

# PROIV VERSION 8.2 RELEASE NOTES

## September 2016

Release 8.2R1



---

PROIV is a registered trademark of NIS UK Limited.

Acrobat Reader is a registered trademark of Adobe Systems Incorporated.

AIX is a registered trademark of IBM.

IBM Informix C-ISAM is a registered trademark of IBM Informix.

Firefox is a registered trademark of the Mozilla Foundation.

Linux is a registered trademark of Linux Foundation.

Microsoft, Microsoft Windows, MS Windows, Microsoft Internet Explorer, Microsoft Windows Server 2008, Microsoft Window 7, Microsoft Windows Vista, Windows XP, Microsoft Word, MS Word, and Visual Basic for Applications (VBA) are registered trademarks of Microsoft Corporation.

HP-UX, Tru64 Unix are all trademarks of Hewlett-Packard Development Company.

Sun Solaris, Java and Oracle are registered trademarks of Oracle Corporation.

UNIX is a registered trademark of The Open Group.

All marks and product names referred to in this document are trademarks or registered trademarks of their respective owners.

Internet: <http://www.proiv.com>

Email: [provisupport@ngahr.com](mailto:provisupport@ngahr.com)

© 2016 NorthgateArinso UK Limited.

No part of this document may be reproduced, transmitted, adapted, stored in any retrieval system or translated into any language in any form without the prior written permission of PROIV Technology LLC.

NGA Human Resources is a trading name of NorthgateArinso UK Limited, Peoplebuilding 2, Maylands Avenue, Hemel Hempstead, Herts, HP2 4NW, UNITED KINGDOM. Company registered number: 1587537, place of registration: England.

## Document Control Information

### Document Information

INFORMATION	
Document Id	V8.2_RN
Document Owner	P4 TA
Issue Date	29-09-2016
Last Saved Date	29-09-2016
File Name	PROIVv8.2R1_ReleaseNotes

### Document History

VERSION	ISSUE DATE	CHANGES
8.2R1	30-06-2016	Release Candidate Notes
8.2.12.17	14-07-2016	Amended for Service Release 8.2.12.17
8.2.12.18	20-07-2016	Amended for Service Release 8.2.12.18
8.2.12.18	01-08-2016	Added Known issue for 8.2.12.18
8.2.12.18	08-08-2016	Replaced JIRA ticket numbers with the S-NOW defect numbers
8.2.12.25	23-09-2016	Amended for Service Release 8.2.12.25
8.2.12.25	29-09-2016	Added an exception in Section 2

# TABLE OF CONTENTS

<b>1</b>	<b>INTRODUCTION.....</b>	<b>1</b>
1.1	Document Structure .....	1
1.2	Upgrading your Application to Version 8.2 .....	1
1.3	End Of Life Products .....	1
<b>2</b>	<b>SYSTEM REQUIREMENTS AND SUPPORTED PLATFORMS .....</b>	<b>2</b>
<b>3</b>	<b>GETTING STARTED WITH VERSION 8.2.....</b>	<b>4</b>
3.1	New Features.....	4
3.2	Differences Between Version 7 and Version 8 Installations .....	6
3.3	New PROIV V8 Control Panel.....	8
3.4	PROIV System Database.....	8
3.5	Licence Server .....	9
3.6	Connecting to PROIV.....	9
3.7	Co-existence with earlier versions of PROIV.....	9
<b>4</b>	<b>COMPONENT SPECIFIC INFORMATION.....</b>	<b>10</b>
4.1	Aurora .....	10
<b>5</b>	<b>PLATFORM AND DATABASE SPECIFIC INFORMATION .....</b>	<b>11</b>
5.1	64-bit Linux.....	11
5.2	Solaris .....	12
5.3	HP-UX Itanium .....	13
5.4	AIX .....	14
5.5	32-Bit Linux .....	15
5.6	Oracle.....	15
5.7	MySQL .....	16
<b>6</b>	<b>ISSUES .....</b>	<b>17</b>
6.1	Known Issues.....	17
6.2	Resolved Issues 8.2.12.16.....	17
6.3	Resolved Issues 8.2.12.17.....	19
6.4	Resolved Issues 8.2.12.18.....	19
6.5	Resolved Issues 8.2.12.25.....	19

# 1 INTRODUCTION

## 1.1 DOCUMENT STRUCTURE

- Section 2 – Supported Platforms and Databases
- Section 3 – Getting Started with Version 8.2
- Section 4 – Component Specific Information
- Section 5 – Platform and Database Specific Information
- Section 6 – Issues

## 1.2 UPGRADING YOUR APPLICATION TO VERSION 8.2

PROIV version 8.2 is language and gen compatible with all point releases of version 8 (8.0, 8.1 and 8.2R0, 8.2R1); you do not need to perform a mandatory regen when moving from 8.0/8.1 to 8.2. However, NGA always recommended you should as certain defect correction do require changes to the gen process; doing so ensures you are always upto date with the latest corrections.

However, if you are upgrading from v7 to v8, you must take a backup of your boots folder; export your application source code and import into v8.2 and then perform a regen of the application.

## 1.3 END OF LIFE PRODUCTS

The following are withdrawn from PROIV Version 8.

### Components:

- Active Web
- Web Developer
- Client Administration

### Platforms:

- 32-bit AIX
- 32-bit Solaris
- 32-bit and 64-bit HP-UX PA-RISC
- OpenVMS

## 2 SYSTEM REQUIREMENTS AND SUPPORTED PLATFORMS

The following table details about the compatibility of system requirements, platforms, databases and browsers for PROIV 8.2 components. For installation process, refer to PROIV v8.2 Installation guide.

PROIV Version 8.2R1 Server Supported Platforms														
Platform				Database Interface										
OS Name	Arch	Min OS	Max OS	My SQL		Oracle		SQL Server				Postgr eSQL	Reality	C- ISAM
				5.7	11g R2	12c	2008 R2	2012	2014	2016	9.1	15.1	7.26	
Windows Server	32-bit	2008 SP2	2008 SP2		✓	✓	✓	✓	✓					
Windows Server	64-bit	2008 SP2	2012 R2	✓	✓	✓	✓	✓	✓		✓			
Windows Server	32-bit and 64-bit	2012 R2								✓				
Windows Workstation	64-bit	7	10		✓	✓	✓	✓	✓		✓			
Windows Workstation	64-bit	8	10							✓				
Linux	32-bit x86	RedHat 5	RedHat 5		✓	✓					✓			✓
Linux	64-bit x64	RedHat 6	RedHat 7	✓	✓	✓					✓	✓		✓
AIX	Power 5+	AIX 6.1	AIX7.1		✓	✓								✓
HP-UX	la64	11iv3	11iv3		✓	✓								✓
Solaris	SPARC 64-bit	Solaris 10	Solaris 11		✓	✓								✓

PROIV Version 8.2R1 Supported Client / Browser Platforms								
Platform			Browser					
OS Name	MFC Client	Internet Explorer		Edge	Google Chrome		Mozilla Firefox	Safari
		10	11		18	39 Onwards	33 Onwards	8
Windows 7	✓	✓	✓			✓	✓	
Windows 8.0	✓		✓			✓	✓	
Windows 8.1	✓		✓			✓	✓	
Windows 10	✓	✓	✓	✓		✓	✓	
Windows 2012R2	✓		✓			✓	✓	
Windows 2012	✓	✓				✓	✓	
Windows 2008R2	✓	✓	✓			✓	✓	
iOS 8.1.1						✓		✓
Android 4.x					✓			

---

## MFC Client / Forms Designer Platforms

The MFC Client and Forms Designer are 32-bit applications which are compatible with the Windows 7 and Windows 8 operating systems. Whilst the installation may be successful on Windows XP, it is not a supported platform and is not tested; NGAHR will not accept any fault reports or support issues on this platform.

### p4sshlink.exe virus detection

Some third party security software providers' classified p4sshlink.exe as a threat, as it is used in secure connections and may have the possibility to be exploited or used maliciously. There is no specific known virus reported, but it is placed it into 'suspicious' or a 'potential threat' category.

The p4sshlink.exe itself is not dangerous, but it depends on how it is used. It is built from source for every release specifically for use in the PROIV product, so the risk is very minimal.

False positive claims have been submitted to the security software providers to have them ignore the file when detected. Meanwhile, NGA recommends adding an exception on p4sshlink.exe to prevent it from being quarantined and it potentially disabling PROIV.

## 3 GETTING STARTED WITH VERSION 8.2

### 3.1 NEW FEATURES

The following new features are included in this release.

#### 3.1.1 SSOs AS STANDARD

PROIV v8.2 introduces three SSOs namely PDFWriter, ExcelWriter and FTPClient which provide additional connectivity and output options. These are in line with the other SSOs and are shipped in the distribution with package names 'com.ngahr.pdfssso', 'com.ngahr.excelssso', and 'com.ngahr.ftpsso' respectively. You can access the programming documentation for all the SSOs using PROIV Virtual Machine web application.

- The PDF WriterSSO is used to create an Acrobat PDF file within PROIV logic. Using various methods on the SSO, you can create or open the PDF file, set and format the content.
- The ExcelWriterSSO is used to create an Excel workbook with PROIV. The SSO supports XLS and XLSX file formats.
- The FTPClient SSO allows you to connect with FTP services on external systems to send and receive data files within your PROIV application.

#### 3.1.2 STANDARD COMPLIANCE FOR PROIV CHARTS

The v8.2 Control Panel has been updated to utilise the same charting library as the OpenClient thereby providing a clear and consistent charting experience.

#### 3.1.3 PROIV AURORA WITH DOJO 1.10.4

PROIV v8.2 Aurora has been updated with Dojo 1.10.4 which provides improved browser compatibility.

#### 3.1.4 PROIV ENHANCED WITH MYSQL

PROIV v8.2 on Windows (64-bit) and Linux (64-bit) adds support for MySQL (Version 5.7) to the list of databases currently supported. PROIV with MySQL functions with both READ COMMITTED and READ UNCOMMITTED models as presented by MySQL. Refer to PROIV v8.2 Installation Guide to select MySQL during installation; alternatively, refer to PROIV Help to configure MySQL post installation.

It is important to note that MySQL has specific licensing terms depending on the environment in which it is used. It is recommended that any organization using the MySQL interface take appropriate legal advice regarding the consequences of Commercial vs Community licensing.

NGA do not accept any responsibility for incorrect interpretation of the MySQL licence.



## 3.1.5 ENHANCED RESTFUL WEB SERVICES STUBS

PROIV 8.2 provides a mechanism where the format and structure of the parameters to a PROIV REST service can be defined in such a way that native language stub code can be generated to allow easy access to your PROIV RESTful service from other environments. Version 8.2 introduces support for Objective-C and PHP.

## 3.1.6 SUPPORT FOR JAVA 8

Version 8.2R1 introduces support for Java 8. On Windows, the installer contains a bundled Java 8 Virtual Machine; during installation / upgrade a newer JVM will be installed and the product components are updated to use it.

**Note:** On upgrading PROIV on Windows the existing \_jvm7 directory will remain on the filesystem.

On UNIX platforms the JVM is not bundled as part of the installer; the product installer now searches for Java 8 before Java 7 and will use it in preference as it is located. The upgrade process will update the product components to use the newer version of Java.

## 3.1.7 PROIV OBJECTS TO TEXT

PROIV 8.2 provides a mechanism to convert PROIV objects into JSON (JavaScript Object Notation) documents using export and import utilities.

You can export and import to / from JSON in the following ways:

- Individual PROIV source objects
- New PROIV Archives containing multiple JSON documents

### JSON Repository

For easy integration of PROIV Developer with an external source code control system, the Book-In and Book-Out feature has been enhanced to automatically export to JSON on book-in and import from JSON on book-out. This allows the application developer to synchronise their booked-in code with third party version control system using tools provided by the version control system. These JSON files are created in a directory location defined in the PROIV Developer Administration suite (Administration Suite > Tools > 'JSON Repository Configuration'). By default, this is a directory called JSONRepository found within Virtual Machine.

### Object Naming Level

Version 8.2R1 also introduces a new facility to validate the name of a new object when it is created in PROIV Developer. By default, the naming level is set to "File System Safe" – this means the system does not allow any of the special characters defined by the set \ / : \* ? " < > | in the filename. However, it is possible to enforce a more rigorous approach to naming which allows for much more seamless use of JSON export / import. The following are the three naming levels with the significance:

- Strict - This does not allow any of the special characters in the filename. Additionally, never allows duplicate objects of the same type which when compared by name case insensitively would be the same. For example, function objects Fred and FRED are not allowed.
- File System Safe - This is the system default and does not allow any of the special characters defined by the set \ / : \* ? " < > | in the filename.
- Legacy - No restrictions on the name content. This is the current naming convention in PROIV.

Note: If you do not change from Legacy to one of the more rigorous constraints then it is possible to experience clashes in object names on the file system, thereby corrupting the expected content of JSON documents.

### JSON EXPORT AND CHARACTER ENCODINGS OTHER THAN UTF-8

In general, when developing PROIV applications, developers are advised to use UTF-8 (PROIV Developer > Session Properties > Regional Settings > Server Code Page) as this provides the best support for varying Character Sets. However, it is acknowledged that some older applications may have been developed using other Server Code Pages. This causes an issue when attempting to transfer data into Java using the inbuilt JNI interface which is employed for all SSO. PROIV does not know what Code Page was specified at the time in which the data was collated and therefore you must set an encoding in pro4v8.ini file - JAVA\_STRING\_CHARSET to control the character conversions through the JNI; alternatively, you can also set in PROIV Control Panel > Virtual Machine > Environment.

When using the JSON Export / Import feature for applications that have not be written using the UTF-8 Server Code Page, it is possible that characters may be corrupted. To ensure that this does not occur the pro4v8.ini file JAVA\_STRING\_CHARSET must be aligned with the Server Code Page setting that was employed at the time the application was constructed.

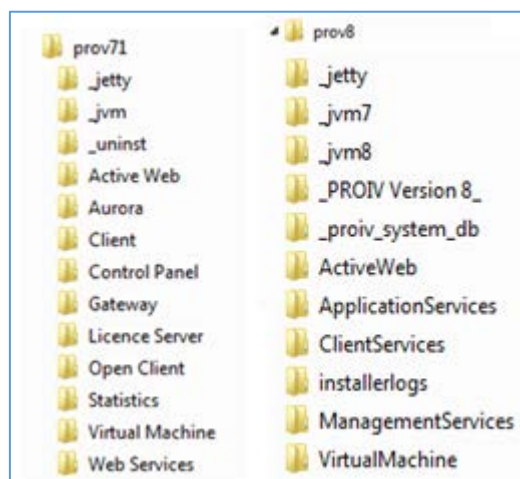
It is recommended that if not already the case, you should look to convert your applications character encoding to UTF-8 to be secure that this or future encoding conversion issues are averted.

## 3.2 DIFFERENCES BETWEEN VERSION 7 AND VERSION 8 INSTALLATIONS

Version 7 comprised 11 different server processes, either services on Windows or daemon processes on Unix. This number has been reduced significantly to 5 and the names of the services changed to reflect their function. The table below lists the new V8 services and their V7 equivalents.

V8 Service / Process Name	V7 Service / Process name
<b>Management Services</b>	Control Panel Statistics Licensing Virtual Machine Configurator
<b>Client Services</b>	OpenClient Aurora
<b>Application Services</b>	Gateway Web Services
<b>V8 Client Virtual Machine</b>	V7 Server
<b>V8 Gateway Virtual Machine</b>	V7 Windows Kernel Server

The PROIV version 8 installed directory structure is revised to reflect the new server grouping. The following snapshot illustrates the difference of version 7 and version 8.



- `_jetty` – the jetty web application server V9.1 and all the Jar files used by the V8 web applications. Note that the web applications no longer have multiple copies of the jar files
- `_jvm8` – the Java Virtual Machine used by the installation
- `_proiv_system_db` – a directory containing two databases, one for the lexicon and one for statistics; this is an internal database for statistics and lexicon it should not be modified by anything other than the tools provided. It is not used to hold any application source and cannot be used as a file type for PROIV.
- `_PROIV Version 8_` - a directory containing the uninstaller for the product
- `installerlogs` – a directory with the log file created by the installer; if you have problems with installation then it is a good idea to send this into support if you need to report an issue
- `VirtualMachine` – the PROIV VM and bootstraps
- `ApplicationServices` – a configuration instance of Jetty which serves Gateway and Web Services
- `Client Services` – a configuration instance of Jetty which serves OpenClient and Aurora
- `ManagementServices` – a configuration instance of Jetty which serves ControlPanel, Licensing, Statistics and Virtual Machine Configuration

It is important to understand that there are multiple web application contexts created within each Jetty based web application server instance.

## 3.3 NEW PROIV V8 CONTROL PANEL

The V8 Control Panel is updated with a new look and feel making it quicker and easier to manage your PROIV installations.



On the left side is an accordion displaying the components configured within your Control Panel, simply click on the orange bar to open the component you wish to manage. Once a component is open, you can manage its configuration by clicking on the items in the tree; once selected the workspace displays the corresponding element for management.

Additionally, the Help system is now integrated within the Control Panel, click the “Show Help” button at the top right and the Help panel will slide out from the right side displaying the context sensitive help for the screen in the workspace.

You can adjust the width of the accordion and the Help using the grey thumb nails present on the dividers.

The operation of the screens presented in the workspace is the same as Version 7.

## 3.4 PROIV SYSTEM DATABASE

New for V8, the PROIV System database is used to hold the statistics generated by your installation and the lexicon for any multi-lingual translations. The database starts automatically as part of the Management Service and cannot be disabled.

If you wish to utilize a different database as per V6 and V7 (Oracle, PostgreSQL or SQL Server) for statistics or lexicon then you are free to do so and should reconfigure the statistics component and lexicon in Control Panel with the correct connection details.

**The system database is not available for use as a relational database for a PROIV application, it is purely for use by the PROIV installation.**

## 3.5 LICENCE SERVER

The Licence Server is no longer a separate process within your PROIV installation; it is now part of the Management Service. In order for Open or MFC clients to successfully get a licence **you must** run the Management Service.

## 3.6 CONNECTING TO PROIV

There are three ways to connect to the PROIV Virtual Machine:

- Legacy Green Screen
- Classic MFC Client
- OpenClient / Aurora


On UNIX platforms the PROIV Virtual Machine may be started with the *runproiv* script as per V7.

On Windows the default port for the Client VM server has changed to 8023 and the default port for the Gateway VM Server is now 8033.

### 3.6.1 PROIV SERVERS

As previously stated, V8 has reduced the number of services which need to be started on your system.

On Windows these can be found in the windows Service Manager and can be started / stopped as per previous releases.



Program Compatibility Assistant...	This service provides ...	Started	Automatic
PROIV V8 Application Services	PROIV V8 Application...	Started	Automatic
PROIV V8 Client Services	PROIV V8 Client Servi...	Started	Automatic
PROIV V8 Client VM	Provides PROIV VM S...	Started	Automatic
PROIV V8 Gateway VM	Provides PROIV VM S...	Started	Automatic
PROIV V8 Management Services	PROIV V8 Manageme...	Started	Automatic
Protected Storage	Provides protected st...		Manual

On Unix there are shell scripts in each of the following directories to start and stop the server instances.

```
$PROIV_HOME/ApplicationServices/bin  
$PROIV_HOME/ClientServices/bin  
$PROIV_HOME/ManagementServices/bin
```

## 3.7 CO-EXISTENCE WITH EARLIER VERSIONS OF PROIV

### 3.7.1 WINDOWS PLATFORMS

Version 8 (client and servers) can now coexist with Version 7 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 behavior.

### 3.7.2 UNIX PLATFORMS

You are able to install PROIV Version 8 on the same system as PROIV Version 7; although it should be noted that some of the pre-requisites for version 8 are different to version 7.

## 4 COMPONENT SPECIFIC INFORMATION

### 4.1 AURORA

#### 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 8804 and the full URL is:

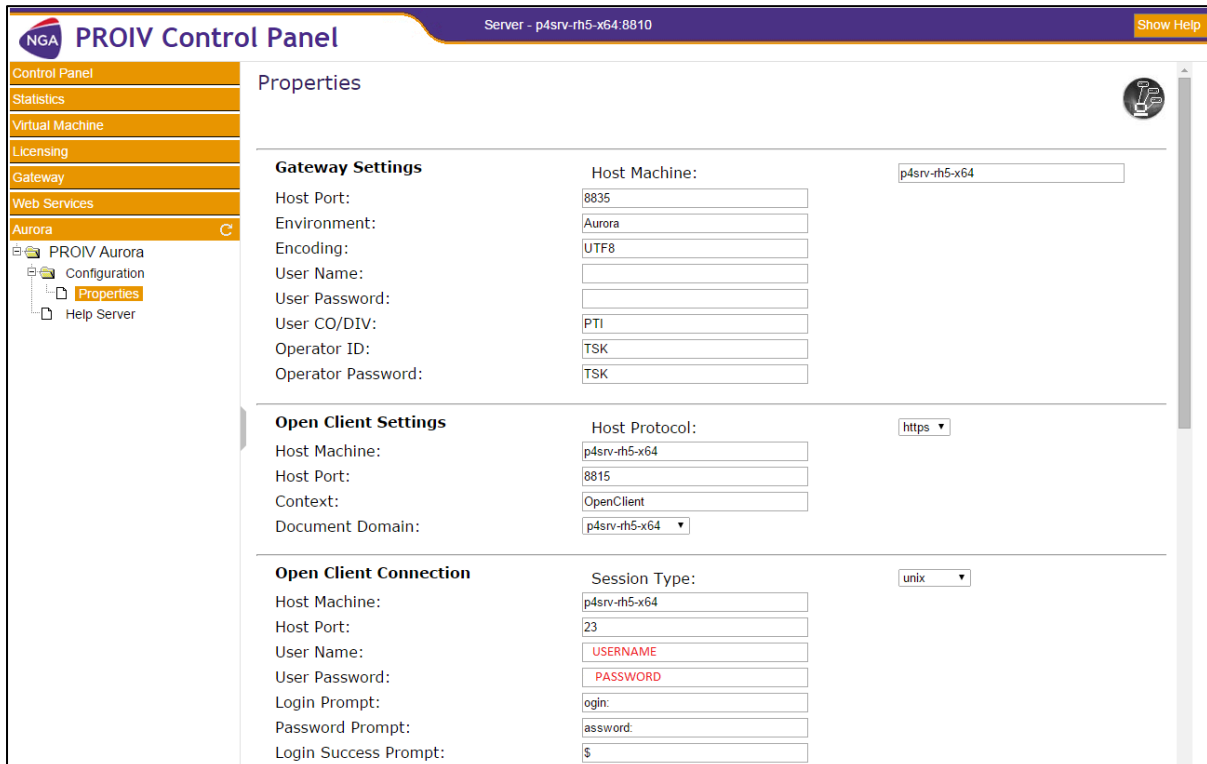
<http://machine:8804/Aurora>

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

#### 4.1.2 UPDATES TO AURORA CONFIGURATION ON UNIX

Once you have installed version 8.2 on UNIX, you will need to make some further configuration changes to allow the Aurora to function.

Using the Control Panel navigate to the Aurora area and select properties from the tree on the left side; in the OpenClient Connection section enter a username and password which will successfully log into the Unix host. Also, ensure that this user can connect either an OpenClient session or an MFC Client session by running the *runproiv* script which was created during the installation process. If required, update the prompts specified to allow processing of the Unix login.



The screenshot shows the PROIV Control Panel interface. The left sidebar contains a tree view with 'Aurora' selected, and 'Properties' highlighted under 'Configuration'. The main area displays the 'Properties' configuration for Aurora, organized into three sections:

- Gateway Settings:** Host Machine (p4srv-rh5-x64), Host Port (8835), Environment (Aurora), Encoding (UTF8), User Name, User Password, User CO/DIV (PTI), Operator ID (TSK), Operator Password (TSK).
- Open Client Settings:** Host Protocol (https), Host Machine (p4srv-rh5-x64), Host Port (8815), Context (OpenClient), Document Domain (p4srv-rh5-x64).
- Open Client Connection:** Session Type (unix), Host Machine (p4srv-rh5-x64), Host Port (23), User Name (USERNAME), User Password (PASSWORD), Login Prompt (login:), Password Prompt (assword:), Login Success Prompt (\$).

When configuring Aurora it is important to ensure that the Document Domain and Host Machine are the same otherwise Aurora will not successfully launch tabs within the framework.

## 5 PLATFORM AND DATABASE SPECIFIC INFORMATION

### 5.1 64-BIT LINUX

#### 5.1.1 SUPPORTED JAVA RUNTIME ENVIRONMENTS

PROIV on 64-bit Linux supports Oracle Java 7 and Java 8 Runtime Environments. The installation process initially refers to the JRE path that is set in the JAVA\_HOME variable; in case not found, it looks in the following directories (as defined using regular expression) for an Oracle JRE 8 before JRE 7 and will use it in preference as it is located.

/usr/*[jJ][rR][eE]*1*8*	/usr/*[jJ][aA][vV][aA]*8*	/opt/*[jJ][sS][Ee]*/jre
/opt/*[jJ][rR][eE]*1*8*	/opt/*[jJ][aA][vV][aA]*8*	/opt/*[jJ][rR][Ee]*
/usr/*[jJ][aA][vV][aA]*1*8*	/usr/*[jJ][sS][Ee]*	/usr/*[jJ][rR][eE]*
/opt/*[jJ][aA][vV][aA]*1*8*	/usr/*[jJ][sS][Ee]*/jre	/opt/*[jJ][rR][eE]*
/usr/*[jJ][rR][eE]*8*	/usr/*[jJ][rR][Ee]*	/usr/*[jJ][aA][vV][aA]*
/opt/*[jJ][rR][eE]*8*	/opt/*[jJ][sS][Ee]*	/opt/*[jJ][aA][vV][aA]*
/usr/*[jJ][aA][vV][aA]/*[jJ]*	/opt/*[jJ][aA][vV][aA]/*[jJ]*	/opt/*[jJ]*
/usr/*[jJ]*	/usr/jre1.8.0	/usr/local/jre1.8.0
/usr/java/jre1.8.0	/opt/jre1.8	/opt/jre1.8.0
/usr/jre8.0	/usr/local/jre8.0	/usr/java/jre8.0
/opt/jre8	/usr/jre8	/usr/local/jre8
/usr/java/jre8		

#### 5.1.2 REALITY DATABASE

This release of PROIV now supports the Reality 15.1 database.

#### 5.1.3 POSTGRESQL

The Linux platform requires unixODBC 2.3.0 or above from [www.unixODBC.org](http://www.unixODBC.org) to be installed and available its libraries available on the LD\_LIBRARY\_PATH of the user running the PROIV Virtual Machine.

This release of PROIV has been compiled and linked against libodbc.so found within an installed distribution of unixODBC build from source code. This file is a symbolic link and points to libunixodbc.so.2.0.0; a proper installation of unixODBC should have this symbolic link setup correctly.

PROIV with PostgreSQL has been tested and compiled against standard distributions of the following components

PostgreSQL	9.1.8, 9.1.14
PostgreSQL ODBC Driver	9.02.100 (no other version is supported)
unixODBC	2.3.0 (or above)

## 5.1.4 ORACLE

The Linux platform includes the Oracle 12c Instant client (version 12.1.0.2.0) 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* script.

## 5.1.5 MYSQL

The Linux 64-bit includes MySQL - Connector/C Library "libmysqlclient.so" which can be found in the PROIV\_HOME/virtual\_machine/lib/mysql directory of your installation. This directory is added to the LD\_LIBRARY\_PATH environment variable as part of the *runproiv* script.

## 5.2 SOLARIS

This release is supported on Solaris 10 (minimum release is Solaris 10 1/13) and Solaris 11. It is very important that the operating system has all vendor-supplied patches installed.

**Note:** The Reality database is no longer supported on this platform.

### 5.2.1 SUPPORTED JAVA RUNTIME ENVIRONMENTS

PROIV on 64-bit Solaris supports the Oracle Java 7 and Java 8 Runtime Environments on the Solaris platform. The installation process initially refers to the JRE path that is set in the JAVA\_HOME variable; in case not found, it looks in the following directories (as defined using regular expression) for an Oracle JRE 8 before JRE7 and will use it in preference as it is located.

/usr/*[jJ][rR][eE]*1*8*	usr/jre1.8.0	/usr/*[jJ][dD][kK]*1*8*
/opt/*[jJ][rR][eE]*1*8*	/usr/*[jJ][rR][eE]*1*8*0*	/opt/*[jJ][dD][kK]*1*8*
/usr/*[jJ][aA][vV][aA]*1*8*	/opt/*[jJ][rR][eE]*1*8*0*	/usr/*[jJ][dD][kK]*1*8*/jre
/opt/*[jJ][aA][vV][aA]*1*8*	/usr/*[jJ][aA][vV][aA]*1*8*0*	/opt/*[jJ][dD][kK]*1*8*/jre
/usr/*[jJ][sS][eE]*	/opt/*[jJ][aA][vV][aA]*1*8*0*	/usr/*[jJ][aA][vV][aA]*1*8*
/usr/*[jJ][sS][eE]*/jre	/usr/*[jJ][rR][eE]*8*0*	/opt/*[jJ][aA][vV][aA]*1*8*
/usr/*[jJ][rR][eE]*	/opt/*[jJ][rR][eE]*8*0*	/usr/*[jJ][sS][eE]*
/opt/*[jJ][sS][eE]*	/usr/*[jJ][aA][vV][aA]*8*0*	/usr/*[jJ][sS][eE]*/jre
/opt/*[jJ][sS][eE]*/jre	/opt/*[jJ][aA][vV][aA]*8*0*	/opt/*[jJ][sS][eE]*
/opt/*[jJ][rR][eE]*	/usr/*[jJ][rR][eE]*8*	/opt/*[jJ][sS][eE]*/jre
/usr/*[jJ][rR][eE]*	/opt/*[jJ][rR][eE]*8*	/usr/*[jJ][dD][kK]*/jre
/opt/*[jJ][rR][eE]*	/usr/*[jJ][aA][vV][aA]*8*	/opt/*[jJ][dD][kK]*/jre
/usr/*[jJ][aA][vV][aA]*	/opt/*[jJ][aA][vV][aA]*8*	/usr/*[jJ][dD][kK]*
/opt/*[jJ][aA][vV][aA]*	/usr/*[jJ][sS][eE]*	/opt/*[jJ][dD][kK]*
/usr/*[jJ][aA][vV][aA]*/[jJ]*	/usr/*[jJ][sS][eE]*/jre	/usr/*[jJ][aA][vV][aA]*
/opt/*[jJ][aA][vV][aA]*/[jJ]*	/usr/*[jJ][rR][eE]*	/opt/*[jJ][aA][vV][aA]*
/opt/*[jJ]*	/opt/*[jJ][sS][eE]*	/usr/*[jJ][aA][vV][aA]*/[jJ]*
/usr/*[jJ]*	/opt/*[jJ][sS][eE]*/jre	/opt/*[jJ][aA][vV][aA]*/[jJ]*
	/opt/*[jJ][rR][eE]*	/opt/*[jJ]*
	/usr/*[jJ][rR][eE]*	/usr/*[jJ]*
	/opt/*[jJ][rR][eE]*	
	/usr/*[jJ][aA][vV][aA]*	
	/opt/*[jJ][aA][vV][aA]*	
	/usr/*[jJ][aA][vV][aA]*/[jJ]*	
	/opt/*[jJ][aA][vV][aA]*/[jJ]*	

### 5.2.2 ORACLE

The Solaris platform includes the Oracle 12c Instant client (version 12.1.0.2.0) 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* script.



## 5.3 HP-UX ITANIUM

This release is supported on HPX 11iv3. It is very important that the operating system has all vendor-supplied patches installed.

### 5.3.1 SUPPORTED JAVA RUNTIME ENVIRONMENTS

PROIV on 64-bit HP-UX supports Java 7 and Java 8 Runtime Environments. The installation process initially refers to the JRE path that is set in the JAVA\_HOME variable; in case not found, it looks in the following directories (as defined using regular expression) for an Oracle JRE 8 before JRE 7 and will use it in preference as it is located.

/opt/*[jJ][rR][eE]*1*8*
/usr/*[jJ][rR][eE]*8*
/opt/*[jJ][rR][eE]*8*
/usr/*[jJ][dD][kK]*1*8*/jre
/opt/*[jJ][dD][kK]*1*8*/jre
/usr/*[jJ][aA][vV][aA]*1*8*
/opt/*[jJ][aA][vV][aA]*1*8*
/usr/*[jJ][aA][vV][aA]*8*
/opt/*[jJ][aA][vV][aA]*8*
/usr/*[jJ]2[sS][Ee]*
/usr/*[jJ]2[sS][Ee]*/jre
/usr/*[jJ]2[rR][Ee]*
/opt/*[jJ]2[sS][Ee]*
/opt/*[jJ]2[sS][Ee]*/jre
/opt/*[jJ]2[rR][Ee]*
/usr/*[jJ][dD][kK]*/jre
/opt/*[jJ][dD][kK]*/jre
/usr/*[jJ][dD][kK]*
/opt/*[jJ][dD][kK]*
/usr/*[jJ][rR][eE]*
/opt/*[jJ][rR][eE]*
/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][rR][eE]*1*8*
/opt/java1.8
/opt/java1.8/jre
/opt/java8/jre
/opt/java8

### 5.3.2 ORACLE

The HP-UX platform includes the Oracle 12c Instant client (version 12.1.0.2.0) 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* script.

### 5.3.3 ENVIRONMENT SETTINGS

#### TTY\_MIXED\_CASE

This platform supports terminal ids which include both upper and lower case characters. It is advised that the TTY\_MIXED\_CASE variable is set to "Y" to ensure terminal id's when used by PROIV are unique. Refer to PROIV Help for more information.

## 5.3.4 POTENTIAL PROBLEM WITH DISK SPACE DURING INSTALLATION

When attempting to install on HP-UX Itanium the installer reported insufficient disk space in the temporary directory used by the installer although adequate space exists.

This is due to a fault in installation software used.

Firstly, ensure that your system actually does have sufficient disk space; then set the following environment variables prior to installing

```
export CHECK_DISK_SPACE=OFF  
export IATEMPDIR=/plenty/of/space (a directory on a file system with adequate disk space)
```

This issue will be resolved in a later release.

## 5.4 AIX

This release is supported on AIX 6.1. It is very important that the operating system has all vendor-supplied patches installed.

The technology level must be at least 08 with Service Pack 02.

### 5.4.1 SUPPORTED JAVA RUNTIME ENVIRONMENTS

PROIV on 64-bit AIX supports Java 7 and Java 8 Runtime Environments. The installation process initially refers to the JRE path that is set in the JAVA\_HOME variable; in case not found, it looks in the following directories (as defined using regular expression) for an Oracle JRE 8 before JRE7 and will use it in preference as it is located.

/usr/[jJ][rR][eE]*1*8*
/opt/[jJ][rR][eE]*1*8*
/usr/[jJ][dD][kK]*1*8*/jre
/opt/[jJ][dD][kK]*1*8*/jre
/usr/[jJ][aA][vV][aA]*1*8*
/opt/[jJ][aA][vV][aA]*1*8*
/usr/[jJ]2[sS][Ee]*
/usr/[jJ]2[sS][Ee]*/jre
/usr/[jJ]2[rR][Ee]*
/opt/[jJ]2[sS][Ee]*
/opt/[jJ]2[sS][Ee]*/jre
/opt/[jJ]2[rR][Ee]*
/usr/[jJ][dD][kK]*/jre
/opt/[jJ][dD][kK]*/jre
/usr/[jJ][dD][kK]*
/opt/[jJ][dD][kK]*
/usr/[jJ][rR][eE]*
/opt/[jJ][rR][eE]*
/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*
/opt/java1.8
/opt/java1.8/jre

## 5.4.2 ORACLE

The AIX platform includes the Oracle 12c Instant client (version 12.1.0.2.0) 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* script.

## 5.5 32-BIT LINUX

This release is supported on 32-bit Linux. It is very important that the operating system has all vendor-supplied patches installed.

### 5.5.1 SUPPORTED JAVA RUNTIME ENVIRONMENTS

PROIV on 32-bit Linux supports Java 7 and Java 8 Runtime Environments. On this platform, the installation process initially refers to the JRE path that is set in the JAVA\_HOME variable; in case not found, it looks in the following directories (as defined using regular expression) for an Oracle JRE 8 before JRE 7 and will use it in preference as it is located.

/usr/*[jJ][rR][eE]*1*8*	/usr/jre1.8.0	/usr/*[jJ][aA][vV][aA]*
/opt/*[jJ][rR][eE]*1*8*	/usr/local/jre1.8.0	/opt/*[jJ][aA][vV][aA]*
/usr/*[jJ][aA][vV][aA]*1*8*	/usr/java/jre1.8.0	/usr/*[jJ][aA][vV][aA]/*[jJ]*
/opt/*[jJ][aA][vV][aA]*1*8*	/opt/jre1.8	/opt/*[jJ][aA][vV][aA]/*[jJ]*
/usr/*[jJ][rR][eE]*8*	/opt/jre1.8.0	/opt/*[jJ]*
/opt/*[jJ][rR][eE]*8*	/usr/jre8.0	/usr/*[jJ]*
/usr/*[jJ][aA][vV][aA]*8*	/usr/local/jre8.0	/usr/j2sdk1.8.0
/opt/*[jJ][aA][vV][aA]*8*	/usr/java/jre8.0	/usr/local/jdk1.8.0
/usr/*[jJ][sS][Ee]*	/opt/jre8	/opt/jdk1.8.0
/usr/*[jJ][sS][Ee]*/jre	/usr/jre8	/usr/java/jdk1.8.0
/usr/*[jJ][rR][Ee]*	/usr/local/jre8	/usr/j2sdk8.0
/opt/*[jJ][sS][Ee]*	/usr/java/jre8	/usr/local/jdk8.0
/opt/*[jJ][sS][Ee]*/jre	/usr/*[jJ][dD][kK]*1*8*/jre	/opt/jdk8.0
/opt/*[jJ][rR][Ee]*	/opt/*[jJ][dD][kK]*1*8*/jre	/usr/java/jdk8.0
/usr/*[jJ][rR][eE]*	/usr/*[jJ][dD][kK]*8*/jre	/usr/j2sdk8
/opt/*[jJ][rR][eE]*	/opt/*[jJ][dD][kK]*8*/jre	/usr/local/jdk8
/usr/*[jJ][aA][vV][aA]*	/usr/*[jJ][aA][vV][aA]*1*8*	/opt/jdk8
/opt/*[jJ][aA][vV][aA]*	/opt/*[jJ][aA][vV][aA]*1*8*	/usr/java/jdk8
/usr/*[jJ][aA][vV][aA]/*[jJ]*	/usr/*[jJ][sS][Ee]*	
/opt/*[jJ][aA][vV][aA]/*[jJ]*	/usr/*[jJ][sS][Ee]*/jre	
/opt/*[jJ]*	/opt/*[jJ][sS][Ee]*	
/usr/*[jJ]*	/opt/*[jJ][sS][Ee]*/jre	
	/usr/*[jJ][dD][kK]*/jre	
	/opt/*[jJ][dD][kK]*/jre	
	/usr/*[jJ][dD][kK]*	
	/opt/*[jJ][dD][kK]*	

## 5.6 ORACLE

Oracle may generate a warning return code "ORA-24347" when NULL columns are used in aggregate functions. This happens for all PROIV V8 versions (8.0, 8.1 and 8.2). 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 setting the following environment variable in the pro4v8.ini file – Environment section or in the operating system environment.

IGNORE\_ORACLE\_WARNINGS= "Y"

---

## 5.6.1 ORACLE

The 32-bit Linux platform includes the Oracle 12c Instant client (version 12.1.0.2.0) 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* script.

## 5.7 MYSQL

MySQL allows only one active SQL query for each connection. All the results of the query have to be “retrieved” prior to another query being issued.

PROIV will fetch all rows from a query from the database server to the PROIV Virtual Machine prior to issuing another query. Subsequent fetches for the query as per the PROIV timing cycle will use the locally retrieved copy.

Transaction will work as expected but developers need to be aware that issuing a “Select” which retrieves a large number of rows will require additional memory for temporary storage.

## 6 ISSUES

### 6.1 KNOWN ISSUES

#### Non-compliance of File Naming Levels for existing PROIV Objects

It is possible to copy functions and create file browsers with names that do not comply with the "File System Safe" and "Strict" naming levels.

#### JSException Error during a mouse click from a field outside paging area

JSException doesn't appear while working on Firefox 47, however occurs on Firefox 44.

### 6.2 RESOLVED ISSUES 8.2.12.16

Issue No	Description	Linked Issues
PX-1065	Using the Session SetScreenSize method gives exception error message in Aurora	PX-1183
PX-1097	Open Client Paging Screen exits add mode when the screen enters next page	
PX-1117	PROIV Windows Service Manager displays wrong version	
PX-1137	Open Client - Issue with Column descriptions and Combo boxes	
DFCT0047380	Lexicon Configuration does not allow for SQL Server Instance Name field	
PX-1243	Reduce the number of INI file reads	
PX-1271	ML is not licensed in Run mode - in default or generated licences	
DFCT0047373	Label On Static text Not Working In Open Client but works fine in MFC	PV-1897
DFCT0045553	In Aurora, no horizontal scrollbar displayed when browser is re-sized.	PX-1533, PX-1657, PX-1920
DFCT0046056	Release notes - Documentation need to be clear on upgrading from 8.0 to 8.1	
DFCT0045555	Some combo-drop downs in Open Client appear outside the container window	PX-1452, PX-1302, PX-1841, PX-1600, PX-1436
DFCT0045557	Tree drag item disconnects and sticks to the control	PX-1299
PX-1434	Grid JS exception timer error on 'sendClickMessage' in Open Client	PV-2052
DFCT0046162	Open Client not rendering paging screen fields In same column positions	PX-1877
DFCT0046165	Open Client truncating the description fields with dots (...), instead of utilizing the full length specified in 'GUI Width'	
DFCT0047248	Open Client session hangs when running a paging screen and user types more characters than are defined in a combo box field.	PX-1462
PX-1470	When using an image with scaling enabled, there is a size issue when the image is used in a PROIV Window and viewed by the MFC Client.	
PX-1475	Clicking the scrollbar of an active paging area from parent cycle is	

	ignored	
PX-1478	For HP UX servers documentation needs updating to emphasize the importance of setting TTY_MIXED_CASE=Y especially if the customer is using our Menu and Security system	
PX-1486	Paging area scrollbar incorrectly positioned	PX-1838
PX-1488	Message dialogue size or content layout incorrect causing truncation	
PX-1509	Adding a new row in a paging cycle can drop below the visible area	
PX-1512	CSS class is missing when a hidden field is made visible	
PX-1531	Combo box column header shows ellipses instead of text.	
DFCT0045553	No Aurora Horizontal Scroll Bar is displayed when Aurora is running on a terminal with a small screen size	PX-1348
PX-1552	Pressing ESC while uploading a file using CLIENT.RECEIVE in Aurora or Open Client hangs the entire PRO-IV Session	
DFCT0045555	Some combo-drop downs in Open Client appear outside the container window	PX-1452, PX-1427, PX-1841, PX-1436
PX-1603	Record with NCHAR datatype is not processed in update function	
PX-1639	CREATE_FILE() returns -1 even when the file is created	
DFCT0045553	In Aurora when calling a screen that extends over the bottom of the displayed Aurora screen, the scrollbar is not extending when it should.	PX-1348
PX-1685	Cannot run the uninstaller	
PX-1712	Cannot Enter a Row/Column Number > 125 for a Static Text	
PX-1716	In an Update cycle in a screen function, adding a new file at the top of the cycle does not automatically become the primary File	
PX-1717	Prefix spaces are stripped from combo box fields on input in Open Client	
PX-1755	Default Internet cache folder is set to Version 7 path in MFC Client	
PX-1774	Toolbar does not display if window opened when first enter screen	PV-1512, PV-1733, PX-1830
PX-1781	Mouse scroll wheel not working in some lists on Active Paging	PX-1791
PX-1788	Active paging scrollbar is inaccurate and is inactive before entry in paging area	
PX-1796	Function Key Mappings [backspace, delete] do not work	
PX-1804	Restful Web Services fail to import definitions from previous version	
PX-1805	Up/Down arrows in Properties tabs are not displayed	
PX-1806	Application Profiler is not generating logs when enabled	
PX-1811	SELECT statement on integer/Numeric key doesn't return the desired output	
PX-1812	Unable to run PROIV batch routines through Green Screen or Transparent Logon on *NIX operating system.	
DFCT0047371	In OpenClient the data in a field that has focus is actually "out of focus"	PX-1122
PX-1825	Issue copying Map Interfaces when "Copy from calls to the same Functions?" checkbox is unticked.	
PX-1835	File Definition SQL Script is created incorrectly for SQL Server table with an Alternate Index Mapping.	PX-1842
PX-1839	Blank value sent when Licence Serial number defined	
PX-1842	Issue when ProIV accesses a SQL Server table using an Alternate	PX-1835

	Index Mapped file definition.	
PX-1843	Row gets deleted in paging area when "delete" mode is activated via button/icon	
PX-1846	Paging area expand mode fields without edit box are losing style in Open Client	
PX-1862	405 - HTTP method POST is not supported by this URL in Open Client log	PX-1869
PX-1869	Performance Issues Associated with 405 Errors	PX-1862
PX-1876	Floating point calculation failing in exponentiation operation	
PX-1881	Pre-start session closed message dumps exception stack in log file	PX-1867
PX-1882	Open Client session disconnects after clicking in an edit box	
PX-2095	Function Clean-Up removes SSO parameters	
PX-2122	ExcelSSO documentation around background colour codes is incomplete	
PX-2333	Open Client does not work in IE 7 emulation mode	PX-1441

## 6.3 RESOLVED ISSUES 8.2.12.17

Issue No	Description	Linked Issues
PX-2367	@LS_TITLE field does not display	

## 6.4 RESOLVED ISSUES 8.2.12.18

Issue No	Description	Linked Issues
DFCT0062872	Screen content jumps on "Mouse Over" in Chrome	
DFCT0063269	JSEException Error during a mouse click from a field outside paging area <b>Note:</b> JSEException doesn't appear while working on Firefox 47, however occurs on Firefox 44.	

## 6.5 RESOLVED ISSUES 8.2.12.25

Issue No	Description	Linked Issues
DFCT0065447	Function Cleanup deletes valid Global Function Call Map linkage	
DFCT0063065	Import when object naming level set to Strict fails with "Invalid Object Name XBOX2 matched by XBOX2"	
DFCT0064221, DFCT0064224	PROIV Developer properties not saving / corrupting development by navigation.	

---

NGA Human Resources is a global leader in helping organizations transform their business-critical HR operations to deliver more effective and efficient people-critical services.

We help our clients become better employers through smarter, more streamlined business processes — to save money, manage employee life cycles, and support globally connected, agile organizations. This is how NGA makes HR work.

What sets us apart is The NGA Advantage. It's a combination of deep HR experience and insight, advanced technology platforms and applications and a global portfolio of flexible service delivery options.

[www.ngahr.com](http://www.ngahr.com)

