Northbound Interface

> ✅ Successfully pass the free certification exam at IW Academy and become an Infinet Certified Engineer.
>
> **To the certification exam**

Northbound Interface (NBI) - is a InfiMONITOR's programming interface for integration with the higher-level NMS (Network Management System). Thus, NBI allows to perform integration to the existing monitoring infrastructure.

> ⚠️ **NOTE**
>
> Integration with InfiMONITOR is performed through software. For more detailed information please refer to the documentation of your NMS.
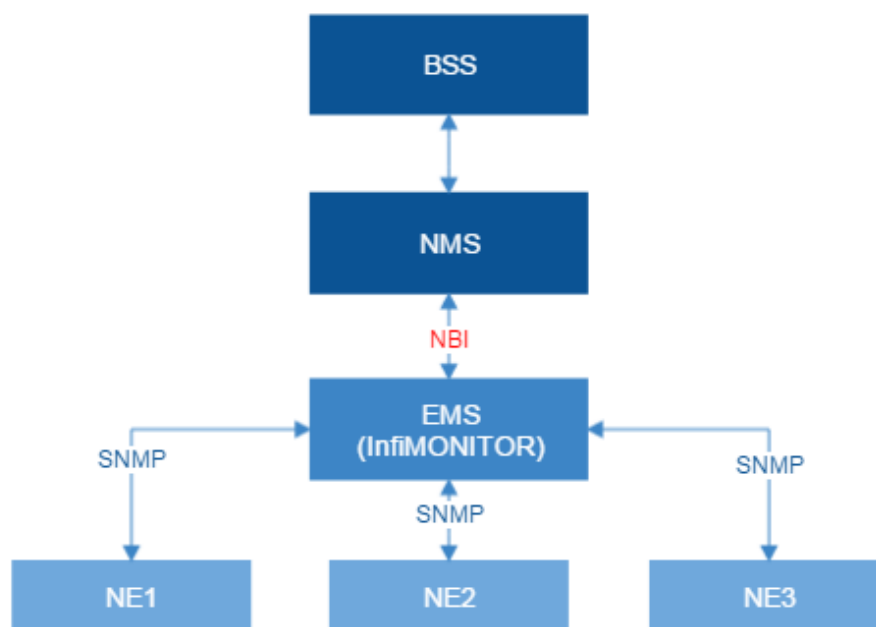

Figure - Monitoring Infrastructure

Northbound interface is implemented as REST API, through which the following data can be obtained from InfiMONITOR:

- Lists of:
    - **Links** - represented as hosts, interfaces and vectors. Vector is a part of link acting in one direction. Each link consists of two vectors for up and down streams.
    - **Hosts** - represented as hosts name and UUID.
    - **Interfaces** - represented as interfaces name, UUID and IP-address.
    - **Vectors** - represented as UUID and link type.
    - **Events** - generated for host in accordance with the rule.
- The current parameters values obtained during the last polling cycle:
    - **Hosts**.
    - **Interfaces**.
    - **Vectors**.
- Parameters values for the specified time period:
    - **Hosts.**
    - **Interfaces.**
    - **Vectors.**

Access to NBI

In order to obtain the link to the NBI go to the section "System" → "Integrations". For authorization use the access key noted in the "*API key*" field.

Figure - Link to the InfiMONITOR data

Find out more about REST API structure through the link above. Here you can manually execute queries for which you need to authorize with "*API key*".

Figure - REST API Structure

Integration examples

> ⚠ **NOTE**
>
> You may download integration examples from the following link: https://github.com/infinetwireless/infimonitor-nbi-examples

SNMP Traps

InfiMONITOR may send SNMP Traps to higher-level NMS to increase reaction speed on events.

> ⚠ **NOTE**
>
> MIB databases must be imported into your NMS to ensure proper message reception - https://ftp.infinet.ru/pub/INMS/MIBS/
>
> Parent MIBs - https://ftp.infinet.ru/pub/Firmware/MIBS/

In order to configure SNMP Traps sending go to the section "System" → "Integrations". There are the following parameters:

- "*Engine Id*" - unique identifier allows NMS to recognize messages, received from InfiMONITOR. Can't be changed.
- "Notification limit" - sending limit expressed in maximum quantity of messages which may be sent during 1 second. In case of messages number over the limit, they will be sent during the next second.
- "*Min. severity*" - severity minimum level. If severity level of event is lower than specified then a message won't be sent.
- Receivers - InfiMONITOR may send messages to several monitoring systems at the same time. Values of the following parameters must be set:
  - NMS IP address;
  - network port;
  - SNMP version.

Title

Figure - SNMP Traps configuration