



Release Notes for Cisco UCS Management Pack, Release 2.x For VMware vRealize Operations Manager

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Revision History

Release	Date	Description
2.0(1)	April 2016	Published release notes for Cisco UCS Management Pack, Release 2.0(1)
2.0(2)	May 2016	Updated with information on Release 2.0(2)
2.0(3)	June 2017	Updated with information on Release 2.0(3)
	September 2017	Added support for Cisco UCS Manager Release 3.2

Introduction

Cisco UCS Management Pack for the vRealize Operations Manager contains UCS Manager Adapter which enables monitoring of the UCS domains on the Operations Manager web UI. The pack uses the XML API exposed by the Cisco UCS Manager to get the data from the UCS domains. This data is used for monitoring the health and faults of the various resources in the UCS domain. This pack also establishes the relation between physical and virtual infrastructure.

System Requirements

The following is the support matrix for Cisco UCS Management Pack for the vRealize Operations Manager:

Cisco UCS Management Pack Version	Supported VMware vRealize Operations Manager Version	Supported UCS Manager Version
2.0(3)	6.3, 6.4, 6.5, and 6.6	2.1, 2.2, 3.0, 3.1 and 3.2
2.0(2)	6.0, 6.1, 6.2, 6.3 and 6.4	2.1, 2.2, 3.0 and 3.1
2.0(1)	6.0 and 6.1	2.1, 2.2, 3.0 and 3.1



Note If **Only TLS 1.2** option is enabled in Cisco UCS Manager, then use Cisco UCS Management Pack 2.0(3) or higher to manage your servers.



Note Ensure that the vRealize operations manager configuration is as per the sizing guidelines. For more information on the sizing guidelines, see https://kb.vmware.com/selfservice/microsites/search.do?language=en_US&cmd=displayKC&externalId=2093783.

Upgrade to Cisco UCS Management Pack, Release 2.x

Any Cisco UCS Management Pack, Release 2.x can be upgraded to the latest release. Any upgrade prior to Release 2.0(1) is not supported. To upgrade the Management Pack, see the [Cisco UCS Management Pack for VMware vRealize Operations Manager](#).



Important If you are upgrading from 2.0(1) or 2.0(2) to higher versions, we recommend that you do the following:

- During installation, check the **Reset Default Content** check box for overwriting the alert definitions
- Restart the vRealize Operations Manager after the installation
- Reconfigure all the adapter instances

New and Changed Features

This section provides an overview of the significant new and changed features in this release. This section does not provide an exhaustive list of all enhancements included in this release.

Release 2.0(3)

This section briefly describes the key features introduced in Cisco UCS Management Pack.

- Support for manual discovery of the resources
- Support for creating adapter instances using proxy server details

- Added resource kinds, metrics and properties related to S3X60 chassis and servers. For more information, see the following **Resource Kinds and Metrics** table

Resource Kinds and Metrics

The following table lists the resource kinds and the supported metrics for this release:

Resource Kind	Properties	Metrics
UCS Chassis	Storage Enclosure Serial Storage Enclosure Model Storage Enclosure Vendor Storage Enclosure Local Disk Serial Storage Enclosure Local Disk Model Storage Enclosure Local Disk Firmware Version Storage Enclosure Local Disk Servers Associated Storage Enclosure Local Disk Vendor	
UCS Server	UUID Blade Server Storage Enclosure Serial Blade Server Storage Enclosure Model Blade Server Storage Enclosure Vendor Blade Server Storage Enclosure Local Disk Serial Blade Server Storage Enclosure Local Disk Model Blade Server Storage Enclosure Local Disk Firmware Version Blade Server Storage Enclosure Local Disk Vendor	

Resource Kind	Properties	Metrics
UCS FI IO Module		Backplane Port Error Counter Align-Delta(packets/sec) Backplane Port Error Counter Deferred-Tx-Delta(packets/sec) Backplane Port Error Counter FCS-Delta(packets/sec) Backplane Port Error Counter Int-Mac-Rx-Delta(packets/sec) Backplane Port Error Counter Int-Mac-Tx-Delta(packets/sec) Backplane Port Error Counter Out Discard-Delta(packets/sec) Backplane Port Error Counter Rx Error-Delta(packets/sec) Backplane Port Error Counter Rx Error-Total(packets) Backplane Port Error Counter Tx Error-Delta(packets/sec) Backplane Port Error Counter Tx Error-Total(packets) Backplane Port Error Counter Under-Sized-Delta(packets/sec) Backplane Port Rx Counters Rx-Delta (Bps) Backplane Port Rx Counters Rx-Delta (packets/sec) Backplane Port Rx Counters Rx-Total (bytes) Backplane Port Rx Counters Rx-Total (packets) Backplane Port Tx Counters Tx-Delta (Bps) Backplane Port Tx Counters Tx-Delta (packets/sec) Backplane Port Tx Counters Tx-Total (bytes) Backplane Port Tx Counters Tx-Total (packets)

Resource Kind	Properties	Metrics
UCS System IO Controller	Serial Model Firmware Version Shared Adapter Serial Shared Adapter Model Shared Adapter Firmware Version	Operational State Temperature Cmc Temperature (Celsius) Temperature Front Temperature (Celsius) Temperature Mid Temperature (Celsius) Temperature Rear Temperature (Celsius) Temperature Vic Temperature (Celsius) Shared Adapter Operational State Shared Adapter Fabric Port NI Error Counters Too Short (errors) Shared Adapter Fabric Port NI Error Counters Too Long (errors) Shared Adapter Fabric Port NI Error Counters In Range (errors) Shared Adapter Fabric Port NI Error Counters Frame Tx (errors) Shared Adapter Fabric Port NI Error Counters Crc (errors)

Resource Kind	Properties	Metrics
UCS Service Profile		iSCSI vNIC Error Counters Rx-Error-Delta (packets/Sec) iSCSI vNIC Error Counters Tx-Error-Delta (packets/Sec) iSCSI vNIC Error Counters Rx-Error-Total (packets) iSCSI vNIC Error Counters Tx-Error-Total (packets) iSCSI vNIC Rx Counters Rx-Delta (Bps) iSCSI vNIC Rx Counters Rx-Delta (packets/sec) iSCSI vNIC Rx Counters Rx-Total (bytes) iSCSI vNIC Rx Counters Rx-Total (packets) iSCSI vNIC Tx Counters Tx-Delta (Bps) iSCSI vNIC Tx Counters Tx-Delta (packets/sec) iSCSI vNIC Tx Counters Tx-Total (bytes) iSCSI vNIC Tx Counters Tx-Total (packets)

Release 2.0(2)

This section briefly describes the key features introduced in Cisco UCS Management Pack.

- Support for vRealize Operations Manager 6.2, 6.3, and 6.4
- Added model, serial, vendor, and the firmware version for hardware resources as properties in UCS Manager adapter. For more information, see the following **Resource Kinds and Metrics** table
- Includes defect fixes

Resource Kinds and Metrics

The following table lists the resource kinds and the supported metrics for this release:

Resource Kind	Properties	Metrics
UCS Chassis	Serial Operational State Model PSU Serial PSU Model PSU Firmware Version Fan Module Serial Fan Module Model Fan Module Fan Serial Fan Module Fan Model	Operational State Input Power (watts) Output Power (watts) Fan Module Exhaust Temperature Fan Module Fan Speed (RPM) PSU Input Voltage (volts) PSU Internal Temperature (celsius) PSU Output Current (Amps) PSU Output Power (watts) PSU Output Voltage (volts)
UCS FI IO Module	Serial Model Firmware Version	Operational State

Resource Kind	Properties	Metrics
UCS Server		

Resource Kind	Properties	Metrics
	Serial	Operational State
	Current Operational Power	Operational Power
	Model	Blade Server Server Motherboard Memory Array Memory Unit DDR Array Temperature (celsius)
	BIOS Version	
	Board Controller Version	Blade Server Server Motherboard Power Consumed Power (watts)
	CIMC Controller Version	
	Blade Server Server Adaptor Unit Model	Blade Server Server Motherboard Power Input Current (Amps)
	Blade Server Mother Board Storage Controller Firmware Version	Blade Server Server Motherboard Power Input Voltage (volts)
	Blade Server Mother Board Storage Controller Model	Blade Server Server Motherboard Processor Unit CPU Temperature (celsius)
	Blade Server Mother Board Storage Controller Serial	Blade Server Server Motherboard Processor Unit Input Current (Amps)
	Blade Server Mother Board Storage Controller Vendor	Blade Server Server Motherboard Temperature Front Temperature (celsius)
	Blade Server Mother Board Storage Controller Local Disk Firmware Version	Blade Server Server Motherboard Temperature Rear Temperature (celsius)
	Blade Server Mother Board Storage Controller Local Disk Model	Rack Unit Server Motherboard Memory Array Memory Unit DDR Array Temperature (celsius)
	Blade Server Mother Board Storage Controller Local Disk Serial	Rack Unit Server Motherboard Power Consumed Power (watts)
	Blade Server Mother Board Storage Controller Local Disk Vendor	Rack Unit Server Motherboard Power Input Current (Amps)
	Blade Server Server Adaptor Unit Serial	Rack Unit Server Motherboard Power Input Voltage (volts)
	Blade Server Server Adaptor Unit Firmware Version	Rack Unit Server Motherboard Processor Unit CPU Temperature (celsius)
	Rack Unit Mother Board Storage Controller Firmware Version	Rack Unit Server Motherboard Processor Unit Input Current (Amps)
	Rack Unit Mother Board Storage Controller Model	Rack Unit Server Motherboard Temperature-Stats Front Temperature (celsius)
	Rack Unit Mother Board Storage Controller Serial	
	Rack Unit Mother Board Storage Controller Vendor	Rack Unit Fan Module Fan

Resource Kind	Properties	Metrics
	Rack Unit Mother Board Storage Controller Local Disk Model Rack Unit Mother Board Storage Controller Local Disk Serial Rack Unit Mother Board Storage Controller Local Disk Firmware Version Rack Unit Mother Board Storage Controller Local Disk Vendor Rack Unit Server Adaptor Unit Model Rack Unit Server Adaptor Unit Serial Rack Unit Server Adaptor Unit Firmware Version Rack Unit PSU Model Rack Unit PSU Serial Rack Unit Fan Module Model Rack Unit Fan Module Serial Rack Unit Fan Module Fan Model Rack Unit Fan Module Fan Serial Rack Unit PSU Firmware Version	Speed (RPM) Rack Unit Fan Module Exhaust Temperature (celsius) Rack Unit PSU Input Voltage (volts) Rack Unit PSU Internal Temperature (celsius) Rack Unit PSU Output Current (Amps) Rack Unit PSU Output Power (watts) Rack Unit PSU Output Voltage (volts)
UCS Fabric Interconnect	Serial Model Kernel Version Firmware Version PSU Serial PSU Model PSU Firmware Version Fan Module Serial Fan Module Model Fan Module Fan Serial Fan Module Fan Model	Operational State Load-Average Memory Available-Average Memory Cached- Average Fan Module Fan Speed (RPM) Fan Module Exhaust Temperature (celsius) PSU Current (A) PSU Power (W) PSU Voltage (V)

Resource Kind	Properties	Metrics
UCS IO Module	Serial Model Firmware Version	Operational State Backplane Port Error Counter Align-Delta (packets/sec) Backplane Port Error Counter Deferred-Tx-Delta (packets/sec) Backplane Port Error Counter FCS-Delta (packets/sec) Backplane Port Error Counter Int-Mac-Rx-Delta (packets/sec) Backplane Port Error Counter Int-Mac-Tx-Delta (packets/sec) Backplane Port Error Counter Out Discard-Delta (packets/sec) Backplane Port Error Counter Rx Error-Delta (packets/sec) Backplane Port Error Counter Rx Error-Total (packets) Backplane Port Error Counter Tx Error-Delta (packets/sec) Backplane Port Error Counter Tx Error-Total (packets) Backplane Port Error Counter Under-Sized-Delta (packets/sec) Backplane Port Rx Counter Rx-Delta (Bps) Backplane Port Rx Counter Rx-Delta (packets/sec) Backplane Port Rx Counter Rx-Total (bytes) Backplane Port Rx Counter Rx-Total (packets) Backplane Port Tx Counter Tx-Delta (Bps) Backplane Port Tx Counter Tx-Delta (packets/sec) Backplane Port Tx Counter Tx-Total (bytes) Backplane Port Tx Counter Tx-Total (packets)

Resource Kind	Properties	Metrics
UCS Fabric Extender	Serial Model Firmware Version PSU Serial PSU Model PSU Firmware Version Fan Serial Fan Model	Operational State PSU Current (A) PSU Power (W) PSU Voltage (V) Fan Speed (RPM)

Release 2.0(1)

This section briefly describes the key features introduced in Cisco UCS Management Pack.

- Support to collect metrics data for the resources discovered for the configured adapter instance automatically. For more information, see the following **Resource Kinds and Metrics** table
- Support for the following alerts generated by the adapter:
 - UCS fault alerts
 - UCS domain unreachability alerts
 - Server power state change alerts
- Support to view UCS components and their relationship with other UCS and vCenter components in an inventory tree
 - UCSM Overview
 - UCS Health Tree
 - UCS Fabric Interconnect Traffic Statistics
 - UCS Power and Temperature Summary
 - UCS Server Motherboard Statistics

Resource Kinds and Metrics

The following table lists the resource kinds and the supported metrics for this release:

Resource Kind	Property	Metrics
UCS Domain	UCS Manager Version	Availability

Resource Kind	Property	Metrics
UCS Chassis	Serial	Operational State Input Power (watts) Output Power (watts) Fan Module Exhaust Temperature Fan Module Fan Speed (RPM) PSU Input Voltage (volts) PSU Internal Temperature (celsius) PSU Output Current (Amps) PSU Output Power (watts) PSU Output Voltage (volts)

Resource Kind	Property	Metrics
UCS Server	Serial	

Resource Kind	Property	Metrics
		Operational State
		Operational Power
		Blade Server Server Motherboard Memory Array Memory Unit DDR Array Temperature (celsius)
		Blade Server Server Motherboard Power Consumed Power (watts)
		Blade Server Server Motherboard Power Input Current (Amps)
		Blade Server Server Motherboard Power Input Voltage (volts)
		Blade Server Server Motherboard Processor Unit CPU Temperature (celsius)
		Blade Server Server Motherboard Processor Unit Input Current (Amps)
		Blade Server Server Motherboard Temperature Front Temperature (celsius)
		Blade Server Server Motherboard Temperature Rear Temperature (celsius)
		Rack Unit Server Motherboard Memory Array Memory Unit DDR Array Temperature (celsius)
		Rack Unit Server Motherboard Power Consumed Power (watts)
		Rack Unit Server Motherboard Power Input Current (Amps)
		Rack Unit Server Motherboard Power Input Voltage (volts)
		Rack Unit Server Motherboard Processor Unit CPU Temperature (celsius)
		Rack Unit Server Motherboard Processor Unit Input Current (Amps)
		Rack Unit Server Motherboard Temperature-Stats Front Temperature (celsius)
		Rack Unit Fan Module Fan

Resource Kind	Property	Metrics
		Speed (RPM) Rack Unit Fan Module Exhaust Temperature (celsius) Rack Unit PSU Input Voltage (volts) Rack Unit PSU Internal Temperature (celsius) Rack Unit PSU Output Current (Amps) Rack Unit PSU Output Power (watts) Rack Unit PSU Output Voltage (volts)
UCS Fabric Interconnect	Serial	Operational State Load-Average Memory Available-Average Memory Cached- Average Fan Module Fan Speed (RPM) Fan Module Exhaust Temperature (celsius) PSU Current (A) PSU Power (W) PSU Voltage (V)

Resource Kind	Property	Metrics
UCS Service Profile		

Resource Kind	Property	Metrics
		Association State vNIC Error Counter Rx-Error-Delta (packets/sec) vNIC Error Counter Tx-Error-Delta (packets/sec) vNIC Error Counter Rx-Error-Total (packets) vNIC Error Counter Tx-Error-Total (packets) vNIC Rx Counter Rx-Delta (Bps) vNIC Rx Counter Rx-Delta (packets/sec) vNIC Rx Counter Rx-Total (bytes) vNIC Rx Counter Rx-Total (packets) vNIC Tx Counter Tx-Delta (Bps) vNIC Tx Counter Tx-Total (Bps) vNIC Tx Counter Tx-Total (packets/sec) vNIC Tx Counter Tx-Delta (packets/sec) vHBA Error Counter Rx-Error-Delta (packets/sec) vHBA Error Counter Tx-Error-Delta (packets/sec) vHBA Error Counter Rx-Error-Total (packets) vHBA Error Counter Tx-Error-Total (packets) vHBA Rx Counter Rx-Delta (Bps) vHBA Rx Counter Rx-Delta (packets/sec) vHBA Rx Counter Rx-Total (bytes) vHBA Rx Counter Rx-Total (packets) vHBA Tx Counter Tx-Delta

Resource Kind	Property	Metrics
		(Bps) vHBA Tx Counter Tx-Delta (packets/sec) vHBA Tx Counter Tx-Total (bytes) vHBA Tx Counter Tx-Total (packets)

Resource Kind	Property	Metrics
UCS IO Module	Serial	Operational State Backplane Port Error Counter Align-Delta (packets/sec) Backplane Port Error Counter Deferred-Tx-Delta (packets/sec) Backplane Port Error Counter FCS-Delta (packets/sec) Backplane Port Error Counter Int-Mac-Rx-Delta (packets/sec) Backplane Port Error Counter Int-Mac-Tx-Delta (packets/sec) Backplane Port Error Counter Out Discard-Delta (packets/sec) Backplane Port Error Counter Rx Error-Delta (packets/sec) Backplane Port Error Counter Rx Error-Total (packets) Backplane Port Error Counter Tx Error-Delta (packets/sec) Backplane Port Error Counter Tx Error-Total (packets) Backplane Port Error Counter Under-Sized-Delta (packets/sec) Backplane Port Rx Counter Rx-Delta (Bps) Backplane Port Rx Counter Rx-Delta (packets/sec) Backplane Port Rx Counter Rx-Total (bytes) Backplane Port Rx Counter Rx-Total (packets) Backplane Port Tx Counter Tx-Delta (Bps) Backplane Port Tx Counter Tx-Delta (packets/sec) Backplane Port Tx Counter Tx-Total (bytes) Backplane Port Tx Counter Tx-Total (packets)

Resource Kind	Property	Metrics
UCS Fabric Extender	Serial	Operational State PSU Current (A) PSU Power (W) PSU Voltage (V) Fan Speed (RPM)

Resource Kind	Property	Metrics
UCS FI Server Port UCS FI Uplink Port UCS FI FcoE Storage Port UCS FI FcoE Uplink Port UCS FI Appliance Port UCS FI Eth Port Channel	Operating Speed	Operational State Error Counter Align-Delta (packets/sec) Error Counter Deferred-Tx-Delta (packets/sec) Error Counter FCS-Delta (packets/sec) Error Counter Int-Mac-Rx-Delta (packets/sec) Error Counter Int-Mac-Tx-Delta (packets/sec) Error Counter Out Discard-Delta (packets/sec) Error Counter Rx Error-Delta (packets/sec) Error Counter Rx Error-Total (packets) Error Counter Tx Error-Delta (packets/sec) Error Counter Tx Error-Total (packets) Error Counter Under-Sized-Delta (packets/sec)ra Rx Counter Rx-Delta (Bps) Rx Counter Rx-Delta (packets/sec) Rx Counter Rx-Total (bytes) Rx Counter Rx-Total (packets) Rx Counter Rx-Utilization (%) Tx Counter Tx-Delta (Bps) Tx Counter Tx-Delta (packets/sec) Tx Counter Tx-Total (bytes) Tx Counter Tx-Total (packets) Tx Counter Tx-Utilization (%)

Resource Kind	Property	Metrics
UCS FI FC Port UCS FI FCoE Port Channel UCS FI FC Port Channel	Operating Speed	Operational State Error Counter Rx-Delta (packets/sec) Error Counter Rx Error-Total (packets) Error Counter Tx-Delta (packets/sec) Error Counter Tx Error-Total (packets) Rx Counter Rx-Delta (Bps) Rx Counter Rx-Delta (packets/sec) Rx Counter Rx-Total (bytes) Rx Counter Rx-Total (packets) Rx Counter Rx-Utilization (%) Tx Counter Tx-Delta (Bps) Tx Counter Tx-Delta (packets/sec) Tx Counter Tx-Total (bytes) Tx Counter Tx-Total (packets) Tx Counter Tx-Utilization (%) Note Rx Utilization and Tx Utilization metrics are not supported for UCS FI FCoE Port Channel.
UCS FI IO Module	Serial	Operational State

Resolved Caveats

The following table lists the resolved caveats in the Cisco UCS Management Pack for vROps:

Defect ID	Symptom	First Affected Release	Resolved in Release
CSCuw47776	Manual discovery feature is not supported in this release	2.0(1)	2.0(3)
CSCuz18132	FI and FI Ethernet port relationship is not updated	2.0(1)	2.0(2)

Related Cisco UCS Documentation and Documentation Feedback

For more information, you can access related documents from the following links:

- [Cisco UCS Management Pack User Guide, Release 2.x for VMware vRealize Operations Manager](#)
- [Cisco UCS Documentation Roadmap](#)
- [Release Bundle Contents for Cisco UCS Software, Release 2.1](#)

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