

Release Notes

iDirect Pulse® NMS
Release 2.3.0.x

Rev G

October 18, 2017



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Revision History

The table below lists the revisions of this document.

Revision	Date	Revision Updates
A	05-May-2017	Initial release
B	02-Jun-2017	Updated for Pulse 2.3.0.1. Included additional Known Issues affecting 2.3.0.x
C	20-Jun-2017	Updated for Pulse 2.3.0.2.
D	14-Sep-2017	Minor updates. Added section <i>Pulse Software Release Numbers</i> on page xi.
E	28-Sep-2017	Minor updates.
F	13-Oct-2017	Updated for Pulse 2.3.0.5.
G	18-Oct-2017	Updated for Pulse 2.3.0.6.

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About

Purpose

The *Release Notes* introduces a specific release of the iDirect Pulse® NMS software by providing a summary overview of new product features and enhancements. Release Notes also describe software issues that have been resolved by this release, as well as any outstanding issues that are known to exist in this release.

Release Notes also provides a summary of important notices that should be reviewed prior to upgrading to the new release, and, if applicable, any instructions for upgrading and installing the new release software.

Audience

This document is intended for use by network architects and operators that implement and work with the iDirect Pulse NMS® software and iDirect Velocity™ networks.

Pulse Software Release Numbers

Table 0-1 shows the software release numbers for the 2.3.0.x Pulse releases.

Table 0-1. Pulse Software Release Numbers

Pulse Software Release Numbers	Notes
2.3.0.6 Patch Release	Latest 2.3.0.x release.
2.3.0.5 Patch Release	
2.3.0.2-52	
2.3.0.1-49	
2.3.0.0-41	Initial 2.3.0.x release.

Contents

This document contains the following major sections:

- *Features and Enhancements*
- *Important Notices*

- [Resolved Issues](#)
- [Known Issues](#)
- [Appendix A: Previously Introduced Features](#)
- [Appendix B: Previously Resolved Issues](#)
- [Appendix C: API Changes](#)

Document Conventions

This section illustrates and describes the conventions used throughout this document.

Convention	Description	Example
Command	Used when user must enter a command at a command line prompt or in a console.	Enter the command: <code>cd /etc/snmp/</code>
Terminal Output	Used when showing the output from a console command line entry.	<code>crc report all</code> 8350.3235 : DATA CRC [1] 8350.3502 : DATA CRC [5818]
Screen Reference	Used when referring to text that appears on a Graphical User Interface (GUI). Used to specify the name of commands, menus, folders, tabs, dialogs, list boxes, and options.	1. To add a remote to an inroute group, right-click the Inroute Group and select Add Remote . The Remote dialog box has a number of user-selectable tabs across the top. The Information tab is visible when the dialog box opens.
Hyperlink	Used to show hyperlink text within a document or external links such as URLs.	For instructions on adding a line card to the network tree, see Adding a Line Card on page 108 .



NOTE: A **Note** is a statement or other notification that adds, emphasizes, or clarifies essential information of special importance or interest.



CAUTION: A **Caution** highlights an essential operating or maintenance procedure, practice, condition, or statement which, if not strictly observed, could result in damage to, or destruction of, equipment or a condition that adversely affects system operation.



WARNING: A **Warning** highlights an essential operating or maintenance procedure, practice, condition or statement which, if not strictly observed, could result in injury or death or long term health hazards.

Getting Help

The iDirect Technical Assistance Center (TAC) and the iDirect Government Technical Assistance Center (TAC) are available 24 hours a day, and 365 days a year, to provide assistance. User guides, installation procedures, FAQs, and other documents that support iDirect and iDirect Government products are available on the respective TAC Web site:

- Access the iDirect TAC Web site at <http://tac.idirect.net>
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Related Document Set

The following iDirect documents are available at <http://tac.idirect.net> and contain information relevant to installing and using iDirect satellite network software and equipment.

- *iDirect Pulse® NMS User Guide*
- *Configuring iDirect Velocity™ Networks Using Pulse User Guide*
- *iDirect Terminal Web User Interface User Guide*
- *iDirect Velocity™ Release Notes for RMT, PP, and HUB Components*
- *Installation, Support, and Maintenance Guide*

Features and Enhancements

This chapter provides a brief summary of the newest features and enhancements introduced in this release of iDirect Pulse®. Also included in this chapter is a compatibility chart that shows the software release requirement of each iDirect Velocity™ component for operation in conjunction with iDirect Pulse®.

iDirect Pulse 2.3.0.6 Patch Release

No features or enhancements were introduced in this release; the focus of this release was bug fixes.

iDirect Pulse 2.3.0.5 Patch Release

No features or enhancements were introduced in this release; the focus of this release was bug fixes.

iDirect Pulse 2.3.0.2

No features or enhancements were introduced in this release; the focus of this release was bug fixes.

iDirect Pulse 2.3.0.1

No features or enhancements were introduced in this release; the focus of this release was bug fixes.

Features Introduced in iDirect Pulse 2.3.0.0

The section describes the new features introduced in this release.

Location Tracker

The Location Tracker includes the following features:

- Graphically shows the Beam, Service Area, and/or Regulatory Area where the terminals are located.
- Global real-time view of terminals and their respective geolocations.
- Weather overlays for Clouds and Precipitation.
- Clustering to group terminals within a certain radius of each other.
 - Clustering can be turned on and off.
 - The clustering radius is user configurable which provides the ability to group more or fewer terminals per cluster circle).
- Ability to zoom in and out of the map.
- Ability to toggle the options on/off.
- Data is streamed and does not need to be refreshed.
- The Configurator is collapsible to expand the view of the map.
- Users can only see the terminals they have permissions to view.
- Built-in search functionality to quickly find Terminals, Beams, Service Areas, and Regulatory Areas.
- Mini-KIP (aka Tier-1) is accessible by clicking a terminal pin.

Real-Time Debugging for Chassis and Line Cards

The new Real-Time Debugging tab in the KIP Detailed View (aka Tier-2) window provides detailed information about the line cards directly from Pulse. The following is a list of information available for the line cards in a chassis with Real-Time Debugging:

- Slot Number
- Line Card Name
- Operational State
- Enabled / Disabled
- Serial Number
- IF Domain
- Assigned iNet

Labels

Phase 1 of the new labels feature has been added in this release which gives the ability to use the API to Create, Assign, Delete, and Search labels.

In the Pulse UI, the user has the ability to create, view, and delete labels on any element.

Impact Analysis Screen

The Impact Analysis screen is displayed before the user is allowed to apply changes, which allows the pending changes to be reviewed before the changes are applied.

Update State Progress

The new Update State Progress screen shows real-time progress on all in-progress actions for all elements to aide tracking and debugging. The data automatically refreshes every 30 seconds, and includes the following information:

- Target element
- Action Plan ID
- Start Time
- Action Plan State
- Destination IP
- Last Update
- Protocol In Use
- Execution Time

Mbps Service Support

iDirect Velocity Release 1.5.0.0 introduces a new option called “QoS Service Mode” that can be selected on Pulse NMS at the Network level. There are two modes available for QoS Service Mode: “IP-Based” and “Symbol-Based”.

The default setting for QoS Service mode is “Symbol-Based”, which supports data rates in terms of Mb/s at a nominal MODCOD (which equivalent to Symbols or MHz) and is the GBWM implementation for previous Velocity releases prior to Velocity 1.5. With the “IP-Based” QoS service mode, the Service Providers (SPs) can offer Layer-3/IP outbound (from Hub to remotes) services with CIR/MIR specified in Mbps rate based on a service region with the existing GSP based on beams. This would allow their distributors to further distribute the Mbps data rate to their end-customers (at the terminal level) in the manner they see best fit for their end-customers.

When offering services in terms of Mbps data rate, it allows the SPs to provision and manage bandwidth at the GSP/SSPC level at a real IP rate with the MIR enforcement at the GSP level. It also allows the SPs to monitor the statistics for GSP/SSPC demand, allocation, and usage at real IP rate for unicast traffic. And, ultimately, the Mbps delivery can be tied to a Service Level Agreement (SLA) with their VNOs.

The QoS Service mode can be enabled using iDirect Pulse NMS at the network level. Once selected and applied to the network, it determines the type of service the Velocity network provides on the downstream direction. This feature is supported for both unicast and multicast types of IP traffic.

Enhancements Introduced in iDirect Pulse 2.3.0.0

The section describes the enhancements to existing features or operations that are included in this release.

API 1.1 Improvements

With the 1.1 version of the API, performance improvements have been made to address the issues found previously with the stats/status/alarms/events queries.

Miscellaneous UX Improvements

- Added date to the time period on the x-axis for charts spanning more than 1 day.
- Removed x of y from the metric selector as this did not make sense with the metric grouping.
- Removed the option to apply configuration for terminals that are incomplete.

Toggle Units on Bandwidth KIP Charts

A toggle bar has been added to all charts that have to do with bandwidth on the KIP to allow the units to be switched for the displayed metrics.

Network Overview Streaming Data

The Network Overview now automatically streams data so the user does not need to refresh the page. The user has the ability to switch streaming off if desired.

Time Delay for Streaming Disconnected Error Message

A 30 second delay has been added before the Streaming Disconnected error will be displayed to prevent the error from displaying for every minor interruption.

Browse Buttons Removed

The Alarm, Event, and Report buttons have been removed from the Browse screens to reduce clutter and allow room for future details.

Consistent Layout for Outbound/Inbound CIR & MIR

On the GSP and SSPP screens, the layout is now presented for CIR & MIR consistently with the Outbound fields on the left side, and the Inbound fields on the right side.

SVN List Items Network Sensitive

The SVN list is filtered to only show the SVNs that are in the network that is currently selected.

Home Button

A Home icon has been added to the navigation menu to make it clearer for users to be able to access the home page.

iDirect Pulse®/iDirect Velocity™ Software Compatibility

Table 1-1 shows the minimum software requirement for each iDirect Velocity™ system component to operate with this iDirect Pulse® NMS software release.

Table 1-1. Software Release Compatibility Chart

Pulse Software Release	PP	Line Card	Remote
2.3.0.0+	1.1.0.0 +	1.1.0.0 +	1.1.0.0 +

NOTE: + Indicates support in subsequent releases of the designated release software for a component, unless otherwise stated.

Important Notices

This chapter presents information of which users should be aware prior to working with this release of iDirect Pulse®. These notices may include items such as specific feature limitations, configuration parameter requirements or constraints, or items that specifically affect the software upgrade.

Cluster Restart During Upgrade

After restarting the NMS cluster during the 2.3.0.6 upgrade procedure, please wait at least thirty (30) minutes before testing the Management State changes and KIP icon changes. A Rollover mechanism for Elasticsearch runs every twenty (20) minutes which will finalize the changes.

This is a one time wait period. After the initial thirty (30) minutes, the Management State and KIP icons will update in real-time.

Issue Certificates Functionality

The ability to issue certificates to multiple objects has been enabled again since 2.3.0.5 (resolved issue PULSE-9676).

Be aware of the following to successfully use the **Issue Certificates** page:

- The objects listed in the **Name** dropdown field are not filtered based on the selection in the **Site** dropdown field.
- When “All ...” is selected from the **Name** dropdown field:
 - NMS Server and PP Server **Target Types** should successfully issue certificates to all objects listed in the **Name** field regardless of the selected **Site**.
 - The other **Target Types** should only successfully issue certificates to the objects listed in the **Name** field which belong to the selected **Site**. Certificates must be issued for these other **Target Types** for each **Site**.
- After issuing certificates, review the successes and failures to make sure all intended objects for the selected **Site** successfully received the certificates.
 - If objects which belong to the selected **Site** failed, investigate what is happening with the failed object(s) and/or the selected **Site**.

- If objects which belong to a **Site** other than the selected **Site** failed, reissue certificates with the correct **Site** selected.

PULSE-11099: Config State Shows Changes Pending with Incomplete Child Element

If an element (for example a PP Server SVN) is associated with a parent element (for example a PP Server), the child element's **Config State** is used to calculate the parent element's **Config State**. The parent element's **Config State** will be **Changes Pending** if a child element **Config State** is **Incomplete**.

If a parent element **Config State** is **Changes Pending**, check all children elements to see what is incomplete.

PULSE-10821: Changes to Many Elements Skips Impact Analysis Page

When the data returned for many changes applied exceeds 2MB, the **Impact Analysis** page will not be loaded. Instead, the user is prompted to confirm to continue with applying changes without redirecting to the **Impact Analysis** page, and is redirected to the **Browse Networks** page.

VELBUGS-2627: NMS Cluster Restart Required after Restore from Snapshot

After restoring the NMS from a snapshot, the NMS cluster must be restarted. Restarting the NMS cluster will sync the date between the NMS and the PP.

PULSE-6485: Monitor and MonitorInstance API Endpoints Not Supported

The endpoints **Monitor** and **MonitorInstance** have been removed from the UI, and are no longer supported in the API even though they still appear. The **Monitor** and **MonitorInstance** endpoints are no longer supported and should not be used.

PULSE-5985: Pulse Automatically Renames iNet and Inroute Group Elements

After custom names are given to **iNet** and **Inroute** group elements, Pulse will automatically rename elements to the default naming convention. This behavior is expected as the system was designed to handle renaming of elements in a scaled environment. Opened PULSE-6293 as an enhancement to a future release.

PULSE-100: NMS Database Servers Configured to Use Blank Password

When accessing the PostgreSQL database from the database server, the passwords for the “root” and “postgres” accounts are blank. SSL and valid X509 certificates are required to access the server, and not the PostgreSQL database.

When accessing the PostgreSQL from a location other than the database server, SSL and valid X509 certificates are required to access the database.

PULSE-8807: Terminal Form Lazy Loading Disabled

Due to numerous issues which could possibly be destructive to the configuration, Lazy Loading has been disabled. The option is available to enable Lazy Loading in the production environment, and is disabled by default to prevent the possible issues.

- All Terminal Features Enabled by Default
- Unable to Save Terminal Form After Enabling DHCP in SVN Subform
- Save and Save & View Impact Not Working on Terminal Form

PULSE-6358: Pulse ACL Propagation Delay

There are a number of issues reported by customers that are similar to “after I create something, it takes some time for <stats/events/update/something else> to work correctly, but it works fine after a while.”

It is strongly believed that this is a byproduct of the ACL propagation, including:

A: time to get new Objects/ACLs from the database

B: time to propagate ACLs from NOC to other sites

C: ACL caching time inside clients themselves

It is possible in some cases that the time from a user making a change to the right thing happening is $A+B+C$.

Effect of Changing User “admin” Password on NMS Initialization

When the NMS is initialized, a script at boot time keeps various components of the Pulse NMS synchronized with the OS. If the user account “admin” password is modified, this can cause the script to fail and cause the administrator account to be locked out. Prior to changing the user account “admin” password, please speak with the iDirect TAC for assistance.

Search Limitations

The use of double quotes and other array syntax such as commas, braces, etc are not supported methods of searching in the global lookup or search box.

Resolved Issues

This chapter describes issues that have been resolved in this release of iDirect Pulse®.

Issues Resolved in iDirect Pulse 2.3.0.6

PULSE-11792: KIP Icon State Displays Incorrect Status

The KIP state icon displays incorrect status due to the querying of historical status data from the database instead of the real-time status.

Known Issues

This chapter describes issues that may be encountered in this release of iDirect Pulse®.

Known Issues in iDirect Pulse 2.3.0.6

PULSE-11301: Multi-Edit of Attributes and Elements in Grids

Using Multi-Edit for attributes and elements displayed in a grid can cause undesirable issues which can break the network.

Work-around: Do not use Multi-Edit on attributes or elements in a grid.

PULSE-11082: Beam Switch Details Not Displayed Correctly

On KIP Tier-1 under the section **Beam Switches**, the **View in Beam Switch Details** does not generate the **Status Report**.

Work-around: Use the **Terminal Status Reports** to view the beam switch details. This issue is fixed in a future release.

PULSE-11065: KIP Weather Widget May Not Provide Useful Location

On a terminal's KIP under the **Weather** widget, the **Location** displayed may or may not provide useful location information based on the location data for the terminal. The displayed location may be correct, blank, or "Earth".

Work-around: Use the location displayed in the **Location Tracker** widget instead.

PULSE-11004: Tooltip Active Value Shows "undefined"

In some locations, the Active Value tooltip (icon of a circle with a lowercase "i" inside) displays "undefined" instead of the object_name or object_id.

Work-around: None.

PULSE-10976: State Change Reports Not Working

The **Infrastructure Change State View** and **Terminal State Change View** reports are not working.

Work-around: Use the **Status Reports**, select the desired elements, select up to 10 Metrics, and generate the report.

PULSE-10791: Unable to Add Squid Cluster

When trying to add a Squid Cluster, the **Save** button does not respond.

Work-around: None.

PULSE-10778: Terminal Software Version in KIP Incorrect

The **Software Version** listed in a terminal's KIP may not accurately display the activated software on the terminal, and instead displays the software version selected on the NMS.

Work-around: None.

PULSE-10670: Notification Popup Window Sometimes Does Not Display

It was observed the notification popup window, used to indicate change result, may not always display.

Work-around: If the notification popup did not display after performing a change, clear the browser cache and the issue should be resolved.

PULSE-10455: “Number of PP_TPA clones” Field Missing with Network Version 1.5.0.0

After changing the **Network Version** from 1.4.0.0 to 1.5.0.0, it was observed that the **Number of PP_TPA clones** field was missing in the **Modify Protocol Processor Cluster** screen.

Work-around: None.

PULSE-10077: Statistic Reports Default Resolution Not Auto Updating

When configuring a **Statistic Report**, the default **Resolution** does not update consistently when switching between the preset date ranges (e.g. **Last 30 Minutes**, **Last Hour**, **Last 6 Hours**, etc.).

Work-around: Manually set the desired **Resolution** after selecting a preset date range.

PULSE-10042: Certificate Issuer Value “(default)” Not Working

On the **Issue Certificate** page, the **(default)** option is not being honored properly. If the **Issuer** value **(default)** is used, errors are shown.

Work-around: Do not use the **Issuer** value **(default)**, and instead select a specific **Issuer**.

PULSE-10023: Save and View Impact Shows on User Management Pages

The **Save and View Impact** button is incorrectly shown on user management pages (**Add/Modify User Group**, **Add/Modify User Role**, **Add/Modify User**, **Add/Modify Customer**, and **Add/Modify Events Management Profile**), and if used will generate errors.

Work-around: Use **Save** or **Cancel** on the user management pages. Do not use the **Save and View Impact** button as there is no need to apply changes for user management changes.

PULSE-10005: Array Order Mismatch

Ordering is not the same in the Pending and Active tables and the option file generation will still create an identical option file which shows the user there are changes pending.

Work-around: Contact TAC for support.

PULSE-9942: SA Maps Deactivated After Upgrade

The Service Area (SA) maps may become deactivated after performing the upgrade from 2.2.x to 2.3.x.

Work-around: Manually activate the SA maps after upgrade.

PULSE-9673: ASCs in Active Table are Duplicated

After the upgrade from 2.2 to 2.3 the ASCs in the active table are duplicated.

Work-around: After the upgrade, apply the changes to the ASCs and the issue will be resolved.

PULSE-9669: “Include latest status” Checkbox Missing from Status Report Date Range Selection

The checkbox **Include latest status** is missing from the **Select Date Range** screen on the **Status Report** page.

Work-around: None.

PULSE-9616 / PULSE-9168: Activation State Shown for All Elements

Under **Browse Networks**, all objects show an activation state even if it is not applicable (e.g. for a user or a group), which results in a white triangle icon shown next to all objects.

Work-around: Ignore the white triangle for elements which do not have an **Activation State**.

PULSE-9457: Configuration Status of SSPP Does Not Indicate “Changes Pending”

After deleting a service level from an SSPP, the **Configuration Status** does not indicate **Changes Pending** to alert the user the changes need to be applied.

Work-around: After deleting a service level from an SSPP, be sure to apply changes.

PULSE-9299: Issue Certificate Fail Error Not Displayed

Sometimes when issuing a certificate fails, the user is not notified of the fail error.

Work-around: After issuing a certificate, if a confirmation or error is not displayed, check the status of the certificate.

PULSE-9067: “Save and View Impact” Shown on User and User Group Pages

The option to **Save and View Impact** is shown on the **User**, **User Group**, and **User Role** pages. This function is not applicable to these pages and may generate errors if used.

Work-around: Do not use the option to **Save and View Impact** on **User**, **User Group**, and **User Role** pages.

PULSE-9048: Terminal “Save” and “Save and View Impact” Not Responding

Sometimes on the **Modify Terminal** page the **Save** and **Save and View Impact** buttons do not respond.

Work-around: Refresh the browser and try the **Save** or **Save and View Impact** button again.

PULSE-8966: Manage Labels Link On NMS Management Menu

The **Manage Labels** link on the **NMS Management** menu is a placeholder for a feature that has not been implemented yet.

Work-around: Do not use the **Manage Labels** link.

PULSE-8935: Cannot Undo Delete ACU Object from Activity Log

If an ACU object is deleted, the action cannot be undone in the Activity Log, and the object data cannot be restored.

Work-around: None.

PULSE-8933: SAS Site Creation: Round-Trip Delay not Shown as Required

When creating a SAS site, the **Round-trip Delay** field is not shown in red to indicate it is a required field. If the **Round-trip Delay** value is not entered, the SAS will show as incomplete.

Work-around: When creating a SAS site, make sure to complete the **Round-trip Delay** field as well as all other required fields.

PULSE-8896 / PULSE-5528 / PULSE-6037: Uploading a PP Carton Can Take a Long Time

Due to the time taken to decompose Cartons on a Pulse system (especially highly loaded virtual environments), sometimes a carton upload, while it uploads correctly to the server, times out between the browser and the server and reports an error.

Work-around: If you see this error please wait up to 30 minutes to see if this carton becomes available to assign. If so, you can go ahead and use it. If not please retry the carton upload.

PULSE-8754: Stats Not Immediately Available for SSPC After Creation

After creating a new SSPC for a terminal, it was observed the stats were not generated immediately.

Work-around: None.

PULSE-8377: Permissions Prevent User from viewing Terminal Event Log

A permissions error prevents a non-admin user who has own rights for a terminal from viewing the Terminal Event Log. However, the Terminal Status Report can be viewed.

Work-around: None.

PULSE-8236: Line Card KIP “Linecard Operational Mode” Displays Number

Instead of displaying **Active** or **Standby**, the line card KIP displays a number.

Work-around: None. If the **Linecard Operational Mode** displays the number “1”, the line card operational mode status is **Active**; if the **Linecard Operational Mode** displays the number “2”, the line card operational mode status is **Standby**.

PULSE-8191: Copying Non-Circular Beam Not Functioning Correctly

When copying a Non-Circular Beam, the Azimuth, Elevation, and RADIUS fields are present which makes it so the beam cannot be created.

Work-around: Do not copy Non-Circular Beams, instead create new non-circular beams.

PULSE-7789: IP Addresses “.0” and “.255” Not Allowed for SAT IP

While the Velocity datapath supports SAT IP addresses ending in “.0” or “.255”, Pulse does not allow IP addresses ending in “.0” and “.255” to be configured for the SAT IP for a terminal.

Work-around: None.

PULSE-7773: SAS or PP Failure Does Not Trigger Alarm

When the SAS or PP fails, the appropriate alarm is not displayed.

Work-around: Monitor SAS or PP availability from an external source.

PULSE-7530: Time Columns in CSV Export of Alarms Displayed as Epoch

The time format in the alarm report is displayed in epoch format (aka Unix Time), and not a human readable format.

Work-around: Convert epoch date values to human readable values. Example: if the epoch date value is in cell A1, paste this formula into cell A2:

`=((A1/60)/60)/24+DATE(1970,1,1)`

NOTE: The cell must be formatted as “date” in Excel.

PULSE-7195: New Elements Not Shown in Activity Log until Changes Applied

Elements do not appear in the Activity Log until after the changes for that element are applied.

Work-around: None.

PULSE-6874: API Returns ACL Errors for Stats Metrics with Resolution Greater than 300 Seconds (5 Minutes)

Certain GSP stats metrics cannot return results if the resolution is greater than 300 seconds (5 minutes).

Work-around: Restart the stats process. Contact TAC for assistance.

PULSE-6776: Write Permissions for MGSP Required To Add A MSSPP

In order to add a child element, Write permissions for the parent element are required.

Work-around: None.

PULSE-6753: ATDMA-IGC Report Data Not Displayed

When the ATDMA-IGC report is running, no data is displayed.

Work-around: Use the **Statistic Report**, select the desired iNets, select **Metric Type: All Stats** from the dropdown menu in the Metrics window, select the **IGC Usage** Metric, and generate the report.

PULSE-6709: DRBD Geo Not Able To Sync

After performing an upgrade, it was observed that the DRBD Geo was unable to sync to the backup clusters. After all sites are upgraded, DRBD Geo should resume back to a normal state.

Work-around: None.

PULSE-6677: Map File Activation Allowed When Domain Name(s) Do Not Match

A map file can be activated even if it references a network domain that is not configured for a satellite without giving a warning to the user.

Work-around: Only activate maps for valid network domains.

PULSE-6676: WUI and API Allow Invalid Characters

Satellite domains starting with numbers or containing spaces are considered as valid inputs in Pulse and the API, but not handled by the MapConverter tool or the PP_GEO.

Work-around: Do not include spaces or start a Satellite Domain attribute with numbers.

PULSE-6642: Socket.io Connection Not Working

Socket.io connection does not always connect when using HTTP and self-signed certificates using the Chrome browser. Socket.io will always use WSS, so if the client uses HTTP to access a Pulse instance for the first time, the browser doesn't like the self-signed certificate in the WSS handshake (there's no mechanism for the client to accept the invalid certificate).

Work-around: Open a HTTPS instance and accept the certificate.

PULSE-6129: Stats CSV Export Missing Data for Element Column

When a stats report which includes Element data is exported, the Element data cells are blank.

Work-around: None.

PULSE-5942: Historical Report Only Displays Updated Data

The historical report can be confusing since it only displays data if the data has changed from the previous value during the selected interval for the report. E.g. If the Beam and Channel have not changed during the selected interval for the historical report, the values for Beam and Channel will not be displayed.

Work-around: None.

PULSE-5706: Activity Log: Real Time Alarm Does Not Match The Date Range Selected

The displayed results of an alarm query for a specified date range are 1 month behind the selected date range.

Work-around: None.

PULSE-5629: VNO Does Not Have Own Permissions for Created SSPCs

When a VNO creates a new SSPC, the VNO does not by default have own permissions for that new SSPC.

Work-around: None.

PULSE-5628: VNO Requires Pulse Network Read Permissions, Grants Additional Permissions

A VNO requires Pulse Network read permissions to create a SSPP, which also grants the ability to create top-level GSP and is able to bypass the parent GQoS tree.

Work-around: None.

PULSE-5594: VNO User with Permissions Cannot Add a MSSPP

A VNO user with the permissions to add a MSSPP is unable to successfully add the MSSPP and errors are displayed.

Work-around: Use the admin user account to create each MSSPP and then give the VNO user read permissions.

PULSE-5351: NOC and EAP Site Show Option File Options in Action Menu

Options to **Retrieve Pending Option File**, **Retrieve Active Option File**, and **Compare Configuration** are showing in the **Actions** menu dropdown for the NOC and EAP. Only the SAS should have these options available.

Work-around: Do not use these options. These actions are not relevant to these elements and should be ignored. Clicking on them will do nothing destructive

PULSE-5231: Configuring IP pool range in DHCP Server mode is duplicated to all Terminal SVN's configured

The IPv4 address pool range configured in one terminal SVN is getting duplicated across all terminal SVN's configured in the system.

Work-around: None.

PULSE-4804: Admin User Cannot Assign Own Permissions for VNO User Group

An Admin User in an Admin User Group cannot assign own permissions for a terminal to a VNO User Group. When the user tries to Save and Close, a message shows the save is successful, but the page does not close which prevents the configuration from being saved.

Work-around: Assign the terminal to the VNO User Group with read permissions, then modify the VNO User Group to change the permissions for the terminal from read to own.

PULSE-4685: Network Data Snapshot Report Not Highlighting Offline Terminal

The Network Data Snapshot report does not highlight the row for a terminal that is offline when the report is first generated. When the data is refreshed after 30 seconds, the row for a terminal that is offline will be highlighted.

Work-around: None.

PULSE-4622: TCP Payload Compression Cannot Be Selected In Pulse

The option to select TCP Payload Compression is not available in the Pulse NMS.

Work-around: None.

PULSE-4599: Secondary Metric Cannot be Added to An Existing Report

The 'Done' button becomes unresponsive when a user attempts to add a secondary metric to an existing report when the report is generated.

Work-around: None.

PULSE-4508: ACM Report Data Not Displayed

When the ACM report is generated, no data is displayed and the message "No data present for element" is displayed.

Work-around: None.

PULSE-3308: CEM Network Interface Allows Any Text

The **CEM Network Interface** field allows any text to be entered instead of limiting the entries to valid **CEM Network Interface** names. If an invalid **CEM Network Interface** name is used, the NMS cluster and resources will not start on the SAS NMS cluster.

Work-around: Only enter valid **CEM Network Interface** names.

PULSE-2914: FE Drop-Down Menu Issue When Browsing a Large Network

For large networks, the browser can potentially become unresponsive when opening a drop-down menu which contains a large number of options.

Work-Around: None.

PULSE-2222: Options File Push to PP, Terminal, etc. May Stick

During the software update and options file push, the process may encounter an error and get stuck. This issue is caused when duplicate inventory items exist in the Update Manager, when one is no longer valid.

Work-around: Contact TAC for support.

PULSE-2124: Filter Tab for the SSPC Configuration Missing

The NMS GUI is missing the 'Filter' tab for the SSPC configuration page where a user can define traffic rules for SSPP.

Work-around: None.

PULSE-2109: POST ACL Ends in Error

When using the API to make a sequence of calls, or a single call with the addACL array with multiple entries, the POST ACL ends with a "Database connection unavailable."

Work-around: None.

PULSE-1763 / PULSE-1940: Slow Response for Terminal Creation

In some cases the terminal creation page can take up to a couple of minutes to load and may be unresponsive during that time. PULSE-8334 has been created to address this issue.

Work-around: None.

PULSE-1361: User Created on the External System with WebServices API Unable to Login

When a user is created with the WebServices API, and then the user email ID is updated, the user will not be able to login.

Work-around: Modify the user to lock the account, then unlock the user account.

PULSE-1200: Multi-Edit Limited to First 20 Elements

Multi-Edit will not apply changes to more than 20 elements at a time.

Work-around: Do not use Multi-Edit to modify more than 20 elements. When using Multi-Edit, the loading time is exponentially worse than changing one at a time.

VELBUGS-2411: MODCOD Fields Shown in IP Based Mode

When using IP based QoS mode, the Default Average MODCOD and GSP Profile fields are displayed on the Modify Group Service Plan page under the QoS and Geographic Scope tabs.

Work-around: When using IP based QoS mode, do not use the Default Average MODCOD and GSP Profile fields.

VELBUGS-2331: GSP Downstream/Upstream Total Usage Composite Stats Erratic

The GSP Downstream Total Usage Composite Stats (GSP@iNET or GSP@SAS) values turn on and off, while the non Composite Stats is stable (GSP@NOC).

Work-around: None.

VELBUGS-2330: SSPP FAP Throttle Action Upon Top-up Not Functioning

The SSPP FAP option to select the **Throttle action upon top-up** is not working correctly. The field defaults to the option **Throttle until end of Regular allowance** regardless of which option the user selects.

Work-around: None.

VELBUGS-2303: SSPP Required Fields Not Marked As Required

A SSPP can be created with without the required Region ID and inbound parameters information filled in on the **Geoscope QoS** screen of the **Add Subscriber Service Plan Profile** configuration page because the fields are not marked as required, which will generate an invalid options file without issuing an error message.

Work-around: Make sure to complete all necessary fields, including Region ID and all inbound parameters.

VELBUGS-2299: SSPC Value in Status Report Is Blank

The `sspc_gsp` metric value is displayed as blank instead of displaying the object ID of the GSP from which the SSPC is currently obtaining bandwidth.

The SSPC status report works like an event report by reporting the status changes. If the status has not changed within the selected time range, the report will return blank values.

Work-around: None.

VELBUGS-2239: IGC Setting May Not Change

Changes to the IGC default setting may not always take effect. The issue is intermittent.

Workaround: Confirm desired IGC default is correct. If not, try to change the default again.

VELBUGS-2145 (Was: VELO-3198): DHCP Configuration Issues

In the **Modify Terminal > Modify Terminal SVN > DHCP** tab, when the DHCP Server V4 mode is used, a blank value is allowed for the **Default Gateway**, and a blank value is not allowed for the **Secondary DNS** if only one DNS server is being used.

Work-around: None.

VELBUGS-2142 (Was: VELO-3159): Linecard Shows Unstable NCR Clock Delta

It was observed for two linecards showing unstable “NCR Clock Delta”.

Work-around: None.

VELBUGS-2101 (Was: VELO-3262): Options File Not Generated for GSP when MODCOD is Not Entered

Configuring a GSP without a Nominal MODCOD is allowed to be saved. No options key will be generated for the GSP without a Nominal MODCOD.

Work-around: Make sure to enter the Nominal MODCOD when configuring a GSP.

VELBUGS-1927: Multiple Select for Terminals for RT Commands Should Not Be Allowed

Currently multiple terminals can be selected for RT commands, but only the first terminal in the list gets the action applied.

Work-around: Only select one terminal at a time.

VELBUGS-1923: Add or Modify MSSPP Displays Error

When adding or modifying a MSSPP it becomes incomplete with the error “region_type:There is no regions chosen for this Multicast SubscriberServicePlanProfile” even if all regions are defined.

Work-around: None

VELBUGS-1914: Event Not Reported if MSSPC Is Outside Geoscope

No error or event is generated when the MSSPC is outside the defined Geoscope.

Work-around: None.

VELBUGS-1912: False Alarm Generated When Geoscope of SSPP is Modified

An alarm is falsely generated when the Geoscope of a SSPP is modified stating the SSPC time has expired when the SSPC is still active.

Work-around: None.

VELBUGS-1804: VNO Cannot View or Add Child GSP

A VNO cannot view its assigned GSP, and is unable to add a child GSP.

Work-around: None.

VELBUGS-1792: Cannot Add TOPUP in Pulse

In **Troubleshooting > Probe Commands** there is no option to select Multicast GSP, which prevents adding TOPUP in Pulse.

Work-around: None.

VELBUGS-1624: Invalid Deactivate Option for Map Objects

An invalid **Deactivate** option shows under **Group Actions** when multiple map objects are selected. If selected, Pulse displays an **Unknown BE Error**.

Work-around: None.

VELBUGS-1614: Beams Not Assigned to Respective Network are Visible Under Beam Limitation Actions

On Pulse NMS with multiple service domain networks, unassigned beams are visible under **GSP>Geographic Scope>Beam Limitation**

Work-around: None.

VELBUGS-1588: User Not Alerted when GSP Service Expires

The event “GSP Expired” is not reported to the NMS by the PP, so the user does not know when the GSP service expires. This causes both IB and OB traffic to stop.

Work-around: None.

VELBUGS-1575: Issues With User Token for Terminal

Two issues related to user token creation for terminal have been found:

1. NMS allows a user to perform a permission transitioning from **Read>Write>Own** for a terminal in a User Group when it is forbidden.
2. A user is able to assign ownership to multiple terminals in a User Group even the user profile is configured with only 1 terminal token.

Work-around: None.

VELBUGS-1565: User Able to Add Maps Without Selecting Map Type on Pulse NMS

When adding a map using the Pulse NMS, the user must select the map type as either **FixMap** or **SteerMap**. However, the NMS allows the user to create the map without any map type. If this happens, no edit is possible since there is no modify option available for the map.

Work-around: None.

VELBUGS-1460: Alternate Fan-Out Outbound Frequency Same as Dedicated ASC

If an alternate downlink frequency for a dedicated ASC is previously configured, and then the user modifies the ASC and selects the **Use Fan-Out** option checkbox, the alternate frequency for fan-out is automatically populated with the alternate outbound frequency for the dedicated ASC instead of being blank and user configurable.

Work-around: None.

VELBUGS-900: Multiple Group Actions Not Working

When trying to perform a group action on two or more ASC objects to add a primary and alternate downlink frequency, an error will be returned.

Work-around: None.

VELO-5192: Deprecated Stats Still Visible In Pulse

The list of stats below have been deprecated, and have not yet been removed from the UI:

- `sspc_us_cir_demand_symbols`
- `sspc_us_mir_demand_symbols`
- `gsp_us_cir_demand_symbols`
- `gsp_us_mir_demand_symbols`
- `agg_gsp_us_cir_demand_symbols_sas`
- `agg_gsp_us_mir_demand_symbols_sas`
- `agg_gsp_us_cir_demand_symbols_noc`
- `agg_gsp_us_mir_demand_symbols_noc`
- `group_total_us_usage_symbols`
- `gsp_sas_us_cir_demand_symbols`
- `gsp_sas_us_mir_demand_symbols`

Work-around: Do not use the deprecated stats listed above.

VELO-3904 / VELBUGS-1949 / VELBUGS-1954

(Was: VPFT-479 / VPFT-480 / VPFT-483):

Terminal Downstream Minimum and Operating MODCOD Display Issues

The terminal downstream minimum MODCOD and operating MODCOD values are not clear, and can cause confusion.

Work-around: None.

Appendix A Previously Introduced Features

This appendix provides a list of features introduced in previous releases of Pulse 2.x.

For the complete feature descriptions, please review the Release Notes document for the associated Pulse software release.

Release	Feature Titles
2.2.x.x	Configuration: Getting Started Guide PDF
	Required Fields Identified
	Decimal Precision Normalized
	Wildcard Support for Status Streaming
	Significant Key Information Panel (KIP) Improvements
	Velocity - Independent Service Area (ISA) Multicast
	Velocity - Token-Based Authentication
	Velocity - Reduced Roll-Off Factor Options
	Velocity - Beam Switch API Enhancement
	Velocity - AIM/BIM IP Address Configurability
	Velocity - SVN Scaling Enhancements
2.1.x.x	Red Hat Enterprise Linux (RHEL) 6.8
	Update Manager Workload Balancing
	Network Data Snapshot
	User Homepage
	Element Selector Checkbox for Item Selection
	Status Reports Status Streaming
	WUI Metric Visibility
	Velocity - Group Service Plan (GSP) MODCOD Scaling
	Velocity - Independent Service Area (ISA)

Release	Feature Titles
2.0.x.x	Network Visualization - Org (Organization) Chart Views
	Network Visualization - Dynamic Tree View
	Added Browser Support
	Responsive Design
	Network Infrastructure Support - Server Virtualization
	Network Overview
	Key Information Panel

Appendix B Previously Resolved Issues

This appendix provides a list of issues resolved in previous releases of Pulse 2.3.0.x.

Issues ID	Short Description	Fixed In
PULSE-11665	KIP Does Not Show Status Updates	2.3.0.5
PULSE-11508	Site Coordinator Process Restarts	2.3.0.5
PULSE-11279	Options File Not Generated by Pulse for Terminal SVN VR	2.3.0.5
PULSE-11088	Terminal Status Default to “unknown”	2.3.0.5
PULSE-10831	KIP Management State and Icon Display	2.3.0.5
PULSE-10821	Impact Analysis Shows Too Much Information	2.3.0.5
PULSE-11311	Maintain Log File Size	2.3.0.5
PULSE-11312	Maintain Appropriate Logging Level	2.3.0.5
PULSE-11313	Reduce High CPU Consumption Due to Disk I/O Activity	2.3.0.5
PULSE-9888	Acknowledging Alarm Causes Page to Freeze	2.3.0.5
PULSE-9676	Cannot Issue Certificate for More than One Object	2.3.0.5
PULSE-9675	Management State Not Updating on KIP Tier 1	2.3.0.5
PULSE-9409	Terminal KIP Does Not Report Correct Traffic Data	2.3.0.5
PULSE-9724	Modify Terminal SVN Form Data Incorrect when First Displayed	2.3.0.2
PULSE-7876 / PULSE-9615	Terminal SVN IDs Change to Default Value	2.3.0.2
PULSE-9334	Online and Offline Homepage Links Show 403 Error	2.3.0.1
PULSE-9180	“Save and Close” Button Not Working on Issue Certificate Page	2.3.0.1
PULSE-9152 / PULSE-8248	Cannot Add More than One Filter when Creating SSPP	2.3.0.1
PULSE-9150	Management State Summary Not Displayed Correctly	2.3.0.1
PULSE-8875	API Does Not Report Status When Using Timestamp	2.3.0.1
PULSE-8483	Alarms Do Not Clear for HLC	2.3.0.1
PULSE-8045	Auto Generate iNet on Beam Modify Causes Cluster Restart	2.3.0.1

Issues ID	Short Description	Fixed In
PULSE-4279	Configuration Not Saved for More than 20 Line Cards	2.3.0.1
PULSE-8970	Cannot Configure Terminals with the Same Static Multicast IP	2.3.0.0
PULSE-8078	Cannot Generate CW Carrier Using RT Command	2.3.0.0
PULSE-8050	HLC and IF Domain Pages Do Not Load	2.3.0.0
PULSE-7561 (PULSE-3293)	Cannot Issue Certificates for NMS Services for Teleport Servers	2.3.0.0
PULSE-7050	Data Not Removed Based on DDE Management Profiles	2.3.0.0
PULSE-6911 (PULSE-6785)	Changes Pending Shown with No Changes Pending for pp_cluster	2.3.0.0
PULSE-6803	Cannot Change Polarization in channel and ifdomain	2.3.0.0
PULSE-6752	Elasticsearch In Stopped State After Upgrade	2.3.0.0
PULSE-6556	Terminal Returns Error Message	2.3.0.0
PULSE-6109	Progress Report Hangs After Applying Changes	2.3.0.0
PULSE-5941	Downstream RF Performance Shows “No data available”	2.3.0.0
PULSE-5795	API WebSocket Connections Receive Session Errors	2.3.0.0
PULSE-5694	Select All Option Missing	2.3.0.0
PULSE-3040	DDE Alarm and Event Proxy, and Stats Proxy, CPU 100%	2.3.0.0
PULSE-2812	Triggers for revisiontracker Fail When Upgrading	2.3.0.0
PULSE-2103	VNO User with Permissions Cannot Create a GSP	2.3.0.0
PULSE-2097	NMS Allows Objects with the Same Value	2.3.0.0
PULSE-106	NMS Web Service Vulnerable to CSRF	2.3.0.0
VELBUGS-2248	Cannot Deselect OpenBMIP	2.3.0.0
VELBUGS-2243	Terminal Status Reports Erroneous Value	2.3.0.0
VELO-4493 (VELBUGS-2229, PULSE-5584, and VELBUGS- 1667)	Activating New Map, Old Map Not Removed from PP	2.3.0.0
VELO-3444 / VELBUGS-1826	SSPP/MSSPP SAG Cannot Be Saved	2.3.0.0

Appendix C API Changes

This appendix details the changes in the various versions of the Pulse APIs.

Pulse API Versions

The API is continually being improved. Improvements usually involve minor schema changes and are backwards compatible with previous releases of Pulse. Occasionally changes may be significant and will therefore involve an API version change.

API Version change occurs when either:

- A schema change occurs that means it is no longer compatible with previous versions.
- A new architectural feature is being implemented that can run alongside the existing API versions.

Available Pulse API versions:

- API 1.0 (Supports all Config/DDE/Stats resources)
- API 1.1 (Supports DDE & Stats resources)

API 1.1 has been developed to offer improved speed and reliability to API 1.0 using different technology. API 1.1 should be used in preference to API 1.0 although the API load can be shared between the two API versions as they have identical schemas.



NOTE: API 1.1 only supports the GET method of DDE and Stats processes. Details are available in the DevTools product.

Pulse API Changes Between Pulse Releases

This section lists the changes in the API from Pulse 2.2.x.x to 2.3.x.x.

C.1 Config API

C.1.1 New Endpoints

- /api/1.0/config/element/l2tpsessionprofile
- /api/1.0/config/element/l2tpstaticsession
- /api/1.0/config/element/l2tptunnelprofile
- /api/1.0/config/element/settings
- /api/2.0/config/elementstatus

C.1.2 Attributes Added to Endpoints

Endpoint	Attribute
beam	autopopulate
element status	obj_id
gsp	restrict_sspp
network	service_mode
site	nmssite_id
svn	enable_l2tp
svn	l2tp_session_profile_name
svn	l2tp_tunnel_profile_id
svn	l2tp_vlan_id
terminaltype	min_margin
usergroup	dashboard
userrole	dashboard

C.1.3 Attributes Removed from Endpoints

Endpoint	Attribute
buc	gain
buc	power
buc	specinv
buc	startfreq
buc	stopfreq
downstreamcarrier	error_correction
downstreamcarrier	spreading_factor
lnb	bandid
lnb	dcvoltage
lnb	gain
lnb	noisefigure
lnb	specinv
lnb	stability
svn	enableltd
svn	thresholdprofile_id
terminal	freqoffsetmax
terminal	freqoffsetmax
terminal	maxpower
terminal	maxtcpstream
terminal	mgmtgateway
terminal	mgmtipaddress
terminal	mgmtsubnetmask
terminal	minbytescompression
terminal	mincompressioncycles
terminal	nominalmodcod
terminal	onedbcompression
terminal	thresholdprofile_id
terminaltype	maxeirp
trafficrule	precedence

C.1.4 Attributes Changed on Endpoints

Endpoint	Attribute	New Value
geoscopeqos	precedence.maximum	65535
geoscopeqos	precedence.minimum	1
lnb	startfreq.default	0
lnb	stopfreq.default	0
map	is_fom_map.default	"FOM_RO & SA"
terminalsfn	svntype.default	"DataVlan"

C.2 Stats API

More details about these Stats metrics can be retrieved from the API using the following:

`/api/1.0/config/element/statsmetric?stats_id=<metric_id>`

Metric ID	Name	Description	Element
2519	active_pw_term	number of active Psuedo wires per terminal	Terminal
2520	fib_count_pp_svn	number of Forwarding Information Base entries per PP per SVN	PP Server SVN
2521	broadcast_bytes_pp_svn	number of Level 2 Broadcast bytes sent per PP per SVN	PP Server SVN
2522	broadcast_bytes_pp_svn	number of Layer 2 Frames received by PP with invalid service delimiter type	Protocol Processor Server
2523	fib_count_term	number of Forwarding Information Base entries per terminal	Terminal
2524	broadcast_bytes_pp_svn	number of Layer 2 Broadcast bytes per iNet	iNet

C.3 DDE API

No new changes have been included for the DDE APIs.

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