PANDUIT™
infrastructure for a connected world

smartzone™ by PANDUIT

SmartZone™ Software

Release 9.2
Planning Letter

Release 9.2
Issue 1

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Table of Contents

About This Document **5**
Scope 5
Purpose of This Document 5
Panduit Technical Support 5
Severity 1 & 2 Issues: 5
Severity 3 & 4 Issues, Email - normal business hours: 5
Overview **6**
What's New in SmartZone Release 9.2? 6
Introduced in SmartZone Release 9 Series 7
SmartZone Software Release 9.2 Requirements **8**
SmartZone Server Requirements 8
Hardware 8
Software 8
SmartZone Client Requirements 9
Hardware 9
Software 9
SmartZone Database Virtual Machine Requirements 10
SmartZone Reports Server Requirements 10
Hardware 10
Software 10
Integration Requirements 11
Supported Migration Paths for SmartZone Release 9.2 ..... **12**
Standard Installation or Upgrade 12
Migrating from Earlier Panduit DCIM Versions 12
SmartZone Release 9 Series: New Features and Enhancements **14**
Release 9.2 14
Events Report 14
Reports Include Daily Aggregation Data 15
Default Data Retention Task for Events 15
Data Retention Policy for Reports 15
SmartZone Support for QlikView Version 12.20 15
Tool Tip Explaining Time Period Selections for Reports 15
Unit of Measurement (UOM) Added to Environmental Performance Report 16
Switch Port Description Field in Reports for Cisco Switches 16
New System Configuration Option for Events 17
Re-login Prompt when a User's Account Is Changed 17
Additional Encryption Types Added for SNMP 17
All Gen5 PDU Types Available as of Release 9.2 Added to Device Catalog 18
Ability to Discover the Gen 5 Mechanical Lock 18
Release 9.0 and 9.1 18
Patch Installer 18

New "Session Never Expires" Option 18
Port Usage Report Enhancement 19
Automatic Updates in Analytics Window 19
Full Deletion of Cables from Inventory 20
Export Search Results to MS Excel 20
Improved Record Deletion Procedure 21
Faster Discovery of Panduit G5 PDUs 21
Enhanced Ability to Mark Ports as Damaged or Unusable 21
New Software Licensing Model 21
License Keys 24
Multi-Agent Support 24
QlikView Reports Installer 26
Colocation 4-in-1 and 2-in-1 Cabinet Support 26
Temperature Settings Affecting Cabinet Colors 28
Energy Phase Report 29
Resolved Issues in SmartZone Release 9 Series 31
Known Issues 36
Automated Network Discovery Supported Devices 39
Appendix A: Related Information Products and Sites 40

About This Document

Scope

This Planning Letter covers new features, enhancements, and prerequisites introduced in SmartZone Release 9.2 and the Release 9 Series.

Purpose of This Document

This document is designed to help you prepare for the upcoming SmartZone software release in terms of the following considerations:

- Software requirements
- Supported migration paths
- New features and enhancements
- Expansion of network discovery supported devices
- Resolved issues
- Unresolved issues

Panduit Technical Support

Severity 1 & 2 Issues:

Americas: 1-866-721-5302 x86810 during normal Central Standard Time business hours

EMEA: 44-1291-674-661 x22761 during normal U.K. business hours

APAC: 65-8200-3931 or 65-8200-3932 between 8 a.m. and 5 p.m. local time

Severity 3 & 4 Issues, Email - normal business hours:

systemsupport@panduit.com

Overview

Panduit® SmartZone™ Software Release 9.2 adds important features and capabilities to our DCIM solution. SmartZone Software Solutions enable comprehensive energy and physical infrastructure efficiency in data centers. The software provides visibility of power, environmental, space, and connectivity information that is accurate and actionable for operational optimization.

What's New in SmartZone Release 9.2?

SmartZone Release 9.2 focuses on strengthening the software system's existing functionality in **Reports** and **Events**. It includes the following new features and enhancements. See New Features for details.

- New Events Report
- Reports include Daily Aggregation data
- Data Retention Task for Events
- User can choose a Data Retention Policy for Reports
- SmartZone supports QlikView version 12.20, but does not support earlier QlikView versions - if you have a QlikView version earlier than 12.20, please go to:

  http://us-d.demo.qlik.com/download

  and download the correct version for your server Operating System

- Tool tip explaining Time Period selections for Reports
- Unit of Measurement (UOM) added to Environmental Performance Report heading
- Several reports now have a Switch Port Description field, which will provide data for Cisco switches
- New System Configuration option for Events:
  - **Disable creation of threshold crossing events after traps**
- User is prompted to re-login when a change to the User Account is made
- Additional encryption types added for SNMP (AES192 and AES256 Privacy) for G5 PDUs
- All Gen5 PDU types available as of Release 9.2 have been added to the Device Catalog
- Ability to discover the Gen 5 mechanical lock
- A Re-Indexing tab has been added to Admin/System Configuration

Introduced in SmartZone Release 9 Series

Prior SmartZone Series 9 releases focused on strengthening the software system's existing functionality in its four pillars: **Power** , **Environmental, Asset, and Connectivity**. It included the following new features and enhancements. See New Features for details.

- Patch Installer
- New **Session Never Expires** option at User level
- Improved Record Deletion procedure
- Faster Discovery of Gen 5 PDUs
- Full deletion of cables from inventory
- Port Usage Report enhancement shows rack unit location of switch ports
- Mark a port Damaged or Not Usable even when the patch panel has a permanent link attached to the back
- Option to prevent the Analytics Window from refreshing after each Automatic Update
- Export Search results to MS Excel
- New Simple-to-Order Licensing Model
- Multi-Agent Support
- Improved QlikView Reports Installer
- Colocation 4-in-1 Cabinet Support
- New System Configuration Setting - Temperature Settings Affecting Cabinet Colors
- Energy Phase Report

SmartZone Software Release 9.2 Requirements

SmartZone Server Requirements

Hardware

CPU	3.0 GHz multi-core minimum 4 core
RAM	8 GB minimum, 16 GB recommended
Hard Disk Space	1.3 GB for installation (up to 10 GB for database expansions) (See notes below.)

Note: During an upgrade of your SmartZone application database, disk space will grow significantly. You may need up to double the size of the current database in free disk space to account for database expansion before starting an upgrade.

Insufficient free disk space during an upgrade will result in data corruption.

Software

Operating System	• Windows Server 2016 (64 bit) (English, Korean, Japanese, Russian, Portuguese, and Spanish) • Windows Server 2012 (English)
Browser	• Mozilla Firefox 56 and higher • Google Chrome 66 and higher • IE11 and higher
Database	• Microsoft SQL Server 2016 Enterprise Edition (64-bit) English • Microsoft SQL Server 2016 Standard Edition (64-bit) English • Microsoft SQL Server 2014 Enterprise Edition (64-bit) English • Microsoft SQL Server 2014 Standard Edition (64-bit) English • Microsoft SQL Server 2012 Enterprise Edition (64-bit) English • Microsoft SQL Server 2012 Standard Edition (64-bit)English

Note: For optimal performance, Panduit recommends that the SmartZone Application Server, the SmartZone Database Server, and the SmartZone Reports Server each reside on separate machines/VMs.

Note: To update from SQL Server 2008 to 2012 to 2014, export a .bak file from a prior version and import the .bak file into a later version (run any special queries if there is a need).

SmartZone Client Requirements

Hardware

CPU	2.9 GHZ dual core recommended
RAM	3.5 GB recommended
Display Resolution	1280 × 800 or higher
Handheld Device	• Apple iPad 2, 16GB, iOS6 & 7 • Apple iPad Mini, 16GB, iOS6 & 7 • Samsung Galaxy Note 10.1, 16GB, Android^^ 4.0
Handheld Scanner	• Socket Mobile CHS 7Pi • Motorola CS3070

Software

Operating System	• Windows 10 (English, Korean, Japanese, Russian, Portuguese, and Spanish)
Browser	• Mozilla Firefox 56 and higher • Google Chrome 66 and higher • IE11 and higher
Handheld Device Operating System	• Chrome for Android 8.0

SmartZone Database Virtual Machine Requirements

CPU	3.0 GHz multi-core minimum 8 core (for example, two quad-core processors)
RAM	16 GB for Database Server

SmartZone Reports Server Requirements

Hardware

CPU	• 64-bit: Multi-core x64 compatible processors • 32-bit: Intel Core Duo compatible or higher recommended
RAM	• 8 GB minimum (Depending on data volumes, more may be required)
Hard Disk Space	• 450 MB for installation

Software

Operating System	• Windows Server 2016 • Windows Server 2012 R2 • Windows Server 2012
Browser	• Google Chrome 66 and higher • Mozilla Firefox 56 and higher • IE 11 and higher
Handheld Device Operating System	• Android Phones & Tablets (Google Chrome Browser)

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- Samsung is a registered trademark of Samsung Electronics Co., Ltd.

- Windows and MS SQL are registered trademarks of Microsoft Corporation in the United States and/or other countries.
- Mozilla and Firefox are registered trademarks of the Mozilla Foundation.

Integration Requirements

SmartZone software provides an Application Program Interface (API) that allows developers to integrate with third-party software systems such as work order management or ticketing. The API uses SOAP or Rest. It is designed to receive and send task data between SmartZone and other software systems to enable automated updates of information in both systems. It helps to eliminate double entry of information and human error, thus saving time and streamlining processes.

Submit additional API requests to systemsupport@panduit.com.

Supported Migration Paths for SmartZone Release 9.2

Before installing or upgrading to SmartZone Release 9.2, review the following information.

Note: You must have a valid support and maintenance agreement to access PIM and SmartZone upgrades and receive Panduit Technical Support assistance.

Note: Paid Service Engagements are available to assist you with any upgrade.

Standard Installation or Upgrade

If you are new to SmartZone software or are currently running SmartZone 9.0 or 9.1, the SmartZone 7 Series, or PIM 5.3, simply mount and run the .ISO file. When prompted, select **Install SmartZone Software**.

For further installation details, see the SmartZone Installation Manual included in the .ISO file.

Migrating from Earlier Panduit DCIM Versions

The following table shows which Panduit DCIM offerings can migrate to SmartZone Release 9.2.

Release	SmartZone 9.2
PIM 4.5.1	No
PIM 5.0	No
PIM 5.1.1	Yes*
PIM 5.2	Yes*
PIM 5.2.1	Yes**
PIM 5.3	Yes
SmartZone 7.0 through 9.1	Yes
DCiQ 2.1	No
DCiQ 2.5	No
DCiQ 3.0	Yes***
SynapSense	No

*Users running PIM 5.1.1 or PIM 5.2 will first have to migrate to PIM 5.2.1, then migrate to PIM 5.3.0, and then migrate to SmartZone 9.2.

**Users running PIM 5.2.1 will first have to migrate to PIM 5.3.0, and then migrate to SmartZone 9.2.

***Users running DCiQ 3.0 will need to contact Customer Support to migrate to SmartZone 9.2.

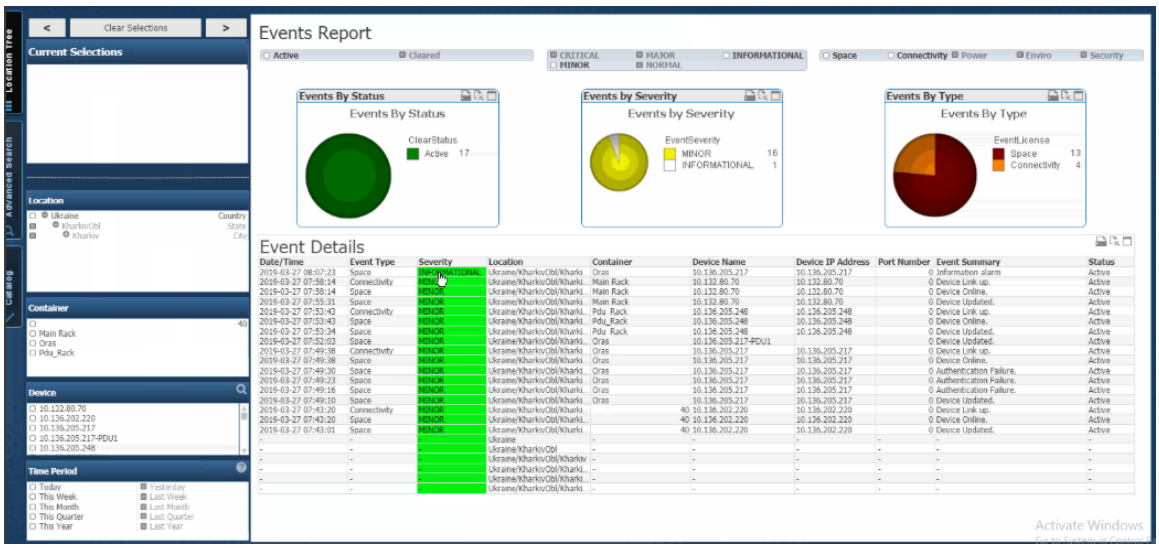
SmartZone Release 9 Series: New Features and Enhancements

The SmartZone Release 9 Series introduces the following new features and enhancements.

Release 9.2

Events Report

SmartZone Release 9.2 introduces the Events Report.



This new report:

- Displays events based on day, week, month, or the selected date range.
- Allows you to filter events by event type. You can select one or more of the following check boxes:
  - All (no selections)
  - Space
  - Connectivity
  - Power
  - Enviro
  - Security

- Includes the following event fields:
  - Date/Time
  - Event Type
  - Severity
  - Location
  - Container
  - Device Name
  - Device IP Address
  - Port Number
  - Event Summary
  - Status
- Allows you to filter the report on one or more of the fields above.
- Allows you to print and to export to Excel.

Reports Include Daily Aggregation Data

Complete daily aggregation data displays in the Energy Performance and the Cost Analysis reports.

Default Data Retention Task for Events

A new default Event Data Retention Task retains 365 days worth of events. The task moves events to the history table rather than deleting them. The history table maintains 2 years (730 days) of events.

Data Retention Policy for Reports

You can change the Data Retention Policy for Reports from the default value of 365 days to a value that suits your needs by opening the SZ-ERM-Config.xml file and editing the MaxHistoryDaysCount parameter.

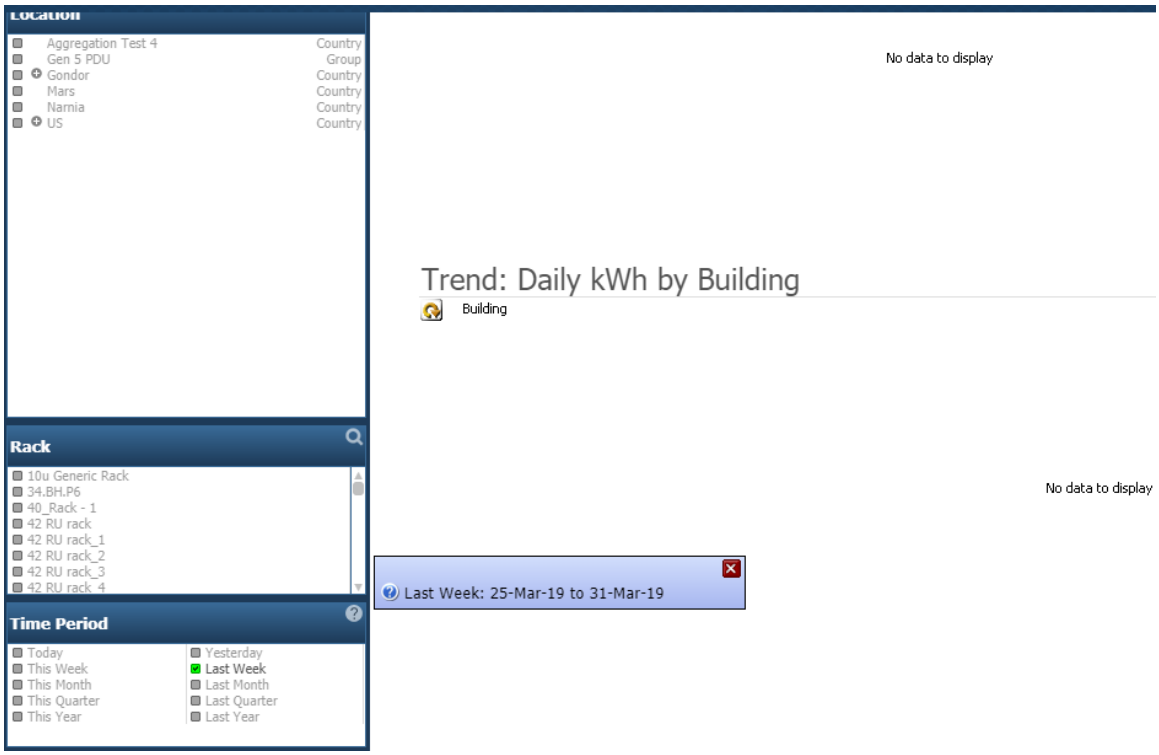
SmartZone Support for QlikView Version 12.20

SmartZone supports the latest version of QlikView, 12.20. If you have a QlikView version earlier than 12.20, please go to
http://us-d.demo.qlik.com/download

and download the correct version for your server Operating System

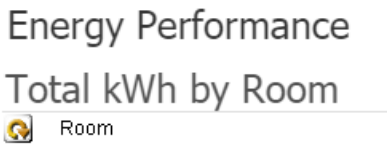
Tool Tip Explaining Time Period Selections for Reports

Reports that include Time Period selections now feature a tool tip that provides the exact dates for the time period you have selected. Mouse over the question mark icon to see the tooltip, or click the icon to open the message in a pop-up window. In the example below, choosing Last Week would yield results from March 25th to March 31st 2019.



Unit of Measurement (UOM) Added to Environmental Performance Report

The Environmental Performance Report now specifies the exact unit of measurement under every section heading.



Switch Port Description Field in Reports for Cisco Switches

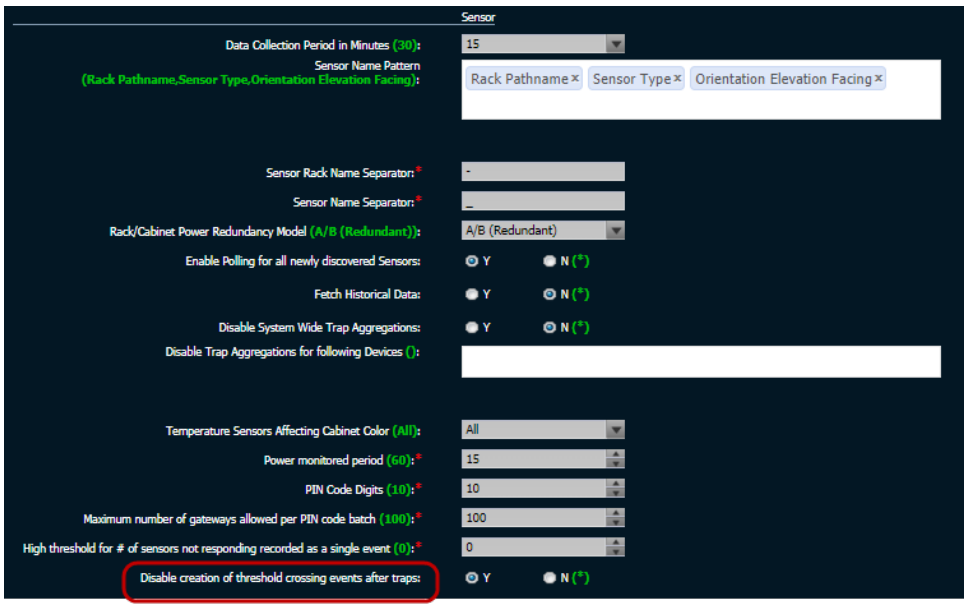
This release introduces a Port Description Field to several reports. The field will provide data for Cisco switches. Along with reports, the Port Description information is also added to:

- Infrastructure > Port Details (Right-Hand Menu)
- Connectivity > Port tooltip

- Device > Port Details (Right-Hand Menu)
- Advanced Search > Port

New System Configuration Option for Events

The Settings tab under System Configuration includes the **Disable creation of threshold crossing** events after traps options for events:



This setting allows you to specify how the system handles threshold-crossing events. By default, two events are generated for every gateway trap - a traps event and a threshold-crossing event. To maintain this default, leave this field set to **N**. If you change the setting to **Y**, threshold crossing events that result from an on-demand trap (i.e. after every sensor trap) will not be added to events table. Other (not on-demand) threshold-crossing events will continue to be processed and recorded (for example, sensor polling from Analytics).

Re-login Prompt when a User's Account Is Changed

Users are prompted to re-login when their account password is changed.

Additional Encryption Types Added for SNMP

SmartZone now supports AES192 and AES256 Privacy SNMP encryption standards for SmartZone's Gen 5 PDUs.

All Gen5 PDU Types Available as of Release 9.2 Added to Device Catalog

In Release 9.2, the SmartZone Device Catalog includes all of the Gen 5 PDU types available at the time of release.

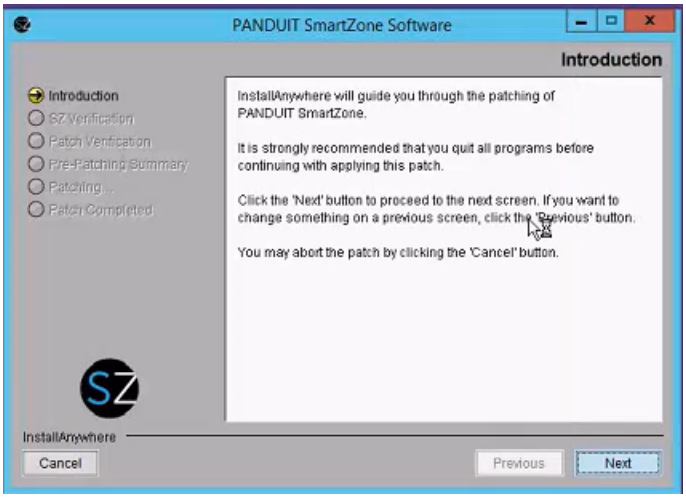
Ability to Discover the Gen 5 Mechanical Lock

For Gen 5 devices with mechanical locks, a rediscovery after upgrade to 9.2 will map the sensors correctly.

Release 9.0 and 9.1

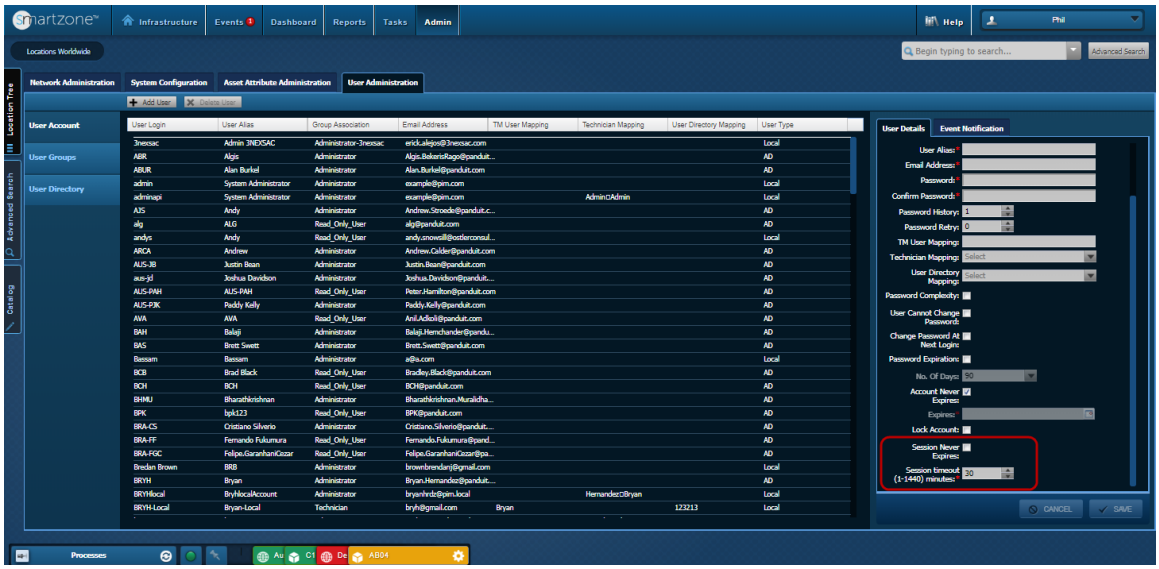
Patch Installer

The new Patch Installer allows you to install SmartZone patches without having to do a full install. This feature takes effect for all patches delivered after the release of SmartZone 9.1.



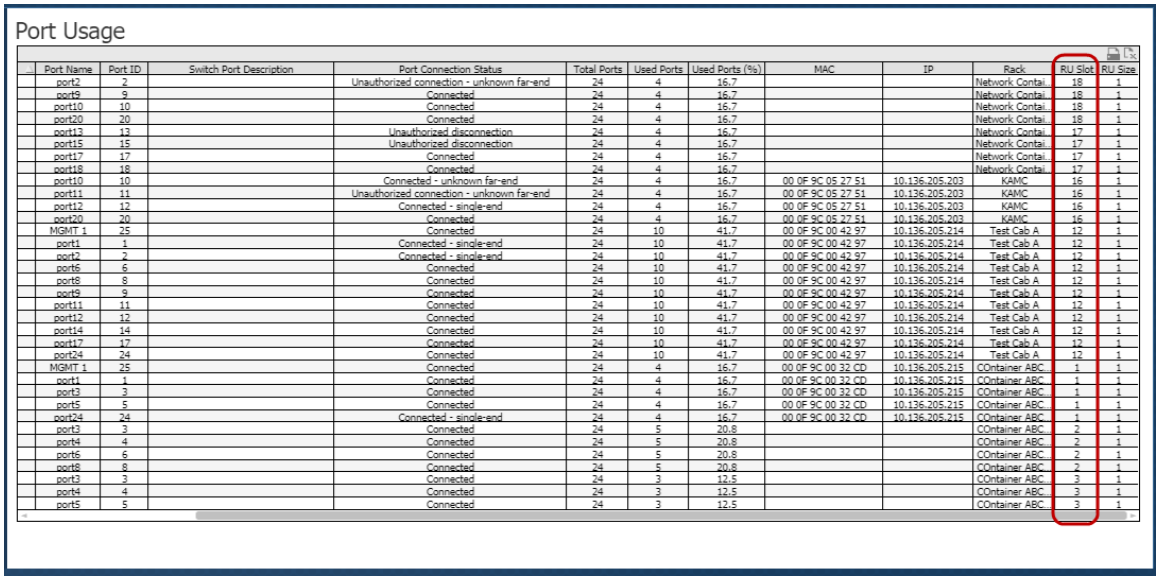
New "Session Never Expires" Option

Two new options have been added to **User Administration** -> **User Account** tab: **Session Never Expires** and **Session timeout (1-1440) minutes**. Checking the **Session Never Expires** check box will prevent SmartZone sessions from expiring for the selected user. Leaving the Session Never Expires check box unchecked enables the **Session timeout** selection list. The default is set to 30 minutes, but the user can choose to change this to any number between 1 and 1440 minutes (24 hours). The user needs to log out and log back in for timeout setting changes to take effect.



Port Usage Report Enhancement

The Port Usage Report now maps the Rack Unit location of ports to the location of the switch chassis.



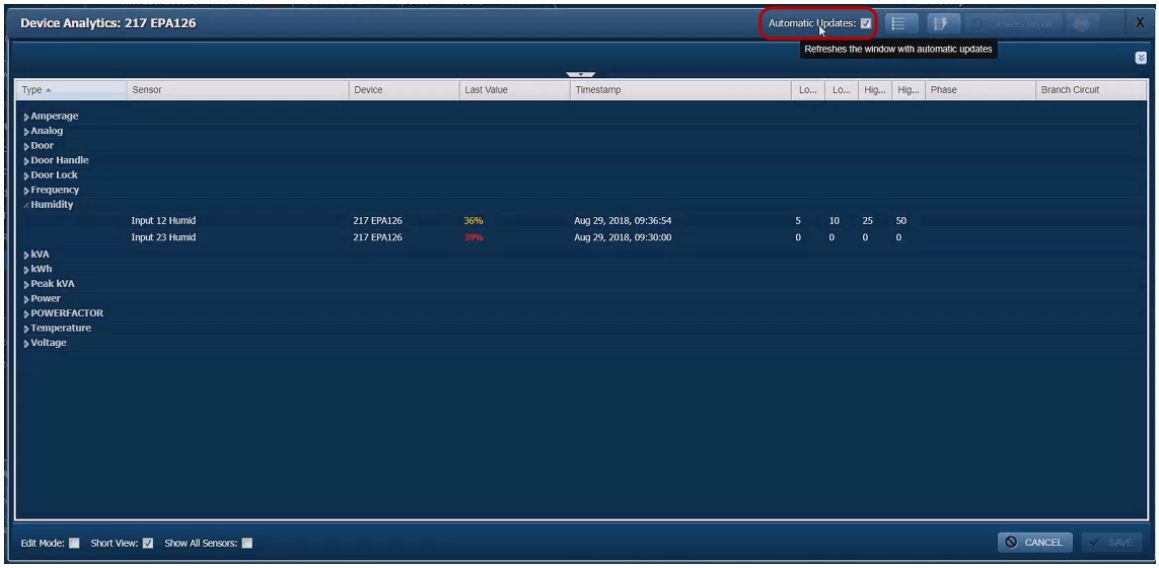
Port Usage

Port Name	Port ID	Switch Port Description	Port Connection Status	Total Ports	Used Ports	Used Ports (%)	MAC	IP	Rack	RU Slot	RU Size
port2	2		Unauthorized connection - unknown far-end	24	4	16.7			Network Contai...	18	1
port9	9		Connected	24	4	16.7			Network Contai...	18	1
port10	10		Connected	24	4	16.7			Network Contai...	18	1
port20	20		Connected	24	4	16.7			Network Contai...	18	1
port13	13		Unauthorized disconnection	24	4	16.7			Network Contai...	17	1
port15	15		Unauthorized disconnection	24	4	16.7			Network Contai...	17	1
port17	17		Connected	24	4	16.7			Network Contai...	17	1
port18	18		Connected	24	4	16.7			Network Contai...	17	1
port10	10		Connected - unknown far-end	24	4	16.7	00 0F 9C 05 27 51	10.136.205.203	KAMC	16	1
port11	11		Unauthorized connection - unknown far-end	24	4	16.7	00 0F 9C 05 27 51	10.136.205.203	KAMC	16	1
port12	12		Connected - single-end	24	4	16.7	00 0F 9C 05 27 51	10.136.205.203	KAMC	16	1
port20	20		Connected	24	4	16.7	00 0F 9C 05 27 51	10.136.205.203	KAMC	16	1
MGMT 1	25		Connected	24	10	41.7	00 0F 9C 00 42 97	10.136.205.214	Test Cab A	12	1
port1	1		Connected - single-end	24	10	41.7	00 0F 9C 00 42 97	10.136.205.214	Test Cab A	12	1
port2	2		Connected - single-end	24	10	41.7	00 0F 9C 00 42 97	10.136.205.214	Test Cab A	12	1
port6	6		Connected	24	10	41.7	00 0F 9C 00 42 97	10.136.205.214	Test Cab A	12	1
port8	8		Connected	24	10	41.7	00 0F 9C 00 42 97	10.136.205.214	Test Cab A	12	1
port9	9		Connected	24	10	41.7	00 0F 9C 00 42 97	10.136.205.214	Test Cab A	12	1
port11	11		Connected	24	10	41.7	00 0F 9C 00 42 97	10.136.205.214	Test Cab A	12	1
port12	12		Connected	24	10	41.7	00 0F 9C 00 42 97	10.136.205.214	Test Cab A	12	1
port14	14		Connected	24	10	41.7	00 0F 9C 00 42 97	10.136.205.214	Test Cab A	12	1
port17	17		Connected	24	10	41.7	00 0F 9C 00 42 97	10.136.205.214	Test Cab A	12	1
port24	24		Connected	24	10	41.7	00 0F 9C 00 42 97	10.136.205.214	Test Cab A	12	1
MGMT 1	25		Connected	24	4	16.7	00 0F 9C 00 32 CD	10.136.205.215	COntainer ABC	1	1
port1	1		Connected	24	4	16.7	00 0F 9C 00 32 CD	10.136.205.215	COntainer ABC	1	1
port3	3		Connected	24	4	16.7	00 0F 9C 00 32 CD	10.136.205.215	COntainer ABC	1	1
port5	5		Connected	24	4	16.7	00 0F 9C 00 32 CD	10.136.205.215	COntainer ABC	1	1
port24	24		Connected - single-end	24	4	16.7	00 0F 9C 00 32 CD	10.136.205.215	COntainer ABC	1	1
port3	3		Connected	24	5	20.8			COntainer ABC	2	1
port4	4		Connected	24	5	20.8			COntainer ABC	2	1
port6	6		Connected	24	5	20.8			COntainer ABC	2	1
port8	8		Connected	24	5	20.8			COntainer ABC	2	1
port3	3		Connected	24	3	12.5			COntainer ABC	3	1
port4	4		Connected	24	3	12.5			COntainer ABC	3	1
port5	5		Connected	24	3	12.5			COntainer ABC	3	1

Automatic Updates in Analytics Window

A new **Automatic Updates** check box has been added to the top of the Analytics window. By default, this option is unchecked, so that the Analytics screen will not refresh after automatic updates. If **Automatic Updates** is checked, the Analytics window will refresh every time an automatic update occurs.

This check box is disabled when the **Edit Mode** check box is selected, because the Analytics window never refreshes while in edit mode.

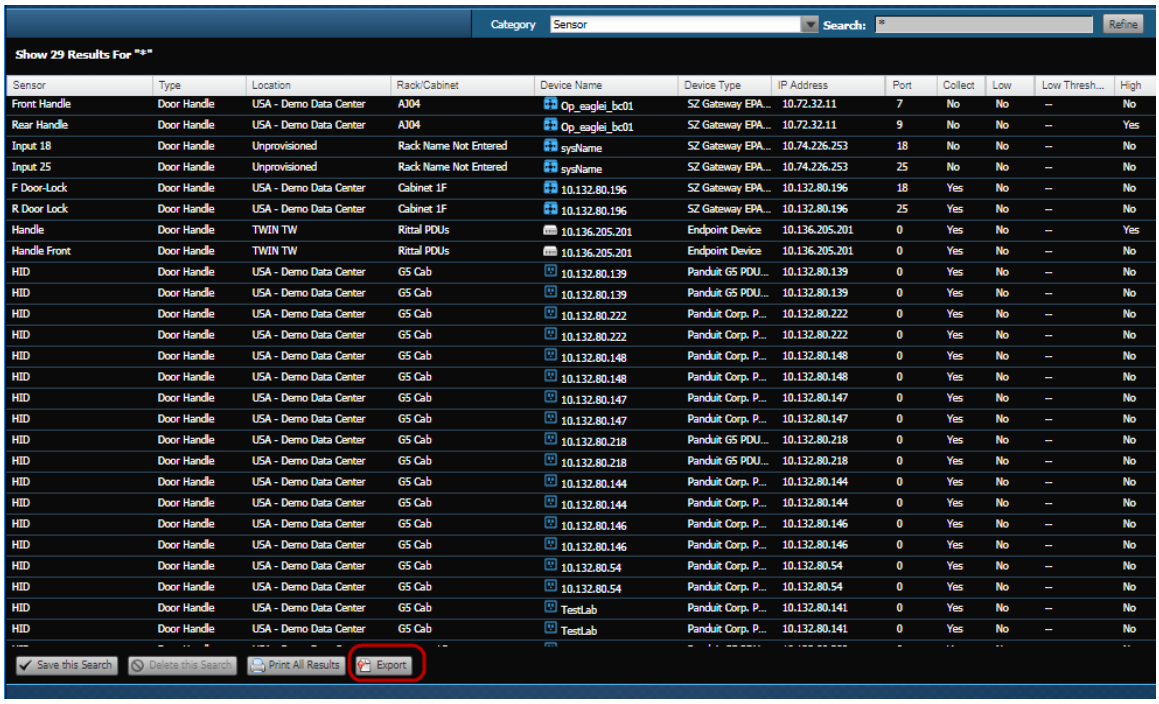


Full Deletion of Cables from Inventory

The user can now completely delete a cable from inventory, including its serial number.

Export Search Results to MS Excel

Users can now export a maximum of 5,000 search results to an Excel spreadsheet by clicking the new **Export** button at the bottom of the Search window.



Improved Record Deletion Procedure

Record deletion (both Delete Forever and Move to History) has been changed so that it deletes in chunks of 1,000,000 rows. As a result, the option to cancel a data retention task has been removed. This change is implemented to prevent errors that can occur when deleting very large amounts of data.

Faster Discovery of Panduit G5 PDUs

The process for discovering Panduit G5 PDUs has been streamlined for quicker results.

Enhanced Ability to Mark Ports as Damaged or Unusable

A port may now be marked as Damaged or Not Usable even if the patch panel has a permanent link attached to the back. Previously, this was not allowed.

New Software Licensing Model

SmartZone Software Release 9.0 introduced a new, streamlined licensing model. All new licenses are at Maturity Level 3. Maturity Levels 1 and 2 have been eliminated. These changes impact new users installing Release 9.2, along with existing users upgrading to Release 9.2. The new licensing model is based on SmartZone software's four application pillars:

- Power
- Environmental
- Asset
- Connectivity

You can order any combination of these four licenses, including all four. The license level count is based on the number of containers to be included in SmartZone.

The table below shows the four pillars and which benefits are included in each individual license.

Benefits	Asset	Connectivity	Power	Environmental
Reports	•	•	•	•
Reservation of MACs	•	•	•	•
Capacity Planning	•	•	•	•
APIs	•	•	•	•
Event Management	•	•	•	•
Floor Plan View	•	•	•	•
Discovery	•	•	•	•
Warnings & Alerts	•	•	•	•
Manage Asset Attributes	•	•	•	•
Asset Inventory and Tracking	•			
Asset Management	•			
Cable Management	•	•		
Identification of Endpoints *(requires both Asset and Connectivity)*	•	•		
End-to-End Connectivity		•		
Search for Cabling Capacity		•		
Connect/Disconnect Real-Time Notifications		•		
Device Reconciliation Notifications		•		
On/Off-line Device Notification	•	•		
Power Management			•	
Discover PDUs and IT power chains			•	
Environmental Monitoring				•
Cooling Management				•
Advanced Events *(requires all four licenses)*	•	•	•	•
Extended Reports *(requires all four licenses)*	•	•	•	•

Customers see only features associated with the licenses they have purchased. Features not associated with their license will be hidden. For example, a user that purchases Power and Environmental will not see any of the screens, options, or menu items associated with Asset or Connectivity. The UI will adjust itself based on the licensing to show only available features.

This licensing filters apply to the following areas within SmartZone:

- Catalog
- Discovery
- Reports and Dashboard
- Analytics
- Overview and Details pane
- EDGE Discovery
- Sensor polling and aggregations
- Trap processing
- Floor Plan
- Advanced Search
- Administration sections:
  - System Configuration
  - Asset Attribute Administration
  - User Administration
- Events

For reference, the **About Panduit SmartZone** window lists only the licenses you have purchased, along with their expiration dates if applicable. If there is no expiration date for a license, it is listed as Permanent.

License Keys

Panduit generates a single license file and license key for all the SmartZone application pillars you select*. Your license will also factor in the number of containers to be supported.

*SmartZone Reports require a separate license. The initial license accommodates 16 named users (this is a limitation set by QlikView). Additional user licenses can be purchased.

Multi-Agent Support

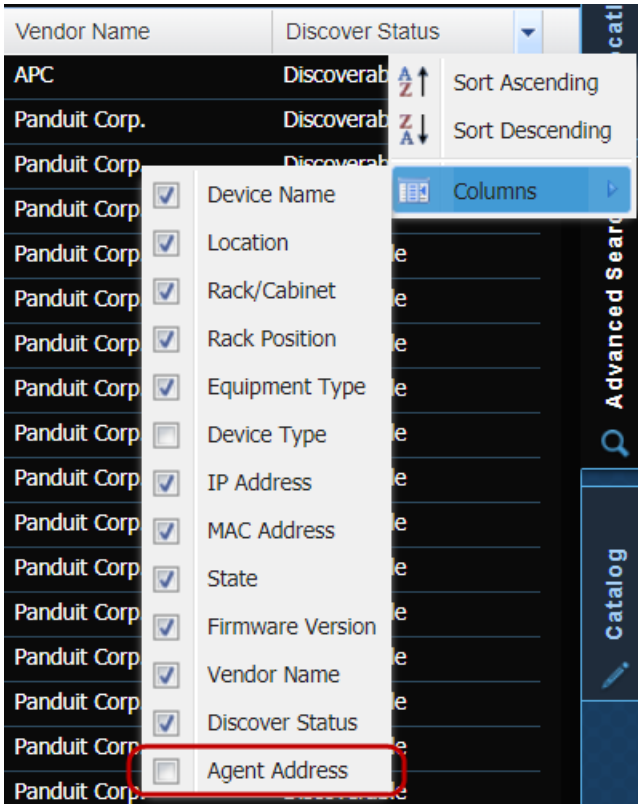
SmartZone supports a Multi-Agent system, which involves multiple interacting software agents. This feature affects both the SmartZone User Interface and the Installer.

Multi-Agent support introduces the following changes to the SmartZone system:

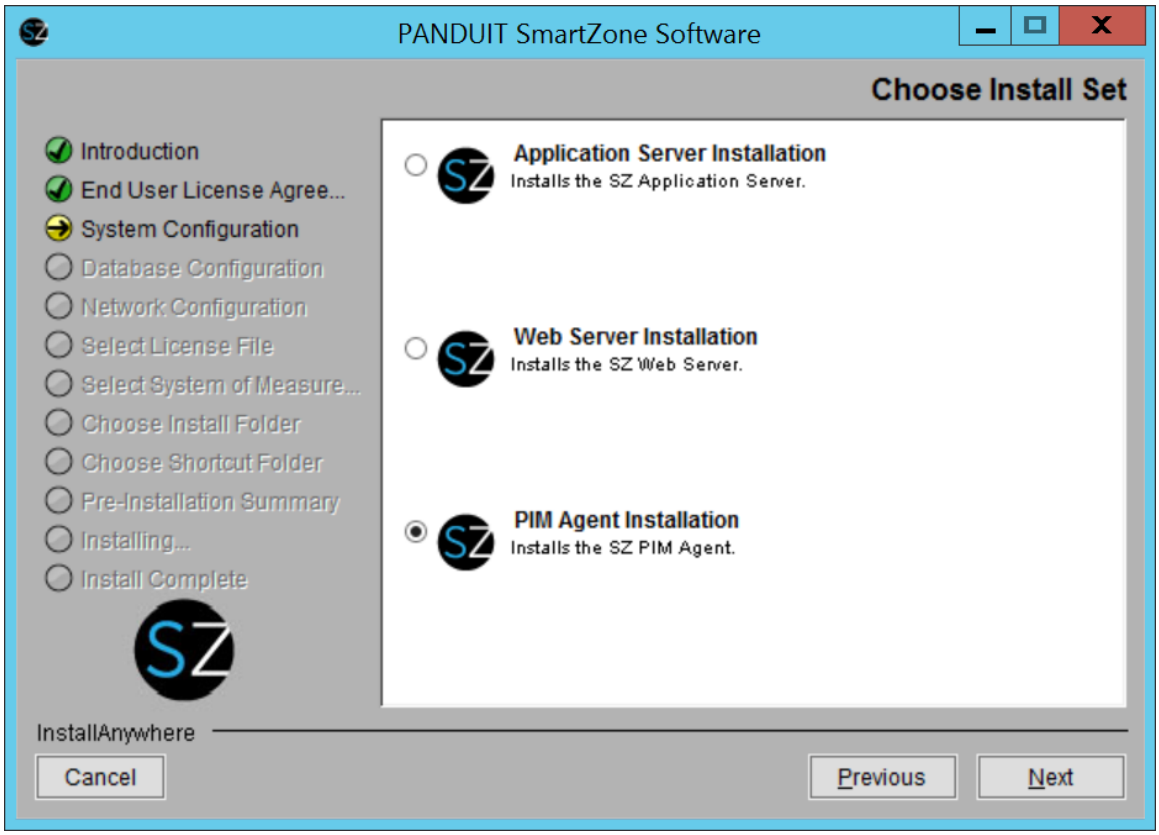
- When a device is discovered, you can click the **Agent** button to open a pop-up window where you can select an agent that Discovery should use. Once you choose

the agent, the subsequent discovered devices will use this agent.

- You can change an agent by right-clicking a location in the Location Tree and selecting the Override Agent option from the drop-down menu. This overrides the current agent for all the devices in that location.
- The agent status window now displays the health status of all registered agents.
- To discover a device in a system with multiple agents, you need to ensure that the agent's IP address is configured in the SNMP NMS list on the Gateway web interface.
- When you perform an Advanced Search, the agent address is included in the results. To view the Agent column, click the down arrow in a column heading, mouse over Columns, and select Agent Address.



To support the Multi-Agent mode, the SmartZone Installation program will allow you to perform an Agent-Only installation.



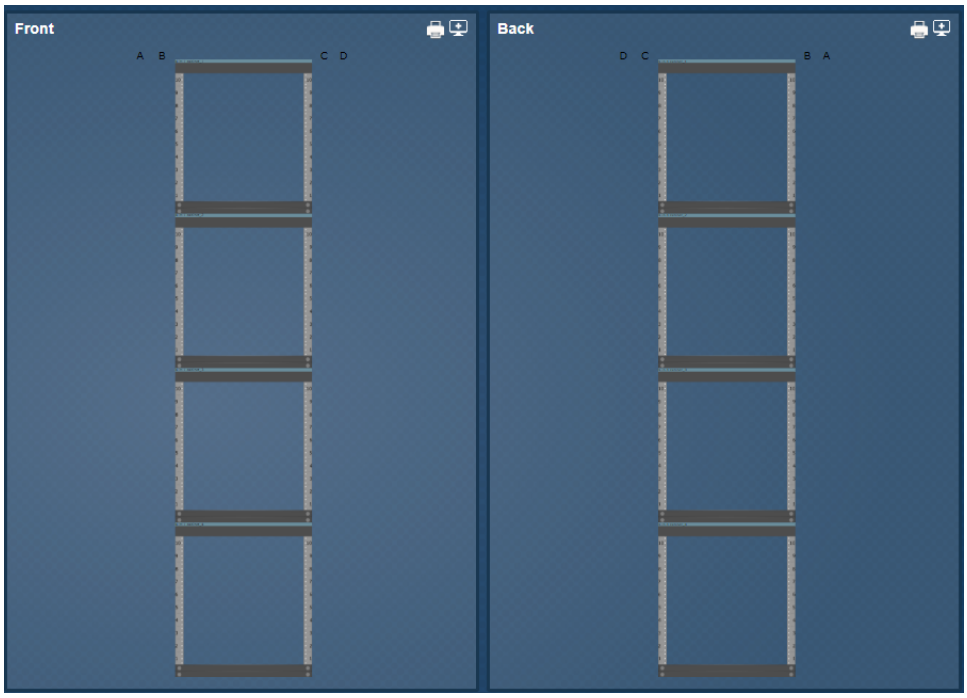
QlikView Reports Installer

As of SmartZone Release 9.0, QlikView must be installed using the QlikView Installer prior to running the Panduit SmartZone Reports installer. If QlikView is not installed (or not installed correctly), the Panduit SmartZone Reports installer will abort. For details, see the SmartZone Release 9.2 Reports User Manual.

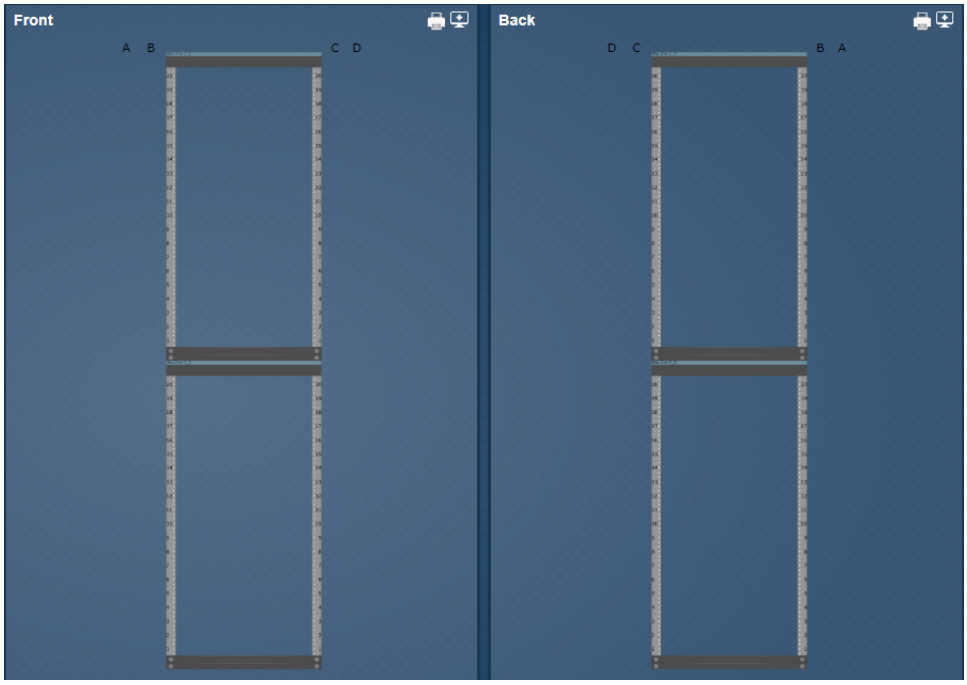
Colocation 4-in-1 and 2-in-1 Cabinet Support

SmartZone provides support for Colocation 4-in-1 and 2-in-1 cabinets.

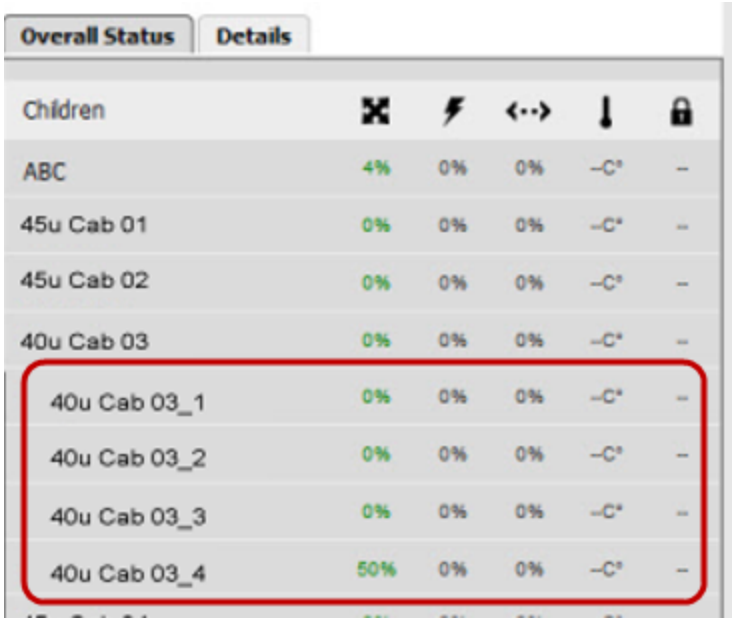
A 4-in-1 cabinet:



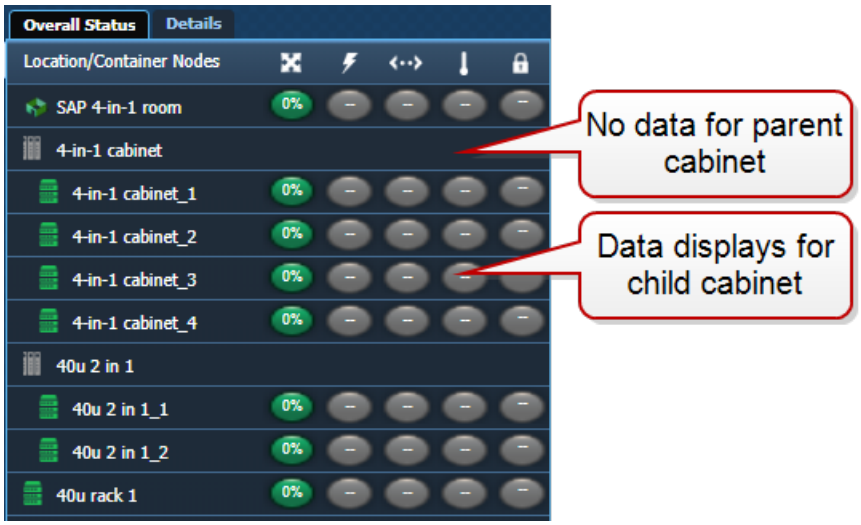
A 2-in-1 cabinet:



SmartZone treats the sub-cabinets as children of the 4-in-1 or 2-in-1 cabinet.

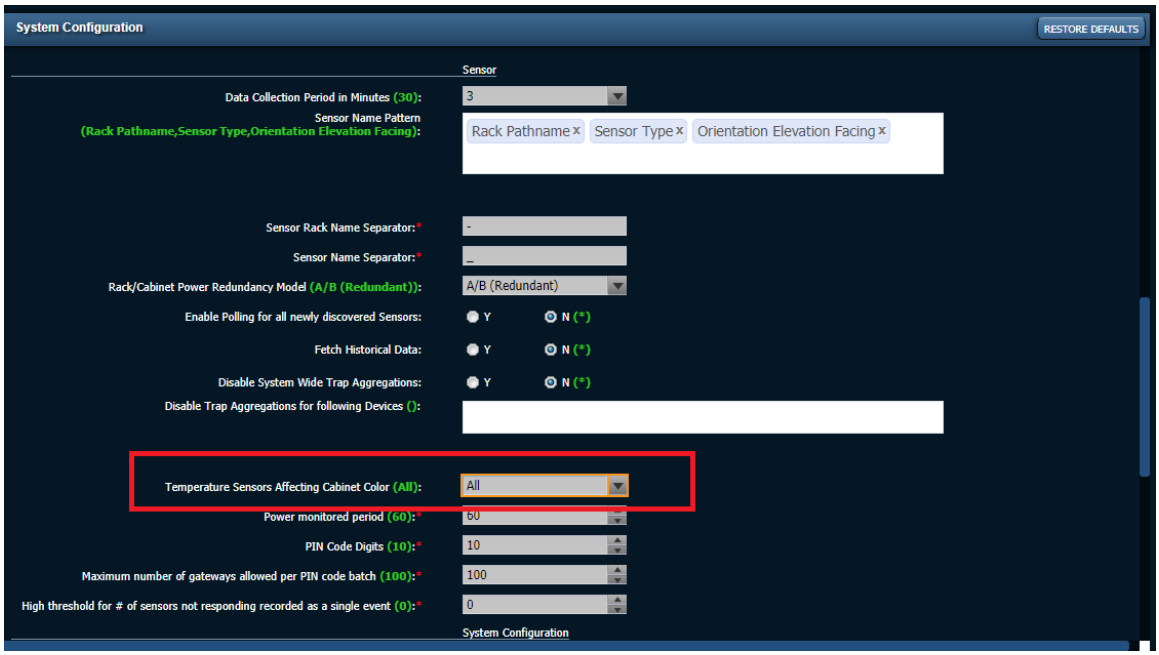


Note: Data aggregations occur only at the child cabinet level. Data is not aggregated for the parent cabinet.



Temperature Settings Affecting Cabinet Colors

The Admin module's System Configuration tab offer a configurable option for temperature sensors whose readings are used to determine the temperature health color for cabinets. This option displays in the Sensor section of the tab.



Options include:

- All (default)
- Intake
- Exhaust

This setting affects the following areas:

- Temperature health bubble in Overview pane
- Location Tree temperature color (both for Location and Cabinet)
- Floor Plan

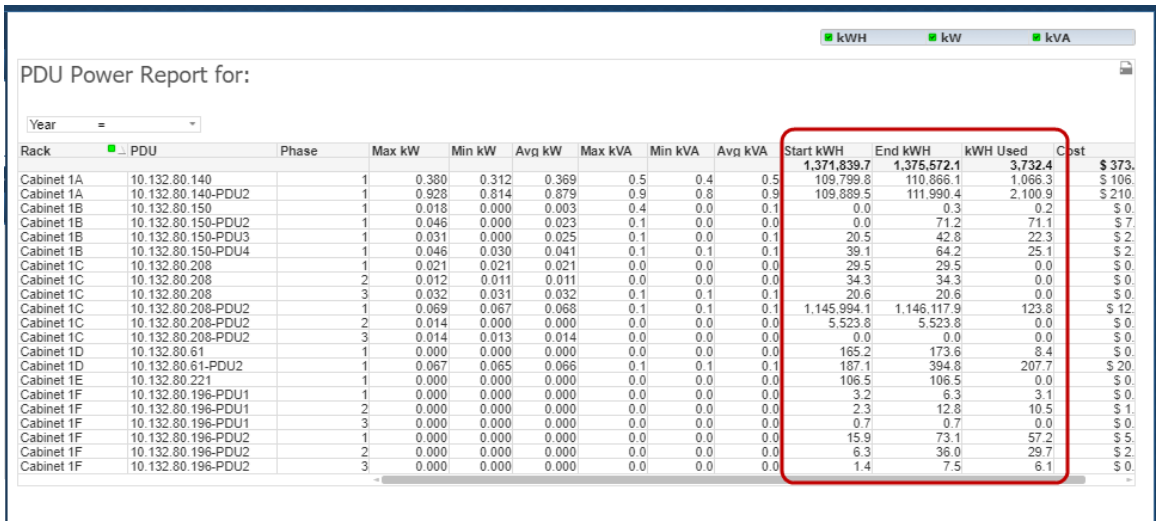
Energy Phase Report

The Energy Phase Report shows the following data by phase for the selected time period:

- Maximum, average, and minimum kW, kVA, and/or kWH for the time period
- Total cost

If kWH is selected, the following data displays:

- Starting kWH for the time period
- Ending kWH for the time period
- Total kWH used



kWH kW kVA

PDU Power Report for:

Year =

Rack	PDU	Phase	Max kW	Min kW	Avg kW	Max kVA	Min kVA	Avg kVA	Start kWH	End kWH	kWH Used	Cost
									1,371,839.7	1,375,572.1	3,732.4	$ 373.
Cabinet 1A	10.132.80.140	1	0.380	0.312	0.369	0.5	0.4	0.5	109,799.8	110,866.1	1,066.3	$ 106.
Cabinet 1A	10.132.80.140-PDU2	1	0.928	0.814	0.879	0.9	0.8	0.9	109,889.5	111,990.4	2,100.9	$ 210.
Cabinet 1B	10.132.80.150	1	0.018	0.000	0.003	0.4	0.0	0.1	0.0	0.3	0.2	$ 0.
Cabinet 1B	10.132.80.150-PDU2	1	0.046	0.000	0.023	0.1	0.0	0.0	0.0	71.2	71.1	$ 7.
Cabinet 1B	10.132.80.150-PDU3	1	0.031	0.000	0.025	0.1	0.0	0.1	20.5	42.8	22.3	$ 2.
Cabinet 1B	10.132.80.150-PDU4	1	0.046	0.030	0.041	0.1	0.1	0.1	39.1	64.2	25.1	$ 2.
Cabinet 1C	10.132.80.208	1	0.021	0.021	0.021	0.0	0.0	0.0	29.5	29.5	0.0	$ 0.
Cabinet 1C	10.132.80.208	2	0.012	0.011	0.011	0.0	0.0	0.0	34.3	34.3	0.0	$ 0.
Cabinet 1C	10.132.80.208	3	0.032	0.031	0.032	0.1	0.1	0.1	20.6	20.6	0.0	$ 0.
Cabinet 1C	10.132.80.208-PDU2	1	0.069	0.067	0.068	0.1	0.1	0.1	1,145,994.1	1,146,117.9	123.8	$ 12.
Cabinet 1C	10.132.80.208-PDU2	2	0.014	0.000	0.000	0.0	0.0	0.0	5,523.8	5,523.8	0.0	$ 0.
Cabinet 1C	10.132.80.208-PDU2	3	0.014	0.013	0.014	0.0	0.0	0.0	0.0	0.0	0.0	$ 0.
Cabinet 1D	10.132.80.61	1	0.000	0.000	0.000	0.0	0.0	0.0	165.2	173.6	8.4	$ 0.
Cabinet 1D	10.132.80.61-PDU2	1	0.067	0.065	0.066	0.1	0.1	0.1	187.1	394.8	207.7	$ 20.
Cabinet 1E	10.132.80.221	1	0.000	0.000	0.000	0.0	0.0	0.0	106.5	106.5	0.0	$ 0.
Cabinet 1F	10.132.80.196-PDU1	1	0.000	0.000	0.000	0.0	0.0	0.0	3.2	6.3	3.1	$ 0.
Cabinet 1F	10.132.80.196-PDU1	2	0.000	0.000	0.000	0.0	0.0	0.0	2.3	12.8	10.5	$ 1.
Cabinet 1F	10.132.80.196-PDU1	3	0.000	0.000	0.000	0.0	0.0	0.0	0.7	0.7	0.0	$ 0.
Cabinet 1F	10.132.80.196-PDU2	1	0.000	0.000	0.000	0.0	0.0	0.0	15.9	73.1	57.2	$ 5.
Cabinet 1F	10.132.80.196-PDU2	2	0.000	0.000	0.000	0.0	0.0	0.0	6.3	36.0	29.7	$ 2.
Cabinet 1F	10.132.80.196-PDU2	3	0.000	0.000	0.000	0.0	0.0	0.0	1.4	7.5	6.1	$ 0.

Resolved Issues in SmartZone Release 9 Series

The tables below describe recent resolutions to identified issues.

Note: The SmartZone Release 9 Series resolves a large number of issues, but only those most visible to the user are listed below.

Reports and Dashboard	
1.	Min, Max, and Avg values on power Executive Summary report are calculated correctly.
2.	The Power Profile Report no longer shows a spike value for the first data point of the day due to duplicate data calculated from the previous day.
3.	The Reports Installer automatically looks for the new supported QlikView version, 12.20.
4.	The Environmental Performance Report correctly displays the chart.
5.	When a PDU is swapped out, the kWhr count compensates for this in its power usage report by continuing the usage count where it left off before the old PDU was swapped out. This ensures that power usage figures for that month are not skewed.
6.	For a reservation involving multiple connections, the Work Order sheet shows both port names and port numbers.
7.	The Logical Connectivity Reservation task sheet shows the actual names of the equipment.
8.	Values display properly for Temperature and Power Usage Dashboard widgets.
9.	Power Ranking Dashboard widget ranks only the 10 racks with the highest power consumption from the selected location.
10.	In Executive Summary report, the Average value is never greater than the Maximum value.
11.	Dashboard colors for Maximum, Average, and Minimum values are now consistent across locations and data types.
12.	PUE values display with 3 decimals (for values greater than 1) or 4 decimals (for values less than 1).

Discovery	
1.	SmartZone discovers the Liebert IntelliSlot Web Card.
2.	CMCIII PSM modules are discovered as a PDU/POU type.
3.	SmartZone discovers gateways set to SNMP v3 'AuthPriv' mode.
4.	An SNMP v3 discovery of PViQ panels displays only SNMP v3 community strings.
5.	Discovery finds endpoint MAC address.
6.	An EDGE is discovered as an EDGE Device rather than as an Endpoint Device.
7.	When discovering a gateway after enabling sensors to collect data, the enabled setting is preserved.
8.	Deleted discoveries are removed from the Discovery window.
9.	Sensors poll successfully after a rediscovery.
10.	After a discovery, power information displays before data aggregation runs.
11.	When **Move Endpoints After Connection** is set to **Y** in System Configuration, the endpoints will move to the location of the switch after a Linkup Discovery.

Analytics	
1.	After setting a percentage for a threshold in the Analytics window, the exact value and percentage value entered continue to display.
2.	The Analytics window opened from a Sensor hotspot shows the last value.
3.	SmartZone supports SNMP for the Unity DP Emerson network card.
4.	SmartZone shows all available power information for ServerTech PDUs at phase and branch levels.
5.	SmartZone shows per-outlet monitoring data for the Chatsworth PDU.
6.	In the Device Analytics window, data does not refresh after polling cycles while the user is working in Edit mode.

Analytics	
7.	The Device Analytics window displays a gateway's configured socket names, along with each outlet's amperage.
8.	Data in the Analytics window tree view can be sorted by Timestamp.
9.	Chatsworth PDUs kVA readings display correctly.
10.	User can assign a sensor to a container from the Analytics window.

Installation/Upgrade	
1.	The SmartZone Application Installer prompts user to click **Next** to stop the SmartZone Services so that the installation can continue.
2.	SmartZone supports MS SQL 2014.
3.	User can uninstall SmartZone Web Server using the ISO file.
4.	For SmartZone Web Server installation screens, all mandatory fields are marked.
5.	As long as IT Equipment Power (ITEP) and Total Facility Power (TFP) are both enabled or both disabled, no PUE calculation errors will occur during an upgrade.
6.	DCiQ Room information migrates correctly to SmartZone.
7.	The Reports Installer performs upgrades successfully.

Events	
1.	Traps/Events are generated for the state changes in the Gen 5 security sensors.
2.	All traps for Gateway EPA126 are detected.
3.	Events generated by Clamps display as Power Event type.
4.	User can select From/To filters from Advanced Search on Events /Time.

Data Collection	
1.	Date and time of device sensors whose values were expanded before a sensor repoll will display correct values after the sensor repoll.
2.	Power values are no longer set to 0 at the first daily aggregation of the day. This ensures subsequent calculations are correct.
3.	The date and time stamp of a rack's Overall Status is updated after a data aggregation.
4.	Usage data at the Container and Location level is available from day 1 of data collection.
5.	SmartZone consistently collects data from EDGE units.

Infrastructure Manager	
1.	The Power Monitored Average value of a rack's Overall Status is never less than the Minimum value.
2.	Locations that contain G5 PDUs can be deleted.
3.	High/Low values for Temperature and Humidity display correctly under containers' Overall Status tab.
4.	Derated Nameplate values display correctly.
5.	Min/Max kW values display correctly.
6.	Floor plan and its containers can be removed from the SmartZone Infrastructure module.
7.	When a container has a security sensor, the Lock icon displays in the location's Overall Status tab.
8.	User can select A/B (Redundant) or A/A (Not Redundant) options in a container's Asset Attributes tab.
9.	The Temperature colors for containers on Floor Plans show the highest temperature.
10.	A cloned device can be successfully deleted.
11.	When all power is available for a container, the Power health indicator in the right-hand menu now displays as green.
12.	Power Monitoring values in right-hand menu are now properly calculated and displayed.
13.	In the Location Tree, the Reservation icon for a device clears when the reservation is canceled.

Search and Advanced Search	
1.	When running an Advanced Search on Capacity - Best Fit, the search results reflect the search criteria.
2.	When running an Advanced Search on Reservations and then down-loading a CSV file of the search results, the CSV file's Status column displays correctly.
3.	Advanced Search results do not included negative numbers where they do not apply (for example, number of devices, password values).
4.	In Advanced Search, the **Refine** button is now disabled after changing a category or canceling the search.

Administration	
1.	In Asset Attribute Administration, the General drop-down menu no longer shows duplicate options.

Login Screen	
1.	At the Login screen, the **Use Active Directory Credentials** option remains available after a session has timed out.

Known Issues

- When SmartZone is installed in a non-default folder, a workaround is required to run Data Mover:
  1. Start the Data-Mover-Tool from the PIM-Data-Mover-tool folder.
  2. Click the **Browse** button and select the C:\Program Files\<SZ install folder->\tomcat folder.
  3. Click **Next** to start the Data Mover.
- While SmartZone supports Virtual Switch discovery, the Virtual Switch will be discovered as one switch instead of all the physical switches. You cannot move a part of the virtual switch to a different rack.
- Trap forwarding does not work for an unauthorized disconnect involving an SNMPv3 device.
- At the Analytics window, if you run a sensor repoll while in Edit mode, the Sensor Repoll process runs in the background, and the display does not automatically refresh. You need to refresh the Analytics window to see the updated sensor information.
- In some cases, Power Analytics may not show all circuit breaker branches. If this occurs, perform one of the following workarounds:
  - Configure PDUs correctly before discovery. Before discovering a PDU, make sure that branch circuit monitoring is turned on (if monitoring is needed) or off (if monitoring is not needed), then run a discovery. Changing this setting after initial discovery might not populate the right data in the database.
  - Change the device type of the discovered PDU by right-clicking the device in the Location Tree and selecting **Change Device Type**. For example, change the PDU device type from (10002 =Panduit Corp PDU) to (1195=Panduit PDU GMPO-A2070). Then run a rediscovery.
  - Delete old PDUs and rerun the discovery.
- When changing the threshold for capacity temperature, the change does not affect the location until you refresh the screen.
- If sensor thresholds are changed on a SmartZone™ Gateway, the readings in SmartZone will display incorrectly. To fix this, re-discover the Gateway. The readings will then display correctly in SmartZone.
- Currently, to add a switch chassis to the Location Tree, the user must add a switch and then add a chassis and blades. This differs from how other device types are added to the Location Tree.
- Setting the **Connect Endpoint Automatically During Discovery** option to **Y** in System Administration can cause the Discovery Process to take longer to complete. For a Link-Up Discovery, if two devices are connected to a switch port, only one of the devices will display as connected on the connectivity screen.

If there are more than two devices connected to the switch port, no connections will display on the connectivity screen. This is due to a trunk port's ability to have many connections. Instructions for connecting endpoints during Discovery are included in the "Add Discovery" section of SmartZone Help.

- The interconnect provisioning (i-Cord) process by design requires a native VLAN1 on the switch port being provisioned. If a certain port/switch has a different configuration, the user can use the Accept feature to ensure traceability and documentation of such a patch field. The SmartZone system will track this standard interconnect link like any other MAC.
- Only critical connectivity states like MAC, violations and panel status LED are shown in the SmartZone graphical view.
  Performance issues may be noticed if your system is near the lower end of minimum system requirements, or experiences sub-optimal network traffic.
- Users may occasionally see minor GUI automatic/dynamic refresh issues, particularly during SmartZone Location Tree Updates and SmartZone Connectivity Screen Updates. A manual refresh resolves any inconsistencies under such circumstances.
- If your screen size or resolution changes after login, you may experience display issues.
- Accepting an interconnect port connection only works from the connectivity screen of a PViQ panel and not from the Switch’s connectivity page.
- Data loss for monitoring environmental and power readings may occur in the event of one or multiple components of SmartZone software losing network connectivity. In this scenario, SmartZone would require a restart of all the three component services in the exact order of the SmartZone Database Server, SmartZone Application Server, and SmartZone Reports server to restore normal operations.
- When performing Device Analysis for multiple devices, selecting sensors with significantly different value ranges (for example, sensor A at 92w, and sensor B at 7128w) may cause SmartZone to appear unresponsive, and may take several minutes to generate a result.
- When setting the database password during SmartZone installation, including any of the following special characters in the password will cause inconsistent results: !@#$%^&*()_-+=;?/
- SmartZone Mobile users are unable to add a PViQ EM device in the Add Asset module. Until this issue is resolved, PViQ EM devices will have to be added through the SmartZone web application or through Data Mover.
- When Asset Reconciliation reports are generated for an Audit Inventory, the minute entry for the End Date time needs to be set to the next upper boundary of 10 minutes for the report to generate correctly.
  For example, if the scan time is 13:13:00 and the user inputs 13:15:00 as the End

Date time, the report will not generate correctly (it will be missing data). For the report to work correctly, the user would need to set the end date time to at least 13:20:00.

- When users change the system of measurement under the SmartZone Admin tab from Metric to U.S., SmartZone converts all 0 degree Celsius data to 32 degree Fahrenheit, even when the 0 degree value was not entered by the user or produced by any sensors.
- Nesting the stranded capacity search filter produces search results that require further analysis. Panduit recommends that users scroll through the search results to find the stranded capacity instead of nesting the search to filter the search results.
- To generate PDF reports in Unicode languages (for example, Japanese, Chinese, etc.), you will need to install the Arial Unicode MS font on the reports server. To perform this installation, go to the web page below and follow the instructions:

  http://www.microsoft.com/typography/fonts/font.aspx?FMID=1081

Automated Network Discovery Supported Devices

SmartZone Software Series supports each device that it discovers. To view a list of all Panduit-supported vendors, device types, and device models/series, contact your sales representative or Panduit Technical Support. (See "Panduit Technical Support" under About This Document for contact information.)

Appendix A: Related Information Products and Sites

See the following documents and websites for more information about Panduit's SmartZone offerings and marketing tools.

- Sales Enablement Portal
  - https://panduit.sharepoint.com/sites/seportal/Pages/home.aspx
- SmartZone 9.2 User Manual
- SmartZone 9.2 Installation Guide
- SmartZone 9.2 Release Notes
- SmartZone 9.2 Reports User Manual