Chapter

1

Knowlagent / Genesys ACD Integration Overview

This chapter introduces the Knowlagent/Genesys ACD integration.

K nowlagent integrates with Automated Call Distribution (ACD) systems to deliver learning sessions without adversely impacting the ACD service levels that are important to Knowlagent customers. When the Knowlagent/ACD integration is operational, Knowlagent continuously monitors the levels of the customer-chosen ACD metrics, and can prevent or interrupt learning sessions whenever the status of the ACD metrics crosses the configured thresholds.

In this chapter, we will introduce the major components and requirements of the Knowlagent server integration with the Genesys Interface Service (Genesys or GIS) ACD system, including:

- How the Knowlagent/Genesys ACD integration architecture operates

- Prerequisites that must be met before setting up the integration

- An overview of the steps that you must complete to set up the integration

The remaining chapters in this document will guide you through the process of configuring and integrating a Knowlagent Web and Application server to work with the Genesys/GIS ACD system.

Integration Architecture and Operations

In customer facilities with Genesys ACD systems, Knowlagent receives the statistics for the selected ACD parameters through the Genesys Interface Server (GIS), the Genesys integration Web service package that provides statistics from Genesys ACDs to external systems.

Knowlagent/Genesys ACD Integration Components

Knowlagent 8.0 systems integrate with Genesys ACD systems using .NET technologies. The following tables introduce the major Knowlagent and Genesys software components involved in the Knowlagent/Genesys integration architecture.

KNOWLAGENT SERVER ACD INTEGRATION COMPONENTS

The following table describes the purpose and use of the ACD integration components that reside on the Knowlagent server.

Component	Integration Purpose / Use
RightTime Delivery	Knowlagent Configure tool function. Used to define the ACD parameters, instance(s), queues, and rules.
KAServicesX.exe	Knowlagent Enterprise Server .NET service. Loads and runs Knowlagent sub- services, including ACD-related sub-services .
Services.config.xml	.NET configuration file. Specifies the sub-services that the KAServicesX.exe component should load .
Genesys sub-service	.NET sub-service. Supports the Knowlagent-GIS integration.
GenesysSTA	Software component called by the Genesys sub-service. This component acts as a client of the GIS Web service to receive ACD queue statistics from the Genesys Stats Server.
GenesysSTQ	Software component that runs when the Knowlagent Retrieve Genesys Skills task is scheduled . This component acts as a client of the GIS Web service to retrieve ACD user-queue assignments from the Genesys CS_Proxy/Configuration Server .
ACDRuleEngine sub-service	.NET scripting engine sub-service. Applies the ACD queue threshold limits or "rules" configured using the RightTime Delivery function.
ACDStateManager sub-service	.NET sub-service. Receives results from the all ACDRuleEngines supported by the Knowlagent server and maintains the System Cache.
SessionScheduler sub-service	.NET sub-service. Interprets the results from the ACDRuleEngine found in the SystemCache and determines whether to allow or cancel learning session deliveries to agents .
Messaging Server sub-service	.NET sub-service. Sends the appropriate message as indicated by the Session Scheduler to the agent desktop.
System Cache	.NET remoting DLL object. Maintains status of ACD users and queues in memory.
KnowlagentAPS	The Knowlagent application database stores the configured ACD rules. database

Table 1: Knowlagent 8.0 Genesys ACD Integration Components.

GENESYS / GIS SERVER ACD INTEGRATION COMPONENTS

The following table describes the purpose and use of the ACD integration components that reside on the Genesys GIS server.

Component	Integration Purpose / Use
Genesys Interface Server (GIS)	The GIS is a Web service provided by Genesys as an add-on package to support 3rd party software integrations to Genesys ACDs. The GIS Web service must be installed on the Genesys system before completing the Knowlagent integration tasks described in this document.
Stats Server	Serve statistics to the GenesysST A client on the Knowlagent server
CS_Proxy and Configuration Server	Serve user-queue assignment data to the GenesysSTQ client DLL on the Knowlagent server.

Table 2: Genesys ACD Integration Components.

Knowlagent Genesys ACD Integration Architecture

The figure below shows the Knowlagent integration architecture for Genesys ACDs. The following section describes the operations of this architecture.
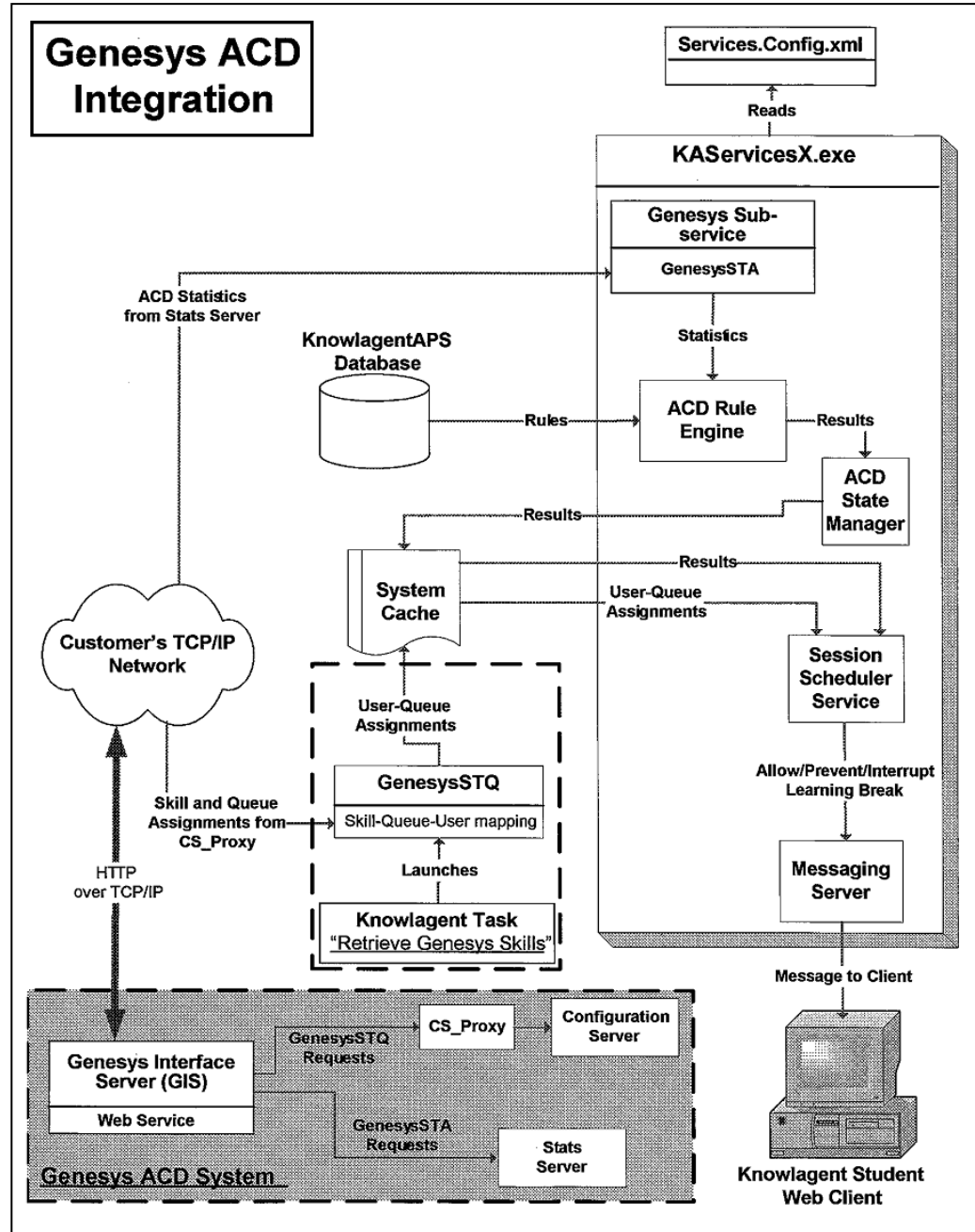

Figure 1: Knowlagent Genesys ACD Integration Architecture.

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Knowlagent Genesys Integration Architecture Operations

The following table describes the processes and operations illustrated in the preceding diagram of the Knowlagent Genesys ACD integration architecture.

Process	What Happens
1. At system start-up, ACD configuration is read.	When the Knowlagent server is started, the **KAServicesX.exe** .NET service reads the **Services.config.xml** configuration file and loads the appropriate sub-services used to establish the Genesys ACD system connection.
2. ACD queue statistics are retrieved.	The **GenesysSTA** sub-service checks the statistics reported by the Genesys **Stats Server** at a configured time interval to find the current values of the metrics chosen by the Knowlagent customer.
3. ACD queue statistics are passed to the ACDRuleEngine sub-service.	The **GenesysSTA** sub-service passes the ACD statistics received from the **Stats Server** to the **ACDRuleEngine** sub-service.
4. The ACDRuleEngine reads and applies the rules configured for the ACD.	The **ACDRuleEngine** applies the rules configured on the Knowlagent server for the customer's chosen ACD parameters to the statistics it receives, and passes those results to the **ACDStateManager**.
5. The ACDRuleEngine passes its results to the ACDStateManager.	The **ACDStateManager** sub-service receives and then forwards the results from the **ACDRuleEngine** to the **System Cache**.
6. Learning session is allowed, prevented, or interrupted.	The **SessionScheduler** sub-service retrieves the results and the user queue assignments from the **System Cache**, and determines whether or not a learning session should occur, or whether one that is occurring should be interrupted. The **SessionScheduler** then sends the appropriate message to the **MessagingServer**, which in turn passes the message to the agent's Web browser client.
7. Retrieve Genesys Skills task launches GenesysSTQ DLL to retrieve ACD queues and skills.	The **Retrieve Genesys Skills** task, scheduled using the Tasks function of the Knowlagent Configure tool, launches the **GenesysSTQ** DLL. When launched, the **GenesysSTQ** DLL sends a request to the **GIS** and retrieves the ACD queues and skills.
8. GenesysSTQ DLL maps and maintains user-to-queue assignments in the System Cache.	The **GenesysSTQ** DLL matches queues to skills based on the assignments configured in Knowlagent, and finds the users and their associated skills in the Knowlagent user hierarchy. It then maps users-to-queues and stores these assignments in the **System Cache**.

Table 3: Knowlagent 8.0 Genesys Integration Operations.

Integration Prerequisites

The integration process begins when Knowlagent consults with the appropriate customer personnel to determine the specifications and requirements of the ACD system. The Knowlagent "integration team" should identify and specify the following information before beginning the Knowlagent Genesys ACD integration tasks described in this guide.

IS THE KNOWLAGENT USER HIERARCHY ESTABLISHED?

Knowlagent provides two primary ways to establish the user population and hierarchy. The best and recommended method is to use the Knowlagent User Management API (UMA). The UMA allows the customer's developers to create connections to Knowlagent from source data systems that contain user information. Through the UMA, the external systems can automatically create and maintain the Knowlagent user hierarchy, including all external system user IDs (ACD, WFM, OM, and so on) required for cross-referencing. The second user hierarchy management option is to use the User functions in the Knowlagent Manager Console. These functions allow managers to manually create and manage user information. Either way, the Knowlagent user hierarchy must be present before the ACD integration process begins.

HOW MANY AND WHAT KIND OF ACDs NEED TO BE CONFIGURED?

Different ACD systems (Genesys, Aspect, Nortel, etc.) have different requirements to integrate with Knowlagent. Also, Knowlagent supports multi-ACD system integrations. The Knowlagent integration team must know how many and which type(s) of ACD system(s) the customer wants Knowlagent to monitor, and configure the ACD(s) as "instance(s)" on the Knowlagent server. Chapter 2 explains how to define Genesys ACD instances using the Knowlagent Manager Console.

WHAT ARE THE ACD QUEUES/SKILLS KNOWLAGENT WILL MONITOR?

The customer must decide (in consultation with Knowlagent) which ACD queues Knowlagent should monitor. For Genesys ACDs, the customer's Genesys administrator must also provide the skill-to-queue association mapping so that the Knowlagent integration team can appropriately associate skills with queues in the Knowlagent Manager Console.

WHAT ACD PARAMETERS, THRESHOLDS AND TERMINATION RULES WILL MAKE UP THE ACD RULES?

The customer must decide (in consultation with Knowlagent) which Genesys ACD parameters (Service Factor, Total Number Calls Abandoned, Average Distribution Call Time, and so on) should be monitored for the chosen queues and skills. The customer must also decide the threshold limits they want to monitor for each parameter, and the percentage of agents to take out of learning sessions when the configured parameters are outside the configured limits.

These customer decisions make up the ACD "Rule Expressions" that are configured for enforcement by the Knowlagent server. The **RightTime Delivery** function supports complex ACD rule expressions. The chapter Configuring Genesys ACD(s) in the Knowlagent Manager Console explains how to use this interface to create any ACD Rule Expressions that a customer may specify.

WHAT ARE THE CONNECTIVITY REQUIREMENTS OF THE ACD SYSTEM(S)?

The Knowlagent integration team must define and specify how the Knowlagent server will connect to the ACD system. The Configuring ACD services and connections chapter explains the complete connectivity information requirements for Knowlagent to integrate with Genesys ACDs.

Knowlagent 8.0 Genesys ACD Integration Process

The following table provides an overview of the steps you must take to integrate the Knowlagent 8.0 server with a Genesys/GIS ACD.

Step	What You Do	See
1. Configure the Genesys ACD(s) in the Knowlagent Manager Console UI.	Use the Configure tool in the Knowlagent Manager Console to define the operational settings of the Genesys ACD(s), including parameters, queue(s) and queue limit "thresholds."	Chapter 2
2. Configure the Knowlagent .NET sub-services for the ACDRuleEngine(s) and schedule the GenesysSTQ task in Knowlagent.	Configure the ACD-related .NET sub-services in the Services.config.xml configuration file to support the Genesys/GIS integration.	Chapter 3
3. Complete the integration deployment.	Complete several tasks to finalize and deploy the integration, including assigning Genesys skills to the appropriate queues and scheduling the Retrieve Genesys Skills task.	Chapter 4
4. Validate the integration.	Perform checks to determine if the Chapter 5 integration was successful.	Chapter 5

Table 3: Knowlagent 8.0 Genesys integration process.