
Avocent® Universal Management Gateway 2000/4000/6000 Appliance

Release Notes

Version 3.1.2.10

September 24, 2015

This document outlines:

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2. Local Client Requirements
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1. Update Instructions

Please refer to the installer/user guide for detailed instructions on updating the Avocent® Universal Management Gateway appliance.

If the current appliance version is older than 1.3.2.1, please update to appliance version 1.3.2.1 before upgrading to the latest version. If your appliance(s) had already been upgraded multiple times using version 2.x.x.x versions, and you see problems configuring the Service Processors, please contact Technical Support for a recovery procedure.

If the current appliance version is older than 2.6.0.9, please update to appliance version 2.6.0.9 before upgrading to the latest 3.x.x.x version.

IMPORTANT NOTE: When upgrading the appliance to 2.2.1.10 or later from 2.1.1.6 or earlier, please ensure power is retained on the appliance for at least three hours to allow the upgrade to complete. The appliance upgrade process requires more time in this version as the FPGA is being upgraded. Also, please avoid rolling back the version from 2.2.1.10 or later to 2.1.1.6 or earlier since there will be a FPGA downgrade procedure. If there are any issues with upgrade or rollback, please contact Technical Support for additional assistance.

In order to have features listed in this release available through DSView™ 4 (v4.5.x) management software, the Avocent® Universal Management Gateway appliance plug-in version 3.1.0.18 or later is required.

Older versions of the DSView™ software and the Avocent® Universal Management Gateway appliance 1.x plug-in may work with this new firmware but could have limitations with the features or bug fixes of this release.

After upgrading the appliance to version 3.1.2.10, if KVM sessions launched via the DSView™ software display an error message, resync the appliance with the DSView™ software and try again.

NOTE: If the Web interface Session times out while transferring the firmware upgrade file, the upgrade process will be cancelled. If this occurs, lengthen or disable the Session Time-Out setting for the Admin user in the Web interface before starting the upgrade.

NOTE: Please allow at least three hours for the upgrade process to complete once it is started.

2. Local Client Requirements

Software	Version
Java (32-bit)	Java 7 Update 71, Java 8 Update 45

Software	Version
Adobe Flash	18.0.0.209
Internet Explorer	8, 9, 10, 11
Firefox	38.0.5
Chrome	43

NOTE: 64-bit editions of Java are not supported.

NOTE: If the Firefox browser prompts that the Flash plug-in should be updated when the appliance Web interface is accessed, please update the Flash plug-in to the latest version before continuing, if possible.

NOTE: If using Java 7 Update 51 or later and attempting serial and KVM session launches from the DSView™ software and the Avocent® Universal Management Gateway appliance, confirmation prompts may be presented by the Java Run-time Engine even though there are no specific security concerns listed in the details of the prompt. The launches can be continued by clicking *Cancel* or *Continue* to follow through on the launch process.

NOTE: If using Java 7 and attempting KVM or SP SSH, Telnet, or SoL session launches from the Avocent® Universal Management Gateway appliance, ensure that the TLS1.1 and TLS1.2 boxes are checked and the SSL 2.0 box is unchecked in the Advanced tab of the Java Control Panel.

NOTE: If using Java 8 update 51 or later, KVM sessions launched from the Firefox or Chrome browsers may fail. Use the Internet Explorer browser to launch KVM sessions, or downgrade to Java 8 Update 45.

NOTE: Please check the DSView™ software release notes for the latest client requirements for the DSView™ software.

After upgrading the Avocent® Universal Management Gateway appliance to version 2.9.0.25 or later, the web user interface may not open in IE8 or Firefox if the correct TLS options are not selected.

To ensure the correct TLS options are selected in IE8:

1. Select *Internet Options- Advanced*.
2. In the Settings list, click the Use TLS 1.1 and Use TLS 1.2 checkboxes.
3. Close all browser sessions.
4. Open a new session and verify that you have access to the Avocent® Universal Management Gateway appliance web interface.

To ensure the correct TLS options are selected in Firefox:

1. Enter **about:config** in your browser.
2. Enter **security.tls** in the Search bar.
3. Under the Preference Name section, ensure the security.tls.version.max Value is set to 2.
4. Under the Preference Name section, ensure the security.tls.version min Value is set to 1.
5. Close all browser sessions.
6. Open a new session and verify that you have access to the Avocent® Universal Management Gateway appliance web interface.

3. Features/Enhancements

Firmware version 3.1.2.10 is an update of the Avocent® Universal Management Gateway 2000/4000/6000 appliance firmware.

Please refer to the installer/user guide for a detailed list of features supported by the Avocent® Universal Management Gateway appliance.

New general features and resolved issues in this release include:

- The Dell iDRAC 8 and C Series service processors area now supported in the appliance and the DSView™ 4 management software.
- Service processor firmware upgrade support is added for the IBM BladeChassis Service Processor.
The firmware upgrade file can be extracted for upgrade by capturing the CNETCMUS.PKT file from the root folder within the compressed executable provided by IBM.
- A SNMP Trap MIB file is now available as a separate download to describe SNMP trap objects provided by the appliance to external SNMP trap handlers.
- Periodic polling of SEL and IML logs to generate Platform Event Traps is now configurable from 5 to 1440 minutes with a default setting of 1440 minutes.
- Smart card (CAC) support is now available for KVM sessions and is enabled by default in the appliance.
- DSView™ software authentication functionality is now restored.

Expanded Service Processor firmware version support in this release includes:

- Cisco UCS-B chassis firmware version 2.2(5a) is now supported.
- Dell M1000e chassis firmware version 5.02 is now supported.
- Dell iDRAC7 blades and monolithics firmware version 1.65.65 is now supported.
- Dell iDRAC8 blades and monolithics firmware version 2.15.10.10 is now supported.
- Dell C Series firmware version 2.53 is now supported.
- Fujitsu iRMS S2 firmware version 5.76A is now supported.
- HP BladeSystem firmware version 4.40 is now supported.
- HP iLO3 firmware version 1.85 is now supported.
- HP iLO4 firmware version 2.20 is now supported.
- IBM BladeChassis firmware version BPET66N is now supported.
- Oracle ILOM3 firmware version 3.2.4.26 is now supported.
- Sun ILOM firmware version 3.0.6.15d is now supported.

Support Issues Addressed In This Release

Issue	Resolved Issue Description
487234-472370487	The configuration file /etc/snmp/snmpd.conf can now be manually updated by admin users if needed.
487234-483042960 487234-476284389 487234-484873864	A self-signed certificate can now be added to the appliance using the Web interface.
487234-477433217 487234-475732613 487234-475659195 487234-480993709 487234-483866422	Serial sessions launched from the DSView™ 4 software where the DSView™ software user is not also defined as an Avocent® Universal Management Gateway appliance user are now functional.
487234-452356393	Cisco UCS-B data collection issues seen in some configurations are resolved.

Issue	Resolved Issue Description
487234-467083919	Shell command "hostname" functionality is restored.
487234-480631363	System time and date may now be correctly set thru the CLI.
487234-493885336 487234-484157492 487234-492028922 487234-493589520	Netboot failures from version 2.7.0.11 or older versions to version 2.9.0.25 are now resolved by netbooting to this firmware version.
487234-486246733	An active KVM session window on the local video port is no longer automatically moved to the background when the Web interface session window on the local port times out. If the KVM session window is sent to the background by the Web interface session window, please press Alt+Tab to restore the KVM session window to the foreground.
487234-484430357	KVM video when connected to a Dell M1000E chassis iKVM port is now in sync and readable.

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4. UMIQ Module Support

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NOTE: Attaching either the UMIQ-V1 or UMIQ-V2 module to a Windows target requires the USB CCID driver to be installed. If the user is prompted by the Windows New Hardware Wizard, the *Next* button should be selected.

NOTE: The Video Viewer included with the DSView™ 4 software does not support non-automatic Keyboard/Video/Mouse (KVM) video sharing when the first video session is launched. When video sharing is needed, please configure the appliance to automatically share video by navigating (within the DSView™ software) to *Unit Overview-Target Settings-KVM Settings-KVM Devices* and selecting *Automatic Sharing*.

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5. Service Processor Support

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Tested Service Processors/Servers and Firmware

Service Processor	Firmware Version
Cisco UCS-B Chassis and Blades	2.2(5a)
Cisco UCS CIMC/Monolithic (C210)	1.4(3x)
Dell C Series (PowerEdge C6220)	2.53
Dell DRAC 4 (PowerEdge 1850)	1.75 (Build 06.03)
Dell DRAC 5 (PowerEdge 2950)	1.65 (12.08.16)
Dell DRAC/MC	1.6.9

Service Processor	Firmware Version
Dell iDRAC blades (M600/M605/M805)	1.65
Dell iDRAC6 blades (M610/M710)	3.65 (if problems are seen with vKVM sessions, use 3.60)
Dell iDRAC6 monolithics (R210/R410/R710)	1.98
Dell iDRAC7 blade (M620)	1.66.65
Dell iDRAC7 monolithic (R320)	1.66.65
Dell iDRAC8 blade (M630)	2.15.10.10
Dell iDRAC8 monolithic (R430)	2.15.10.10
Dell M1000E Chassis	5.01
FSC iRMC (BX630 S2)	2.30G
FSC iRMC S2 (RX300 S4)	5.76A
HP BladeSystem	4.40
HP iLO 2 (DL580 G5)	2.27
HP iLO 3 (DL380 G7)	1.85
HP iLO 4 (DL360p Gen8)	2.20
IBM BladeCenter (E/8677)	BPET66N
IBM IMM (x3550 M2, x3650 M2)	YUOOG7C-1.47
IBM IMM2 (x3250 M4)	1A0O64N-4.55
IBM RSA II (x3550, x3850)	GGEP42A
IPMI 1.5	N/A
IPMI 2.0	N/A
Oracle ILOM3 (Sun Server X3-2)	3.2.4.26.a
SUN ALOM (Netra 240)	1.6.10
SUN ELOM (x2200 M2)	3.2
SUN ILOM (Sun Fire x4250)	3.0.6.15d

Supported Service Processor Features

Service Processor	Sensors	Power Information	Power Capping	Power Control	Alert Destination	FRU Information	SP Time	LED Status/Control	System Event Log	SOL Session	SOL Configuration	Browser UI	SSL	Telnet Session	SSH Session	Autologin SSH	vKvm	Virtual Media
IPMI 1.5	✓			✓	✓	✓	G/S	S*	✓			*	*	*	*			
IPMI 2.0	✓	G*	G*/S*	✓	✓	✓	G/S	S*	✓	✓	✓	*	*	*	*			
IDRAC 8 (13G)	✓	G	G/S	✓	✓	✓	G/S	G/S	✓	✓	✓	*	*	*	*	*	*	*
IDRAC 7 (12G)	✓	G	G/S	✓	✓	✓	G/S	G/S	✓	✓	✓	*	*	*	*	*	*	*
IDRAC 6 (11G)	✓	G*	G*/S*	✓	✓	✓	G/S	G/S	✓	✓	✓	*	*	*	*	*	*	*
C Series	✓	G*	G*	✓	✓	✓	G/S		✓	✓	✓	*	*		*	*	*	*
Dell DRAC 5	✓			✓	✓	✓	G/S	G/S	✓	✓	✓	*	*	*	*	*	✓	✓
Dell DRAC 4				✓	✓		G		✓	✓		D	*	*	*	*	D	D
HP ILO 4	✓	G	G/S	✓	✓	✓	G	G/S	✓	✓	✓	*	*		*	*	✓	✓
HP ILO3	✓	G	G/S	✓	✓	✓	G	G/S	✓	✓	✓	*	*		*	*	✓	✓
HP ILO2	✓	G		✓	✓			G/S	✓	✓		*	*	*	*	*	✓	✓
Oracle ILOM3	✓	G		✓	✓	✓	G/S	G/S	✓	✓		D	*		*	*	D	D
Sun ELOM	✓			✓	✓	✓	G/S	G/S	✓	✓	✓	D	*	*	*	*	D	D
Sun ILOM	✓	G		✓	✓	✓	G/S	G/S	✓	✓		D	*		*	*	D	D
Sun ALOM	✓			✓					✓	✓				*	*	*		
IBM IMM2	✓			✓	✓	✓	G/S	G/S	✓	✓	✓	*	*	*	*	*	*	*
IBM IMM	✓			✓		✓	G/S	G/S	✓	✓	✓	*	*	*	*	*	*	*
IBM RSA II	✓			✓			G/S	G/S	✓	*		D	*	*	*	*	D	D
Cisco UCS-C (Monolithic)	✓	G	G/S	✓	✓	✓	G/S	G/S	✓	✓	✓	*	*	*	*	*	✓	✓
FSC IRMC	✓			✓	✓	✓	G/S		✓	✓	✓	D	*	*	*	*	D	D
FSC IRMC II	✓	G*	G*/S*	✓	✓	✓	G/S	G/S	✓	✓	✓	*	*	*	*	*	✓	✓
Dell M1000E	✓	G	G/S		✓		G/S	G/S	✓			*	*	*	*	*		
Dell M1000E (Blade)		G		✓				G/S	✓	✓		†	†	†	†	✓		
Dell DRAC/MC	✓	G			✓		G/S	G/S	✓			D	*	*	*			
Dell DRAC/MC (Blade)		G		✓				G/S				D					D	D
HP BS	✓	G	G/S		✓	✓	G/S	G/S				*	*	*	*	*		
HP BS (Blade)	✓	G		✓		✓		G/S		✓		†	†	†	†			
IBM BC	✓	G			✓		G/S	G/S	✓			*	*	*	*	*		
IBM BC (Blade)	✓	G	G/S	✓				G/S		✓						†	†	†
Cisco UCS-B (Chassis)	✓	G	G			✓	G	G/S				*	*	*	*	*		

Service Processor	Sensors	Power Information	Power Capping	Power Control	Alert Destination	FRU Information	SP Time	LED Status/Control	System Event Log	SOL Session	SOL Configuration	Browser UI	SSL	Telnet Session	SSH Session	Autologin SSH	vKvm	Virtual Media
Cisco UCS-B (Blade)	✓	G	G			✓		G/S	✓	✓							✓	✓
Generic												*		*	*			

	New Feature / SP		New command support		Unsupported
✓	Supported feature	*	Supported if available	†	Features inherited from Chassis
G	Get only	S	Set only	G/S	Get and Set
D	Only via DirectCommand support in DSView™ 4 software				

General Notes and Known Issues

- Do not manage the same Service Processor from multiple Avocent® Universal Management Gateway appliances at the same time. Some Service Processors may show erratic behavior when sessions limits are exceeded, or with simultaneous access. This may manifest in the appliance Web interface as being unable to discover, manually add Service Processors or errors when viewing and managing SP settings.
- When upgrading the appliance firmware, Service Processors previously added with IPMI 2.0 profiles will not be updated, even if the Service Processor is now a newly supported profile in the upgraded Avocent® Universal Management Gateway appliance release. If the full capabilities of the specific Service Processor are needed, delete and then re-add the Service Processor to use the newly defined profile.
- When attaching a Service Processor chassis on one of the private ports on the back of the Avocent® Universal Management Gateway appliance for automatic discovery, make sure the chassis and all the blade servers in the chassis are configured for DHCP. All manageable components must be configured for DHCP for automatic discovery to work correctly.
- Some Service Processors may take several minutes to query SEL records. If the command takes more than 1 minute, the Web interface query may timeout. If this occurs, check the SEL record list via the SP's native Browser UI or CLI and empty the list.
- Service Processors that support virtual media may have problems mapping removable media devices when the client is the Avocent® Universal Management Gateway appliance local port or a PC running a Linux operating system. Potential workarounds include:
 - Make sure the Service Processor's firmware is the latest supported by the Avocent® Universal Management Gateway appliance (see table at the beginning of the Service Processor Support section in these release notes).
 - Create a CD (ISO) or disk (IMG) image file containing the data to be accessed by the server. Service Processors that do not properly mount a remote block device will usually mount an image file, even if the file is stored on that same block device.
NOTE: On the IBM BladeCenter, only ISO images map correctly.
- After many SPAccess sessions in some browsers, it is possible that all available cookies may be consumed. If the browser presents an error message that no more cookies are available, please close all open tabs and windows for that browser to clear the cookies.
- When adding a Service Processor, the alias does not accept a space. If a user needs a space in the name, after adding, they can modify the name via Administration/Targets.

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- When a Service Processor SP Console session is launched, an SoL Session Launched event is logged in the appliance event log, and in the DSView™ 4 software event log if the appliance is managed using DSView™ 4 software.
 - Power state transitions from Service Processors may not be identified and displayed in the appliance Web interface or DSView™ 4 software for up to fifteen minutes after the transition occurs.
 - The Serial-over-LAN Data Buffering Download Log button in the Web interface is currently not functional, but the log can be manually downloaded from the appliance. An example method to retrieve a log of SoL history from the appliance shell is:

```
ssh -t admin:<SP_Name>@<UMG_IP> targetexec solhistory | tee sol.log
```
 - The default state of the IPMI/DCMI privilege for IPMI-based SPs managed by the appliance is not displayed for Service Processors that were discovered prior to appliance firmware upgrade, although any Service Processor added to the appliance prior to appliance version 2.5.0.8 will use the Administrator IPMI/DCMI Privilege. Please delete and re-add the Service Processor to restore the correct display.
 - The Java 7 Update 51 has introduced strict security requirements where native Service Processor vKVM applets will fail to launch until the Service Processor supports the Java security requirements. The Service Processor vendor should provide firmware updates to resolve these issues. Until the updates are in place, consider workaround options that are consistent with your corporate security requirements.
 - When connecting a Service Processor to a private port of the Avocent® Universal Management Gateway appliance for discovery, please ensure that the Service Processor has been configured for DHCP address assignment and reset prior to connection for successful discovery. If the appliance firmware is updated by USB boot or net boot, it may be necessary to disconnect the Service Processor and power-cycle or reset it, then reconnect the Service Processor for rediscovery after the appliance is restored to normal operation. If the Service Processor is reconnected before the appliance is restored, it may be necessary to manually discover the Service Processor by defining and launching a SP discovery range including the IP address range for the private port.
 - After a Service Processor has been added or discovered into the Avocent® Universal Management Gateway appliance, dynamic data may not be available from the Web interface for up to five minutes and time-outs may be seen during this initial five minute period, depending on network delays between the Service Processor and the Avocent® Universal Management Gateway appliance.
 - When manually adding or discovering Service Processors, occasionally the Service Processor is displayed on the Administration/Targets/Service Processors page but not in the Targets page or on the Administration/Targets page of the appliance Web interface. Please close the browser and reopen it to resolve the issue.
 - The alert and optional trap indicating that the Service Processor sensors have been viewed is not currently being generated.

Service Processor Firmware Upgrade

- The firmware files from the Service Processor vendors can be extracted for upgrade as follows:
 - Cisco UCS-B: Use the ucs*.bin file provided by Cisco.
 - Cisco UCS-C: Extract the upd-pkg-<model>.cimc.full.<version>.bin file from the <model>-cimc-<version>.zip file from the <version>\cimc folder within the compressed executable provided by Cisco. For example, for version 1.4(3t), the upd-pkg-c200-m1-cimc.full.1.4.3t.bin file is extracted from the c200-m1-cimc.1.4.3t.zip file.
 - Dell DRAC5: Extract the firmimg.d5 file from the payload folder within the compressed executable provided by Dell.
 - Dell iDRAC6: Extract the firmimg.d6 file from the payload folder within the compressed executable provided by Dell.
 - Dell iDRAC7: Extract the firmimg.d7 file from the payload folder within the compressed executable provided by Dell.

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- Dell M1000e: Extract the firming-<version>-A00.cmc file from the compressed executable provided by Dell. For example, for version 4.5, the extracted file is fmrimg-4.5-A00.cmc.
 - HP iLO 2, iLO3, and iLO4: Extract the ilox_<version>.bin file from the root folder or the image folder from the compressed executable provided by HP. For example, for version 2.03 for iLO4, the extracted file is ilo4_203.bin.
 - HP BladeSystem: The upgrade file is specifically provided by HP. For example, for version 4.30, the downloaded file is hpoa430.bin.
 - IBM IMM, IMM2: Extract the *.upd from the root folder within the compressed executable provided by IBM.
 - Oracle ILOM3 Extract the *.pkg from the Model/Firmware/service-processor folder within the compressed executable provided by Oracle.
 - The current firmware version of a Service Processor will be displayed as “---“ if the version cannot be identified. Please either re-discover or delete and re-add the Service Processor to the appliance to try to resolve this issue.
 - The alert and optional trap indicating that the Service Processor is not using supported firmware does not currently include the Service Processor target name.

Cisco UCS-B Chassis and Blades

- Blade Virtual Media launches can only be supported if the blade credentials are passed from the viewer back to the Service Processor unencrypted. A second Virtual KVM / Media button is presented in the Web interface to launch the vKVM session so that a Virtual Media session can be launched from the vKVM session using the unencrypted credentials. There is a confirmation prompt to continue the launch. If the Virtual KVM button is used to launch the vKVM session, a Virtual Media session launch from that vKVM session will fail as the Virtual Media credentials will be encrypted. The DSView™ software does not support the unencrypted Virtual Media launch. Also, launching a blade vKVM through a chassis login does not support the unencrypted Virtual Media launch.
- Chassis autologin sessions are not supported.
- SoL configuration for blades is not supported.

Dell C Series

- The Dell C Series default username and password of root/root is not included in the appliance default names list. If discovery of these Service Processors is needed, please add the appropriate credentials to the default names list.
- The Dell C Series vKVM and Virtual Media applets fail when launched using Java 8. Please use Java 7 Update 71 for these operations.
- Occasionally power control failures are seen on the Dell C Series. Retry these power control operations.

Dell DRAC4 and DRAC5

- When the maximum number of sessions in DRAC4 or DRAC5 has been reached, a new AutoLogin or vKVM SPAccess session will fail. The failure can be recovered by resetting the SP via Telnet or SSH. The command for SP reset is 'racadm racreset'.
- The DRAC5 does not support use of the forward slash (“/”) in login passwords. Avoid use of the forward slash in the password definition.
- DRAC5 firmware supports only IE7 and Firefox2 browsers. SP Access sessions, especially vKVM and Virtual Media sessions may not work in newer versions of Firefox and Chrome and are not supported. SP Access to the DRAC5 is possible with IE9.

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- The Dell DRAC5 vKVM and Virtual Media applets fail when launched using Java 8 and using the VGA console of the Avocent® Universal Management Gateway appliance. Please use the remote Web interface from a Windows client running Java 7 Update 71 for these operations.
 - The DRAC5 firmware version may not be displayed properly on the Properties screen through the Web interface following an appliance upgrade.

Dell iDRAC6 Monolithics

- Sensor data is not returned from iDRAC6 monolithics when the Dell server is turned off. After the server power is restored, refresh the Targets/SP/Sensors tab display, if needed, to update the sensor display.

Dell iDRAC6 Blades

- On the M1000e, occasionally clicking the *Launch iDRAC GUI* button for one of the blades will not complete a single sign-on login due to a Dell limitation. Please log in manually in these cases.
- When M600, M605 or M805 blades are discovered by the appliance as standalone Service Processors, occasionally the SPAccess Browser and SPAccess Browser-AutoLogin buttons are not enabled in the Web interface or in the DSVIEW™ 4 software. If this occurs, please delete the Service Processor from the appliance, reset the Service Processor, and then add the Service Processor back into the appliance.
- Power information is not available from M600, M605 or M805 blades.
- The M600, M605, and M805 blade Virtual KVM Java applets now fail when launched from a client running Java 8, which means they will fail using the VGA console of the Avocent® Universal Management Gateway appliance. Please use the remote Web interface with the client running Java 7 Update 71 for these operations.
- When a Virtual KVM session is launched for a M610 and M710 blade that is discovered through the M1000e chassis, the chassis vKVM preference is not used. If the alternate viewer is preferred, please launch the desired viewer through the blade native Web interface.
- The M610 and M710 Virtual KVM Java applets may fail to launch correctly when the 3.65 Service Processor firmware is installed. If this issue happens, install the 3.60 Service Processor firmware for more reliable operation.
- Virtual Media connections to the iDRAC6 blade Service Processors are not supported from the appliance local port interface as the Service Processors do not natively support this environment.

Dell M1000e CMC

- The login process for the M1000e may take up to 20 seconds after proper username and credentials are presented, so it may take several seconds to access some features in the Avocent® Universal Management Gateway appliance Web interface. For example, displaying power information may take 15-20 seconds for an M1000e chassis.
- When connecting an M1000e chassis to a private port of the appliance, SPAccess AutoLogin sessions to blades either directly or through the chassis may intermittently abort if using FF or IE. If this is seen, try using Chrome.
- Each SPAccess session launched to blades in a blade chassis using blade-through-chassis (use of the single sign-on feature of the chassis to access the blades indirectly through the chassis) opens a separate session on the chassis, so it is possible that all active sessions for the chassis may be consumed if multiple sessions are launched in a short period of time. If this happens, please log out of active blade sessions and allow time for the chassis to time out its sessions.
- SPAccess sessions may now be successfully launched directly to Dell M610/M710 (iDRAC6) blade servers with iDRAC6 Service Processor firmware 3.50; however, sessions launched through the chassis are still failing. Please add or discover the individual iDRAC6 blades separately from the chassis (if this has not already been done), then launch SPAccess sessions directly to the iDRAC6 blade server.

Dell iDRAC7 Monolithics and Blades

- SPAccess Browser-only sessions may not work to an iDRAC7 when using the VGA Console. Manually launch a new tab and browse using (<https://<IP>>) to the SP using the Browser Tabs on the VGA Console.
- The Dell iDRAC7 Service Processor does not natively support Internet Explorer 11 without compatibility mode set in the browser. Please also set compatibility mode when SPAccess sessions are launched.

FTS iRMC

- Power data can be retrieved from FSC iRMC Service Processors only if their firmware includes the DCMI IPMI extensions (such as the Intel Node Manager).

FTS iRMC S2

- Power data can be retrieved from FSC iRMC S2 Service Processors only if their firmware includes the DCMI IPMI extensions (such as the Intel Node Manager).
- iRMC S2 SPs that use log in passwords containing the ampersand (&) character cannot be discovered or managed by the Avocent® Universal Management Gateway appliance. The SP can be discovered and managed when the login passwords do not contain the ampersand character.
- The vKVM (Video Redirection) viewer will not start if the user starts a Browser or AutoLogin session and manually browses to the Video Redirection (non-Java Web Start) in the iRMC browser UI. The user should instead use the JWS launcher for video redirection.
- The FSC iRMC S2 Service Processor only supports firmware upgrade through its native Web interface, so automated firmware upgrade through the Avocent® Universal Management Gateway appliance is not supported.

HP iLO 2

- The iLO 2 does not support use of the single or double quotation marks in login passwords. Avoid use of quotation marks in a password definition.
- SSH sessions launched to the iLO2 Service Processor are currently failing.

HP iLO 3

- Single quotation mark characters are not permitted in username and passwords entered in the SP browser UI for the iLO 3.
- The indicator blink control should not be enabled in the appliance Web interface as the iLO3 does not support this function.
- The SoL baud rate selection should not be enabled in the appliance Web interface since the iLO3 does not support this function.
- The currently supported iLO3 firmware has had compatibility issues with the Firefox browser version 33, which also impacts the SPAccess vKVM operation.

HP iLO 4

- Single quotation mark characters are not permitted in username and passwords entered in the SP Browser UI for the iLO 4.
- The indicator blink control should not be enabled in the appliance Web interface as the iLO4 does not support this function.
- The HP iLO4 Service Processor appears to have a limitation where the vKVM applet is not launched when clicking the Java launcher buttons after logging into the Service Processor directly using the Firefox browser. This function works correctly when the iLO4 is directly accessed using Internet Explorer and

Chrome browsers, and when the SPAccess vKVM launch in the Avocent® Universal Management Gateway appliance Web interface.

- The HP iLO3 and iLO4 Service Processors can connect virtual media sessions when the client is the Avocent® Universal Management Gateway appliance local port or a PC running a Linux operating system using these steps:
 - a. Select *Java IRC* within the Remote Console section.
 - b. Enter the physical USB drive name in the Local Image File textbox in the iLO3/4 UI. The drive name will be similar to “/dev/sdc1”, where the sdc1 would be replaced with the actual drive name associated with the USB slot.

NOTE: After a Virtual Media session is complete, the vKVM session window will disappear and the vKVM session must be restarted.

HP BladeSystem and Blades

- The HP Integrity blade product line is not supported as these blades use a different management interface than the ProLiant blades.
- The HP BladeSystem firmware supported by the Avocent® Universal Management Gateway appliance does not support the Chrome browser. Use Firefox or IE browsers for SP Access sessions to the BladeSystem.
- Occasionally, all HP iLO blades within a HP BladeSystem chassis are not discovered as standalone targets when adding these blades as new targets. Please attempt to discover these blades again to complete the add target operation.
- Each SPAccess session launched to blades in a blade chassis using blade-through-chassis (use of the single sign-on feature of the chassis to access the blades indirectly through the chassis) opens a separate session on the chassis, so it is possible that all active sessions for the chassis may be consumed if multiple sessions are launched in a short period of time. If this happens, please logout of active blade sessions and allow time for the chassis to timeout its sessions.

IBM RSA-II

- When a vKVM session is connected on an RSA-II server, a second login with the same user ID will cause the original vKVM session to be disconnected. This includes a second login through the Avocent® Universal Management Gateway appliance which will use the same user ID. This behavior is by design in the RSA-II servers.
- Intermittent load failures of the vKVM and Virtual Media applets on RSA-II servers have been recorded when the JRE is allowed to keep temporary files on the computer. When using these vKVM and Virtual Media applications on RSA-II servers, Avocent recommends setting the JRE to disallow temporary file storage through the Java Control Panel.
- vKVM operation to RSA-II servers is incompatible with JRE-6u13. Clients should use JRE-6u14 or later for these applications.
- The native browser UI for the IBM 3950 RSA-II server will not allow login if the password contains special characters unless the SP firmware is upgraded to A3EP40A or later.

IBM BladeCenter and Blades

- If the SP discovery feature is used to manage the IBM BladeCenter, the IBM BladeCenter needs to be configured so that its “lockout period after 5 login failures” is one minute, if this setting is consistent with corporate security requirements. This setting is located within the IBM BladeCenter web interface under *System-MM Control-Login Profiles-Global Login Settings*. Otherwise, the IBM BladeCenter must be manually added to the appliance.

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- When adding an IBM BladeCenter to an Avocent® Universal Management Gateway appliance, the user account of the IBM BladeCenter provided to the Avocent® Universal Management Gateway appliance must have its “Maximum simultaneous active sessions” set to 0.

IBM IMM Monolithics

- IMM-based monolithic servers purchased with the “IMM Standard” option do not support vKVM. The Avocent® Universal Management Gateway appliance cannot detect the “IMM Standard” configuration prior to web interface login, so the user is not notified until after the vKVM login attempt.
- The IMM Monolithic servers do not support use of the special characters ':', '&', '\', and '<' in login passwords.
- If the SP discovery feature is used to manage any type of IBM IMM or BC server, the IMM needs to be configured so that its “lockout period 5 login failures” is one minute. This setting is located within the IMM web user interface under *System -IMM Control-Login Profiles-Global Login Settings*.
- SPs may deny login requests if there are too many users/connections; this can result in *500-Internal Server Error* messages being displayed when starting SPAccess sessions to the IMM. Check if there are multiple sessions connected to the SP using the SP's native Web interface and close them. It may also be necessary to reset the SP to restore connectivity.
- Remote Control sessions launched from the IMM's native Web Page in an SPAccess Browser or AutoLogin session may fail to start using the Chrome browser. If this issue is seen, try using Firefox or IE9.

IBM IMM2 Monolithics

- SPAccess sessions to IMM2-based monolithic servers may not function correctly using the Google Chrome version 28 browser. Please upgrade the browser to version 29 or later.
- The IBM IMM2 Service Processor does not natively support Internet Explorer 11 without compatibility mode set in the browser. Please also set compatibility mode when SPAccess sessions are launched.
- When logging out of a SPAccess session to a IMM2-based server, all page elements are not downloaded. Refreshing the browser window will restore all page elements.

Oracle ILOM3 Monolithics

- The Oracle ILOM3 can only be managed when connected to a public interface of the Avocent® Universal Management Gateway appliance.

Sun ALOM, ELOM, ILOM

- ILOM servers must have their http service running to be properly discovered using the SP Auto-Discovery or IP Discovery features. If the http server is not running, the ILOM must be added to the Avocent® Universal Management Gateway appliance using the Manual SP Add feature.
- ALOM servers lack a management web interface natively. The Avocent® Universal Management Gateway appliance does not support custom implementations of ALOM that include a Web interface.
- ELOM and ALOM SPs that use login passwords containing special characters cannot be discovered or managed by the Avocent® Universal Management Gateway appliance. These SPs can be discovered and managed when the login passwords do not contain special characters.

IPMI 2.0

- SP Access Browser sessions to LO100 servers added to the appliance with IPMI 2.0 profiles are not supported.

6. Known Issues

Trellis™ Platform Integration

- When the Avocent® Universal Management Gateway appliance is enrolled in the Trellis™ platform, the SNMP notification destination IP address must be set to the appliance IP address assigned to eth0 and the community must be set to “public” on the Administration/Monitoring/Notifications Destinations screen of the appliance Web interface.

Upgrading

- KVM sessions may fail after the upgrade of an appliance that had been previously added to the DSView™ management software prior to the upgrade. Resyncing the Avocent® Universal Management Gateway appliance in question will restore KVM functionality.
- An appliance firmware version that is older than the currently installed appliance firmware should not be used in an upgrade operation. Please use the rollback operation to revert to an older firmware version.

Backup/Restore/Restore to Factory Defaults

- The event log and any user files in the /var/home and /download directories are not included in the image backup, so please export and save the events and any user files, if needed, when performing a backup operation.

Command Line Interface (CLI)

- Event syslog enable/disable configuration using the command line interface is currently not functional. Please use the appliance Web interface for this function.
- When disabling DSView™ software access, please reboot the appliance after the operation to ensure that all active connections to the DSView™ software are terminated.
- When enabling DSView™ software access, please delete the appliance and re-add it to the DSView™ software to restore secure mode operation.

Local Serial Console

- The local serial console does not accept the '@' and '#' characters. Please avoid using these characters in passwords or other critical functions that would be needed through the local serial console.

VGA Console

NOTE: Enabling the URL bar will allow anyone with access to the VGA console to use the browser.

- Sometimes following an upgrade to this appliance firmware version, the VGA console will display an Adobe Flash update prompt screen. Choose *Active Adobe Flash* and then *Allow and remember* to continue past this screen, and this prompt will not appear again.
- When rebooting the system, there is a small chance that the *Restarting system* message followed by machine restart will appear on the VGA Console. If this occurs, a power cycle of the Avocent® Universal Management Gateway appliance will be needed to recover the KVM appliance.
- The VGA console does not support the Avocent® Universal Management Gateway appliance firmware upgrade feature. You can, however, use the firmware upgrade feature via the Avocent® Universal Management Gateway appliance Command Line Interface (CLI) console by logging in as an admin user and selecting *Update Firmware* from the menu.
- If the user attempts to log in to the appliance with an expired account when the language is set to non-US English, an *Account has Expired* error message is not displayed.

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- If the KVM session window is sent to the background by the Web interface session window, please press **Alt+Tab** to restore the KVM session window to the foreground.

Authentication

NOTE: LDAP authentication is not functional in this release. Please use appliance firmware 2.8.1.13 for this functionality.

SSH connections can be made to disabled Serial Ports; however, the connection to the Serial Target itself will not be established.

Networking

- You cannot set a bridged interface as the default gateway. Likewise, if you add the default gateway to a bridged connection, you will lose your default gateway.
- The `fwnat-alias.sh` script is currently failing to complete its operation. Use appliance firmware 2.8.1.13 for this feature.
- If the appliance was configured to use a static IP address prior to an appliance firmware upgrade, then the DNS settings are not retained after the upgrade is complete. Re-enter the DNS settings manually as a workaround.
- On the initial attempt to set the first valid firewall policy, an *Unknown Policy error occurred* error may appear, but the policy is actually defined. This error does not reoccur on subsequent valid policy definitions.
- When changing the DHCP server for private interfaces to be internal or external from the Administration/Targets/Port Configuration/DHCP Settings screen of the Web interface, network communication to the IP-based targets may be lost as the IP-based targets will retain the assigned network addresses from the previous DHCP server. To restore communication, reset the targets or disconnect and then reconnect the targets to the private port of the appliance so that the targets will request a new IP address from the new DHCP server.

Web Interface

- Occasionally the Web interface may stop responding and the cursor will continuously spin when hovering over the Web interface. If this occurs, please refresh or reload the browser tab to continue.
- Occasionally when multiple clients are actively logged into the Avocent® Universal Management Gateway appliance, an exception error may be seen on one of the clients. Select *OK* to bypass the error and continue the session.
- The contents of the Targets page are not always automatically refreshed when running the Firefox browser. If this occurs, please manually refresh or use the Internet Explorer or Chrome browsers.
- If the log detail has been changed to Trace, and another user with the same username logs in and back out, the debug level may revert back to default.
- The USB ports cannot currently be disabled using the Web interface.
- The Avocent® Universal Management Gateway appliance uses a polling mechanism to determine the Service Processor power state. Due to this, there will likely be a delay between when the state changes and the Avocent® Universal Management Gateway appliance updates its user interface.
- A Server Processor's status may remain as *Powered On* if that Service Processor has lost power. If there is a concern about the power status, perform a ping test against the IP address of the Service Processor to validate.
- The default login page of a Web interface session does not match the default language setting of the browser and must be set manually when using the Internet Explorer browser.
- The Image Dump progress popup message remains after the Image Dump is completed and must be closed manually.
- Some columns, by default, are not wide enough to accept the maximum number of characters the entries

in the columns can have. In these cases, the columns can be manually adjusted in width.

- When performing a Factory Reset on a UMIQ module, an exception error may be displayed.
- The event logs may become excessively large over time. To improve performance, please export and save the event logs, then clear all entries periodically.
- An incorrect error message is displayed when an invalid DHCP range is entered in the Dynamic Ranges table of the /Administration/Targets/Port Configuration/DHCP Settings screen.
- The Avocent® Universal Management Gateway 2000 appliance does not update the Event Viewer Log page when switching to a different page and back to the Event Viewer Log page. The Event Viewer Log page will reload when the *Next* button is clicked to advance to the next page of Event Log, then the *Prev* button is clicked to return to the original Event Log page.
- The Avocent® Universal Management Gateway 2000 appliance does not currently support filtering of events shown on the Event Viewer Log pages. The events can be filtered by exporting the Event Log and then filtering the events using a separate tool.
- If the Web browser cache history is cleared during an active Web interface session, an HTTP request error will occur on the next Web interface screen refresh. If this occurs, please close the browser window and log in to the appliance Web interface again.
- Browsing in the Web interface consumes memory in the client browser that is not returned. Please close the browser session to recover client memory.
- The network port used for the Web interface cannot be reconfigured from port 443.
- Web interface sessions cannot be established using the Internet Explorer 8.0.6001.18702 (Cypher Strength 128-bit). Please upgrade to Internet Explorer 8.0.7601.17514 (Cypher Strength 256-bit), or a newer version of Internet Explorer to support this functionality. See section 2 in these release notes for instructions to ensure the correct TLS options are selected.
- If the appliance is configured for an IPv6 network, Web interface sessions cannot be established using the Firefox browser version 25 or later. Please use an alternate browser to access the appliance.
- Web interface sessions cannot be established on some clients using Firefox browser version 31. Please browse to the About: Support page and reset Firefox, then try to establish the session again after the browser restarts.
- Reconfiguration of Notification destinations or other notification configurations do not take effect until after the appliance is rebooted.

Target Discovery and Operations

- The initial Service Processor Discovery operation may stop before completion of the search of the specified range. Please restart the search range if this occurs.
- After UMIQ modules are added to a Target Group, a view of the members of the Target Group will show all UMIQ modules in the appliance included in the Target Group, even though only the configured subset of the UMIQ modules are actually in the Target Group.
- Attempts to assign access to more than 30 targets to a User Group in one operation may fail. Please limit the number of targets assigned in one operation.

Asset Location

Due to a Methode CCM limitation, the CCM must be power-cycled when it is disconnected from one Avocent® Universal Management Gateway appliance before it is reconnected to another Avocent® Universal Management Gateway appliance.

KVM/UMIQ Module

- If a KVM session is canceled prior to being completely launched and a second KVM session is launched to the same target, a *Path Blocked -- wait a moment and try again* error may be seen. Please wait up to 150 seconds before repeating the launch. This delay can be avoided by allowing a session to completely launch prior to termination.

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- When logged into the appliance Web interface using the Internet Explorer browser, if a KVM session is launched, followed by a serial session, followed by an additional KVM session, the second and subsequent KVM launches will not open the KVM viewer. Launch another instance of the appliance Web interface to launch another KVM session.
 - If UMIQ module targets are lost after rebooting an appliance, it is suggested to disable the Automatically Delete Offline Modules setting in the Admin-Targets-KVM Management-Default Settings page.
 - It may be necessary to enable then re-disable mouse acceleration before the mouse pointer can be synchronized with a Linux machine.
 - The [Windows] key is passed through to the target even when the keyboard pass through is disabled.
 - For Suse 11 targets, the mouse will not synchronize or align.
 - For Red Hat 6.2 targets, the dual mouse feature is not functional until after the target is rebooted.
 - The following settings are recommended on the server to optimize local mouse alignment:
 - Windows: Initial Setting- 50% Speed. No Acceleration
 - Linux: Uncheck Enable Absolute Synchronization in Tools/Session Options/Mouse/Mouse Synchronization.
 - Macintosh: Uncheck Enable Absolute Synchronization in Session Options/Mouse/Mouse Synchronization.

NOTE: Refer to the Mouse and Pointer Settings Technical Bulletin found online with the other appliance user manuals and tech bulletins for detailed help. This technical bulletin can be found at http://pcs.mktg.avocent.com/@_@content/manual/590809644b%283%29.pdf.

- Mouse synchronization may be lost after switching to full screen mode in KVM sessions launched to Linux clients. Please refer to the Mouse and Pointer Settings Technical Bulletin found online (see previously listed link) for detailed help.
- Mouse synchronization may be lost after rolling the mouse over the Stat window. Please realign the local cursor to recover synchronization.
- Mouse synchronization may be lost after rebooting the server. Please realign the local cursor to recover synchronization.
- A target computer with a video resolution less than 1400 x 900 and a screen refresh of 70 Hz cannot be scaled to a higher KVM resolution.
- Selecting a higher resolution display will produce slower sessions and may cause mouse response to be jumpy. Reducing the screen resolution should improve mouse stability.
- If a UMIQ module is disconnected from the appliance while a KVM session using that UMIQ module is active, the session will not be removed from the Active Sessions list until the *Delete Offline* configuration is selected for the given UMIQ module.
- When the UMIQ module is connected to a Dell M1000e chassis iKVM port, the mouse clicks may not always be passed to the Avocent® OSCAR™ graphical user interface. Please use the hotkeys and keyboard to operate the OSD if the mouse interface is not functional.
- When using the DSView™ 4 software and moving a UMIQ module from one port to another port on the Avocent® Universal Management Gateway appliance, the appliance must be resynced in the DSView™ 4 software to correctly update the port. Also, if the *Automatically Delete Offline Modules* configuration is selected, delay at least ten seconds between disconnecting the UMIQ module from the appliance before reconnecting it to a different port.
- Event time tags for UMIQ module-related events in the Avocent® Universal Management Gateway appliance Web interface event log are not adjusted for UTC and are not displayed in sync with other Web interface event log events.
- Occasionally, the port number of a UMIQ module is not updated in the Avocent® Universal Management Gateway appliance Web interface when moving the UMIQ module from one port or the other. The UMIQ module may need to be completely unplugged from the appliance and server, then reattached.

If DSView™ 4 software is managing the appliance, the appliance would need to be resynced in DSView™ 4 software.

KVM Viewer

- Within a Virtual Media session, an error is displayed when ejecting a mapped thumb drive from the target and the drive does not fully unmap. The mapped drive no longer appears in the details section and it is disconnected from the target, but the drive is still checked as mapped. Please restart the Virtual Media session to recover.
- If problems occur during ActiveX viewer installation, please launch the Internet Browser running as administrator, then attempt to install the viewer by launching a KVM session.
- Macro changes made while in Full Screen mode are currently lost after switching to Normal view mode then switching back to Full Screen mode.
- On a Macintosh OS, the Virtual Media tool will crash with a *The Virtual Media native library cannot be loaded* error.
- On a Macintosh OS, the Manual Video Adjust and Session Options do not work if the KVM session is launched from the Web interface. They do work, however, if the KVM session is launched from the DSView™ software.
- Virtual Media sessions do not connect to a CD/DVD drive on a target running the Sun operating system. Please use a thumb drive on the target if needed.
- The Pass all keystrokes to target setting is enabled by default and is re-enabled at the beginning of every new viewer session.
- Intermittently, option selection in the viewer is not stored. Please re-select the option as needed.
- Occasionally, the Scaling options under the View menu of the KVM Viewer are not visible after a KVM session is launched.

Serial Targets including Terminal Servers

- The bit rate for serial ports has been successfully tested at 230.4 Kbps, but there is a potential limitation where only 115.2 Kbps may be supported. If there is a problem using 230.4 Kbps, please reconfigure the appliance and serial target to 115.2 Kbps.
- The port signals within the Administration/Targets/Serial Management/Serial Ports screen are currently not displayed.
- Only one Terminal Server can be deleted from the appliance at a time. If multiple Terminal Servers are deleted in a single operation, exceptions may be seen in the Web interface and an appliance reboot may be required for recovery.
- Logging of virtual serial port sessions is currently not supported.
- If virtual serial ports are enabled in a Terminal Server after the Terminal Server has been added to the appliance, sessions to the newly enabled virtual serial ports will fail. Please delete and re-add the Terminal Server to the appliance to avoid this issue.
- Virtual serial ports are always displayed as port 0 within a Terminal Server.
- Session status for sessions launched to Virtual Serial Ports through the Web interface is always displayed as idle. Launch sessions using DSView™ if correct status is needed.

Power Distribution Unit (PDU)

- If PDUs are not responding after an appliance firmware upgrade, please reboot the appliance to restore proper operation.
- If a PDU has an issue where it is not responding to the appliance, the non-responsive status is not shown in the outlets of the PDU within the appliance Web interface or DSView™ 4 software.
- The firmware update of serial PDUs from the appliance Web interface is currently not functional. Upgrade these PDUs using direct connection as needed.

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- An auto detected Serial PDU port cannot currently be reconfigured as a Serial Console port.
 - When a network PDU is added to the Avocent® Universal Management Gateway appliance, its port may have an incorrect value for the port number in the associated event message.
 - If the Energy Consumption start time is unknown, a *01/01/70 12:00 AM* value will be displayed.
 - Before adding the Liebert® MPH/MPX PDU to the Avocent® Universal Management Gateway appliance for power control or configuration, please ensure that the PDU has a unique community name with RW permissions. The Liebert® MPH/MPX PDU will allow duplicate community names to be configured with RO and RW permissions, but then will only allow RO operations.
 - If both serially-connected (such as the Avocent Power Management PM 1000, PM 2000 and PM 3000 Power Distribution Units) and IP-connected (such as Liebert® MPH/MPX) PDUs are connected to the Avocent® Universal Management Gateway appliance, a reboot of one of the serially-connected PDUs will cause the rebooted PDU to be displayed with a duplicate name of one of the IP-connected PDUs. Restarting the Web interface session will restore the display of the correct name to the serially-connected PDU.
 - Power cycle operations to Liebert® PDU outlets will always fail when launched through the command-line interface and will occasionally fail when launched through the Web interface. Please launch the on/off operations separately to achieve the cycle operation.
 - The SNMP community settings for each Liebert® MPH/MPX PDU shown on the Administration/Targets/Rack PDU/Network PDU tab will be displayed as *LiebertEM* name and *RO* type following a reboot of the appliance.
 - The default name assigned to a Liebert® MPH2 or MPX2 PDU does not follow the default naming convention to prefix the name with the appliance MAC address. When the appliance is used with the DSView™ software and there are multiple appliances managing the same PDU target, each instance of that same PDU target must be assigned a unique name.
 - The Web interface display for Liebert® MPH2 or MPX2 PDU Phases does not include voltage, power consumption, apparent power or power factor.
 - The Web interface display for Liebert® MPH2 or MPX2 PDU Branches always displays zero for power consumption, apparent power and power factor.
 - The Web interface setting of outlet thresholds for Liebert® MPH2 or MPX2 PDUs is currently not functional. Please launch a Browser session to the native Liebert® MPH2 or MPX2 PDU Web interface to set outlet thresholds.
 - PDUs may be deleted from the Avocent® Universal Management Gateway 2000 appliance only when the PDU is in a No Response state. When the PDU is deleted, all its outlets are also deleted. Individual outlets cannot be deleted from the appliance.
 - When connecting the Liebert® MPH/MPX PDU to a private port of the Avocent® Universal Management Gateway appliance for discovery, please ensure that the PDU is power-cycled or reset after connection so that the appliance can be assigned a network address through DHCP to the PDU. If the appliance firmware is updated by USB boot or net boot, please power-cycle or reset the PDU after the appliance is restored to normal operation. If the PDU is power-cycled or reset before the appliance is restored, it may be necessary to manually discover the PDU by defining and launching a SP discovery range including the IP address range for the private port.
 - The Avocent® Universal Management Gateway appliance can support up to 32 total network-based PDUs (such as the Liebert® MPH/MPX/MPH2/MPX2) in the Avocent® Universal Management Gateway 2000 appliance, 64 total network-based PDUs in the Avocent® Universal Management Gateway 4000 appliance, and 128 total network-based PDUs in the Avocent® Universal Management Gateway 6000 appliance. Up to four PDUs may be daisy-chained per appliance port.
 - Target state transition events may be generated when a PDU is added to the appliance.
 - The Liebert® MPH/MPX/MPH2/MPX2 PDUs cannot currently be renamed.

Environmental Sensors

- Humidity sensors may fail to be detected.

- The Digital Output relays DO1 and DO2 as defined on the back panel of the appliance and in the configuration settings in the Web interface are reversed.
- The Avocent PM 1000/2000/3000 PDU internal temperature sensor is not displayed in the Web interface with the environmental sensors under the Sensors tab. Please read the internal sensor information from Targets/PDU/Properties.

7. Compatibility with the *Trellis*™ Real-time Infrastructure Optimization Platform

Firmware version 3.1.2.10 is an update of the Avocent® Universal Management Gateway 2000/4000/6000 appliance firmware.

This version includes the *Trellis*™ Intelligence Engine version 3.4.3.31 for use with the *Trellis*™ real-time infrastructure optimization platform, version 3.4.1. This appliance firmware version is also compatible with *Trellis*™ platform versions 3.4 and 3.3.

New General Features and Resolved Issues in This Release

Issue	Resolved Issue Description
487234-489256674	Issues related to dynamic indexing of targets managed using SNMP are resolved.
487234-490663083	Issues while communicating to the <i>Trellis</i> ™ platform using FQDN are resolved.
487234-491993112	Added support in Element Library Framework to handle slow responding devices.
n/a	Enhanced Element Library Framework to handle large number of devices by forking Element Library Framework process to allow handling large number of devices and consistent data collection across all devices.
n/a	Added utility to recover SNMPv3 trap configuration.
n/a	Added support in Element Library Framework to handle slow responding devices.
n/a	Feature Enhancement for handling batch aggregation processing for optimizing transaction processing.

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