

***Logo

Description automatically generated***

***MAM***

**Revision: 1.0**

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| Date | Revision | Author | Description |
| 2021/07/09 | 1.0 | Vivian Wang | MAM |
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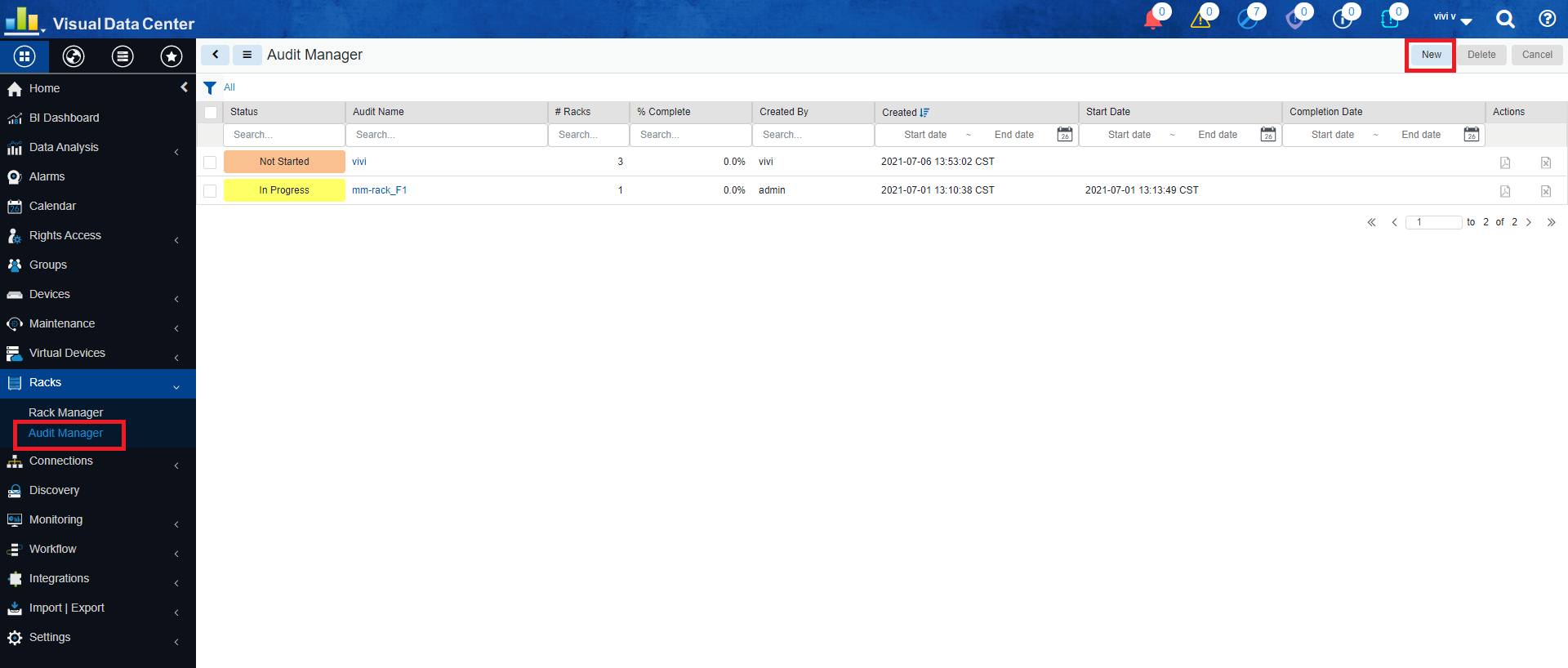
# Overview

MAM is the mobile asset management tools to help audit the cables, rackmount assets and racks being managed with the application. In the audit management, the audits can be generated manually or through the project workflow.

# Audit Manager

# Create a new audit - Manual

Users can create the audits through the ‘Audit Manager’ under the racks section. The audit manager allow the users to track the audits status and view the details by clicking the audit name link.

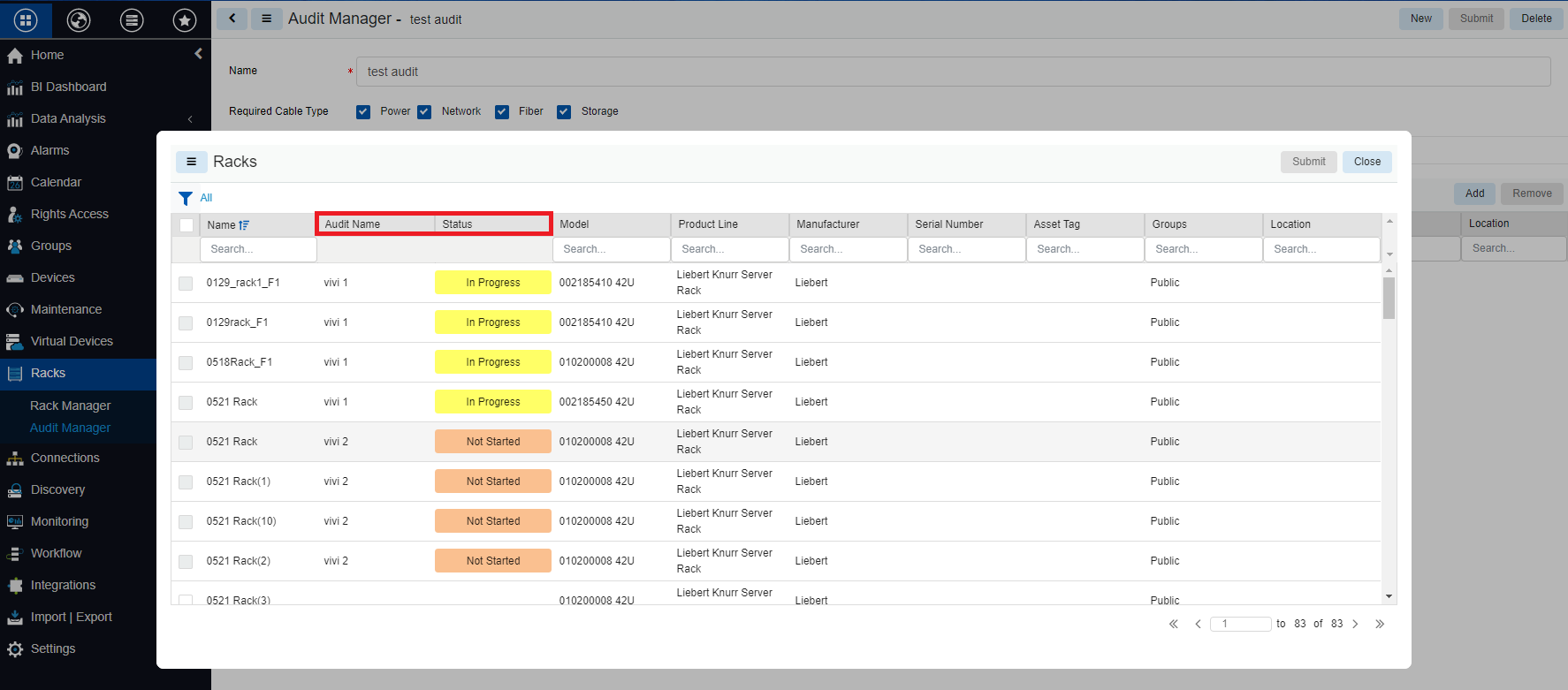


The ‘new’ button on the top of page allows users to create new audits.

Name: the name of audit

Required Cables Types: there are total four (Power, Network, Fiber, Storage ) types of cable. Only when the check box has been selected, the specific types of cables should be verified in the MAM. Otherwise, it unnecessary to verify the when the cable type is not required.

After an audit has been created, users can add racks through rack list. If a rack has been added to an audit, then the audit name and status will be shown in the search list.



If the check box is disabled which means the rack is not able to add into the current audit and MAM will only show the audits with the following conditions:

* The rack is already in an audit and the status of the audit is ‘Not started’
* The rack is already in an audit and the status of the audit is ‘In Progress’

The check box will be enabled with the following the conditions:

* There is no audit
* The rack used to be in an audit and the status of the audit is ‘Complete’
* The rack used to be in in an audit and the status of the audit is ‘Complete With Error’
* The rack used to be in in an audit and the status of the audit is ‘Incompleted –Error’
* The rack used to be in in an audit and the status of the audit is Canceled

The system provides users with two exportable ways to view and manage their audit information. One is to export an audit record as an EXCEL file and the other one is PDF file. As the figure shows, the basic information like audit name and status, required cable types and the start and end dates will be listed in both exported files. Besides, the detailed information of associated racks is recorded in both files as well.

# Create a new audit - project

Once a work order has been generated successfully in the project, then it will automatically create an audit to the audit manager. The audit naming rule will be following this format: Generated\_Adudit\_[name of work order]\_[work order number].

Different action type been performed will lead to a different result in the MAM, below sections explain the details of the work order generated audit.

Install Equipment:

1. Type – Rack

Install a new rack the system will automatically assign a rack name, then MAM will list this rack and allow to audit in the MAM.

1. Type – Rackmount device

The MAM audit will list the name of its rack.

1. Type – Floor mount device

The MAM audit will not listed it.

Graphical user interface, application, table

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Graphical user interface, application

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Graphical user interface, text, application, email

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Install existed device:

The rule of install existed device is basically same as install the new device, the only difference is

1. Type – Rack

Install a new rack the system will automatically assign a rack name, then MAM will list this rack and allow to audit in the MAM.

1. Type – Rackmount device

The MAM audit will list the name of its rack.

1. Type – Floor mount device

The MAM audit will not listed it.

Graphical user interface, application

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Graphical user interface, application

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Graphical user interface

Description automatically generated

Move Device:

1. When the type is Rack, the MAM audit will listed it
2. When the type is Rack Mount device, the MAM audit will listed the name of destination rack mount that move
3. When the type is floor mount device expect rack, the MAM audit will not listed it.

Graphical user interface, application, table

Description automatically generated

Graphical user interface, text, application, email

Description automatically generated

Decommission Device:

Show the whole rack button:

1. Select the check box: show all the devices

Graphical user interface, application

Description automatically generated

1. Unselect the check box: only show the devices that have work order.

Graphical user interface, text, application

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Graphical user interface, text, application, email

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Graphical user interface, text, application, email

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1. Manual –>
2. Project–>
3. Flow chart -> cable/device/rack/audit bottom up

# Delete Audit

* If an audit is generated manually and the audit status is ‘Not Started’ then the audit allow to delete.
* If an audit is generated through the work order and the audit status is ‘Not Started’, the audit not allow to delete.

The relative audit will be removed from the audit list automatically:

1. after the work order has been finished and the work order status become ‘Complete’

2. one of action status become ‘Rejected’

The manual deleted audits or WO audit removed audits will all be removed from the MAM audit list.

# Modify Audit

Only the manual audit can be modified, and the audit status must be ‘Not Started’.

* Audit name can be modified to a non-existed audit name
* Required cable type can be reselect
* Racks can be removed or add.

After submitting, all the info will be synchronized to the MAM.

# Cancel Audit

Only when the audit status is ‘In Progress’ the manual audit and word order generated audit can be cancel. The canceled audit will remove from the MAM.

# Audit through MAM

# Audit Rules

- Case 1: By default, all racks in the system are auditable. Users can manually set an 'Auditable' attribute to each rack to determine if it is auditable. If the auditable attribute has been set as ‘Not auditable’ then it cannot be add in the audit. Otherwise, only auditable racks can be added into an audit.

- Case 2:Racks added into an audit will be verified. If a rack is empty, then it can be verified directly. If there are some assets mounted in the rack, these assets will be verified first. In addition, if the user specified some kinds of cables to be verified, then only the required cable types will be verified first, then the assets and the rack.

# Audit Status

The Audit status refer to the device attribute named ‘Audit Status’. In the system there are total six possible values:

1. Not Verified

When a new audit is created manually, the device audit status of all devices will be set to ‘Not Verified’. If the audit is generated in Work Order, then keep the audit status.

1. Verified

When a user select a device / cable and clicks the Validate button in MAM, the device audit status of this device / cable will be set to Verified.

1. Verified – New

When a device / cable is created during an audit in MAM, the device audit status of this device / cable will be set to Verified - New.

1. Absent

When a user selects a rack / device / cable and clicks the Absent button in MAM, the device audit status of this device / cable will be set to Absent.

1. Verified – Error

For a rack

If the device audit status of any device in this rack is set to any of the status: Verified - New / Absent / Verified - Error, the device audit status of this rack will be set to Verified – Error at end.

For an enclosure

If the device audit status of any blade devices in this enclosure is set to any of the status: Verified - New / Absent / Verified - Error, the device audit status of this enclosure will be set to Verified - Error.

For a device

If the device audit status of any cables of this device is set to Verified - New / Absent / Verified - Error, the device audit status of this device will be set to Verified - Error.

1. Unverified - Error

The device audit status is updated to the reserved device (Life Cycle: Reserved Available/Reserved Procurement/Reserved Move).

There will be a button named ‘Raise Error’ next to the Validate button in the reserved device detail panel. When the user clicks the ‘Raise Error’ button, the user needs to confirm raise error. After the user confirmed, the reserved device will have the status of Unverified - Error.

Currently reserved device will not be listed in the search list in the VDC system like the following one. This is because reserved devices are not real devices. Thus this reserved device with Unverified - Error only exists in the device list in MAM

# Audit Manager Authority

# Device Audit Status

The device audit status could be:

1. Not Started

When an audit is newly created, the status of this audit is Not Started.

1. In Progress

If the device audit status of any racks / devices / cables in this audit is already start to verify, the status of this audit is In Progress.

1. Complete

Per the manually created audit, if the device audit status of all racks in this audit are set to Verified, the status of this audit is Complete.

Per the generated audit in WO, if the device audit status of all devices/cables related to the Work Order are set to Verified, the status of this audit is Complete.

1. Complete with Error

For both manually created audit and generated audit in WO, if the device audit status of any rack/device/cable is set to Verified - New / Absent / Verified - Error, the status of this audit is Complete with Error.

1. Incomplete - Error

When all racks are Verified/Verified - Error/Unverified - Error, the audit status will be updated. Conditions are listed in the order from high priority to low priority. Processing is in this order and it stops after the condition is met.

* If there is a rack with status Unverified - Error, the audit will get status Incomplete - Error.
* If there is a rack with status Verified - Error, the audit will get status Completed - Error.
* If all racks are with status Verified, the audit will get status Completed.

Incomplete - Error is an end state. Audits with status Incomplete - Error will not be listed in the audit list in MAM.

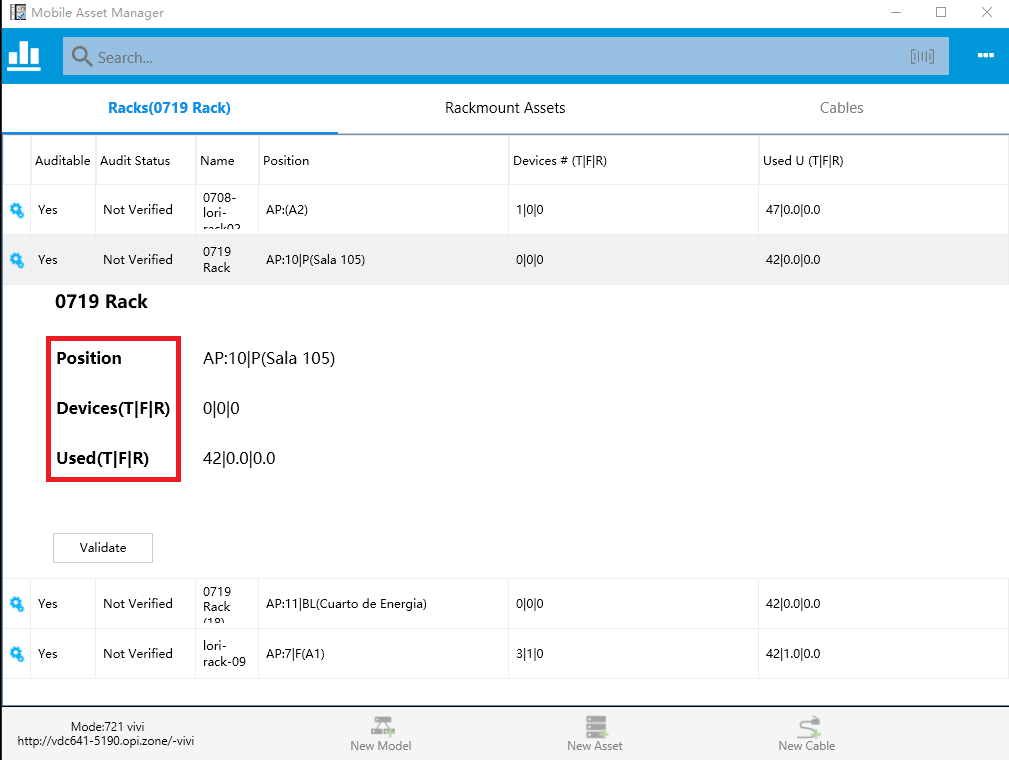
1. Canceled

Only a manual audit status is ‘In Progress’ and has been canceled then the audit will be changed to ‘Canceled’.

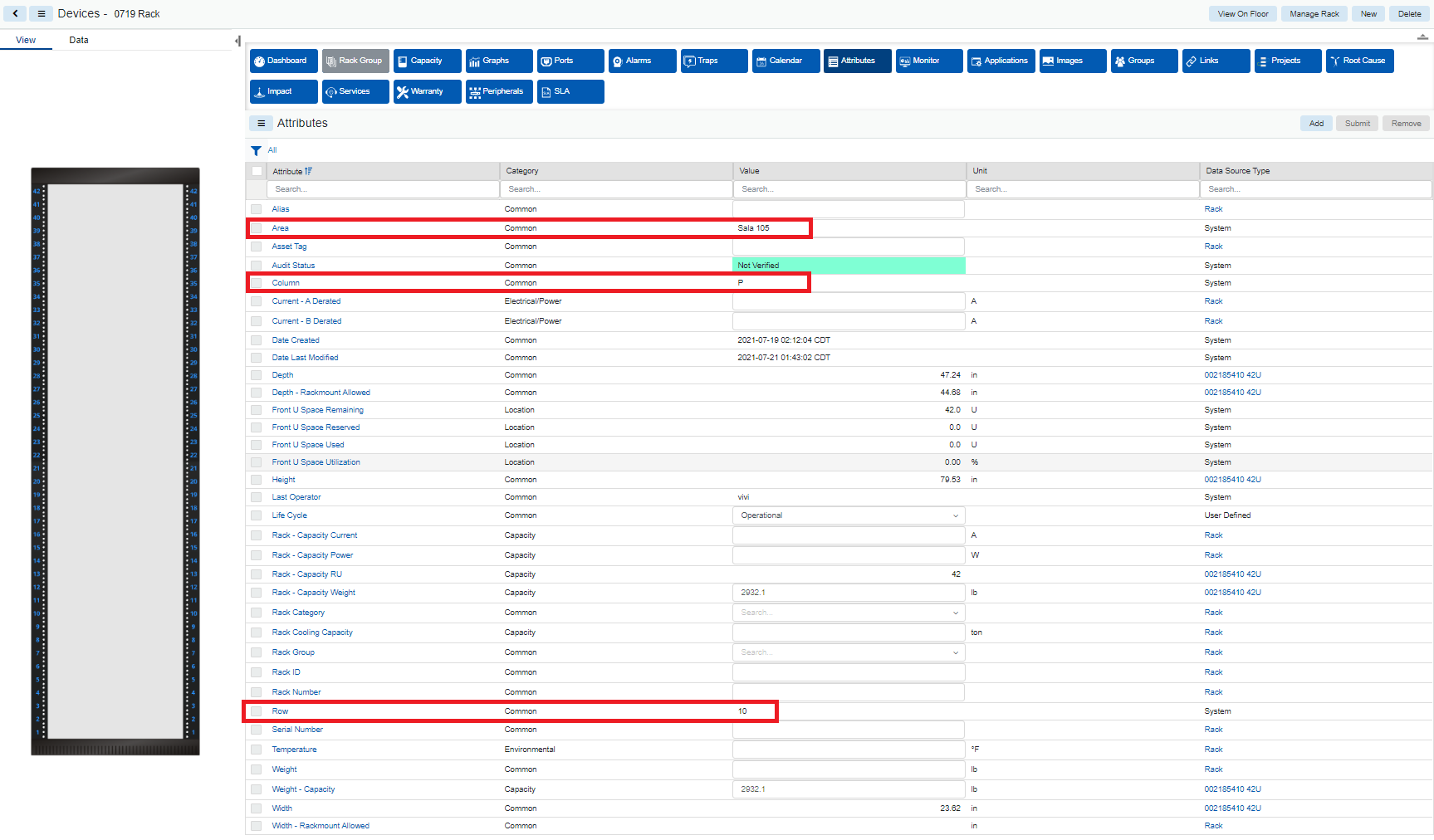
# Attribute definition

The attributes in MAM are consistent with those in VDC, and the corresponding data is also synchronized with the ones in VDC.

1. Racks



Position: Format as AP:Row|Column (Area)



Devices (T| F|R): Total count of devices | Total count of devices in front | Total count of devices in Rear

Used (T| F|R): Total used RU | Total used RU in front | Total used RU in Rear

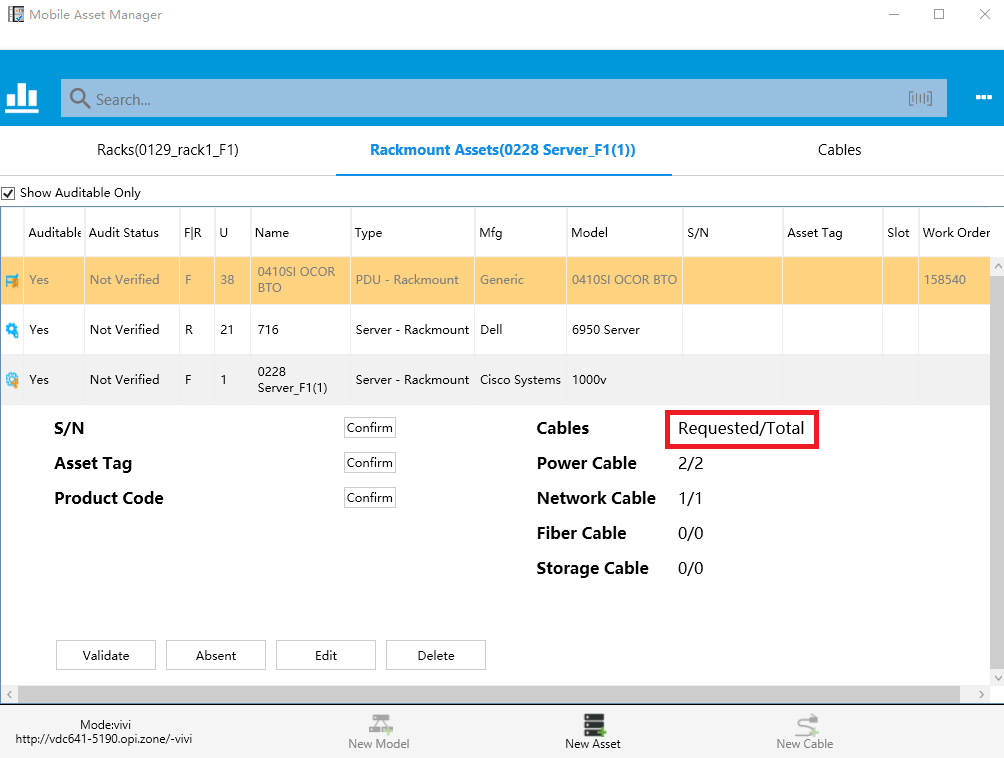
1. Rackmount Assets
2. Cables

# Verify Devices

There are cable types and rackmount devices required to be verified or not based on the option defined when a new audit is created before this device is verified:

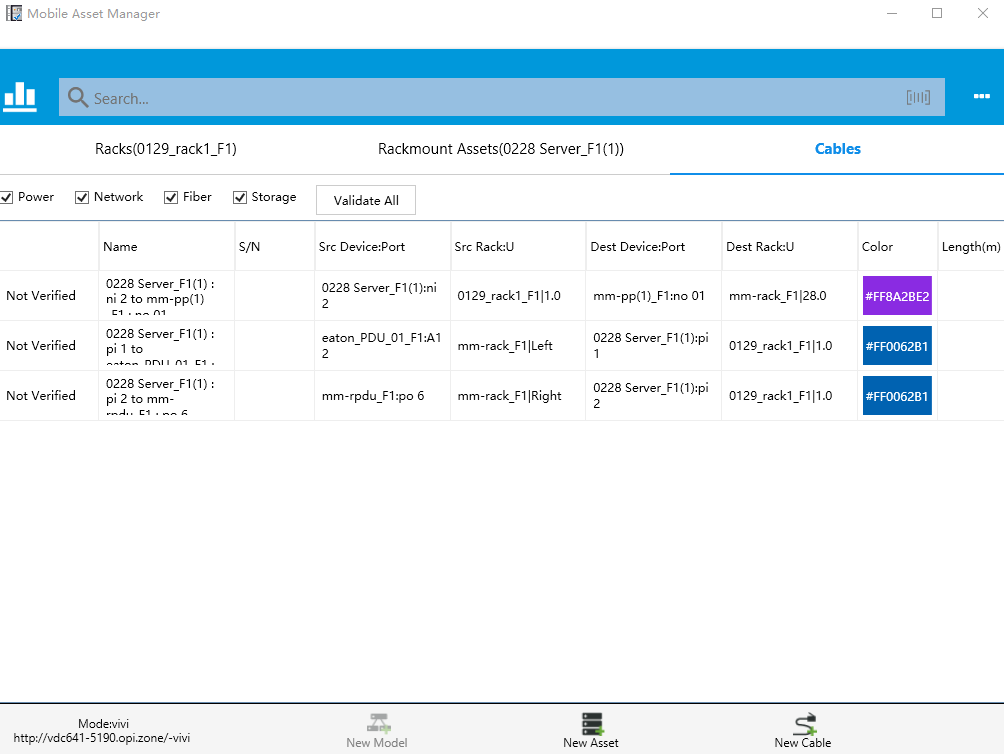
* In order to verify a rackmount device, it must verify all the cables in that device.
* In order to verify a rack, it must verify all the rackmount device in that rack.

1. Audit Cables:



Requested: it represented how many cable requested to be verify.

Total: it represented the total count of the cables.



There are 4 checkbox on the top, users can choose which types of cable to display through select the checkbox.

1. Devices audit status: