



*Powering Business Worldwide*

# Visual Capacity Optimization Manager

*Release Notes*

Release 6.2.0

January 2020

## Eaton

[www.eaton.com/powerquality](http://www.eaton.com/powerquality)

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## Contact Eaton Support

For your convenience, Eaton provides support to assist you with questions on installation, operation and troubleshooting. Please contact us at:

[softwareconnectivityts@eaton.com](mailto:softwareconnectivityts@eaton.com)

800-356-5737 option 2, option 5, option 1

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## 1. 1 Introduction

### 1.1. About This Guide

This guide provides detailed information related to the features and enhancements provided in

### 1.2. Audience

This guide is intended for administrators who are responsible for installing, licensing, and configuring the application.

## 2. Release Details

This version of the product is available in both a full installation version and as an upgrade patch to the previous release. Please note the details in the table below for each variation of the installation.

### 2.1. Upgrade Patch

The following details apply to the upgrade patch version of the installation which is applied to an existing instance of the application only. To perform a new install of the application please view the New Installation section of this document.

#### 2.1.1. Upgrade Patch Details

Item	Description
Name of Install File	VCOMPatch-191030-C-6.02.00000-20010904-2e45acea76ebe29970955cf7a6243239.tar
Type of Install File	Upgrade
MD5 Checksum	2e45acea76ebe29970955cf7a6243239
Release Date	January 2020
Version Affected	6.1.1
Version of 3D Client Required	6.2.0

#### 2.1.2. Upgrade Patch Prerequisites

The following items are required to complete a successful installation of this release.

**Please ensure all pre-requisites are met prior to starting any installations of the application.**

- **WARNING: Before installing this patch, please ensure that ALL VCOM servers have at least one known-good and recent backup and/or VM snapshot to rollback to if necessary.**
- All VCOM servers must have version affected (as noted above) installed
  - Version number is visible on the Web Interface link ribbon bar on the upper left or
  - On the server run: `cat /opt/VDC/VERSION`
- **WARNING: If the VCOM system consists of multiple servers, it is vital to install this patch in the following order:**
  - Master Database Server first
  - Then the Master Server
  - Finally, all the Probe Servers
  - If the Master Database Server and Master Server reside on the same server, apply this patch on that server first
- Must have SSH access via a tool like PuTTY to gain command line access on the server
- Must have access to the systems using the root user account
- Root user must use BASH shell
- Must have the ability to transfer the patch file to the server (example: WinSCP)

- Confirm the integrity of the patch transfer by comparing the MD5 checksum located in the Patch Details above:
  - After moving the file from your local system to the application server run:  
`md5sum PATCH_NAME.tar.bz2`

### 2.1.3. Upgrade Patch Installation Instructions

Follow the instructions below to successfully apply this version of the product to your existing application servers.

**WARNING you will be presented with a similar message at the beginning of the installation. Please ensure that the conditions are met before starting the install.**

Before installing this patch, please ensure that ALL VDC servers have at least one known-good and recent backup and/or VM snapshot to rollback to if necessary. Is such a known-good and recent backup and/or VM snapshot available for EVERY VDC server? (YES/NO): YES

If the VDC system consists of multiple servers, it is vital to install this patch on the Master Database Server first, then the Master Server, finally all the Probe Servers. If the Master Database Server and Master Server reside on the same server, apply this patch on that server first. Is this required installation sequence being followed correctly? (YES/NO): YES

- Upload PATCH\_NAME.tar.bz2 onto all application servers under /tmp/
- Login to all application servers as root user
- Extract the patch installer by running:
  - `tar -C /opt/VDC -xvf /tmp/PATCH_NAME.tar.bz2`
- Apply the patch by running:
  - `/opt/VDC/patch/PATCH_NAME/install -u {certified | customized | locked}`

The -u option is required and will control how updates to the model library will be processed. Most upgrade packages include updates to existing models and creation of new models in the model database. Select one of the three options for managing this model update like in the example below:

```
/opt/VDC/patch/PATCH_NAME/install -u certified
```

- Certified – The application will receive the most up to date model information for models included in the upgrade file. For existing models, changes to the model will be overwritten with the configurations included in the patch. If the model does not exist, then it will be created.
- Customized – If the model exists in the application it will NOT be updated with the information contained in the upgrade file. If the model does not exist, then it will be created.
- Locked – The model information will NOT be processed into the application as part of the upgrade process.
- Monitoring Templates - If you have modified any of the system monitoring templates, by adding OIDs, etc. those changes will be kept by default during the upgrade.

- To RESET the system monitoring templates back to the original system settings you must use the -P option. For example:  
`/opt/VDC/patch/PATCH_NAME/install -P -u certified`
- Clear browser history after installation before launching a web session to log into the new version of the application.

## 2.2. New Installation

### 2.2.1. New Installation Details

Item	Description
Name of Install File	xxxxx
Type of Install File	Full Install
MD5 Checksum	xxxxx
Release Date	xxx
Version Affected	Not Applicable – New Install
Version of 3D Client Required	Version 6.2.0

### 2.2.2. Prerequisites & Installation Instructions

Please consult the application Server OS & Installation Guide for details on the full installation prerequisites and installation steps.



## 3. 6.2.0 New Features and Enhancements

The 6.2.0 release represents a continuation of the 6.x release plan which focuses on the creation of true HTML5 web support for all of the features in the application. This effort includes the conversion of Flash features to HTML5 from the prior versions as well as the creation of new HTML5 web features which have historically been isolated to the 3D client interface.

The following list of features, enhancements and bug fixes are included in the 6.2.0 version of the product. The prefix for each item included in this release will indicate if the enhancement is included in the Web interface, 3D client interface or Both interfaces. If no prefix is listed then the enhancement is a general enhancement to the application without an update to the user interface. Items listed with a reference in [] were originated in the Customer Support Portal. The number in [] is a reference to the Support Portal Ticket ID. Please refer to the User Guide documentation for the Web Interface and 3D client for additional details on these features.

### 3.1. New Features Table

ID	Description
3568	Web: All Flash Features have been Converted to HTML5
2597	Web: Auto Plan Ignores Blanking Panels
2741	Web: IP Address included in Racks Filter Tool for Rack and Device Lists
2865	Web: Service Now Integration has been Enhanced
2964	Web: Rotate 180 Degree for devices Mounted on back of racks
3001	Web: Rack Manager displays multiple racks for adding and moving devices
3041	Both: [FTL-194-88095] Cable Types added to SFP port mapping
3063	Clear Trap Alarm in Alarm Panel
3098	Web: [DRY-280-51151] Cannot add sleds to rear of storage array
3164	Rack PDU Rotate
3239	Web: [OQB-166-85002] Project Approval Notification Enhanced
3278	Web: Calendar Log Enhancement to include import information
3324	Web: Rack mounted devices can be flipped horizontally
3330	Both: [QUN-846-27941] Messages for Unreachable points on device are consolidated
3524	Both: [BHE-635-68211]: VCOM monitor Slony process error
3525	Web: Layer Replay
3535	Web: [NWK-332-23212] Discovery of Liebert UPS and Eaton UPS
3536	Web: Updated Trap XUPS Monitoring Template
3537	Web: [VYU-953-97922] New Rack Space Report
3538	Web: [UPT-413-95498]: SNMP Polling and SNMP Trap Community Strings Configured Independently
3541	Web: [LGS-639-42481] Discovery of Vertiv, Giest, Avocent and APC Rack PDUs
3542	3D: [UVZ-854-11860] Rack Summary Temperature and Humidity show 0 if there is no monitored value
3544	Web: [FUB-544-98371] ServerAdmin password can be changed in GUI
3546	Web: Improvements to APC PDU Dashboard

3548	Export Racks PDF on floor view
3564	Web: [DEQ-306-37318] Power Assignment to the Racks
3565	3D: [FBJ-953-10624] Show Attribute on Data Plate
3589	API: Calls added to retrieve space, environment power and asset information for a given company
3591	Real time data table supports tabular data points
3595	Both: [EGQ-640-36776] Time Zone errors
3600	Both: [ATT-694-64647] Fix corrupt system library
3601	3D: [TWR-723-78272] Error when Decommissioning Rack on Rack View
3603	Web: [PSC-787-81059 13] Export Device.xlsx error opening file
3604	Web: [EDG-106-98496] User cannot manually add a device to a rack in a move Work Order with Pending Deploy status
3605	3D: [MJD-970-25278] In Project Wizard unable to set location to planned racks
3607	Web: [FJU-392-53000] APC Rack PDUs - Dashboard not working for outlets
3611	[LIY-182-78363] Thermal map
3612	Web: [YKC-201-14688] Error when trying to show hidden devices
3615	[QUA-271-32872] PUE Calculation Issue

## 3.2. New Features List

- **3568 Web: All Flash Features have been Converted to HTML5**

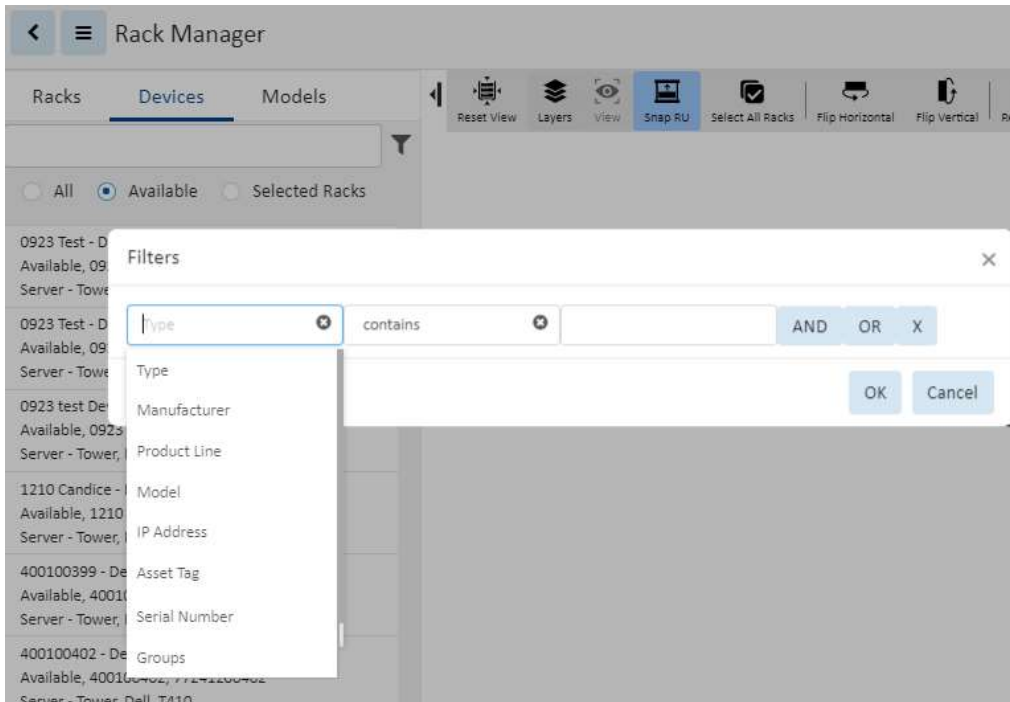
The features listed were the last of the Flash interface and have all been converted to HTML5. All Flash has been eliminated from the web interface. These features have been thoroughly documented in the *Web Interface Users Guide*.

- Rack Manager (Racks Menu Group > Rack Manager Menu Item)
- Reports (Data Analysis Menu Group > Reports Menu Item)
- Firmware (Devices Menu Group > Manage Menu Item)
- Circuit Trace, Power Path and Network Path (Select Device link > Device Central > Ports Function Tile)
- ITSM Integration (Integrations Menu Group > ITSM Integration Menu Item)
- Camera Studio (Integrations Menu Group > Camera Studio)
- Capacity Planner (Data Analysis Menu Group > Capacity Plans)

- **2597 Web: Auto Plan Ignores Blanking Panels**

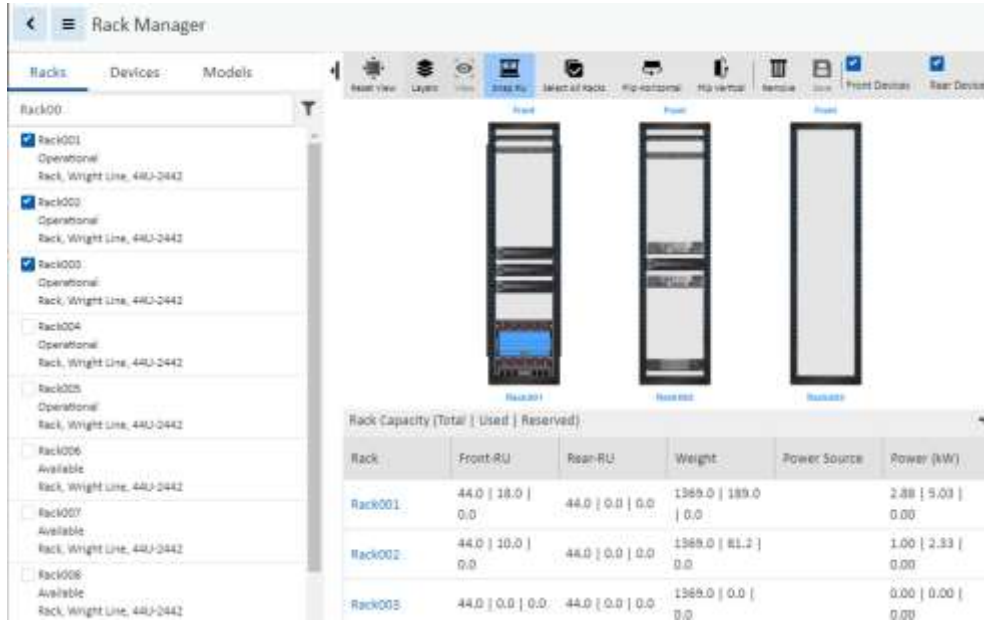
The project auto plan feature ignores blanking panels when determining if space is available for device placement.

- 2741 Web: IP Address included in Racks Filter Tool for Rack and Device Lists**  
 The filter tool in Rack Manager's Rack and Device lists now includes IP Address.

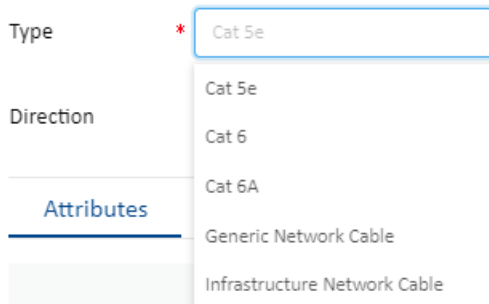


- 2865 Web: Service Now Integration has been Enhanced**  
 In addition to the conversion of ITSM Integration to HTML5 the specific Service Now integration allows for importing and exporting of the model and attribute mapping lists using spreadsheets. The device location information in the application is available in a series of fields that can be mapped to fields in Service Now.
- 2964 Web: Rotate 180 Degree for devices Mounted on back of racks**  
 Devices mounted on the rear of racks have the option to be rotated 180 degrees.

- **3001 Web: Rack Manager displays multiple racks for adding and moving devices**  
Users can view and work with multiple racks simultaneously in rack manager.

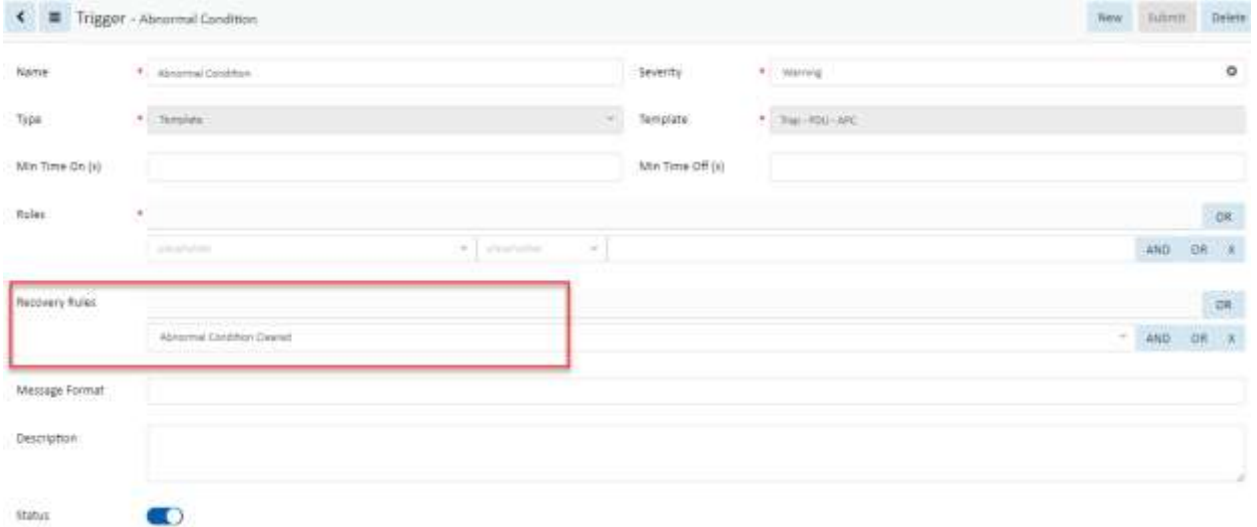


- **3041 Both: [FTL-194-88095] Cable Types added to SFP port mapping**  
Cat 5e, Cat 6 and Cat 6a have been added to the list of cable types for SFP ports.



- **3063 Web: Clear Trap Alarm in Alarm Panel**

Triggers now have a Recovery Rule where you can specify another trigger to clear the current trigger. The trigger shown here goes into a warning state when the trap from the device indicates an abnormal condition. When the device sends another trap indicating that the abnormal condition has been cleared the alarm will be cleared.



The screenshot shows a web interface for configuring a trigger. The title is "Trigger - Abnormal Condition". There are buttons for "New", "Submit", and "Delete" in the top right. The form includes the following fields:

- Name:** Abnormal Condition
- Severity:** Warning
- Type:** Templates
- Template:** Trap - PDU - APC
- Min Time On (s):** (empty)
- Min Time Off (s):** (empty)
- Rules:** (empty)
- Recovery Rules:** Abnormal Condition Cleared (highlighted with a red box)
- Message Format:** (empty)
- Description:** (empty)
- Status:** (checked)

- **3098 Both: [DRY-280-51151]: Web Interface: Cannot add sleds to rear of storage array**

Issue has been fixed and users can now add sleds to the rear of storage arrays.

- **3164 Web: Rack PDU Rotate**

A Rack PDU can be rotated when being placed on a rack in the web interface.

- **3239 Web: [OQB-166-85002] Project Approval Notification Enhanced**

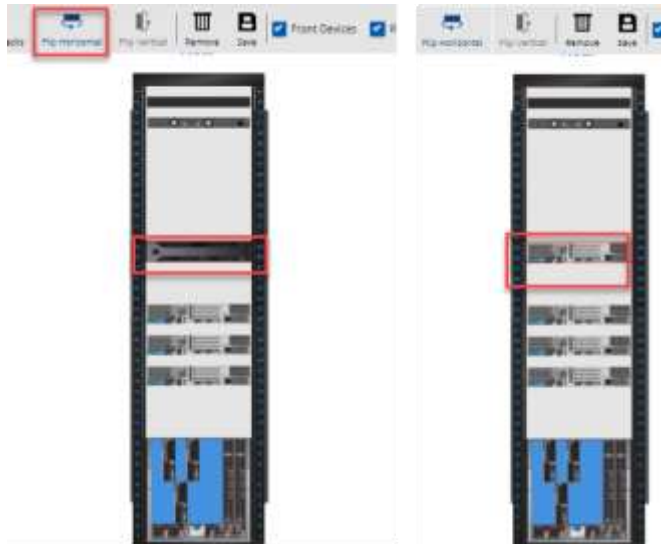
Refer to the Web Interface User Guide for project management details.

- **3278 Web: Calendar Log Enhancement to include import information**

Calendar now include import file name when logging import activity.

- **3324 Web: Rack mounted devices can be flipped horizontally**

Devices in rack now have Flip Horizontal option. This means that a rear mounted device can be flipped to face the front of the rack and front mounted device can be flipped to face the back.



- **3330 Both: [QUN-846-27941] Messages for Unreachable points on device are consolidated**

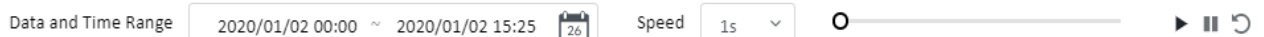
Previously users would receive a notification for each unreachable data point on a monitored device. Now when a device shuts off or drops from the network and becomes unreachable a single email stating "Some or all of the data points are Unreachable" for the device.

- **3524 Both: [BHE-635-68211]: VCOM monitor Slony process error**

Previously vdcmon would send an error report for the Slony process. Slony is no longer used by the application so the error check has been removed.

- **3525 Web: Layer Replay**

Some layers within a floor's layer views have replay capability where you can view the changes to the layer over time (For example: Any of the Thermal Environment Layers). When available the player is visible and allows for a date and time range, video speed, timeline, video play, pause and replay buttons. This can be seen in the thermal and humidity maps.



- **3535 Web: [NWK-332-23212] Discovery of Liebert UPS and Eaton UPS**

Auto discovery functionality added for several UPS' including Emerson/Liebert Battery String U36BP500WXBNUUU, Vertiv GXT5-1000LVRT2UXL, Vertiv PS15-1500RT120 and Eaton 5PX1500RT.

- **3536 Web: Updated Trap XUPS Monitoring Template**

The attributes and OIDs in the system pre-defined monitoring template Trap XUPS have been updated.

- **3537 Both: [VYU-953-97922] New Rack Space Report**

Rack Space

Visual Data Center  
OPI

Location Num(s): 3 (F1, F1, BU)(DC, F1, BU)(AA, F1, BU) by location

Location: SH, BU, F1

Area	Total Rack Space (m <sup>2</sup> )	Total # of Racks	Used Rack Space (m <sup>2</sup> )	Install # of Racks	Remaining Rack Space (m <sup>2</sup> )	Remaining # of Racks
DC	28.80	40	17.93	25	2.24	3
AA	7.20	10	0.00	0	7.20	10
Total	36.00	50	17.93	25	9.44	13

- **3538 Web: [UPT-413-95498]: SNMP Polling and SNMP Trap Community Strings Configured Independently**

The SNMP Polling and SNMP Trap community strings can now be configured separately so there is a different community string for each. The Trap Community string is the last attribute in the configuration list.

The screenshot shows a configuration page for SNMP. The 'Trap Community' field at the bottom is highlighted with a red box. Other fields include Port (881), Protocol (UDP), Version (SNMP\_VERSION\_1), Get Community (\*\*\*\*\*), Set Community (\*\*\*\*\*), Security Level (authNoPriv), User Name, Password, Auth Protocol (SHA), Context, Privacy Protocol (aes), Privacy Password, and Unit (1).

- **3541 Web: [LGS-639-42481] Discovery of Vertiv, Giest, Avocent and APC Rack PDUs**  
Auto discovery functionality added for several rack PDU models from Vertiv, Giest, Avocent and APC.

- **3542 3D: [UVZ-854-11860] Rack Summary Temperature and Humidity show 0 if there is no monitored value**

Previously when there was no temperature and humidity values for a rack, the rack summary would show a value of 0. The value is now blank on Rack Summary if there are no reported values.

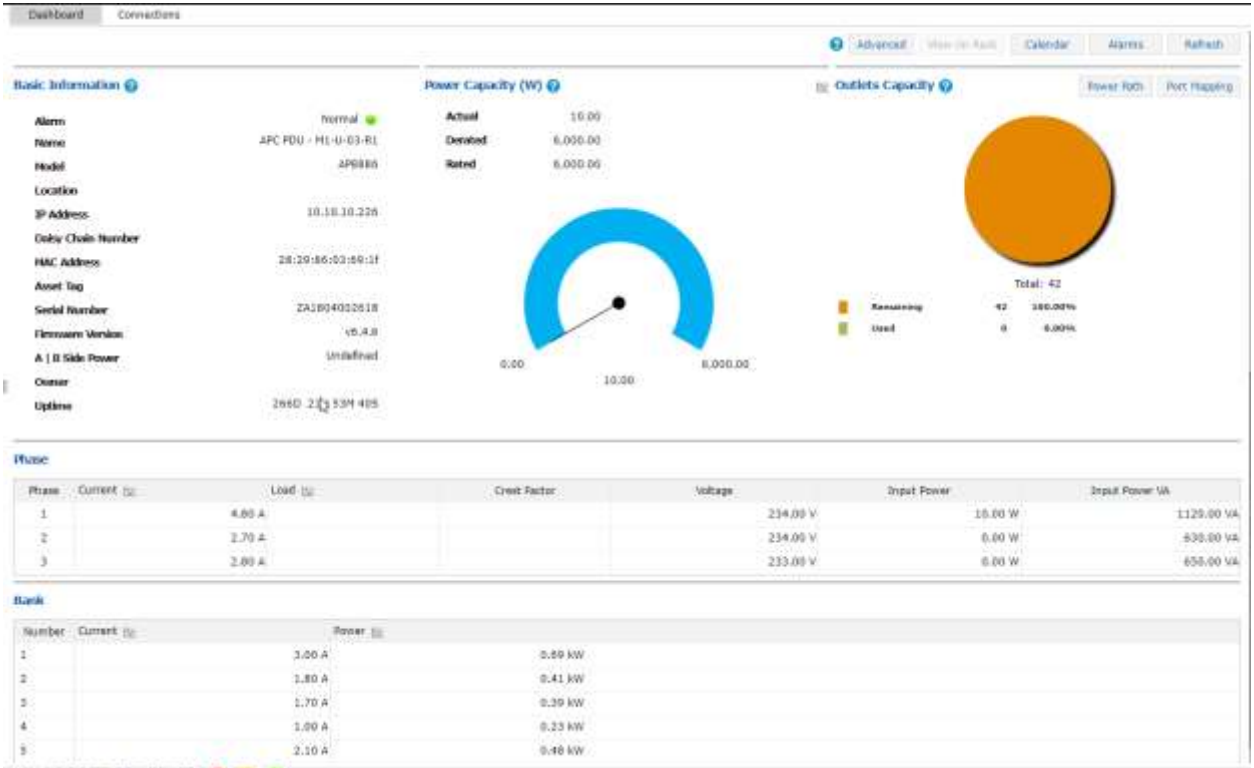
Rack Summary		
Space		
U-Capacity	42 U	
Device Count	3	
Power		
Static Power	0.00 kW / 0 kW	0%
Monitored Power	0.00 kW / 0 kW	0%
Reserved Power		
Environmental		
Temperature		
Humidity		

- **3544 Web: [FUB-544-98371] ServerAdmin password can be changed in GUI**  
Previously the Set Password option in the ServerAdmin graphic user interface interface did not work. It works properly now and changes the ServerAdmin password to the one specified by the user.



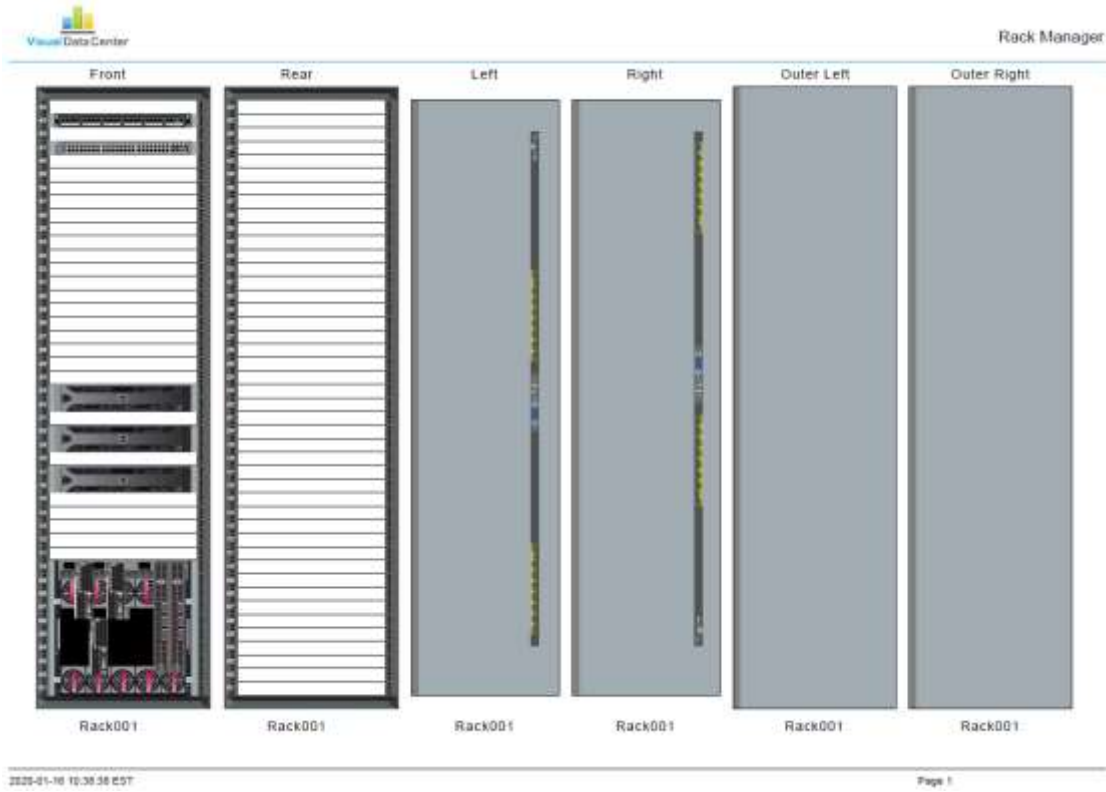


- **3546 Web: Improvements to APC PDU Dashboard**  
Improved display of the APC PDU Dashboard.



- **3548 Web: Export Racks PDF on floor view**

The floor view now has an Export Racks PDF option which produces a report with information for each rack at the location. The system will produce a PDF for each batch of 100 racks and deliver them in a zip file to the downloads folder. The zip file is named for the location (For example: London,1 Main St,1.zip). The PDF file is named for the sequence of racks it contains (For example: 1-100.pdf, 101-200.pdf, etc.). For each rack there are graphics of the Front, Rear, Left, Right, Outer Left and Outer right followed by a list with details regarding all the mounted devices.




2020-01-10 10:35:38 EST

Page 1

Rack001

Name	Lifecycle	Asset Tag	Serial Number	IP Address	Type	Model	U Position	Enclosure	Slot ID	Side
PatchPanel001	Operational				Patch Panel	CPP24PMWBLV	43.0			
Switch001	Operational			10.10.10.110	Switch	ProCurve 2548 (J4904A)	41.0			
Server001	Operational				Server - Rackmount	RS10	22.0			
Server002	Operational				Server - Rackmount	RS10	19.0			
Server003	Operational				Server - Rackmount	RS10	16.0			
ServerEnc001	Operational				Server - Blade Enclosure	BL C7000	1.0			
ServerBlade001	Operational				Server - Blade	BL485c 07	1.0	ServerEnc001	2	
ServerBlade002	Operational				Server - Blade	BL485c 07	1.0	ServerEnc001	11	
ServerBlade003	Operational				Server - Blade	BL485c 07	1.0	ServerEnc001	4	
ServerBlade003	Operational				Server - Blade	BL485c 06	1.0	ServerEnc001	7, 8	
ServerBlade004	Operational				Server - Blade	BL485c G6	1.0	ServerEnc001	8, 10	
ePDU - UE17F13022	Operational		UE17F13022	192.168.111.109	PDU - Rackmount	EMA112-10				Left
ePDU - UE17F13023	Operational		UE17F13023	192.168.111.100	PDU - Rackmount	EMA112-10				Right
TA800k 207	Operational	0009-020-007		192.168.111.207	Access Control	0607LS				Front Door
TA800k 206	Operational	0009-020-007		192.168.111.206	Access Control	0607LS				Rear Door

- **3564 Web: [DEQ-306-37318] Power Assignment to the Racks**
  - Added a calculated Attribute named Contracted Power and a static attribute Contracted Power.
  - Users need to manually add the Contracted Power attribute to devices if they want to calculate the value on this device. Users also need to add the attribute to monitoring templates.
  - Calculated Contracted Power Rules:
    - On Rack devices: the Contracted Power = Power – Derated on the rack
    - On Rack PDU devices:
      - The Contracted Power = total of all connected racks Contracted Power (Single) + total of all connected racks Contracted Power/2 (Dual)
      - \*Single means the rack is connected to 1 RDU device, Dual means the rack is connected to 2 RDU devices
      - If users key in static attribute Contracted Power at Rack PDU level, the Contracted Power equals to the static value.
    - On PDU devices: the Contracted Power = total of all connected RDUs Contracted Power
    - On MSB devices, the contracted power = total of all connected PDU’s Contracted Power
    - On UMSB devices, the Contracted Power = total of all connected MSBs Contracted Power
  - Power Assignment report added
    - Derated Power and Rated Power are from device static attribute Power – Rated and Power – Derated.
    - Contracted Power is from the device monitored MA Contracted Power
    - Actual Power is from device monitored MA Layer – Power
    - Power Utilization = Actual Power / Contracted Power \* 100%


Power Assignment

---

Location Num: 10 (L256564, F1, Lindsey Nelson)(L256561, F1, Lindsey Nelson)(L256566, F1, Lindsey Nelson) by device

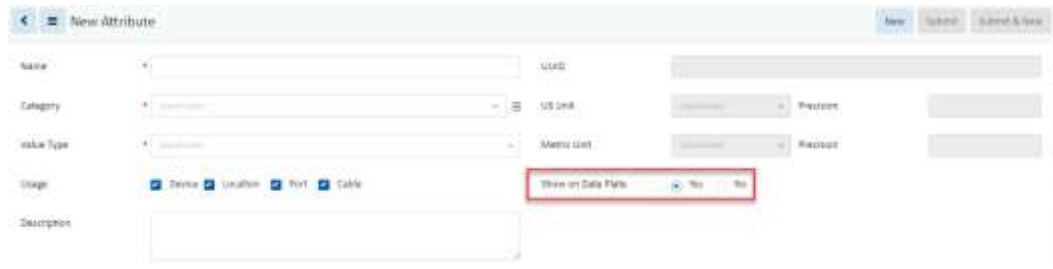
Device Group Num: 1 (power assignment)

Location: Unassigned Devices

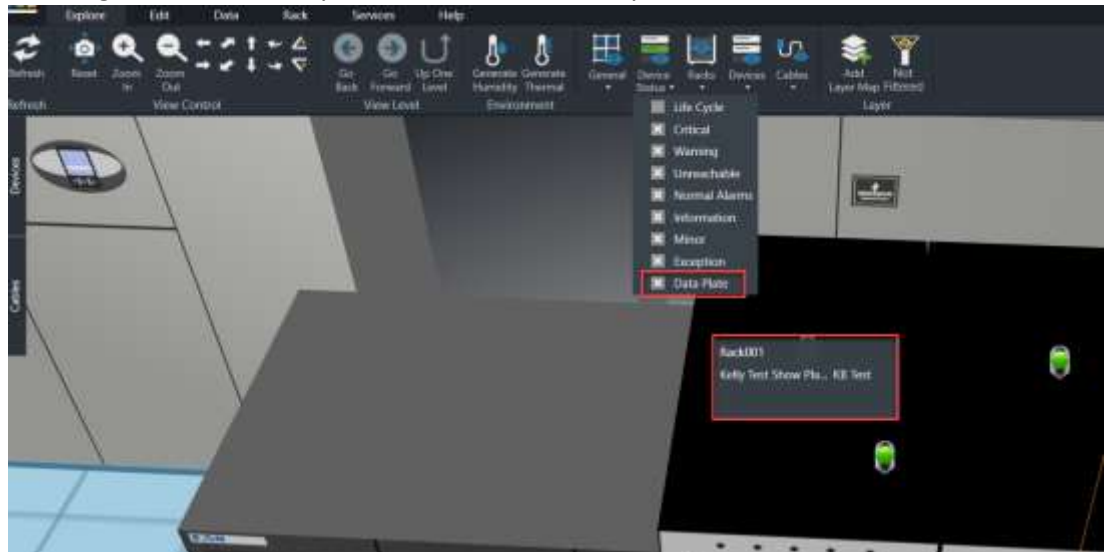
Device Name	Rated Power kW	Derated Power kW	Contracted Power kW	Actual Power kW	Power Utilization %
m-MSB-A1	200.00	150.00	20.0	6.4	32.00%
m-MSB-B1	200.00	150.00	6.0	2.0	33.33%
m-PDU-L1-A1	80.00	70.00	3.0	2.0	66.67%
m-PDU-L1-A2	80.00	70.00	17.0	3.2	18.82%
m-PDU-L1-B1	80.00	70.00	6.0	2.8	46.67%
m-PDU-L1-B2	80.00	70.00	7.0	3.4	
m-rack(1)	8.00	6.00	6.0		
m-rack(2)	8.00	6.00	6.0		
m-rack(3)	8.00	6.00	6.0		
m-RDU-L1-A1	50.00	40.00	1.8	1.0	55.56%
m-RDU-L1-A2	50.00	40.00	1.2	0.8	66.67%
m-RDU-L1-A3	50.00	40.00	5.0	1.4	28.00%
m-RDU-L1-A4	50.00	40.00	12.0	1.5	12.50%
m-RDU-L1-B1	50.00	40.00	6.0	1.2	20.00%
m-RDU-L1-B2	50.00	40.00		1.5	
m-RDU-L1-B3	50.00	40.00		1.4	
m-RDU-L1-B4	50.00	40.00		1.5	
m-UMSB-A	240.00	200.00	20.0	14.0	70.00%
m-UMSB-B	240.00	200.00	6.0	3.0	50.00%

- **3565 3D: [FBI-953-10624] Show Attribute on Data Plate**

- New option in Attributes Manager named Show on Data Plate. The default value is no.



- When set to Yes, the attribute will be displayed on the Data Plate on the 3D floor plan. Allowing users to show any attribute that is marked yes when the Data Plate is shown.

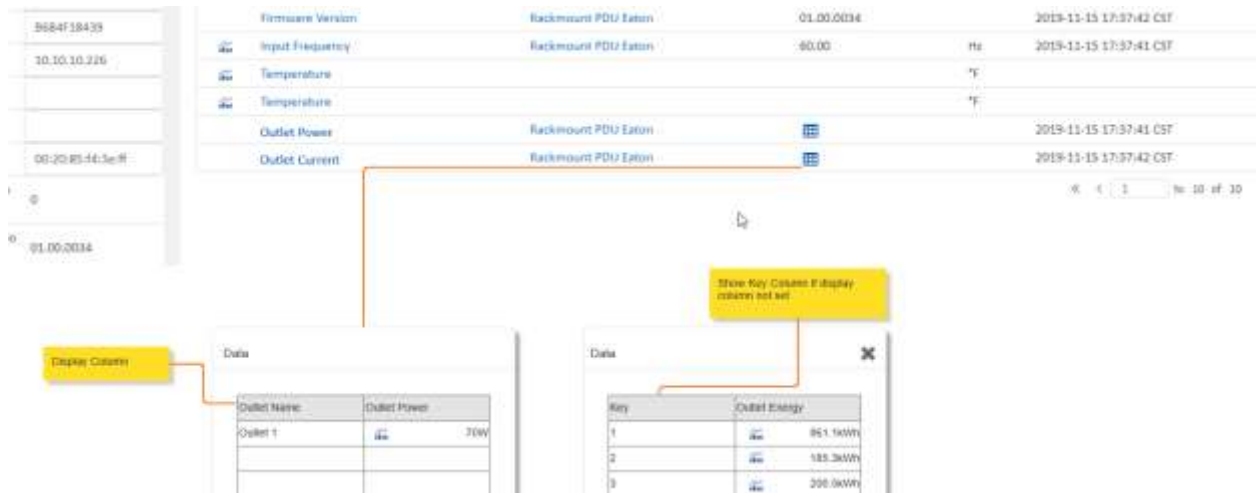


- Users can choose to Show/Hide Data Plate on the floor plan. When Data Plate is checked the Data Plate panel will appear on the top of each rack. The Data Plate will show the Device Name by default and all of the attributes marked Yes for Show on Data plate.
  - The Data Plate will always face the screen when user rotates/pans/zooms.
- **3589 API: Calls added to get space, environment power and asset information for a given company**

The new API calls are documented in the Company and Department API calls section of the VCOM v6.2.0 - RESTful API User Guide. These calls require an added authorization level. To get the authorization codes you must contact Eaton support.

- **3591 Web: Real time data table supports tabular data points**

The Real-time data table now displays a table icon indicating that the datapoints returned as in a tabular format. The user clicks on the table icon to displays the tabular data.



- **3595 Both: [EGQ-640-36776] Time Zone error**

Issue with time zone error message and monitoring timestamp due to change in Brazil from GMT-200 to GMT-300 has been resolved.

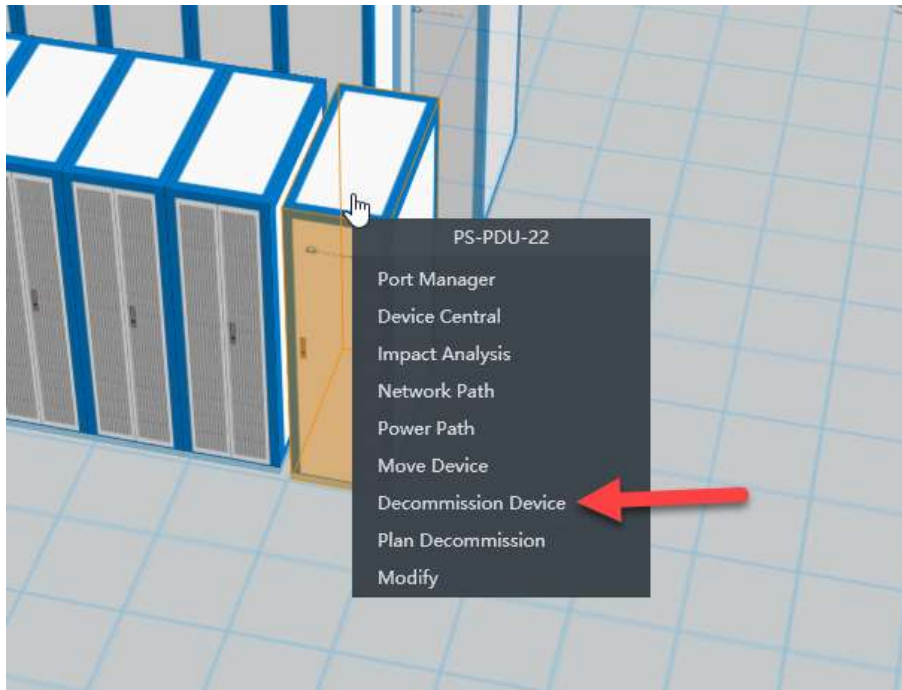
- **3600 Both: [ATT-694-64647] Fix corrupt system library**

In some cases a corrupted python library rack\_capacity.py can prohibit user from creating or cloning racks. This issue has been resolved.

- **3601 3D: [TWR-723-78272] Error when Decommissioning Rack on Rack View**

The decommission device option is now only available on floor in edit mode for floor mount devices. The decommission option has been removed from the right click menu in the rack edit mode.





- **3603 Web: [PSC-787-81059 13] Export Device.xlsx error opening file**  
Error fixed in device export when there are multiple rack groups defined in the system.
- **3604 Web: [EDG-106-98496] User cannot manually add a device to a rack in a move Work Order with Pending Deploy status**  
Users are now able to manually mount devices in an Operational Moving rack.
- **3605 Web: [MJD-970-25278] In Project Wizard unable to set location to planned racks**  
Set Location and Auto Plan can now place rackmount devices in Reserved Available/Reserved Procurement/Operational Moving racks.
- **3607 Web: [FJU-392-53000] APC Rack PDUs - Dashboard not working for outlets**  
The dashboard for APC Rack PDUs now works properly with outlets.
- **3611 Both: [LIY-182-78363] Thermal map**  
An attribute internal unit issue that could cause problems with the thermal map has been corrected.
- **3612 Web: [YKC-201-14688] Error when trying to show hidden devices**  
Error when trying to show hidden devices on the discovery page has been resolved. The issue occurs when there are discovered devices in jobs which are deleted from the system.
- **3615 Web: [QUA-271-32872] PUE Calculation Issue**  
In the previous version there was a problem with calculating the electricity cost and it has been

resolved.

Attribute	Value
Actual Power	50 kW
Cooling - Tons Capacity	
Cooling Utilization	
Estimated Yearly Cost	\$ 43,800
Estimated Yearly Energy Consumption	438,000 kW-h
Front U Space Remaining	615 U
Front U Space Reserved	0 U
Front U Space Total	623 U