Genesys
Data Source
Installation Guide

Genesys

Data Source Installation Guide

March 26, 2015

NOTICE OF TRADEMARKS:

Inova LightLink and its components are trademarks of Inova Solutions.

Table of Contents

1. Introduction

Inova Solutions is a global provider of real-time reporting, alerting and display solutions for contact centers. Inova helps customers identify and measure contact center KPIs, quickly react when KPIs fall out of compliance, and gain insight into the relationship between the call center and overall organizational performance.

Inova's contact center solutions are built on Inova LightLink®, a powerful middleware that extracts, calculates, and unifies data from multiple contact center and enterprise operating systems and prepares it for display to an array of output options. Visual output options include LCD and LED digital signage and wallboards, agent desktop applications, and web-based dashboards. LightLink also allows you to program KPI thresholds that trigger an alert, such as a message, text, email, color change, or audio notification, ensuring that you're instantly aware of changing conditions that need your attention. With these capabilities, LightLink-based solutions provide a foundation for contact center performance management by managing your center's data, unifying your reporting, and ensuring the right people receive the right information when and how they want to see it.

In particular, Inova's real-time solutions extend the Genesys reporting value proposition by allowing you to:

- Deliver unified real-time reporting across Genesys and multi-vendor platforms
- Create custom KPIs that map to your organizational goals
- Integrate enterprise data to gauge the impact of your contact center on the top line

1.1.   Executive Summary

The LightLink Genesys Data Source enables LightLink to retrieve an extensive array of statistical information from the Genesys Unified Communication solution. This information is provided to LightLink through the Genesys Integration Server (GIS), which is a component within Genesys Solutions that provides statistical information to external systems. Using the Genesys Statistics API, the GIS can provide data to LightLink through the use of web services.

A *web service* is a standardized way of integrating web-based applications using standards such as XML, SOAP, WSDL and UDDI over an Internet protocol backbone. Using this method, LightLink establishes authentication to the GIS and receives a record stream of statistics via the Hyper-Text Markup Language (HTML) protocol. Once LightLink has received the statistics, it becomes available to any LightLink display solution.

2. Data Fields

This section provides information on what Objects and Stats are available using this data source. Inova Solutions provides a standard configuration for the most commonly used Stats. Additional Stats may be requested by the customer and configured during implementation.

Table 1 defines all available Objects (tables) for configuration in LightLink. The Example column displays what a user might see as a group within LightLink.

Object Type ID	Example
Agent	381
GroupAgents	Sales Agents
GroupPlaces	Service Desk
GroupQueues	Service Queues
Queue	6600@G3_Switch
Place	Desk601
RegDN	601@G3_Switch
RoutePoint	2200@G#_Switch
StagingArea	Inbound queue
Tenant	Resources
Campaign	OutBoundCampaign1
CampaignGroup	OutBoundGroup1
CampaignCallingList	ServiceCallbacks

Table 1: Available Object Types

Tables 2 and 3 define the most commonly used Objects and Stats available with a standard deployment of the LightLink Genesys Data Source.

Queue - Stat Type ID
CurrNumberWaitingCalls
Total_Calls_Abandoned
CurrMaxCallWaitingTime
Total_Calls_Answered
Calls_Answered_0_20
Calls_Answered_0_60
Calls_Answered_0_180
CallsAbandonedInTimeRange
Max_Time_to_Answer
Max_Time_to_Abandon
AbandCallsPercentage
AverageSpeedAnswer
AverAbandCallTime

Table 2

AgentGroup - Stat Type ID
CurrNumberWaitStatuses
CurrNumberInboundStatuses
CurrNumberACWStatuses
CurrNumberNotReadyStatuses
CurrNumberCallUnknown
CurrNumberHoldStatuses
CurrNumberRingingStatuses
CurrNumberLoggedIn
Total_Hold_time
Calls_Inbound
TotalAfterCallWorkDNStatusTime
Total_Talk_Time_Inbound

Table 3

LightLink can be configured to capture virtually any Stat Type supported by the GIS Statistics API, as documented in the Genesys Statistics SDK Web Services API Reference. Customers should specifically request any additional Stats desired beyond those listed above, such as ServiceFactor1 or Queue_Talk_Time. A complete list of Stat Types can be found in the Genesys provided Statistics API documentation and will be configured in cooperation with the customer to identify the correct Stat Type.

3. Prerequisites

- An installed Genesys Integration Server (GIS)

- A licensed Wallboard Connector from Genesys Labs to access the Session and Statistics APIs.

- Detailed connectivity information for the GIS:

- **GISHost -** Machine name or TCP/IP address of the machine which is running the GIS.

- **GISPort -** Port number for connecting with the GIS.

- **GISPrincipal -** Name or ID of the entity logging on.

- **GISCredentials -** Password for the name or ID logging on.

- **GISTenant -** Name of the tenant under which to log in.

- **StatServerName -** Name of the Genesys Stat Server.

- **PollingInterval -** Number of milliseconds to wait between requests for stats from Genesys. This setting will match the restriction_time option in the GIS application Options tab.

- **GISRelativeInstallationPath –** If GIS is not installed in the default location, customer must provide this location.

The Genesys Configuration Management Environment (CME) will be a resource to obtain information needed by Inova Solutions for configuration of the LightLink Genesys Data Source. Most of the configuration items listed above can be obtained from the Genesys GIS Overview web page. The GISHost and GISPort can be verified by using them to access the GIS Overview web page.

In addition, the customer should also provide:

- Access to GIS and StatServer logs

- Listing of Objects to be monitored by LightLink if outside the default configuration. (Queue, GroupQueues, GroupAgents, etc.)

- Queue names (and Switch Name when applicable) associated with the above Objects.

- Genesys Stat Name as defined in CME (e.g. – CurrNumberWaitingCalls) and name preference in LightLink – if something other than default name is preferred.

- The Time Interval – Growing, Sliding, SlidingSelection.

- Notification Mode – ChangeBased, TimeBased, ResetBased

- Time Range values, filter names, time interval profile names (e.g., Range_0_to_30), time interval length, slide length as needed per Stat Name.

4. Product Specifications

4.1. Capacity and Limitations

The data refresh rate is controlled by the polling interval configured in LightLink and the restriction_time configured in the GIS application. The default setting for this configuration is 30 seconds. Inova Solutions and Genesys recommend a refresh rate of 10-15 seconds for optimum system performance.

The specific capacity and limits of the Genesys Data Source are determined during implementation. The most common factors are the number of Objects/Stats monitored and the polling interval.

Typical deployments consist of approximately 50-100 Objects and 25 Stats at a 10 second polling interval. Larger implementations consisting of 200+ objects are subject to review by Inova and may require additional GIS connections.

4.2. Compatibility

The LightLink system is compatible with GIS v7.6.

4.3. Licensing

The Genesys licensed Wallboard Connector is required and must be procured by the customer prior to LightLink integration.

4.4. Firewall

Any system connecting via the network may be affected by firewalls and firewall applications. Please ensure the firewall team is available to address any potential port and connectivity issues that may be encountered.

5. Installation and Basic Configuration

5.1. Configure the EDSM

To configure the Genesys GIS External Data Source Manager (EDSM):

1. From the New External Data Source dialog, select *Genesys* and select *OK*.

2. The External Data Source Properties dialog appears. Complete the following External Data Source Properties fields:

   - Name - name of the connection; the default is Genesys GIS EDSM.

   - INI Filename – This field should be prefilled with LL_GENESYS_template.ini. It is recommended that you save the file with a different name after editing in order to preserve the template.

   - Edit – opens the INI file editor for configuration changes.

   - Browse – opens the Select File dialog box for choosing a specific Genesys GIS INI file.

3. Click *Edit* to open the INI file editor.

4. Edit the INI file parameters for the LightLink connection:

   - LLCommAddress = TCP/IP address and port over which this application will communicate with the LightLink Genesys GIS Data Source Manager (configuration defined in next section). This will most often be the same server where you are configuring the Genesys GIS EDSM. The port entered here MUST MATCH the listening port configured in your Genesys GIS DSM.

   - LLCommMode = Refer to the text in INI file.

   - heartbeat = Refer to the text in INI file.

   - HeartbeatText = Refer to the text in INI file.

5. Edit the INI file parameters for the Genesys connection configuration:

- GenesysID = This can be any 1-3 character string to uniquely identify this Genesys interface. If more than one External Genesys DSM is configured, then the ini file for each must contain a unique string for each External DSM.

- GenesysTimeout = Refer to text in INI file

- GISHost = Machine name or TCP/IP address of the machine which is running the Genesys server.

- GISPort = Port number for connecting with the Genesys server.

- GISPrincipal = Name or ID of the entity logging on.

- GISCredentials = Password for the name or ID logging on.

- GISTenant = Name of the tenant under which login should be completed.

- StatServerName = Name of the Genesys Stat Server from which statistics are to be retrieved.

- PollingInterval = Number of milliseconds to wait between requests for stats from Genesys. This time cannot be less than the restriction_time option in the GIS application Options tab. The GIS default setting for restriction_time is 30 seconds.

- SdfPath = This must be the name of the same .sdf file configured for use by the LightLink Genesys DSM. The full file path must be included. For example: `c:\Program Files\LightLink\srvcfg\dsms\mygenesys.sdf`.

- GISRelativeInstallationPath= If the GIS is not installed to the default location, this is the part that is different (e.g., VGApp).

- GISTestMode = Disables connecting to the GIS server and allows for testing of the SDF file and LightLink publishing.

6. Select *Save* to complete the configuration.

Any time the SDF or INI file has been edited, the Genesys GIS EDSM Component will need to be restarted.

5.2. Configure the Genesys GIS DSM

To configure the Genesys GIS Data Source Manager (DSM):

1. From the New Data Source dialog, select *LightLink Custom Data Source* and select *OK*.

2. The *Custom Data Source Properties dialog appears*. Select the General tab.

   Note: Notice that the Server ID, Preferred ID, and Host are pre-populated for you. You can change the Preferred ID and host.

   Complete the following *General* tab fields:

   - **Name -** name of the connection; the default is Genesys GIS.

   - **Server ID** - ID number of the Server. This cannot be changed.

   - **Preferred ID** - ID number of the Input Manager channel.

   - **Remote - Host** - name of the host PC on which the Input Manager for this connection resides. This cannot be changed.

3. Select the Connection tab on the Properties dialog and complete the following Connection tab options:

   - **Connection port –** This should be configured so that the Genesys GIS DSM will communicate with the Genesys GIS EDSM via the TCP/IP connection.

   - **Hostname or IP Address** - Enter the hostname or IP Address of the Inova LightLink Server hosting the Genesys GIS EDSM. This value will be defined as LLCommAddress in the Genesys GIS External Data Source configuration file.

   - **Listening port** - Enter the listening port defined in the Genesys GIS EDSM. This port will be defined under the LLCommAddress value in the Genesys GIS EDSM configuration file.

4. Select the Settings tab on the Properties dialog and complete the following fields:

- **Data format file** - genesys.sdf. Source Data Format files specify the format of the data

- **Script file**: genesys.dss. Data Source Script files specify the script required to long into the data source and access data

- **Edit** – allows you to edit the selected file

- **Browse** – allows you to view other files in the same folder with the selected file.

- **Connect timeout (secs)** - maximum time in seconds that will be allowed for the connection and login sequence

- **Disconnect timeout (secs)** - maximum time in seconds that will be allowed for logout and disconnection sequence

- **Data timeout (secs)** - maximum time in seconds expected between data updates. If no updates occur in this period, the data source will be assumed to be in an invalid state.

- **Automatically reconnect if data timeout occurs** – select the check box to have the system automatically reconnect.

- **Advanced** – opens the Advanced dialog. *The Advanced button settings should only be changed on the advice of Inova personnel.*

5. Select *OK* to complete the configuration.

5.3.   Configure the SDF File

Refer to field descriptions in the SDF file for non-data specific parameters.

- Name = This field will define the skill prefix in the LightLink data field tree. It can be whatever you want.

- Header = The text in this field must EXACTLY MATCH the Object in which the Keys below will be requested from.

Key Configuration Note: Queue names tend to have the format *queuename@switchname* in the SDF. What follows the *at* sign is a switchname.

Refer to Figure 1 for field formatting information.

```
Field1=CurrNumberWaitingCalls,uint16,0,2,CurrNumberWaitingCalls,GrowingWindow,TimeBased,Long
            1                    2   3 4          5                    6            7       8
```

1. Field1=Name As It Populates Into LightLink

2. Field type (commonly uint16 or time2)

3. Number of characters to capture (recommended to leave at 0, no limit)

4. Field position in stream (field position must increment sequentially with each field requested. Field1 value should be 2, Field 3 value should be 4, etc)

5. Field name EXACTLY as it exists in Genesys GIS server (case and spacing sensitive),

6. IntervalType (defined by customer)

7. Notification Mode (defines the way GIS provides updates to LL)

8. Data type of the data when returned

Not pictured: Time range name. This must match exact time interval profile name as defined in Genesys GIS. This field is typically used on fields with some timerange qualifier, such as *answered in X seconds* (e.g., CallsHandled).

Figure 1

6. Known Configuration Issues

INI File parameter for SDF path uses 32-bit folder structure by default. Make sure to add (x86) to Program Files if configuring on a 64-bit machine.

7. Best Practices

You MUST restart the Genesys GIS EDSM component any time the INI file or SDF file is updated. If you rename your SDF file, you must also update the SDF File path in the INI.

Concentrate on getting 1 GroupName to work with 1 field first. Populate all fields, and then start incrementing your KeyCount. Expand slowly!

8. Troubleshooting

If you encounter issues getting fields to populate:

- Confirm that the data field position parameter in the SDF is in sequential order, incrementing with each field requested. The first data field position (Field1) should be 2.

- Check the Genesys GIS EDSM log file for 'EXCEPTION' errors post-subscription to the GIS. These exception errors should direct you to the cause of the issue. Common causes include incorrect skill or field name formatting, requesting a skill or field that does not exist in the Object type, and incorrect GIS credentials or IP/Port information.

In order to identify which field or skill is causing an issue, it is recommended that you reduce table count, skill count, and field count to 1. After you re-subscribe and receive data, increase the field count by one and re-subscribe. After all fields are confirmed to work, increase skill count by one and resubscribe.

If multiple tables are needed, it is recommended that you make each table 'Table1' (other tables must be renumbered or commented out) and repeat the process above until all skills and fields are working correctly.