

APPLICATION NOTE

# **FOXMAN-UN**

## **Metrics Database**

|                  |                               |
|------------------|-------------------------------|
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| Document edition | FOXMAN-UN System Release: R18 |
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# 1 Introduction

Since FOXMAN-UN released with system release R16A, ENP has been offering the ability to create performance monitoring dashboards in the Metrics Database (InfluxDB) for VPWS and MPLS Links. This functionality is now improved and extended with most limitations cleared.

The metrics database is now also used to collect network-wide performance data and provide the data to the “Network Monitoring” application, including the Health Monitoring feature, of the FOXMAN-UN Homepage. This is an automatic process running in the background.

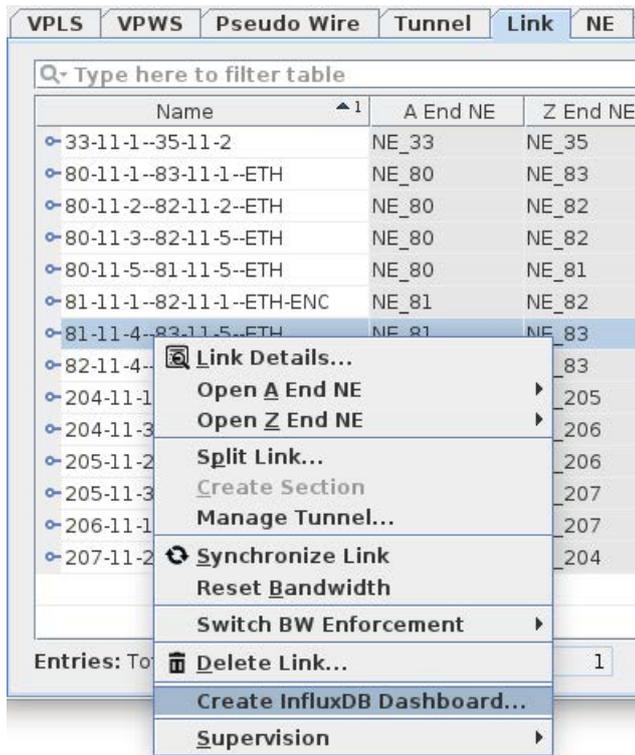
This application note describes how to make customized dashboards available.

## 2 Requirements

A PM Job containing any ports to be monitored needs to be created in advance. For guidance to do so, refer to the FOXMAN-UN user manual “NEM GUI Help System” [1KHW002412], section “Create PM Collection Job”.

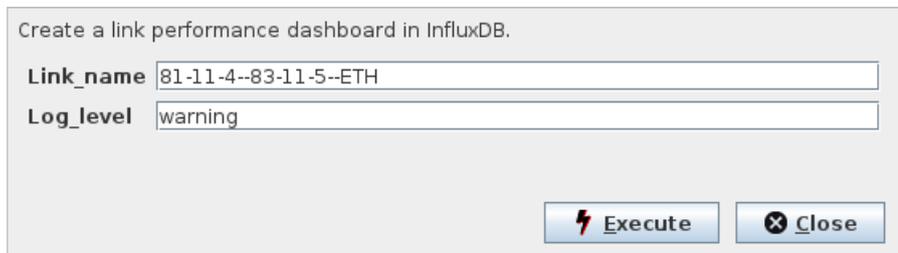
### 3 Launching

InfluxDB Dashboard creation can be triggered from ENP GUI as shown in the figure below:



For VPWS, switch to the VPWS tab; for links, switch to the Link tab and select the 'Create InfluxDB Dashboard...' menu entry.

The current implementation relies on Remote Executor. Therefore, a Remote Executor window will pop up. The user then needs to click the 'Execute' button.



Feedback and error messages are provided in the Remote Executor, which is launched separately from the NEM Desktop:



The 'Executions' show whether 'Create Link Performance Monitor' completed successfully (State – 'FINISHED'):

The screenshot displays two main sections: 'Scripts' and 'Executions'.

**Scripts Section:**

| Name                               | Description  |
|------------------------------------|--|
| ENP Nodes Analyzer                 | Analyze all the ENP tunnels configuration from the ENP Nodes |
| Create Link Performance Monitor    | Create a link performance dashboard in InfluxDB.             |
| Set PW Control Word                | Changes PW CW option   |
| Create Service Performance Monitor | Create a VPWS service performance dashboard in InfluxDB.     |
| Stop Quickmonitoring               | Stop NE performance data collection via SNMP                 |

Buttons: Refresh, Import, Delete, Execute

Entries: Total 10, Filtered 10, Selected 1

**Executions Section:**

| Script Name                     | User          | State    | Start Time          | End Time            |
|---------------------------------|---------------|----------|---------------------|---------------------|
| Create Link Performance Monitor | nemadm@chb... | FINISHED | 2024/03/21 10:50:23 | 2024/03/21 10:50:25 |
| Create Link Performance Monitor | nemadm@chb... | FINISHED | 2024/03/21 10:50:37 | 2024/03/21 10:50:40 |

Buttons: Details, Delete

Entries: Total 2, Filtered 2, Selected 0

? Help Close

Note that it is not required to have the Remote Executor open; it can be used to get the feedback of successful creation. Also see troubleshooting.

# 4 Opening the Metrics Database

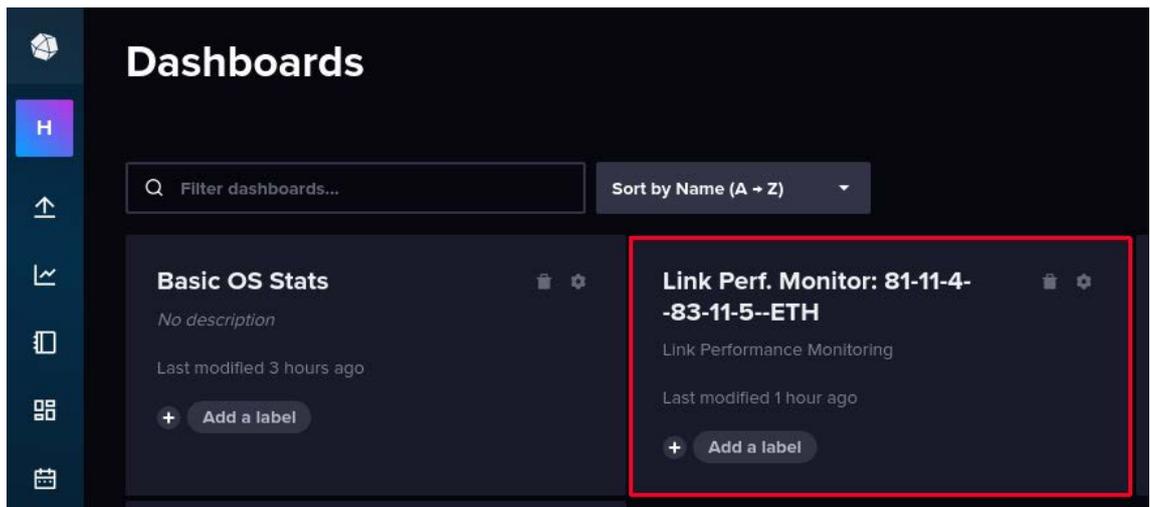
Start the Metrics Database UI from NEM Desktop by navigating to 'System -> Metrics Database...'.



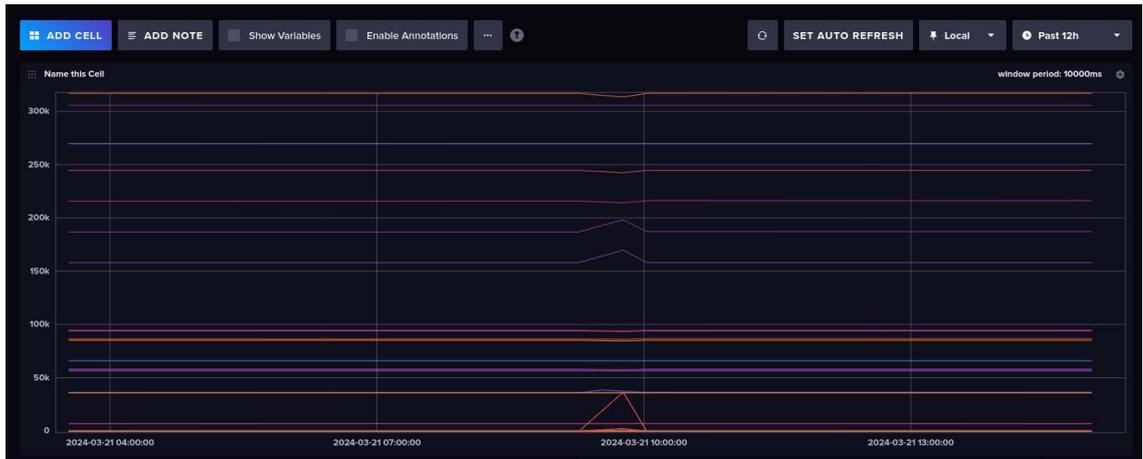
Once inside InfluxDB GUI, click the "Dashboards" icon in the middle of the left-hand side icon bar...



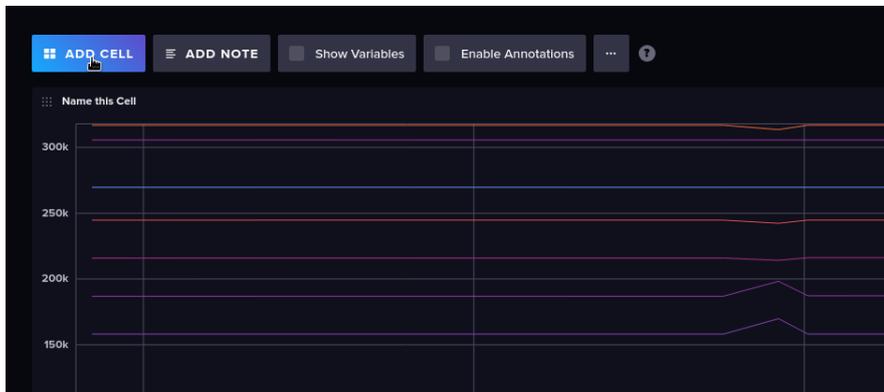
to navigate to the Dashboards and click on the newly created Dashboard (as per description in section 3 "Launching") to view the PM counter information and collected PM data.



The graph names are self-explanatory. User may choose between 15m and 24h counters by picking either 'statistic\_15m' or 'statistic\_24h', depending on the PM data intervals activated in the PM collection job. The time period may be adjusted in the upper right corner.



To modify an existing dashboard, click on the “Add Cell” button in the upper left corner of the dashboard:



Give the new cell a name, select

- source (“FROM”), e.g. “network\_pm\_raw”,
- Filter / \_measurement, e.g. “ethernet\_counters”,
- Filter / \_field, e.g. “rx\_octets”,
- Filter / category, e.g. “network\_pm\_raw”,

and apply the change by clicking on the apply button:

This will add the new cell (diagram) to the existing dashboard. You can rearrange, resize, move or delete cells (diagrams) on the dashboard by drag the lower right corner to resize:

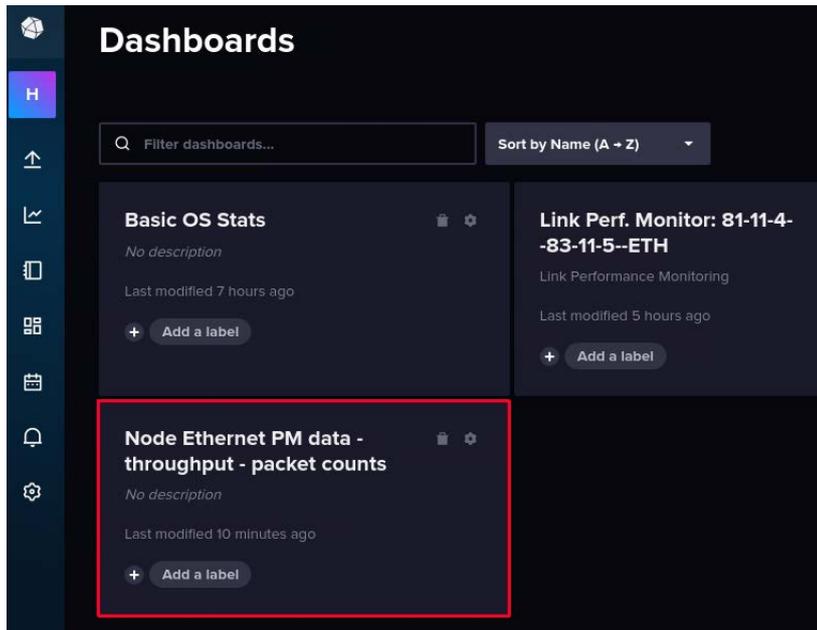


or click and hold the upper left 9-dot icon to move a cell:

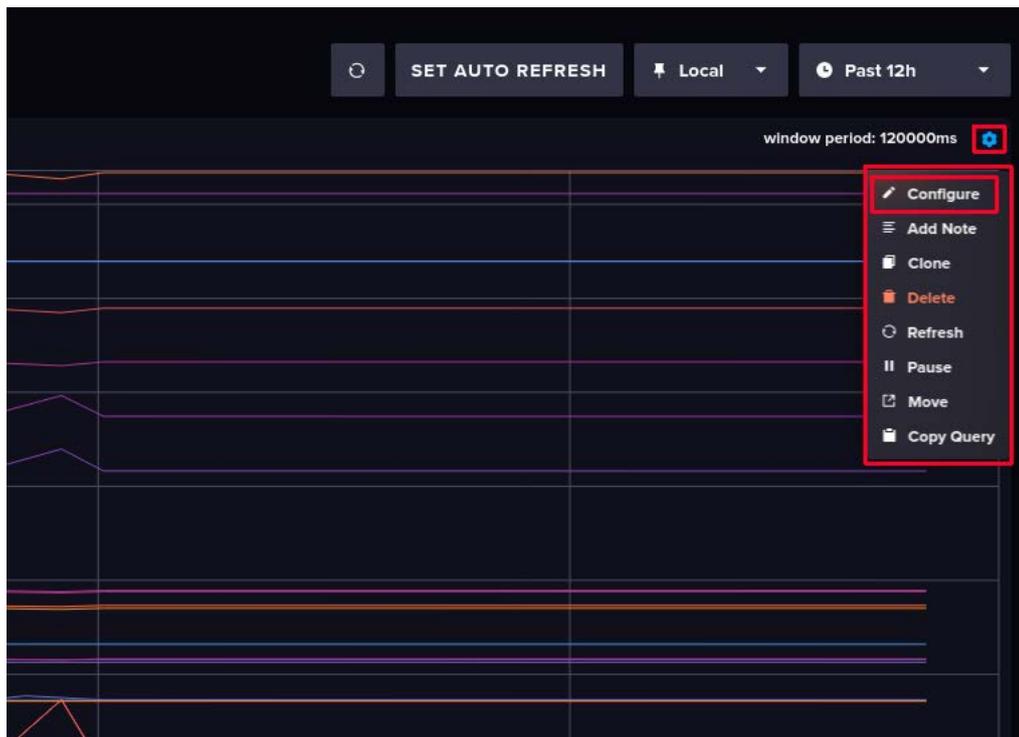


# 5 Data Export

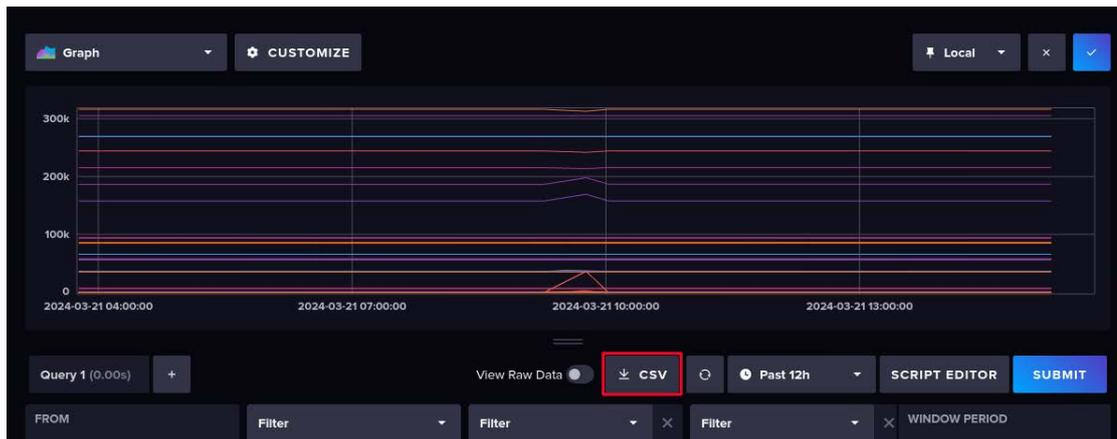
To export data in CSV format, go to the dashboard of your choice:



The graphs you see are just cells. Click on the graph you want to export data from, then click on “Configure”:



Now you can export the CSV data by clicking on the “CSV” button:



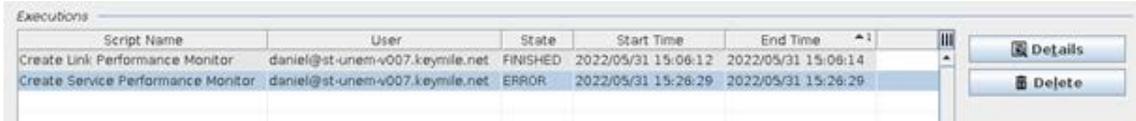
Then select an appropriate folder and file name (or use the proposed name) and click on "Save".

## 6 Limitations

- Trying to create a dashboard for a port which is not part of any PM Job will result in an error. See requirements.

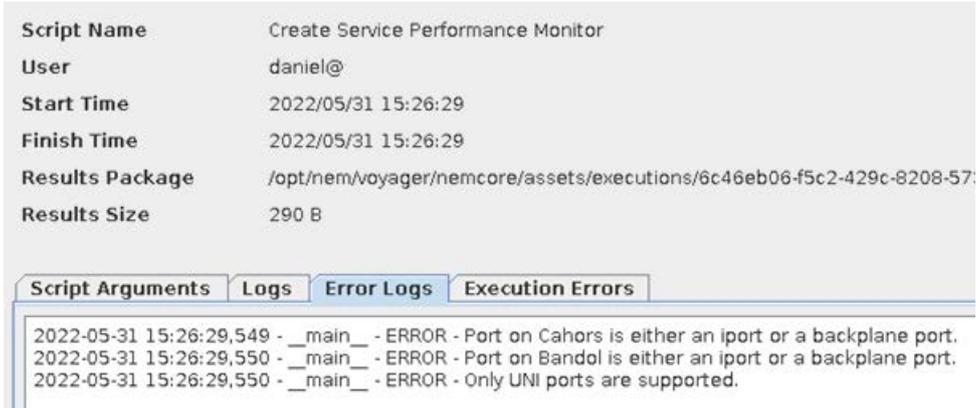
# 7 Troubleshooting

Check Remote Executor for progress, warnings and error messages. Select an execution and click on details:



| Script Name                        | User                            | State    | Start Time          | End Time            |
|------------------------------------|---------------------------------|----------|---------------------|---------------------|
| Create Link Performance Monitor    | daniel@st-unem-v007.keymile.net | FINISHED | 2022/05/31 15:06:12 | 2022/05/31 15:08:14 |
| Create Service Performance Monitor | daniel@st-unem-v007.keymile.net | ERROR    | 2022/05/31 15:26:29 | 2022/05/31 15:26:29 |

A new window will pop up. Click 'Error Logs' tab view error messages.



**Script Name** Create Service Performance Monitor  
**User** daniel@  
**Start Time** 2022/05/31 15:26:29  
**Finish Time** 2022/05/31 15:26:29  
**Results Package** /opt/nem/voyager/nemcore/assets/executions/6c46eb06-f5c2-429c-8208-57:  
**Results Size** 290 B

**Script Arguments** | **Logs** | **Error Logs** | **Execution Errors**

```
2022-05-31 15:26:29,549 - __main__ - ERROR - Port on Cahors is either an iport or a backplane port.  
2022-05-31 15:26:29,550 - __main__ - ERROR - Port on Bandol is either an iport or a backplane port.  
2022-05-31 15:26:29,550 - __main__ - ERROR - Only UNI ports are supported.
```

# 8 Annex

## 8.1 Document History

**Table 1: Document History**

| Document ID | FOXMAN-UN Release | Rev | Date     | Changes since previous version  |
|-------------|-------------------|-----|----------|---|
| 1KHW029196  | R18               | A   | Jun 2025 | Updated and reworked for current system release.  |
| 1KHW029196  | R17A              | A   | Sep 2024 | Changed title in accordance with application name. Updated and reworked for current system release R17A.  |
| 1KHW029196  | R16B              | A   | Aug 2023 | Updated for current system release R16B. Removed paragraphs related to entering user name and password. This is not required anymore. Removed section related to changing the default password since a complex password is generated automatically. |
| 1KHW029196  | R16A              | A   | Dec 2022 | First version published for R16A.   |

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