM-package>
```

3. A message will display indicating that the NetFlow Integrator setup has been successfully completed along with the URL for the login page

Removal

Manually remove the NetFlow Integrator virtual appliance files from the hypervisor.

Linux

Installation

RPM Installation

To Begin the **RPM** installation of NetFlow Integrator in the default directory `/opt/flowintegrator` perform the following;

1. Open a shell prompt and enter the following command to begin the installation

```
rpm -ihv <RPM-package>
```

2. A message will display indicating that the NetFlow Integrator installation has been successfully completed along with the URL for the login page to complete the setup

To begin the **RPM** installation of NetFlow Integrator in another directory, perform the following;

1. Open a shell prompt and enter the following command to begin the installation

```
rpm -ihv --relocate /opt/flowintegrator=<directory> <RPM-package>
```

2. A message will display indicating that the NetFlow Integrator installation has been successfully completed along with the URL for the login page to complete the setup

TAR Installation

To Begin the **TAR** installation of NetFlow Integrator in the default directory `/opt/flowintegrator` perform the following;

1. Open a shell prompt and enter the following command to un-compress the installer

```
tar zxvf <TAR-package> -C </opt/flowintegrator>
```
2. Go to the `/opt/flowintegrator` directory and enter the following command to begin the installation

```
setup.sh -i
```
3. A message will display indicating that the NetFlow Integrator installation has been successfully completed along with the URL for the login page to complete the setup

To Begin the **TAR** installation of NetFlow Integrator in another directory, perform the following;

1. Open a shell prompt and enter the following command to un-compress the installer

```
tar zxvf <TAR-package> -C <directory>
```
2. Go to the directory and enter the following command to begin the installation

```
setup.sh -i
```
3. A message will display indicating that the NetFlow Integrator installation has been successfully completed along with the URL for the login page to complete the setup

Upgrade

To Begin the upgrade of NetFlow Integrator on a Linux platform, perform the following:

1. Open a web browser and go to the NetFlow Integrator URL, entering the NetFlow Integrator hostname or IP address:
2. Click on the 'Stop' button at the top of the page to stop the server



The 'Play' button will turn grey indicating that the NetFlow Integrator has stopped

RPM Upgrade

1. Open a shell prompt and enter the following command to begin the setup

```
rpm -Uhv <RPM-package>
```


2. A message will display indicating that the NetFlow Integrator upgrade has successfully completed along with the URL for the login page

TAR Upgrade

1. Go to the existing installation directory and enter the following command to begin the uninstall
`setup.sh -u`
2. Copy the upgrade installation package for Linux into the existing installation directory
3. Open a shell prompt and enter the following command to un-compress the installer
`tar zxvf <TAR-package> -C <directory>`
4. Enter the following command and begin the setup
`setup.sh -i`
5. A message will display indicating that the NetFlow Integrator upgrade has successfully completed along with the URL for the login page

Removal

To Begin the uninstall of NetFlow Integrator on a Linux platform, perform the following:

1. Open a web browser and go to the NetFlow Integrator URL, entering the NetFlow Integrator hostname or IP address:
2. Click on the 'Stop' button at the top of the page to stop the server



The 'Play' button will turn grey indicating that the NetFlow Integrator has stopped

RPM Removal

1. Open a shell prompt and enter the following command to begin the uninstall
`rpm -e flowintegrator`
2. Remove the install path if the full uninstall needed
`rm -rf <directory>`

TAR Removal

1. Go to the existing installation directory and enter the following command to begin the uninstall
`setup.sh -u`
2. Leave the installation directory

```
cd ..
```

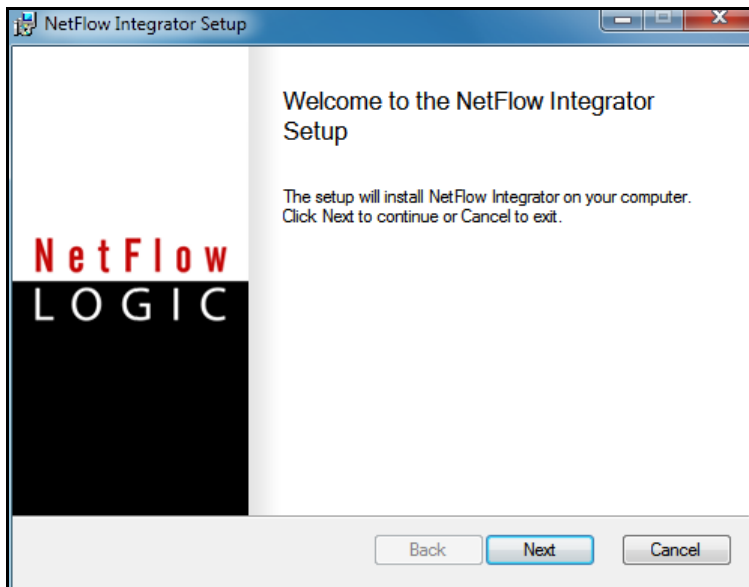
3. Remove the install path if the full uninstall needed

```
rm -rf <directory>
```

Windows

Installation

1. Open the installation file and click 'Run' to launch the installer and Click 'Next' to begin the 'NetFlow Integrator Setup'



2. Click 'Next' to install NetFlow Integrator in the default location:

```
C:\Program Files\NetFlow Logic\NetFlow Integrator
```

3. Click on 'Install' to begin the installation (follow the installation steps)
4. Click on 'Finish' to complete the installation and exit the installer

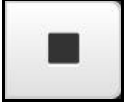
Go to Start > Programs > NetFlow Logic > NetFlow Integrator to open the URL for the login page to complete the setup using the default browser

Upgrade

To Begin the upgrade of NetFlow Integrator on a Windows platform, perform the following:

Go to NetFlow Integrator > Server Configuration

1. Click on the 'Stop' button next to the NetFlow Integrator status to stop the server



A message will display indicating the NetFlow Integrator server has stopped

Begin Installation

1. Open the upgrade installation file and click 'Run' to launch the installer and Click 'Next' to begin the 'NetFlow Integrator Setup'
2. Click 'Next' to install NetFlow Integrator in the default location:

`C:\Program Files\NetFlow Logic\NetFlow Integrator`

3. Click on 'Install' to begin the installation (follow the installation steps)
4. Click on 'Finish' to complete the installation and exit the installer

Removal

1. Go to Control Panel > Programs > Programs and Features and select the NetFlow Integrator program.
2. Follow the steps to uninstall the program.

NOTE: You may need to manually remove the NetFlow Integrator files from the installation directory prior to restarting the system.

NetFlow Integrator Set Up

Launch the NetFlow Integrator Web UI

1. Open a web browser and go to the following URL, entering the NetFlow Integrator hostname or IP address:

Example: `https://<hostname>:8443`

2. Click on proceed to continue to the login page

Login and Change Password

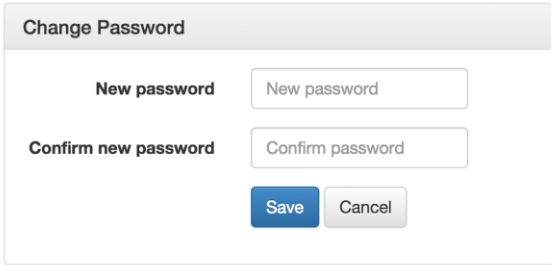
Note: In the event you receive a warning message during login such as ‘The sites security certificate is not trusted!’ click on the ‘proceed anyway’ button to continue to the log in page.

1. Enter the following default credentials on the login page and click ‘Sign In’

Username: **admin**

Password: **changeme**

2. Click on ‘Agree’ to accept the license agreement
3. Enter a new password at the change password prompt and click ‘Save’



The image shows a 'Change Password' dialog box with a title bar. It contains two input fields: 'New password' and 'Confirm new password'. Below the fields are two buttons: 'Save' (highlighted in blue) and 'Cancel'.

Click on the ‘NetFlow Integrator’ link at the top of the page to go to the Home page

Getting Started

Step 1. Apply your License

1. Click on the [Apply License](#) link at the top of the page
2. Click on 'Choose files' to upload and apply your license
3. Proceed to the next step

Step 2. Start NetFlow Integrator

1. Click on the 'Play' button next to the NetFlow Integrator status to Start the server



The 'Play' button will turn green indicating that the NetFlow Integrator has started and is running

2. Proceed to the next step

Step 3. Update Input and Output

By default NetFlow Integrator is preconfigured with one active data input port number 9995. To change the default data input port number or to add additional data inputs, follow the steps below

Input Summary

1. Click on the 'edit' symbol to change the existing data input port



2. Click 'Save'
3. Click on the 'plus' symbol to add additional data input ports



4. Click 'Save'
5. Proceed to the next step

Output Summary

You may add several output destinations, specifying the kind of data (consolidated, original, or both) to be sent to each destination (**Output** drop down). For example, you might want to send Modules output to one destination, like Splunk, and Original unconsolidated data to another destination, like Hadoop.

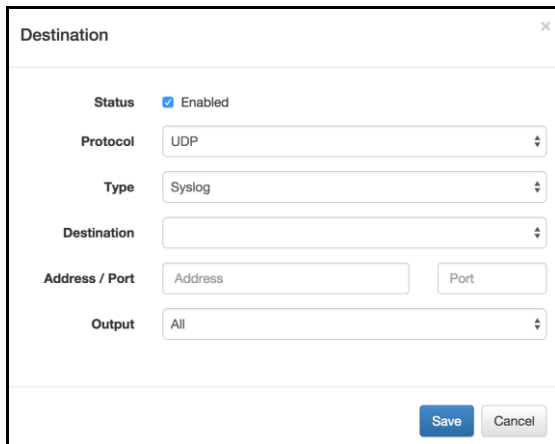
The **Type** drop down specifies whether the output should be Syslog (Syslog option) or NetFlow (Repeater option).

Please note that **Repeater** option allows you to specify the IP address, but not the destination port. This feature was designed so NFI can be "**inserted**" between NetFlow exporters and legacy NetFlow collectors. NFI will use the input port number and the exporter IP address when forwarding the original message received from the exporter.

1. Click on the 'plus' symbol to add data outputs



2. Enter the destination information for your data output



3. Click 'Save'
4. Proceed to the next step

Step 4. Enable and configure Modules

By default NetFlow Integrator is preconfigured with one Module enabled -- Network Traffic and Device Monitor: 10067 Top Traffic Monitor. You may enable / disable the entire set or each module by clicking on

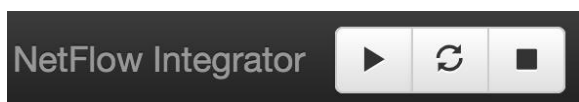


Administration

Use this Administration section if you are responsible for configuring, running, and maintaining NetFlow Integrator where can learn about specific aspects of NetFlow Integrator administration in the following sections.

Home

NetFlow Integrator > Home



Starting and Stopping NetFlow Integrator

Start

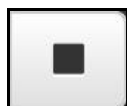
Click on the 'Play' button next to the NetFlow Integrator Server Status to start the server



A message will display indicating that the server has been started

Stop

Click on the 'Stop' button to stop the server



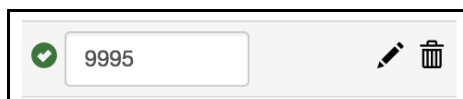
Restart

Click on the 'Restart' button to restart the server



Input Summary

1. Click on the 'edit' symbol to change the existing data input port



2. Click 'Save'
3. Click on the 'plus' symbol to add additional data input ports



4. Click 'Save'
5. Proceed to the next step

Output Summary

1. Click on the 'plus' symbol to add data outputs





2. Enter the destination information for your data output

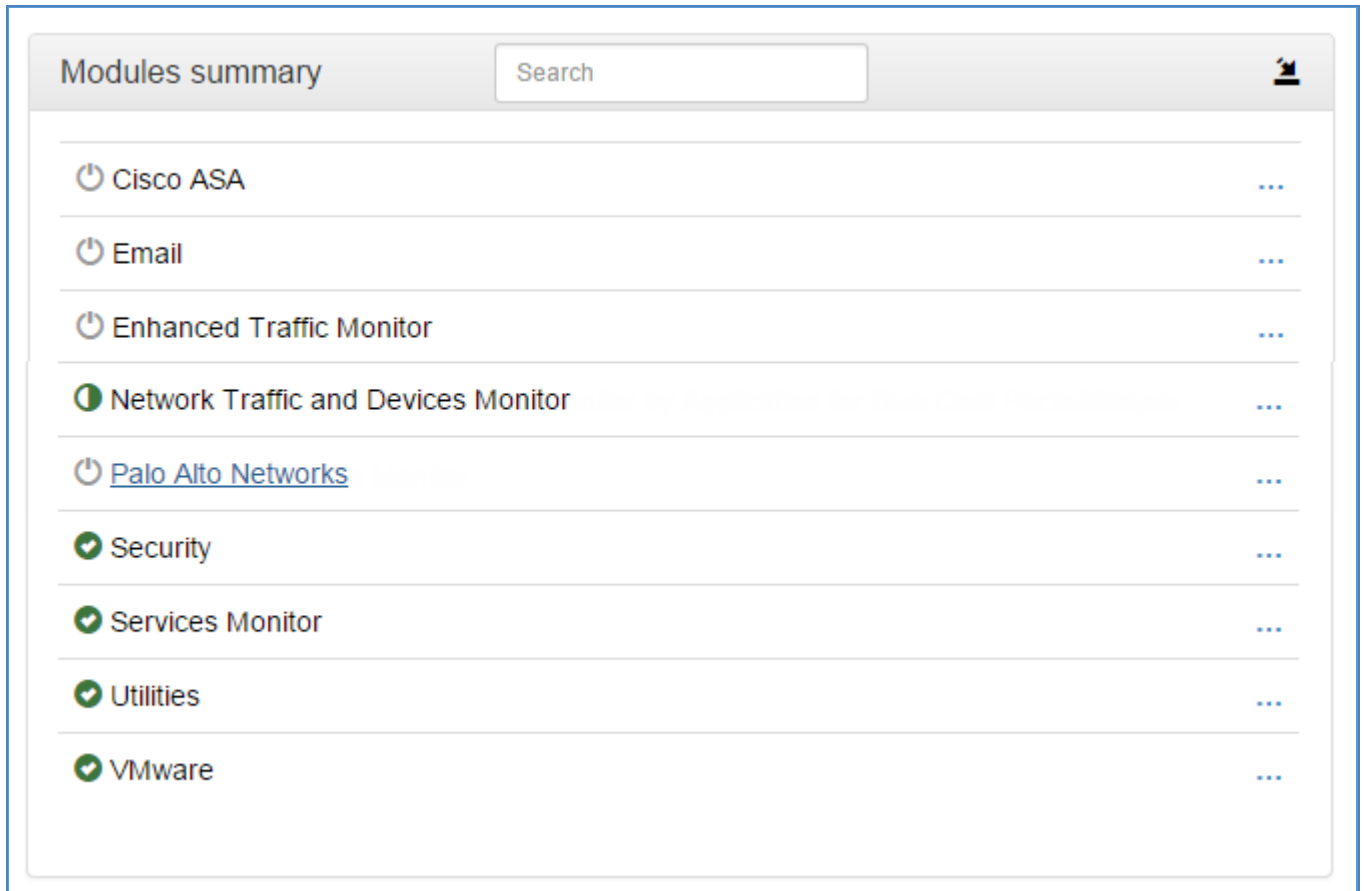
The screenshot shows a 'Destination' dialog box with the following fields and options:

- Status: Enabled
- Protocol: UDP (dropdown)
- Type: Syslog (dropdown)
- Destination: (empty dropdown)
- Address / Port: Address (text input) and Port (text input)
- Output: All (dropdown)
- Buttons: Save, Cancel

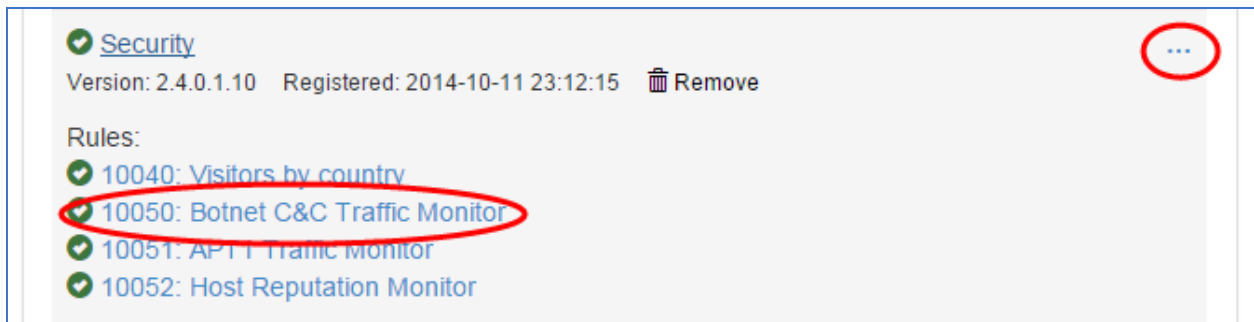
3. Click 'Save'
4. Proceed to the next step

Modules Summary

You may enable / disable the entire set or each module by clicking on  / .



To configure Module parameters expand Module set and click on its' name.



See NetFlow integrator User Guide for more information.

Data Sets Summary

This section contains watch list parameters. Watch lists are created and updated when the corresponding Module is configured.

Data sets summary		
Data set names	Last updated	Module
10011: Monitored subnet IPv4 address and subnet mask	2014-11-14 23:53:16	10011
10040: List of monitored localities	2014-10-13 19:41:49	10040
10040: List of watched local subnets and hosts	2014-11-17 14:18:33	10040
10052: Known malicious hosts list	2014-12-29 04:00:05	10052

Some watchlist are created and maintained manually (e.g. Monitored subnet IPv4 address and subnet mask for Module 10011: Network Subnets Monitor), and some can be automatically loaded and updated via NFI Updater (e.g. Known malicious hosts list for Module 10052: Host Reputation Monitor).

Status

This section shows detailed NFI Input / Output statistics, message history, and license usage in Blocks.

NetFlow Integrator Status

Statistics

total input messages	32320121
input rate, msg/sec	388
kron messages total	9889
number of processed records	383348068
processing rate, rec/sec	3883
output syslog messages	20192151
forwarded flow messages	0
output messages total	20192151
total work threads work queues length	0
total work threads QoS queues length	0
running average work threads RED queue length	0
total output work queues length	0
total output QoS queues length	0
running average RED output queue length	0
dropped by input threads	0
dropped by work threads	36
dropped by kron thread	0
dropped at output	0
dropped by QoS	0

Measurement

Date	Blocks
2015-02-16	7
2015-02-15	7
2015-02-14	7
2015-02-13	7
2015-02-12	7
2015-02-11	7

History

- 2015-02-17 05:00:00 INFO Module 10050 (agent Host reputation monitor for 10050): watch list updated
- 2015-02-17 05:00:00 INFO Data set Auto created by "Host reputation monitor" agent is updated
- 2015-02-17 04:00:10 INFO Module 10967 (agent Host reputation monitor for 10967): watch list updated
- 2015-02-17 04:00:10 INFO Data set Auto created by "Host reputation monitor for 10967" agent is updated
- 2015-02-17 04:00:07 INFO Module 10052 (agent Host reputation monitor): watch list updated
- 2015-02-17 04:00:07 INFO Data set Auto created by "Host reputation monitor" agent is updated
- 2015-02-16 13:08:49 INFO NFI server started
- 2015-02-16 13:08:49 NOTICE Start up configuration complete
- 2015-02-16 13:08:45 INFO NFI server stopped
- 2015-02-16 12:58:18 INFO Service "IPv4 Address to Host Name Translation" custom parameters updated
- 2015-02-16 12:58:12 INFO Service "IPv4 Address to Host Name Translation" custom parameters updated

Advanced

This section contains several tabs with additional NFI configurations.

Output

This tab allows you to enable / disable original flow output. When this option is enabled, in addition to output from Modules, all original flow records are also converted to syslog one-to-one and sent out. Please note that you may configure a separate destination for this output, such as your Hadoop cluster.

This tab also contains various syslog options.

Services

This tab allows you to enable and configure NFI built-in services.

IPv4 Address to Host Name Translation

This service is using FQDN resolution to enrich your flow data with real-time domain names. This service is enabled by default.

Modules state persistence support

This service saves Module state which is used in case NFI server is restarted. It is always enabled and has no configuration parameters.

Original Flow Data Converter Service

This service is for Blue Coat Packeteer-2 device. It allows you to map ClassIDs to application names.

SNMP Data Retrieval Service

This Service supports protocol version SNMPv2C. It does not support any later versions of the protocol.

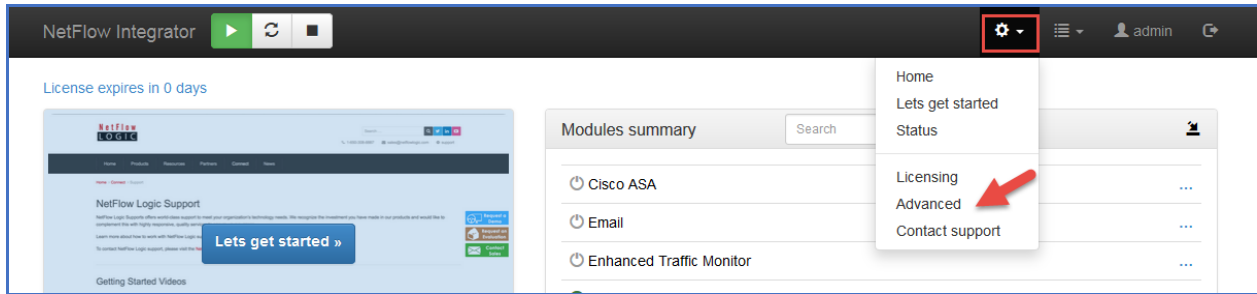
The service is always enabled.

NFI Modules query this Service to get SNMP data, passing Exporter IP and Interface SNMP index as parameters. SNMP information polled from network devices is cached in the Service (OIB + Exporter IP + if SNMP index), until it expires.

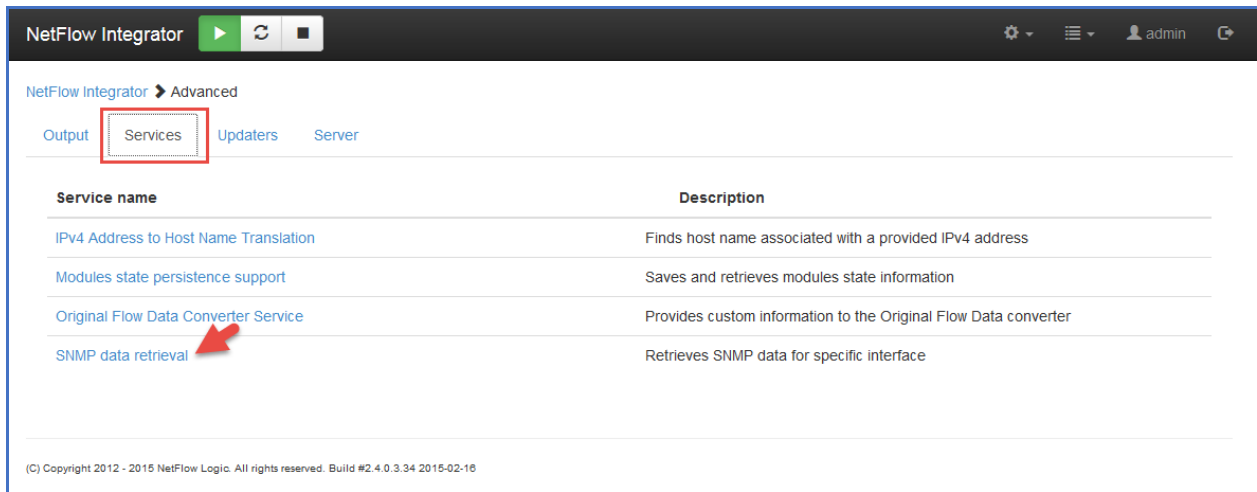
The service has the following parameters:

- T – SNMP expiration time in secs – expiration time of SNMP data held in cache, default is 86400 seconds (1 day).
- Snmp service watchlist: exporter IP, snmp mgt IP, community string – allows mapping exporter IP address to SNMP management IP address, if different.

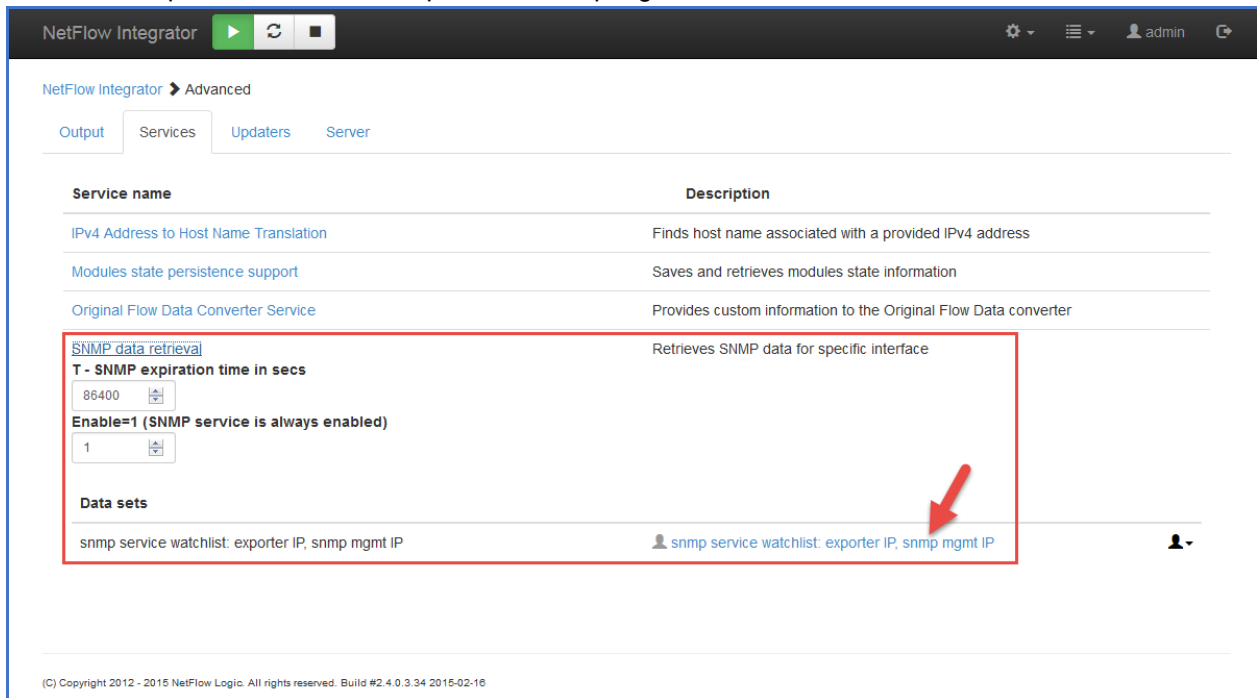
Select Advanced from top left navigation bar:



Go to Services tab and select SNMP data retrieval:



Click on “snmp service watchlist: exporter IP, snmp mgmt IP” link:



Specify IP address pairs – Exporter IP, SNMP Management IP – in data records field or prepare cvs file with Exporter IP, SNMP Management IP, and community string and upload it. Set Community string to "public", if it is left default on network devices.

SNMP service watchlist: exporter IP, SNMP mgmt IP, community name ✎ ✕

Last updated 2015-07-24 14:53:12 👤 [Download](#)

Upload file

[*.csv file download template](#)

Automation is not available.

Data records

10.0.5.21, 10.0.3.2, public

10.0.5.22, 10.0.4.2, public

10.0.5.24, 10.0.5.24, public

10.0.5.23, 10.0.5.23, public

The following SNMP OIDs are polled:

1. Interface description (ifDescr) - OID 1.3.6.1.2.1.2.2.1.2
2. Interface type (ifType) - OID 1.3.6.1.2.1.2.2.1.3
3. Size of the largest packet (ifMtu) - OID 1.3.6.1.2.1.2.2.1.4
4. Interface bandwidth (ifSpeed), (ifHighSpeed) - OID 1.3.6.1.2.1.2.2.1.5, OID 1.3.6.1.2.1.31.1.1.1.15
5. Interface physical address (ifPhysAddress) - OID 1.3.6.1.2.1.2.2.1.6
6. Desired state of the interface (ifAdminStatus) - OID 1.3.6.1.2.1.2.2.1.7
7. Operational state of the interface (ifOperStatus) - OID 1.3.6.1.2.1.2.2.1.8
8. Interface InetAddress (ipAddressAddr) - OID 1.3.6.1.2.1.4.34.1.2
9. Interface InetAddressType (ipAddressAddrType) - OID 1.3.6.1.2.1.4.34.1.1
10. Interface duplex status (dot3StatsDuplexStatus) - OID 1.3.6.1.2.1.10.7.2.1.19
11. Interface name (ifName) - OID 1.3.6.1.2.1.31.1.1.1.1

NFI Utility Module (10003: SNMP Information Monitor)

This Module queries SNMP information from the Service and sends it out in syslog format as follows:

```
May 22 11:04:51 10.0.5.9 May 22 11:04:51 ff:ff:00:01 nfc_id=20003 exp_ip=10.0.5.21
mgmt_ip=10.0.3.2 sysName=GW02.nfcLab ifIndex=2 ifName="Fa0/1" ifDescr="FastEthernet0/1"
ifType=6 ifMtu=1500 ifSpeed=100000000 ifPhysAddress=0016ffffffc7 ifIPAddress=
```

May 22 11:04:51 10.0.5.9 May 22 11:04:51 ff:ff:00:01 nfc_id=20003 exp_ip=10.0.5.24
mgmt_ip=10.0.5.24 sysName=HP-E2620-48-upper ifIndex=2 ifName="2" ifDescr="2" ifType=6
ifMtu=1500 ifSpeed=100000000 ifPhysAddress=ffffffecffff ifIPAddress=na

The Module has the following configuration parameters:

NetFlow Integrator > 10003: SNMP Information Monitor

Status: ✔ Enabled (Last enabled: 2015-03-07 14:30:55)

Data collection interval, sec

Report SNMP information	300
Refresh SNMP information	3600

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Future releases of NetFlow Integrator

The following features are scheduled to be implemented in upcoming releases of NFI:

1. Add ability to specify arbitrary OID (NFC-5308).

Admin

To access the Users and Authentication section click on the link located on in the top right of any page

Change Password

To change the current click on the change password icon

Change Password

Old password

New password

Confirm new password

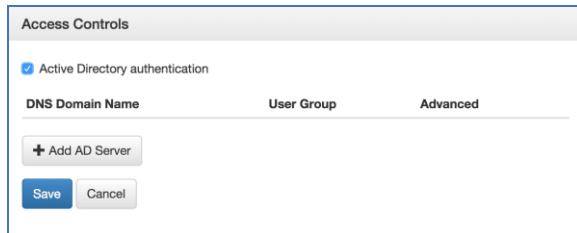
1. Enter the Old Password
2. Enter the New Password, Confirm the New Password
3. Click 'Save'

Active Directory Authentication

To access the access controls click in the Access Control icon

Active Directory Authentication

To enable Active Directory Authentication click on the check box



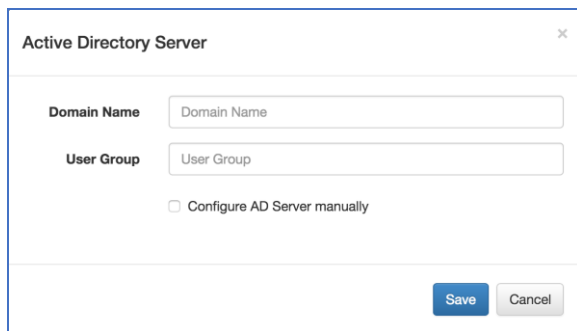
Access Controls

Active Directory authentication

DNS Domain Name User Group Advanced

+ Add AD Server

Save Cancel



Active Directory Server

Domain Name Domain Name

User Group User Group

Configure AD Server manually

Save Cancel

1. Enter the Domain Name
2. Enter the User Group
3. Click 'Save'

To enable Advanced Settings click on the Advanced Settings icon

To configure AD Server Host / Port manually

1. Enter the AD Server IP or host name and Port
2. Click on the check box Use SSL to enable SSL
3. Click Save

Forgot Password

In order to reset the default admin password you will require root or administrator access to the system where NetFlow Integrator is installed. To reset the default admin login password perform the following

1. Go to the NetFlow Logic installation location i.e.

Windows: C:\Program_Files/NetFlowLogic/NetFlowintegrator

Linux: /opt/flowintegrator/data

2. Go to the directory where the password file is stored

Windows: C:\Program Files\NetFlow Logic\NetFlow Integrator\tomcat\data

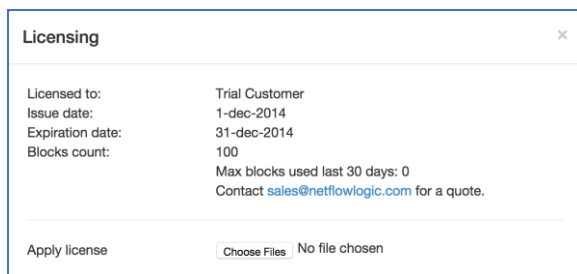
Linux: /opt/flowintegrator/tomcat

3. Delete the following file: nf2sl_password
4. Restart NetFlow Integrator

Once restarted, the default password will be reset back to 'changeme'.

Licensing

The licensing page displays information about the license for NetFlow Integrator. To access the licensing page go to NetFlow Integrator > Licensing



The Licensing page displays the following information

License Details

Licensed to: The organization the license was issued and the license type

Issue date: The date the license was issued by NetFlow Logic support

Expiration date: The date the license will expire

Blocks count: The number of blocks available for use with the license (a single block is 1000 records per second)

Apply a License

To apply a new license perform the following from the licensing page

1. Click on the 'Choose Files' button
2. Select the license file
3. Click Ok to apply the license

Server Configuration Parameters

There are several advanced NetFlow Integrator parameters located in <flowintegrator installation directory>/server/etc/server.cfg file. You have to restart NetFlow Integrator if you change them. Please contact us at <https://www.netflowlogic.com/connect/support/> if you need assistance.

```
TRACE_ERR
LOG_DIR ..\..\logs
LOG_ROT_DIR ..\..\logs\bak
LOG_ROT_DAILY
LOG_COUNT 10
LOG_FILE_SIZE_KB 20000
SVR_ID NFI_SERVER
NF_PORT 9995
TIME_ZONE GMT
```

Updater Installation and Administration

Linux

Installation

RPM Installation

To Begin the **RPM** installation of NFI Updater in the default directory `/opt/nfi-updater` perform the following;

1. Open a shell prompt and enter the following command to begin the installation

```
rpm -ihv <RPM-package>
```
2. A message will display indicating that the NFI Updater installation has been successfully completed

To begin the **RPM** installation of NetFlow Integrator in another directory, perform the following;

1. Open a shell prompt and enter the following command to begin the installation

```
rpm -ihv --relocate /opt/nfi-updater=<directory> <RPM-package>
```
2. A message will display indicating that the NFI Updater installation has been successfully completed

TAR Installation

To Begin the **TAR** installation of NFI Updater in the default directory `/opt/ nfi-updater` perform the following;

1. Open a shell prompt and enter the following command to un-compress the installer

```
tar zxvf <TAR-package> -C </opt/nfi-updater>
```
2. Go to the `/opt/nfi-updater` directory and enter the following command to begin the installation

```
setup.sh -i
```
3. A message will display indicating that the NFI Updater installation has been successfully completed

To Begin the **TAR** installation of NFI Updater in another directory, perform the following;

1. Open a shell prompt and enter the following command to un-compress the installer

```
tar zxvf <TAR-package> -C <directory>
```
2. Go to the directory and enter the following command to begin the installation

```
setup.sh -i
```
3. A message will display indicating that the NFI Updater installation has been successfully completed

Upgrade

When upgrading NFI Updater on RHEL 7, the messages like these ones, might be displayed:

```
=====
Cleaning up / removing...
 2:nfi-updater-2.4.0.3.34-linux  warning: file /opt/nfi-updater/lib/wasync-1.4.0.jar: remove failed: No
such file or directory
warning: file /opt/nfi-updater/lib/netty-3.9.2.Final.jar: remove failed: No such file or directory
warning: file /opt/nfi-updater/lib/async-http-client-1.8.11.jar: remove failed: No such file or directory
=====
```

This is a normal situation and these messages should be ignored.

RPM Upgrade

1. Open a shell prompt and enter the following command to begin the setup

```
rpm -Uhv <RPM-package>
```

2. A message will display indicating that the NFI Updater upgrade has successfully completed

TAR Upgrade

1. Go to the existing installation directory and enter the following command to begin the uninstall

```
setup.sh -u
```

2. Copy the upgrade installation package for Linux into the existing installation directory

3. Open a shell prompt and enter the following command to un-compress the installer

```
tar zxvf <TAR-package> -C <directory>
```

4. Enter the following command and begin the setup

```
setup.sh -i
```

5. A message will display indicating that the NFI Updater upgrade has successfully completed

Removal

RPM Removal

1. Open a shell prompt and enter the following command to begin the uninstall

```
rpm -e nfi-updater
```

2. Remove the install path if the full uninstall needed

```
rm -rf <directory>
```

TAR Removal

1. Go to the existing installation directory and enter the following command to begin the uninstall

```
setup.sh -u
```

2. Leave the installation directory

```
cd ..
```

3. Remove the install path if the full uninstall needed

```
rm -rf <directory>
```

Administration

1. If NFI Updater is installed on a separate server, change `uri` parameter in `updater.properties` file located in `/opt/nfi-updater/conf` to IP address of NetFlow Integrator

```
uri = https://<nfi-host>:8443
```

2. Enter the following command to check the status

```
/etc/init.d/nfi_updd status
```

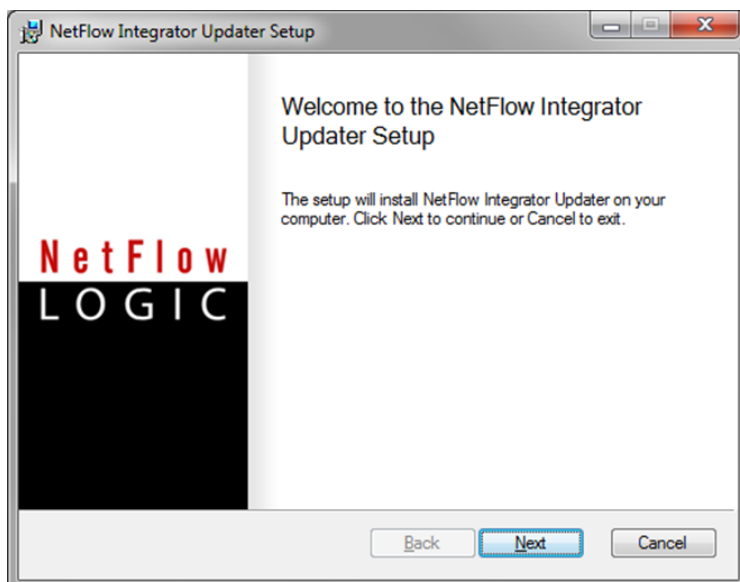
3. For the list of available commands enter the following

```
/etc/init.d/nfi_updd
```

Windows

Installation

1. Open the installation file and click 'Run' to launch the installer and Click 'Next' to begin the 'NFI Updater Setup'



2. Click 'Next' to install NFI Updater in the default location:

C:\Program Files\NetFlow Logic\NFI Updater

3. Click on 'Install' to begin the installation (follow the installation steps)
4. Click on 'Finish' to complete the installation and exit the installer

Upgrade

1. Open the upgrade installation file and click 'Run' to launch the installer and Click 'Next' to begin the 'NFI Updater Setup'

2. Click 'Next' to install NFI Updater in the default location:

C:\Program Files\NetFlow Logic\NFI Updater

3. Click on 'Install' to begin the installation (follow the installation steps)
4. Click on 'Finish' to complete the installation and exit the installer

Removal

1. Go to Control Panel > Programs > Programs and Features and select the NFI Updater program.
2. Follow the steps to uninstall the program.

Administration

1. If NFI Updater is installed on a separate server, change uri parameter in `updater.properties` file located in `C:\Program Files (x86)\NetFlow Logic\NetFlow Integrator Updater\conf` to IP address of NetFlow Integrator

uri = https://<nfi-host>:8443

2. Use Windows Services to check NFI Updater status

