



# **OpenIG Release Notes**

Version 3.0.0

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## Abstract

Notes covering OpenIG prerequisites, fixes, known issues. OpenIG provides a high-performance reverse proxy server with specialized session management and credential replay functionality.



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## Chapter 1

# What's New in OpenIG

OpenIG 3.0.0 fixes a number of issues, and provides the following additional features.

- This release brings major improvements to the configuration model.

OpenIG now supports runtime configuration changes, with separate routes for separate applications ( [OPENIG-73](#), [OPENIG-97](#), [OPENIG-204](#) ). For a tutorial on how to use routes, see [Routing Tutorial](#).

OpenIG now removes the Java EE Servlet and Servlet Filter objects to simplify configurations. The top-level configuration object now references a handler rather than a Servlet ( [OPENIG-95](#) ).

OpenIG now supports the ability to change the location where configuration files are stored ( [OPENIG-96](#), [OPENIG-140](#) ).

- OpenIG now supports OAuth 2.0 and OpenID Connect 1.0 ( [OPENIG-176](#), [OPENIG-195](#) ).

OpenIG can act as an OAuth 2.0 resource server on behalf of a server housing protected resources. For details and a tutorial demonstrating this capability see the chapter, [Configuring OpenIG as an OAuth 2.0 Resource Server](#).

OpenIG can act as an OAuth 2.0 client application, and as an OpenID Connect 1.0 relying party. For details and a tutorial demonstrating these capabilities see the chapter, [Configuring OpenIG as an OAuth 2.0 Client](#).

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- OpenIG now supports use of scripts to process and to handle the HTTP exchange ( [OPENIG-66](#), [OPENIG-72](#), [OPENIG-80](#), [OPENIG-90](#), [OPENIG-92](#), [OPENIG-235](#) ). Use the ScriptableFilter and ScriptableHandler objects to the configuration in order to hook scripts into exchange processing. At present Groovy is supported, but JavaScript is not. For examples using Groovy scripts for Filters and Handlers see the chapter, *Scripting Filters & Handlers*.

Scripting also adds support for working with LDAP servers ( [OPENIG-81](#) ).

- OpenIG now includes a default welcome page if no configuration is found ( [OPENIG-202](#) ).
- SAML 2.0 federation support is now integrated into the main OpenIG .war file ( [OPENIG-94](#) ).

OpenIG SAML 2.0 federation now supports SP-initiated single logout and also supports single logout using the SOAP binding ( [OPENIG-10](#), [OPENIG-237](#) ).

OpenIG SAML 2.0 federation now supports an option to set AuthnContext in the OpenIG session ( [OPENIG-9](#) ). You can also obtain OpenAM authentication level by including the AuthLevel attribute in the IDP or SP attribute mapping.

- OpenIG Expressions now support additional built-in functions, and use of system properties and environment variables.

Built-in functions to call within expressions now include `base64Encode(string)`, `base64Decode(string)`, `matchingGroups(string, pattern)`, `read(filename)`, `readProperties(filename)`, `urlencode(string)`, and `urldecode(string)` as described in the reference section, [Functions](#) ( [OPENIG-54](#), [OPENIG-213](#) ).

Expressions access system properties and environment variables as described in the reference section, [Expressions](#).

Expressions now also support Java Beans ( [OPENIG-200](#) ).

- OpenIG Expressions are now usable in more configuration fields ( [OPENIG-12](#), [OPENIG-211](#), [OPENIG-232](#) ).
- OpenIG now provides an HttpClient configuration object that lets you disable connection reuse when server does not support it, set socket and connection timeouts, choose how you verify host names in server certificates, and so forth ( [OPENIG-12](#), [OPENIG-38](#), [OPENIG-203](#) ).
- OpenIG now allows you to change URI components, rather than rewrite entire URIs ( [OPENIG-70](#), [OPENIG-243](#) ).
- OpenIG now provides a RedirectFilter to rewrite Location headers returned as a result of a HTTP redirect ( [OPENIG-35](#) ).

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- OpenIG StaticRequestFilter now lets you restore the original state of the request ( [OPENIG-245](#) ).
  - OpenIG HttpBasicAuthFilter now lets users change their passwords during a session ( [OPENIG-32](#) ).





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## Chapter 2

# Before You Install

This chapter covers requirements for running OpenIG software.

### Tip

If you have a special request to support a component or combination not listed here, contact ForgeRock at [info@forgerock.com](mailto:info@forgerock.com).

## 2.1 JDK Version

This release of OpenIG requires Java Development Kit 6, 7, or 8. ForgeRock recommends the most recent update to ensure you have the latest security fixes.

If you install an OpenAM policy agent in the same container as OpenIG, then you must use a Java release that is supported with the policy agent as well.

## 2.2 Web Application Containers

OpenIG runs in the following web application containers.

- Apache Tomcat 7
- Jetty 8 (8.1.13 or later)

See the *Guide to OpenIG* section, [Configuring Deployment Containers](#), for details on setting up your web application container.



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## Chapter 3

# Changes & Deprecated Functionality

This chapter covers both major changes to existing functionality, and also deprecated and removed functionality.

### 3.1 Major Changes to Existing Functionality

This release brings important new functionality and many changes to OpenIG.

If you are running older versions of OpenIG you must at minimum modify both the location and also the content of your `config.json` file.

You must migrate the configuration by hand.

- The configuration file location and configuration layout have changed.

By default, configuration files are now stored under `$HOME/.openig/config` and `$HOME/.openig/SAML` on UNIX, Linux, and Mac OS X, and under `%appdata%\openig\config` and `%appdata%\openig\SAML` on Windows systems.

For details the *Guide to OpenIG* section, [Installing OpenIG](#).

As described in that section, the base configuration directory can be changed and can even be set at run time. You must therefore take care to protect access to OpenIG, both by protecting access to the environment at startup time, and also by protecting access to configuration files at run time.

Notice that OpenIG configuration can be split across multiple files.

- Usage for some configuration objects has changed. In particular, the top-level configuration object now references a Handler rather than a Servlet.

When migrating your configuration, review current usage in the [OpenIG Reference](#).

- OpenIG supports runtime configuration changes, as described in the *Guide to OpenIG* chapter, [Routing Tutorial](#).

Notice that you can turn off runtime configuration changes.

- OpenIG configuration Expressions can depend on runtime settings, such as environment variables and system properties.

You must ensure that these settings are properly protected.

- As SAML 2.0 federation support is now integrated into the main OpenIG .war file, the way of configuring dispatch to the Federation component has changed. For an example of how the configuration is handled now, see the *Guide to OpenIG* chapter, [Tutorial For OpenIG Federation](#), or read the example configuration file, [Configuration for the Federation Tutorial](#).

### 3.2 **Deprecated Functionality**

No functionality is deprecated in this release.

### 3.3 **Removed Functionality**

Custom Servlet and Servlet Filter integration now requires additional development. For an example, see the `org.forgerock.openig.handler.saml` package.

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## Chapter 4

# Fixes, Limitations, & Known Issues

OpenIG issues are tracked at <https://bugster.forgerock.org/jira/browse/OPENIG>. This chapter covers the status of key issues and limitations at release 3.0.0.

### 4.1 Fixes

The following issues were fixed in release 3.0.0.

- **OPENIG-76**: Documentation is not clear about what the CryptoHeaderFilter can encrypt/decrypt
- **OPENIG-67**: Shutdown problem when using Federation Gateway
- **OPENIG-62**: StaticRequestFilter overrides the Content-Type header
- **OPENIG-59**: Federation does not correctly handle XML signatures
- **OPENIG-51**: SSL mutual auth fails because client certificate is not presented to server
- **OPENIG-49**: Empty Expression string not handled correctly
- **OPENIG-36**: Problems with Expression examples in the reference documentation
- **OPENIG-31**: Cached HttpBasic authentication header can cause issues when a user changes password

- [OPENIG-29](#): Federation requires AssertionMapping settings, even though the mapping is optional
- [OPENIG-15](#): Expressions needed in HeaderFilter and need to support backslashes
- [OPENIG-8](#): OpenIG gateway removes Content-Length: 0
- [OPENIG-4](#): Boundary stripped off of multipart/form-data on POST operation
- [OPENIG-1](#): File upload over HTTPS fails

## 4.2 Limitations

For HTTPS, OpenIG can check server certificates. However mutual authentication, where OpenIG presents its client certificate, is not supported if the client certificate is not the first certificate in the HttpClient key store.

OpenIG scripts are not sandboxed, but instead have access to anything in their environment. You must make sure that the scripts that OpenIG loads are safe.

When acting as an OpenID Connect 1.0 relying party, OpenIG does not support dynamic registration.

## 4.3 Known Issues

The following known issues remained open at the time release 3.0.0 became available.

- [OPENIG-258](#): OpenIG doesn't shutdown properly when protected by a Tomcat J2EE agent
- [OPENIG-221](#): Cannot specify which certificate to present to server if server requires mutual authentication in https
- [OPENIG-85](#): SqlAttributesFilter throws SQLException: Invalid operation for forward only resultset
- [OPENIG-78](#): SqlAttributesFilter throws SQLException: Invalid column index
- [OPENIG-69](#): OpenIG seems to remove the URI part of requests when using baseURI
- [OPENIG-56](#): Temporary files leak

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## Chapter 5

# How to Report Problems & Provide Feedback

If you have questions regarding OpenIG that are not answered by the documentation, there is a mailing list which can be found at <https://lists.forgerock.org/mailman/listinfo/openig> where you are likely to find an answer.

If you have found issues or reproducible bugs within OpenIG, report them in <https://bugster.forgerock.org>.

When requesting help with a problem, include the following information:

- Description of the problem, including when the problem occurs and its impact on your operation
- Machine type, operating system version, web container and version, Java version, and OpenIG release version, including any patches or other software that might be affecting the problem
- Steps to reproduce the problem
- Any relevant logs or stack traces





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## Chapter 6

# Support

You can purchase OpenIG support, subscriptions and training courses from ForgeRock and from consulting partners around the world and in your area. To contact ForgeRock, send mail to [info@forgerock.com](mailto:info@forgerock.com). To find a partner in your area, see <http://forgerock.com/partners/find-a-partner/>.

