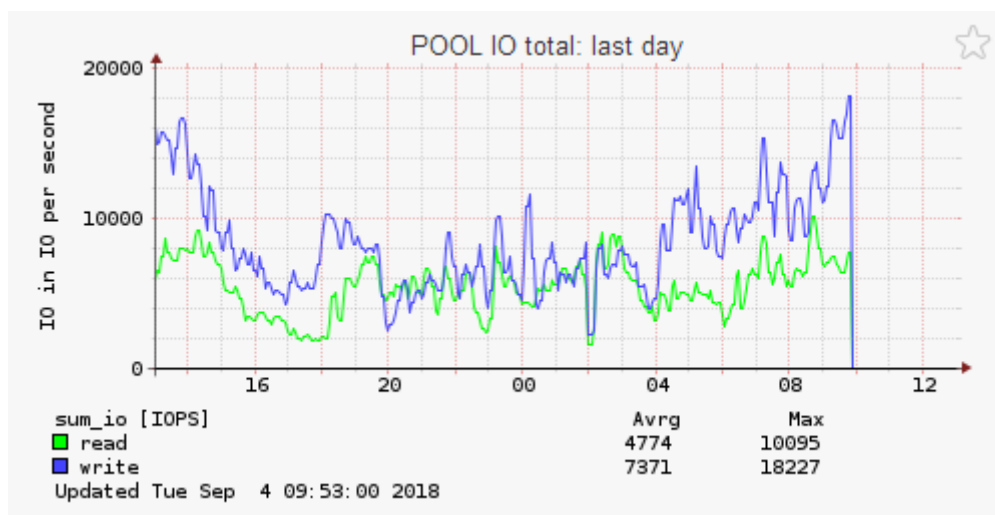# Hitachi VSP, VSP G and HUS-VM setup guide

Follow the steps described below to configure your Hitachi VSP, HUS VM or VSP G storage system from the array side. This guide also applies to HPE XP where high end Hitachi arrays are concerned (XP Remote Web Console is the HPE equivalent of Hitachi Storage Navigator).

1. Set date and time

The date and time settings (including time zone) used by the Hitachi Performance Monitor should match the stor2rrd server. Otherwise, all metrics obtained from the array will not be graphed properly:

As you can see above, the array time is 3 hours behind the Stor2rrd server.

On a high-end Hitachi array, just set the proper time and time zone on the SVP like on any other typical Windows machine. However, on mid-range Hitachi VSP arrays (G200/400/800 and later models) the Export Tool ignores any time settings on the SVP and uses CTL (controller) time instead. Open Maintenance Utility, click Administration – Date & Time and make sure time and time zone are set up correctly.
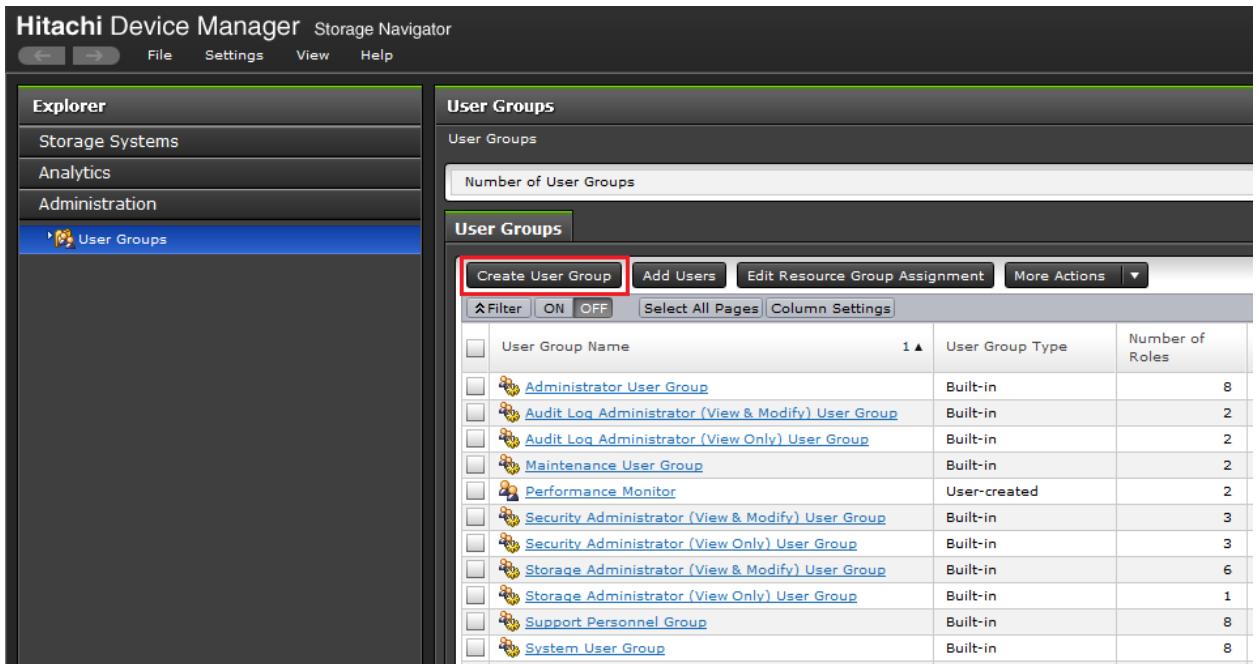
2. Create a local user to run the Export Tool

Hitachi Export Tool should run under a designated local user with 2 roles assigned:

- Storage Administrator (View Only) — assigned by default
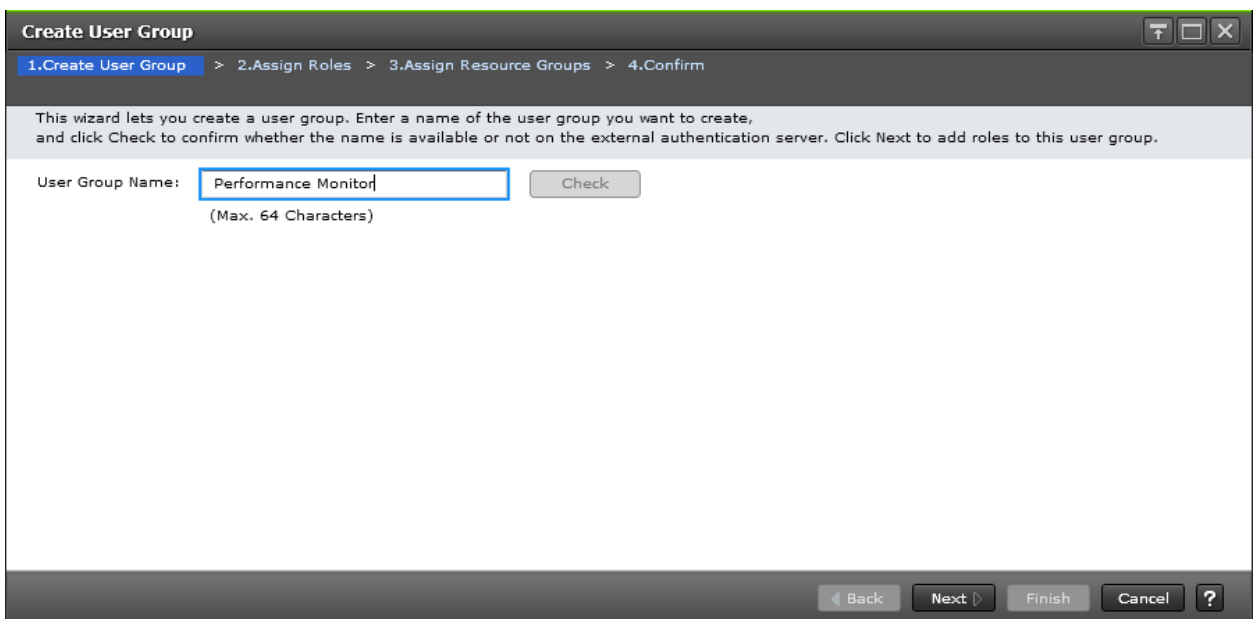- Storage Administrator (Performance Management)

The user with a **Storage Administrator (Performance Management)** role can do the following:

- Save the monitoring data into files
- Change the gathering interval
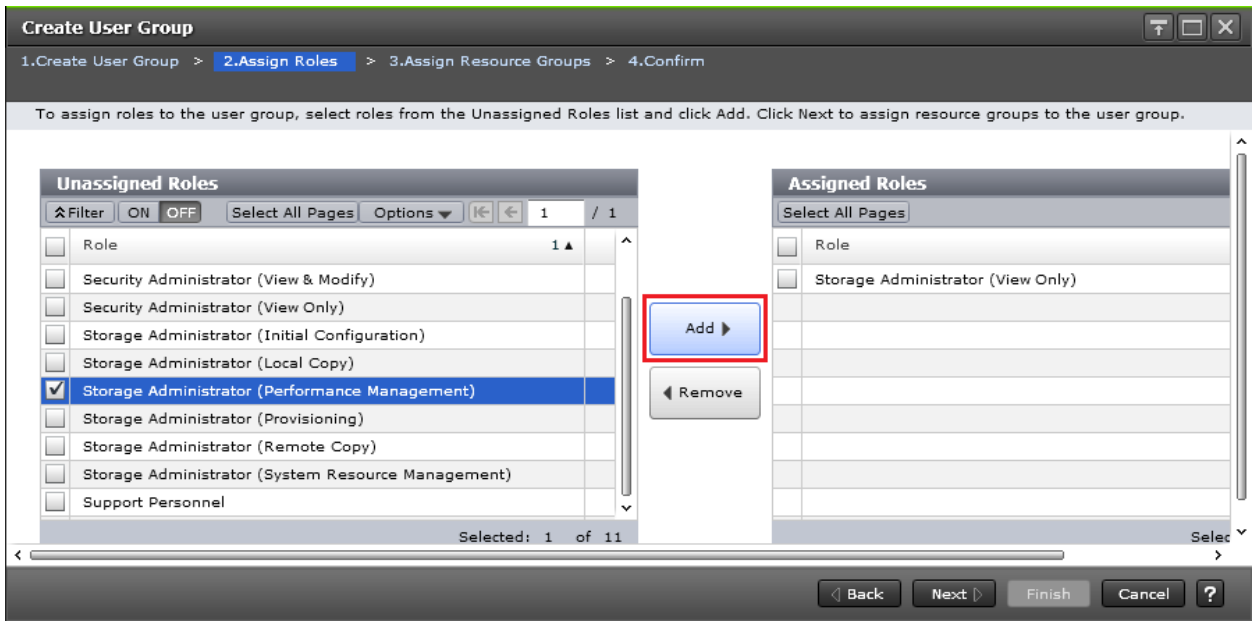- Start or stop monitoring by the set subcommand

The Storage Administrator (Performance Management) role is not assigned to any of the pre-defined user groups. Therefore, a new user group should be created first.
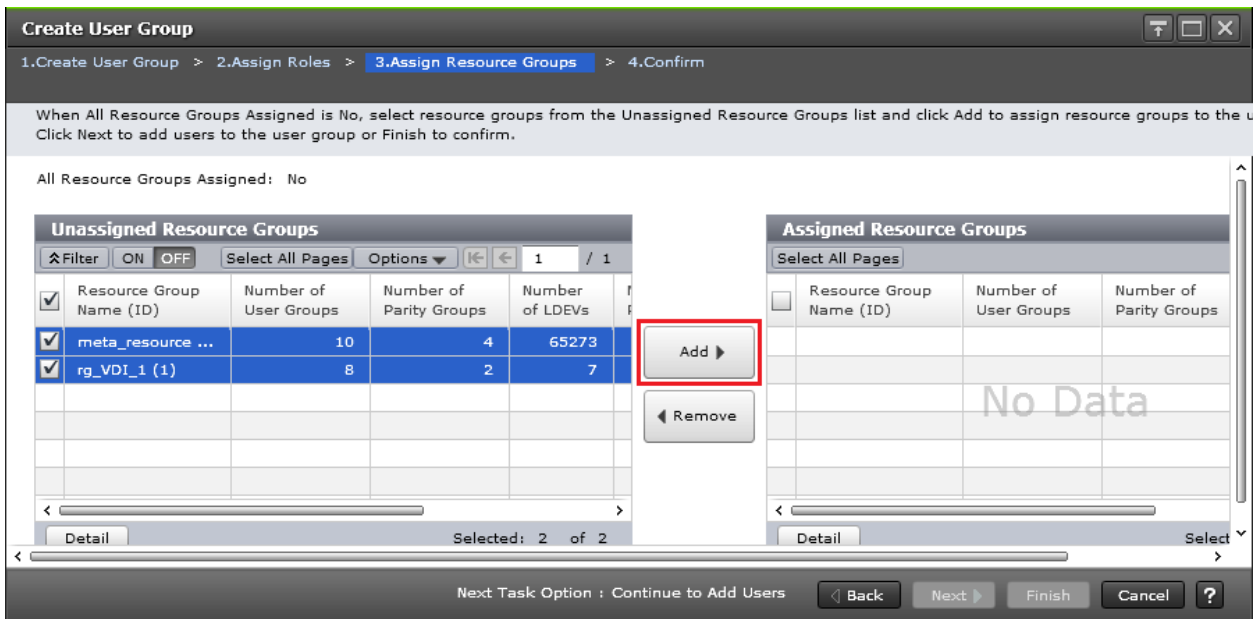
In Hitachi Storage Navigator, open **Administration – User Groups** and click the **Create User Group** button.

Type in the name of the new group (e.g. Performance Monitor)

In the list of Unassigned Roles on the left, select Storage Administrator (Performance Management) and click the Add button.

Every Hitachi array has a default meta_resource group configured. Select it and click the **Add** button.

If the array is partitioned into multiple resource groups or features that require resource partitioning like GAD (Global Active Device) and VSM (Virtual Storage Machine) are used, add every resource group on the left to the list of Assigned Resource Groups by clicking the **Add** button.

Note: stor2rrd is only able to retrieve data on objects its user ID has access to. GAD always requires a VSM based on a separate resource group. If a stor2rrd user ID doesn't have this resource group assigned, metrics for GAD volumes will not show up in stor2rrd.

Click **Finish** to create the user group. Follow the task progress under **Storage Systems – Tasks**. Once the task is completed, go to **Administration – User Groups**, select the newly created user group and click the **Create User** button.

Type in the user name and password, select Local authentication and click Finish to launch the CreateUser task.

3. Enable Performance Monitoring

The Performance Monitor license comes with every Hitachi array free of charge. Make sure the license is installed and enabled.

If you have a high-end Hitachi machine (VSP, VSP G1000, VSP G/F1500), open **Storage Navigator** and go to **Administration – License Keys**. The Performance Monitor license is displayed as below:
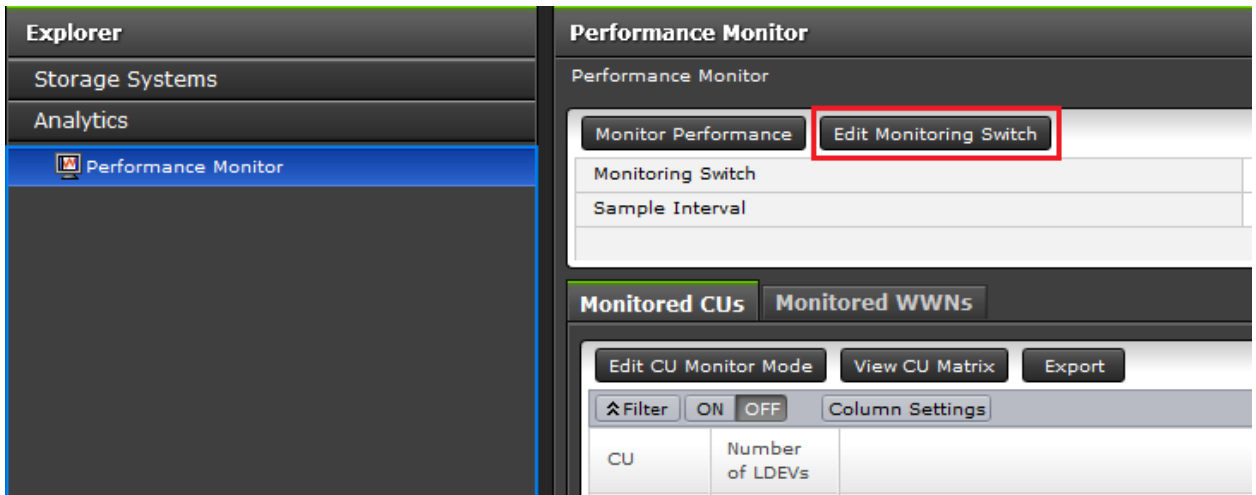

For a mid-range Hitachi array (VSP G200/400/600/800 and later models) open **Maintenance Utility**, then go to **Administration – Licenses**. The license should be displayed as below:

If the license is not installed, contact your local Hitachi Vantara representative to obtain the license key.

Performance Monitor feature is disabled by default. To enable it, open Storage Navigator, then go to **Analytics – Performance Monitor** and click the Edit Monitoring Switch button.

Set the Monitoring Switch radio button to Enable and Sample Interval to 5 minutes (note: lesser values, e.g. 1 minute seem to work as well).

Clicking Finish will start the Edit Monitoring Switch task. Once the task is completed, you're all set.