Generate Reports

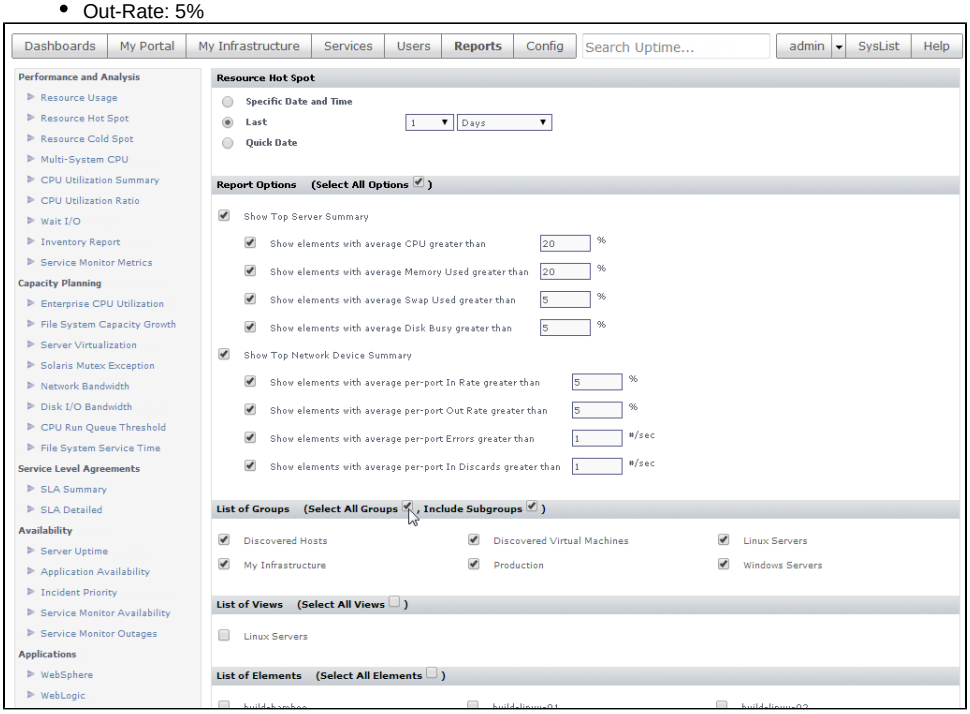
Over the last four modules, you have populated your monitored inventory with some sample Elements, got to know the main areas of the Uptime Infrastructure Monitor UI, and learned about how the intersecting properties of Elements and Element Groups, service monitors and Service Groups, Users, and Views allows you to configure Uptime Infrastructure Monitor for every type of user in your organization. While doing these modules, you've hopefully used up enough time to allow some data collection cycles to happen, meaning there can be data in reports.

This module consists of the following exercises:

Exercise	Description	Time required
generate a hot spot report	drawing from now-collected metric data for your Elements, identify which are performance hotspots	1 slice
generate a server uptime report	explore the default uptime reports that help you assess your infrastructure immediately upon installation	1 slice
Revisit the Quick Snapshot pages	When you first added the VMware vCenter Server Element in Track 1 of the first module, you examined the (empty) contents of the vCenter Server's Quick Snapshot, and a random VM's Quick Snapshot. Let's revisit these pages to see what they look like with a little more data on them.	1 slice

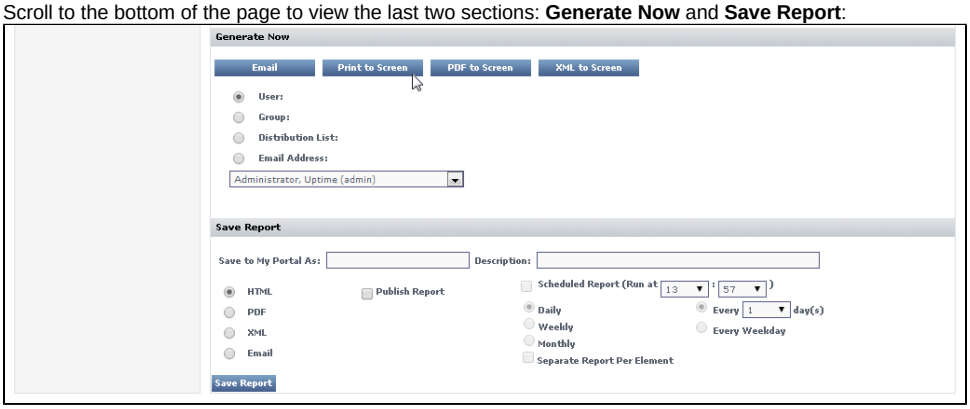
Generate a Resource Hot Spot Report

1. Click **Reports**, then click **Resource Hot Spot** in the left pane.
2. In the opening set of of options, click **Last**, then leave the selection at **1 Days**.
   Because you presumably have only had these Elements monitored over the course of this Getting Started Guide, you do not have more than a days' worth of data to draw; however, feel free to increase the time frame if you have collected more data.
3. In the **Report Options**, let's **Select All Options** to also include any possible network-device issues.
4. The report allows you to define what constitutes a hot spot, and the default values are reasonable. In the hopes of having some "resource gluttons" appearing in your report, let's manufacture a crisis, and configure new, lower thresholds, as shown below:
   - CPU Used: 20%
   - Memory Used: 20%
   - In-Rate: 5%
   - Out-Rate: 5%



   Below the **Report Options** section are three sections that allow you to select what is to be included in the report. You can use any of the ways you've organized your inventory to select which Elements are included in the report: Element Groups, Views, and individual Elements.
   Note in the above screenshot that the **Linux Servers** View you created in the previous module, and the **Production**, **Linux Servers** and **Windows Servers** Element Groups you created in the module before that are available.
5. For simplicity, select **All Groups** from the **List of Groups** section (as shown in the image above), to include everything we have added to our monitored inventory.

6. Scroll to the bottom of the page to view the last two sections: **Generate Now** and **Save Report**:



When configured to perfection, reports can be saved to be generated at a precise time, at a specific schedule, in various formats. Users also can save reports to their **My Portal**. Administrators and end-users can schedule reports for themselves, or as part of an agreement, deliver them to managers.

Reports can also be generated in real time, to assist with diagnosis, or to fine-tune the configuration of a report. This example uses this process.

7. In the **Generate Now** section, click **Print to Screen**.

Validation: Admire the Resource Hot Spot Report

The results of the report depends on the activity and performance of your Elements, but hopefully there is enough activity for resource hot spots to be listed, such as in the following example:

Resource Hot Spot Report

For Period: 2014-07-14 13:52 to 2014-07-15 13:52

Produced By: Administrator, uptime (admin)

Top Resource Consumers Summary

These systems are your top consumers in each capacity category

Top Servers

CPU	%
vmh-rd14.rd.local	22
vmh-rd11.rd.local	20
vmh-rd15.rd.local	13
vmh-rd10.rd.local	9
vmh-rd12.rd.local	8

Memory	%
win-ken	59
Cleaner	19
vmh-rd10.rd.local	12
vmh-rd11.rd.local	8
vmh-rd14.rd.local	6

Swap	%
Cleaner	0
March	0
vmh-rd10.rd.local	0
vmh-rd11.rd.local	0
vmh-rd12.rd.local	0

Disk	%
March	1
Cleaner	0
vmh-rd10.rd.local	0
vmh-rd11.rd.local	0
vmh-rd12.rd.local	0

Top Network Devices

In Rate	%
PowerOver9000/ch1	0
PowerOver9000/ch2	0
PowerOver9000/ch3	0
PowerOver9000/ch4	0
PowerOver9000/g1	0

Out Rate	%
PowerOver9000/ch1	0
PowerOver9000/ch2	0
PowerOver9000/ch3	0
PowerOver9000/ch4	0
PowerOver9000/g1	0

Errors	errors/sec
PowerOver9000/ch1	0
PowerOver9000/ch2	0
PowerOver9000/ch3	0
PowerOver9000/ch4	0
PowerOver9000/g1	0

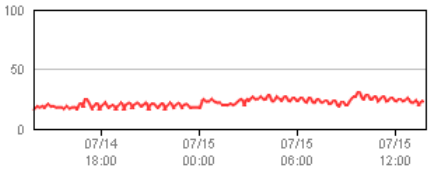
Discards	discards/sec
PowerOver9000/ch1	0
PowerOver9000/ch2	0
PowerOver9000/ch3	0
PowerOver9000/ch4	0
PowerOver9000/g1	0

Servers with High CPU Usage

These elements averaged > 20%

vmh-rd14.rd.local

	CPU %	Mem %	Swap Usage %	Disk Busy %
Max	32	6	0	0
Avg	22	6	0	0
Min	16	6	0	0

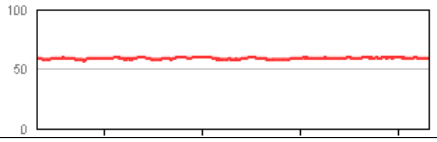


Servers with High Memory Usage

These elements averaged > 20%

win-ken

	CPU %	Mem %	Swap Usage %	Disk Busy %
Max	75	60	0	7
Avg	8	59	0	0
Min	0	57	0	0



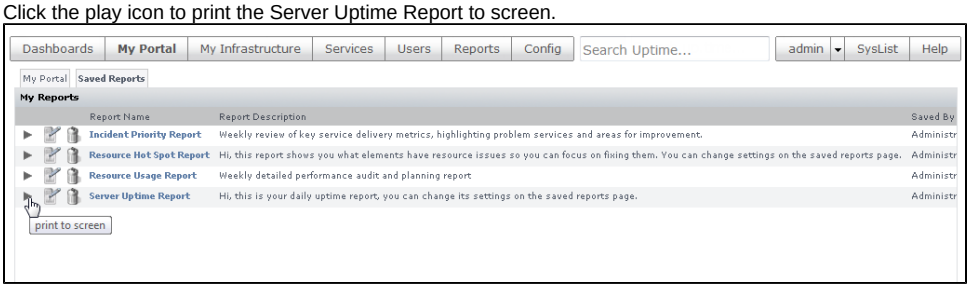
The opening **Top Resource Consumers Summary** lists Elements regardless of your configured thresholds; subsequent sections list any hot-spot Elements.

Generate a Pre-configured Server Uptime Report

When Uptime Infrastructure Monitor is first installed, a few broad-coverage, quick-value reports are created out of the box for the **admin** user. One of these is the Server Uptime report, which is ideal for all the ESX hosts and VMs that are managed by your VMware vCenter Server Element.

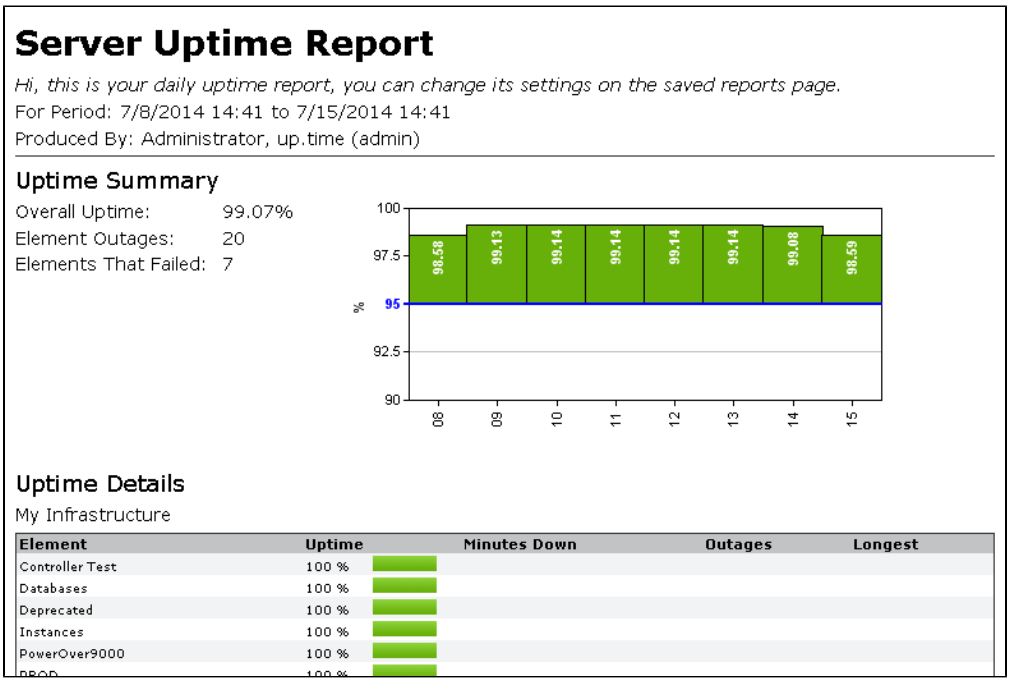
1. Click **My Portal**, then click the **Saved Reports** tab.
2. Note the report you generated in the last exercise is also in this list as a pre-configured report. One of the benefits users saving reports to their respective My Portal Saved Reports lists is they can generate at any time, based on saved settings. Let's demonstrate how to live in the moment.

3. Click the play icon to print the Server Uptime Report to screen.



Validation: Review the Server Uptime Report

The pre-configured options for this report include all of your Elements (by the report configuration, the **Infrastructure** Element Group, as well as its subgroups), and whether they met a target uptime threshold of 95%. This is reported for the last seven days. If you have completed all of this guide in the same sitting, unless you are very slow, you won't have a week's worth of data to display. Uptime Infrastructure Monitor reports with however much data it has collected, which in this case is likely a day's worth. The following example shows a full week of meeting up-time targets, with a modest number of outages:



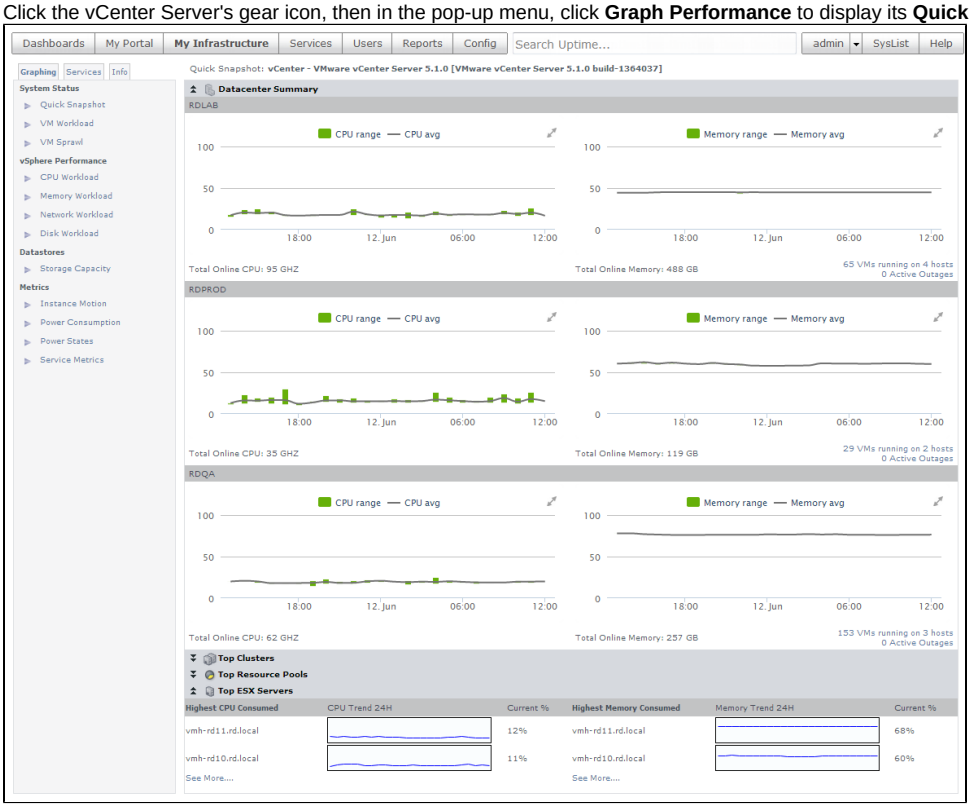
Now that you've touched on a couple of reports, let's go back to what are essentially a real-time status report, the Quick Snapshot.

Revisit the Quick Snapshot pages

In the first module, specifically the first track, you added a VMware vCenter Server to your monitored inventory. In the final exercise, you viewed the Quick Snapshot for both the vCenter Server Element and one of its VMs. Because the vCenter Server was just added, there was no data in the graphs. Because the graphs show the last 24 hours of activity, you only need to wait overnight to fully populate them, but even a handful of data-collection cycles can suffice. Let's revisit these pages.

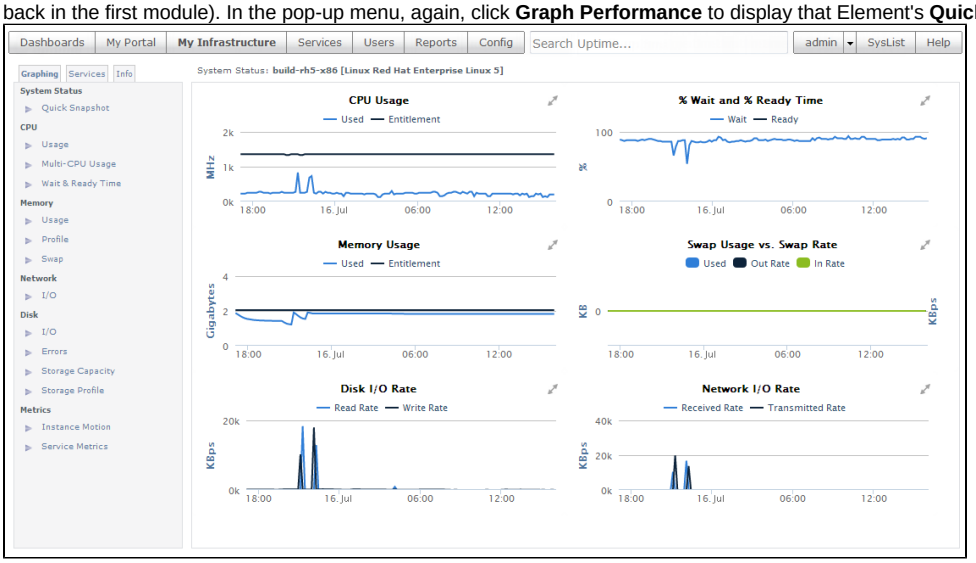
1. Click **Infrastructure**.

2. Click the vCenter Server's gear icon, then in the pop-up menu, click **Graph Performance** to display its **Quick Snapshot**.



The this example, there is a full day's worth of data displayed for a same vCenter Server that comprises three datacenters. The top CPU and memory consumers are shown by cluster, ESX host, and resource pool; you should now see some ranked vCenter Server objects, accompanied by historical graphs.

3. Click **Infrastructure** to return to the main inventory view.
4. Expand the **Discovered Virtual Machines** Infrastructure Group, and click the gear icon for any of the VMs (preferably the same on you selected back in the first module). In the pop-up menu, again, click **Graph Performance** to display that Element's **Quick Snapshot**.



The key performance and resource metrics for the VM should now show some usage and baselines.

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