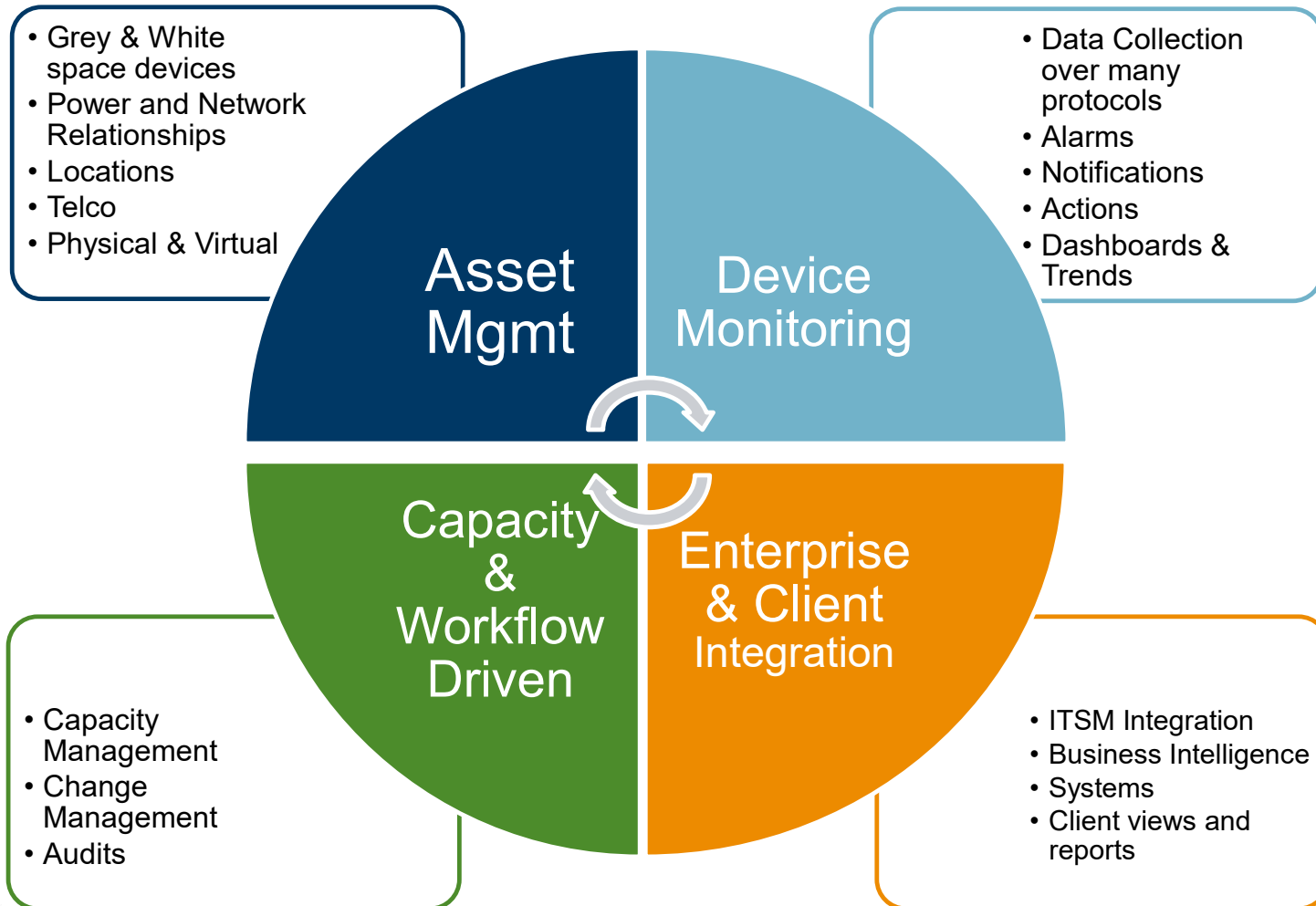


# VCOM DCIM

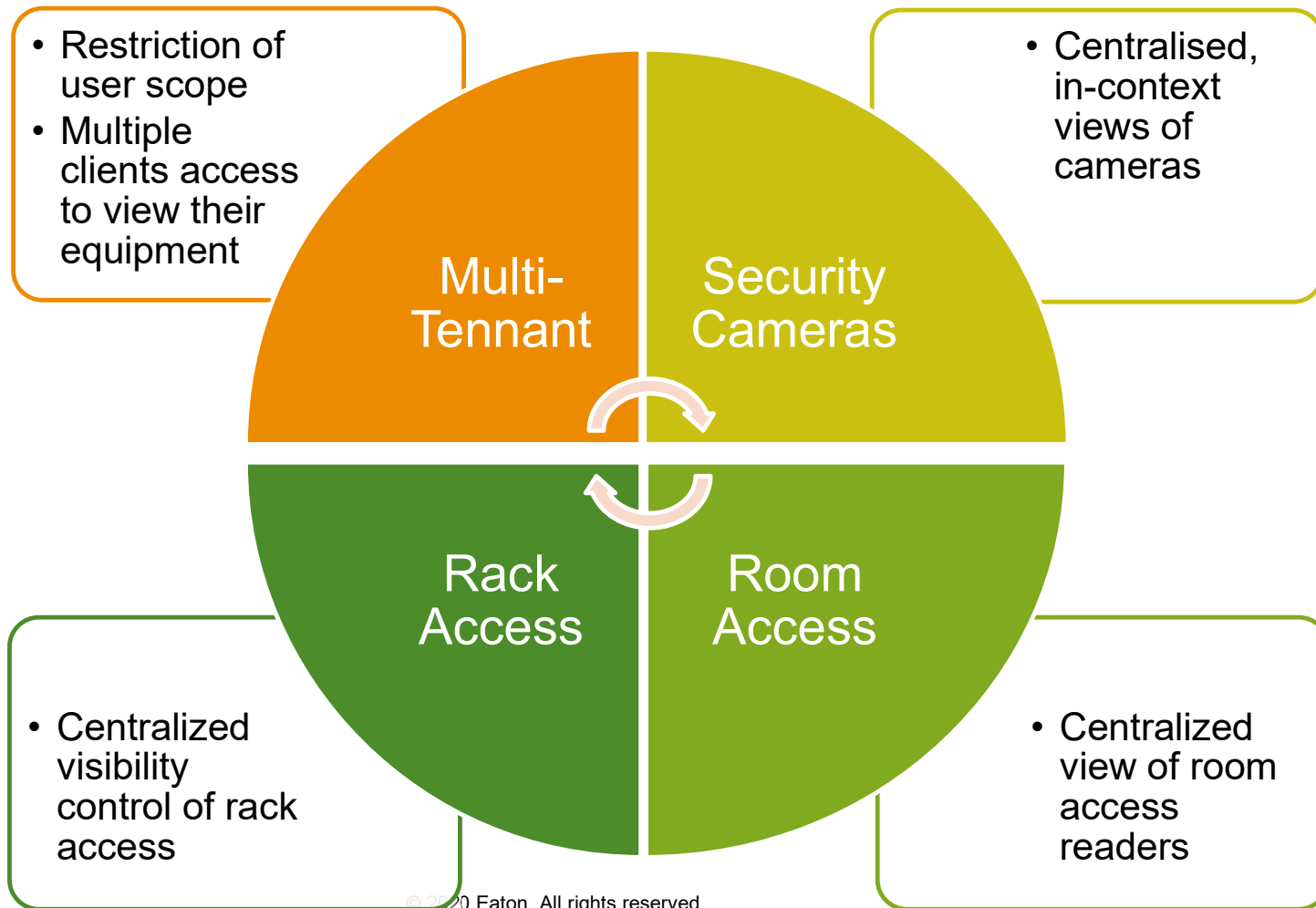
## Visual Capacity Optimization Manager

# VCOM DCIM



# VCOM Security

Visual Capacity Optimisation Manager



# Aggregate Consolidate Simplify



# Asset Management

Visual Floorspace

Rack Building

Port Mapping

Reservations & LifeCycle

Extensible Attribute Mgmt

Service Scheduling

Warranty Tracking



# Monitoring & Alarming

## Generic protocol support

## SNMP

## Modbus TCP

## Bacnet IP

# OPC

IPMI|WMI

## CSV

API

# HTML

MQTT

# Threshold Definitions

# Alarm Triggers

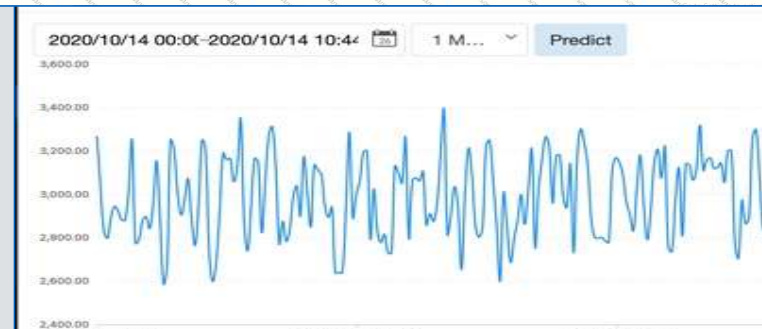
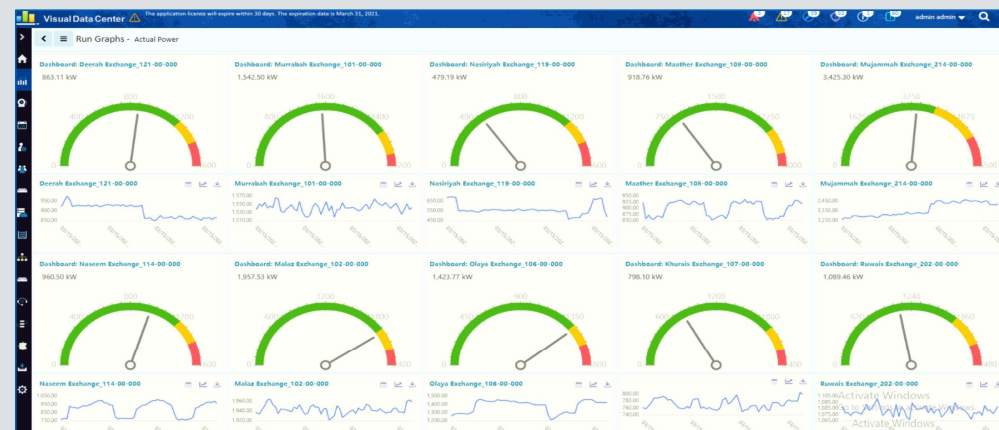
# Notifications

## Traps, SMTP, SMS, Scripts

## Actions

## Dashboards, Trend Charts & Prediction

# Actionable Data in Context



All

Alerts

Acknowledge

Devices

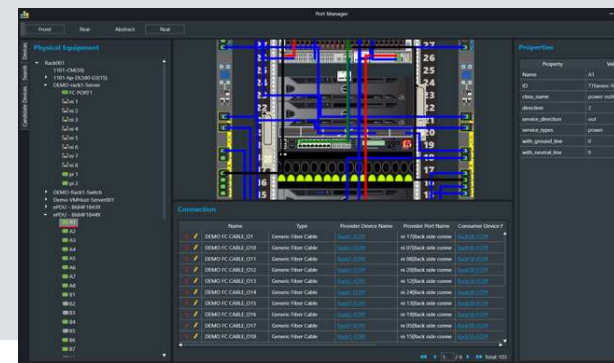
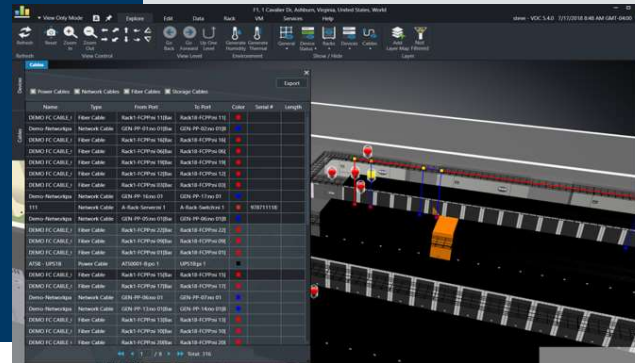
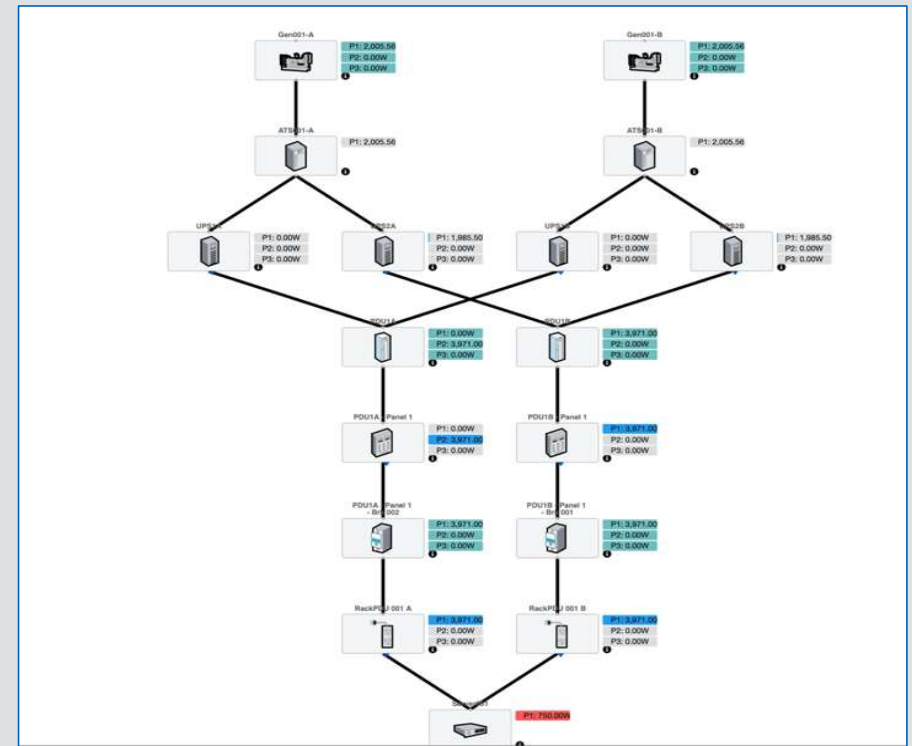
Locations

All | Severity does not contain Normal

Ack	Severity	Alarm Source	Trigger/Attribute	Rules	Details	Last Updated	Location	Actions
Search...	Normal	Search...	Search...			Start date - End date 2021-01-25 05:01:36 EST	Search...	
<div></div>	Critical	HAI2-Sensor 100		1		2021-01-25 05:01:36 EST	Colo A, 1, 100 Rack Rd	<div></div>
<div></div>	Critical	HAI2-Sensor 092		1		2021-01-25 05:01:36 EST	Colo Space, 1, 100 Rack Rd	<div></div>
<div></div>	Critical	HAI2-Sensor 128		1		2021-01-25 05:01:36 EST	Colo Space, 1, 100 Rack Rd	<div></div>
<div></div>	Critical	HAI2-Sensor 108		1		2021-01-25 05:01:36 EST	Colo A, 1, 100 Rack Rd	<div></div>
<div></div>	Critical	HAI2-Sensor 008		1		2021-01-25 05:01:36 EST	Heil A, 1, 100 Rack Rd	<div></div>
<div></div>	Critical	http-FABUS(SC200)-test		2		2021-01-25 04:55:28 EST	Room 2, Local-L, Darren	<div></div>
<div></div>	Warning	HAI2-Sensor 026		1		2021-01-25 05:01:36 EST	Heil A, 1, 100 Rack Rd	<div></div>
<div></div>	Warning	APSS_DS_001		2		2021-01-25 05:00:08 EST	Room 1, Local-L, Darren	<div></div>
<div></div>	Warning		SC300 - AC Voltage High		"SC300 - AC Input Voltage" = 24 V and "SC300 - AC Input Voltage" <= 240 V	2021-01-25 05:00:08 EST		<div></div>
<div></div>	Information	SC300 Heartbeat	sc300-heartbeat		"1.3.6.1.4.1.1918.2.14.10.10.108.0": Home Office, "1.3.6.1.4.1.1918.2.14.10.10.101.0": AS 0418 S03 956, "1.3.6.1.4.1.1918.2.14.10.10.106.0": Barro date Way Ringwood Nth, "1.3.6.1.4.1.1918.2.14.10.10.106.0": Number 30, "1.3.6.1.4.1.1918.2.14.10.10.10.40.0": Melbourne, Australia, "1.3.6.1.4.1.1918.2.14.10.10.10.50.0": APSS Darren, "1.3.6.1.4.1.1918.2.14.10.10.10.112.0": Derren S, "SC300-heartbeat": N/A.	2021-01-25 04:59:46 EST		
<div></div>	Warning	APSS DS Test		1		2021-01-24 06:00:07 EST		<div></div>

# Connectivity

Power  
Network  
Fiber  
Cable Trays  
Power & Network Path  
Circuit Trace  
Cable serial numbers



# Capacity Planning

Thermal Images  
Capacity Planning  
Root Cause Analysis  
Impact Analysis  
Power Load Failover  
Compound Filters  
Calculated Data & Metrics  
PUE calculation  
Power Rollup

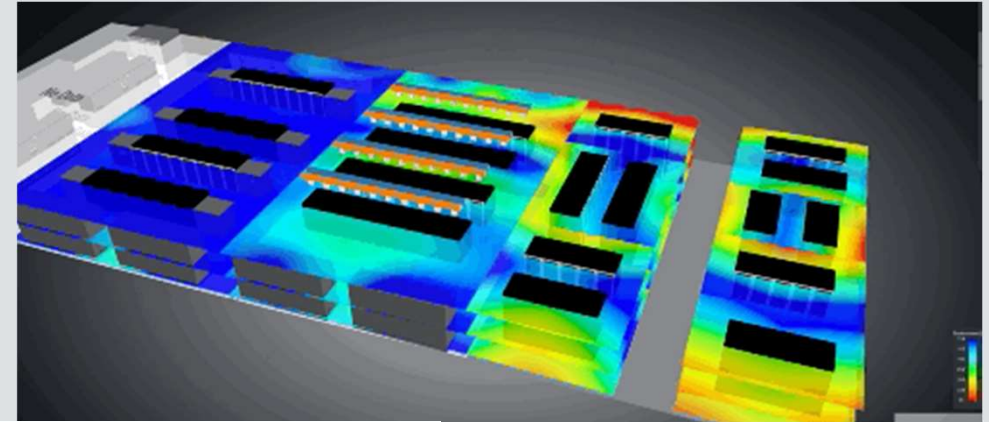
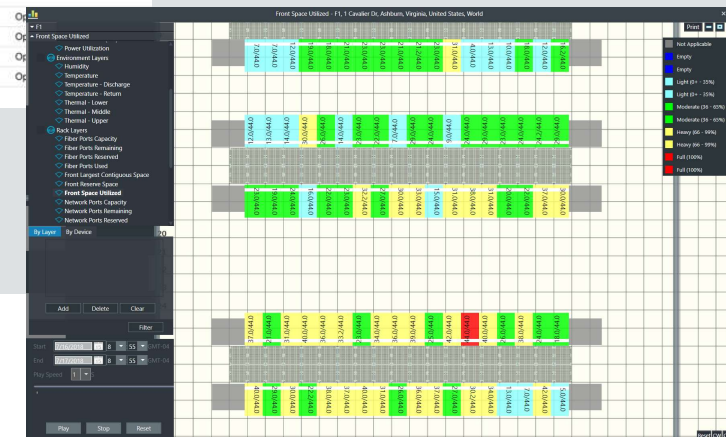


Image here

Root Cause Analysis					
Network Power					
Device ID	Alarm	Type	Manufacturer	Model	Life Cycle
Search...	Search...	Search...	Search...	Search...	Search...
▼ Gen001-A	Warning	Generator	Caterpillar	2000kW 3516B	Operational
▼ ATS001-A		Information Transfer Switch	ASCO	7ATS(3000amp)	Operational
▼ UPS1A	Warning	UPS	Eaton	9395 (1000,1100 kVA)	Operational
▼ PDU1A		PDU	Eaton	PDU 300kVA	Operational
▼ PDU1A - Panel 1	Normal	Electrical Panel	Generic	Generic 42 Circuit Panel (2 col umns)	Operational
▼ PDU1A - Pane 1 1 - Brk 003		Circuit Breaker	Generic	2-Pole Breaker	Operational
▼ RackPDU 00 1 A	Normal	PDU - Rackmount	Eaton	EMA112-10	Operational
▼ Gen001-B	Normal	Generator	Caterpillar	2000kW 3516B	Operational
▼ ATS001-B	Normal	Transfer Switch	ASCO	7ATS(3000amp)	Operational
▼ UPS1B	Normal	UPS	Eaton	9395 (1000,1100 kVA)	Operational
▼ PDU1A		PDU	Eaton	PDU 300kVA	Operational





# Project, Task, Work Order, Audit (VCOM)

Approval Cycles

Various Tasks

Install      Decommission  
Move      Connect/Disconnect

Auto Rack/Port Wizard

Work Order Routing

Graphical Reservations

Floor & Rackmount Devices

Auditing (Mobile Audit Manager)



Project - Install Servers (Approved)

Project Name

Install Servers

Department

OP - Data Center

Project Number

1123

Start Date

2019/03/01

Owner

Project Owner 1

End Date

2019/11/30

Expired After End ...

Tasks

Work Orders

Approvals

Comments

Plan

Submit

Delete

Task 17	Actions	Details 17	Device Type	Model	IP	Serial Number	Plan Result
Search...	Search...	Search...	Search...	Search...	Search...	Search...	Search...
▼ Install Servers (Approved)							
▼ Install		Server211	Server - Rackmount	RS10		SN0967	Details...
Equipment Install							
Provisioning Power							
Provisioning Network							
▼ Install		Server212	Server - Rackmount	RS10		SN0740	Details...
Equipment Install							
Provisioning Power							
Provisioning Network							
▼ Install		Server213	Server - Rackmount	RS10		SN0631	Details...
Equipment Install							

Server211 Install to A-Rack01 Rack U: 11  
Server211:pl 1 connect to RackPD U 001 A:A14,Server211:pl 2 connect to RackPDU 001 B:A14  
Server211:nr 1 connect to Switch0 01:no 22

Server212 Install to A-Rack01 Rack U: 13  
Server212:pl 1 connect to RackPD U 001 A:A09,Server212:pl 2 connect to RackPDU 001 B:A09  
Server212:nr 1 connect to Switch0 01:no 13

Server213 Install to A-Rack01 Rack U: 15  
Server213:nr 1 connect to Rack01 Rack U: 15

Current View		Planned View	
			
Name	CO-Rack001		
Model	AR3100		
Row / Column	5/S		
Area	DCA		
Location	F1, 2 Main St, Denver, Colorado, United States		

# Device Management

Auto Discovery

Rack PDU

Eaton Firmware Upgrades and Configuration  
Outlet Controls

Server

KPI Collection  
Application

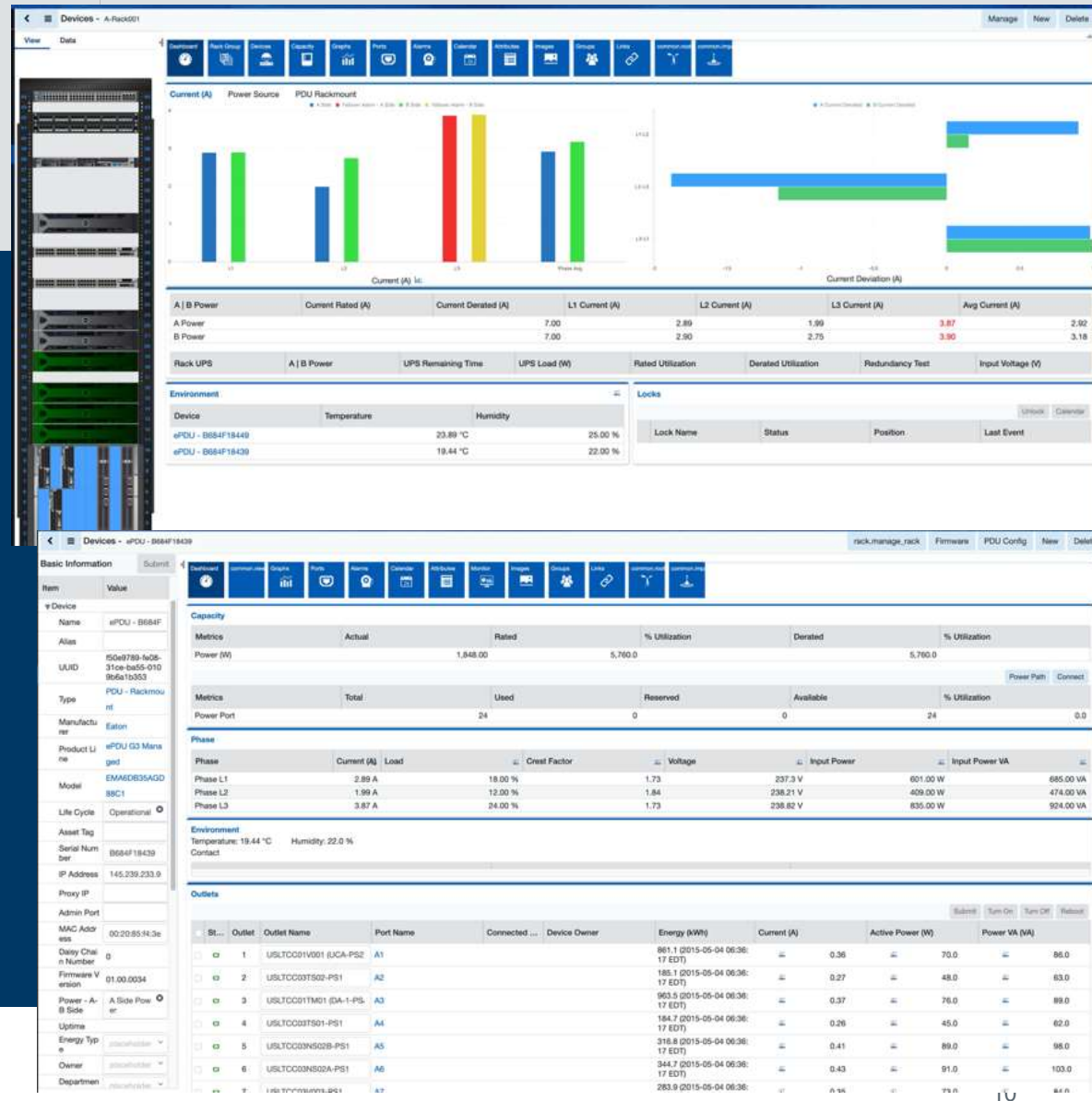
Network Switch

Port usage & Assignments  
Throughput

Virtual Machines Host & Guest Controls

Device Controls

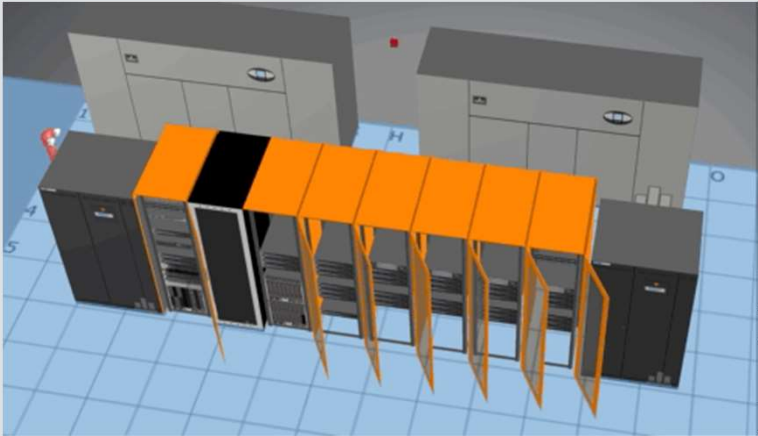
User Initiated & Automated



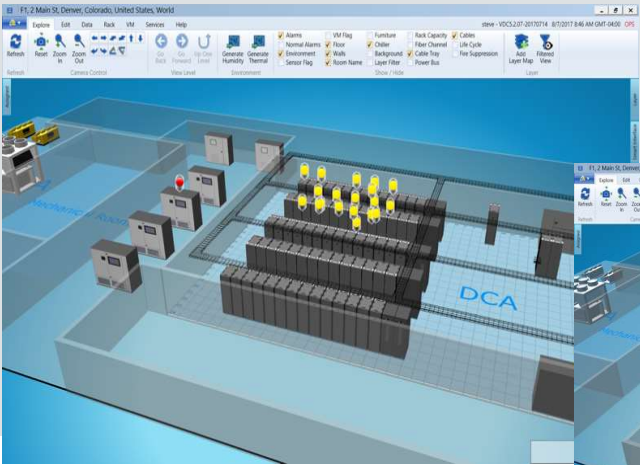
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# Security & Rights Access

- Multi Tenant Management
- LDAP/Active Directory Integration
- HTTPS Access
- Encrypted SSL Database Access
- Multi language Support
  - English, Française, Español, Português, Italiano
  - Русский, 繁体中文, 大和
- Rack Locking
- Room Access



Insert image here

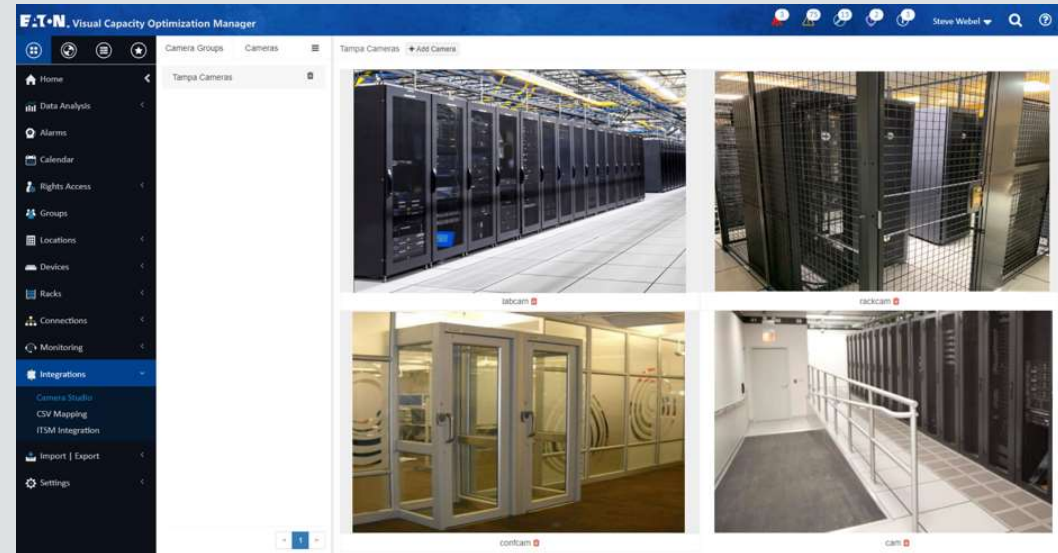


Attribute Data	
Name	Value
Name	TPA-Tankoo 209
Type	Access Control
Manufacturer	Fath
Product Line	Rack Door Locks
Model	0607LS
IP Address	47.206.120.71
MAC Address	47.206.120.71
Position	TPA-Rack003 (Front Door)
Row	9
Column	1
Admin Port	1289
Area	DC
Asset Tag	TPA209
Date Created	2019-05-23 11:22:48 EDT
Date Last Modified	2019-05-23 11:22:54 EDT
Depth	1.20m
Device IP	192.168.111.209
Door Status	Closed
External 1 Status	Unlocked
External 2 Status	Unlocked
Firmware - Hardware	xs
Firmware - Software	08
Height	7.99m
IPv4 Address	47.206.120.71
Life Cycle	Operational
Lock Status	Locked
MAC Address	40:08:55:03:11:CB



# Camera Images

IP Cameras with FTP/SFTP  
Image repository in VCOM  
Historical views of images  
Streaming Video  
Rights Access





# Reporting

## Built in & Custom reports

# Distribution reports

## Client / Billing reports

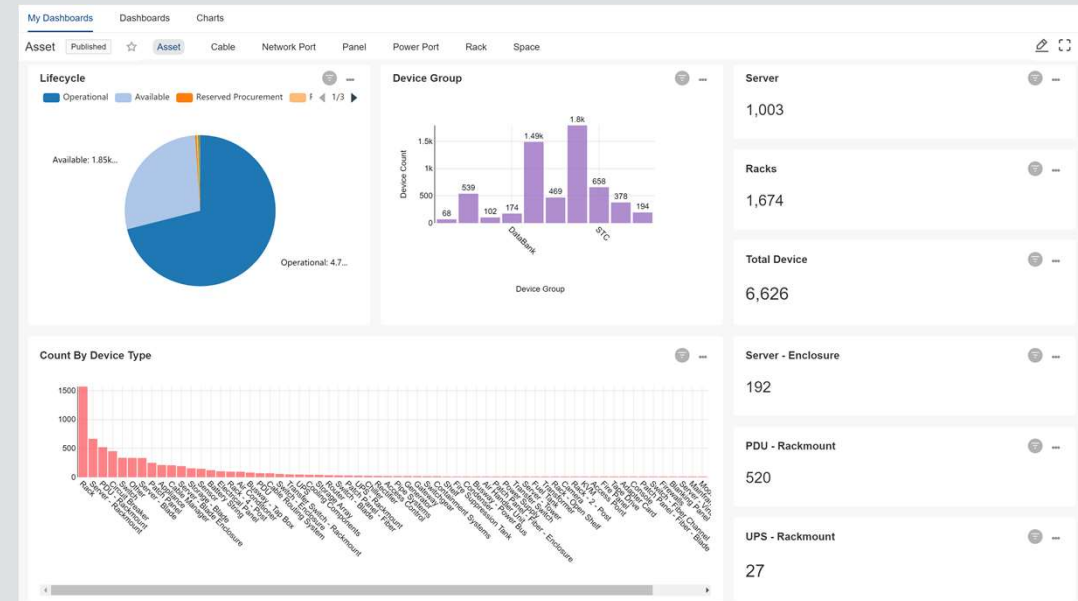
# Microsoft Power BI Integration

# Apache SuperSet

## Asset, Capacity, Cost data

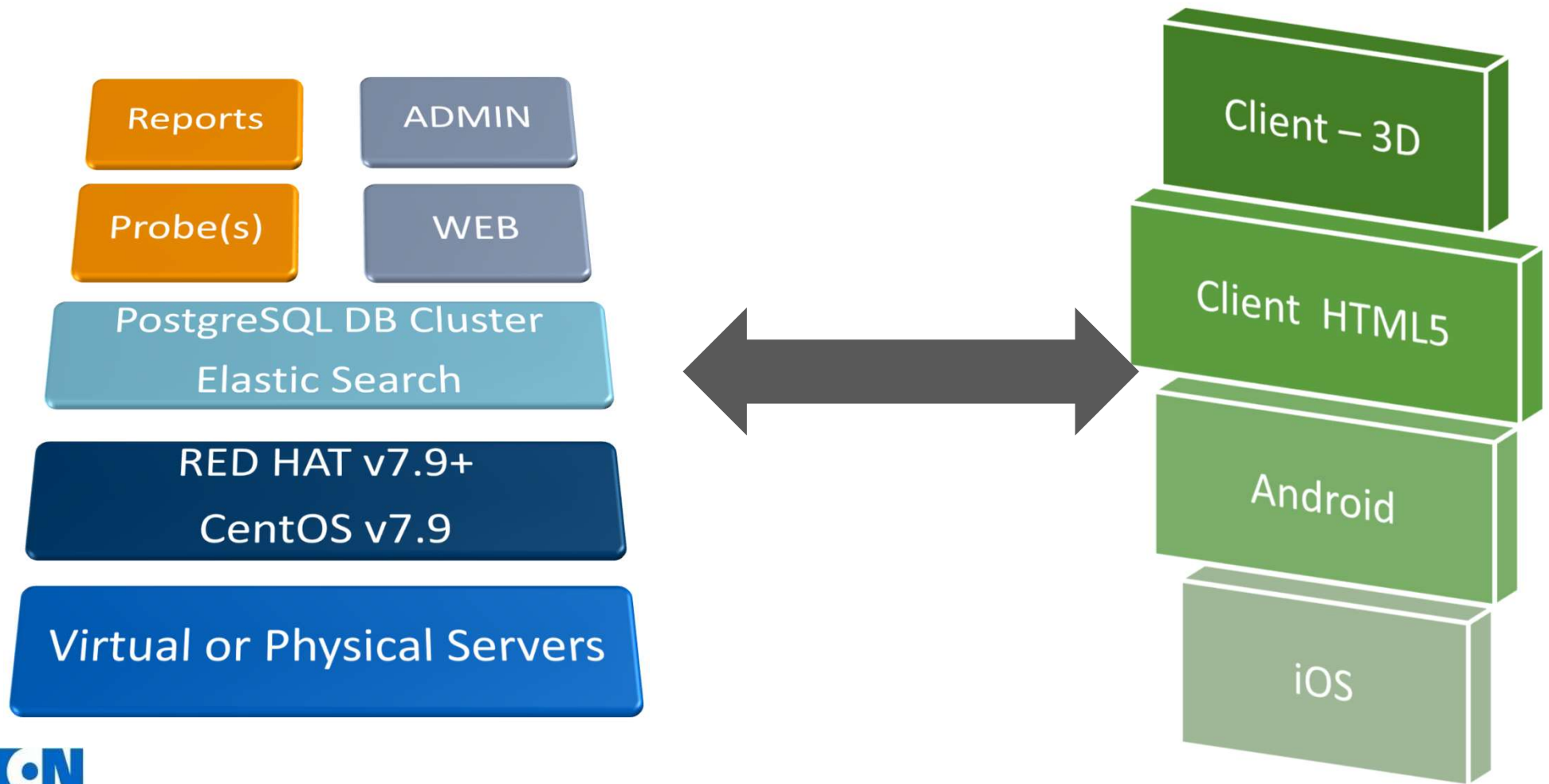
## Interactive navigation & Filter

## User Tables

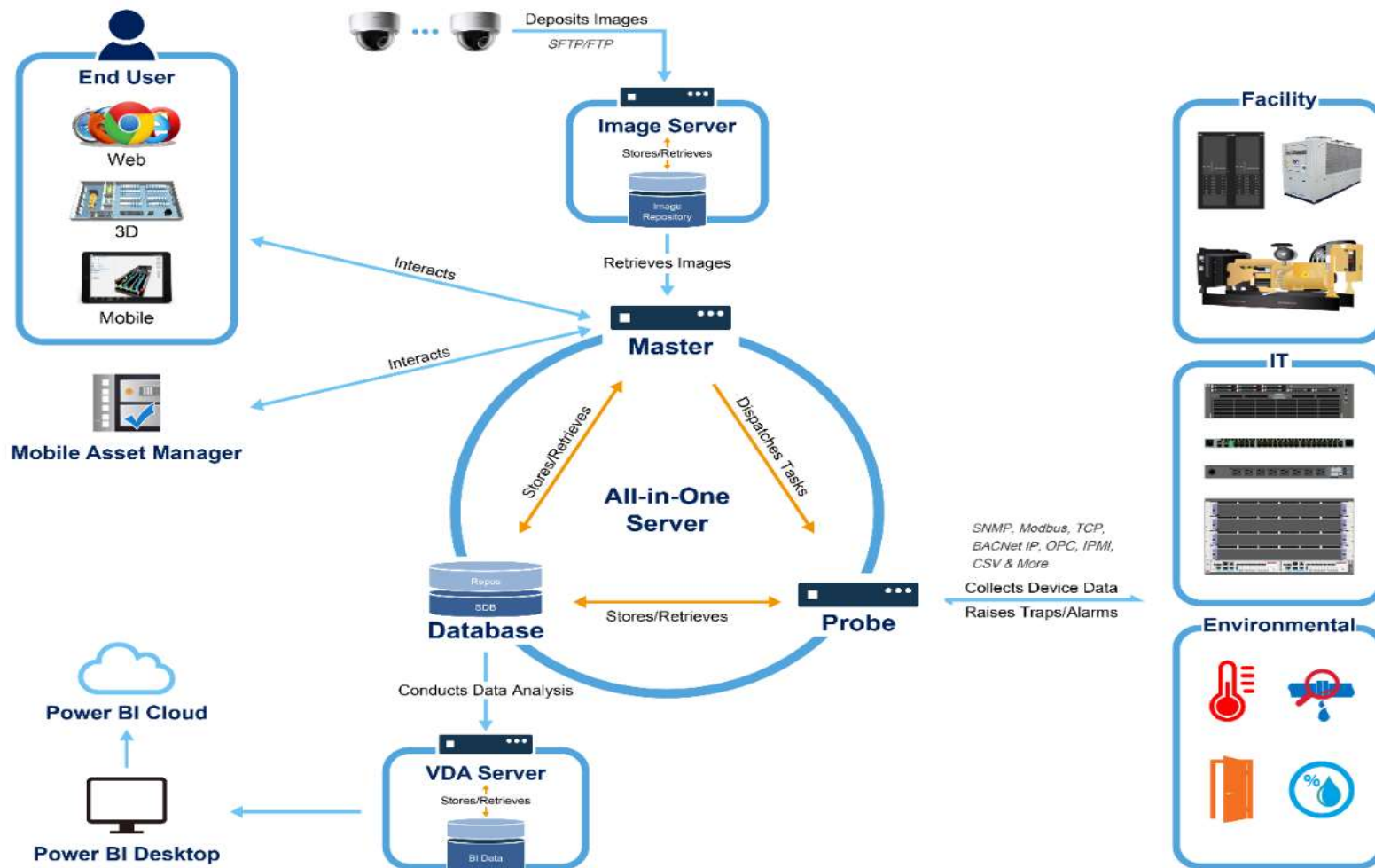


# Highly Scalable and Extensible Architecture

# VCOM Architecture

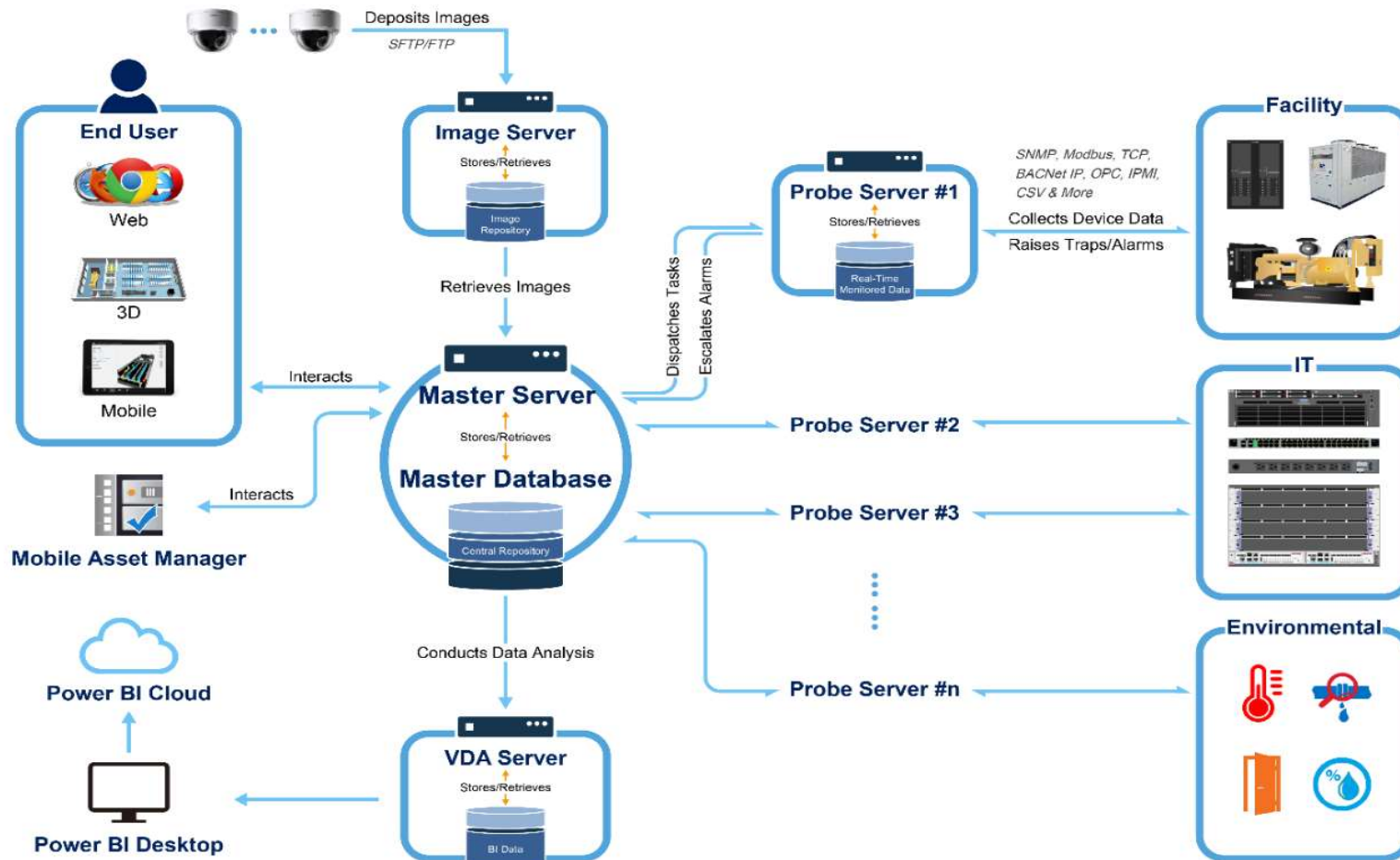


# VCOM All-In-One Server Architecture (<1500 racks)



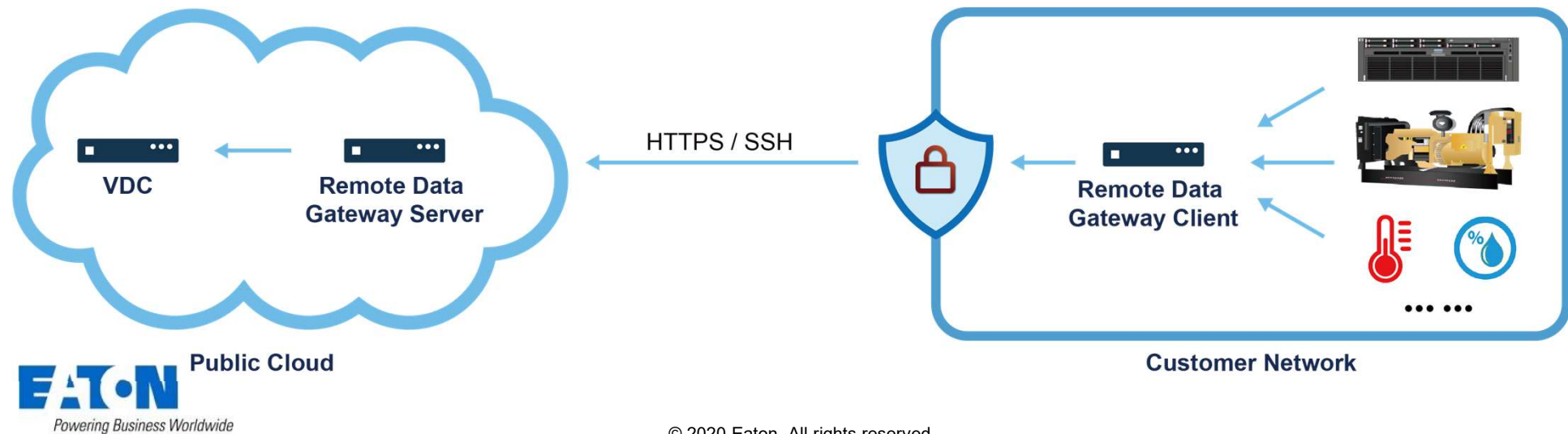


# VCOM Distributed Server Scalable Architecture (>1500 racks)



## VCOM Remote Data Gateway (VCOM)

- Allows EASY Data collection from complex heterogeneous networks
- Eliminate the needs for having VPNs or firewall rule changes
- A Simple, clean, transparent and safe solution to meet cloud DCIM needs
- IOT support using MQTT, Q3-2021



# Why VCOM !

# 6 Unique Features of VCOM

Solution benefits span departments of the organization



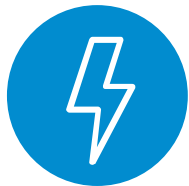
## Single solution for all DCIM

DCIM solutions are required by many departments, including Data Center, Facilities, IT and Project Management. VCOM combines all of these functions into a single, easy to use solution. Not multiple products glued together.



## 3D Management of the datacenter

Management in 3D is not just a gimmick, with complex environments like Data Centers, it is necessary to physically navigate to the correct location quickly, 3D is clearly the best methodology.



## Support for protocols, not vendors

VCOM supports the protocols of SNMP, Bacnet, Modbus, IPMI, WMI & XML. The actual vendor of the equipment is not important, only the protocol. This is unlike many DCIM solutions from hardware vendors.



## Systems Integrations

A data center is not a black box, it needs to integrate with the enterprise systems that run the business. VCOM includes integration with VMWare and can support BMS, Asset Management systems and Service desk systems.



## HIGHLY scalable

The ability to distribute data collection probes around a large, multi-data center environment, enables global enterprise scalability.



## Embedded database

The core the system is it's database. We have chosen an embedded database for ease of deployment, without reliance on 3<sup>rd</sup> party database licenses. The database itself is self managing and can also be include din enterprise backups.



Powering Business Worldwide

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# 6 major ROI elements of VCOM

- Solution benefits span departments of the organization



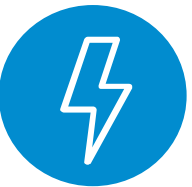
## Data center performance

Organizations today are reliant on the operations of the data center, they are also a huge cost to the organization. To have the data center operated and managed optimally is key to success. This can only be achieved with a complete DCIM solution.



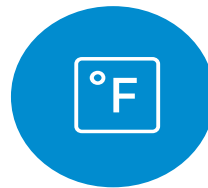
## Data center accuracy

Understanding where all your devices are in the data center and their dependencies and relationship is key to ongoing management. If you don't know where all the devices are they are probably consuming energy and not being used.



## Single pane of glass

Different parts of the organization require information regarding the status of the DC including Facilities, DC Management and IT. A single pane of glass provides the same view to each group to ensure consistent management from the same data eliminating confusion and duplication.



## Accurate changes in the data center

On average 20% of servers change in a data center each year. Accuracy in making these changes is critical to their availability. Understanding all the capacity constraints for changes eliminates errors and duplicate effort.



## Dramatic Reduction in change time

Where time can be reduced in making changes in the data center the better the return of the business, as new or changed services are available quicker. VDC can reduce this time from arrival of the equipment to product use by up to 10 fold.



## Reduction in risk in DC operations

Data Centers are risk averse, and rightly so. Through having accurate information that everyone uses, by making changes correctly the first time, by not exceeding the capacity of the environment, by predicting failures in equipment and by ensuring redundancy, the risks of major problems in your DC with VCOM are almost eliminated.



Thank you