



Noction Flow Analyzer INSTALLATION & UPGRADE GUIDE





What is Noction Flow Analyzer?

NFA is a web-based network traffic analysis, monitoring and alerting tool. The product enables engineers to optimize their networks and applications performance, control bandwidth utilization, do the proper network capacity planning, perform detailed BGP peering analysis, improve security and minimize network incidents response time.

NFA is intended for use in a production environment. The product should be installed on a dedicated server that meets the following software and hardware requirements:

Hardware Requirements:

- x86_64 architecture
- Minimum 4x core CPU (8x core CPU recommended), SSE4.2 support
- Minimum 32GB of RAM (64GB RAM recommended; 128GB RAM optimal)
- Minimum 250GB SSD storage (500GB SSD storage recommended) allocated to the /var partition

Software Requirements:

• Ubuntu 22.04, Ubuntu 22.04 or Ubuntu 24.04 LTS

Please note that NFA can also be installed on a server running RHEL 8 / RHEL 9. The minimum system requirements assume default configuration. Significantly increasing the flow collection rate might cause additional load on a server, thus requiring extra memory or a larger CPU.

Hardware resources depend on the amount of flows/s exported to NFA. For each additional 1,000 flows/sec, 1 GB of RAM and 0.2 of vCPU are required. An additional 2 GB of RAM and 4 vCPU are required when the BGP add-on is used. Values are directly proportional: RAM and vCPU numbers per 1,000 flows/sec.

For instance: 40,000 flows/sec will require 40 GB of RAM and 8 vCPU, plus 2 GB of RAM and 4 vCPU in case a BGP add-on is used.

1.1 Installing NFA on a server running Ubuntu

Run the below command to configure the NFA repository:

Ubuntu 20.04

```
wget -0 /etc/apt/sources.list.d/nfa.ubuntu20.list http://repo-nfa.noction.
com/ubuntu/nfa.ubuntu20.list
    curl -L http://repo-nfa.noction.com/repo.gpg | apt-key add -
```

Ubuntu 22.04

wget -0 /etc/apt/sources.list.d/nfa.ubuntu22.list http://repo-nfa.noction. com/ubuntu/nfa.ubuntu22.list

wget -O- http://repo-nfa.noction.com/trusted.gpg | sudo gpg --dearmor | sudo tee /usr/share/keyrings/repo-noction.gpg > /dev/null 2>&1

Ubuntu 24.04

wget -0 /etc/apt/sources.list.d/nfa.ubuntu24.list http://repo-nfa.noction. com/ubuntu/nfa.ubuntu24.list wget -0- http://repo-nfa.noction.com/trusted.gpg | sudo gpg --dearmor | sudo tee /usr/share/keyrings/repo-noction.gpg > /dev/null 2>&1

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Running the following command, Noction Flow Analyzer will be installed:

apt update DEBIAN_FRONTEND=noninteractive apt install nfa

NOTE: A properly configured firewall can greatly increase the security of your system. It is highly recommended that you configure a firewall for NFA. Should you need any help with this, please contact us at **support@noction.com**

Please ensure that **chronyd** is started by default. If not, use the following command: **systemctl start chronyd**

NOTE: Do not set any default ClickHouse user passwords during the installation process to ensure smooth NFA deployment.

1.2 Installing NFA on a server running RHEL 8 / RHEL 9

Run the below command to configure the NFA repository:

For RHEL 8

rpm -Uvh http://repo-nfa.noction.com/nfa-repo-0.1.0-0.noc.noarch.rpm

For RHEL 9

wget http://repo-nfa.noction.com/nfa-el9.repo -P /etc/yum.repos.d/

SELinux

SELinux should be set to the permissive state for proper NFA components operation: Enable the SELinux permissive state

setenforce 0

Set SELINUX parameter must be changed to permissive in the /etc/sysconfig/selinux configuration file as well.

Change of the SELinux state in the configuration file

SELINUX=permissive

Running the following command, Noction Flow Analyzer will be installed:

For RHEL 8/RHEL 9:

```
yum --disablerepo=\* --enablerepo=baseos,appstream,nfa install nfa
```

NOTE: FirewallD is the default daemon responsible for firewall security. Please make sure to open HTTP/HTTPS, BGP, and Flow ports and to adjust configurations to include only IPs that should have access to your server.

Please ensure that **chronyd** is started by default. If not, use the following command: **systemctl start chronyd**

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2. Accessing NFA Front End

Once the installation process is complete, access NFA Front End using <u>https://yourhostname</u> or IP address and a combination of the default username and password - **admin/admin**.

The NFA frontend runs on port 443 (https). The system listens to Flow stats on the default protocol ports: NetFlow (2055 port), sFlow (6343 port). Please adjust your firewall settings accordingly.



For security purposes, we recommend that you change the default password to your account under **Profile** upon the first visit.

Profile			a 😩 -
55. ビー 展 ロ,	Q Account Username admun Changing the username is not possible as it is used for the unque identification of the account. email Full Name admun@example.com Firstname Lastname	Personalization Interface theme: Auto Choose a there to personalize the app's appear ance. Display date format Time format. 12h V	
	Current paraverd	C Sessions OS Browser Last access IP address Linux I Current Session 192,168,124,68	
	Click to generate a strong and secure password automatically. The generated password will include special characters to enhance security.		

🖉 API Keys

Create Your First API Key for NFA

n AFI key is essential for securely accessing the features and integrations of Noction How Analyzer. Since you aven't created any keys yet, let's start by generating your first one.

🛆 Browser notification

Inable to weep notifications to receive real-time updates and notifications even when you're away from VEA. Browser notifications are different from the mandatory in app notifications, which are enabled by Refault.

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We recommend you to limit NFA frontend access to specific IPs only. To do so, go to **Management > Configuration Settings**. Enable the Front-end access restriction and introduce the allowed IPs. Click the **Save Changes** button.

	API					
SNMP BGP	(SSL listening IPv4/IPv6 address	SSL listening port	o	Non-SSLIPv4/IPv6 listening address	
DNS Report Cache SSL/TLS Certificates		= 0 × 00.00 0 ×	- 443		= 0 × 0.000 0 ×	\odot
API API-Scheduler	Usten port	0	Allowed IP addresses	0	Access taken TTL (seconds)	0
	(- 80	+	0.0.0.00 / × ==0 / ×		- 3,600	
	Refresh token TTL (seconds)	0				
	- 2,592,000					

3. Licensing

NFA is a licensed product and requires users to obtain and register a license in the application.

Register with Noction at <u>https://nfa.noction.com</u> and request a license. The license activation key will be sent to the email address you provide during registration.

Go to **Management > License**. Introduce your activation key in the corresponding field and hit ACTIVATE LICENSE.

License			Q & ~
下 2013年1月11日 2013年1月11日 2013年11日 2013 2015 2015 2015 2015 2015 2015 2015 2015	License Status - Recurrent	38 days remaining	
⊕, ₽	Enter your license key to activate your subscription:		
φ.	Arrivation key If you have already purchased Noction Flow Analyzer license, you		
(f).	should find the activation key in an email confirmation. PURCHASE LICENSE		

NOTE: Please ensure firewall rules are adjusted for access to <u>repo-nfa.noction.com</u> ports 443 & 80. This is a requirement for license validation.

In case inbound traffic is filtered as well, please allow ephemeral ports 32768-65535 (enables responses to the outbound traffic) to both OS and Noction repositories.

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4. Flow Data

Send flow to your NFA instance. For NetFlow use port 2055, for Sflow port 6343. You can modify standard ports via NFA's Frontend by going to **Management > Configuration Settings**

Flow Collector Stats	Flow Collector							
SNMP BGP	NetFlow/)-Flow/NetStream/IPFIX listening port		sFlow listening port	0	Buffer size (packets)	0	Flow stream stop event threshold (seconds)	_0
DNS Report Cache	- 2.055		- 6,343		- 50,000		- 300	
API API Scheduler	Flows interfaces value TTL in dictionary (seconds)	0					BGP Attributes cache size (in number of entities)	0
Personalization Logs	- 85,400		extended exporter address O		8GP attributes Caching O		- 100,000	
	BGP attributes cache TTU (Time to Use)	0			BGP attributes related requests timeour (millisecone	s) (0		
	(- 180		New aggregation method ()				deutes only	
	Enable utggering of DNS FTR							
	Ciserus nooth							

Alternatively, use the configuration file located at:

/etc/noction/nfa.conf

Once the flow export is configured, wait for at least 5 minutes to start seeing graphs in NFA.

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5. BGP Data

For Proper BGP Add-on functionality, configure an iBGP or eBGP session between NFA and your router(s).

Next go to **Management > Inventory > Add device**.

Once all the details are provided on the **General Settings** and **Location** tabs, go to **BGP Settings**.

Fill out both **OUR AS** and **PEER AS** fields under the **BGP settings** tab to establish an eBGP session. With eBGP, the route-reflector does not need to be configured, and the router side just needs to be set up as though it's a transit customer. If **OUR AS** field is left blank, an iBGP session will be established.

General	Location	BGP	Upstream/Downstream A	SNs	SNMP
Device name			Device description		
Device name			Device description		
Exporter IP					
Device type					
Router		~			
					0/2:
Override the fl	low sampling rate f	or this device			
Data origin priority	for a distinct set of a	ttributes: 🕥			
🕂 🛃 Use d	ata obtained from	Flow protocols			
🕂 🔽 Use d	ata obtained from	the Internal DB(Ð		

You can always edit () an existing device, fill out the required fields under the BGP Settings

tab, and hit Save.

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6. NFA Upgrade

To update to the latest NFA version:

Clean all cached information:

For RHEL:

proceed with

yum clean all

```
yum --disablerepo=\* --enablerepo=baseos,appstream,nfa update nfa
nfa-supplemental-v2
```

Check if all NFA components are updated to the latest version for CentOS or RHEL:

rpm -qa nfa*

For Ubuntu:

Run: apt clean apt update all

apt install nfa nfa-supplemental-v3 nfa-nats-server

Restart nfabgpd:

systemctl restart nfabgpd

Verify the NFA components:

systemctl list-dependencies nfa.target

Check if all NFA components are updated to the latest version for Ubuntu:

apt list --installed nfa*

If you wish to upgrade other packages after completing the installation, you may run the command provided below:

apt upgrade

Important: DO NOT just run a general apt upgrade command to update NFA, as it may disrupt the installation.

Should you have any questions or experience difficulties during the upgrade process, please email <u>support@noction.com.</u>

Access additional information at <u>https://www.noction.com/flow-analyzer/resources</u> to learn more about the product and its use cases.

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