Standalone Monitoring for Virtual Machines

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To facilitate simpler virtual asset management, you can automatically add VMs that belong to a VMware or Hyper-V server topology to Uptime Infrastructure Monitor when that server is added as an Element. The VM server collects the metrics used to monitor these VMs. Despite this setup simplicity, you occasionally may want the virtual machine to host the Uptime Infrastructure Monitor Agent; doing so enables options that are not otherwise available. For example, via the Uptime Infrastructure Monitor Agent, you can use an Action Profile that performs self-healing steps on a mission-critical VM.

In this type of scenario, you can, from Uptime Infrastructure Monitor's configuration perspective, "detach" a VM from the VM server hierarchy that was originally imported, in order to control it independently of the server. Once performed, this VM is "promoted" to receive additional performance data delivered by the Uptime Infrastructure Monitor Agent, or for Windows systems, via WMI.

Although the topology remains intact on the VM server side, from Uptime Infrastructure Monitor's perspective, the VM is a standalone Element.

If the VM Server is configured for additional data collection (the **Uptime Agent Monitoring** option, found in the **Additional Agent or WMI Monitoring** section of the VM server's **General Information** page, is enabled), any VM that is part of a VM server inventory is automatically "promoted" to be independently monitored when either the Uptime Infrastructure Monitor Agent is installed on it, or it is configured to use WMI for metrics retrieval.

This behavior is controlled by the additional data collection settings for the VM server, which were first configured (or skipped) when the server was first added to Uptime Infrastructure Monitor. You can modify these additional data collection settings at any time, after which Uptime Infrastructure Monitor searches for appropriate VMs.

Understanding rescan time intervals

The frequency at which Uptime Infrastructure Monitor checks for Agent-enabled VMs is based on the **Rescan Time Interval** setting. By default, the scan of VM server guest VMs for the presence of an agent or WMI will happen when the host is first added to Uptime Infrastructure Monitor. If a VM is powered off or suspended at the time of initial addition, the presence of an agent or access via WMI to collect OS level metrics will not happen. Once VMs are powered on or when new VMs are created, the regular interval of 180 minutes (3 hours) will take effect. Due to this regular interval, the guests OS may be seen at any point in time during this window. Users who are adding new VMs often or who have lots of change in their virtual inventory may wish to set this setting lower. Inventory configurational refreshes happen ever 15 seconds by default. This behavior updates guest configuration as provisioned by the host, along with OS version information if available. This is not related to agent or WMI scan interval.

To change the scan interval, edit the VM host as desired. In the Additional Agent or WMI Monitoring section, click **Edit Settings**. Make your change to the **Rescan Time Interval**, and then be sure to save it. You must restart the Uptime Data Collector service after making the change for it to take effect.

Configuring Standalone VM Candidacy Scanning

To configure the method with which Uptime Infrastructure Monitor scans Hyper-V host or VMware vCenter server VMs for eligibility for standalone monitoring:

1. In the Infrastructure panel, click the gear icon beside the Hyper-V host or VMware vCenter server, and then select **View**.
2. On the Element profile page, ensure the **Info** tab is selected.
3. On the main profile page, locate the Additional Agent Monitoring section, and then click **Edit Settings**.
4. If desired, modify the **Rescan Time Interval** setting.

   > When you change this interval, the previous scan is completed before adjusting to the new setting.

5. Configure the data collection details with which candidate VMs are configured to collect metrics:

   a. For the Uptime Infrastructure Monitor Agent, indicate the port on which it is listening, and whether it securely communicates with Uptime Infrastructure Monitor using SSL.
   b. For data collection via WMI, indicate the host and domain on which WMI is implemented, and the username and password required for access.

   > If a VM is detected to have both the Uptime Infrastructure Monitor Agent as well as WMI credentials, Uptime Infrastructure Monitor marks the VM for standalone monitoring via the Agent.

6. Click **Save**.
7. If you changed the **Rescan Time Interval** setting, you must restart the Uptime Data Collector service for this change to take effect.

Modifying Data Collection Details for an Existing Standalone VM

For individual VMs that were scanned and discovered using standalone VM settings, you can make changes to their data collection method by doing the following:

1. In the Infrastructure panel, click the gear icon beside the WMI- or Agent-based VM you wish to modify.
2. In the pop-menu, select **View**.
3. On the VM's profile page, ensure the **Info** tab is selected.
4. On the main profile page, in the **Data Collection** section, click **Edit Collection Method**.

5. In the pop-up configuration window, modify the details for the existing data collection method for the VM:
6. For the Uptime Infrastructure Monitor Agent, indicate the port on which it is listening, and whether it securely communicates with Uptime Infrastructure Monitor using SSL.
7. For data collection via WMI, indicate the host and domain on which WMI is implemented, and the username and password required for access.
8. Click **Save**.
9. When the pop-up window closes, you can make sure the settings you have provided are correct by clicking the **Test** button.

Detaching Ignored VMs

Any VM whose parent object is marked as ignored cannot individually be added to the monitored list. (See Managing vCenter Inventories in Uptime Infrastructure Monitor for more information.) In these cases, any ignored VM that is a candidate for standalone monitoring is shown with an accompanying **Enable Monitoring** button, found on the Hyper-V host or VMware vCenter server's **Info** page:

Enabling Standalone Monitoring on Ignored VMs

To remove an ignored VM from Uptime Infrastructure Monitor's mirrored inventory of the Hyper-V host or VMware vCenter server, do the following:

1. Ensure the Uptime Infrastructure Monitor Agent is installed on the VM Element, or that Uptime Infrastructure Monitor is configured to use WMI as a data collection method for Windows-based Elements.
   For more information, see Configuring Global Data Collection Methods.
2. In the Infrastructure panel, click the gear icon beside the Hyper-V host or VMware vCenter server, then in the pop-menu, select **View**.
3. On the Element profile page, ensure the **Info** tab is selected.
4. Click **Inventory** (Hyper-V) or **Inventory Detail** (vCenter).
5. On the **Inventory Detail** page, from the **Ignored Elements** list, locate the VM Element you wish to enable for standalone monitoring.
   All VMs that are part of the Hyper-V or VMware vCenter server's inventory that are found to be eligible for standalone monitoring are listed with a corresponding **Enable Monitoring** button.
6. Click **Enable Monitoring**.

   > Enabling standalone monitoring for a VM permanently detaches it from the host server's configuration in Uptime Infrastructure Monitor.

7. Repeat these steps for each VM.

All VMs that are detached for standalone monitoring no longer appear in Uptime Infrastructure Monitor as part of the Hyper-V host or VMware vCenter server's inventory, or as a virtual machine, and instead appear and report as a physical Element.