



# Caché Release Notes

Version 2017.1  
07 November 2016

*Caché Release Notes*

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# About This Book

This book provides information on the major features that have been added to Caché in this release.

It contains the following section:

- [Caché 2017.1 Release Notes](#)

The following books provide related information:

- [Caché Upgrade Checklists](#) discusses changes made to each release that may adversely affect existing Caché applications.
- [Caché Release Notes and Upgrade Checklist Archive](#) provides release notes describing new features for previous releases and the issue checklist for version prior to those covered in the *Caché Upgrade Checklists*.
- [InterSystems Supported Platforms](#) lists the technologies supported by this release of Caché.
- [Caché Installation Guide](#) describes the process of installing Caché on your system.
- [Introduction to Caché](#) provides an overview of the features and major components of Caché.

## General Licensing Notes

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Developers must be aware that certain license types are required in order to use specific product features such as Multi-Server capability, Mirroring, and Web Services features. The specific requirements are noted in the InterSystems Price List and the Terms and Conditions for licensing. These are available from your local InterSystems representative.

## Application Use Of InterSystems Web Server

InterSystems installs an Apache-based web server (often referred to as the "private web server") to assure that the management portals for its products are always available. The private web server is built and configured to meet the management needs of InterSystems administrative servers and is configured to only connect to InterSystems products. The options selected are not, in general, suitable for production use - in particular, security is minimal and the options used are generally unsuitable for a high volume of HTTP requests. Testing, by InterSystems, of the private webserver only covers use of the private web server for managing Caché, Ensemble, HealthShare, and other InterSystems products.

Customers are not required to use this web server to manage our products. You may also use a web server of your choice, located on whatever server you elect to use. The private web server is provided as a convenience to simplify installation and installation dependencies. Many developers also find it useful to use the private web server for unit testing.

### UNIX®

The parameters used for the UNIX® build are:

```
--prefix=<installation_location>  
--disable-actions  
--disable-asis
```

```
--disable-auth
--disable-autoindex
--disable-cgi
--disable-cgid
--disable-charset-lite
--disable-dir
--disable-env
--disable-imap
--disable-include
--disable-negotiation
--disable-setenvif
--disable-shared
--disable-status
--disable-userdir
--enable-access
--enable-alias
--enable-log-config
--enable-mime
--enable-so
--without-berkeley-db
--without-gdbm
--without-ndbm
```

The server produced has defaults using the Apache Group's prefork Multi-Processing Module (MPM). This is the non-threaded server model. The number of requests that can be concurrently served is directly related to the number of Apache worker processes in the pool. The private web server is configured to occupy the smallest possible footprint by allowing a maximum of two worker processes to be created for the pool. The following settings will be found in the Apache configuration (`httpd.conf`) for the server:

- `MinSpareServers: 1`
- `MaxSpareServers: 2`

By contrast, the default Apache configuration for a production grade build is usually the following:

- `StartServers: 5`
- `MinSpareServers: 2`
- `MaxSpareServers: 20`
- `ServerLimit: 256`
- `MaxClients: 256`

This configuration will allow Apache to create 5 worker processes at start-up time, increasing to a maximum of 256 as the concurrent load increases. Because of these differences in configuration, the performance of the private web server will be noticeably inferior to that of a production grade Apache build as the concurrent load increases.

## Windows

Windows-based Apache installations use the official binary distribution for Windows and a special multithreaded Multi-Processing Module (MPM) which is more suited to the way the operating system is optimized. However, since InterSystems installs and loads only a small subset of modules (`mod_alias.so`, `mod_authz_host.so`, `mod_log_config.so` and `mod_mime.so`), their functionality is limited.

## Conclusion

If you expect very low volume of HTTP traffic, have limited demands for high availability and secure operation, the private web server may be suitable for your deployment needs. However, if you expect a high amount of HTTP traffic, require high availability in your webserver, need to integrate with other sources of web information, or need a high degree of control over your web server, InterSystems recommends installing your own separate copy of Apache, ideally on its own server, and configuring it to use our CSP gateway to communicate with Cache, Ensemble, or HealthShare. Review the options above to determine if this is so.

**Note:** This applies to Unix®, Linux, Mac OS X and Windows systems. A private web server is not installed on OpenVMS.

# 1

## New and Enhanced Features for Caché 2017.1

This section includes:

- [FIPS 140-2 Validated Cryptography for Caché Database Encryption](#)
- [DeepSee Improvements](#)
- [Improved Docbook Search](#)
- [Feature Tracker](#)
- [iKnow REST API and Other Enhancements](#)
- [Other Items of Note](#)

### 1.1 FIPS 140-2 Validated Cryptography for Caché Data-at-Rest Encryption

This release allows you to configure Caché running on Red Hat Enterprise Linux 64-bit to use a FIPS 140-2 validated library for Caché data-at-rest encryption. For details, see the article “[FIPS 140–2 Compliance for Caché Database Encryption](#)”.

### 1.2 DeepSee Improvements

This release includes the following DeepSee improvements:

- New controls widget for dashboard.
- Improved export of DeepSee components.
- New DayOfWeek time function.
- New CreateTable plug-in.
- Improvements to setting default filter values.

- Improvements to setting advanced filter values.
- Drilldown expression now uses expressionBuilder.
- SQL-based listings now support dynamic sorting.

## 1.3 Improved Docbook Search

Docbook search has improvements that can help you find information faster. Search now puts matches found in the most commonly used documents first. The docbook search page has new options that allow you to limit the scope of your search. To reach the docbook search page, select **Search Page** from the documentation home page. It has the following new filters:

- Find topics with *all* or *any* of the specified words. In previous releases, search was always for *all* words.
- Use free-text search or exact match with or without case sensitivity. In previous releases, search always used free-text search, which removed some special symbols and searched for all words that shared the same root. Exact match retains special symbols and only finds the exact word specified. For example, with the search word “^global”, free text search finds all occurrences of the word “global”, but exact match searches will only find “^global” with the caret character.
- Limit search to product allows you to search for words in either the Caché or Ensemble documentation.
- Search in a specific book.
- Search for items associated with a tag. This allows you to search for words tagged with terms such as DeepSee, Zen, HL7, and BPL.

## 1.4 Feature Tracker

In 2017.1 we are introducing a safe and trustworthy approach for InterSystems to periodically collect information about the Caché features being used while maintaining the integrity of our relationship with our clients. The Feature Tracker is enabled by default but may be easily disabled by clients who have any concerns for any reason. Feature Tracker will help us prioritize which Caché features to enhance based on the features that are used by customers.

The Feature Tracker collects information about instance attributes (product type, version, license, platform, etc.) and use of technology, including ECP, Mirroring, DB Encryption, and SQL. It does not collect information about license utilization, database attributes, applications, errors, authentication, client data, client-specific configuration. Weekly, the Feature Tracker sends the collected data (XML file) to an InterSystems Caché instance using SSL. You may view the most recent collected data to see that this information is trustworthy. If for any reason the Feature Tracker cannot transmit, it fails silently with no impact to the instance.

More information about Feature Tracker can be found in [Feature Tracker Collects Usage Statistics](#), in the *Caché System Administration Guide*.

## 1.5 iKnow REST API and Other Enhancements

This release introduces a REST API to access iKnow domain information directly from a RESTful client. Many common query API methods are supported through a simple, consistent interface where individual requests can be configured to retrieve rich query results or just the basic data, depending on your application requirements. The iKnow REST API provides reference documentation using the Swagger Specification, which is the foundation of the OpenAPI Specification.



**Note:** One method to view the iKnow REST API documentation, is to use Swagger UI, either by directing a web browser to <http://petstore.swagger.io/> or by downloading the Swagger UI toolkit. Enter one of the following URLs in the Swagger UI form and then select the **Explore** button. For a Caché development instance with minimal security, you can enter:

```
http://localhost:port-number/api/iknow/v1/user/swagger
```

For a Caché instance with password security, you can enter:

```
http://localhost:port-number/api/iknow/v1/user/swagger?CacheUserName=user-name&CachePassword=password
```

In addition, this release includes a significant overhaul of our Knowledge Portal demo interface for exploring your domain's contents and a number of extensions to the iKnow Architect interface for managing a domain definition.

## 1.6 Other Items of Note

In addition, many more minor improvements and corrections are also included. In particular, if you are upgrading an existing installation, please review the detailed list of changes in the [Upgrade Checklist](#).

Areas of improvement include:

- OpenSSL library—In this release the OpenSSL library has been upgraded to v1.0.2h.
- New Date/Time format—With this release InterSystems products now support Thai (Buddhist Era) date format. Please consult the Reference guide for the functions \$ZDATEH() and \$ZDATETIMEH() for details.
- Lightweight SQL profile.
- Improved work queue manager.
- Improvements to the XSLT Gateway.
- Improvements to the JDBC driver including a faster and more robust preparer.
- Support for .NET 4.5 in .NET Gateway, Caché eXtreme, and ADO.NET.

