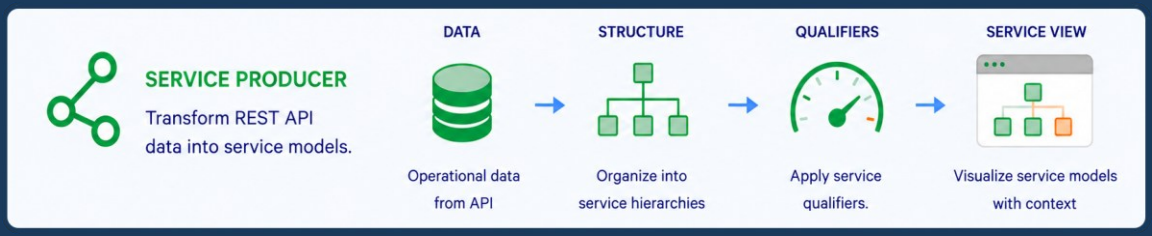
CEEVIEW

REST Monitor Learning Series

Tutorial 3

Creating Operational Service Models with Service Producers

Building Live Ceeview Service Models from REST API Data



Version 2.19 · DataIntegration Package

This tutorial is Tutorial 3 in the REST Monitor Learning Series and assumes Tutorial 1 — Health Producer and Tutorial 2 — Metric Producer have been completed.

In this tutorial, you'll extend the Nordic Retail Example REST Monitor by adding Service Producers that create live Ceeview service models from REST API data.

1. Starting Point from Tutorials 1 and 2

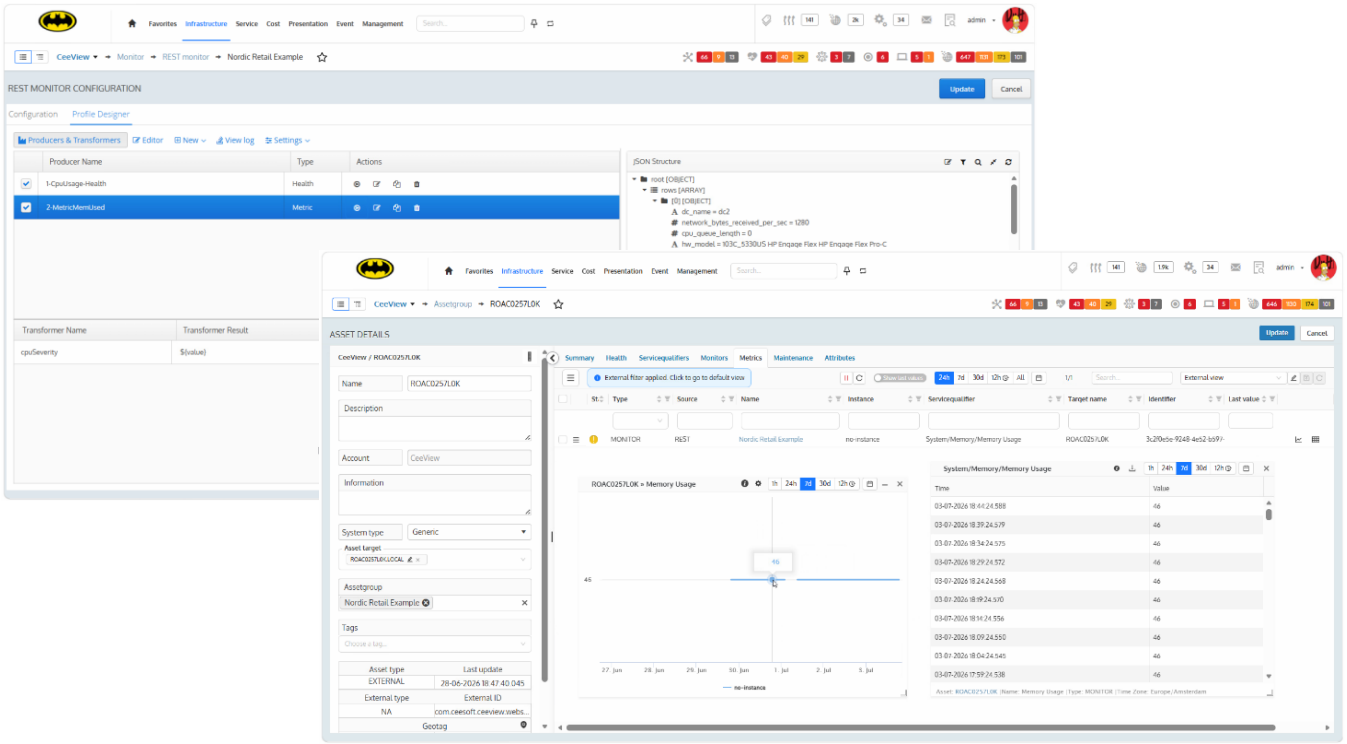
Before beginning this tutorial, your environment should match the completed configuration from **Tutorial 1 — Creating a Multi-Asset Health Producer** and **Tutorial 2 — Creating a Time-Series Metric Producer**.

You should already have:

✓ REST Monitor: **Nordic Retail Example**
✓ Health Producer: **1-CpuUsage-Health**
✓ Metric Producer: **2-MetricMemUsed**
✓ Transformer: **cpuSeverity**
✓ Editor function: **stripWorkgroup ()**
✓ Asset Group: **Nordic Retail Example** with eleven Health Assets
✓ Memory Usage Metrics associated with the same Health Assets

Experienced Ceeview users: If you're already familiar with REST Monitor configuration, you may begin with this tutorial directly. Otherwise, refer to Tutorial 1 for the initial REST Monitor setup.

The first screenshot confirms that the Nordic Retail Example REST Monitor now contains both the Health Producer from Tutorial 1 and the Metric Producer from Tutorial 2. The second screenshot confirms that metric history is available for one of the Health Assets created earlier.



What You'll Add: This tutorial adds Service Producers to the existing Nordic Retail Example REST Monitor. When complete, the Health Producer will continue creating Health Assets, the Metric Producer will continue recording time-series Metrics, and the new Service Producers will create live Ceeview service models from the same REST API data.

2. From JSON Payloads to Operational Service Models

REST APIs often return more than individual values. They also expose fields that describe how an environment is organized—such as locations, devices, operational resources, and the operational status used to qualify those resources.

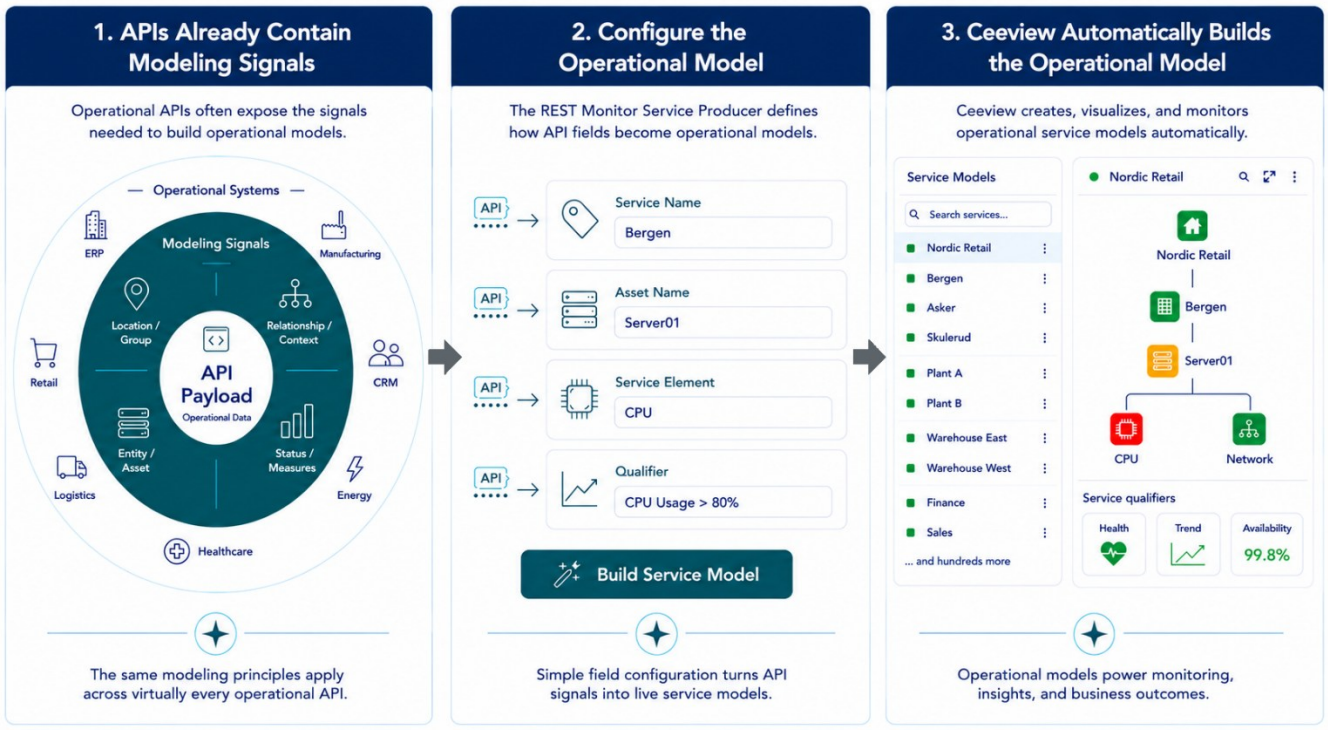


Figure 1 · Service Producers transform API modeling signals into live, monitorable service models in Ceeview.

In this tutorial, you'll use the Nordic Retail REST API to build a service model that organizes locations, server devices, service elements, and service qualifiers:

Nordic Retail → Bergen / Asker / Skullerud → Server devices → CPU / Network → Service Qualifiers

This model becomes visible in Ceeview's Service section and can be monitored, qualified, and used for dashboards, reports, alerts, and operational visibility.

3. Extending the REST Monitor with Service Producers

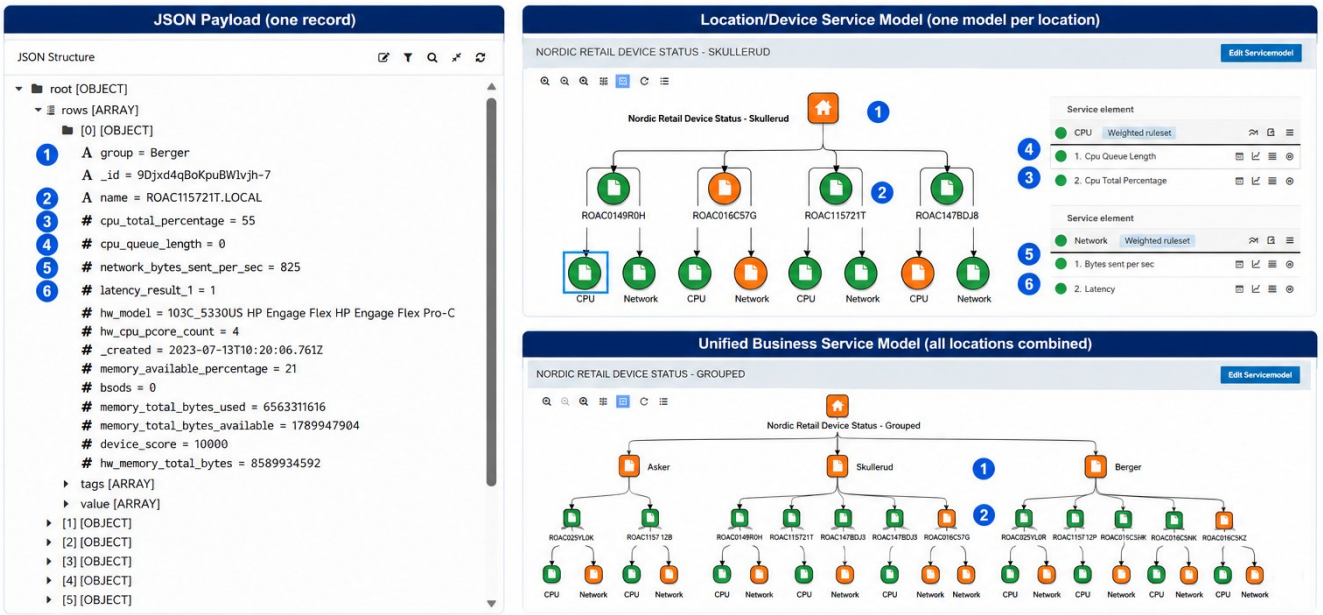
Now that the REST Monitor contains the Health and Metric Producers from the previous tutorials, this section introduces Service Producers, which automatically transform operational JSON data into native Ceeview Service Models.

The illustration below provides a blueprint for the service models you'll build throughout this tutorial. Starting with a single REST API response, the Service Producers organize devices into operational hierarchies, attach CPU and Network monitoring to each device, and ultimately combine multiple location-based service models into a unified business service.

The Service Producers created throughout this tutorial progressively extend the Nordic Retail operational model:

- **Service Producer 1** — Create location/device Service Models with CPU observability.
- **Service Producer 2** — Extend the location/device Service Models with Network observability.
- **Service Producer 3** — Build a unified Nordic Retail business service that combines the individual location/device Service Models.

Each Service Producer builds upon the previous one, demonstrating how REST Monitor progressively transforms operational API data into rich, hierarchical Ceeview Services.



	JSON Field		Operational Meaning
1	group		Retail location / region (e.g., Berger, Asker, Skullerud). Used to create location services.
2	name		Server device name. Used to create device service elements under each location.
3	cpu_total_percentage		Current CPU utilization percentage. Used as a CPU service qualifier.
4	cpu_queue_length		Current CPU queue length. Used as a CPU queue service qualifier.
5	network_bytes_sent_per_sec		Network throughput (bytes sent per second). Used as a Network service qualifier.
6	latency_result_1		Network latency measurement. Used as a Network latency service qualifier.

The remainder of this chapter demonstrates how each part of this blueprint is created using the REST Monitor Service Producer.

3.1 Service Producer 1 – Create Location/Device Service Models with CPU Observability

Step 1: Create Service Producer

In the Profile Designer select New → Producer → Service.

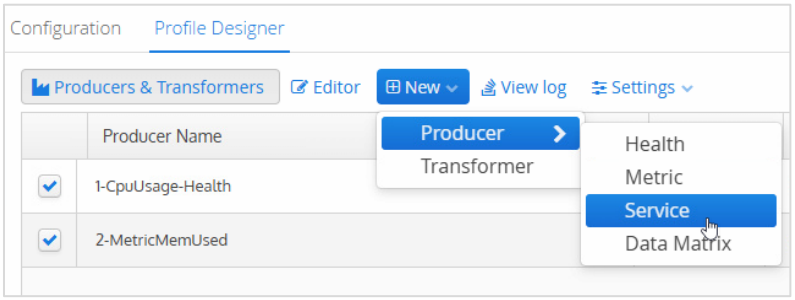


Figure 2 · Selecting New → Producer → Service from the menu.

Step 2: Configure General Properties

Complete the General Properties tab as shown below. The highlighted settings define how the Service Producer creates the service model structure, associates service elements with the Health Assets created in Tutorial 1, and prepares the model for service qualification. Fields that behave the same as in previous tutorials should be configured using the existing values.

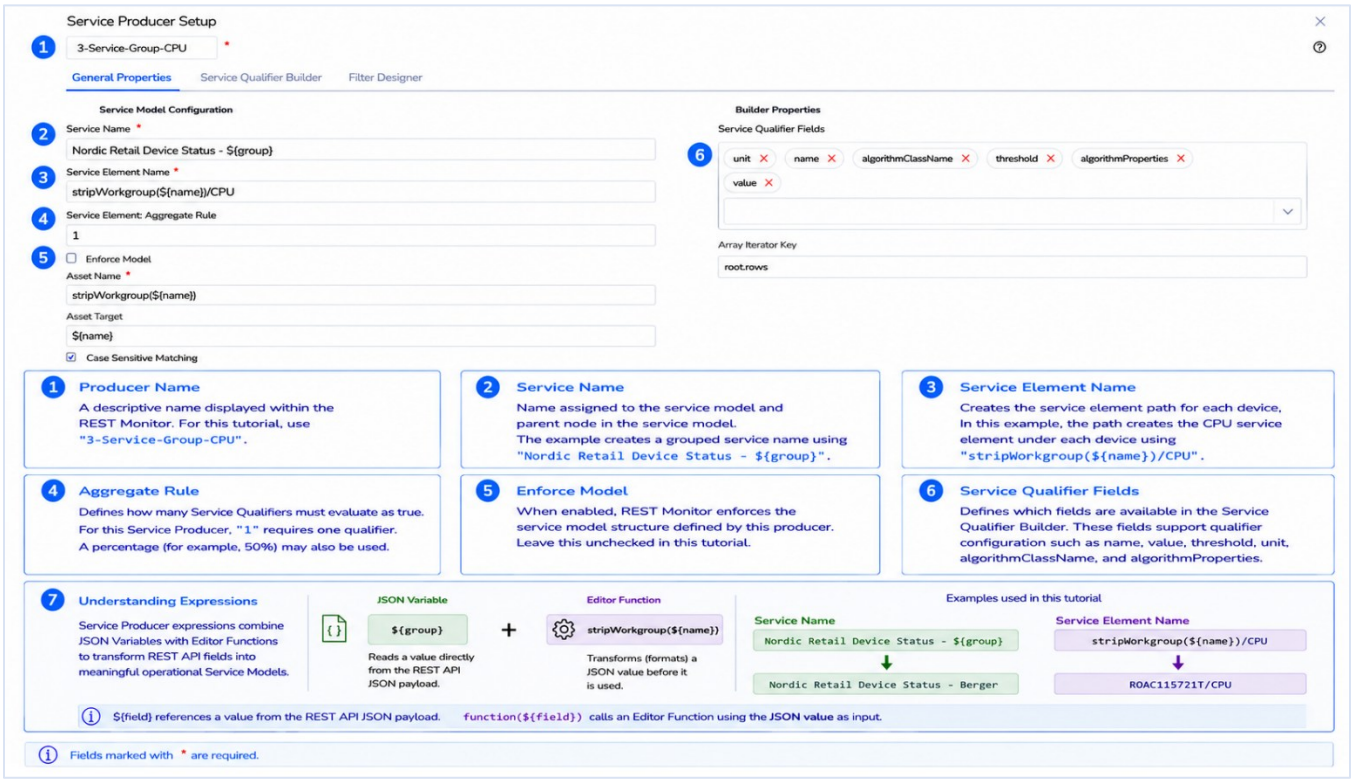
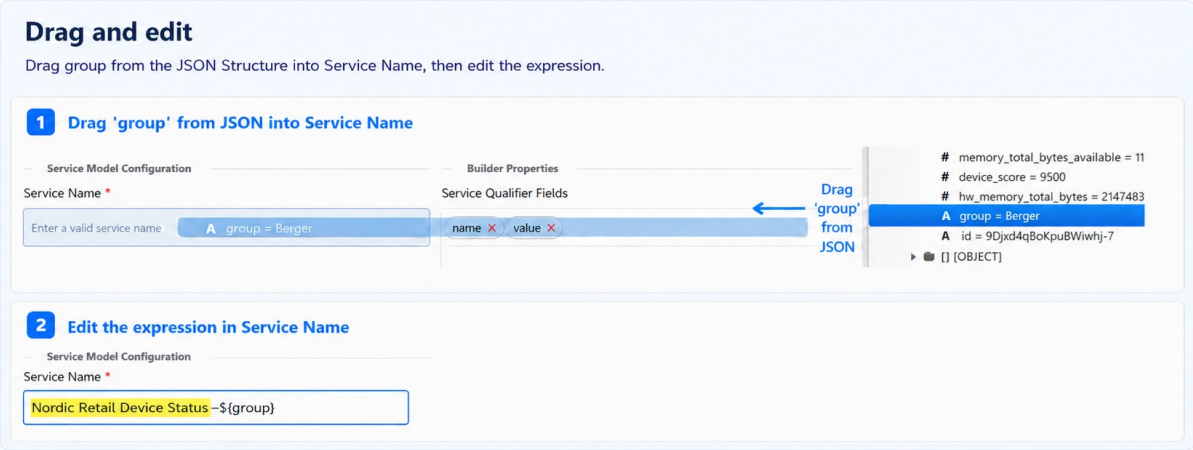


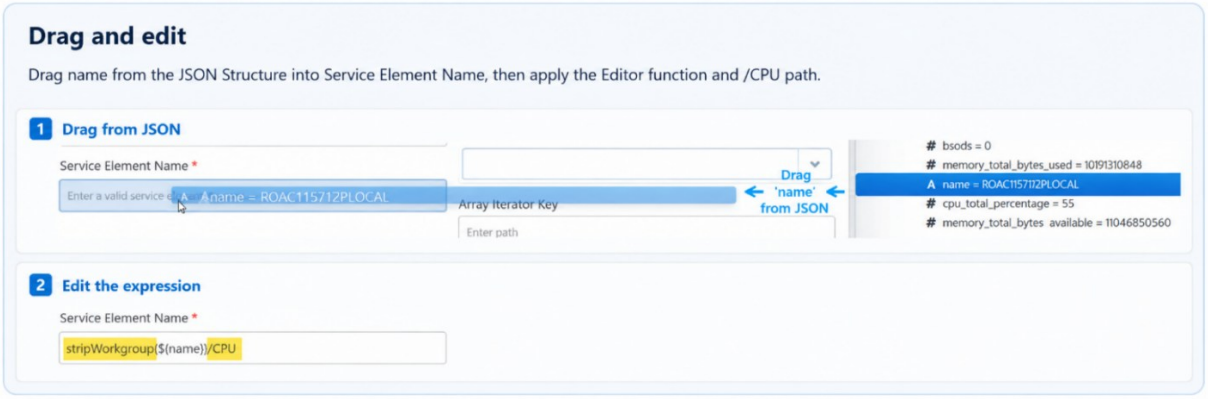
Figure 3 · Service Producer General Properties. Beyond configuring the producer, this page explains how JSON variables, expressions, and Service Qualifiers combine to transform REST API data into operational Service Models.

Use the following values when configuring the General Properties tab. The table below summarizes each setting, the value used throughout this tutorial, and the purpose of each configuration.

#	Configuration	Tutorial Value	Purpose
1	Producer Name	3-Service-Group-CPU	Display name shown within the REST Monitor.
2	Service Name	Nordic Retail Device Status - ${group}	Creates the parent service node for each location (for example, Nordic Retail Device Status – Bergen).



3	Service Element Name	stripWorkgroup(${name})/CPU	Creates a CPU service element beneath each device using the cleaned device name.



4	Service Element Aggregate Rule	1	Applies the default aggregation rule used to evaluate the service element.
5	Enforce Model	Unchecked	Leave disabled in this tutorial.
6	Service Qualifier Fields	unit, name, algorithmClassName, threshold, algorithmProperties, value	Makes these API fields available to the Service Qualifier Builder.

	The remaining General Properties fields are configured the same as in Tutorials 1 and 2 and continue on the next page.		
	Asset Name	stripWorkgroup(${name})	Uses the same naming logic as the Health Producer so service elements map to the correct Health Assets.
	Asset Target	${name}	Matches each generated service element to the corresponding Health Asset created in Tutorial 1.
	Case Sensitive Matching	Enabled	Compares asset names using case-sensitive matching.
	Array Iterator Key	root.rows	Iterates through each device returned by the REST API to create the service model.

Next, configure the Service Qualifier Builder to define how each generated CPU service element will be evaluated.

Step 3: Configure Service Qualifiers

In the Service Qualifier Builder tab, define the qualifier rows that will be attached to each generated CPU service element. In this tutorial, two qualifiers are created: **Cpu Usage** and **Cpu Queue Length**.

Each row defines the value to evaluate, the threshold to compare against, the unit of measure, the algorithm used, and any required algorithm properties.

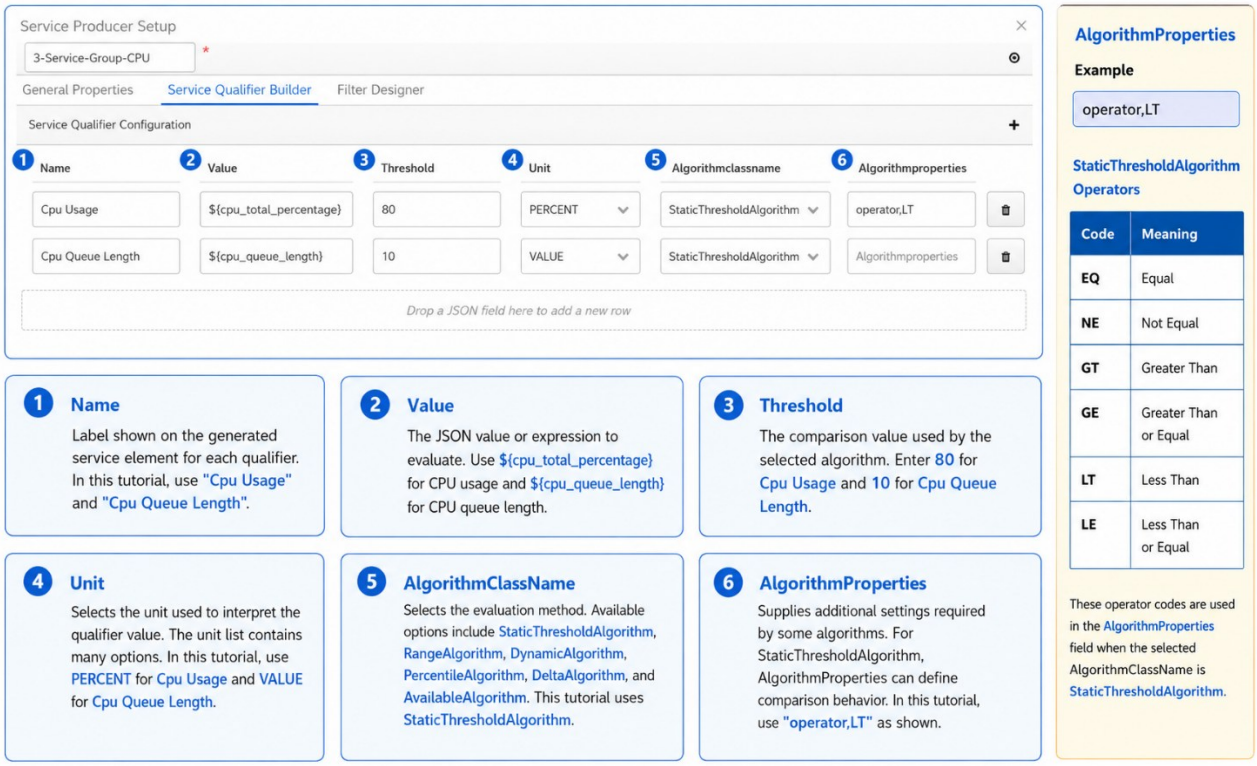


Figure 4 · Service Qualifier Builder configuration for CPU service elements.

Step 4: Test the Service Producer Configuration

Click Run for the Service Producer to execute the configuration using the current JSON response. This confirms that the Service Producer can generate the expected service model structure, CPU service elements, and service qualifiers.

Review the Output panel to confirm that service elements and service qualifiers are generated before saving the Producer.

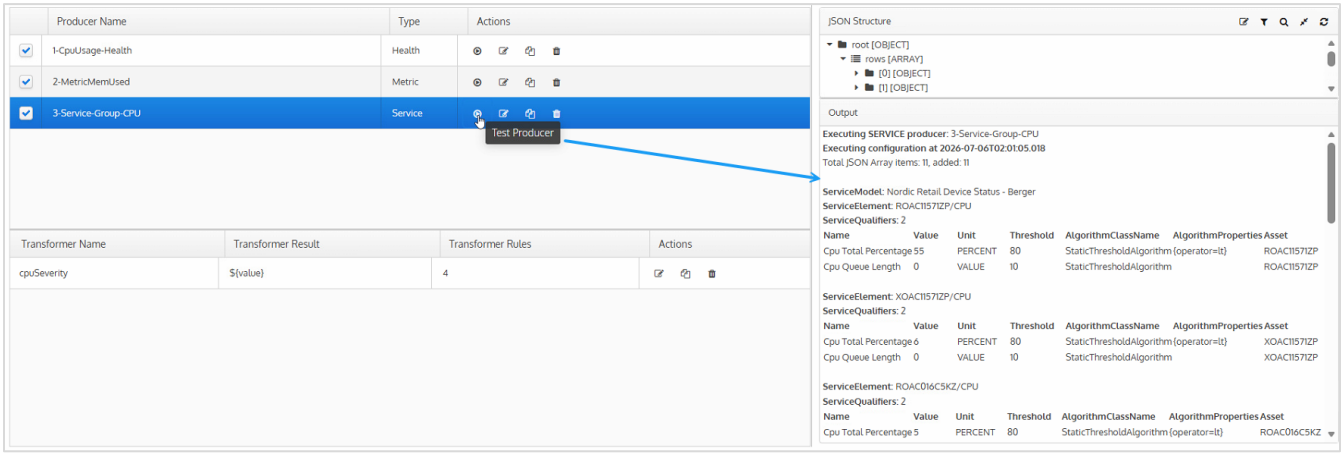


Figure 5 · Executing the Service Producer generates service elements and service qualifiers from the Nordic Retail REST API.

> **Note:** After verifying the Output panel, close the Service Producer window using the X in the upper-right corner. REST Monitor prompts you to save the Service Producer before returning to the Profile Designer.

Step 5: Update the REST Monitor

Click Update to save the REST Monitor configuration. The Service Producer is now part of the Nordic Retail Example REST Monitor and will execute each time the monitor runs.

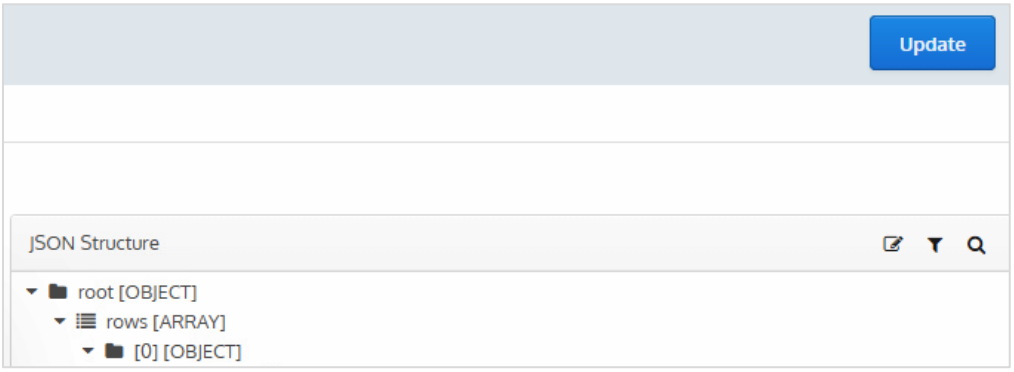


Figure 6 · Click Update to save the REST Monitor configuration and activate the new Service Producer.

Step 6: Verify the Generated Service Models

After the REST Monitor is updated, Ceeview creates service models from the Service Producer configuration. In this tutorial, the API group field creates one service model per Nordic Retail location: **Bergen**, **Asker**, and **Skullerud**.

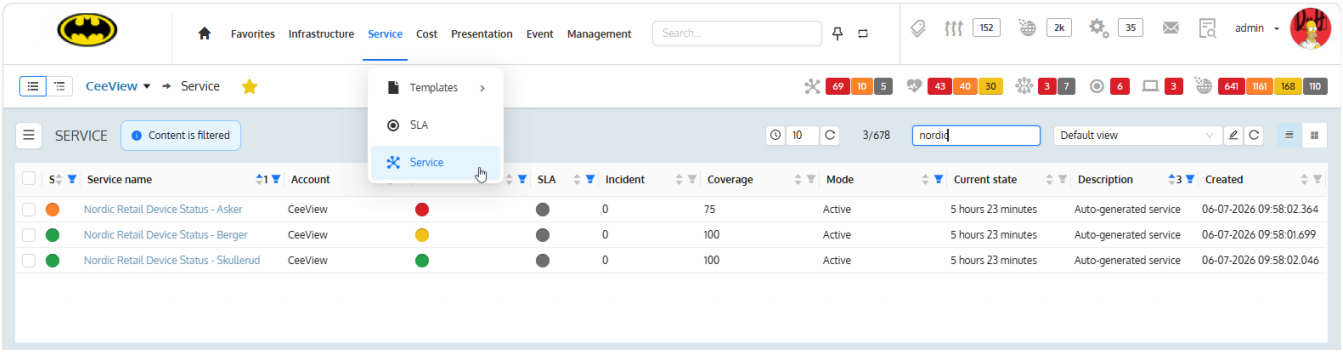
Each service model contains the devices returned by the API, with a CPU service element and CPU service qualifiers attached beneath each device.

Open the Service section

From the top navigation, select Service, then open the Service view. This displays the service models available in Ceeview.

If your environment contains many service models, use the search field to filter the list. Enter **nordic** to locate the service models created from the Nordic Retail REST API.

The list shows the three location-based service models created from the API group field: **Bergen**, **Asker**, and **Skullerud**. Their health indicators reflect the CPU service qualifier calculations configured in the previous step.

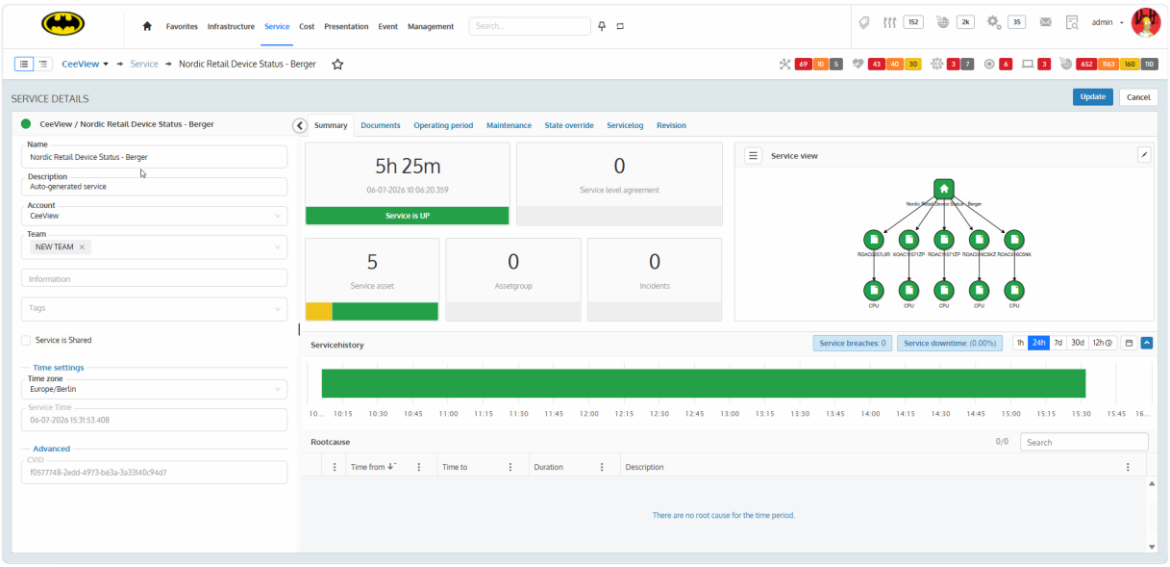


Review the Generated Service Model

Select **Nordic Retail Device Status – Bergen** from the filtered service model list to open its detail view.

The Service Details page provides an operational overview of the generated service model. Because the Service Producer creates a native Ceeview Service, the model can immediately leverage platform capabilities such as Service Level Agreements (SLAs), operating periods, maintenance schedules, team ownership, documentation, state overrides, incident management, and service history.

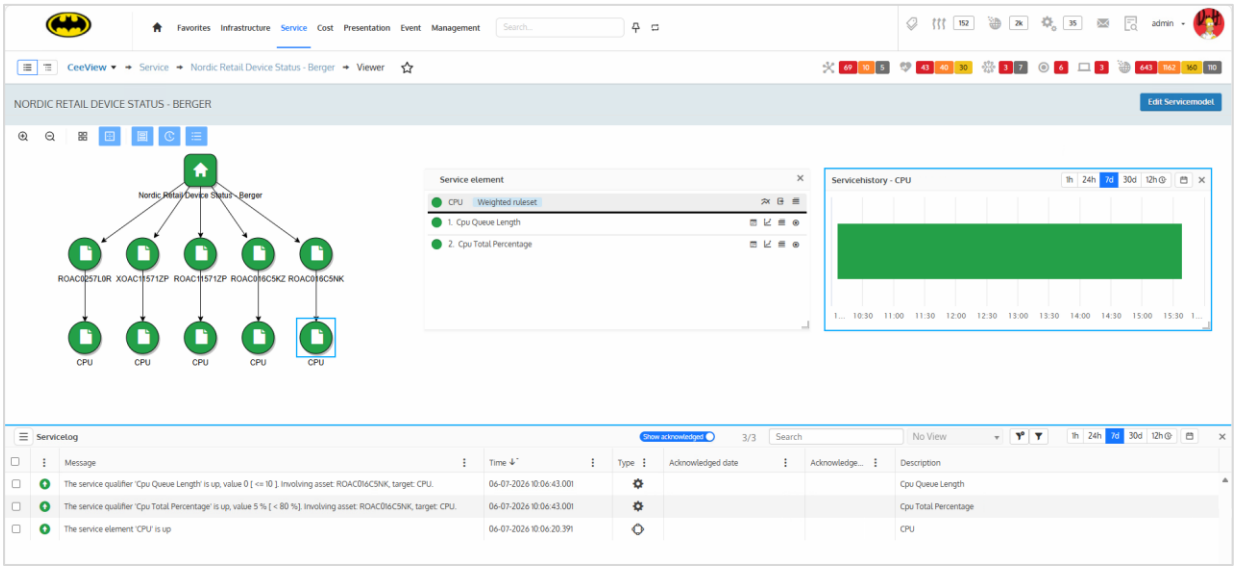
The Summary cards provide an at-a-glance view of the service, while the Service View panel displays the generated topology for the Bergen location. In the next step, you'll open this topology for a closer inspection of the generated service elements and service qualifiers.



Explore the Generated Service Topology

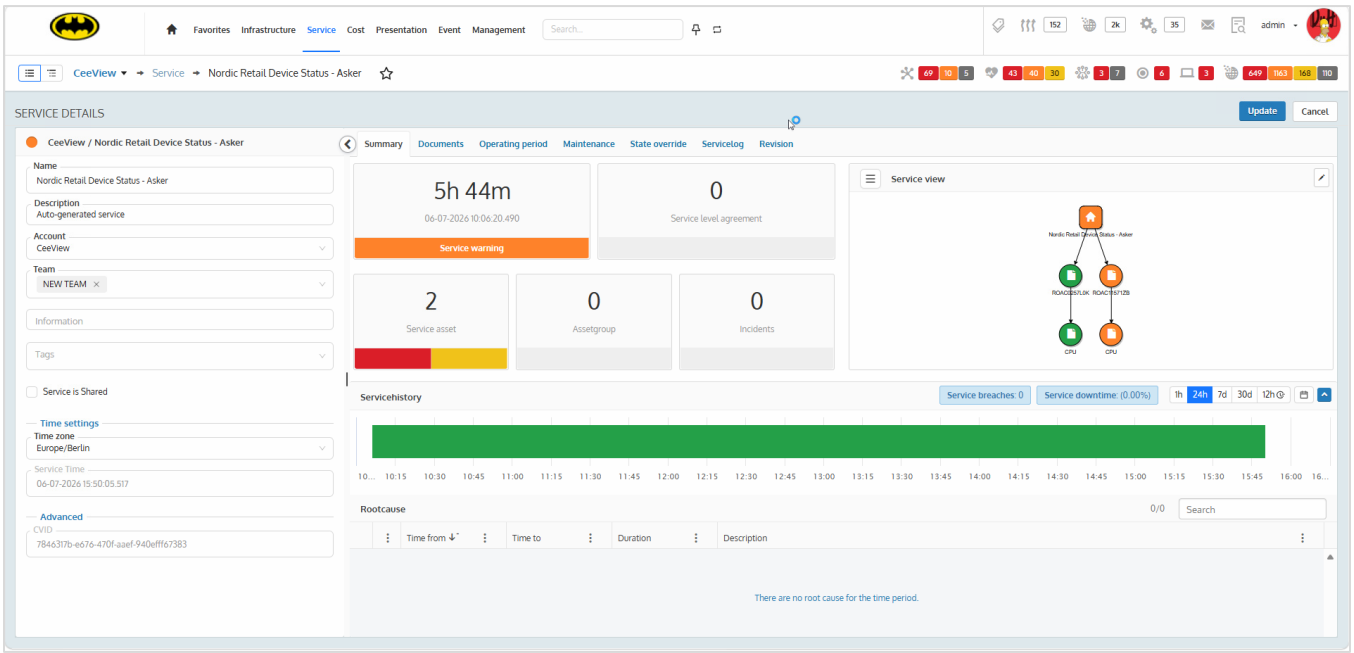
Select the **Service View** panel to open an enlarged interactive view of the generated Service.

The expanded topology provides a focused view of the hierarchy created by the Service Producer, making it easier to inspect the generated service elements and their current health. Selecting a **CPU** service element displays the configured service qualifiers, their current evaluation status, historical trends, and related service events.



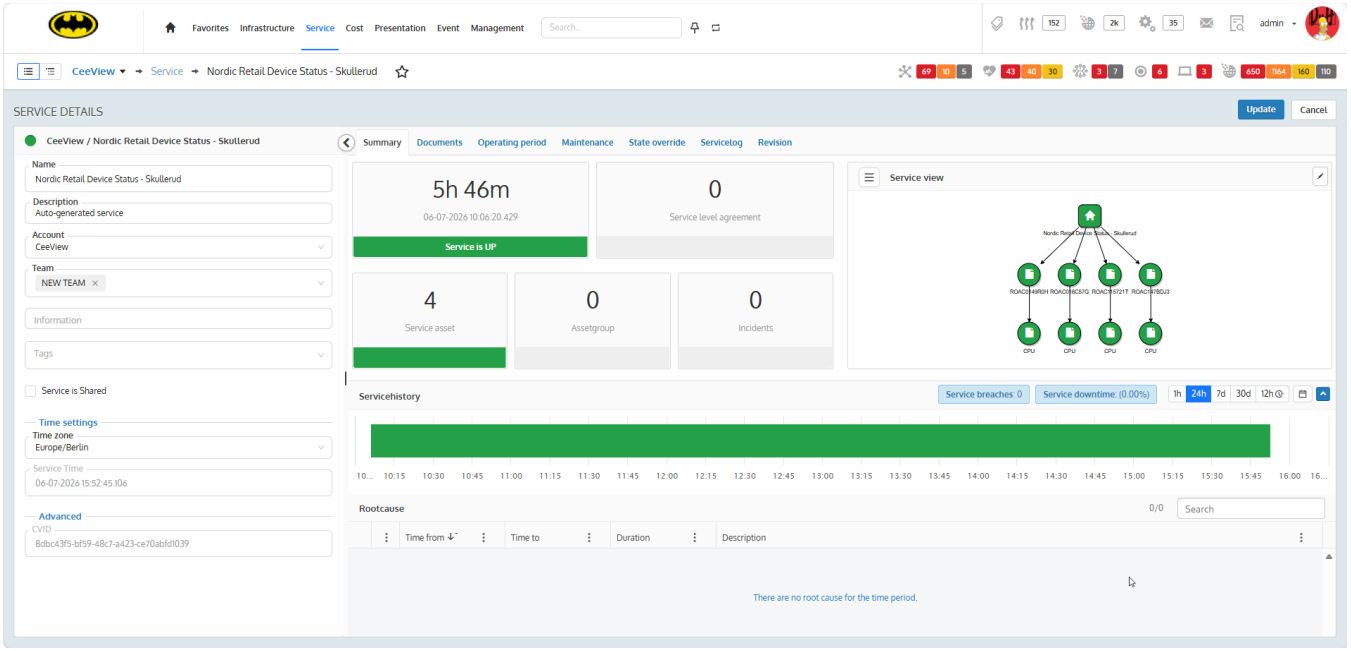
Verify the Asker Service Model

The Asker service model should display the same generated structure as Bergen, including the parent service, devices, CPU service elements, and service qualifiers.



Verify the Skullerud Service Model

Likewise, the **Skullerud** service model should contain the same generated hierarchy and CPU service qualifiers, confirming that the Service Producer created a consistent service model for every location returned by the REST API.



At this point, the REST Monitor is fully operational. Each execution interval retrieves the latest JSON data, maintains the generated Health Assets, records new CPU Metrics, refreshes the service models, and reevaluates the service qualifiers. Together, these producers continuously synchronize the Nordic Retail operational model with the latest REST API data.

Step 7: Confirm the Updated REST Monitor

Return to the Nordic Retail Example REST Monitor. The Profile Designer now contains the original Health Producer, the Metric Producer, and the new CPU-focused Service Producer.

The REST Monitor will execute these producers each time it runs, updating Health Assets, time-series Metrics, and the generated CPU service models from the same REST API response.

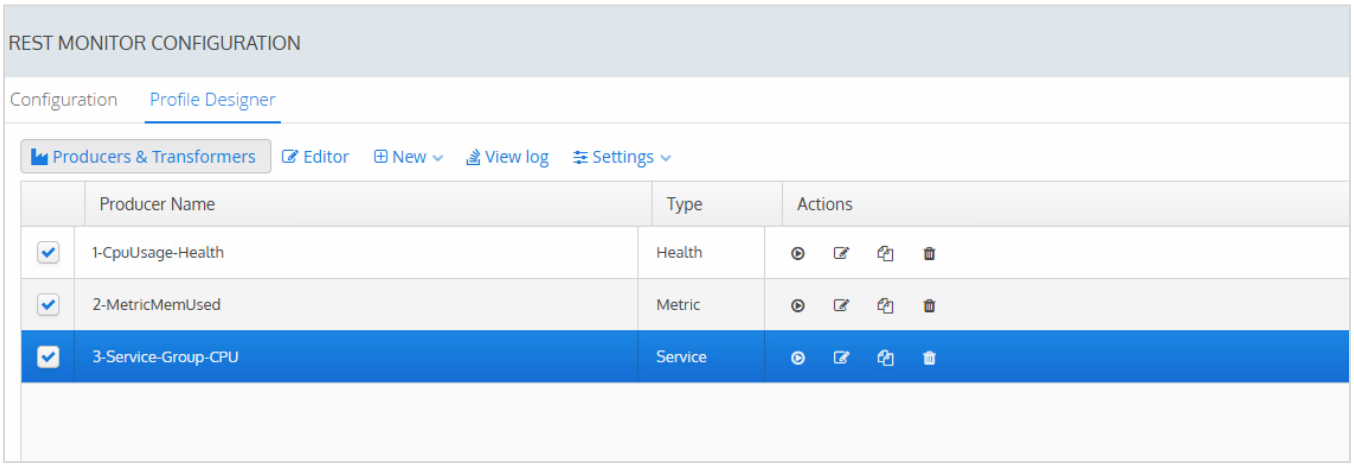


Figure 8 · Nordic Retail Example REST Monitor with Health, Metric, and Location/Device/CPU Service Producers configured.

3.2 Service Producer 2 – Extend Location/Device Service Models with Network Observability

The first Service Producer created three location/device Service models that monitor **CPU** utilization across the Nordic Retail environment.

This second Service Producer extends those existing Service models by adding **Network** service elements and service qualifiers beneath each device. Rather than creating new Service models, this producer enhances the existing hierarchy using the same REST API response.
This demonstrates how additional operational resources can be layered onto existing Service models without rebuilding them, allowing operational visibility to evolve incrementally as monitoring requirements grow.

Step 1: Create Service Producer

In the Profile Designer select New → Producer → Service.

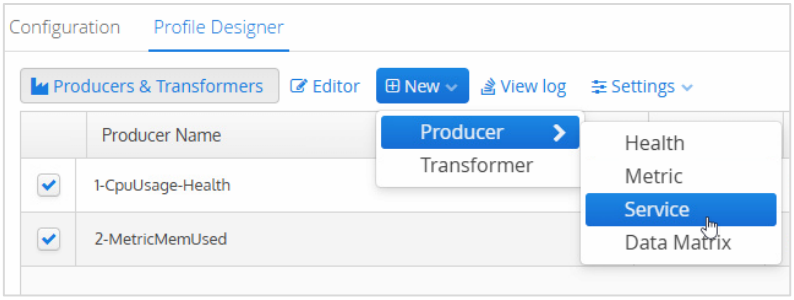
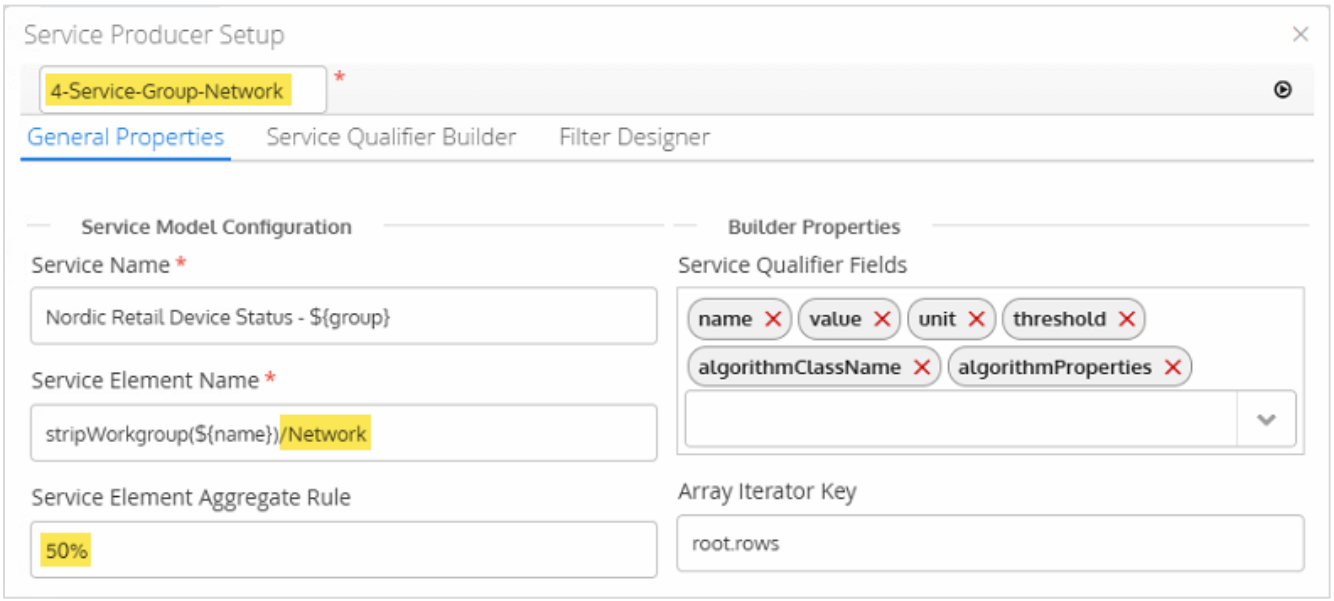


Figure 2 · Selecting New → Producer → Service from the menu.

Step 2: Configure General Properties

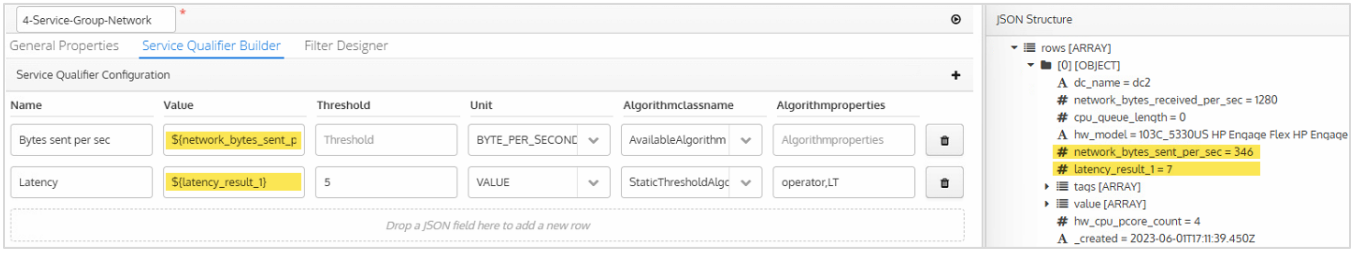
Most General Properties remain identical to **Service Producer 1**. Update the highlighted settings below to create **Network** service elements while retaining the existing location/device Service model structure.



Step 3: Configure Service Qualifiers

In the Service Qualifier Builder tab, define the qualifier rows that will be attached to each generated Network service element. Configure two Network service qualifiers that complement the existing CPU qualifiers created in Service Producer 1.

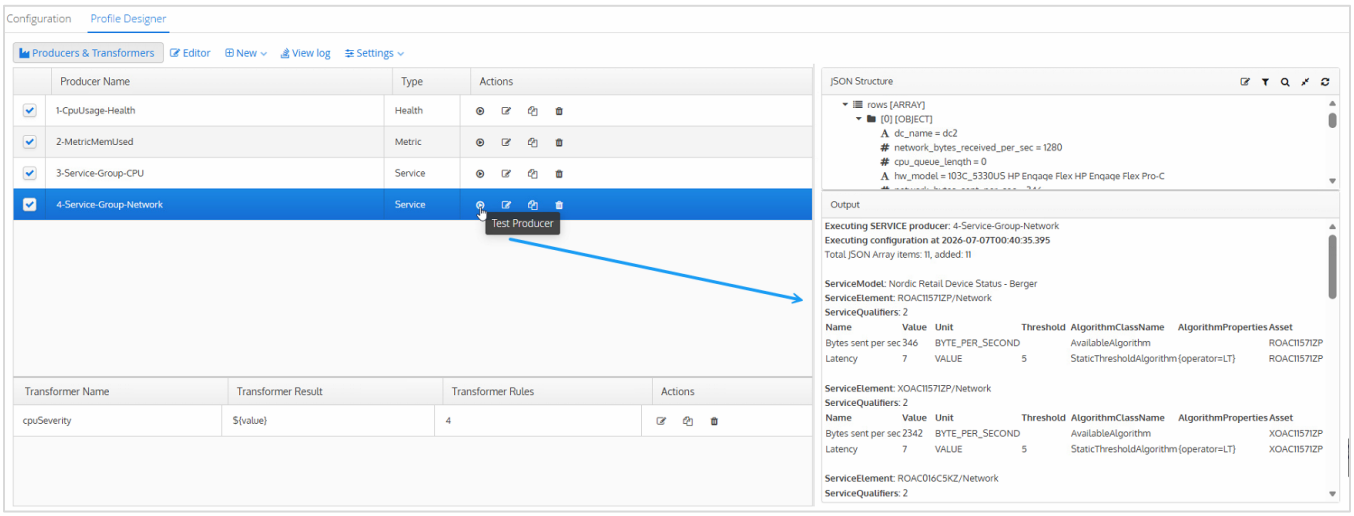
Each row defines the value to evaluate, the threshold to compare against, the unit of measure, the algorithm used, and any required algorithm properties.



Step 4: Test the Service Producer Configuration

Click Run for the Service Producer to execute the configuration using the current JSON response. This confirms that the Service Producer can generate the expected service model structure, Network service elements, and service qualifiers.

Review the Output panel to confirm that service elements and service qualifiers are generated before saving the Producer.



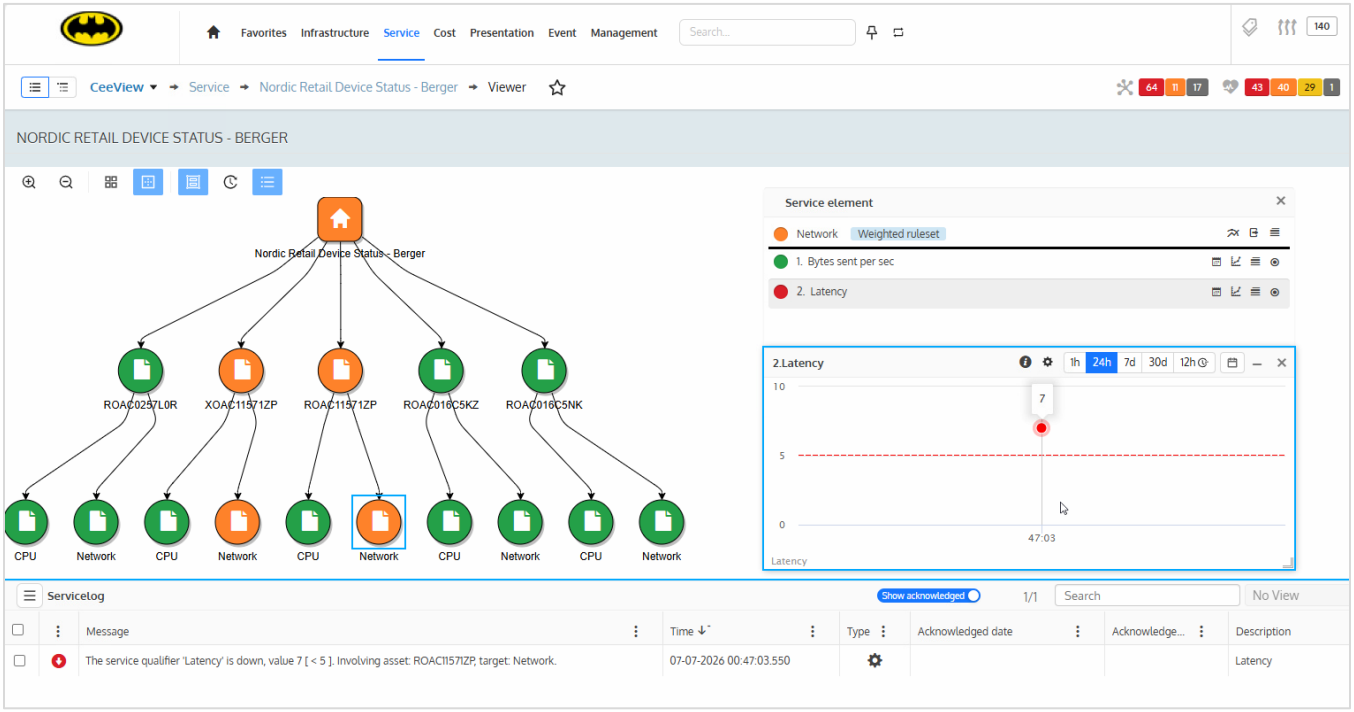
Step 5: Update the REST Monitor

Click Update to save the REST Monitor configuration. The Service Producer is now part of the Nordic Retail Example REST Monitor and will execute each time the monitor runs.

Step 6: Verify the Extended Service Models

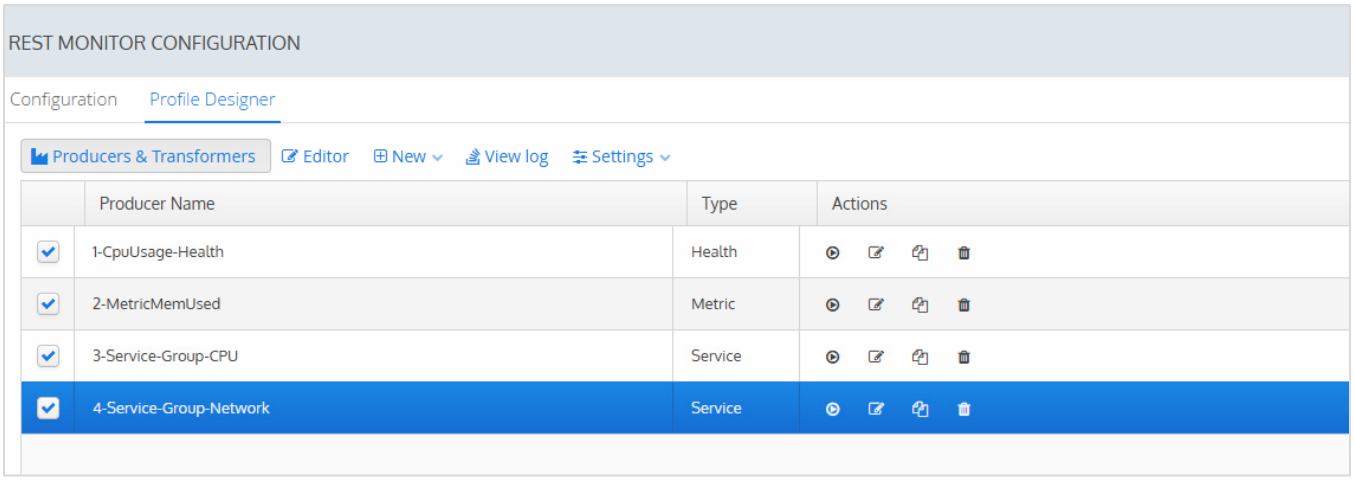
After the REST Monitor is updated, Ceeview creates service models from the Service Producer configuration. In this tutorial, the API group field creates one service model per Nordic Retail location: **Bergen**, **Asker**, and **Skullerud**.

Each location/device Service model now contains both **CPU** and **Network** service elements beneath every device. Together, these service elements provide complementary operational visibility while remaining part of the same generated Service model.



Step 7: Confirm the Updated REST Monitor

Return to the Nordic Retail Example REST Monitor. The Profile Designer now contains the original Health Producer, the Metric Producer, and the new Network-focused Service Producer. The REST Monitor now contains two Service Producers that work together to generate and maintain the same location/device Service models with both CPU and Network observability.



3.3 Service Producer 3 – Build a Unified Nordic Retail business Service

Unlike the previous Service Producers, this section creates a new business-level Service hierarchy. Two additional Service Producers are configured—one for CPU observability and one for Network observability—to generate a single unified Service model representing the entire Nordic Retail environment.

Because CPU and Network service elements require independent Service Producers, two additional Producers are configured using the same techniques introduced earlier in this tutorial. Only the Service Name and Service Element Name expressions change to create a unified business hierarchy instead of independent location-based models.

Step 1: Create Service Producer

In the Profile Designer select New → Producer → Service.

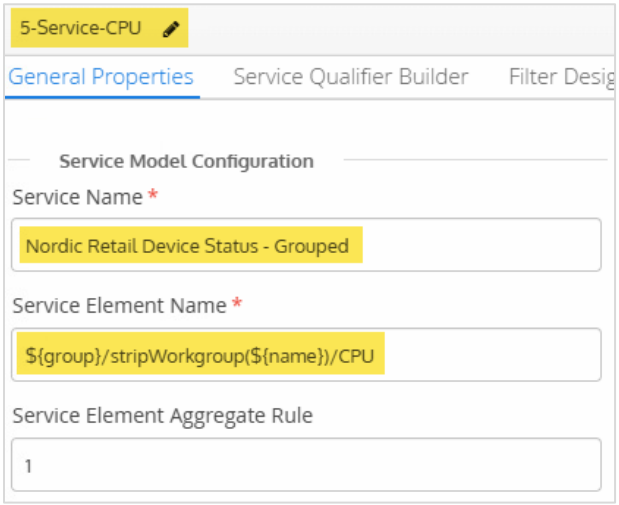
Step 2: Configure General Properties

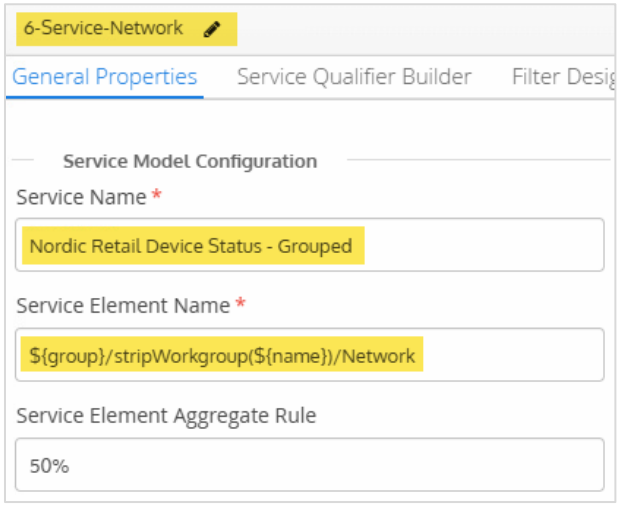
Configure two additional Service Producers using the same approach developed in Sections 3.1 and 3.2.

Only the following settings change:

- Producer Name
- Service Name
- Service Element Name

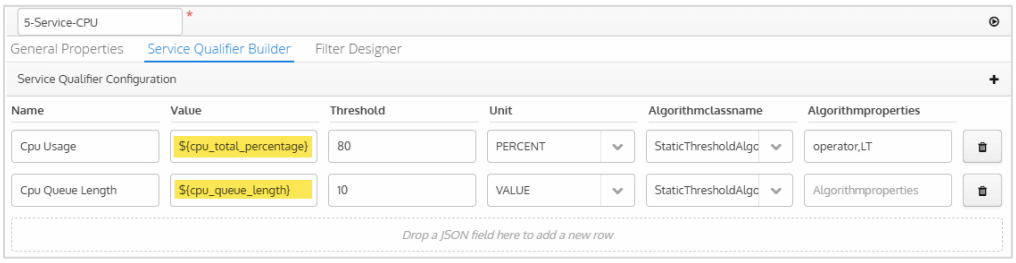
All remaining General Properties are configured identically to the previous Service Producers.

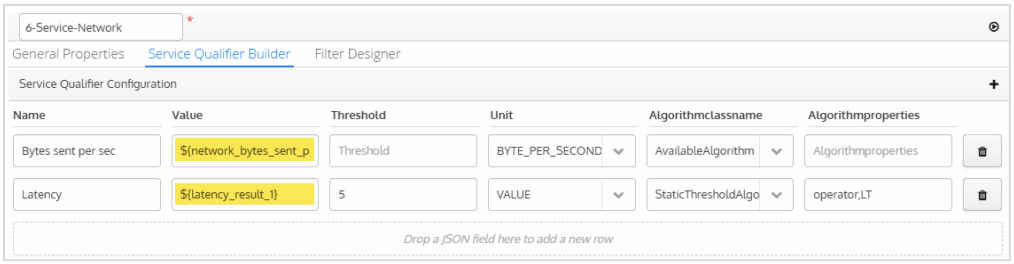




Step 3: Configure Service Qualifiers

Configure the CPU and Network Service Qualifiers using the same settings from Service Producers 1 and 2.



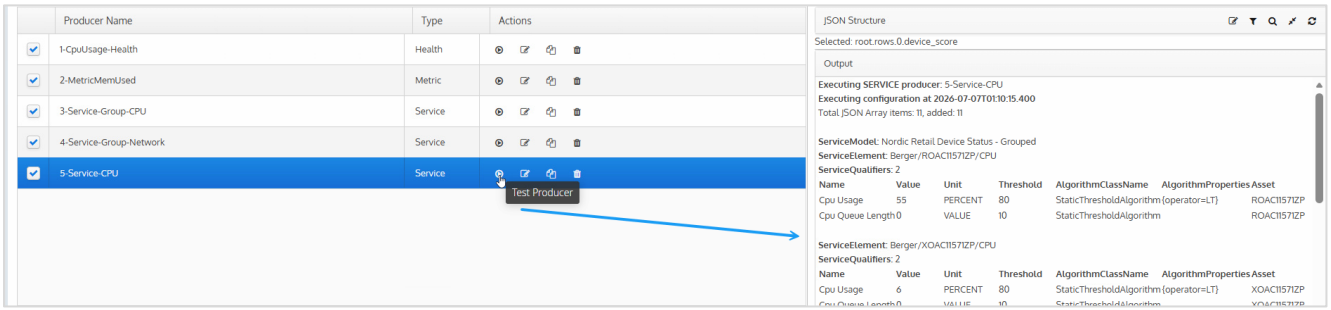


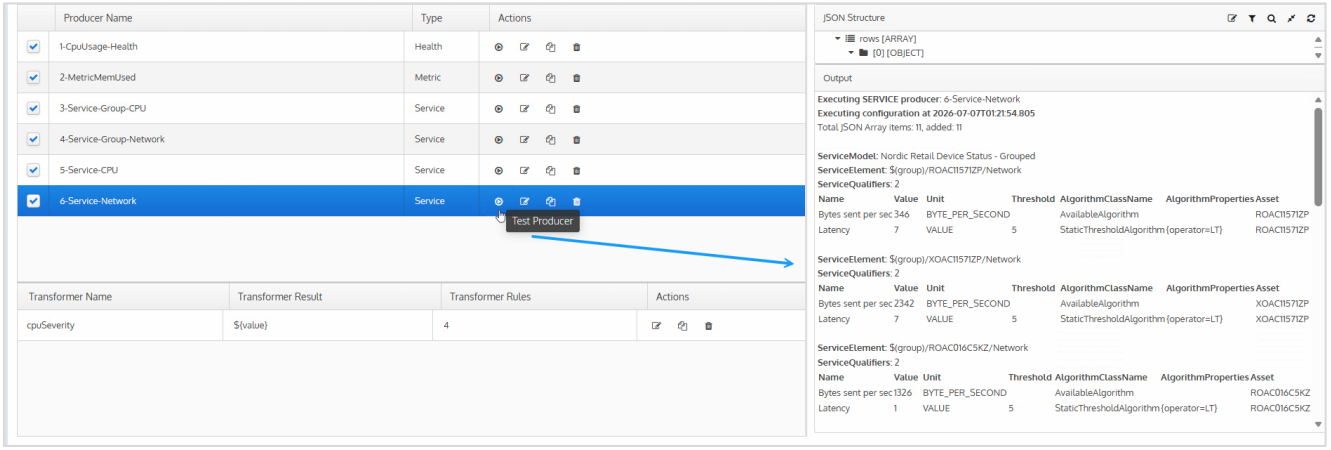
Step 4: Test the Service Producer Configuration

Test both the Unified CPU and Unified Network Service Producers using the current JSON response. As in the previous Service Producers, the Output panel confirms that the configuration executes successfully and generates the expected service model.

Unlike the previous Service Producers, these configurations generate a single unified Nordic Retail business service containing the three retail locations beneath one parent service, while preserving the CPU and Network service elements created for each device.

Review the Output panel after each test to confirm that both Service Producers complete successfully before saving the configurations.



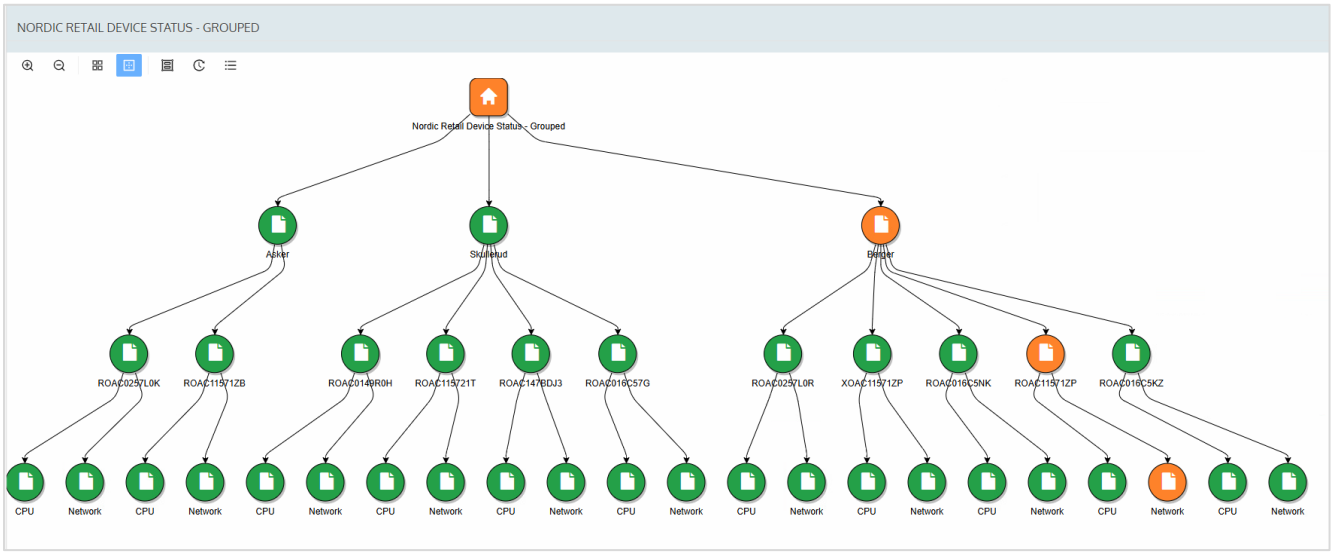


Step 5: Update the REST Monitor

Click Update to save the REST Monitor configuration and activate the Unified CPU and Unified Network Service Producers. During each execution interval, the REST Monitor now generates and maintains the unified Nordic Retail business service alongside the previously created location/device service models.

Step 6: Verify the Generated Service Model

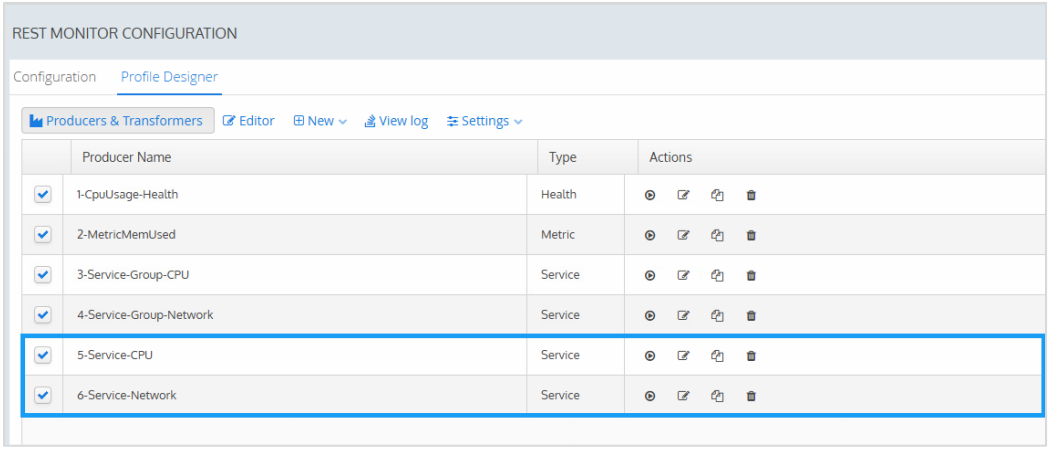
The unified Nordic Retail business Service now contains the three retail locations beneath a single parent Service. Each location includes the generated device hierarchy with both CPU and Network service elements attached beneath every device.



Step 7: Confirm the Updated REST Monitor

Return to the Nordic Retail Example REST Monitor. The Profile Designer now contains six Producers working together:

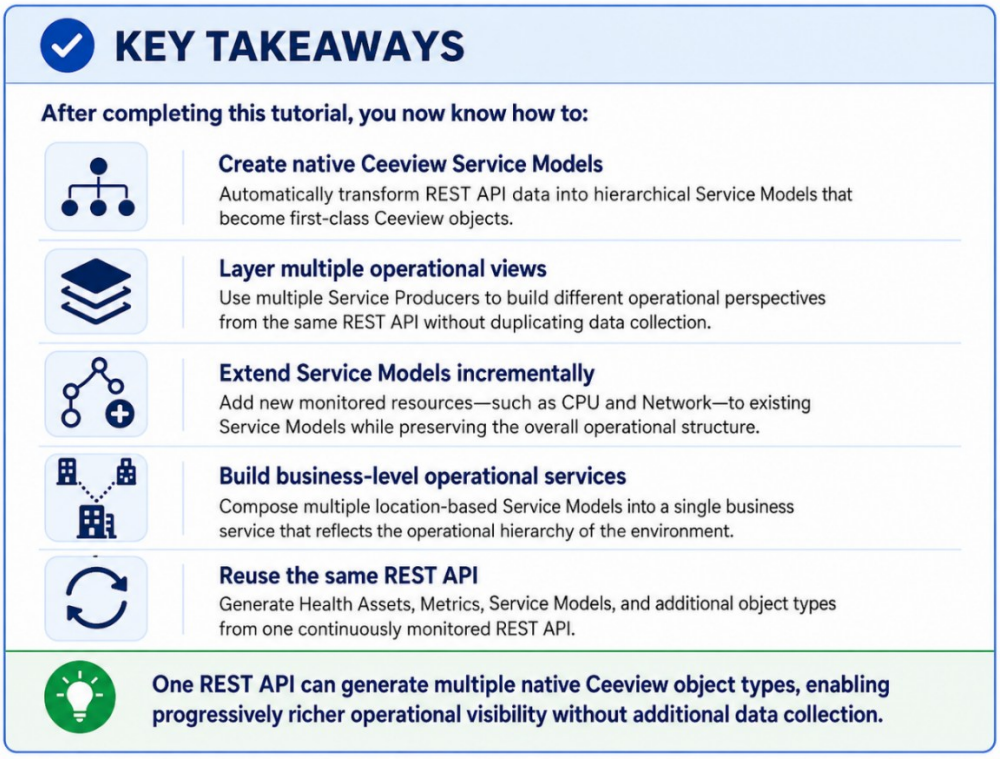
- Health Producer
- Metric Producer
- Location/Device CPU Service Producer
- Location/Device Network Service Producer
- Unified Business CPU Service Producer
- Unified Business Network Service Producer

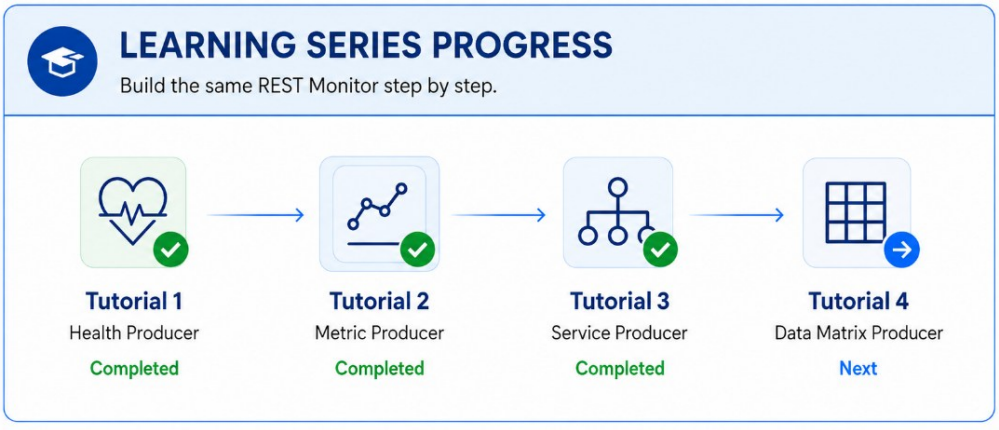


Continue the REST Monitor Learning Series

Congratulations—you've now transformed a single REST API into a rich operational model within Ceeview.

Across the first three tutorials, you've progressively extended the same REST Monitor by creating Health Assets, Metrics, and native Service Models. Together, these Producers demonstrate how a single JSON response can generate multiple operational views of the same environment without writing code.





The Nordic Retail Example REST Monitor now contains Health, Metric, and Service Producers working together from the same REST API. Health Producers create operational assets, Metric Producers record historical performance, and Service Producers organize those assets into hierarchical operational services.

In the next tutorial, you'll complete the operational model by adding a **Data Matrix Producer**, enabling REST API data to be presented in rich tabular views for dashboards, reporting, filtering, and operational analysis.