Add a VMware vCenter Server

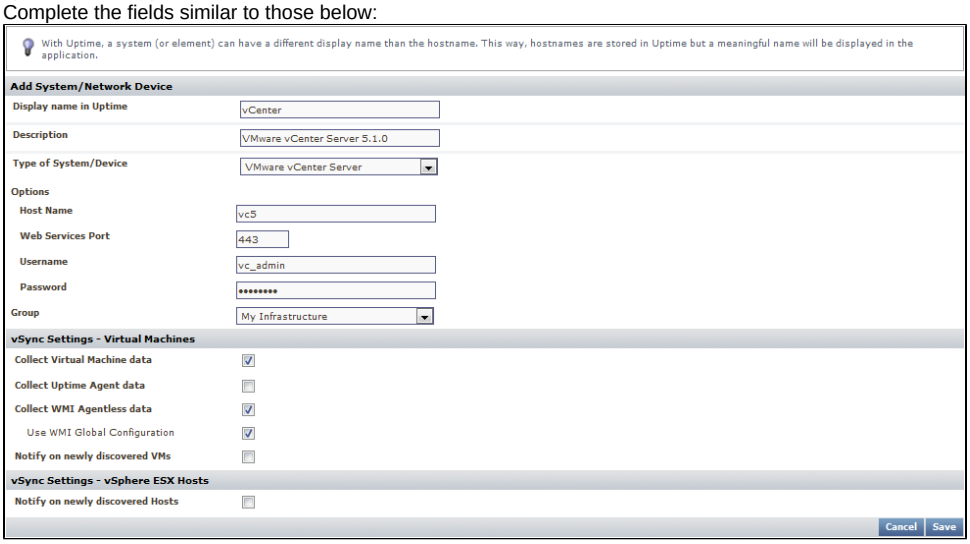
Not planning to do this module? You can skip to the next one...

This module consists of the following exercises:

Module	Description	Time required
Add Your vCenter Server	Use Auto Discovery to import a VMware vCenter Server and its inventory of ESX servers and VMs.	1 slice
Validation Step 1: Explore the Monitored Inventory	Understand how Uptime Infrastructure Monitor organizes an imported and synchronized vCenter Server inventory.	1 slice
Validation Step 2: View the vCenter Server Inventory	Understand how Uptime Infrastructure Monitor allows you to focus on the parts of the vCenter Server that you actually want to monitor.	1 slice
Validation Step 3: View Metrics for the vCenter Server and a VM	View metrics available on a summary page for a vCenter server, as well as a VM.	½ slice

Add Your vCenter Server

1. In the Uptime Infrastructure Monitor Web interface, begin by clicking **Infrastructure**.
2. Begin adding your VMware vCenter Server as an Uptime Infrastructure Monitor Element. In the Infrastructure view, click **Add System/Network Device**.
3. In the **Add System** window, select **VMware vCenter Server** from the **Type of System/Device** drop-down. This reveals configuration fields specific to this type of monitored Element.
4. Complete the fields similar to those below:

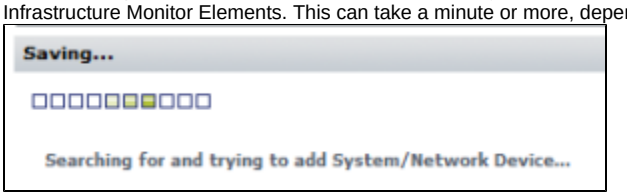


- The **Display Name** is used throughout the Uptime Infrastructure Monitor interface, as well as reports.
- The **Description** can contain any extra information such as the version number or IP address.
- The **Options** fields tell Uptime Infrastructure Monitor how to find and access your vCenter Server.
- You can leave the **vSync Settings** options at their defaults.

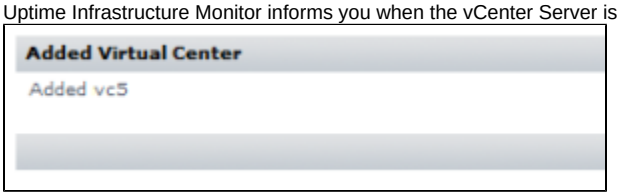
Stick to the Basics

By default, the **Collect Uptime Agent data** check box is clear. For this exercise, clear the **Collect WMI Agentless data** check box as well. This means the metrics Uptime Infrastructure Monitor retrieves for each monitored VM is what the vCenter Server itself collects and provides to Uptime Infrastructure Monitor. For these "basic VMs," their metrics are a subset of what can be collected from the guest operating system using the Uptime Infrastructure Monitor Agent or using WMI. For simplicity in this guide, we work with a "basic" vCenter Server inventory. You can learn more about agent- and WMI-based data collection in the next module, where you are adding physical servers.

5. Click **Save**. Uptime Infrastructure Monitor searches for your vCenter Server and import its inventory of ESX hosts and VMs as Uptime Infrastructure Monitor Elements. This can take a minute or more, depending on how large your vCenter inventory is.



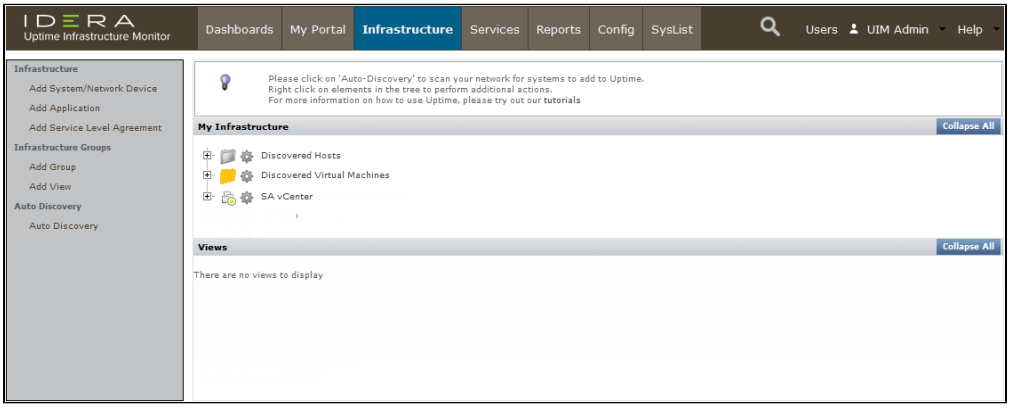
6. Uptime Infrastructure Monitor informs you when the vCenter Server is added:



Click **Done** to close the **Add System** window.

Validation Step 1 > Explore the Monitored Inventory

After adding the vCenter Server and closing the **Add System** window in the previous section, the main UI window is displaying the **Infrastructure** view:



If you look at your Uptime Infrastructure Monitor inventory, you can see that part of the vCenter Server import process included the automatic creation of two top-level *Element Groups* (which are folders and subfolders used to organize Uptime Infrastructure Monitor Elements): **Discovered Hosts** and **Discovered Virtual Machines**. These Element Groups respectively include the ESX hosts and virtual machines managed by the vCenter Server, and these contents can be further rearranged in Uptime Infrastructure Monitor, for example, by platform or server function.

Alongside this pair of Infrastructure Groups, the vCenter Server itself appears as a top-level Element in **Infrastructure**. It includes the hierarchy of objects that comprise the vCenter Server inventory. Click the **+** icon beside your vCenter Server to expand its view.

Consider this example vCenter, which includes a datacenter:

In the above example, the datacenter's cluster of ESX hosts is organized into two resource pools, along with their component virtual machines. Hosts and virtual machines can be moved elsewhere in Infrastructure, but the hierarchy remains intact as a reflection of the vCenter Server:

> **note**
>
> Depending on the size of your vCenter Server inventory, importing one could exceed your Uptime Infrastructure Monitor license. If this were to happen, you might see the following:
>
> - ESX hosts and VMs that you may expect to see do not respectively appear in the **Discovered Hosts** and **Discovered Virtual Machines** infrastructure groups.
> - Correspondingly, the expanded vCenter Server hierarchy may display empty datacenter objects. ESX hosts and VMs that are not monitored due to exceeding the license do not appear here, along with the vCenter Server objects to which they belong (for example, resource pools or clusters).
>
> In this scenario, you need not worry. Uptime Infrastructure Monitor has in fact imported these; it is simply ignoring them. We learn more about this in the next section.

Validation Step 2 > View the vCenter Server Inventory

This validation step can be particularly enlightening if your vCenter Server import exceeded your license, and resulted in automatic exclusion of ESX hosts and VMs from the monitored inventory in Uptime Infrastructure Monitor.

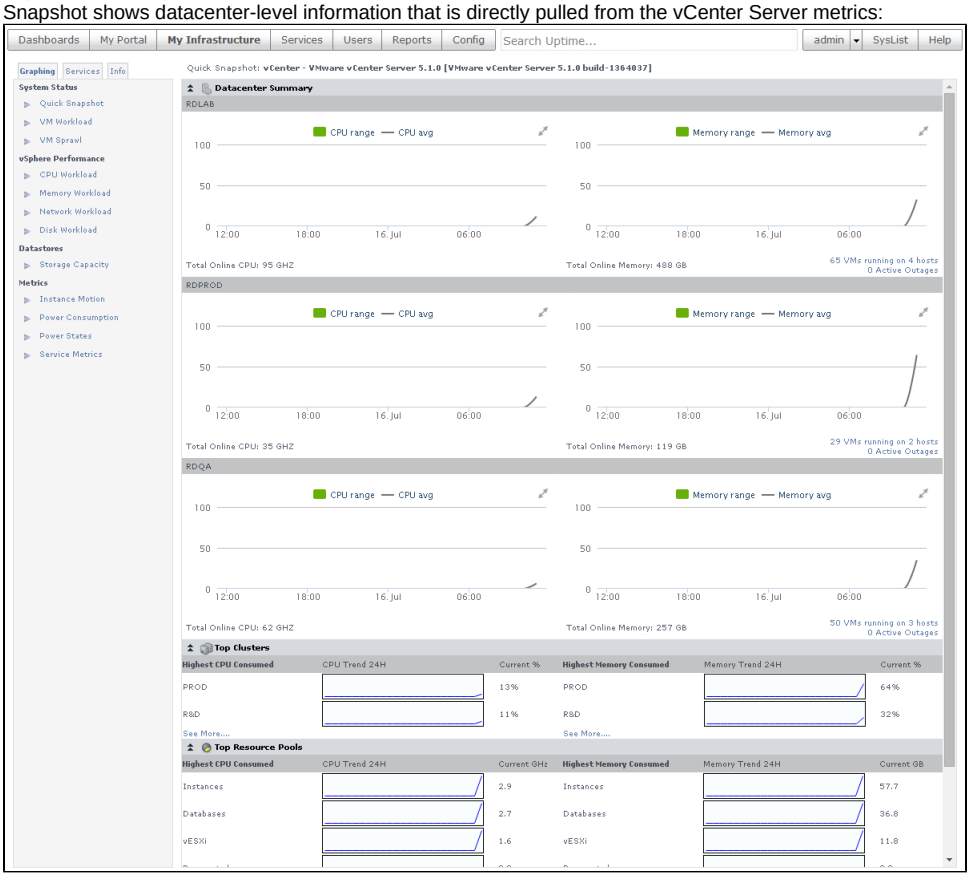
1. While in the **Infrastructure** view, click the vCenter Server's gear icon, then in the pop-up menu, click **View**.
2. In the left menu, the **Info** tab is active. Click **Inventory Detail**.
   This displays a list of all of your vCenter Server's inventory, grouped hierarchically. It is divided into two main groups: Elements that are monitored by Uptime Infrastructure Monitor, and Elements that are currently ignored. Initially, during the vCenter Server import, hosts and VMs that were imported after the Uptime Infrastructure Monitor license was exceeded were placed in the **Ignored Elements** section. You can use this **Inventory Detail** view to ignore monitored Elements, and begin monitoring currently ignored Elements.

   > **Pro Tip**
   >
   > You can also use this **Inventory Detail** view to **Enable Monitoring** for a vCenter Server Element. This can be done when an Uptime Infrastructure Monitor Agent is installed on a VM, allowing Uptime Infrastructure Monitor to collect metrics that are more detailed than what is provided by the vCenter Server.

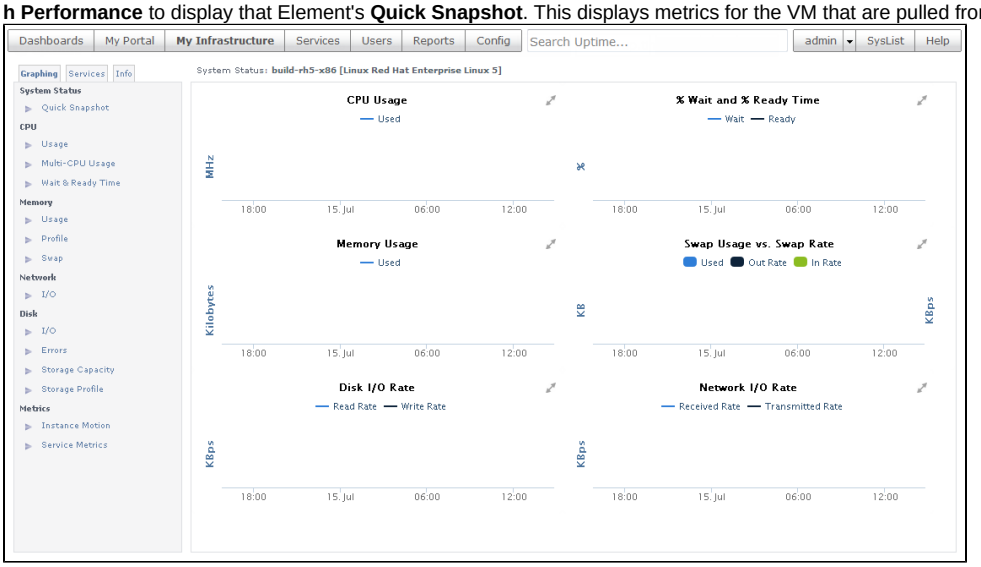
Validation Step 3 > View Metrics for the vCenter Server and a VM

1. Click **Infrastructure**.

2. Click the vCenter Server's gear icon, then in the pop-up menu, click **Graph Performance**. Whenever you take this action with an Element, you are taken to its **Quick Snapshot**.
   Whenever you graph the performance of an Element from the **Infrastructure** view, its **Quick Snapshot** is displayed. What exactly is shown depends on the type of Element, which we see throughout this part of the Getting Started Guide. In this case, the vCenter Server's Quick Snapshot shows datacenter-level information that is directly pulled from the vCenter Server metrics:



   You can incorporate these basic metrics into your Uptime Infrastructure Monitor monitoring plans (such as alerts or reporting). It's more likely, however, that your interest is with the virtual machines that are a part of the vCenter Server inventory.
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. In the pop-up menu, again, click **Graph Performance** to display that Element's **Quick Snapshot**. This displays metrics for the VM that are pulled from the vCenter Server's metrics:



   As with the vCenter Server Element's metrics, you can incorporate these into your alerts and reports. However, this "basic VM" view allows you to work only with what the vCenter Server provides; there may be cases where you want to add a little extra "Uptime Infrastructure Monitor power," and install an Uptime Infrastructure Monitor agent on the VM. This is something you learn a bit more about in the next module.

License Check!

In this module, if the inventory imported from vCenter Server exceeds open slots in your license, some of the inventory is ignored, and you have no space left to add Elements to your monitored inventory. In the next two tracks In this Getting Started Guide, you are adding servers and

network devices. If you plan on following either or both of these tracks, you need to anticipate the number of servers and network devices you add. To follow the server track, you'll need at least 2; to follow the network device track, you'll need at least 1. The easiest way to free up space is to manually ignore VMs; each VM you ignore opens a license spot for a new Element.

Return to the Inventory Detail view for the vCenter (**Infrastructure** > gear icon > **View** > **Inventory Detail**). Select VMs, ESX hosts, or even an entire cluster, then click **Add Selected Elements to Ignore**. The spots are freed up in your license, which you can verify by clicking **Config** > **License Info**.

Alternatively, you can also contact your Uptime Sales representative at sales@uptimesoftware.com to look into increasing the size of your license.

Back: **Add Elements to Uptime Infrastructure Monitor**
Next: **Add Physical Servers**