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About This Software

At the core of Genesys' solutions, Universal Routing handles traditional voice routing, multimedia routing, or blended voice and multimedia routing requests. Interactions can be routed to the most appropriate agent, whether the agent is local, located at a different site, or is external to the enterprise.

Using Interaction Routing Designer (IRD), users can create routing strategies for voice or multimedia interactions. Based on these strategies, Universal Routing Server (URS) evaluates each interaction so that it gets the proper treatment and priority based on factors such as the type of inquiry, the business value of the interaction, and the media channel. For multimedia interactions, users can also create business processes, which enable complex interaction workflow that can incorporate multiple strategies and interaction queues.

The Universal Routing CD contains the Universal Routing Configuration Wizard, Universal Routing Server, Interaction Routing Designer, Custom Server, Configuration Database Update Scripts, and Application Templates.

Note: Starting with release 8.1.3 of Universal Routing, Orchestration Server (ORS) is no longer included on the Universal Routing CD. ORS is still available on the 8.1.0, 8.1.1, and 8.1.2 Universal Routing CDs, but starting with the 8.1.3 release of ORS, it is located on its own CD.

New Features in 8.1.x

Universal Routing 8.1.4

The following new features were introduced in the April 2016 CD update of Interaction Routing Designer:

- Universal Routing supplies a Japanese Language Pack.
- You can use the Windows Region and Language dialog box to specify a user language preference.
- A new function, RequestRouter, simplifies using URS Web API methods for more precisely calculating estimated wait time.
- When configuring strategies that use Interaction Data, IRD now allows the use of hyphens in Interaction Data names.
- IRD adds support for Oracle Database 12c, PostgreSQL 9.x, and Windows Server 2012 64-bit Compatibility.

The following new features were introduced in the June 2015 CD update of Universal Routing Server:

- The default_stat_server option is extended to allow you to specify a separate default Stat Server for every Virtual Queue object.
- Universal Routing can now utilize a “best fit" factor as one of the criteria for selecting the most ideal agent to handle a skills-based routing inquiry. This applies to both overflow situations when there is more than one interaction with the same priority competing for the same agent and to situations when more than one agent is available.
- While executing the first target state request for an agent, URS now returns the requested information about an agent's login status on DNs.
- The maximum size of data that a Web Service object can return is increased from 64 KB to 256 KB.
- URS supports HTTP Proxies for an "http://" type of request.
- A new option is introduced to configure the protocol to be used for HTTPS connections.
- A new option is introduced to specify the maximum number of attempts for URS to execute GetSkillInGroupEx and CountSkillInGroupEx functions when their parameter sync is set to true.

The following new features were introduced in the initial 8.1.4 release of Universal Routing Server:

- URS now has the ability to route to a combination of Place and Skill (Skill-based Routing to Place Groups).
- In this release, URS provides the ability for users to specify authentication credentials as part of the Web Service request.
- Users may now retrieve the number of licenses used by the Router at any given time through a REST command.
- URS now manages and controls its own CPU consumption in case of overloading. Upon detecting a shortage of CPU resources, URS temporarily switches to a CPU saving mode until the CPU shortage ends. During this period of time, statistic-based target selection functionality might be limited; however, URS does not sacrifice any other routing criteria.
- URS now provides the possibility to connect to an alternative Stat Server in the event that both Primary and Backup Stat Servers disconnect their clients. The alternative Stat Server is used until the original pair of Stat Servers restores connection with URS.
- URS now provides metric information such as expected waiting times, position in queue, and average handling time, about specific target selection objects. Functionality can be utilized within strategies, through REST commands, and from treatments.
- URS now supports Microsoft Windows Server 2012 native.

The following new features were introduced in the June 2015 CD update of Interaction Routing Designer:

- Universal Routing can now utilize a "best fit" factor as one criteria for selecting the most ideal agent to handle a call when more than one agent is available. You can also use this factor to select the most ideal call when there is more than one call competing for the same agent.To implement this functionality, new IRD functions are added: SetIdealAgent and

TargetListSelected.
- Security parameters of the Web Service object are extended to include Proxy Server parameters—Host and Port—to enable execution of Web requests through HTTP Proxy Server. New parameters are supported by URS version 8.1.400.16 or later.
- Security parameters of the Web Service object are extended to include Client Authentication and Protocol fields. New parameters are supported by URS version 8.1.400.16 or later.
- Addition of a new Multimedia object Analyze for enhanced context analyses.

The following new features were introduced in the initial 8.1.4 release of Interaction Routing Designer:

- The Data type of rbn column in the ird_strategies table for the Oracle Database has been changed from LONG RAW to BLOB.
- This release of IRD works with strategies in UNICODE format. It allows using data written in any language within a single strategy. It also provides full support of UTF-8 Configuration Server by both IRD and URS.
- To support the URS ability to specify authentication credentials as part of a given web service request, the security tab of Web Service access object in IRD is extended with three optional parameters on the web service properties> Security tab: Certificate, Certificate Key, Trusted CA.
- Interaction data objects definition now allows a name length beyond 32 characters. Currently, the configuration table allows up to 254 characters.
- To support URS skill-based routing to place groups, the IRD functions CreateSkillGroup, GetSkillInGroupEx, and CountSkillInGroupEx now accept not only Agent Groups, but Place Groups, as well.
- IRD now supports Microsoft Windows 8.

Custom Server 8.1.4 Features

- Custom Server now supports Microsoft Windows Server 2012.

Universal Routing 8.1.3

Universal Routing Server (URS) 8.1.3 Features

- This release of URS supports Genesys SIP cluster solution for enterprise telephony, which is currently under restricted release. To learn more about Genesys SIP cluster solution, please contact your Genesys representative.
- URS now supports Red Hat Enterprise Linux V6 64-bit natively.
- URS now supports Red Hat Enterprise Linux V6 32-bit.
- URS now supports log filtering by provisioning a `tag`, where tag will cause KVList value to be prefixed by `<#' and post fixed by '#>`. Users who want to have sensitive data in logs for their own purpose would be able to fetch these utilizing automated tools (read big data concept).
- In this release URS enhances security by supporting FIPS (Federal Information Processing Standards) compliant Transport Layer Security (TLS).

Interaction Routing Designer (IRD) 8.1.3 Features

- This release of IRD supports Genesys SIP cluster solution for enterprise telephony, which is currently under restricted release. To learn more about Genesys SIP cluster solution, please

contact your Genesys representative.

- eServices solution now supports multiple Interaction Server in a single tenant. IRD now supports this feature as part of workflow development.
- IRD can now connect to the WFM Server. This facilitates IRD to list all the WFM activities by site when users define WFM based routing through workforce routing rule or through the function ExpandWFActivity.
- IRD now provides the ability to display any meta-text associated with successful authentication attempts to a Radius server.
- As part of system security features, first time users of IRD, after installation needs to update password by default.
- In this release, enhancements have been made to web service functionality. IRD now accepts wider range of WSDL files when creating strategies accessing SOAP web Service.

Custom Server 8.1.3 Features

- Custom Server now supports Red Hat Enterprise Linux V6 64-bit natively.
- Custom Server now supports Red Hat Enterprise Linux V6 32-bit.

Universal Routing 8.1.2

Universal Routing Server (URS) 8.1.2 Features

- URS 8.1.2 continues to support Genesys Orchestration Server (ORS) 8.x and above. This combination of URS and ORS is known as Orchestration Platform.
- URS now provides two new functions `GetSkillnGroupEx` and `CountSkillnGroupEx`, these new functions in addition with `Synchronous` parameter, allows users to get more accurate stats by inducing a delay. The older functions `GetSkillnGroup` and `CountSkillnGroup` will also be supported.
- URS now allows HTML requests without any `SOAP` tags, which allows customers to send secure mail HTML requests from URS, when their environment does not support `SOAP` due to security reasons.
- URS now supports distributed agent reservation, not only for voice interactions but also for Multimedia interactions too.
- URS now provides options to propagate or mask VQ event distribution. In a distributed environment this allows users to limit the number events propagated across Routers.
- This release provides more control to users when building dynamic busy treatments in a call flow. Users would be able to define `escape sequence` as parameter to provide more customized treatments to interactions.
- Router introduces a new pseudo statistics `RStatAgentsReadyMedia` and `RStatAgentsReadyvoice`. These Statistics are utilized to calculate the number of ready Agents for a specific media type, when Agents/Agent Groups/Places/Place groups/skill expressions are used as a target.
- URS now provides more robust logic to restore connections to Configuration Server, specifically in the case where the environment has redundant Configuration Servers.
- Starting from URS 75, we supported IVR Server load balance in an in-front mode. In this release, this solution will support `ExtRP` partitioning or `epn` configuration for this architecture.

- URS now introduces `MultiplyTargets` function. This function provides the ability to keep priority of interaction on re-entering a selection block, thereby minimizing the logic user needs to build to have incremental targets in a call flow.
- URS now provides configurable call delete time out in Router. Users would not be able to specify how long URS would keep `hanged` interaction in memory. Previously this used to be a hardcoded value of 60 seconds.

Interaction Routing Designer (IRD) 8.1.2 Features

- IRD now provide users ability to call Subroutine by a variable. This provides more flexibility to users to expand their existing routing logic.
- IRD now provides ability to call business rules by a function. To achieve this functionality IRD now provides predefined Macro `CheckBusinessRule`.
- IRD now provides enhancement for `CountSkillInGroup` function with the introduction of a new function `CountTargetByThreshold`.
- Date Time stamp functionality within a strategy has been enhanced with the introduction of a new function `StrFormatTime`.
- IRD now allows update to statics definition in IRD. Properties like Time profile, Filters, Distinguish by connection ID and sliding Interval Time Profile can now be defined within IRD.
- IRD extends current integrity checking functionality by not allowing updates/editing to subroutines, if they are used optionally within a strategy.
- IRD now provides ability to list or hide all voice platform port DNs in monitoring/loading view within IRD.
- IRD now provides new function `SDataInTenant`, which is similar to `SData` function but with additional parameters of `Tenant`. This helps users to have more demarcation of logic for specific tenants.
- There are new WSDL samples added as part of our IRD samples so that users would have a reference.

Orchestration Server (ORS) 8.1.2 Features

- Orchestration platform now supports call treatment which just includes ORS and media server only. In the previous versions, this functionality was managed by URS working in tandem with ORS.
- Genesys Orchestration Server (ORS) now has features enhancing multisite routing from an ORS cluster.
- ORS now supports fallback URI, as a failover mechanism to provision SCXML application from a Web Server.
- This release of ORS supports multiple views of an Interaction queue, this provides flexibility to users to branch out earlier based on conditions up-front before kick starting a work flow.
- ORS now supports sending user events to a specific T-Server/SIP Server/IVR Server.
- ORS now supports extension data update during call processing to influence, recording, reject codes, dynamic greetings, remote supervision, overriding ring no answer capabilities.
- ORS now supports Windows 2008 64-bit native.

Universal Routing 8.1.1

Universal Routing Server (URS) 8.1.1 Features

- URS 8.1.x supports Genesys Orchestration Server (ORS) 8.1.x and later releases. This combination of URS and ORS is known as the Orchestration Platform.
- New functionality is provided to enhance agent skill selection by considering the current interaction's media type and returning a subset only of agents that match the skill and capacity rule.
- A new option is provided to facilitate improved handling of TRoute call failures within a strategy by enabling users to specify a time interval, in which stuck calls can be removed from router memory.
- A new function is provided to identify the agent station. This function enables users to force-route the call to any DN on the agent's station. Alternatively, users can obtain agent information, based on DN that the agent currently logged into.
- A new solution is provided for access-resource partitioning of DNIS pooling, which is similar to the ISCC method that is used in an IVR In-Front configuration. This solution is enhanced to use EPN partitioning.
- Busy treatment parameter values can be dynamically recalculated, based on statistical and/or interaction data.
- The SDataInTenant function can now be used to obtain statistics from the Environment tenant and other tenant objects.
- Current runtime strategy names, including the subroutines, can now be queried, enabling users to track the exact location in the interaction flow.
- The new GetSkillInGroupEx and CountSkillInGroupEx funtions, enable synchronization with the Stat Server open stat results. These new functions enhance the existing GetSkillInGroup and CountSkillInGroup functions with the addition of the Synchronous parameter.
- If an interactions has attached data with the RPVQID key, URS now deletes the data when strategy execution begins.
- The Unresponsive Process Detection feature of Management Framework is now supported.
- IBM AIX 7, 64-bit is now supported
- IBM DB2 9.7 is now supported.
- Oracle 11g RAC Database Cluster is now supported.

Interaction Routing Designer (IRD) 8.1.1 Features

- New functionality is introduced to invoke subroutines through a variable name.
- The new predefined CheckBusinessRule macro is introduced that works with business rules that are specified through variables.
- Busy treatment parameter values can be dynamically recalculated, based on statistical and/or interaction data.
- A new function is introduced to obtain a specific DN or list of DNs that belong to a specific place.
- The function used to retrieve and specify alias name from DN objects is now supported.
- Scalable printing of routing strategies is now supported.
- Certain Business Attributes that are used in MultiScreen and Stop Interaction multimedia objects can now be defined as variables.
- The Business Process renaming procedure is improved; IRD now automatically updates all references of renamed queues and work bins within strategies.
- Voice treatment ports can now be displayed or hidden in the IRD Monitoring/Loading views.

A new CFGRulesESPServer parameter is now included in the list of supported application types for the External Service object in IRD.

Orchestration Server (ORS) 8.1.1 Features

- Genesys Orchestration Server (ORS) can now be used to implement the business logic associated with Advice of Charge (AoC) through the <privateservice> action. This feature enables SIP Server to act as a Charge Determination Point (CDP) to specify the charges/billing rates that will be applied for using a service.
- Orchestration platform now supports Service Level and Service Objective routing solutions. Users can now build SCXML applications to achieve these solutions.
- The Cassandra Open Source solution that is packaged with the Genesys Orchestration Solution is upgraded to versions 0.7x and 0.8x.
- ORS now provides stricter session control through Genesys Administrator, which facilitates real-time reporting for the Orchestration platform and provides application provisioning capabilities.
- Encryption of the Secure Socket Layer (SSL) security password that is used to retrieve strategies is now supported.
- Username, password, and headers are now supported in the session:fetch action.

Custom Server 8.1.1 Features

- IBM AIX 7, 64-bit is now supported.
- The Unresponsive Process Detection feature of Management Framework is now supported.

Universal Routing 8.1.0

Universal Routing Server (URS) 8.1.0 Features

- URS supports Genesys Orchestration Server (ORS) 8.0 and above. This combination of URS and ORS is known as Orchestration Platform.
- URS now provides agent reservation functionality with GVP ports when dealing with busy treatments. Users can implicitly do agent reservation for call treatments.
- URS improves the mechanism for agent blending. In this release, URS delivers Claim Agent requests to Outbound Contact Server when an agent is required to process an inbound interaction.
- URS now allows the use of the Force function for all types of interactions, including multimedia interactions.
- URS is now supported on these additional operating systems:
  - Red Hat Enterprise Linux 5.5 32-bit and 64-bit Native.
  - Windows Server 2008 R2 64-bit Native.
  - HP-UX 11i v3 Integrity Native.
- URS discontinues support on the following operating systems:
  - Tru64 Unix.
  - AIX 5.1, 5.2.
  - Red Hat Enterprise Linux (RHEL) v3.
  - Solaris/SPARC v8.
- URS now supports TCP/IP v6. TCP IP v6 improves network security and addresses allocation and efficiency in routing traffic.

Interaction Routing Designer (IRD) 8.1.0 Features

- IRD now provides the option to configure Compiler Settings; this allows the validation of connections/links between Objects within a routing strategy.
- IRD now provides a function to selectively claim agents on an outbound activity to handle inbound interactions in a blended scenario.
- IRD now provides improved strategy scheduling functionality for Routing strategies.
- IRD now allows the use of one hundred entries in Segmentation objects, thereby providing flexibility in defining segmentation and improving usability.
- IRD provides a function to get the call state, allowing users to build logic based on the outcome of the state.

Orchestration Server (ORS) 8.1.0 Features

- ORS supports interaction persistence through the use of Cassandra. This functionality provides uninterrupted processing of sessions regardless of ORS instance failure. Other applications within the ORS cluster will pick up the pending task as stipulated in persistence database.

  Note: Cassandra is a highly scalable second generation distributed database and is part of the Apache project. Cassandra services can also be implemented in an N+1 architecture similar to ORS and is bundled on this URS CD. For more information on Cassandra, please refer to http://cassandra.apache.org.

- ORS now facilitates a real-time view of sessions through Genesys Administrator. Users can see all current and pending sessions listed by cluster, Orchestration service, and so on, for the previous 24 hours.
- ORS now allows the use of Statistical Functional Module functions without subscribing the required statistics beforehand within the SCXML application.
- ORS is now supported on the Red Hat Enterprise Linux 5.5 32-bit and the 64-bit Native operating systems, in addition to the operating systems on which it is currently supported.
- ORS now supports TCP/IP v6. TCP IP v6 improves network security and addresses allocation and efficiency in routing traffic.

Custom Server 8.1.0 Features

- Custom Server now supports TCP IP v6.
- Custom Server is now supported on these additional operating systems:
  - Red Hat Enterprise Linux 5.5 32-bit and 64-bit Native.
  - Windows Server 2008 R2 64-bit Native.
  - HP-UX 11i v3 Integrity Native.
- Custom Server discontinues support on the following operating systems:
  - Tru64 Unix.
  - AIX 5.1, 5.2.
  - Red Hat Enterprise Linux (RHEL) v3.
  - Solaris/SPARC v8.

Directories on This CD

configuration_database_update_scripts
Contains the Configuration Database Update Scripts.

configuration_wizard
Contains the Universal Routing Configuration Wizard.

documentation
Contains the ReadMe file, the graphics for the ReadMe, and the versions.html file.

solution_specific
Contains the installation files for the software.

templates
Contains the application templates used for configuration.

Documentation

Product documentation is provided on the Genesys Documentation website, and the Documentation Library DVD.

Any information regarding this release that was discovered too late to be included in the documentation is available in the Release Advisory.

In addition to an updated library of product documentation, the Genesys Customer Care website also contains product advisories that describe recently discovered issues related to Genesys products.

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Technical Support

Contacting

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For complete information on how and when to contact Customer Care, read the *Genesys Care Support Guide for On-Premises*. Please tell the Customer Care representative that you are a Universal Routing 8.1.4 customer.

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Supported Operating Environment Information

Information on supported hardware and third-party software is available on the Genesys Customer Care web site in the following documents:

- *Genesys Supported Operating Environment Reference Guide*
- *Genesys Supported Media Interfaces Reference Guide*

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