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Genesys Rules System Rules Engine

Release Notes 9.0.x

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Genesys Rules System Rules Engine 9.0.x Release Note

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

This Release Note applies to all 9.0.x releases of Genesys Rules System Rules Engine. Links in the [Available Releases](#) section enable you to access information regarding a specific release.

Available Releases

[+] Note about release order

Releases are listed by version number rather than in date order. For this reason, a recent release may be listed after earlier releases, if the version number is lower. Except when otherwise noted in the information for a specific release, each release includes all of the features and corrections that were introduced for the applicable operating system at earlier dates, regardless of the version numbering.

Release 9.0.0:

Release	Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
9.0.005.01	03/05/25	Update			X		X
9.0.004.00	10/28/24	Update			X		X
9.0.003.02	07/23/24	Update			X		X
9.0.003.01	06/19/24	General			X		X
9.0.002.01	03/15/24	Update			X		X
9.0.001.00	02/20/24	General			X		X
9.0.000.30	11/17/23	General			X		X
9.0.000.29	06/07/23	Hot Fix			X		X
9.0.000.28	12/22/22	Hot Fix			X		X
9.0.000.25	07/01/22	Hot Fix			X		X
9.0.000.24	05/17/22	Hot Fix			X		X
9.0.000.22	01/14/22	Hot Fix			X		X
9.0.000.21	12/17/21	Hot Fix			X		X
9.0.000.19	07/23/21	Hot Fix			X		X
9.0.000.18	04/26/21	Hot Fix			X		X
9.0.000.16	11/30/20	Hot Fix			X		X
9.0.000.15	08/26/20	Hot Fix			X		X

Release	Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
9.0.000.13	06/29/20	Hot Fix			X		X
9.0.000.12	11/22/19	Hot Fix			X		X
9.0.000.11	08/30/19	General			X		X

The operating systems available for use with each component release are listed in the table at a high level only. For more detailed information about the supported operating environments, including requirements, supported versions, and any conditions or limitations, see the [Genesys Rules System](#) page in the *Genesys Supported Operating Environment Reference Guide*.

For information about 8.5.x releases of Genesys Rules System Rules Engine, see the [8.5 Release Note \(Cumulative\)](#).

Discontinued Support

[+] Note about discontinued items

This section documents features that are no longer supported in this software. This cumulative list is in release-number order with the most recently discontinued features at the top of the list. For more information on discontinued support for operating environments and databases, see [Discontinued Support](#) in the *Genesys Supported Operating Environment Reference Guide*.

-
- Red Hat Enterprise Linux operating system 6
Discontinued as of: 9.0.000.19

-
- CentOS 6 operating system
Discontinued as of: 9.0.000.19

-
- All versions of Solaris operating system.
Discontinued as of: 9.0.000.11
-

Known Issues

You can find a cumulative list of the Known Issues and Recommendations for all 9.0.x releases of Genesys Rules System Rules Engine, including the issues that are specific to Localized (International) releases, at the following links:

- [Known Issues and Recommendations](#)
 - [Internationalization Issues](#)
-

Related Resources

For additional information about Genesys Rules System Rules Engine, see the following documentation:

- The documentation related to this software is available from the [GRS](#) page.
- The [Genesys Rules System Deployment Guide](#) provides details about installing and configuring Genesys Rules System Rules Engine.
- The [Genesys Rules System](#) page in the [Genesys Supported Operating Environment Reference Guide](#) provides detailed information about the supported operating environments, including requirements, supported versions, and any conditions or limitations for Genesys Rules System Rules Engine components.

Release Notes for other Genesys components are available [here](#).

Known Issues and Recommendations

Genesys Rules System Rules Engine

The Known Issues and Recommendations section is a cumulative list for all 9.0.x releases of Genesys Rules System Rules Engine. This section provides the latest information on known issues and recommendations associated with this product. It includes information on when individual items were found and, if applicable, corrected. The Resolved Issues section for each release describes the corrections and may list additional issues that were corrected without first being documented as Known Issues.

See also [Internationalization Issues](#).

In GRE 9.0.000.28, Xstream library has been upgraded to v1.4.19 for addressing security vulnerabilities. With this upgrade, in a unique case, the Jettison library marshals an array object as a JSON object (which is not the expected behavior) if GRE response Fact has an array object and if the array object contains a single element (size= 1). However, if the array object has more than 1 element (size>1), it is marshalled as an array itself, hence this is not an issue for array object with multiple elements.

This issue (unique case) may lead to a parse issue while consuming GRE response facts.

Workaround: To prevent it from happening, we must change the GRE configuration option **json-hierarchical-driver** to true (default is false) which makes use of a JSON driver for marshalling. The JSON driver does not produce the above-mentioned issue in case of array containing a single element but slightly changes the GRE response schema. Additionally, this may necessitate a minor change in Composer strategy logic where GRE response facts are fetched to accommodate the change in schema.

If a customer encounters the above unique case when GRE response Facts has any array elements, they must perform the following steps:

1. Set the GRE configuration option **json-hierarchical-driver** to *true*
2. Update the Composer application strategy logic where GRE response facts are being fetched to accommodate JSON driver schema.

For example, let us take an existing logic as below in composer strategy:

```
var fact = JSON.parse(JSON.stringify(m_ruleresult["knowledgebase-response"].inOutFacts["named-fact"][1].fact));
```

Update it to remove ["named-fact"] as shown below:

```
var fact = JSON.parse(JSON.stringify(m_ruleresult["knowledgebase-response"].inOutFacts[1].fact));
```

For reference, GRE response schema with different **json-hierarchical-driver** setting are shown in the following table:

GRE response with json-hierarchical-driver=true (uses JSON driver)	GRE response with json-hierarchical-driver=false (uses Jettison driver)
<pre> { "knowledgebase-response": { "inOutFacts": [{ "fact": { "@class": "ctl.com.CallTreatment", "offerCallBack": true, "maxWaitTime": 30, "routeToAgentGroup": "Accounts" }, "id": "CallTreatment" }, { "fact": { "@class": "ctl.com.CallInfo", "intention": "Payment" }, "id": "CallTreatment" }, { "fact": { "@class": "ctl.com.Customer", "segment": "gold" }, "id": "Customer" }, { "fact": { "@class": "ctl.com._GRS_Environment" }, "id": "env" }], "executionResult": { "rulesApplied": ["Row 7 DT-110 Handle Calls DT", "Row 6 DT-110 Handle Calls DT"] } } } </pre>	<pre> { "knowledgebase-response": { "inOutFacts": { "named-fact": [{ "fact": { "@class": "ctl.com.CallTreatment", "offerCallBack": true, "maxWaitTime": 30, "routeToAgentGroup": "Accounts" }, "id": "CallTreatment" }, { "fact": { "@class": "ctl.com.CallInfo", "intention": "Payment" }, "id": "CallTreatment" }, { "fact": { "@class": "ctl.com.Customer", "segment": "gold" }, "id": "Customer" }, { "fact": { "@class": "ctl.com._GRS_Environment" }, "id": "env" }] }, "executionResult": { "rulesApplied": { "string": ["Row 7 DT-110 Handle Calls DT", "Row 6 DT-110 Handle Calls DT"] } } } } </pre>

GRE response with json-hierarchical-driver=true (uses JSON driver)	GRE response with json-hierarchical-driver=false (uses Jettison driver)
	<pre> } } }</pre>
ID: GRS-4155	Found In: 9.0.001.00 Fixed In:

GRE generates a Java version parsing error in the log when running with OpenJDK 11 and 13. Functionality is not effected.

ID: GRS-3690	Found In: 9.0.000.18	Fixed In: 9.0.000.19
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To avoid display problems on the GRAT **Deployment History** tab, set the following option when using versions of Java newer than version 1.8:

JVM option -Djava.locale.providers=COMPAT

ID: GRS-3688, GRS-3683	Found In: 9.0.000.18	Fixed In:
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Internationalization Issues

Information in this section is included for international customers. Release numbers in the **Found In** and **Fixed In** fields refer to the English (US) release of Genesys Rules System Rules Engine unless otherwise noted in the issue description.

There are no internationalization issues for this product.

Release 9.0.0

Genesys Rules System Rules Engine Release Notes

You can find links to Release Notes for particular 9.0.0 releases of Genesys Rules System Rules Engine, if available, in the tree menu on the left or in the list of [Available Releases](#).

9.0.004.00

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
10/28/24	Update			X			X

What's New

This release includes only resolved issues.

Resolved Issues

This release contains the following resolved issues:

Fixed fact array element issue in GRE response structure to maintain backward compatibility with GRE version up to 9.0.000.25. (GRS-4327)

Helpful Links

Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

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Upgrade Notes

No special procedure is required to upgrade to release 9.0.004.00.

9.0.003.02

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
07/23/24	Update			X			X

What's New

This release includes only resolved issues.

Resolved Issues

This release contains the following resolved issues:

Due to security vulnerabilities, the Spring framework is upgraded from v5.3.33-wso2v1 to v5.3.36-genesys. (GRS-4309)

Helpful Links

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Upgrade Notes

No special procedure is required to upgrade to release 9.0.003.02.

9.0.003.01

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
06/19/24	General			X			X

What's New

This release contains the following new features and enhancements:

- Due to the security vulnerability (CVE-2019-12415 and CVE-2022-26336) and lack of usage, **Apache Poi** v3.17 library has been removed. (GRS-4284)
- Due to the security vulnerability (BDSA-2022-4307), the **Apache jackson** jar is upgraded from v2.12.7 to v2.17.0. (GRS-4247)
- Due to the security vulnerability (BDSA-2024-0720 (CVE-2024-29025)), the **Netty** library is updated from 4.1.101 to 4.1.109. (GRS-4245)
- Due to the security vulnerability (CVE-2024-22243, CVE-2024-22259, and CVE-2016-1000027), the **Spring** framework is updated from v5.3.30 to v5.3.33-wso2v1. (GRS-4244)

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Resolved Issues

This release contains no resolved issues.

Upgrade Notes

No special procedure is required to upgrade to release 9.0.003.01.

9.0.002.01

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in 9.0.000.11.

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
03/15/24	Update			X			X

What's New

This release contains the following new features and enhancements:

- Upgraded the following libraries to fix CVE-2022-40156, CVE-2022-40155, CVE-2022-40154, CVE-2022-40153, CVE-2022-40151, CVE-2021-39154 vulnerabilities:
 - Xstream library to v1.4.20
 - Jettison library to v1.5.4

As part of Xstream and Jettison library upgrades, customer may need to utilize the GRE templates available in GRE 9.0.002.01 version. In the current version templates, a new configuration option `serialize-with-legacy-jettison-format` has been introduced in GRE to maintain backward compatibility with GRE response.

We strongly recommend that customers adapt their applications, which consume GRE, to the GRE response schema produced when `json-hierarchical-driver=true`. In future releases, GRE response schema produced with `json-hierarchical-driver=false` will no longer be available.

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Warning

Setting `serialize-with-legacy-jettison-format=false` when `json-hierarchical-`

driver=false will result in producing a slightly different GRE response schema, potentially breaking existing workflows.

Recommended Action: Customers are advised to update `json-hierarchical-driver=true` in non production environment and modify their application to consume GRE response schema produced with this updated option. In future releases, only this schema will be available. As an additional information, `json-hierarchical-driver=true` indicates JSON driver will be used for marshalling, while `json-hierarchical-driver=false` indicates Jettison driver will be used for marshalling.

Resolved Issues

This release contains no resolved issues.

Upgrade Notes

No special procedure is required to upgrade to release 9.0.002.01.

9.0.001.00

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
02/20/24	General			X			X

What's New

This release contains the following new features and enhancements:

- To improve security, Netty library has been upgraded from v4.1.64 to v4.1.101 (CVE-2023-34462, CVE-2023-44487, CVE-2021-37137). (GRS-4071)
- Support for the following operating environments:
 - OpenJDK 17
See the [Genesys Rules System](#) page in the [Genesys Supported Operating Environment Reference Guide](#) for more detailed information.
(GRS-3961)
- Detailed status description for the GRE cluster deployment is added in the GRAT User Interface. (GRS-3994)

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Resolved Issues

This release contains no resolved issues.

Upgrade Notes

No special procedure is required to upgrade to release 9.0.001.00.

9.0.000.30

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
11/17/23	General			X			X

What's New

This release includes only resolved issues.

Resolved Issues

This release contains the following resolved issues:

To improve security, Spring framework has been upgraded from v5.3.20 to v5.3.30.

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Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.30.

9.0.000.29

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
06/08/23	Hot Fix			X			X

What's New

This release includes only resolved issues.

Resolved Issues

This release contains the following resolved issues:

The level-reassign-<eventID> option is now added in the configuration manager similar to log and setting sections. This option filters the logs based on their numbers. It was part of GRS8 version and now available in GRS9 from GRE 9.0.000.29.

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Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.29.

9.0.000.28

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
12/22/22	Hot Fix			X			X

What's New

This release includes only resolved issues.

Resolved Issues

This release contains the following resolved issues:

The Spring Framework is now upgraded to version 5.3.20 to address the CVE-2033-22950 security vulnerability. (GRS-3866)

In Configuration Manager, the categories and sub objects under a business structure have a DBID to uniquely represent each object. In some instances, the same DBID was assigned to categories and sub objects under the same hierarchy resulting in an infinite loop. This issue is now fixed. (GRS-3822)

The XStream library is now upgraded to version 1.4.19 to address the CVE-2022-40156, CVE-2022-40155, CVE-2022-40154, CVE-2022-40153, CVE-2022-40151, and CVE-2021-39154 security vulnerabilities. (GRS-3700)

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A new configuration option, `log-input-facts-on-no-rules-executed`, is introduced to enable recording of input data details in logs for cases where no rules are executed for the input request. This helps understand if there is any problem with the input data when no rules are applied. (GRS-3744)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.28.

9.0.000.25

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
07/01/22	Hot Fix			X			X

What's New

This release contains the following new features and enhancements:

- A new configuration option ignore-config-connection-status is added to send a GRE OK status, when the configuration server is down but Genesys Rules Engine is operational. (GRS-3854)

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Resolved Issues

This release contains the following resolved issues:

After an upgrade to the log4j2 library, there was an issue using the built-in logger, `$_GRS_log` in iWD rule packages. With this fix, the built-in logger `$_GRS_log` is reset to the original **org.apache.log4j.Logger** class for the iWD rule request code path. (GRS-3811)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.25.

9.0.000.24

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
05/17/22	Hot Fix			X			X

What's New

This release includes the following new features or enhancements:

- The option **log4j-config-profile** is now removed from Genesys Rule Engine (GRE). Now the GRE automatically detects the **log4j2.xml** file location in the application server. (GRS-3813)

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Resolved Issues

This release contains the following resolved issues:

After upgrading to log4j2, there was an issue using the built-in logger `$_GRS_log`. With this fix, the built-in logger `$_GRS_log` is reset to the original `org.apache.log4j.Logger` class. (GRS-3811)

The issue with loading the expired packages on start-up is fixed. Previously, the rule package expired status was not validated if serialization was enabled, which led to loading of all the expired packages in the cache and caused high memory usage. (GRS-3808)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.24.

9.0.000.22

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in 9.0.000.11.

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
01/14/22	Hot Fix			X			X

What's New

This release includes the following new features or enhancements:

- This release includes important security fixes related to the Apache Log4j 2 vulnerability (CVE-2021-45105). In particular, the Log4j library included with Genesys Rules System Rules Engine has been upgraded to 2.17.1. (GRS-3754)

Resolved Issues

This release contains no resolved issues.

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Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.22.

9.0.000.21

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
12/17/21	Hot Fix			X		X

What's New

This release includes the following new features or enhancements:

- Important security fixes related to the log4j vulnerability (CVE-2021-44228). (GRS-3751)

Resolved Issues

This release contains no resolved issues.

Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.21.

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9.0.000.19

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
07/23/21	Hot Fix			X		X

What's New

This release includes the following new features or enhancements:

- **Support for log4j2 logging**—As part of the upgrade to using log4j2 logging, the configuration option *No results* needs to be configured to the full path of the **log4j2.xml** file located in the **WebContent\WEB-INF\classes** directory. If this option is not set, after the server connects to Configuration Server and reads the logging settings, the startup values for the various loggers are lost. This results in a lot of unnecessary log messages. (GRS-3556)
- No longer supported:
 - Red Hat Enterprise Linux 6.
 - CentOS Linux 6.

Resolved Issues

This release contains the following resolved issues:

The **httpclient** library has been updated to a newer version to improve security. (GRS-3699)

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GRE has been modified to properly restrict the XML parser during rule deployment, in order to protect against a possible security vulnerability. (GRS-3696)

When GRE is deployed on OpenJDK runtime versions 11 thru 13, it would previously write warning messages to the log indicating an unsupported Java runtime error. The error message has been corrected in this version. OpenJDK versions 11 thru 13 are supported. (GRS-3690)

Upgrade Notes

See [GRS-3556](#).

9.0.000.18

Genesys Rules System Rules Engine Release Notes

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Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
04/26/21	Hot Fix			X		X

What's New

This release includes the following new features or enhancements:

- Support for:
 - Open JDK 13. See also Known Issue [GRS-3688](#).
 - Tomcat 9.0.41. (GRS-3465)

See the Prerequisites section on the [Genesys Rules System](#) page in the [Genesys Supported Operating Environment Reference Guide](#) for more detailed information and a list of all prerequisites.

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Resolved Issues

This release contains the following resolved issues:

A problem with the GRE "cache operational parameters" feature not working properly if the connection to Configuration Server was lost and subsequently restored has now been fixed. Previously in this scenario, future updates to operational parameters were not reflected until GRE was restarted. (GRS-3673)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.18.

9.0.000.16

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
11/30/20	Hot Fix			X		X

What's New

This release includes the following new features or enhancements:

- Support for the following operating environments:
 - Windows Server 2019
 - MS SQL Server 2019
See the [Genesys Rules System](#) page in the [Genesys Supported Operating Environment Reference Guide](#) for more detailed information.
- (GRS-3625)

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Resolved Issues

This release contains no resolved issues.

Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.16.

9.0.000.15

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
08/26/20	Hot Fix			X		X

What's New

This release includes only resolved issues.

Resolved Issues

This release contains the following resolved issues:

GRE now correctly handles high values configured for option **unload-inactive-package-timeout**. Previously, high values for this option caused **status.jsp** to return a **SYSTEM_STATUS_CONFIG_SERVER_NOT_CONNECTED** error. (GRS-3617)

This release ships with upgraded libraries to improve security and reliability. (GRS-3613)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.15.

Helpful Links

Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

Product Documentation

- [Genesys Rules System](#)

Genesys Products

- [List of Release Notes](#)

9.0.000.13

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in **9.0.000.11.**

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
06/29/20	Hot Fix			X		X

What's New

This release includes the following new features and enhancements:

- **Business Calendar Caching**—A new feature has been added that improves performance for rule packages using Business Calendars by enabling an in-memory cache. This is enabled (true) or disabled (false) using the new configuration option `cache-business-calendars`. This configuration option is dynamic, so the feature can be enabled or disabled without restarting GRE.

Helpful Links

Releases Info

- [List of 9.0.x Releases](#)
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Important

If you are using the deprecated feature that allowed dynamic configuration of holidays, and so on, only for the duration of a rule execution, then enabling this caching feature will cause those dynamic configurations to apply across rules. Please confirm that this is acceptable behavior before enabling caching.

(GRS-3589)

- Support for the following databases is added in this release:

- Oracle 19C and RAC (GRS-3602)

See the Prerequisites section on the *Genesys Rules System* page in the *Genesys Supported Operating Environment Reference Guide* for more detailed information and a list of all prerequisites.

Resolved Issues

This release contains no resolved issues.

Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.13.

9.0.000.12

Genesys Rules System Rules Engine Release Notes

9.x Genesys Rules System Rules Engine is part of 9.x starting in 9.0.000.11.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
11/22/19	Hot Fix			X		X

What's New

This release includes only resolved issues.

Resolved Issues

This release contains the following resolved issues:

Jackson library updates have been implemented to improve security. (GRS-3443)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.12.

Helpful Links

Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

Product Documentation

- [Genesys Rules System](#)

Genesys Products

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9.0.000.11

Genesys Rules System Rules Engine Release Notes

9.x

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
08/30/19	General			X		X

What's New

This release contains the following new features and enhancements:

- **Support for rule package serialization**—In this release, rule packages can be serialized to greatly improve response times for loading and re-loading them into memory. With serialization enabled, GRE looks for a serialized version of the package and loads or re-loads it if one is found. There are several benefits:
 - Faster GRE startup time
 - Reduced initial memory usage of GRE on startup
 - Reduced GRE memory usage over time
 - Improved performance when unloading expired packages
 - Improved performance when loading or reloading rule packages into memory

A new configuration option in the **[settings]** section of GRE—enable-package-serialization—is used to enable/disable this feature. In general, users should take advantage of the performance improvements available with this feature, but iWD users are recommended to disable it.

The feature can also be disabled at the rule package level when required: a "Disable Package Serialization" button has been added to the **General** tab of rules packages in GRAT.

(GRS-3357)

- GRE now detects the minimum Java version needed for proper performance and memory management. For proper memory management and performance, Genesys recommends Java 1.8.0_131 or higher.

Helpful Links

Releases Info

- [List of 9.0.x Releases](#)
- [9.0.x Known Issues](#)

Product Documentation

- [Genesys Rules System](#)

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(GRS-3131)

- Support for the following operating environments:
 - OpenJDK 1.8. (GRS-3351)
 - Oracle 12c Release 2/Oracle 18c database. (GRS-3384)
See the [GRS](#) page in the *Genesys Supported Operating Environment Reference Guide* for more detailed information.
- Support for all versions of Solaris operating system is discontinued. (GRS-3077)

Resolved Issues

This release contains no resolved issues.

Upgrade Notes

No special procedure is required to upgrade to release 9.0.000.11.