Predictive Routing - URS Strategy Subroutines

Release Notes 9.0.x

6/17/2022

Table of Contents

Predictive Routing - URS Strategy Subroutines 9.0.x Release Note

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

This Release Note applies to all 9.0.x releases of Predictive Routing - URS Strategy Subroutines. 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
9.0.021.00	06/17/22	General	Under Shipping Control				X
9.0.020.01	04/11/22	General	Under Shipping Control				X
9.0.020.00	02/10/22	General	Under Shipping Control				X
9.0.018.01	12/09/20	General	Under Shipping Control				X
9.0.017.01	08/06/20	General	Under Shipping Control				X
9.0.017.00	04/17/20	General	Under Shipping Control				X
9.0.016.00	12/20/19	General	Under Shipping				X

Release	Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
			Control				
9.0.015.00	07/19/19	General	Under Shipping Control				X
9.0.014.04	01/25/19	General	Under Shipping Control				X
9.0.013.00	10/19/2018	General	Under Shipping Control				X
9.0.011.00	07/13/2018	General	Under Shipping Control				X
9.0.009.00	03/28/2018	General	Under Shipping Control				X
9.0.008.00	03/05/2018	Restricted					X
9.0.007.00	12/22/17	General	Under Shipping Control				X
9.0.006.00	09/26/17	General	Under Shipping Control				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 Predictive Routing page in the *Genesys Supported Operating Environment Reference Guide*.

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*.

There are no discontinued items for this product.

Known Issues

You can find a cumulative list of the Known Issues and Recommendations for all 9.0.x releases of Predictive Routing - URS Strategy Subroutines, 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 Predictive Routing - URS Strategy Subroutines, see the following documentation:

- The documentation related to this software is available from the Genesys Predictive Routing page.
- The *Genesys Predictive Routing Deployment and Operations Guide* provides details about installing and configuring Predictive Routing - URS Strategy Subroutines.
- The Genesys Predictive Routing 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 Predictive Routing components.

Release Notes for other Genesys components are available here.

Known Issues and Recommendations

Predictive Routing - URS Strategy Subroutines

The Known Issues and Recommendations section is a cumulative list for all 9.0.x releases of Predictive Routing - URS Strategy Subroutines. 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.

GPR subroutines maintain the authentication tokens received from GPR Core Platform for the timeout configured in the scoring-token-expiration option (by default, this is 43200 seconds/12 hours). When Data Loader resets the SERVICE account password, which it uses to connect to the GPR Core Platform, GPR invalidates all tokens generated using the old password. However, the old token is still stored in the URS global map and the URS Strategy Subroutines continue to use this token when sending score requests, score log updates, and requests for predictor details. As a result, GPR returns an error response with code 12 and message such as `Auth token <tokenString> is expired`. To make the URS Strategy Subroutines immediately switch over to a token created using the updated password, use one of the following two workarounds:

- **Option 1**
  1. Create a test strategy and add the following function in a function block:
     ```
     SetMapValue['SCORING_AUTHENTICATION','token',' ',-1]
     ```
  2. Load the test strategy on a test route point and make a test call to it.

     This statement clears the old token from primary URS global map, and syncs the update to the backup URS instance as well.
- **Option 2** (for use only when option 1 is not possible)
  1. Stop both primary and backup URSs.
  2. Restart the primary URS and then the backup URS, which clears all global map entries.

ID: **PRR-6453**	Found In: **9.0.017.00**	Fixed In:

The default configuration option values set in the template file for the **Predictive_Route_DataCfg** Transaction List object are not correctly set. Carefully review and verify the default values set in the **Predictive_Route_DataCfg** `Transaction List` object to ensure that they are appropriate for your environment. For a corrected set of default values, contact your Genesys representative.

ID: **PRR-6047**	Found In: **9.0.016.00**	Fixed In: **9.0.017.00**

When the GPR Core Platform/AICS username or password contains characters using Shift JIS encoding, the authentication request from the ActivatePredictiveRouting_v3 subroutine to get the access token fails with the following error message: `Invalid json data in request`.

ID: **PRR-5174**	Found In: **9.0.015.00**	Fixed In:

If you set the **use-action-filters** option to `false` and send a scoring request for an agent whose name contains an opening or closing parenthesis [‘(’ or ‘)’], GPR returns an error response similar to the following: `No valid operator found in node <node_name> from filter employeeId in <employee_ID>. Valid operators are: ' in ', '>=', '<=', '=', '>', '<'.`

ID: **PRR-5168**	Found In: **9.0.015.00**	Fixed In: **9.0.016.00**

If you have set the **use-action-filters** option to `false` and URS restarts, the first list it sends of Employee IDs in scoring request action filters for agents in the Ready and ACW states is empty, even though Ready agents are available. However, all subsequent lists contain the correct lists of Employee IDs, as expected.

ID: **PRR-5167**	Found In: **9.0.015.00**	Fixed In: **9.0.016.00**

The value `14 (Call Routing Failed)` for the gpmResult KVP can happen for the following reasons:

- An agent is selected, but does not answer the call. After the timeout expires, routing is considered failed. In this scenario, the correct agent score value is recorded for gpmAgentScore and gpmScoreAboveMedian also has the correct value.
- No agent is selected. The target selection timeout expires and no agent becomes available or no available agent has a matching score. In this scenario, gpmAgentScore is `0`, since no agent is selected, and gpmScoreAboveMedian has the default value `unknown`.

ID: **PRR-4805**	Found In: **9.0.015.00**	Fixed In:

When the gpmResult value for an interaction is `13 (Call Abandoned)`, the media_server_ixn_guid column in the Genesys Info Mart GPM_FACT table, which normally stores the CallUUID for the interaction, is empty. This is the result of Interaction Concentrator design, which does not associate EventUserEvent data received after EventCallDeleted events, such as the gpmResult = 13 value, with the CallUUID.

ID: **PRR-4764**	Found In:	Fixed In:

If a custom routing procedure—such as a busy treatment—is started after the agent to which an interaction should be routed is selected, but before the interaction is routed to the agent, the routing might not be successful. This can happen if the custom routing treatment executes external requests that require some time to execute, such as accessing DB Server or a Web service, and these interfere with the routing attempt.

Workaround: If your version of URS is earlier than release 8.1.400.57, add a function,

ResetBusyTreatments[], to the end of the GPRIxnCompleted subroutine avoid this issue. This issue was corrected in URS 8.1.400.57.

ID: **PRR-4372**	Found In: **9.0.014.04**	Fixed In: **9.0.015.00**

The URS Strategy Subroutines component does not provide out-of-the-box logging. If you do not add a logging macro, the strategy generates a compile error.

Workaround: Create your own logging macro and add it to the strategy. For example, you might create the following:

```
Print['PRR [INFO]:',ConnID[],' Message: ',parMessage]
```

Where the parameter is `parMessage`.

ID: **PRR-4257**	Found In: **9.0.013.00**	Fixed In: **9.0.015.00**

The following limitations apply to Shift-JIS encoding support in the Predictive Routing subroutines:

- The skill names used in the `action_filters` field expression in scoring requests must not contain the following characters: ' ' [space], '(' [left parenthesis], ')' [right parenthesis].
- The user data KVPs that are used in the `context` field in scoring requests must not contain the following characters '[' and ']' (left and right square brackets). To exclude such KVPs from the scoring context, specify them in the **udata-keys-to-exclude** configuration option in the **[default]** section of the Predictive_Route_DataCfg `Transaction List` object.

ID: **PRR-4014**	Found In: **9.0.014.04**	Fixed In:

If you would like to evaluate Genesys Predictive Routing for use with schedule-based routing (using Genesys Workforce Management), service-level routing, or business-objective routing, contact Genesys Professional Services for a review of your routing environment. These routing types are not supported by default in an out-of-the-box deployment.

ID: **PRR-1895**	Found In:	Fixed In:

High priority calls do not bypass Genesys Predictive Routing calls in queue in call surplus mode.

ID: **PRR-176**	Found In: **9.0.000.00**	Fixed In: **9.0.004.00**

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 Predictive Routing - URS Strategy Subroutines unless otherwise noted in the issue description.

There are no internationalization issues for this product.

9.0.0

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

You can find links to Release Notes for particular 9.0 releases of Predictive Routing - URS Strategy Subroutines, if available, in the tree menu on the left or in the list of Available Releases.

9.0.020.01

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
04/11/22	General	Under Shipping Control					X

What's New

This release contains the following new features and enhancements:

- Two new configuration options, use-minimum-available-agent and minimum-available-agent have been introduced to allow the agent hold-out feature to be disabled if the number of agents is lower than the minimum available agents. (PRR-7439)

Resolved Issues

This release contains no resolved issues.

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

Upgrade Notes

No special procedure is required to upgrade to release 9.0.020.01.

9.0.020.00

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Mac	Solaris	Windows
02/10/22	General	Under Shipping Control					X

What's New

This release contains the following new features and enhancements:

- A new configuration option, gpm-update-status-on-last-attempt checks the routing integration in environments where the clear targets are enabled between routing attempts and reports a correct gpmResult value. (PRR-7354)
- A new configuration option, setreadycondition-agent-timeout defines the maximum allowed agent idle time after which the agent will be selected for the next call irrespective of that agent score compared to the threshold value. (PRR-7332)

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

Resolved Issues

This release contains the following resolved issues.

- The formula for calculating the 90-10 split has been adjusted to cover all hours of the day at least once in 10 days. earlier, this formula covered only the odd or even hours of a day based on the timezone. (PRR-7238)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.020.00.

9.0.018.01

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
12/09/20	General	Under Shipping Control				X

What's New

This release contains the following new features and enhancements:

- Genesys Predictive Routing (GPR) now supports Workforce Management (WFM) schedule-based routing. The URS Strategy Subroutines have been updated to accept a WFM agent list as the value for the skill_target input variable. For more information, see Subroutines to use an agent list for WFM schedule-based routing in the *Predictive Routing Deployment and Operations Guide*. (PRR-6978)

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

Resolved Issues

This release contains the following resolved issues:

The URS Strategy Subroutines now correctly counts the number of agents who have scores higher

than initial score threshold. GPR reports this number as the value for the gpmSuitableAgentsCount KVP. If this number is `0` and you enable agent holdout for the predictor processing the call, the URS Strategy Subroutines sends the following two KVPs to the Genesys Info Mart database and to the GPR score_log: gpmResult = 16 and gpmMessage = "No agents found with a score above minimum threshold". (PRR-6862)

Support for the `log-to-api` configuration option is discontinued in release 9.0.018.01. (PRR-6610)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.018.01.

9.0.017.01

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
08/06/20	General	Under Shipping Control				X

What's New

This release contains the following new features and enhancements:

- To enable outcome reporting, the URS Strategy Subroutines now provides a consistent InteractionID, enabling score requests and the results written to the score_log to be connected. To do this, the URS Strategy Subroutines attaches the following values for the InteractionID field:
  - score requests - the InteractionID field contains the CallUUID.
  - score_log requests - the InteractionID field contains either the CallUUID or the CallUUID_RPVQID. You can set the value used as the InteractionID in the score_log in the new use-vqid-identifier configuration option.

    Outcome results are available to STAFF users on the KPI Outcome tab in the Genesys Predictive Routing (GPR) web application. (PRR-6558)
- To improve URS Strategy Subroutines performance, a change to the value of the udata-keys-to-exclude now becomes effective within 24 hours. (Data is updated daily at 3 am UTC, so the actual time require for the change to take effect can vary.) Previously, changes took effect on the next interaction. (PRR-6390)

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

- The new platform-request-timeout configuration option enables you to specify how long Universal Routing Server (URS) should wait for a response from the GPR Core Platform after a GPR subroutine makes a request that the routing strategy sends to the GPR Core Platform. After this timeout expires, the subroutine logs a GPR error and URS continues to process the strategy. This option overrides the URS **request_timeout** option, which has a default value of **0**. Previously, if the default value was set for **timeout_response** and, for some reason, the GPR Core Platform did not respond correctly, URS waited indefinitely instead of proceeding with the strategy and the interaction was not routed. (PRR-6229)

Resolved Issues

This release contains the following resolved issues:

The URS Strategy Subroutines now correctly terminates scoring requests for predictors that have no customer features available and provides informative results to the Genesys Info Mart database and to the GPR score_log. (Predictors must have at least one customer feature configured to enable scoring.)

When this happens, the URS Strategy Subroutines sends the following two KVPs to the Genesys Info Mart database and to the GPR score_log: gpmResult = 7 and gpmMessage = "Failed to build Scoring Context". (PRR-6233)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.017.01.

9.0.017.00

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
04/17/20	General	Under Shipping Control				X

What's New

This release contains the following new features and enhancements:

- The Predictive Routing strategy subroutines now support the use of HTTPS Proxy for requests sent to the GPR Core Platform from the URS Strategy Subroutines.
  - Configure the following four new options to activate this functionality:
    - proxy-host
    - proxy-port
    - proxy-username
    - proxy-password
  - The following subroutines have been modified to use the values configured in the HTTPS proxy options noted above when making requests to the GPR Core Platform:
    - ActivatePredictiveRouting_v3
    - GetScoringContext
    - GPRIxnCleanup

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

    - GetScoringAuthToken

    (PRR-6401)

- This release offers the option to specify a VQ alias (name) when calling the ActivatePredictiveRouting_v3 subroutine before Target selection or the Route Call block. To use this functionality, pass the desired VQ_Name value in the default_skill_data parameter of the ActivatePredictiveRouting_v3 subroutine.
    - ActivatePredictiveRouting_v3 stores this VQ value in the gpmVQNumber field in the URS global map. The GPRIxnCleanup subroutines then reads the gpmVQNumber value in URS global map and uses this to generate the value for the gpmVQDBID, which is required to be present in the GPM_FACT table for Genesys Info Mart reporting.
    - If no VQ is passed to the ActivatePredictiveRouting_v3 subroutine, then the GPRIxnCleanup subroutine cannot locate the value in the URS global map, so GIM reporting uses the value configured in the vq-for-reporting option.
    - **Notes:**
        - The GPRIxnCleanup subroutine always sends an EventUserEvent containing the VQ name configured in vq-for-reporting as the value for AttributeThisDN, regardless of the VQ on which the interaction is actually queued and routed.
        - The values for VQ Number (on VQ `DN` object **General** tab), VQ Alias (on the VQ `DN` object **Advanced** tab), and the value for the **vq-for-reporting** option should all be identical.

    (PRR-6317)

- A new option, deployment-type, tells the GPR URS Strategy Subroutines to generate the new gpmDeploymentType KVP and pass it to the GPR score log for use by the GPR Core Platform. This option indicates whether GPR is deployed in hybrid or cloud-only mode. (PRR-6317)
- AB testing mode has been reworked, enabling more robust time-sliced AB testing. To activate this functionality, set the prr-mode option to `ab-test-time-sliced` and configure the ab-test-time-slice option as needed for your testing environment. Note that the default value for the **ab-test-time-slice** option has changed from 1741 to `0`. (PRR-6244)
- GPR subroutines now support on-premise anonymization when your GPR account is configured to use on-premise anonymization and Data Loader is deployed and started in a premise environment before using the GPR subroutines.
    - GPR subroutines use the anon-salt, anon-agent-id, and anon-customer-id options, which Data Loader creates and configures automatically, to perform the anonymization.
    - Agent IDs sent in the scoring request and score_log request are anonymized only when Data Loader sets the **anon-agent-id** option to `true`.
    - Context_id values (customer IDs) sent in the scoring request and score_log request are anonymized only when Data Loader sets the **anon-customer-id** option to `true`.

    For a complete discussion of anonymization in GPR, see Data anonymization. (PRR-6226)

- A new configuration option, enable-log-suppression, controls log suppression in the URS Strategy Subroutines. (PRR-6265)

Resolved Issues

This release contains the following resolved issues:

The URS Strategy Subroutines now correctly refrain from sending scoring requests in the following scenarios:

- When the GET Predictor API request, which is sent from the GetScoringContext subroutine to get customer features, fails.
- When the configured predictor has empty customer features. In production, predictors are expected to contain at least one customer feature to be added to scoring requests.

In these scenarios, the URS Strategy Subroutines add the following KVPs to Genesys Info Mart and the GPR score log: gpmResult = 7 and gpmMessage = "Failed to build Scoring Context". (PRR-6233)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.017.00.

9.0.016.00

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
12/20/19	General	Under Shipping Control				X

What's New

This release includes the following new features and improvements:

- Documentation for this and all subsequent releases has been moved to the following locations:
  - *Predictive Routing Deployment and Operations Guide*
  - *Predictive Routing Help*
  - Predictive Routing Configuration Options
  - Documentation in the previous location remains as-is as a reference for those using earlier releases of GPR.
- The URS Strategy Subroutines are now delivered as ZCF files. For more information and updated deployment instructions, see Deploy the URS Strategy Subroutines. (PRR-5393)

  NOTE: Genesys Predictive Routing (GPR) does not support custom subroutines in hybrid deployments (that is, deployments that combine components delivered in Genesys Engage cloud and on-premises).
- Action filtering is now done exclusively by URS. As a result, the **use-action-filters** configuration option must be set to `false`. See use-action-filters for more information. (PRR-5564)
- The following new KVPs are now attached to user data and are stored in the Genesys Info Mart database:

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

  - gpmVQDBID
  - gpmVQGUID
    (PRR-5653)

    In addition, the following KVPs are attached to EventUserEvent data if they are present, although they are not generated by GPR. See Integrate with Genesys Reporting for all GPR KVPs.

  - CustomerID
  - ServiceType
    (PRR-5924)

- A new Universal Routing Server (URS) option, **[default].automatic_ideal_agent**, enables you to set a universal score for all non-GPR interactions. Such a universal score serves the following purposes:
  - It enables direct comparison of GPR and non-GPR interactions when URS places interactions into a queue.
  - It resolves collisions of agent reservation requests between GPR and non-GPR interactions processed by different URS instances.

    Genesys recommends that you set the value of **automatic_ideal_agent** to (*<max score for the predictor in use> - <median score the GPR agents receive over time>*).

    The new option requires URS 8.1.400.60 or higher.

    (PRR-5428)

- The following URS Strategy Subroutine-specific options stored in the Predictive_Route_DataCfg `Transaction List` object have been renamed to align with the current GPR component names:
  - In the **[default]** section, the following options are renamed:
    jop-api-key to **platform-api-key**

    jop-auth-url to **platform-auth-url**

    jop-logging-url to **platform-logging-url**

    jop-password to **password**

    jop-username to **platform-username**
  - In the **[default-predictor]** and **[*<predictor_name>*]** the following option is renamed:
    jop-scoring-url to **platform-scoring-url**

    When you install the latest release of the URS Strategy Subroutines, ensure that you update the option names in your configuration.

    (PRR-5200)

- The new **setreadycondition-timeout** option, configured in the Predictive_Route_DataCfg `Transaction List` object **[default-predictor]** or **[*<predictor_name>*]** section, enables you to specify a timeout value that sets the maximum delay, in seconds, between the moment when URS receives an Event from T-Server and when the IsAgentScoreGood subroutine is called. See setreadycondition-timeout for details. (PRR-5420)
- The options controlling how GPR handles agent occupancy have been updated so you can now specify minimum and maximum values for the threshold and the factor by which the score is adjusted. The **use-agent-occupancy** option description has also been updated to explain how the set of options works together. See Agent Occupancy Options for details. (PRR-5822)

- A new KVP, gpmPriorityIncrement, now sends priority increment data to Genesys Info Mart.
  NOTE: This KVP is not yet stored in a separate column in the Genesys Info Mart database. You can access this information from the score_log endpoint using the GPR API. (PRR-5227)

Resolved Issues

This release contains The following resolved issues:

When the use-action-filters option is set to `false` (mandatory for hybrid deployments) and URS is restarted, URS now correctly sends the list of Employee IDs in the scoring request action filter for agents matching the Ready/ACW states as configured in the login-status-expression option. Previously, URS sent an empty list even when Ready agents were available. (PRR-5167)

Upgrade Notes

See the instructions in the "Upgrade to a new subroutines release" section of Deploy the URS Strategy Subroutines to upgrade to release 9.0.016.00.

9.0.015.00

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
07/19/19	General	Under Shipping Control				X

What's New

This release includes the following new features and improvements:

- A number of subroutines have been introduced or modified. They perform the following functions:
  - The new GPRIxnSetup subroutine initializes all the GPR KVPs with default values, setting with gpmMode to `off` and gpmResult to `15 (Predictive Routing is turned off or not used for this interaction)`. This subroutine should be configured as prestrategy in the Universal Routing Server (URS) configuration and executed for all interactions before applying any other strategy. As a result, all interactions, whether handled by GPR or not, can be reported on by configuring this subroutine. (PRR-5177)
  - The GPRIxnCompleted subroutine has been updated to include the correct value of gpmScoreAboveMedian KVP by comparing the selected agent score with the returned median score. Previously, the GPR subroutines did not send a value for this KVP. As a result, its value in the Genesys Info Mart database was always `unknown`. (PRR-4469)
  - The ActivatePredictiveRouting_v3 and GPRIxnCleanup subroutines have been enhanced to add connection_ids as a URL parameter in the score request and the score_log request, for easier troubleshooting in URS logs. (PRR-4443)

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

  - The GPRIxnCleanup subroutine now performs score log and UserEvent (KVP) distribution (previously done in the GPRIxnCompleted subroutine). This subroutine can now correctly identify abandoned interactions and interactions in which GPR was unable to route the interaction and add this information to the score log and the Genesys Info Mart gpmResult KVP, with the values `13 - Call Abandoned` and `14 - Call Routing Failed`. (PRR-4366)

- The URS Strategy Subroutines now send the following new KVPs, which are stored in the Genesys Info Mart database and are available for reporting:
  - gpmAdjustedAgentScore - The final agent score used to route the associated interaction to the selected agent. This score is calculated from the gpmAgentScore combined with any agent occupancy factor.
  - gpmDefaultAgentScore - This default agent score for the associated interaction. The value is the outcome, for this interaction, of the setting specified in the **default-agent-score** configuration option. (PRR-4703)
  - gpmDefaultScoredAgents - The number of agents with default scores assigned for an interaction. (PRR-4859)
  - gpmDefaultScoreUsed - Indicates whether the agent score for the associated interaction is taken from the scoring response returned by GPR or the value of the **default-agent-score** configuration option. (PRR-4703)
  - gpmGlobalScoreCount - The number of agents scored using the Global model. This value is the content of the global_scores_count field returned by AICS in the scoring response. (PRR-4882)
  - gpmInitialScoreThreshold - The initial threshold value used for the interaction, taken from the value set in the **score-base-threshold** configuration option.
  - gpmFinalScoreThreshold - The final threshold value used to route the associated interaction to the selected agent. The routing strategy calculates the value from the configured score threshold combined with values resulting from any agent holdout options.
  - gpmScoreAboveMedian - Indicates whether the score for the selected agent was better than the median score for the target group.
  - gpmSuitableAgentsCount - The number of agents who had scores greater than or equal to the initial threshold value when the scoring response was received.
  - gpmPredictorType (Reserved for future use)
  - gpmRoutingMethod (Reserved for future use)

    For additional information see the following sources:

  - Integrate with Genesys Reporting
  - For the corresponding changes in Genesys Info Mart, see the “New in This Release” information for release 8.5.014.09 in the Genesys Info Mart Physical Data Model for your RDBMS.
- The gpmResult KVP now includes four new values:
  - 12 - Reserved for future use
  - 13 - Call Abandoned
  - 14 - Call Routing Failed
  - 15 - Predictive Routing is turned off or not used for this interaction
- The value `off` was added to the valid values for the gpmMode KVP.
- The gpmWaitTime value is now calculated using START_TS rather than gpm-ixn-timestamp.

- The GetActionFilters subroutine was enhanced to identify the list of agents matching the target skill group along with the configured login status expression. This information is also reported in the action filters of the scoring request. This functionality is invoked only when the **use-action-filters** configuration option is set to `false`. (PRR-4567)
- Two new documentation pages, Routing Scenarios Using GPR and How Does GPR Score Agents? provide detailed discussions of those aspects of GPR functionality.
- The *Deployment and Operations Guide* now contains complete instructions for configuring HTTPS connections among all GPR components: Configure GPR to Use HTTPS

Resolved Issues

This release contains The following resolved issues:

URS Strategy Subroutines now correctly adds the GPR KVPs to the score_log request as attributes outside the context field, which is the format AICS expects. The GPR-related KVPs are also present in the context field, where they are populated from the interaction user data. (PRR-4787)

URS Strategy Subroutines now correctly processes the **default-agent-score** option. As a result, agents are correctly assigned the configured default score when GPR does not return a score. (PRR-4703)

URS Strategy Subroutines now correctly parses the mean_global_Score returned in scoring response and adds its value to the gpmGlobalScore KVP. Previously, this KVP was not correctly assigned and thus always had the default value, `0`. (PRR-4600)

URS Strategy Subroutines now correctly adds the resolved context_id to the score_log request. Previously, the context_id was added to the score_log request with the ANI as its value. (PRR-4566)

The Print_Log_Message macro is now correctly included in the **objects.kvlt** file, which is shipped as a part of the URS Strategy Subroutines IP. Previously, this macro was inadvertently omitted. (PRR-4257)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.015.00.

9.0.014.04

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
01/25/19	General	Under Shipping Control				X

What's New

This release includes the following new features and improvements:

- Updated subroutines and the new **set-dynamic-priority** option restore and improve dynamic-priority routing functionality. For more information about these subroutines and how to configure dynamic-priority interaction handling for Predictive Routing, see Subroutines for Environments Using Dynamic Priority Routing.
- The URS Strategy Subroutines component now includes updated versions of the following IRD strategy subroutines that support conversion of non-ASCII characters to UTF-8:
  - **ActivatePredictiveRouting_v3** - Converts non-ASCII characters to UTF-8 characters before sending scoring requests to the Predictive Routing scoring engine.
  - **GPRIxnCompleted** - Converts non-ASCII characters to UTF-8 characters before sending scoring logs.
  - **GetScoringAuthToken** - Replaces the StrFormat function with the SetStringKey function. This eliminates an issue with the *~s* character in the StrFormat function, which does not work correctly in a non-ASCII environment.

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

> **Important**
>
> URS 8.1.400.55 is the minimum required version for GPR-specific IRD subroutines to work in non-ASCII environments.

(PRR-3991)

Resolved Issues

This release contains the following resolved issues:

This release corrects issues with the URS Strategy Subroutines component which rendered dynamic-priority interaction handling inactive, even if you configured the options identified as activating that feature. This correction requires you to take the following steps to enable dynamic-priority interaction handling:

1. Configure the new **set-dynamic-priority** configuration option, in addition to the already-existing dynamic-priority configuration options.
2. Replace the current version of the ActivatePredictiveRouting_v3 subroutine in the strategy you use for Predictive Routing with the updated ActivatePredictiveRouting_v3_SJIS_v3 subroutine, included in this IP.
3. Replace the current version of the isAgentScoreGood callback subroutine in the strategy you use for Predictive Routing with the updated version included in this IP.
4. Add the new GPRIxnCleanup subroutine to the strategy you use for Predictive Routing.

See Subroutines for Environments Using Dynamic Priority Routing for more information. (PRR-4081; PRR-4054)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.014.04.

9.0.013.00

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
10/19/2018	General	Under Shipping Control				X

What's New

This is a general release for this component. For availability of this release, contact your Genesys representative. This release contains the following new features and enhancements:

- AI Core Services (AICS) now requires HTTPS communication by default. Note that this change also requires you to adjust your configuration for Agent State Connector and the URS instance implementing the URS Strategy Subroutines component. For instructions, contact your Genesys representative. (PRR-1940)

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

Resolved Issues

This release contains the following resolved issues.

The IRD routing strategy subroutine ActivatePredictiveRouting_v3 now reports the correct value for the gpmCustomerFound user data key. Previously, ActivatePredictiveRouting reported an incorrect user data value for this key, with the result that there was no customer match for the associated scoring request. (PRR-3291)

The ActivatePredictiveRouting_v3 subroutine no longer submits a retry request with an empty body in some scenarios that involve the failure of an agent scoring request to the GPR API. (PRR-3062)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.013.00.

9.0.011.00

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
07/13/2018	General	Under Shipping Control				X

What's New

This is a general release for this component. For availability of this release, contact your Genesys representative. This release includes only resolved issues.

Resolved Issues

This release contains the following resolved issues.

The **use-double-selection** option is now correctly initialized in the SetIdealAndReadyCondition subroutine. (PRR-2796)

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

Upgrade Notes

No special procedure is required to upgrade to release 9.0.011.00.

9.0.009.00

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
03/28/2018	General	Under Shipping Control				X

What's New

This is a restricted release for this component. For availability of this release, contact your Genesys representative. This release contains the following new features and enhancements:

- The component name has been updated from Genesys Predictive Matching - URS Strategy Subroutines to Genesys Predictive Routing - URS Strategy Subroutines.
- The PrrIxnCompleted subroutine has been renamed to GPRIxnCompleted to align with the new product name.
- Journey Optimization Platform was renamed to AI Core Services in release 9.0.009.01.

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

Resolved Issues

This release contains no resolved issues.

Upgrade Notes

No special procedure is required to upgrade to release 9.0.009.00.

9.0.008.00

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
03/05/2018	Restricted					X

What's New

This is a restricted release for this component. For availability of this release, contact your Genesys representative. This release includes only resolved issues.

Resolved Issues

This release contains the following resolved issues:

The IRD GetScoringAuthToken subroutine version 9.0.007.00 did not correctly handle the clean up of expired authentication tokens from the URS global map. This behavior is now corrected. (PRR-1985)

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

Upgrade Notes

No special procedure is required to upgrade to release 9.0.008.00.

9.0.007.00

Predictive Routing - URS Strategy Subroutines Release Notes

9.x **Predictive Routing - URS Strategy Subroutines** is part of 9.x starting in 9.0.006.00.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
12/22/17	General	Under Shipping Control				X

What's New

For availability of this release, contact your Genesys representative. This release contains the following new features and enhancements:

- Genesys Predictive Routing now supports historical reporting, provided by the Genesys Reporting solution. Historical reporting is enabled in Predictive Routing by the following two new options, which control whether routing outcome KVP data is attached to TEvents after interaction routing: **send-user-event** and **vq-for-reporting**.
- The behavior of the agent occupancy control feature was modified. This update includes a new configuration option, **agent-occupancy-factor** option. In addition, the descriptions of the **use-agent-occupancy** and **agent-occupancy-threshold** options have been updated to incorporate the new behavior.
- The behavior of the time-sliced A/B testing mode (the **prr-mode** option is set to `ab-test-time-sliced`) has been improved. Previously, the alternation of time periods when Predictive Routing interaction processing is on or off was restarted each midnight. Now the periods are counted from the midnight of January, 1, 1970, GMT (the epoch time). This change enables you to turn on Predictive Routing at different times during a day if an A/B test spans multiple days. The default value of the **ab-test-time-slice** option is now set to 1741 seconds, (approximately 29 minutes). Previously, the default value was `60` seconds, which is far shorter than the period recommended for use in a production environment.
- You can now set a timeout value that enables Genesys Predictive Routing to tell whether URS is

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

overloaded, at which point Predictive Routing turns itself off. This functionality is controlled by the new **overload-control-timeout** option.

- The Predictive Routing strategy integration with URS now automatically deletes interaction scoring data stored in the URS global map once the interaction is routed or abandoned. As a result, the PMIxnCleanup subroutine is no longer needed. This change in Predictive Routing subroutines is supported in URS version 8.1.400.37 or higher.
- The Composer subroutine ActivatePredictiveMatching now supports two types of responses to score requests to the Predictive Routing API, either containing both **list** and **list_ranks** fields or just the **list** field. These are controlled by the request parameter `format_as_map`. The value of this parameter is controlled by the **format-as-map** option.

Resolved Issues

This release contains the following resolved issues:

The scoring response functionality provides the following additional fields used for Genesys Reporting:

- median_score
- mean_score
- min_score
- max_score
- scores_count
- context_matched

More details are available in the *Predictive Routing API Reference*. (PRR-1232)

The PrrIxnCompleted subroutine now attaches the `gpmResult` user data key to an interaction processed by Predictive Routing. If an interaction was processed successfully, the key has value 1; if not, it contains an error code. See Deploying: Integrating with Genesys Reporting in the *Predictive Matching Deployment and Operations Guide* for a description of error code values used by Predictive Routing. (PRR-1231)

The names of the user data keys attached to an interaction by the PrrIxnCompleted subroutine to report Predictive Routing routing decisions have changed. Previously, the user data keys had the prefix `prr`. The prefix is now changed to `gpm`. See Deploying: Integrating with Genesys Reporting in the *Predictive Matching Deployment and Operations Guide* for a complete list of attached data keys. (PRR-1229)

Predictive Routing no longer supports the interleaved A/B test mode. References to this mode were removed from the Predictive Routing strategy subroutines. (PRR-1228)

Upgrade Notes

No special procedure is required to upgrade to release 9.0.007.00.

9.0.006.00

Predictive Routing - URS Strategy Subroutines Release Notes

9.x This is the first 9.x release of **Predictive Routing - URS Strategy Subroutines**.

Release Date	Release Type	Restrictions	AIX	Linux	Solaris	Windows
09/26/17	General	Under Shipping Control				X

What's New

For availability of this release, contact your Genesys representative. This release contains the following new features and enhancements:

- Predictive Routing IRD strategy subroutines now utilize the URS TimeBehind[] function to detect when URS is overloaded and adjust their behavior accordingly. TimeBehind[] returns a value that indicates the delay, in milliseconds, between the moment an event is received from T-Server and when it is processed by URS for the current interaction. If the delay is more than 1000 milliseconds, URS is experiencing an overload and is unable to process interactions in a timely manner. In this case, the Predictive Routing IRD subroutines skip agent scoring and stop matching any new interactions passing through the ActivatePredictiveRouting subroutine. If you configured the strategy to hold out for higher-scoring agents, the hold-out is interrupted and interactions are distributed to agents as they become ready, regardless of agent score, until the overload condition ends.
- The Strategy Subroutines can now take agent occupancy into account when identifying the best target for an interaction. This functionality is controlled by the new **use-agent-occupancy** and **agent-occupancy-threshold** configuration options.
- Two new configuration options, **scoring-token-expiration** and **emergency-scoring-token**, enable you to customize how Predictive Routing handles the authentication tokens that enable the URS

Helpful Links

Releases Info

- List of 9.0.x Releases
- 9.0.x Known Issues

Product Documentation

- Genesys Predictive Routing

Genesys Products

- List of Release Notes

Strategy Subroutines to request agent scores from JOP.

Resolved Issues

This release contains no resolved issues.

Upgrade Notes

No special procedure is required to upgrade to release 9.0.006.00.