



## OpenEdge® 12 Platform & Product Availability Guide

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The OpenEdge® Platform & Product Availability Guide reflects the current commercial releases for Progress Software's OpenEdge 12 products. This document does NOT address unannounced future product release plans. The information contained in this document is updated on a regular basis and is subject to change without notice.

A *platform* is a collective term referring to a computing environment that is explicitly validated by Progress for deploying and use of a given OpenEdge release. For the purposes of this document a platform includes operating systems, Java, Microsoft .Net and, where relevant, other third-party products such as and Apache Tomcat server and Perl. Some of these products are expected to be supplied and maintained by OpenEdge customer while others are shipped by Progress with OpenEdge. In each case this guide clarifies the expectations on minimum supported versions and recommended patching/upgrade practices to ensure our ability to support you.

For platform and product information related to earlier Progress OpenEdge releases please refer to the Availability and Compatibility information posted on Progress Information Hub at

<https://docs.progress.com/category/openedge-get-started>

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### Update Summary:

- Reformatted and updated Operating Systems section, added table listing unsupported Operating Systems that have not yet reached their end of life.
  - Added certification for Red Hat Enterprise Linux 8.2 and Ubuntu 20.04.
  - Added certification for Azure SQL Database.
  - Updated supported version of AdoptOpenJDK for Linux
  - Updated De-Supported and Deprecated Features tables.
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# 1 OpenEdge Supported Platforms

## 1.1 Operating Systems

Certified Platforms	OpenEdge Version
Microsoft Windows Server 2019 (Version 1809)	12.0+
Microsoft Windows Server 2016	12.0+
Microsoft Windows Server 2012 R2	12.0+
Microsoft Windows 10 (Version 1903)	12.0+
Microsoft Windows 8.1	12.0+
Ubuntu 18.04 LTS	12.0+
Ubuntu 20.04 LTS	12.2+
Oracle Linux 8.1	12.2+
Oracle Linux 7.6	12.0+
Red Hat Enterprise Linux 8.2	12.2+
Red Hat Enterprise Linux 8	12.0+
Red Hat Enterprise Linux 7.6	12.0+
CentOS 8.1	12.2+
CentOS 7.6	12.2+
CentOS 7	12.0+
SUSE Enterprise Server 15	12.0+
SUSE Enterprise Server 12	12.0+
SUSE Enterprise Server 11	12.0+
Oracle Solaris 11.4 (SPARC)	12.2+
Oracle Solaris 10 (SPARC)	12.1
IBM AIX 7.2	12.0+

Operating System releases prior to the ones listed above, that have not reached their end of life are also supported unless explicitly listed in the table below.

Unsupported Platforms	OpenEdge Version
Oracle Solaris 10 (SPARC)	12.0, 12.2+
IBM AIX 7.1	12.0+
HP-UX all versions	12.0+

All supported Operating Systems are 64-bit. For information on supporting 32-bit Windows client application refer to section 1.1.2.

Finally, Operating Systems vendors regularly issue critical and/or security patches and updates (“**Patches**”) for their releases. Progress relies on the Operating System vendors to guarantee binary compatibility between their patches and kernel versions, and therefore does not explicitly certify these patches.

### 1.1.1 Supporting Microsoft Windows Client Operating Systems (Effective June 2019)

Microsoft offers two flavors of its Windows Operating System (OS):

- a) Client OS (e.g. Windows 10) designed to run on personal computers, and
- b) Server OS (e.g. Windows Server 2019) optimized for handling mission critical, heavy computing loads on production grade servers.

This section describes how Progress supports OpenEdge-based applications deployed on Windows Client Operating Systems that are on different support cycles.

For their Client OS products, Microsoft offers a choice of lifecycle support options:

#### **A. Windows Client OS Semi-Annual Channel (SAC)**

For users wishing to stay current on the latest features, starting with Windows 10, a Semi-Annual Channel (SAC) was introduced where the cumulative updates are pushed out (often automatically) twice per year. For example, Windows 10 1903 release was made available on May 21, 2019.

##### ***What this means to you:***

- Progress will not explicitly certify OpenEdge on new Windows Client OS SAC updates.
- Should you encounter a problem using OpenEdge after the new Microsoft Windows SAC update is applied you may open a support case with our Technical Support. Progress will make reasonable effort to investigate the issue and help find a solution or a workaround, including if necessary, working with Microsoft. In case a solution or a workaround is identified we will share it proactively with our customers.
- If your deployment is mission critical and/or you want to minimize the risk of incompatibility between latest OS updates and your OpenEdge version, you should consider using Windows LTSC instead of SAC.

#### **B. Windows Client OS Long Term Servicing Channel (LTSC)**

For mission critical use, an Enterprise Long Term Servicing Channel (LTSC) editions are offered, with releases made available approximately once every three years.

##### ***What this means to you:***

- Progress will make every effort to certify all then active and mature OpenEdge releases within **60 days** of Microsoft making Windows LTSC updates publicly available. Upon completion of this certification Progress will update this document (OpenEdge PAG).
- When you open a support case with our Technical Support, you may be asked to reproduce the reported issue on the certified Windows Client OS LTSC update, and in some cases updating to the latest certified LTSC version may be the only remedy available to you.

### 1.1.2 Supporting 32-bit Microsoft Windows Client Applications

Legacy OpenEdge client applications compiled to run on 32-bit Windows often depend on 32-bit ActiveX (or OCX) controls that are not supported on modern 64-bit Windows. To help our customers maintain these 32-bit applications we provide:

1. Platform independent r-code, which means OpenEdge latest development tools generate output that can be used on both 64 and 32-bit Windows.
2. 32-bit client-side AVM that can be used to validate the changes made, by running updated or modified applications on their native 32-bit platform.

For additional information please refer to the Knowledge Base Article “[HOW TO COMPILE AND RUN AN OPENEDGE APPLICATION WITH 32-BIT OCX USING OPENEDGE 12?](#)”

**Note, if your application uses the 32-bit OpenEdge ODBC driver, the corresponding SQL application must be compiled in 32-bit mode.**

### 1.1.3 Supporting Linux

- OpenEdge is supported on Linux Operating System for the following hardware platforms:
  - Intel x86
  - AMD64
  - Intel EM64T
- Linux environment details: Support of the Network File System (NFS) protocol version 3 (NFSv3) under the Linux Intel x86 platform for Progress OpenEdge products, in particular the support of RDBMS files (physical and recovery) on an NFS partition, requires updates and features found within the 2.4.21 Linux Kernel and OpenEdge Updates (Service Packs in the past). Network File System (NFS) protocol versions NFSv2 and NFSv4 under Linux have not been certified and are therefore unsupported.

## 1.2 Web Browsers

OpenEdge does not certify any specific Web browser with any release of OpenEdge product. Except as noted below, if a problem arises using a specific Web browser, please contact Progress Support for assistance.

*Note*, Microsoft Internet Explorer has been known to have issues with modern web technologies and we don't recommend using it.

## 1.3 Microsoft .NET

OpenEdge 12.2 is certified to work with Microsoft .NET v4.8.

Progress recommends you monitor for critical updates issued by Microsoft for your supported version of Microsoft Windows and apply them as needed to stay current. As always prior to updating your production environment validate that the change will not cause issues.

## 1.4 Java

**⚠** Starting with OpenEdge release 12.1 Java Development Kit (JDK) is no longer included with the product. Instead, **supported JDK version must be available as a pre-requisite to the installation of OpenEdge.**

OpenEdge 12.1 is certified to work with the following JDK versions:

OS Platform	AdoptOpenJDK OpenJDK (Hotspot)	Oracle Java SE Development Kit	IBM SDK, Java Technology Edition
Microsoft Windows	jdk1.8u222-b10	1.8.0_221-b11	-
Linux	jdk1.8u222-b10	1.8.0_221-b11	-
Oracle Solaris	jdk1.8u222-b10	1.8.0_221-b11	-
IBM AIX	-	-	8.0.5.20

OpenEdge 12.2 is certified to work with the following JDK versions:

OS Platform	AdoptOpenJDK OpenJDK	Oracle Java SE Development Kit
Microsoft Windows	jdk-11.0.4+11 (x64)	11.0.4+10
Linux	jdk-11.0.4+11 (x64) for Linux	11.0.4+10
Oracle Solaris	-	11.0.4+10
IBM AIX	jdk-11.0.6+10_openj9-0.18.1	-

Progress recommends you monitor Java vendors updates for latest security patches and apply them as needed to stay current. As always prior to updating your production environment validate that the change will not cause issues.

For your convenience we list the sources where you can find security fixes and updates for different Java distributions

- AdoptOpenJDK OpenJDK - <https://adoptopenjdk.net/index.html>
- Oracle JDK - <https://www.oracle.com/technetwork/topics/security/alerts-086861.html>
- IBM SDK, Java Technology Edition - <https://developer.ibm.com/javasdk/downloads/sdk8/>

Note, if you are using OpenEdge on Docker containers refer to the relevant supplied documentation for recommended JDK.

## 1.5 Cloud and Virtualization Support Policy

Modern computing infrastructure technology continues to evolve towards virtualization and cloud, in support of growing scalability and performance demands. As a result, our customers are facing new choices and considerations when it comes to deployment and operating OpenEdge, including

- Server Virtualization including capabilities like VMware® VMotion™
- Virtual Desktop Infrastructures (VDI), for example from Citrix
- Containerization, for example from Docker
- Cloud Computing, including AWS, Azure and others

Unless explicitly stated, Progress supports OpenEdge on Operating Systems listed in this document, irrespective of any given cloud or virtualization technology. In case of any issue, it should be ensured that it is not because of the changes / customization of the cloud or virtualization platform, i.e. if the same issue is reproducible on a full OS installation then we will provide support in line with the customer's support agreement.

## 2 OpenEdge Product Availability by Platform

Note, this also covers File Systems. Refer to Note A in *Platforms and Product Notes*.

Product Category	Product Name	Certification and key functionality details	Microsoft Windows Intel		Linux x64 Intel	Oracle Solaris SPARC	IBM AIX	Notes
			32 Bit	64 Bit	64 Bit	64 Bit	64 Bit	
OpenEdge Development	4GL Development System		✓	✓	✓	✓	✓	
	OpenEdge Studio			✓				
	Progress Developer Studio for OpenEdge			✓				
	OpenEdge Ultra Controls for .NET			✓				
OpenEdge Deployment	WebClient™		✓	✓				
	Client Networking		✓	✓	✓	✓	✓	
	Query/Results		✓	✓	✓	✓	✓	
	OpenEdge Personal RDBMS	OpenEdge RDBMS 4GL & SQL RDBMS support		✓	✓	✓	✓	
	OpenEdge Workgroup RDBMS	Support for SQL Stored Procedures		✓	✓	✓	✓	
	OpenEdge Enterprise RDBMS	Native JDBC Drivers (embedded)		✓	✓	✓	✓	
	OpenEdge Advanced Enterprise Edition RDBMS	Type-4 v4.0 and Type-5 v5.1 Native ODBC Drivers (embedded) v5.3 and v7.1		✓	✓	✓	✓	
	Transparent Data Encryption			✓	✓	✓	✓	
	Multi-tenant Tables			✓	✓	✓	✓	B
	Table Partitioning			✓	✓	✓	✓	B
	OpenEdge DataServer for Oracle	OpenEdge 12.2 and higher – Oracle 19c (19.3.0.0)	✓	✓	✓	✓	✓	C
		OpenEdge 12.1 and higher - Oracle 18c (18.3.0.0)	✓	✓	✓	✓	✓	C
		Oracle 12c R2 (12.2.0.1)	✓	✓	✓	✓	✓	C
		Oracle 12c R1 (12.1.0.2)	✓	✓	✓	✓	✓	C
	OpenEdge DataServer for Microsoft SQL Server	OpenEdge 12.2 - Azure SQL Database (ODBC17 driver for SQL server, SQL Native Client 11, Data Direct ODBC driver)	✓	✓				D
		OpenEdge 12.1 and higher - MS SQL Server 2019 (ODBC17 driver for SQL server, SQL Native Client 11, Data Direct ODBC driver, SQL server)	✓	✓				



Product Category	Product Name	Certification and key functionality details	Microsoft Windows Intel		Linux x64 Intel	Oracle Solaris SPARC	IBM AIX	Notes
			32 Bit	64 Bit	64 Bit	64 Bit	64 Bit	
		MS SQL Server 2017 (ODBC17 driver for SQL server, SQL Native Client 11, Data Direct ODBC driver, SQL server)	✓	✓				
		MS SQL Server 2016 (ODBC17 driver for SQL server, SQL Native Client 11, Data Direct ODBC driver, SQL server)	✓	✓				
		MS SQL Server 2014 (ODBC17 driver for SQL server, SQL Native Client 11, Data Direct ODBC driver, SQL server)	✓	✓				
		MS SQL Server 2012 (SQL Native Client 11, Data Direct ODBC driver, SQL server)	✓	✓				
	Progress Application Server for OpenEdge	Production and Development		✓	✓	✓	✓	
	OpenEdge Explorer			✓	✓	✓	✓	
	OpenEdge Management	Standard Edition Console & Trending Database		✓	✓	✓	✓	
		Remote OpenEdge and operating system monitoring		✓	✓	✓	✓	
		SNMP Adapter		✓	✓	✓	✓	
	OpenEdge Replication	OpenEdge Replication		✓	✓	✓	✓	
		OpenEdge Replication Plus		✓	✓	✓	✓	

## 2.1 Progress Application Server (PAS) for OpenEdge

The table below lists the Tomcat versions supplied with PAS for OpenEdge.

OpenEdge Release	Tomcat Version
12.0 and higher	9.0

### 2.1.1 Tomcat Update Policy

Progress OpenEdge embeds a version of the Apache Tomcat Web server in the Progress Application Server (PAS) for OpenEdge product and recognizes customer requirements to keep up-to-date with Apache Tomcat security patches. The best way to get the latest security fixes for Tomcat is to upgrade to the latest version of PAS for OpenEdge.

If you are unable to upgrade to the latest version you can try to replace the core Apache Tomcat server libraries that you may update from an official Apache Tomcat distribution (e.g. <http://tomcat.apache.org/migration.html>) of *the same release version*. The patch being applied must be a higher version. The core Tomcat server libraries contain most of the security patches.

**Note:** An Apache Tomcat distribution also contains configurable text files that *cannot* be updated without invalidating the PAS for OpenEdge security configuration, ABL language support, and its integration with the overall OpenEdge product set. Please review the “Tomcat 8.5.x configuration file differences” section in the correct version of the link above. Please consult with Progress Technical Support before altering these text files.

The possible list of files that may be safely updated from an official Apache Tomcat distribution includes:

```
$DLC/servers/pasoe/bin/bootstrap.jar
$DLC/servers/pasoe/lib/*.jar
$DLC/servers/pasoe/bin/catalina.{sh|bat}
$DLC/servers/pasoe/bin/daemon.{sh|bat}
$DLC/servers/pasoe/bin/setclasspath.{sh|bat}
```

Patching the PAS for OpenEdge SSL/TLS capability may require an update of the JDK version. Please refer to *Java* section for information on updating JDK versions.

Please note that Progress cannot formally certify each security patch released by Apache. Issues that arise from installing these patches, so long as they are part of the same major Tomcat release version, can be reported to Progress Technical Support for further assistance, but realize Progress may not be able to resolve the issue without requiring you to upgrade to the latest version of OpenEdge.

## 2.2 Progress Developer Studio (PDS) for OpenEdge

The table below summarizes component versions within PDS for OpenEdge.

OpenEdge Release	Eclipse Version
12.0 and 12.1	4.9
12.2	4.13

### 2.2.1 Eclipse Update Policy

Progress ensures the version of Eclipse shipped with OpenEdge is fully supported. You are advised against changing Eclipse version as it may render the product inoperable and/or lead to difficult to troubleshoot issues. If, despite this advice, you change the Eclipse version and then contact Progress Technical Support with issues caused by this change, you may be asked to reproduce reported issue with supported Eclipse version.

## 2.3 Progress OpenEdge JMS Adapter

Progress OpenEdge JMS Adapter, delivered as a separate installer requiring Java 8, supports any JMS1.1 or higher compliant vendor implementation. Progress validated this with Aurea Messenger MQ (formerly known as Aurea SonicMQ), ArtemisMQ and WebsphereMQ.

### 2.3.1 OpenEdge Adapter for Sonic ESB

The following table lists the compatibility between OpenEdge Adapter for Sonic ESB and Aurea Messenger ESB (formerly known as Aurea Sonic ESB).

OpenEdge Adapter for Sonic ESB	Aurea Messenger ESB
12.1 and higher	2018 R2 and higher

## 2.4 New Relic

Customers with New Relic APM subscription can benefit from complementary OpenEdge plugins. These plugins collect the availability and performance metrics for OpenEdge Database and PAS for OpenEdge, making it easier to monitor OpenEdge applications using New Relic tool, side by side with other relevant Information Technologies.

### 2.4.1 New Relic Plugin for PAS for OpenEdge

New Relic Plugin for PAS for OpenEdge	Compatible OpenEdge Version
pasoenr-2020.1.0-release.zip	12.2.0
pasoenr-2019.3.0-release.zip	12.1.0,11.7.5,11.7.4,11.7.3

### 2.4.2 New Relic Plugin for OpenEdge Database

New Relic Plugin for OpenEdge Database	Compatible OpenEdge Version
oedbnr -2020.1.0-release.zip	12.2.0
oedbnr-2019.3.0-release.zip	12.1.0,12.0.0,11.7.5

## **2.5 Apache Ant**

Apache Ant build tool is used by Progress OpenEdge, including in the installer for tailoring and for development by PDS for OpenEdge and PCT.

OpenEdge 12.2 ships with and is certified to work with Apache Ant 1.10.6. It is not recommended replacing shipped version of Ant with another version.

## **2.6 Perl**

Perl programming language is used by some of Progress OpenEdge tools (e.g. PAS for OpenEdge Migration Wizard).

OpenEdge 12.2 ships with Perl version 5.26.1 which is compiled by Progress directly from the source code. It is not recommended replacing shipped version of Perl with another version.

Note, except for Linux and AIX- based distributions, a 32-bit version of Perl is shipped with OpenEdge 64-bit Product. Before using Perl (or utilities using Perl), install all dependent libraries (32-bit) of Perl as specified in the corresponding documentation.

### 3 Feature / Functionality Obsolescence

De-Support and Deprecation terms are defined in [Progress OpenEdge Life Cycle Policy Guide](#).

#### 3.1 De-supported Features and Functionality

The following table contains the current list of de-supported features and operating systems for OpenEdge 12. Timeframe details are published to help partners and customers with their planning. We recommend substituting obsolete functionality with appropriate equivalents as indicated in the following table.

De-Supported Feature or Functionality	Replacement Feature	De-Support Information	
		Deprecation Scheduled For	Notes
Red Hat Enterprise Linux 6	N/A	OpenEdge 12.4	This version of OS will be retired by its vendor, read more here <a href="https://access.redhat.com/support/policy/updates/errata/">https://access.redhat.com/support/policy/updates/errata/</a>
CentOS 6	N/A	OpenEdge 12.4	This version of OS will be retired by its vendor, read more here <a href="https://wiki.centos.org/About/Product">https://wiki.centos.org/About/Product</a>
Oracle Linux 6	N/A	OpenEdge 12.5	This version of OS will be retired by its vendor, read more here <a href="https://www.oracle.com/a/ocom/docs/elsp-lifetime-069338.pdf">https://www.oracle.com/a/ocom/docs/elsp-lifetime-069338.pdf</a>
Supplemental PROMSGS	None	OpenEdge 12.4	In addition to English, OpenEdge supports 13 languages out of the box. OpenEdge also supports an additional 21 downloadable supplemental languages. From Release 12.4, the support for any supplemental languages will no longer be available.

#### 3.2 Deprecated Features and Functionality

The following table contains the current list of deprecated features and operating systems for OpenEdge 12.0. Timeframe details are published to help partners and customers with their planning. We recommend substituting obsolete functionality with appropriate equivalents as indicated in the following table.

Deprecated Feature or Functionality	Replacement Feature	Deprecation Information	
		Announced OpenEdge Version	Notes
Aurea Messenger (Sonic) MQ client jar is included with OpenEdge distribution	None	OpenEdge 12.2	<ul style="list-style-type: none"><li>Since OpenEdge 12.2 has been ported to Java 11 and Aurea Messenger still requires Java 8, the latest Aurea Messenger MQ client jar is no longer distributed by Progress.</li><li>Progress OpenEdge JMS Adapter now supports multiple JMS 1.1 implementations, not just from Aurea. If required, Aurea Messenger MQ client jars are available directly from Aurea.</li></ul>

Deprecated Feature or Functionality	Replacement Feature	Deprecation Information	
		Announced OpenEdge Version	Notes
Enhanced support for Aurea Messenger MQ by Progress OpenEdge Management (OEM) and Progress OpenEdge Explorer (OEE)	None	OpenEdge 12.2	OEM/OEE will continue to support Aurea Messenger MQ Adapter configuration, management and monitoring for OpenEdge releases prior to 12.2.
Failover Cluster Managers	None	OpenEdge 12.2	<ul style="list-style-type: none"> <li>Microsoft Windows Server 2016 Failover Clusters (64-bit OpenEdge only)</li> <li>PowerHA 7.1 (HACMP 7.1) with AIX 7.1</li> </ul>
Progress OpenEdge Application Server (Basic and Enterprise), including Progress WebSpeed	Progress Application Server (PAS) for OpenEdge	OpenEdge 12.0	Trade-in Value is available for OpenEdge Application Server licenses that are under a current Maintenance contract, towards the purchase of PAS for OpenEdge.
WebSpeed Workshop	Progress Development Studio (PDS) for OpenEdge	OpenEdge 12.0	WebSpeed Workshop was part of Progress WebSpeed which has also been deprecated.
V9 Debugger	V12 Debugger	OpenEdge 12.0	
Embedded SQL-89/C	None	OpenEdge 12.0	
Translation Manager	None	OpenEdge 12.0	
Progress Dynamics	None	OpenEdge 12.0	Progress Dynamics source code can be used and maintained by users in OpenEdge 12.
OpenEdge Replication Synchronous Commit	None	OpenEdge 12.0	Not a performant solution
MD5 & RC4 ciphers	Assorted current ciphers	OpenEdge 12.0	<p>Both ciphers have documented vulnerabilities.</p> <p>While these ciphers are removed from internal use by OpenEdge, they continue to be available for ABL application use. ABL application developers are encouraged to update their products and replace these algorithms because OpenEdge may be forced to drop their support in some future release.</p>
Ability to directly link C code to the AVM running on the application server	Host Language Call (HLC) feature in OpenEdge 12.2	OpenEdge 12.0	This was supported in Classic AppServer which is not part of release 12.x. PAS for OpenEdge has never supported this.

## 4 Platforms and Product Notes

- A. File System Support (NFS, iSCSI, CIFS, ZFS, and Encrypted file systems): No matter which operating system you prefer, there are numerous choices for file systems available, each with different performance characteristics and limitations.

In general, Progress Software does not support or certify specific file systems for use as OpenEdge RDBMS storage. File systems are part of an operating system, just as device drivers are, and are supported by their respective operating system suppliers. If there are bugs or defects, Progress cannot correct them - the operating system supplier is responsible for that. Furthermore, certification testing of any operating system using any file system is done from the standpoint of correct functionality and does not take performance metrics into account. Different file systems may have performance-related side effects that are a by-product of how the file system operates. Users are advised to carry out extensive acceptance testing and seek vendor guidance when performance issues are observed. Progress Software is unable to assist customers with configuring any file system to manage performance or other characteristics.

The OpenEdge RDBMS works well with most file systems as long as the operating system's file access API is properly implemented, the file system's options are properly configured, and the supplier's patches have been applied. Only in very rare instances has Progress Software certified file systems or other storage products for use as OpenEdge RDBMS storage. These were done on an exception basis, usually in cooperation with the respective vendors, and include: Network File System (NFS), which is supported starting with NFS Version 3; NetApp Filers; EMC SRDF; and iSCSI, which is supported beginning with the OpenEdge 10.1A release.

For leveraging UNIX/Linux/Windows Encrypted File Systems, OpenEdge products have no restrictions provided the encryption technology is truly transparent to the Operating System. No formal certification of Encrypted File System Technology is planned. The EFS technology transparently allows files to be stored encrypted on NTFS file systems.

XFS is the default file system for RHEL 8.0 64-bit/CentOS 8.0 64-bit, and OpenEdge certifications have been carried out using XFS.

- B. Report Builder Engine is not supported with tables that have Table Partitioning or Multi-Tenancy enabled against them. In addition:
- The Report Builder Engine will only work with tables in a partitioned database that are not partitioned. The Report Builder Engine will return an error if the report in question attempts to access a table in a partitioned database that has been partitioned.
  - The Report Builder Engine will only work with tables in a multi-tenant database that are shared tables. The Report Builder Engine will return an error if the report in question attempts to access a table in a database that has been defined as multi-tenant.

- C. **Oracle RDBMS Support:** Indicates platforms where the Oracle RDBMS product may not be commercially available but the OpenEdge DataServer can be installed to provide client/server access to remote Oracle RDBMS instances. For operating systems that support 32-bit and 64-bit applications, Oracle 12 and later are only available as 64-bit products. The 32-bit based OpenEdge DataServer for Oracle can access a 64-bit Oracle Database instance via 32-bit Oracle Client software.

The table below provides information on OpenEdge certification of Oracle for the OpenEdge DataServer for Oracle. The Oracle client version given in the table was used for certification testing. However, other client versions of the same Oracle release are also supported. The same version (listed in the “Oracle Certified Version” column) of Oracle Server and OCI Client Libraries were used for certification.

Oracle Database Version	Oracle Certified Version	Microsoft Windows		Linux x86 on Intel	Oracle Solaris (SPARC)	IBM AIX
		32-bit	64-bit			
19C	19.3.0.0	12.2	12.2	12.2	12.2	12.2
18C	18.3.0.0	12.1	12.1	12.1	12.1	12.1
12c R2*	12.2.0.1	12.0	12.0	12.0	12.0	12.0
12c R1*	12.1.0.1.0	12.0	12.0	12.0	12.0	12.0

\* In addition to the current support for Oracle 19c, the OpenEdge DataServer for Oracle is certified for Oracle18c with multi-tenant enabled databases.

- D. **While migrating OpenEdge sequences to Microsoft Azure SQL Database, the native sequences should be used instead of the revised sequences. The revised sequences does not work with Microsoft Azure SQL Database.**