InterSystems Supported Platforms

Version 2020.3
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InterSystems Corporation 1 Memorial Drive Cambridge MA 02142 www.intersystems.com

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For Support questions about any InterSystems products, contact:

InterSystems Worldwide Response Center (WRC)
Tel: +1-617-621-0700
Tel: +44 (0) 844 854 2917
Email: support@InterSystems.com

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About This Book

InterSystems IRIS® data platform runs on a number of operating systems on various platforms. It works with many types of technologies and provide support for several national languages. This document describes the details of what is supported in this version and also indicates which versions of technologies are no longer supported that have been in previous releases.

- "Supported Technologies" describes which operating systems support which features including server platforms, client platforms, web servers and browsers, language bindings, SQL and Java interfaces, LDAP, multithreaded callin, T-SQL programming extensions, and the MQ interface.
- "Supported Languages" provides a list of supported languages and character sets for InterSystems IRIS, indicates whether or not InterSystems provides utility translations for each language, and provides a list of supported languages for NLP.
- "Discontinued Platforms" provides information on which technologies supported in the previous version of the product have been discontinued.
- "Supported Version Interoperability" provides information on the cross-version compatibility of selected components and technologies within the most recent releases of InterSystems products.
- "Cross-Product Technology Matrix" describes compatibility between this version of InterSystems IRIS and other InterSystems products.

There is also a detailed Table of Contents.

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Supported Technologies

The technologies that InterSystems products support are categorized as follows:

- Supported Platforms
- Supported File Systems
- Supported Web Servers
- Supported Web Browsers
- ODBC Support
- Node.js Support
- Platform Endianness
- Supported SQL Gateway Databases
- Supported .NET Frameworks
- Supported Java Technologies
- Other Supported Technologies
- Other Supported Features

1.1 Supported Platforms

This release supports the listed server platforms and operating system releases on the indicated InterSystems products.

- Server Platforms
- Container Platforms
- Cloud Platforms
- Development Platforms

1.1.1 Operating System Patches and Service Packs

Because InterSystems relies on the operating system vendor to ensure compatibility, InterSystems does not certify its products for specific operating system patches or service packs.

In the rare event that a specific patch or service pack (SP) is required to run InterSystems products, the appropriate table indicates the explicit requirement.

If a vendor introduces new features or functionality in a base version to create a new offering, InterSystems does not do additional testing but relies on the vendor to assure the quality of the base version.

1.1.2 Server Platforms

Platform	Notes
IBM AIX® 7.1 TL4, 7.2 for Power System-64	InterSystems IRIS for AIX is compiled using the IBM XL C/C++ for AIX 16.1.0 compiler. If the system on which you are installing InterSystems IRIS does not have the corresponding version of the runtime already installed, you must install it. See https://www.ibm.com/support/home/ for more information.
Microsoft Windows Server 2012, Server 2016, Server 2019, 10 for x86-64	
Oracle Linux 7 for x86–64	Unmodified kernel.
Red Hat Enterprise Linux 7 for x86-64	To use Kerberos on the Red Hat platform, you must install the krb5-devel package in addition to the krb5-libs package. See the Red Hat Linux Platform Notes section of the "Preparing to Install InterSystems IRIS" chapter of the *Installation Guide* for detailed information on obtaining these components.
Red Hat Enterprise Linux 8	
SUSE Linux Enterprise Server 12 SP3, 15 for x86-64	
Ubuntu 18.04, 20.04* LTS for x86-64	

1.1.3 Container Platforms

Container images from InterSystems comply with the Open Container Initiative (OCI) specification and are built using the Docker Enterprise Edition engine, which fully supports the OCI standard and allows for the images to be certified and featured in the Docker Hub registry.

InterSystems container images are built and tested using the widely popular container operating system Ubuntu. InterSystems containers therefore are supported on any OCI compliant runtime engine on Linux-based operating systems both on-premises and in public clouds.

1.1.4 Cloud Platforms

Cloud Platform	Use InterSystems IRIS version for these OS platforms
Amazon EC2 for x86-64	Microsoft Windows Server 2012, 2016, 2019
	Red Hat Enterprise Linux 7
	SUSE Linux Enterprise Server 12 SP3, 15
	Ubuntu 18.04, 20.04 LTS

Cloud Platform	Use InterSystems IRIS version for these OS platforms
Amazon EC2 for ARM64	Ubuntu 18.04, 20.04 LTS*
Google Cloud Platform for x86-64	Microsoft Windows Server 2012, 2016, 2019
	Red Hat Enterprise Linux 7
	SUSE Linux Enterprise Server 12 SP3, 15
Microsoft Azure for x86-64	Microsoft Windows Server 2012, 2016, 2019
	Red Hat Enterprise Linux 7
	SUSE Linux Enterprise Server 12 SP3, 15
	Ubuntu 18.04, 20.04 LTS

*Container only.

The following restrictions apply to the preceding table:

- IP addresses are required for mirroring. Virtual IP addresses are not supported for mirroring.

1.1.5 Development Platforms

In addition to the listed Server Platforms, the following platforms are supported for development work:

Platform	Notes
CentOS-7 x86-64	Requires InterSystems IRIS kits for Red Hat
Apple macOS 10.13, 10.14 for x86-64[1]	

[1] Key Management Interoperability Protocol (KMIP) is not supported on macOS.

Support for development platforms is subject to the following qualifications:

- Development platforms are to be used for application development only; they are not supported for deployment of applications.
- The results of comparative analysis will not be underwritten by InterSystems. No valid conclusions can be drawn from performance, sizing, or other measurements taken on supported development platforms versus other supported platforms.
- InterSystems will reevaluate its continued support for these platforms with each major release of InterSystems IRIS.

1.1.6 Hardware Considerations

In most cases, this document focuses specifically on operating system versions, and only generally on the characteristics of the underlying hardware. This section is intended as a refinement of that approach, describing specific features of individual hardware offerings that InterSystems products recognize and use to their advantage.

Advanced Encryption Standard (AES)

When run on Intel 64-bit processors, beginning with the Intel® Xeon® Processor (Westmere), InterSystems IRIS makes direct use of hardware instruction(s) to perform AES encryption.

1.2 Supported File Systems

This release supports the following file systems on the specified platforms:

Platform	Recommended File System	Other Supported File Systems
Apple macOS for x86-64	HFS	APFS
IBM AIX® for Power System-64	JFS2[3]	
Microsoft Windows for x86-64	NTFS	
Oracle Linux for x86-64	XFS	
Red Hat Enterprise Linux for x86-64	XFS	ext3[1], ext4[1,2], NFS
SUSE Linux Enterprise for x86-64	XFS	Btrfs, ext3[1], ext4[1,2], NFS, VxFS[3]
Ubuntu for x86-64	XFS	Btrfs, ext3[1], ext4[1,2], NFS

[1] The `data=journal` mount option for ext3/ext4 file systems is not supported.

[2] InterSystems recommends using the ext4 file system with Red Hat Clusters.

[3] For optimum journaling performance, the **cio** mount option is recommended for JFS2 and VxFS file systems on all supported platforms. If you cannot use **cio** on VxFS, mounting with direct I/O enabled (file system mount options **mincache=direct,convosync=direct**) is supported for journaling.

1.3 Supported Web Servers

This release supports the Caché Server Pages (CSP) technology on the following web servers for the indicated platforms. This does not necessarily mean that all InterSystems products run on these platforms, but rather that the InterSystems Web Gateway component does.

Web Server	Platform
Apache 2.4	Apple macOS
	IBM AIX® for Power System†
	Microsoft Windows
	Oracle Linux
	Red Hat Enterprise Linux
	SUSE Linux Enterprise
	Ubuntu
Microsoft IIS 7.0 and later	Microsoft Windows
Nginx	Apple macOS
	IBM AIX® for Power System
	Microsoft Windows
	Red Hat Enterprise Linux
	SUSE Linux Enterprise
	Ubuntu

† Using Kerberos security and/or SSL for the Web Gateway on 64-bit UNIX® platforms requires 64-bit Apache.

1.4 Supported Web Browsers

InterSystems IRIS supports CSP on the web browsers listed in the following tables.

Browser Platforms

Newer versions of the browsers listed in the following table will be supported with the understanding that critical issues may be found that will have to be corrected in a major release of InterSystems IRIS. Those fixes will not be backported to earlier releases of InterSystems IRIS.

InterSystems also requires that browsers support the XML HTTP interface which limits support for some older browser versions.

Platform	Supported Web Browsers
Windows	Chrome, Internet Explorer, Edge, Firefox, Opera
Linux	Firefox
Android	Chrome
iOS	Safari
macOS	Chrome, Firefox, Opera, Safari

Portals

Support for the InterSystems IRIS Management Portal (including InterSystems IRIS® Business Intelligence functionality) is limited to the browsers listed in the following table. New versions released by vendors are assumed to provide backward compatibility; they are supported as described in Supported Web Browsers and are tested as they become available.

Web Browser (Platform)	Version
Chrome (Windows, macOS)	latest released
Internet Explorer (Windows)	10[1]
Internet Explorer (Windows)	11[1]
Firefox (Windows, macOS, Linux)	latest released

[1] Internet Explorer 10 and 11 are not supported in Metro mode.

1.5 ODBC Support

InterSystems products support multithreaded ODBC on most platforms.

The InterSystems ODBC driver on UNIX®-based systems supports the following driver managers:

- The iODBC driver manager (see http://www.iodbc.org) — for use with the Unicode and 8-bit ODBC APIs; works with the **select** executable and the following drivers:

libcacheodbc35.so	iODBC 3.5 driver
libcacheodbciw35.so	iODBC 3.5 unicode driver

- The unixODBC driver manager (see http://www.unixodbc.org) — for use with the 8-bit ODBC API only; works with the **selectu** executable and the following driver:

libcacheodbcu35.so	unixODBC 3.5 driver

  When building with `#Define BUILD_REAL_64_BIT_MODE`, and *only* with `#Define BUILD_REAL_64_BIT_MODE`, use the following unixODBC drivers:

libcacheodbcur6435.so	unixODBC Real Mode built 3.5 driver

1.6 Node.js Support

This release supports Node.js clients on the platforms and operating system versions listed in the Supported Server Platforms table. For information about installation and configuration see the "Introduction" chapter of *Using Node.js with InterSystems IRIS*.

1.7 Platform Endianness

When restoring a backup or transferring a database, the target system must be the same Endianness (Big-endian or Little-endian) as the source system; for example, if a backup was created on a Big-endian system, it cannot be restored to a Little-

endian system. For information, see the section on "Using cvendian to Convert Between Big-endian and Little-endian Systems" in *Specialized System Tools and Utilities*.

The following table identifies the Endianness of the supported server platforms for this release:

Platform	Endianness
Apple macOS for x86-64	Little-endian
IBM AIX® for Power System-64	Big-endian
Microsoft Windows for x86-64	Little-endian
Oracle Linux for x86-64	Little-endian
Red Hat Enterprise Linux for x86-64	Little-endian
SUSE Linux Enterprise Server for x86-64	Little-endian
Ubuntu for x86–64	Little-endian

1.8 Supported SQL Gateway Databases

The InterSystems IRIS SQL Gateway supports the following legacy relational database systems:

Database System	Version	Notes
IBM DB2	9.7, 10.5, 11.1	
Informix	12.10	
Microsoft SQL Server	2012, 2014, 2016, 2017	
MySQL	5.7	
Oracle	11g, 12c	
Sybase Adaptive Server Enterprise	16	Data expected in UTF-8 format

This release supports both the JDBC-based and the ODBC-based gateway on all platforms on which the InterSystems IRIS SQL Gateway is available.

1.9 Supported .NET Frameworks

This release supports the following Microsoft .NET frameworks:

- .NET Framework Version 2.0 (Visual Studio 2005)
- .NET 4.0 (Visual Studio 2010)
- .NET 4.5 (Visual Studio 2012)
- .NET Core 1 (Visual Studio 2017)
- .NET Core 2.0 (Visual Studio 2017)

Note: InterSystems IRIS .NET clients do not support Kerberos because the .NET framework does not include direct Kerberos support.

1.10 Supported Java Technologies

InterSystems Java products require a Java Development Kit (JDK) from Oracle (or a compatible JDK). This release supports the following JDKs:

Development Kits	Versions
Java SE Development Kit (JDK)	8
OpenJDK	8

Please contact InterSystems if you would like to take advantage of InterSystems product license sharing when running Java on Windows Terminal Servers.

1.11 Other Supported Technologies

This release supports other technologies as specified in the following tables:

Supported Libraries	Version
ICU	4.0
Xerces	3.1.1
Xalan	1.11.0.0
OpenSSL	Instance-specific; to determine the version in use by the instance, call **$SYSTEM.Encryption.OpenSSLVersion()**

ODBC Driver Managers	Version
unixODBC	2.3.4
iODBC	3.52.4

1.12 Other Supported Features

InterSystems products support the LDAP protocol, multithreaded callin, T-SQL programming extensions, and the MQ Interface as indicated in the following table. (Supported operating system versions are those listed in the Supported Server Platforms table.)

Platform	Supported Features
Apple macOS for x86-64	LDAP, T-SQL,

Platform	Supported Features
IBM AIX® for Power System-64	LDAP, T-SQL, MQ Interface
Microsoft Windows for x86-64	LDAP, Multithreaded Callin, T-SQL, MQ Interface
Oracle Linux for x86-64	LDAP, Multithreaded Callin, T-SQL, MQ Interface[1]
Red Hat Enterprise Linux for x86-64	LDAP, Multithreaded Callin, T-SQL, MQ Interface[1]
SUSE Linux Enterprise for x86-64	LDAP, Multithreaded Callin, T-SQL, MQ Interface[1]
Ubuntu for x86–64	LDAP, Multithreaded Callin, T-SQL, MQ Interface[1]

[1] The minimum version supported by InterSystems IRIS is WebSphere MQ V7.0.

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Supported Languages

InterSystems IRIS provides National Language Support (NLS) for selected regions in one or more character sets. InterSystems IRIS also includes utility translations for some languages. These localizations exist for the languages as indicated in the following table.

InterSystems IRIS documentation is available in English and Japanese.

2.1 InterSystems IRIS

The languages in the following table are supported by InterSystems IRIS in this release:

Language	Character Sets	Utility Translation
Arabic	CP1256 (Arabic), Latin/Arabic, Unicode	
Chinese (Simplified)	GB18030 (Chinese National Standard), Unicode	
Chinese (Traditional)	Unicode	
Chinese (Mandarin)	Unicode	Included
Czech	CP1250 (Central Europe), Latin-2, Unicode	
Danish	Latin-1, Latin-9, CP1252 (Western Europe), Unicode	
Dutch	Latin-1, Latin-9, CP1252 (Western Europe), Unicode	Included
English	ASCII †, Latin-1, Latin-9, CP1252 (Western Europe), Unicode	Included
Finnish	Latin-1, Latin-9, CP1252 (Western Europe), Unicode	
French	Latin-1, Latin-9, CP1252 (Western Europe), Unicode	Included
German	Latin-1, Latin-9, CP1252 (Western Europe), Unicode	Included
Greek	CP1253 (Greek), Latin-G, Unicode	
Hebrew	CP1257 (Hebrew), Latin-H, Unicode	
Hungarian	CP1250 (Central Europe), Latin-2, Unicode	
Italian	Latin-1, Latin-9, CP1252 (Western Europe), Unicode	Included

Language	Character Sets	Utility Translation
Japanese	Unicode	Included
Korean	Unicode	Included
Lithuanian	CP1257 (Baltic), Latin-4, Latin-6, Latin-7, Unicode	
Maltese	Latin-3, Unicode	
Polish	CP1250 (Central Europe), Latin-2, Unicode	
Portuguese (Brazil)	Latin-1, Latin-9, CP1252 (Western Europe), Unicode	Included
Russian	CP1251 (Cyrillic), Latin-C, Unicode	Included
Slovak	Unicode	
Slovenian	Unicode	
Spanish	Latin-1, Latin-9, CP1252 (Western Europe), Unicode	Included
Thai	CP874 (Thai), Latin-T, Unicode	
Turkish	Unicode	
Ukranian	Unicode	Included

† US English only.

2.2 NLP

The following languages are supported by Natural Language Processing in this release:

- Dutch
- English
- French
- German
- Japanese
- Portuguese
- Russian
- Spanish
- Swedish
- Ukrainian

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Discontinued Platforms

The platforms that this release no longer supports are categorized by the following:

- Discontinued Server Platforms
- Discontinued Container Platforms
- Discontinued Cloud Platforms
- Discontinued Web Servers
- Discontinued Web Browsers
- Discontinued SQL Gateway Databases
- Discontinued Java Development Kits
- Other Discontinued Technologies

3.1 Discontinued Server Platforms

This release is not available for the following server platform versions:

Platform	Operating System Version

3.2 Discontinued Container Platforms

This release is not available for the following container base OS versions:

Container Base OS	Operating System Version

3.3 Discontinued Cloud Platforms

This release is not available for the following cloud platform versions:

3.4 Discontinued Web Servers

At this release, CSP cannot be used with the following web server versions:

Web Server	Version

3.5 Discontinued Web Browsers

At this release, CSP cannot be used with the following web browser versions:

Web Browser	Version

3.6 Discontinued SQL Gateway Databases

This release is not available for the following legacy relational database system versions:

Database System	Version

3.7 Discontinued Java Development Kits

This release is not available for the following Java Enterprise specifications:

Java Development Kit	Version

3.8 Other Discontinued Technologies

This release is not available for the following previously supported technologies:

Technology	Platforms

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Supported Version Interoperability

This section describes supported interoperability between different versions of InterSystems IRIS® data platform.

4.1 Version Interoperability Table

The following table shows the cross-version compatibility of this release with the most recent releases of InterSystems IRIS.

Component	Client/Destination Version (with 2020.3 Server)	Server/Source Version (with 2020.3 Client)
Web Gateway	2018.1[1], 2019.1, 2019.2, 2019.3, 2019.4, 2020.1, 2020.2, 2020.3	2020.3 or earlier
ECP[2]	2018.1[1], 2019.1, 2019.2, 2019.3, 2019.4, 2020.1, 2020.2, 2020.3	2018.1[1], 2019.1, 2019.2, 2019.3, 2019.4, 2020.1, 2020.2, 2020.3
Backup Restore	2018.1[1], 2019.1, 2019.2, 2019.3, 2019.4, 2020.1, 2020.2, 2020.3	2018.1[1], 2019.1, 2019.2, 2019.3, 2019.4, 2020.1, 2020.2, 2020.3
Journal Restore	2018.1[1], 2019.1, 2019.2, 2019.3, 2019.4, 2020.1, 2020.2, 2020.3	2018.1[1], 2019.1, 2019.2, 2019.3, 2019.4, 2020.1, 2020.2, 2020.3
Async Mirror[3]	2018.1[1], 2019.1, 2019.2, 2019.3, 2019.4, 2020.1, 2020.2, 2020.3	2018.1[1], 2019.1, 2019.2, 2019.3, 2019.4, 2020.1, 2020.2, 2020.3
Studio[4]	2018.1[1], 2019.1, 2019.2, 2019.3, 2019.4, 2020.1, 2020.2, 2020.3	2018.1[1], 2019.1, 2019.2, 2019.3, 2019.4, 2020.1, 2020.2, 2020.3
xDBC	2018.1[1] or later	2018.1[1] or later

[1] This refers to the 2018.1 release of InterSystems IRIS.

[2]To run any object-based application over ECP, the server and the clients must use the same product version, because the data dictionary must be the same on both client and server.

When running routine code over ECP, the code may be compiled client- or server-side. The compiler is backwards compatible in most cases, but not forwards compatible. This means that if the client and server run different product versions and both need to run the routine code, then that code must be compiled on the oldest product version in use

[3] Only reporting async members can be of a different version than the other members of the mirror; in this table, **Client/Destination Version** refers to reporting async members and **Server/Source Version** to failover members and disaster recovery (DR) async members. The failover members of a mirror and any DR async members must all be of the same version, and can differ within the range of releases defined in this table only for the duration of one of the upgrade procedures described in Upgrading a Mirror in the "Upgrading InterSystems IRIS" chapter of the *Installation Guide*.

[4] Studio is not forward compatible; it does not connect to systems with higher version numbers. The Studio version on a client must be the same or later than the InterSystems IRIS server version to which it connects. This restriction does not apply to maintenance releases.

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Cross-Product Technology Matrix

In general, connectivity components of InterSystems IRIS are not compatible with older InterSystems products. However, there are certain exceptions. For information about cross-product compatibility, see "Coexistence & Compatibility" in the InterSystems IRIS Adoption Guide, which you can request from the InterSystems Worldwide Response Center (WRC).