Release Notes

PROIV Version 10.701

October 2023 Service Release

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10.701	October 2023	October Service Release
10.700	September 2023	Autumn 2023 Maintenance Release
10.605	July 2023	July 2023 Service Release
10.604	June 2023	June 2023 Service Release
10.603	May 2023	May 2023 Service Release
10.602	April 2023	April 2023 Service Release
10.601	March 2023	March 2023 Service Release
10.600	February 2023	Spring 2023 Maintenance Release
10.504	January 2023	January 2023 Service Release (no SR required in December)
10.503	November 2022	November 2022 Service Release
10.502	October 2022	October 2022 Service Release, Added new section for CVEs
10.501	September 2022	September 2022 Service Release
10.500	Autumn 2022	Autumn 2022 Maintenance Release
10.403	June 2022	June 2022 Service Release (No Release required in May)
10.402	April 2022	April 2022 Service Release
10.401	March 2022	March 2022 Service Release
10.400	February 2022	Spring 2022 Maintenance Release.
10.400	February 2022	Added known issue requiring regen of stub functions following upgrade to 10.400
10.400	January 2022	Limited Early Access Preview Release of 10.400
10.300GA	January 2022	Additional patch for Intermittent Application Connector network issues on Solaris platforms
10.300GA	January 2022	Patch for Log4j2 CVEs
10.300GA	October 2021	10.300 Final Production version
10.300	Autumn 2021	Maintenance release rolling up previous defect fixes and new functionality
10.202	June 2021	Second service release of 10.200
10.201	April 2021	Added fix list for service release
10.200	Feb 2021	Maintenance release rolling up previous defect fixes and new functionality
10.101	Dec 2020	Second service release of version 10.0
10.100	Oct 2020	First service release of version 10.0

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1 Introduction

1.1 Document Structure

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- Section 3 – Getting Started with Version 10.0

- Section 4 – Component Specific Information

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1.2 Upgrading Your Application

1.2.1 Upgrading from Version 9 to Version 10.700

PROIV version 10 is not 'gen' compatible with any previous versions of PROIV. A mandatory Rebuild of all code is required when moving to PROIV version 10. You are required to make a clean install of version 10 in a new directory, export your application source code from your version 9 installation, import into version 10 and then perform a rebuild of the application (e.g. Bulk Build – All Functions). Additionally, all existing set up options will need to be reconfigured using the PROIV Dashboard.

1.2.2 Upgrading from Previous Version 10 Releases to Version 10.700

PROIV version 10.700 is 'gen' compatible with all previous version 10 releases. A re-build of code is not mandatory; however, it is recommended that you take a backup of your boots folder; export your application source code and import into v10.700 and then perform a build of all of the application's functions (e.g. Bulk Build – All Functions). All existing set up options will remain configured and defaults for new options will be added to the dashboard and configuration files during the upgrade process. Note: If upgrading from a previous Preview Release of 10.700 a clean install is recommended as per upgrading from version 9 releases.

The PROIV Developer stubs will all need to be re-built manually regardless of whether they have changed or not.

1.3 End of Life Notices

The following components, platforms and databases are end-of-life or will be soon.

1.3.1 Forthcoming End-of-Life Notices

The following notices are given regarding forthcoming End-of-Life of currently supported platforms, PROIV Components and Databases

Platforms:

- RedHat Enterprise Linux 7 – 30th June 2024

Databases / Filesystems:

- C-ISAM all platforms - 31st December 2025
- PostgreSQL 10 – 10th November 2023

1.3.2 End-of-Life Notices

The following are now end-of-life and are no longer supported.

Platforms:

- IBM AIX 7.1
- Oracle Solaris 10 & 11 Operating System.
- Windows 8 (All versions)
- Windows Server 2012 (all versions)

Components:

- The Performance Monitor functionality (PPM) has been removed

Databases:

- SQL Server 2016 & 2017
- PostgreSQL 9.5 and 9.6
- MySQL
- Oracle 12c, 18c

Browsers:

- Firefox (all versions)

- Internet Explorer (all versions)

2 System Requirements and Supported Platforms

This section lists the currently supported operating environments for PROIV and supersedes all other documents.

The following table provides details about the compatibility of system requirements, platforms, databases and browsers for PROIV v10.701 components. For the installation process, refer to PROIV v10 (10.701 update) Installation guide.

PROIV Version 10.701 Server Supported Platforms							
Platform				**Database Interfaces**			
				Oracle	**SQL Server**	**PostgreSQL**	**C-ISAM**
OS Name	**Arch**	**Min OS**	**Max OS**	**19c 21c**	**2019 thru 2022 Azure SQL**	**10 thru 14**	**7.26**
Windows Server	64-bit	2016	2022	✓	✓	✓	
Windows Workstation	64-bit	10	11	✓	✓	✓	
Redhat Enterprise Linux	64-bit x64	7	9	✓	✓	✓	✓
AIX	Power8	AIX 7.2	AIX 7.2	✓			✓

Notes

1. PROIV with SQL Server on Linux has very specific software requirements, please ensure you load the appropriate ODBC driver as documented by Microsoft.
2. Support is provided for SQL Server 2019 running on Linux and SQL Server 2019 and 2022 running on Windows.
3. Support for Oracle databases and Operating system combinations is in line with Oracle's stated certifications as of the release date of this document.

PROIV Version 10.701 Supported Client / Browser Platforms			
Platform	**Browser**		
OS Name	**MFC Client**	**Microsoft Edge**	**Google Chrome**
Windows 10	✓	✓	✓
Windows 11	✓	✓	✓

Windows 2016		✓	✓
Windows 2019		✓	✓

Notes

1. Google Chrome is tested on the latest production releases only, pre-production releases are not supported.
2. Only Chromium Edge is supported, legacy versions of Edge are not supported.
3. Windows Server 2012; all versions are end of life on 10th October 2023 and will not be supported beyond this date. Windows Server 2012 may function but is not tested as part of this release.

2.1 MFC Client / Forms Designer Platforms

The MFC Client and Forms Designer are 32-bit applications which are compatible with the Windows 10 and 11 operating systems. Whilst the installation may be successful on other versions of Microsoft Windows, they are not supported platforms and are not tested; Zellis will not accept any fault reports or support issues on non-supported platforms.

Version 9.4 introduced a change to the way the MFC Client responded to the return key when focus was on a dynamic icon. If you wish to use the previous behaviour a new option has been added to the General Settings for the application in v9.41 onwards called "Hotspots action on CR" which will need to be checked to get the previous behaviour.

3 Getting Started with Version 10

3.1 New Features 10.700

PROIV Version 10.700 onwards is in long term support, there will be no new features added to this version 10 of the product.

3.1.1 Update to Java 17

Version 10.700 has been updated to include Java 17. If you perform an upgrade install of PROIV then the Java 11 included with previous releases will be updated to Java 17. As a consequence of this change a number of third-party jar files have been updated. You should ensure that any third-party Server Side Objects you utilise in your application have been tested against the jars released as part of 10.700.

3.2 New Features 10.600

3.2.1 Function Package Naming

Prior to this release the only mechanism available to group functions was to assign them to security categories. Whilst functional it was not particularly fine grained and did not allow partitioning of application functions in to hierarchical groups.

The concept of package naming or namespaces has become popular in programming languages. It allows the entitles which make up the application to be grouped together and associated with a logical name. Typically, the names used are hierarchical, thereby allowing the potential decomposition of all entities in functional groups. Other languages which implement package naming concepts include Java and C#. In these languages packages are more than just a grouping, they offer scoping rules to the language.

In this first offering of package naming with PROIV we introduce the package name concept, initially through a new attribute which has been added to the function property sheet. Package names available are defined in the administration suite of PROIV Developer.

As you work your way through your source code associating package names with functions, you will be able to take advantage of them through the Developer list processing model.

For further details check the user documentation topic 500235.

3.3 New Features 10.500

The following features are new to this version.

3.3.1   Changes to Rest Interface

3.3.1.1   Send and Receive objects containing NULL in REST JSON

Previously the JSON used by the RestfulRequestSSO would require a string value of "null" to represent a null value. This version allows null to be sent or received instead of the string.

3.3.1.2   Send and Receive objects containing Booleans in REST JSON

The Restful Response object now supports Boolean values of true and false rather than a numeric with a value of 0 and 1 to represent them.

3.3.2   New functionality in PROIV Developer

3.3.2.1   Find Object in Current View

This has been added to the function edit screen to allow a particular cycle to be added to a search box. The editor will scroll to that cycle without the need in large functions for the programmer to scroll up and down manually to find it. See help topic 500170.

3.3.2.2   Bulk global logic cross reference

This is a new item in the list-based tools section of PROIV Developer allowing cross referencing of Global logics. See help topic 500187.

3.3.2.3   Display files in current cycle when using file search

This new feature allows you to specify only files available in the current cycle when selecting a file from the Object Picker in the logic editor.

3.3.2.4   Open Logic on Gen error

If you get a gen error reported within a logic, you will now be presented with a button giving you the option to go directly to the logic line where the error originated. You also have the option to just return to the function editor. See help topic 500800.

3.3.2.5   Ability to apply a filter to the Value Variables window

The Open Value Variables screen now gives you the ability to search for a value variable based on a combination of name, value, or description.

3.3.3   Jetty Upgrade

Eclipse Jetty has been upgraded in all components to Jetty version 10. This change mandates that the Java Virtual Machine being used must be a minimum of version 11.

3.4 New Features 10.400

The following features are new to this version:

- Demo Refresh for LiteClient
- Support for Java 11
- Project and Operator Import/Export tool
- OpenClient Server SpringBoot resource compliant
- Task Server support in dashboard

3.4.1 Demo Refresh for LiteClient

The Demo functions on the LiteClient provide working examples of the rich functionality that is available to use in this Client. The functionality that is leveraged as part of this demo includes:

- Fluid grid
- Paging area enhancements
- Tethering of static objects
- Paging group headings
- Paging record action controls
- Page quick step / numbering controls
- Paging column sort
- Combo box enhancements
- Side Panel

Further information regarding each of these features can be found in the help documentation.

3.4.2 Support for Java 11 from version 10.400

PROIV on Windows and Linux is supplied with the Microsoft Java Runtime Environment (JRE) version 11.

The Solaris and AIX distributions contain no bundled JRE and you are required to provide your own prior to installation.

Note: As a result of the change to Java 11 the configuration setting of JRE home in the dashboard has been removed in favour of the Java Home setting which is now used to search for the JRE. Both the JRE directory under Java Home and the Java home directory are searched for a JRE respectively.

Note: Java 11 does not include integrated fonts so additional libraries will be required to provide support for fonts available on the system. The following article details the issue and the required libraries on various operating systems:

https://blog.adoptopenjdk.net/2021/01/prerequisites-for-font-support-in-adoptopenjdk/

3.4.3 Project and Operator Import/Export tool

This feature allows the import and export of PROIV project(s) and Operators. The new option "Profile Export" is located in the "Tools" section of the Developer "Administration suite".

When a Project export is selected from the drop-down the file will contain all the attributes associated with a PROIV project in JSON format, with an extension of p4pr. Likewise, these individual p4pr files will be imported by the JSON "Profile Import" process if selected.

When an Operator export is selected from the drop-down the file will contain all the attributes associated with a PROIV operator(s) in JSON format, with an extension of p4op. Likewise, these individual p4op files will be imported by the JSON "Profile Import" process if selected. Note, the project associated with the operator must be present before importing.

3.4.4 Open Client Server Springboot resource compliant

The Open Client Server element of Client Connector has been updated such that if deployed in a Springboot application resources will be accessed correctly.

3.4.5 Unix Task server in Dashboard

The Unix task server (PROIV kernel running in server mode on Unix) has been added into the dashboard. A clean install of version 10.400 and above will now create gateway connections in network mode rather than the previous process mode.

3.5 New Features 10.300

The following features are new to this version.

- Non-root install on UNIX operating systems (See Installation Guide)
- Local Service account installs on Windows operating systems (See Installation Guide)
- Tethering of User Interface objects to Paging Areas and pop-up or frame windows in Lite Client
- Addition of UI and command line options for Import/Export of PROIV Operators
- Option to connect to PROIV Virtual Machine using SSH
- Support for HTTP PATCH method
- Import and Export of RESTful Web Services configurations in the PROIV Dashboard
- Import and Export of PROIV Data Dictionary objects

3.5.1 Connection to PROIV Virtual Machine using SSH (UNIX only)

From 10.300 onwards; it is possible to configure a Virtual Machine connection from OpenClient or LiteClient to a UNIX server to use the SSH protocol rather than Telnet. An

SSH Daemon needs to be installed and running on the server with OpenSSL version 1.1.1 or higher. For Sun Solaris operating systems OpenSSL 1.1.1 requires Solaris 11.4 as a minimum version.

To configure the connection mode the VM connection definition needs to be changed in the Virtual Machine Connections of the Client Connector settings within the PROIV Dashboard. Choose the VM connection to be changed the open the Protocol drop down and select one of the following three options and configure accordingly:

- Telnet
- SSH password authentication
  - o Username / password authentication, enter a username and password into the connection definition.
- SSH key authentication
  - o SSH public / private key authentication, enter the username and the associated public and private keys, there is an option to enforce strict host key checking which means only connect to hosts with keys stored in the known hosts file. (refer to your system administrator for details)

The operational model is fundamentally the same as the Telnet one in that once a connection is established the command to run PROIV is executed and the session begins.

Note: SSH Connections are not supported in Windows and will not appear in the Dashboard on Windows installations.

3.6 New Features 10.200

The following features are new to this version.

- Improved synchronisation between the PROIV Virtual Machine and the Open Client Server utilising the Web Socket transport protocol.
- Styling of Lite Client based on the Zellis Design System (ZDS).
- Improved handling of Paging Header objects

3.7 New Features 10.00

The following features are new to this version.

- Unix Task Server
- Improved Lite Client

3.8 Installation Differences

There are no differences between installation of PROIV version 9 and 10.

3.9 Co-existence with earlier versions of PROIV

3.9.1 Windows Platforms

With the exception of the MFC Client application, version 10 can coexist with Version 9 on the same operating system instance; the servers utilize different listening ports. PRO-ISAM locks will also be shared between versions, however it is important to ensure that file definitions match otherwise there will be unexpected behaviour.

3.9.2 Unix Platforms

You can install PROIV Version 10 on the same system as PROIV Version 9.

4 Component specific Information

4.1 Client Connector

4.1.1 Aurora

4.1.1.1 URL To Access Aurora

The URL to access Aurora depends on the port number provided during the installation of PROIV. The default port number is 10804 and the full URL is:

http://<host>:10804/base-default/aurora

Where <host> is the fully qualified domain name of the server on which you have installed PROIV.

4.1.1.2 Browser Security when using Aurora and the Open Client

Changes in browser security mean that cookies with the same name cannot be used in both HTTPS and HTTP requests. This means that if you have a HTTPS Aurora session and you try to open a HTTP Open Client session then the Open Client session will fail with a 404 error. In order to use both Aurora and Open Client in the same browser they must both use the same protocol either both HTTPS or both HTTP.

4.2 Application Connector

Application Connector has no differences from version 9

4.3 Analytics

From version 10.400 the performance monitor has been removed from the Analytics dashboard module.

4.4 Licensing

Licensing has no differences from version 9

4.5 Dashboard

The Dashboard (System Services) has no differences from version 9

5 Platform and Database specific Information

Note: Prior to upgrading PROIV Server software on any platform it is essential that all users and Web Services are disconnected from the system to prevent various system locks from blocking the installation of essential components during the upgrade process. This includes connections from the Windows Client, Open Client and Lite Client. Any system that connects via SOAP or RESTful Web Services should also be temporarily disabled.

5.1 64-bit Linux

This release is supported on Linux operating systems as per the supported platforms section above. It is very important that the operating system has all vendor-supplied patches installed.

5.1.1   Security Enhanced Linux (SELinux)

If installing as non-root user on SELinux the PROIV web services may not start automatically. If this is the case, they will need to be started manually by a user with root privileges for each of the services, e.g.

$ cd <install-path>/LicensingServices/bin

$ ./licensingServices start

See also Section 7 for Known Issues regarding limitations on <install-path>.

5.1.2   Supported Java Runtime Environments

PROIV on 64-bit Linux (glibc) is bundled with the Microsoft JRE Version 17, the installation uses this, there is no option to search for a different JRE during installation.

5.1.3   PostgreSQL

The solution makes use of native PostgreSQL database drivers making it easier to configure. The drivers required by PROIV on the Linux platform can be found in the following directory which is included in the LD_LIBRARY_PATH environment variable in the runproiv.sh script:

   $PROIV_HOME/virtual_machine/lib

An issue may be seen on RedHat Enterprise Linux version 8 with the native PostgreSQL library, libpq, which has a dependency on /lib64/libkrb5.so.3. This in turn, requires an older version of OpenSSL (OPENSSL_1_1_1b) which is contained in /lib64/libcrypto.so.1.1. If the PROIV /lib/libcurl library is on the search path first then the loader looks in /lib/libcurl/libcrypto.so.1.1 which has OPENSSL_1_1_1k. This fails to satisfy the dependency

for libpq. The solution is to remove $(proiv_base)/lib/libcurl from the line setting LD_LIBRARY_PATH in the runproiv.sh script.

5.1.4   Oracle

The Linux platform includes the Oracle 19c Instant client, it can be found in the directory of your installation as shown below. This directory is added to the LD_LIBRARY_PATH environment variable as part of the *runproiv.sh* script. The Oracle 19c Instant Client is the minimum version required on 64-bit Linux platforms.

$PROIV_HOME/virtual_machine/lib/instant_client

Oracle Performance is much better if the Oracle connection information is specified by an Oracle System Identifier (SID). Specify the name of the SID by exporting ORACLE_SID in your PROIV start-up script. The Connection string then only needs to specify username/password.

5.1.5   SQL Server

Support for SQL Server is enabled through unixODBC. The unixODBC shared libraries must be added to the LD_LIBRARY_PATH in the *runproiv.sh* script; failure to do so will result in the PROIV SQL Server interface not initialising correctly. By default after rpm installation of unixODBC these libraries are usually part of standard system library paths.

There are specific version requirements for unixODBC and the Microsoft odbc driver, please refer to the section above.

Access to SQL Server is via an ODBC DSN (Data Source Name), these are configured as per the unixODBC documentation. By way of example; the configuration is a two part process; first the unixODBC driver manager needs to know about the Microsoft Linux ODBC Driver; this is typically done by adding a section similar to:

```
[ODBC Driver 17 for SQL Server]
Description=Microsoft ODBC Driver 17 for SQL Server
Driver=/opt/microsoft/msodbcsql17/lib64/libmsodbcsql-17.3.so.1.1
UsageCount=1
```

To the /etc/odbcinst.ini file.

The data source is then configured; this can either be a system data source in which the system config file /etc/odbc.ini or the users specific .odbc.ini located in their home directory. The content would include a section similar to the following:

```
[Stock]
Driver = ODBC Driver 17 for SQL Server
Server = localhost,1433
Description = Stock Control Database
```

In this case the Stock data source is defined as being on server local host accessible on port 1433.

To configure PROIV to access the database as the default SQL database you would set the connection string to

username/**password**/Stock

where username and password are replaced with the correct credentials for the database.

5.1.6   Integration with "systemd" services

From release 10.401 the names of the "systemd" services have been updated to avoid clashes with PROIV Version 9. The new names are listed below.

- p4analytics10.service
- p4appcon10.service
- p4clicon10.service
- p4licensing10.service
- p4system10.service
- p4taskserver10.service

On a clean install the "system" unit files will be created with these new names.

An upgrade from an install of version 10.400 or earlier will remove the existing systemd unit files and replace them with the new names.

5.2 AIX

This release is supported on AIX operating systems as per the supported platforms section above. It is very important that the operating system has all vendor-supplied patches installed. See the Supported Platforms section for the currently supported Technology levels.

5.2.1   Supported Java Runtime Environments

PROIV on 64-bit AIX only supports the IBM Java 17 JDK. The installation process initially refers to the path that is set in the JAVA_HOME variable; in case this is not found, it looks in the following directories (as defined using a regular expression) for a Java 17 JDK and will use it in preference as it is found.

/usr/*[jJ][aA][vV][aA]*11*	/opt/*[jJ][aA][vV][aA]*11*
/usr/*[jJ]2[sS][Ee]*	/opt/*[jJ]2[sS][Ee]*
/usr/*[jJ][dD][kK]*	/opt/*[jJ][dD][kK]*
/usr/*[jJ][aA][vV][aA]*	/opt/*[jJ][aA][vV][aA]*
/usr/*[jJ][aA][vV][aA]*/*[jJ]2*	/opt/*[jJ][aA][vV][aA]*/*[jJ]2*
/opt/*[jJ]2*	/usr/*[jJ]2*

5.2.2   Oracle

The AIX platform includes the Oracle 19c Instant client, it can be found in the $PROIV_HOME/virtual_machine/lib/instant_client directory of your installation. This directory is added to the LD_LIBRARY_PATH environment variable as part of the *runproiv.sh* script.

Oracle may generate a warning return code "*ORA-24347*" when NULL columns are used in aggregate functions. This happens for all PROIV V8 and V9 versions. PROIV regards the warning as an error and rolls back the transaction. Within PROIV, this is only likely to happen with full function SQL.

You can instruct PROIV to ignore the Oracle warning by disabling the Enable Warnings As Error switch in the Oracle section of the Virtual Machine configuration in the PROIV Dashboard.

Oracle Performance is much better if the Oracle connection information is specified by an Oracle System Identifier (SID). Specify the name of the SID by exporting ORACLE_SID in your PROIV start-up script. The Connection string then only needs to specify username/password.

5.3   64-bit Windows

This release is supported on Windows operating systems as per the supported platforms section above. It is very important that the operating system has all vendor-supplied patches installed.

5.3.1   Supported Java Runtime Environments

The 64-bit Windows installation is bundled with a Microsoft Java 17 Runtime Environment.

5.3.2   PostgreSQL

The solution makes use of native PostgreSQL database drivers (libpq). If you wish to use PostgreSQL as your database you will need to download and install the PostgreSQL software from https://www.postgresql.org/. The Windows "Path" environment variable should be modified to include the paths to the PostgreSQL lib and bin folders.

5.4   Operating System Authentication to connect PROIV with Oracle database

On UNIX platforms, PROIV supports user authentication to establish connection between PROIV sessions and an Oracle database. You can configure an Oracle Database to authenticate (that is, verify the identity of) users or other entities that connect to the database. Authentication must be configured in two ways, such as through the PROIV application and from the Oracle database.

On the PROIV side, the username and/or password provided in the PROIV Dashboard settings should be blank. On the Oracle database side, you must set Oracle configuration to allow OS authentication. For more information, refer to Oracle documentation.

This will not affect standard database authentication of credentials, however should problems arise it is possible to connect using the existing method by setting the OCI Simple Logon property in the PROIV Dashboard. This cannot be used with OS authentication.

5.5   File System Support

PROIV is not supported on shared file systems such as SAMBA (SMB/CIFS), or NFS.

6 Common Vulnerabilities and Exposures

As of release 10.502.6 Common Vulnerabilities and Exposures (CVEs) that have been addressed in a release will be listed in this section. CVEs are usually addressed by upgrading to the latest version of the software where a fix has been provided. Earlier CVEs and PROIV Issues are now listed in section 7.

6.1 CVEs addressed for the v10.701.9 Service Release

Number	Description
CVE-2022-44729	Server-Side Request Forgery vulnerability in Apache Software Foundation Apache XML Graphics Batik
CVE-2022-44730	Server-Side Request Forgery vulnerability in Apache Software Foundation Apache XML Graphics Batik
CVE-2023-5072	Denial of Service vulnerability in JSON-Java

6.2 CVEs addressed for the v10.700.9 Maintenance Release

Number	Description
CVE-2022-45688	Hutool json processor
CVE-2023-26048	Jetty
CVE-2023-26049	Jetty
CVE-2023-1370	Json smart
CVE-2023-20860	Springboot
CVE-2023-20873	Spring framework
CVE-2023-26115	Word-wrap
CVE-2023-25883	semver

6.3 CVEs addressed for the v10.605.14 Service Release

Number	Description	PROIV Ref.
CVE-2023-2976	Use of Java's default directory for file creation in FileBackedOutStream within Google Guava	224975
CVE-2023-35116	Possible DOS vulnerability in Jackson Databind	224976
CVE-2022-25758	Regular Expression DOS vulnerability in SCSS-Tokeniser	224977
CVE-2022-1471	Snake Yaml's constructor class does not restrict types during de-serialisation	224978
CVE-2023-20862	Spring Security – not properly clearing security context during logout	224979
CVE-2023-20883	Potential for DOS attacks in Spring Boot	224980
CVE-2022-46175	Parse method of JSON5 Extension	225041

6.4 CVEs addressed for the v10.604.4 Service Release

Number	Description	PROIV Ref.
CVE-2023-32695	JavaScript socket.io.parser issue prior to version 4.2.3	222673
CVE-2023-28154	Webpack allows cross realm object access prior to version 5.76.0	222675

6.5 CVEs addressed for the v10.603.7 Service Release

Description	PROIV Ref.
Addressed CVE-2022-45688 in hutool-json v5.8.10	215854
Addressed CVE-2023-26048 in Jetty Web-Server	215855
Addressed CVE-2023-26049 in Jetty Web-Server	215856
Addressed CVE-2023-1370 in json-smart	215857
Addressed CVE-2023-20873 in Spring Boot	215858
Addressed CVE-2023-20860 in Spring Framework	215859

6.6 CVEs addressed for the v10.602.9 Service Release

Description	PROIV Ref.
Addressed CVE-2023-20860 in Spring Framework	213474
Addressed CVE-2023-1370 in json-smart	213476

6.7 CVEs addressed for the v10.601.9 Service Release

Description	PROIV Ref.
Addressed vulnerability in Commons File Upload, CVE-2023-24998	208116

6.8 CVEs addressed for the v10.504.4 Service Release

Description	PROIV Ref.
Addressed CVE-2022-1471, vulnerability in SnakeYaml constructor class	196134

6.9 CVEs addressed for the v10.503.20 Service Release

Description	PROIV Ref.
Addressed CVE-2022-42003 affecting Jackson Databind	191264
Addressed CVE-2022-42004 affecting Jackson Databind	191273
Addressed CVE-2022-2068 affecting OpenSSL	191364
Addressed CVE-2022-45047 affecting Apache MINA SSHD	194114
Addressed CVE-2022-41704 affecting Batik of Apache XML Graphics	192245
Addressed CVE-2022-42889 affecting Apache Commons Text	192251
Addressed CVE-2018-11040 affecting Spring Framework	192258
Addressed CVE-2022-31690 affecting Spring Security	192264
Addressed CVE-2022-31692 affecting Spring Security	192267

6.10 CVEs addressed for the v10.502.6 Service Release

There are no CVEs addressed for this release.

7 Issues

This release of PROIV Version 10 includes fixes for all the issues listed below and those fixed in version 9 up to release 9.1005.

7.1 Resolved Issues for v10.701.9 Service Release

A fix for PRB0052155 (removed from 10.700) has been corrected and applied to this release.

Support Ref.	Description	PROIV Ref.
PRB0052376	While using Developer to edit a function, Ctrl+F no longer opens the search popup window	234201
PRB0052388	Restful task URL paths not resolved consistently	234701
PRB0052423	SQL error when "with(nolock)" not in upper case in Full Function SQL	236248
PRB0052434	Home/End keys not working after selecting from listbox in OpenClient	236736
PRB0052405	Cursor not visible in open client on a multi line edit box in paging screen	235369
	Long string performance improvements can lead to string corruption	233247
	Java Wrapper being built on RHEL 8 causing dependency on later glibc 2.27	239187
	Developer loops when performing gen and execution of batch functions	233764

7.2 Resolved Issues for v10.700.9 Maintenance Release

Release 10.605 included a fix for PRB0052155 relating to increased process times in global logics utilising long strings. This fix has been reverted as it has been found to cause some memory corruption.

Support Ref.	Description	PROIV Ref.
	Inconsistent behaviour in VIP file definition screen for database file types	199489
	Update action in paging area causing exit from function	201246
PRB0051705	Screen formats disappear after a certain point when they overlap the field	201252
PRB0051719	Copy Interface Map is not displaying a list of functions to select when Copy from calls to the same Function option is enabled	201827
	Large number of "fop" messages in jvmerr.log when printing function documentation from MFC	202387
PRB0051774	OneTime Update function that uses FFSQL fails to update a Postgres table	203817
PRB0051775	PostgreSQL Problem with Transparent SQL	203852
PRB0051776	System messages and MSG messages not appearing as a pop up	203899
	Export and Import as Json changing the Spooler Options	204872

	ORD logic command returns unexpected values for Unicode characters	207087
	Clicking check-boxes can lead to client/kernel mis-match where navigation blocked	207426
PRB0051874	max age error message when adding a restfull webservice	208762
PRB0051882	Parse error when REST response body includes a JSON array object	208883
PRB0051895	Open Client does not use custom fonts and colours	209456
PRB0051919	SET_RPTOPT blanking rather than setting correct report filename	210875
PRB0051928	Shortcuts not rendering and not working in Windows Client	211149
	In Developer press and release of CTRL key triggers rebuild of function	211473
	Check box selection is not working for LC/ZDS	211898
	Active x section lost when exporting a function.	212137
PRB0051955	Open Client does not action the shortcut key while in a global window	212611
PRB0051965	Display Mask not rendering length specified in an Editbox field	213112
	Dropdown fields are not aligned with other fields	213232
	Developer adds an invalid paging header property preventing function execution	213316
PRB0051996	The behaviour of a Control Bar is different between MFC and Open Client when no & is included in the Caption field	214453
PRB0052046	If the multi-lingual flag is set on a value variable the kernel may crash during a 'Gen' of the function	216775
PRB0052051	Modified Open Client rendition settings 'heightFactor' and 'widthFactor' are not reflected in Aurora	216946
PRB0052141	Allow standard PDF SSO to accept newline character	222914
PRB0052155	Performance problem using GL with long strings	223188
PRB0052279	NOLOCK hints on SQL Server changed position in generated statement	228865
PRB0052298	Selecting not to overwrite variables in interface mapping still gives warning message	229506

7.3 Resolved Issues for v10.605.14 Service Release

Support Ref.	Description	PROIV Ref.
PRB0052155	Increasing processing time when a Global Logic that manipulates a long string type is called repeatedly	223188

7.4 Resolved Issues for v10.604.4 Service Release

Support Ref.	Description	PROIV Ref.
PRB0052128	Graphics files assigned to icons via a URL are not displaying in Open Client (**missed from previous release notes**)	222339
	Incorrect icon used for Package Maintenance tool on Project Administration tab in Developer	221618

Support Ref.	Description	PROIV Ref.
PRB0052141	PROIV PDF SSO throws exception if carriage return/line feed characters are inserted	222914

7.5 Resolved Issues for v10.603.7 Service Release

Support Ref.	Description	PROIV Ref.
	Developer adds an invalid paging header property preventing function execution	213316
	Change in behaviour of PDF SSO (Functions using the PDF SSO will require a re-build)	215108
PRB0052046	If the multi-lingual flag is set on a value variable the kernel may crash during a 'Gen' of the function	216775
PRB0052051	Modified Open Client rendition settings 'heightFactor' and 'widthFactor' are not reflected in Aurora	216946
PRB0051996	Control bar behavioural difference between MFC and OpenClient when no & in caption field	214453

7.6 Resolved Issues for v10.602.9 Service Release

Support Ref.	Description	PROIV Ref.
PRB0051895	Open Client does not use custom fonts and colours	209456
PRB0051919	SET_RPTOPT blanking rather than setting correct report filename	210875
PRB0051928	Shortcuts not rendering and not working in Windows Client	211149
PRB0051955	Open Client does not action the shortcut key while in a global window	212611
PRB0051965	Display Mask not rendering length specified in an Editbox field	213112
	Http session timeout when using Web Sockets does not attempt PROIV Kernel Shutdown	207484
PRB0051882	Parse error when REST response body includes a JSON array object	208883

7.7 Resolved Issues for v10.601.9 Service Release

Support Ref.	Description	PROIV Ref.
	Session timeout popup is displayed while typing in a text field	206580
	ORD logic command returns incorrect values for Unicode characters	207087
PRB0051874	"Max Age" error reported when adding a Restful Web Service	208762
PRB0051775	PostgreSQL SEL-ONLY not returning any rows	203852
	Combobox drop-lists sometimes too narrow	209053

7.8 Resolved Issues for v10.600.29 Maintenance Release

Support Ref.	Description	PROIV Ref.
PRB0051322	Intermittent session crash during screen, tab and window navigation	177313
PRB0051362	Combo box with Auto Complete crashes session in Open Client	180817

PRB0051719	Copy Interface Map is not displaying a list of functions to select when copy from calls to the same Function option is enabled	201827
PRB0051705	Screen formats disappear after a certain point when they overlap the field	202252
PRB0051774	One-Time Update function that uses FFSQL fails to update a Postgres table	203817
PRB0051776	System messages and MSG messages not appearing as a pop up	203899

7.9 Resolved Issues for v10.504.4 Service Release

Support Ref.	Description	PROIV Ref.
	Make Open Client more resilient to network faults where messages are resent.	201046
PRB0051621	Setting enable and visible properties for fields in a different cycle does work in Open Client	197265
PRB0051719	Copy Interface Map is not displaying a list of functions to select when Copy from is the same function	201827

7.10 Resolved Issues for v10.503.20 Service Release

Support Ref.	Description	PROIV Ref.
PRB0051411	Documentation updated to clarify behaviour of @TFUNCT setting when used in a global function (Topic 730016)	184280
PRB0051496	Helper Function @VIPWP10 Truncates $OperatorTo To 3 Characters	190497
PRB0051516	Open client session hangs while holding down the space bar in a combo-box with auto complete option	191523
	Listbox rows are not removed on refresh	180807
	SSH connection timeout implementation is different from Telnet connection timeout implementation	191749
	Open Client server sending Paging Contracted states hint too early with invalid screen id.	194875 194442

7.11 Resolved Issues for v10.502.6 Service Release

Support Ref.	Description	PROIV Ref.
	@SFUNCT runtime is not present in developer.out	176384
PRB0051449	An Open Client popup window does not change the function name in the status bar	187985
	MFC Session hangs on UNIX when attempting to connect to config with an invalid PROPATH setting	181745
PRB0051433	Password plain text on p4sshlink	186851

7.12 Resolved Issues for v10.501.3 Service Release

Support Ref.	Description	PROIV Ref.
	Updated Restlet Framework to mitigate CVE-2017-14949 in Application connector	181582
	Updated Restlet Framework to mitigate CVE-2017-14868 in Application connector	181581
	Updated PostgreSQL JDBC Driver to mitigate CVE-2022-31197 in Lexicon & java-kernel	181580
	Analytics Health Check is reporting error 401 when enabled or when a manual Health Check is performed	182077
	Siteid program not working in AIX	181638
	Combo drop-list & date-picker horizontal position now fixed	181672
	SDO getBoolean method on a Number with a value of 1 returns true	181056
	SDO getType method return value is incorrect for Booleans and Nulls	181057

7.13 Resolved Issues for v10.500.30 Maintenance Release

Support Ref.	Description	PROIV Ref.
	Combo-box drop-list should resize to current viewport in screens	157401
	Dashboard hanging due to try to clear missing cache items in Spring Framework	153174
	Date-picker and combo drop-list constrained by screen/window rather than viewport	157525
	Tree control in a tab not displayed on re-visit	164233
	If no nodes are highlighted, tree drag fails	165946
	Tethered objects in a button group are incorrectly positioned based on the order they become visible	168407
	Dynamic kernel trace with level 15; logs "FSI Heap tracing" warning and disconnects	169524

7.14 Resolved Issues for v10.403.5 Service Release

Support Ref.	Description	PROIV Ref.
	Fields in a paging area now display all data in the tooltip	171793
PRB0050947	Paging screen columns overlap when the screen has been shrunk	160018
PRB0051150	Unable to close the Maintain Components screen in Aurora	170330
	Exceptions observed in paging screen buttons using LiteClient	171406
	Addressed Apache Xerces Java XML Parser vulnerability (CVE-2022-23437)	170189
	Addressed PostgreSQL JDBC driver vulnerability (CVE-2022-26520)	169888
	Bundled Oracle JDBC driver upgraded to ojdbc11.jar	170236

7.15 Resolved Issues for v10.402.6 Service Release

Support Ref.	Description	PROIV Ref.
	Addressed Jackson Data-bind vulnerability CVE-2020-36518	162983
	Addressed Apache POI vulnerability CVE-2022-26336	162996
	Addressed PostgreSQL JDBC library vulnerability CVE-2022-21724	163000
	Addressed vulnerabilities NPM-1066528 and NPM-1066701 in JavaScript libraries	163001
	SYSERR code 35 being logged when unlink reports no error status	162782
	Address Spring Framework vulnerability CVE-2022-22965	164339
PRB0050995	SystemServices slow to auto start and ClientServices do not auto start	162193
PRB0051030	Pressing the Tab Key in the logic editor always moves the cursor to column position 4	163957

7.16 Resolved Issues for v10.401.20 Service Release

Support Ref.	Description	PROIV Ref.
PRB0050893	Install on Linux overwrites system service files from Version 9	156030
	Toolbars and Menus control causes stack buffer overflow exception	161210
	Import Operator against Default Project 1.0 gives member not setup	156654
PRB0050862	Comment / Uncomment in logic editor not consistent	155100
	Tree control right click initiates node drag	156087
PRB0050936	Unable to run Bulk Build wrapper @VIPWP03 twice – see Known Issues section below.	159172

7.17 Resolved Issues for v10.400.41 Maintenance Release

Support Ref.	Description	PROIV Ref.
	RLTree right panel visible but not showing content	156014
	Paging row falls behind the footer and does not auto-scroll	109391
	Non-editable fields become editable after exiting add mode	124118
	Auto-expand features do not work for Insert mode	124133
	Date picker blocks selection of dates in the previous and next months	124238
	On Tree control TreeClear method now deletes the list	124250
	Shift+Up Arrow multi-row paging deletion only deletes 1 row	128445
	Empty Active Paging Area incorrectly shows two pages & page controls	128455
	Non-visible overlaid paging fields corrupt layout on property change after Global Function call	133800
	Listbox with value not present causes errors and lost mouse clicks	134467
	Tethering not applied if set before the associated static control is rendered	135921
	Date picker opens and allows selection when date field is skipped	139604
	Generic server hangs when acceptor thread receives connection reset by peer from underlying NIO network	139988

	Second exit from file upload dialog causes session to hang	146469
	After sorting a listbox the client and kernel are out of step	148571
	Shift-click in a listbox selects wrong rows (appears to be all, actually nothing)	148572
	Listbox dynamic images appear on the wrong side of the text	148573
	Session hangs on interacting with client while tree control busy with certain actions	149986
PRB0050651	Custom wallpaper cleared after having viewed the value variables definition window	147473
PRB0050748	Developer showing incorrect line number when logic error occurs in line number greater than 999	151517

7.18 Resolved Issues for v10.300.48 GA Release

Support Ref.	Description	PROIV Ref.
PRB0050129	Application Connector hangs intermittently – This is caused by occasional issues in the network layer which have been addressed by restarting the internal server when required.	115630

7.19 Resolved Issues for v10.300.46 GA Release

Support Ref.	Description	PROIV Ref.
PRB0050650	Upgraded Apache Log4j2 to v2.17.1 to address CVE-2021-44832, CVE-2021-45105, CVE-2021-44228 and CVE-2021-45046	147496 148159 148662
	Ensure Java Archive (jar) files are removed if they are no longer required during an upgrade via the PROIV installer	147877

7.20 Resolved Issues for v10.300.36 GA Release

Support Ref.	Description	PROIV Ref.
	Uncaught ReferenceError: mousedown is not defined	135406
PRB0050332	Open Client failed to download large files	129007
	Paging area right-click menu is displayed with all options hidden	127997
	Listbox sort on column click stops working after refresh	128001
	LiteClient resources not updating following a software update	127978

7.21 Resolved Issues for v10.300.28 Maintenance Release

Support Ref.	Description	PROIV Ref.
	Paging row falls behind the footer and doesn't auto-scroll when it should	121147
	Significant performance degradation when loading Tree Controls	94291
	Paging areas incorrectly defaulting to expanded mode	112407

	Selecting Cancel in the file upload dialog retruns the wrong status	116773
	The showSelectRecord function amended to behave correctly with corresponding templates	120238
	Tree nodes and list items no longer scroll into view after a node is clicked	121169
	Modification to Tree or List controls results in all nodes vanishing	123942
	Paging areas rendering all fields as disabled on entry	124538
	Timing issue in the TreeExpandNode while loading Tree Control	123930
	Tree control expands all nodes on load	124649
PRB0043755	Library missing error when trying to connect GUI client	94418
PRB0043793	Added ability for replacing Aurora authentication with a custom implementation	95937
PRB0043837	Added ability to host Aurora on a separate machine to the PROIV server	100725
PRB0043873	Gateway Virtual Machine terminates abnormally	102206
PRB0043883	PROIV Virtual Machine failing to start via Application Services on Windows	102760
PRB0044087	Upload of file does not ignore events in OC/LC and sometimes fails for large files	104968
PRB0043984	List based Search and Replace may hang when the resultant line of logic would be greater than 100 characters long	105544
PRB0044019	PostgreSQL alternate null indicators not set up properly in Full Function SQL when receiving data from a table	106378
PRB0044004	Added ability for the Softkeys toolbar to be set at the bottom of the Open Client panel?	106667
PRB0050014	High memory usage using Restful Web Services and Soap Server-Side Objects	111097
PRB0050016	Client Connector max war contains old version of proiv-lite-client JavaScript libraries	112343
PRB0050190	Access Violation Error when using long running functions containing Paging Header Objects via Restful Web Services	118559

7.22 Resolved Issues for v10.202.10 Service Release

Support Ref.	Description	PROIV Ref.
	Windows called automatically on entry to a screen doesn't have focus on the first field in the window	106568
	Date pickers auto-close in small windows	106590
	Paging dynamics not rendered in Add mode where a global_lscall is performed	106891
	A combo-box in a small window auto-closes where its base touches the window	116800
	Email SSO has issues with MIME Types	109556
	Dismissing a popup window too fast leaves semi-opaque/modal or crashes	110121
PRB0050130	Potential memory leak in Lite/Open Client's state machine	115218

7.23 Resolved Issues for v10.201.11 Service Release

Support Ref.	Description	PROIV Ref.
	Sortable headers on paging areas are not showing the correct icon	92369
	The last line of a multi-line contracted paging is separated	93880
	Right click in RL Tree sometimes automatically selects an option	94124
	Fast navigation causing JSException errors	94866
	Further combo-box drop-down list issues	94889
	Calling a window before user entry causes subsequent combo list and date pickers to error	96243
	Expand mode after entering a paging row causes reanimation issue	96246
	Wrong page shown in paging area when entering add mode	96249
	Dismissing popup too fast leaves semi-opaque/modal screen	96252
	Arrow paging row navigation and delete removes the wrong rows	96253
	Sometimes unable to click into paging area fields	96255
	Dynamic icons are missing from combo lists and list boxes	96258
	Tool tips are missing from check-boxes	96261
	Font size of sequence too big & needs hover state	96263
	Row expand/contract frequently points the wrong way	96264
	RLTimer and screen refresh not working	96266
	Paging areas in tasks are throwing JS exceptions	104438
	Date pickers causing navigation and input corruption	104750

7.24 Resolved Issues for v10.200.59 Maintenance Release

Support Ref.	Description	PROIV Ref.
PRB0043700	The JSON files created from the Dashboard are incorrectly formatted	92648
PRB0043358	Validation message doesn't disappear when trying to save a SOAP webservice	77514
PRB0043360	Cannot save a function under SOAP service in PROIV Dashboard	77531
PRB0043396	Failed to import RESTful Web Services	79995
PRB0043408	A Screen function does not use two custom graphics in the Open Client session	81044
PRB0043404	RWS Max Request Size is not converted to bytes prior to content size check – the value entered is now in Mbytes with a maximum of 2000.	81196
PRB0043414	An Open Client session ComboBox does not list all drop down options alongside an Active Paging screen	81296
PRB0043420	A Listbox is incorrectly positioned in an Open Client screen as Legacy Render Mode defaults to true. This problem can be rectified by changing Legacy Render mode to false in the PROIV dashboard.	81702

PRB0043323	Logic editor 'settings' dialog does not allow developers to change font sizes – added a font size combo box.	74763
PRB0043568	Logic search of given keywords fails on a saved function list	87718
PRB0043592	Dashboard diagnostic setting does not output a specified trace file unless the Misc value is set greater than 0	88334
PRB0043654	Secure SSL Connection for Windows doesn't work	89940
PRB0043661	Adding a SOAP service with an output parameter of type array is not deployed by dashboard	90257
PRB0043196	Function interface map copy over is ignoring called functions and using last function in list	68288
	SQL Timeout value, used by SQL Server, is defaulting to -1 (Do not wait if locked) and should be defaulting to 5 seconds	88987
	Intermittent PRO-ISAM file corruption when running UNIX task server	88250
	Included node null checks to stop unwanted error messages from PROIV applications	92374

7.25 Resolved Issues for v10.101.3 Service Release

Support Ref.	Description	PROIV Ref.
	Default value for PROIV stack size raised to 16384	82488
	Corrected issue with logic verb RENAME_FILE on Alpine Linux	86488

7.26 Resolved Issues for v10.100.11 Service Release

Support Ref.	Description	PROIV Ref.
PRB0043102	When a record is added to an auto-expanded paging screen it is not rendered as the last record in the screen	60355
	Pressing escape while adding a record to a paging screen results in "Error 405" response from the browser	71950
	Application Windows are rendered in unexpected locations	74758
	Listboxes rendering dates in U.S. format	74759
	Uploading a file using CLIENT.RECEIVE fails and the file is not transferred	74846
	PROIV Profiler not producing any output when running PROIV Tasks	78736
	Option to add Lock Hints to full function SQL provided	79714

7.27 Resolved Issues for v10.00 Major Release

Support Ref.	Description	PROIV Ref.
PRB0042696	In Lite Client documentation a link to Component Templates fails	46170
PRB0042035	Services and Uninstall PROIV Version 9 option are missing	46181

PRB0042260	TASK_EXIT() logic processing doesn't match the documentation	46183
PRB0042596	Error reported when exporting numeric Value Variables to JSON with &#@DECEDT enabled	46196
PRB0042382	Not able to rename or delete the open client VM connection on a profile when copied from another profile	46197
PRB0042785	Paging Areas do not permit mouse navigation by clicking on the Paging Icon.	47478
PRB0042875	Access Violation Error - Kernel thread exceptions on connection	52120
PRB0043020	Unable to use supplied ActiveX MSComCtl2.MonthView.2 [MSCOMCT2.OCX] until Registry HKEY_CLASSES_ROOT License key loaded	57013
PRB0043076	Dynamic Text not lining up correctly in Open Client when editing a line on a Paging Screen	59653

7.28 Known Issues

When the PROIV client is running with a secure connection some browsers will convert any non-secure image requests to a secure one (e.g. change http to https). If the server supplying the image does not support https then the image will not be found. Chrome and Edge do the conversion whereas Firefox does not. We would recommend that all images accessed by the PROIV clients as a URL use the secure protocol (https) that way they will always show in all browsers.

PROIV now used Apache FOP version 2.6 and this expects image paths to be enclosed in url format. E.g.

The following format is no longer supported

```
<xsl:attribute name="src">
<xsl:value-of select="//PdfImage"/>
</xsl:attribute>
```

And should be changed to this supported format:

```
<xsl:attribute name="src"> url('file:<xsl:value-of select="//PdfImage"/>')
</xsl:attribute>
```

The wrapper function @VIPWP03 is a run-time function which gives the user the ability to bulk build functions outside of PROIV Developer. If this function is run within the PROIV Developer then the programmer should save before and the restore after the value held in Communication Variable 6 (@$COM6)

SELinux prevents running a system service where the binary to execute (e.g. /home/user1/v10/ClientServices/bin/clientServices) is in a user's home directory or root user's home directory. As a result, SELinux is not currently supported.

If you are upgrading from a version 10 release earlier than 10.400 then you will need to regen all stub functions in your application, regardless of whether they have changed or not. If you don't you will encounter errors similar to the following.

System View ×

663 - CANNOT AUTO-RESET GLOBAL FUNCTION. FUNCTION NAME - @VIPSB23

OK
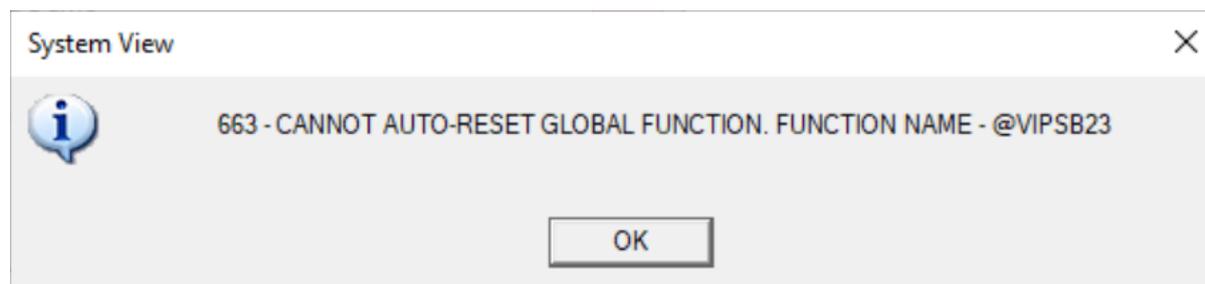
There is an issue running SQLPlus to Oracle databases on IBM AIX that reports errors similar to the following:

rtld: 0712-001 Symbol CreateIoCompletionPort was referenced.

The solution is to change the IOCP IBM AIX parameter from "defined" to "available", this action requires root privilege, further details can be found at the following URL:

https://geodatamaster.com/2015/09/04/sqlplus-error-for-oracle-12c-in-ibm-aix-rtld-0712-001-symbol-createiocompletionport-was-referenced/

During installations on the Solaris operating system, the installer may report that installation is complete before "isin" has completed processing the developer.out or administrator.out files. Please allow a few minutes after the "Installation Complete" message before attempting to use the software.

The new Health Check feature does not work on the Microsoft Windows Edge browser in early versions of Windows 10. This is due to a known issue in the Edge Browser which was corrected in the revised October 2018 Release of the Windows 10 operating system, version 1809.

The "Reduce JVM OS Signals" must be set to true for Unix/Linux platforms and false for Windows. On previous versions, prior to 9.2R0-SR1, the default for all operating systems was false and so this will need to be manually changed in the PROIV Dashboard for all Unix/Linux configurations. In the PROIV Dashboard, navigate to the Virtual Machine, Server-Side Objects section and enable the "Reduce JVM OS Signals" setting. New installations now set the toggle correctly so it should not be changed. The toggle may be removed in a later release.

There is a difference in behaviour between the Open Client and the Windows Client when processing graphics assigned to an Icon when they are to be obtained from the internet. The Windows Client requires the internet settings to specify the URL of the graphics location on the internet and this is then used to access a file specified as the graphic for the icon. The Open Client allows the full URL, including the name of the file, to be assigned to the icon.

From version 9.42 the name of the file used for the Windows Client is case sensitive (PRB0042615).

Over time the number of files in the temp folders of ApplicationServices and ClientServices will increase due to deploying and re-deploying configurations. You should periodically remove these files to reduce problems with disk space and the impact on the time it takes to uninstall and re-install the application.

Under Windows 10 the @DemoFileSendRecieve demo function will not transfer files to the default boots directory if the running process does not have permission to do so.

7.28.1 Consequence of 203899

A consequence of bug fix 203899 in release 10.600.29 it has been found that Developer will loop indefinitely when performing the single "build and run" operation of a function running under batch. This can be worked around by doing separate build and run operations from the Developer toolbar.
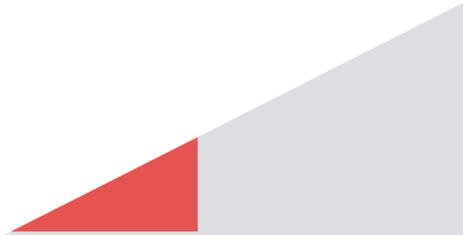
For further information please visit zellis.com