

Release Notes

PROIV Version 10.900

September 2024 Maintenance Release



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1 Introduction

1.1 Document Structure

- Section 2 – Supported Platforms and Databases
- Section 3 – Getting Started with Version 10.0
- Section 4 – Component Specific Information
- Section 5 – Platform and Database Specific Information
- Section 6 – Common Vulnerabilities and Exposures
- Section 7 – Issues

1.2 Changes to the PROIV Release Cycle

Zellis has changed how it releases major versions of PROIV. Going forward there will be a major release of PROIV every six months that will introduce new technology and features to the product for those customers who wish to take advantage of them straight away. These more frequent releases will only be supported until the next major release.

For those customers who prefer longevity of a PROIV release, Zellis has designated selected major releases as Long-Term Support (LTS) versions. This is currently version 10, and this will be supported with some overlap until the next LTS release which will be version 14. All the new technologies and features introduced in the interim releases will be rolled up into this new LTS version.

All versions will continue to have monthly service releases where required.

1.3 Upgrading Your Application

1.3.1 Upgrading from Version 9 to Version 10.900

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.

1.3.2 Upgrading from Previous Version 10 Releases to Version 10.900

PROIV version 10.900 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 v10.900 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 10.900 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.

1.4 End of Life Notices

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

1.4.1 Deprecated Functionality

The following functionality is deprecated and will be removed in a future major release of PROIV.

- PROIV Aurora
- External Sub-routines
- C-ISAM Database support
- Bus and Task C API.

1.4.2 Forthcoming End-of-Life Notices

None planned at this time.

1.4.3 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
- RedHat Enterprise Linux 7
- Windows 8 (All versions).
- Windows Server 2012 (all versions).

Components:

- The Performance Monitor functionality (PPM) has been removed.

Databases:

- SQL Server 2016 & 2017
- PostgreSQL versions 9 to 12
- MySQL
- Oracle 12c, 18c

Browsers:

- Firefox (all versions)
- Internet Explorer (all versions)

1.5 End of Life Schedule

Current PROIV Component and Platform Support End of Life schedule is shown below.

PROIV End of Life Schedule					
		Version 10		Version 14	
OS's	End of Life Planned Date	Deprecated	End of Life	Deprecated	End of Life
IBM AIX 7.1			✓		✓
Oracle Solaris 10 & 11			✓		✓
RedHat Enterprise Linux 7			✓		✓
Windows 8 (all versions)			✓		✓
Databases					
C-ISAM		✓			✓
Oracle 12c & 18c			✓		✓
PostgreSQL 9 to 12			✓		✓
SQL Server 2016 & 2017			✓		✓
Browsers					
Firefox (all versions)			✓		✓
Internet Explorer (all versions)			✓		✓
PROIV Components					
Aurora		✓			✓
Change Management		✓			✓
External Subroutines					✓
Performance Monitor (PPM)			✓		✓
Task API / Library		✓			✓

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 v10.900 components. For the installation process, refer to PROIV v10 (10.900 update) Installation guide.

PROIV Version 10.900 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	13 thru 16	7.26
Windows Server	64-bit x64	2016	2022	✓	✓	✓	
Windows Workstation	64-bit x64	10	11	✓	✓	✓	
Redhat Enterprise Linux	64-bit x64	8	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 10.900 Supported Client / Browser Platforms			
Platform	Browser		
OS Name	MFC Client	Microsoft Chromium 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 10.900

No new features added.

3.2 New Features 10.800

3.2.1 New Excel SSO `getCellContent()` Method

`public String getCellContentsAsString()` - returns the contents of the cell as text irrespective of the formatted type or contents of the cell.

3.3 New Features 10.700

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

3.3.1 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. Because 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.

3.4 New Features 10.600

3.4.1 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 entities 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.

3.5 New Features 10.500

The following features are new to this version.

3.5.1 Changes to Rest Interface

3.5.1.1 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.

3.5.1.2 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.

3.5.2 New functionality in PROIV Developer

3.5.2.1 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.

3.5.2.2 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.

3.5.2.3 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.

3.5.2.4 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.

3.5.2.5 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.

3.5.3 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.

3.6 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

3.6.1 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.

3.6.2 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/>

3.6.3 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.

3.6.4 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.

3.6.5 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.

3.7 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

3.7.1 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
 - Username / password authentication, enter a username and password into the connection definition.
- SSH key authentication
 - 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.

3.8 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

3.9 New Features 10.00

The following features are new to this version.

- Unix Task Server
- Improved Lite Client

3.10 Installation Differences

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

3.11 Co-existence with earlier versions of PROIV

3.11.1 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.

3.11.2 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 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.

4.1.2 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 Login 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 v10.900.7 Maintenance Release

Number	Description
CVE-2023-45857	Axios updated to 1.6.8
CVE-2020-26870	Swagger-ui updated to 5.17.14
CVE-2024-29041	Express updated to 4.19.2
CVE-2024-28849	Follow-redirects updated to 1.15.6
CVE-2024-38355	Socket.io updated to 4.7.5
CVE-2024-37890	Ws updated to 8.17.1
CVE-2024-4068	Braces updated to 3.0.3

6.2 CVEs addressed for the v10.803.6 Service Release

No CVEs addressed in this release.

6.3 CVEs addressed for the v10.802.9 Service Release

No CVEs addressed in this release.

6.4 CVEs addressed for the v10.801.15 Service Release

Number	Description
CVE-2024-29857	Bouncy Caste updated to 1.78
CVE-2024-22262	spring-web updated to 6.1.6
CVE-2024-25710	Apache Commons Compress updated to 1.26
CVE-2023-45133	babel-plugin-transform-class-properties updated

6.5 CVEs addressed for the v10.800.17 Maintenance Release

Number	Description
CVE-2023-26115	word-wrap updated to 1.2.4
CVE-2022-25883	semver updated
CVE-2023-44487	jetty updated to 10.0.17
CVE-2023-26159	follow-redirects updated to 1.15.4.
CVE-2024-1597	postgresql updated to 42.7.2 which causes org.checkerframework:checker-qual to update to 3.42.0

CVE-2024-22243	spring-boot-starter-web updated to 3.2.3 and and spring-web updated to 6.1.4
CVE-2021-37533	commons-net updated to 3.10.0
CVE-2022-31160	JQuery UI updated to 1.13.2.
CVE-2023-48795	Apache SSH with certain OpenSSH extensions

6.6 CVEs addressed for the v10.705.4 Service Release

Number	Description
CVE-2024-1597	postgresql updated to 42.7.2
CVE-2024-22243	spring-web updated to 6.1.4
CVE-2022-25883	semver updated to 7
CVE-2023-4759	JGit updated to 6.7.0

6.7 CVEs addressed for the v10.704.7 Service Release

Number	Description
CVE-2023-44487	HTTP2 updated to 10.0.17
CVE-2023-35116	jackson-databind updated to 2.16.0
CVE-2023-35887	sshd updated to 2.11.0
CVE-2023-26159	follow-redirects updated to 1.15.4
CVE-2023-44720	postcss updated to 6.9.0

6.8 CVEs addressed for the v10.703.3 Service Release

No changes to previous release.

6.9 CVEs addressed for the v10.702.9 Service Release

Number	Description
CVE-2022-1471	SnakeYaml's Constructor class does not restrict types which can be instantiated during deserialization
CVE-2022-25758	All versions of package scss-tokenizer are vulnerable to Regular Expression Denial of Service (ReDoS) via the loadAnnotation() function, due to the usage of insecure regex)
CVE-2023-45133	Using Babel/Traverse to compile code that was specifically crafted by an attacker can lead to arbitrary code execution during compilation
CVE-2023-44487	The HTTP/2 protocol allows a denial of service
CVE-2023-4759	Arbitrary File Overwrite in Eclipse JGit

6.10 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

6.11 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

6.12 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 FileBackedOutputStream 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 deserialisation	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

6.13 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

6.14 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

6.15 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

6.16 CVEs addressed for the v10.601.9 Service Release

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

6.17 CVEs addressed for the v10.504.4 Service Release

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

6.18 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

6.19 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.

7.1 Resolved Issues for v10.900.7 Maintenance Release

Support Ref.	Description	PROIV Ref.
PRB0052831	log4j2.xml install errors	259810
PRB0052836	Browser zoom affects combo box display	260009
PRB0052863	When a restful request encounters a sql error then system variable @TERM is cleared	261945
PRB0052886	Duplicate WITH (NOLOCK) clauses inserted in transparent sql	263198
PRB0052891	Open client help generates an invalid URL when overriding the default help	263732
PRB0052890	Back tab from a date field results in the year portion having been cleared/changed in an open client session	264245
PRB0052962	Up and down arrow keys do not select a record in the Open Client listbox	268422
PRB0052975	EXCELSSO setWorksheetRowGroup method doesn't work when specified first and last row are the same	269344
PRB0052744	Multi-selection of records in a list box does not update the computed field value	254996
PRB0052801	REST response body content will be presented regardless of HTTP status, previous it was removed when the status was an error code	258304
PRB0052607	Scratch Array not removed when running a function cleanup	259500
PRB0052993	Open Client does not send up a zero number value that has been entered into a numeric editbox	269944
PRB0053037	Dashboard errors when trying to select a different profile	272906
PRB0053072	Open Client incorrectly displays error invalid screen mode	273928
PRB0053169	Explicit commit results in the construction of an invalid dynamic full function sql statement	279189
PRB0053189	Contention occurs between two html editor controls in open client	280670
PRB0053220	Dashboard displays incorrect count of Gateway Manager licences	283919
	Dashboard allows SOAP Service to be saved with a blank Connector	275416
	SOAP parameters being omitted for array elements	270955
	Open Client and Lite Client combo box rendering issues in Paging Areas	259559
	Setting diagnostic slider All from level 0 to a positive value and back to 0 does not consistently hide/unhide the individual diagnostic sliders	257547
	Revoke and Invert buttons are disabled under Current Licence Usage	269533

7.2 Resolved Issues for v10.803.6 Service Release

Support Ref.	Description	PROIV Ref.
PRB0053037	Dashboard errors when trying to select a different profile	272906
PRB0052993	Open Client does not send up a zero number value that has been entered into a numeric editbox	269944
	SOAP parameters being omitted for array elements	270955

7.3 Resolved Issues for v10.802.9 Service Release

Support Ref.	Description	PROIV Ref.
PRB0052962	Up and down arrow keys do not select a record in the Open Client listbox	268422
PRB0052975	EXCELSSO setWorksheetRowGroup method doesn't work when specified first and last row are the same	269344
	Revoke and Invert buttons are disabled under Current Licence Usage	269533

7.4 Resolved Issues for v10.801.15 Service Release

Support Ref.	Description	PROIV Ref.
PRB0052886	Duplicate WITH (NOLOCK) clauses inserted in transparent sql	263198
PRB0052891	Open client help generates an invalid URL when overriding the default help	263732
PRB0052890	Back tab from a date field results in the year portion having been cleared/changed in an open client session	264245

7.5 Resolved Issues for v10.800.17 Maintenance Release

Support Ref.	Description	PROIV Ref.
PRB0052604	Open Client incorrectly renders combo box fields defined in paging screen in expand mode	248223
PRB0052743	Open Client fails to render the combo box string in a paging screen while in expand mode	256329
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
PRB0052376	While using Developer to edit a function, Ctrl+F no longer opens the search popup window	234201
PRB0052423	SQL error when "with(nolock)" not in upper case in Full Function SQL	236248
PRB0052481	Open client help generates an invalid URL when overriding the default help	241066
PRB0052482	V10 Open Client File Transfer connection with SSH is very slow.	241230
PRB0052503	MFC Client using SSH connection hangs after approximately 10 hours	242712

PRB0052607	Scratch array not removed when running a function cleanup	248493
PRB0052619	Using ENABLE(&#@NO-CR) in on focus logic causes Open Client to hang	249545
PRB0052573	Task linkage not updated after import	246808
PRB0052649	Selecting de-selecting list box records does not update the computed field value	250583
PRB0052684	Restful Web Service fails to read/process all json records	252070
PRB0052694	Slow PROIV Dashboard performance while amending web service settings	252250
PRB0052727	Open Client right click menu incorrectly renders screen modes	254519
PRB0052744	Multi-selection of records in a list box does not update the computed field value	254996
PRB0052660	Oracle transaction incorrectly committed after Ctrl+Break	251063
PRB0052801	Why is the REST response body empty on a request error	258304
PRB0052607	Scratch Array not removed when running a function cleanup	259500
PRB0052831	log4j2.xml install errors	259810
PRB0052836	Browser zoom affects combo box display	260009
PRB0052863	When a RESTful request encounters an error then system variable @TERM is cleared	261945
	Sort select validation allows no variables to be selected on window close	257208
	OC and LC combo box rendering issues in Paging Areas	259559
	Combo box is not displaying properly on pressing F6	257748
	Setting diagnostic slider All from level 0 to a positive value and back to 0 does not consistently hide/unhide the individual diagnostic sliders	257547
	SQL Server FF-SQL Corrupted with a trailing lock hint	246662
	Open Client file download performance using SSH is adversely affected when UMSGs are present in the code	244957
	SQL Error 368 reported after reading an Oracle table using page down key	233291
	Developer loops when performing gen and execution of batch functions	233764

7.6 Resolved Issues for v10.705.4 Service Release

Support Ref.	Description	PROIV Ref.
PRB0052743	Open Client fails to render the combo box string in a paging screen while in expand mode	256329
PRB0052694	Slow PROIV Dashboard performance while amending web service settings	252250
PRB0052727	Open Client right click menu incorrectly renders screen modes	254519
PRB0052660	Oracle transaction incorrectly committed after Ctrl+Break	251063
	Combo box is not displaying properly on pressing F6	257748

7.7 Resolved Issues for v10.704.7 Service Release

Support Ref.	Description	PROIV Ref.
PRB0052604	Open Client incorrectly renders combo box fields defined in paging screen in expand mode	248223
PRB0052607	Scratch array not removed when running a function cleanup	248493
PRB0052619	Using ENABLE(&#@NO-CR) in on focus logic causes Open Client to hang	249545
PRB0052649	Selecting de-selecting list box records does not update the computed field value	250583
PRB0052684	Restful Web Service fails to read/process all json records	252070

7.8 Resolved Issues for v10.703.3 Service Release

Support Ref.	Description	PROIV Ref.
PRB0052573	Task linkage not updated after import	246808
PRB0052503	MFC Client using SSH connection hangs after approximately 10 hours	242712
PRB0052541	If a user tries to access an Open Client session for an undeployed Configuration-Profile, it is then not possible to access the Open Client once the Configuration-Profile has been deployed.	245218
	SQL Server FF-SQL Corrupted with a trailing lock hint	246662

7.9 Resolved Issues for v10.702.9 Service Release

Support Ref.	Description	PROIV Ref.
PRB0052481	Open client help generates an invalid URL when overriding the default help	241066
PRB0052482	V10 Open Client File Transfer connection with SSH is very slow.	241230
	Open Client file download performance using SSH is adversely affected when UMSGs are present in the code	244957

7.10 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

7.11 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

7.12 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

7.13 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
PRB0052141	PROIV PDF SSO throws exception if carriage return/line feed characters are inserted	222914

7.14 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

7.15 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

7.16 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
	combo box drop-lists sometimes too narrow	209053

7.17 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

7.18 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

7.19 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
	List box 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

7.20 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

7.21 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

7.22 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

7.23 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

7.24 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

7.25 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

7.26 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

7.27 Known Issues

7.27.1 Keyboard selection in list boxes

Selecting entries by keyboard does not trigger the loss-of-focus logic, as in previous releases. In previous releases loss-of-focus logic was triggered when entering by navigating from the previous field and exiting by navigating to the next field. This no longer occurs. Ensuring consistent behaviour of mouse selection triggering loss-of-focus logic was considered to be more important.

7.27.2 Non-fatal errors pertaining to log4j2.xml

The non-fatal errors pertaining to log4j2.xml and webapps encountered during the upgrade process have been successfully resolved. The necessity of conducting this exercise during installation is deemed superfluous.

7.27.3 Paging screen behaviour in relation to column headings

There is an issue in paging screens when no column headings are defined in combination with “Remember Settings” being selected. In this scenario, the paging screen will not render and become unresponsive. The issue is not seen if headings are defined or “Remember Settings” is disabled.

7.27.4 PROIV client and secure connections

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.

7.27.5 PROIV and Apache FOP usage

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>
```

7.27.6 @VIPWP03 bulk build and use of @\$COM6 communication variable

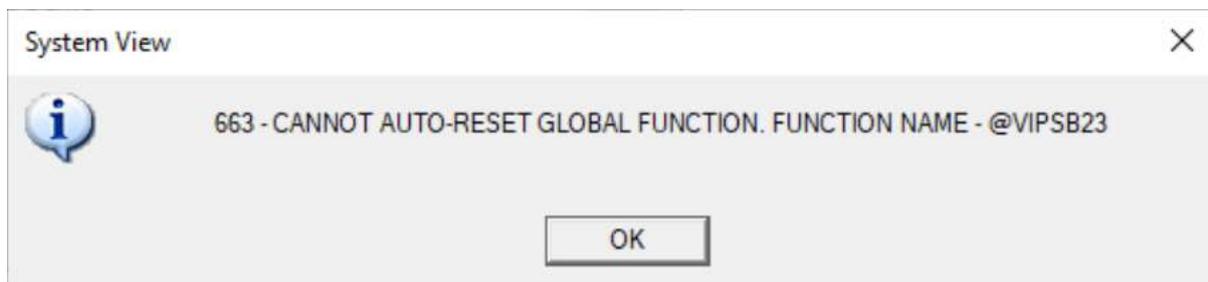
The wrapper function @VIPWP03 is a run-time function which gives the user the ability to bulk build functions outside of PROIV Developer. If this function is run within the PROIV Developer then the programmer should save before and the restore after the value held in Communication Variable 6 (@\$COM6)

7.27.7 SELinux support

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.

7.27.8 Stub function regen

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 like the following.



7.27.9 SQLPlus on IBM AIX

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

```
rtId: 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-rtId-0712-001-symbol-createiocompletionport-was-referenced/>

7.27.10 Solaris installation

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.

7.27.11 Health check feature and Microsoft Windows Edge Broser compatibility

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.

7.27.12 Reduce JVM OS Signals settings on Unix vs Windows

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.

7.27.13 Icon graphics behaviour between Open Client and Windows Client

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).

7.27.14 ApplicationServices and ClientServices temp folder housekeeping

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.

7.27.15 @DemoFileSendReceive permission dependency

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.

7.27.16 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.

A graphic element consisting of a red triangle pointing downwards, partially overlapping a grey triangle that points upwards, creating a white triangular space in the center.

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