NOKIA

NSP
Network Services Platform
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Telemetry Administrator Application Help

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Legal notice

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1 Telemetry Administrator

1.1 What is Telemetry Administrator?

1.1.1

The Telemetry Administrator application is used to manage YANG-based telemetry.

Statistics definition and mapping files are included with installation of the NFM-P, or, if MDM is in use, with the NE adaptor suite.

1.1.2 Telemetry Administrator Application Help scope

The application help discusses managing subscriptions and working with existing aggregation rules in the Telemetry Administrator application.

For detailed information about the following topics, see the adaptor documentation on the Nokia Developer Portal (https://nsp.developer.nokia.com/learn/):

- Configuring YANG aggregation rules
- Configuring stats definition files
- Configuring device mapping files

For detailed information about the following topics, see the tutorial information on the Nokia Developer Portal (https://nsp.developer.nokia.com/learn/)

- Using telemetry APIs
- Managing notifications in Kafka

1.2 What is a subscription?

A subscription represents a request for statistics information management.

When you configure a subscription, you specify a set of statistics data and notification and storage options for the data. To configure the data set, you select the type of statistics you are interested in, the frequency of collection, and filtering by NE and counters as needed.

For an NE that is managed using MDM, when the subscription is created the MDM will initiate collection of the Telemetry data from the NE at the specified interval.

For an NE that is managed using the NFM-P, creating a subscription will tell the NFM-P to publish any stats that match the requirements to Kafka as they are collected. The collection of the stats and storage in the database should be previously configured in the NFM-P. The interval specified in the subscription request is ignored.

If you enable database storage:

- For MDM managed NEs, the data collected will be stored in Postgres, unless there is an auxiliary database enabled, in which case all collected data will go in the auxiliary database.
- For NFM-P managed NEs, the database parameter in the subscription is ignored.

Note: For statistics to be available to the Analytics application for aggregated reports, they must be stored in the auxiliary database.

1.3 How do I set up telemetry data collection?

Here are the prerequisites for telemetry data collection using Telemetry Administrator:

- The NEs from which you want to collect data must be discovered, managed and reachable by the NSP.
- If you want to use a subscription to manage data from NEs managed by NFM-P, statistics collection must be configured in the NFM-P
- Mapping and definition files must be available on the NSP server; see the adaptor documentation
- If you want to use statistics for Analytics reports with granulation other than raw data, you will need aggregation rules for the telemetry types you want to collect; see the adaptor documentation
- You need to configure the aggregation time zone.

To start collection of data, create a subscription and set its state to enabled.

1.4 How do I create a subscription?

1

Choose **Subscriptions** from the drop-down at the top left of the screen.

2

In the Subscriptions view, click **Create Subscription** .

3

In the window that opens, enter information in the Telemetry Type field. As you type, the field will filter for available telemetry types to match your input.

Choose the telemetry type you need from the list of matches.

4

Enter a name for the subscription, and a description if needed.

5

Choose **enabled** in the **State** field if you want your subscription to start running right away.

6

In the **Site Filter** field, enter filtering information as needed to filter the collected data by NE. A filter is composed of expressions. An expression is an attribute, an operator and a value. Expressions can be combined using boolean terms. Click **Filter Syntax Help** for details.

For example, **`neId = "<any ID>" and neType = SR-7750`** will collect data on any 7750 SR.

7

Click **Select Counters** to enable notifications and notification counters for specific counters.

8

Click **Create**.

The subscription will begin collection when it is enabled.

END OF STEPS

1.5 How do I edit or delete a subscription?

1

Choose **Subscriptions** from the drop-down at the top left of the screen.

2

In the Subscriptions view, choose a subscription.

To edit the subscription

3

Click **Edit** .

4

In the form that opens, update the parameters as needed and click **Update**.

To delete the subscription

5

Click **Delete** . The subscription is removed immediately.

END OF STEPS

1.6 What is aggregation ?

Aggregation is the practice of combining measurements for analysis. In the NSP, telemetry data is aggregated based on time period of collection: hourly, daily, weekly, or monthly. When a report is run in the Analytics application, the granularity parameter in the report determines which aggregated data set will be analyzed. For example, if you select hourly granularity the report will look at the hourly aggregated data. Some reports can use raw data, that is, data that is not aggregated, but this is not available for all reports.

An aggregation rule defines how the data for a specified telemetry type is aggregated, and how long each aggregated data set is retained. Aggregation rules for data collected by the NFM-P are configured in the NFM-P; see the *NSP Analytics Report Catalog*.

Aggregation rules for model-driven telemetry are configured on the NSP server; see the *NSP System Administrator Guide* for details. They can be viewed and edited in the Telemetry Administrator application.

1.6.1 What is the aggregation time zone?

The aggregation time zone is the time zone that will be used to determine the start and end time of data to be aggregated:

- Hourly aggregation: from xx:00 to xy:00
- Daily aggregation: from midnight to midnight
- Weekly aggregation: from midnight Monday to midnight Monday
- Monthly: from midnight on the 1st of the month until midnight on the first of the following month

1.7 How do I set the aggregation time zone?

Important! Changing the aggregation time zone will change the start and end times of all future aggregations. The first aggregation following the change may miss data or count data twice due to the difference in time zones.

1

From any view in the Telemetry Administrator application, click **More** ⋮ , **Settings**.

2

In the form that opens, enter a time zone in the **Aggregation Time Zone** field. You can enter the name of the time zone or the GMT offset, for example, GMT-5:00.

As you type, the list of available time zones is refined to match your input.

3

Choose the time zone from the list.

4

Click **Save**.

END OF STEPS

1.8 How do I view or edit aggregation information?

You can view configured aggregation information in the Aggregation view, or retention configuration for aggregated data in the Age-Out Policy view. Aggregation rules can be edited from either view.

To view aggregation information

1

Choose **Aggregation** from the drop-down at the top left of the screen. The Aggregation view displays the aggregation rules and their parameters.

2

Filter the view as needed by typing in the fields at the top of the page.

To view retention information

3

Choose **Age-Out Policy** from the drop-down at the top left of the screen. The Age-Out Policy view displays the retention policies configured for each aggregation rule.

The Name column shows the name of the retention policy, in the format *rule_name_period*, for example **`md-aggr:/md-aggr-base/telemetry-interfaces/interface_daily`**.

4

Filter the view as needed by typing in the fields at the top of the page.

To edit an aggregation rule

5

From the Aggregation or Age-Out Policy view, choose a row and click **Edit** .

6

In the form that opens, edit the parameters as needed and click **Update**.

END OF STEPS

1.9 Frequently asked questions

- **Can I use the same subscription for an NFM-P managed NE and an MDM managed NE?**
  Yes. Remember that for an NFM-P managed NE, the statistics you need must be collected by the NFM-P.
- **How do I find the NE data that maps to the attributes in a subscription filter?**
  For model-driven NEs, find the the NE in Discovered Nodes list in the Device Administrator application. NE ID, NE Type, and NE Version appear in the Summary column.
  For NEs managed using NFM-P, see the following parameters:
  - System ID corresponds to the neId attribute.
  - Product Name in the MIB Entry Policy corresponds to the neType attribute.
  - Software Version corresponds to the neVersion attribute.

Note that the neVersion attribute may be an abbreviated version of the version information that appears in the Device Administrator or NFM-P, for example, 16.0 R7 instead of TiMOS-B-16.0.R7.

- **My Analytics reports don’t look like I expect. How can I troubleshoot?**

  Here are some suggestions for troubleshooting in the Telemetry Administrator application:
  - Verify that subscriptions are in place for the telemetry types you need, and that database storage is enabled.
  - Verify that an aggregation rule is present for each telemetry type you are reporting.
  - Verify that the Report Time Zone for the Analytics browser matches the aggregation time zone. Note that if the aggregation time zone has been changed, aggregated data from before the change will still reflect the old time zone.
  - Check the aggregation rule to verify that the retention periods meet your requirements, and that there has been a successful collection for the time period you need.

    For example, if there has not yet been a successful daily aggregation, you can’t run a daily report yet.

2 Telemetry Administrator use cases

2.1 Setting up statistics and aggregation for Port Throughput on 7750 SR

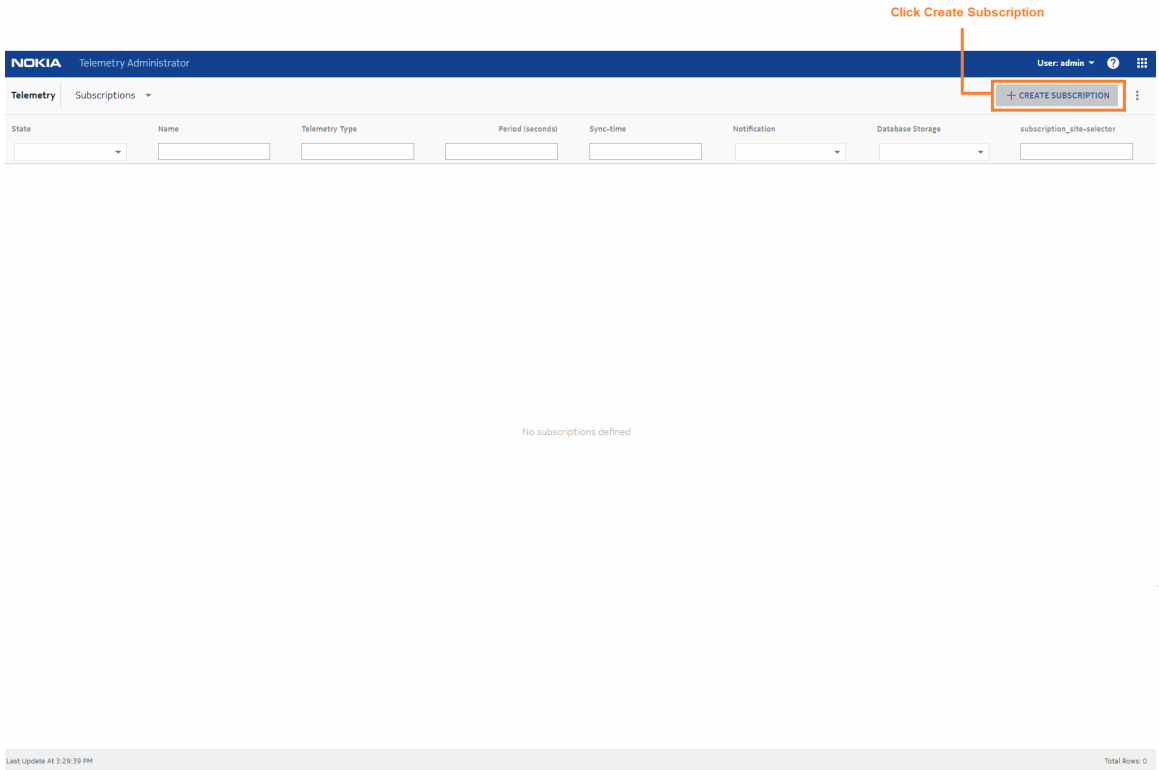
This article shows how to use the Telemetry Administrator application to set up the data collection and aggregation required to run a Port Throughput report in the Analytics application for 7750 SR NEs managed using MDM.

The following prerequisites have been completed:

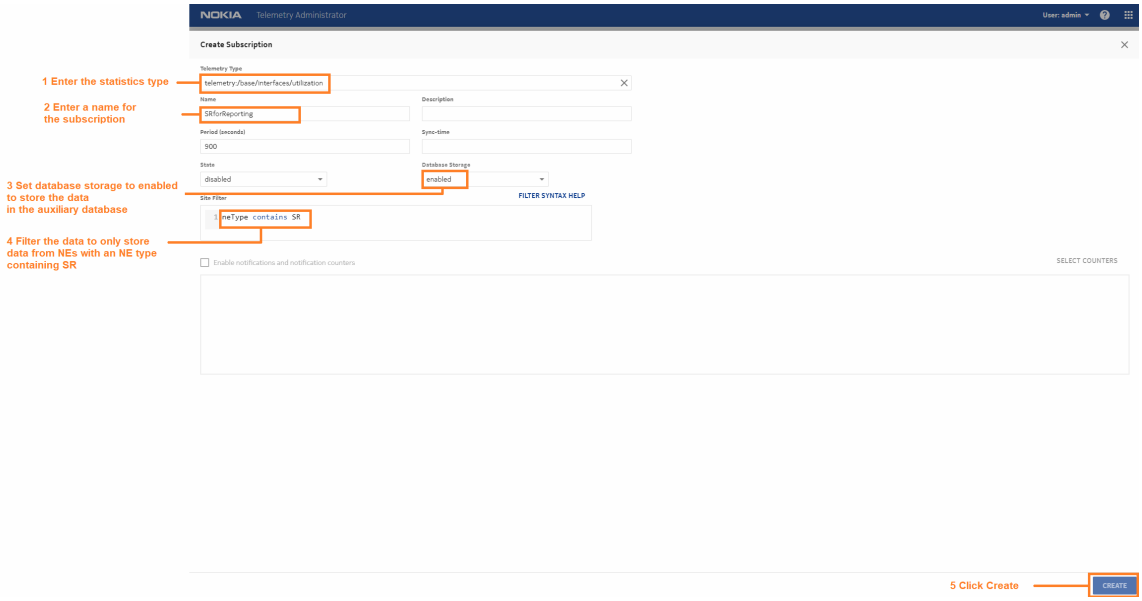
- At least one 7750 SR NE has been discovered in the network and is reachable.
- Aggregation rules have been deployed on the NSP server.

2.1.1 Let's go

From the Subscriptions view, we'll create a subscription.

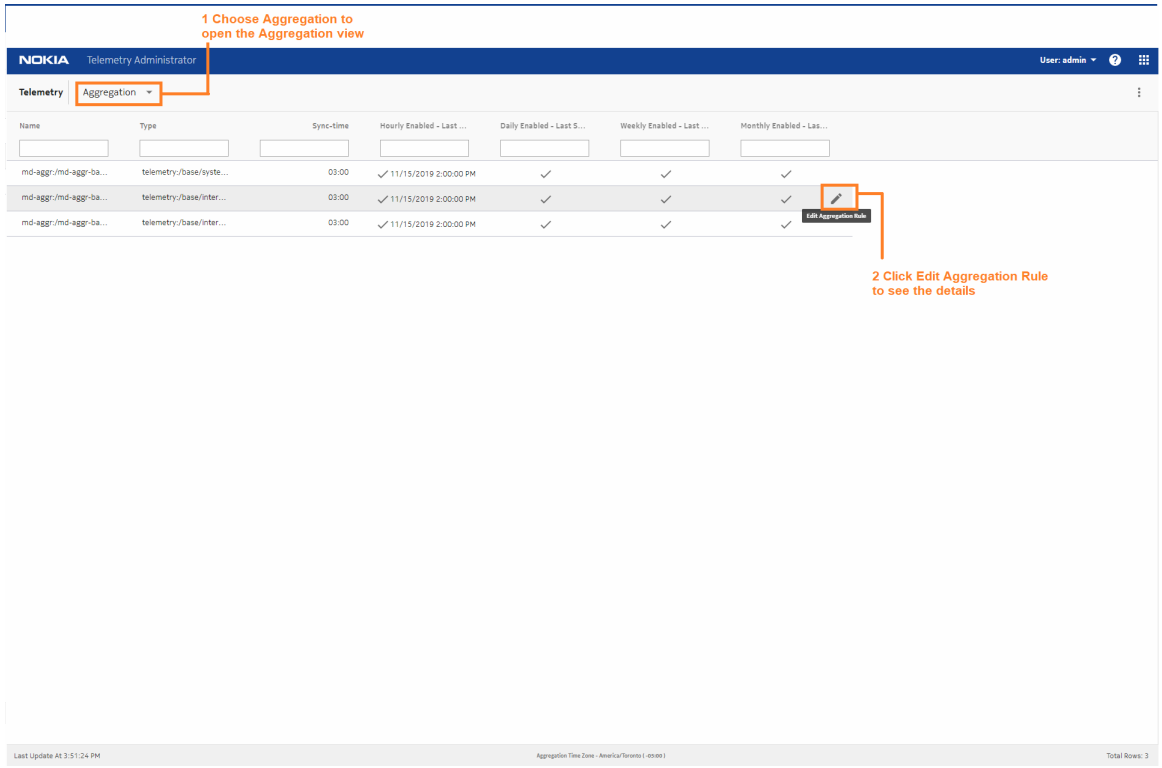


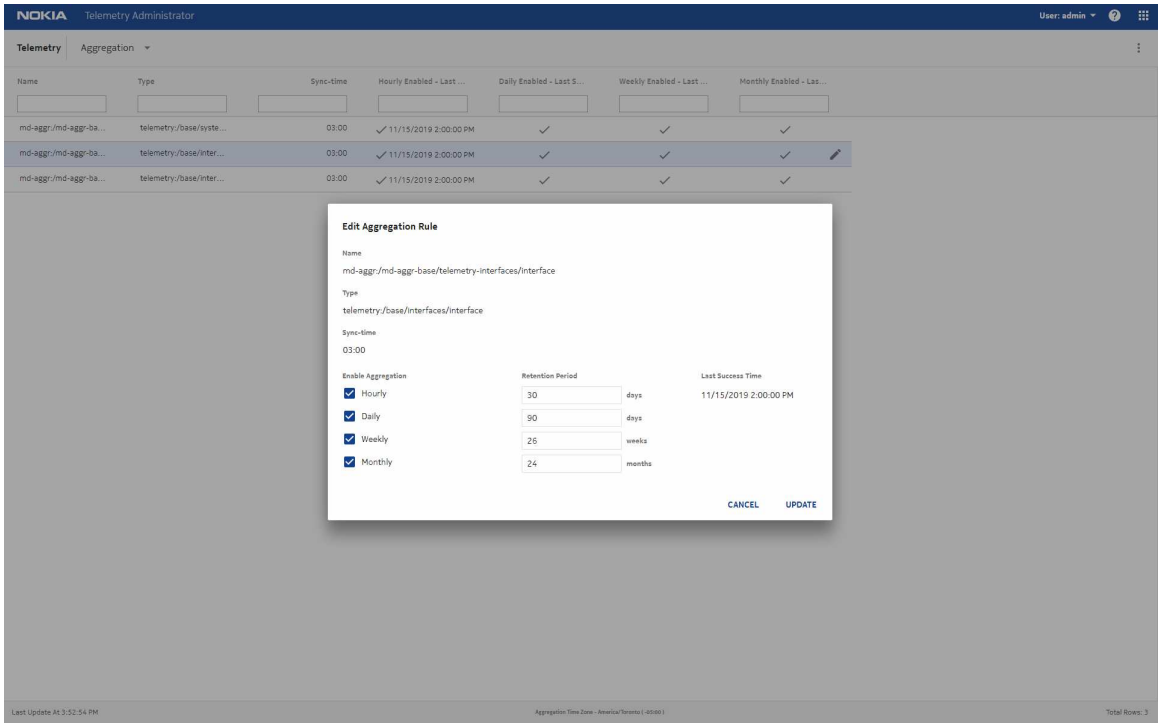
We need interface utilization statistics for 7750 SR NEs. Creating an NE type filter that contains SR will make sure we receive data whether the NE type says 7750 SR or 7750 SR-12.



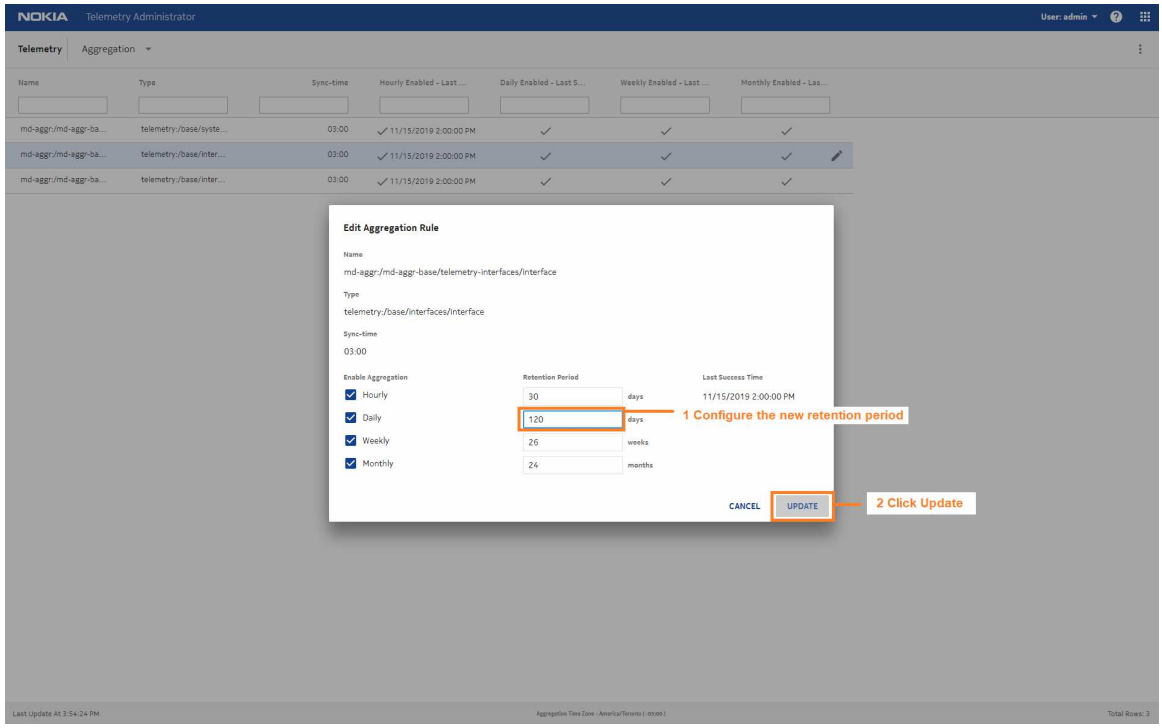
Let’s take a look at the aggregation rule for interface data. From the Aggregation view, choose the aggregation rule and click **Edit Aggregation** to bring up the details.

The **Retention Period** field shows how long aggregated data will be stored in the auxiliary database. The default retention period for daily aggregation is 90 days. That means that daily granularity will be available in Analytics for up to 90 days of data.

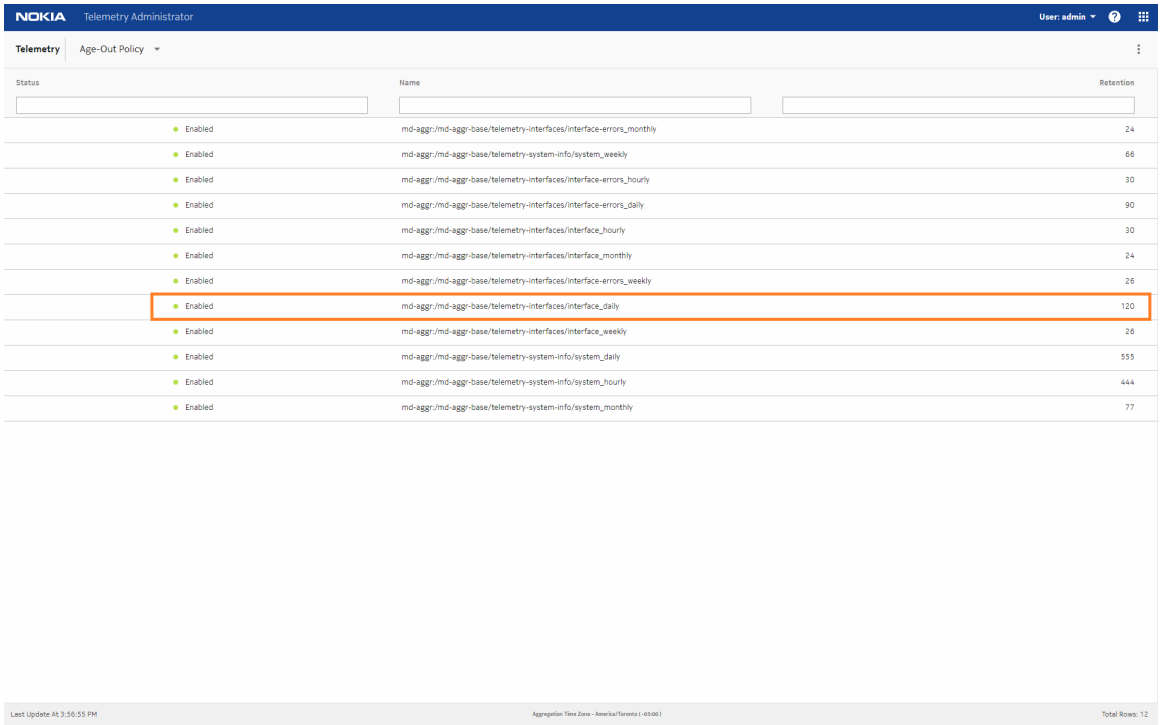

1 Choose Aggregation to open the Aggregation view
NOKIA
Telemetry Administrator
User: admin
Telemetry
Aggregation
Name
Type
Sync-time
Hourly Enabled - Last ...
Daily Enabled - Last S...
Weekly Enabled - Last ...
Monthly Enabled - Las...
md-aggr:/md-aggr-ba...
telemetry:/base/syste...
03:00
11/15/2019 2:00:00 PM
md-aggr:/md-aggr-ba...
telemetry:/base/inter...
03:00
11/15/2019 2:00:00 PM
md-aggr:/md-aggr-ba...
telemetry:/base/inter...
03:00
11/15/2019 2:00:00 PM
Edit Aggregation Rule
2 Click Edit Aggregation Rule to see the details
Last Update At 3:51:24 PM
Total Rows: 3



Changing the retention period to 120 days will make daily granularity available for a longer time. Change the retention time and click **Update**.



Switching to the Age-Out Policy view shows the updated retention.



2.1.2 We’re done

We have set up a subscription for interface utilization data, and aggregation is deployed. When data has been successfully collected and aggregated, we’ll be able to run a Port Throughput Summary (NSP) report in the Analytics application.