

# **GENESYS**

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# Performance Management Advisors Deployment Guide

Deploying CCAdv and WA

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# Deploying CCAdv and WA

If you are installing any or all of the following Advisors modules, use the procedures and information in this section:

- Contact Center Advisor (CCAdv)
- Workforce Advisor (WA)
- Resource Management console (RMC)

You can deploy these modules on a Red Hat Linux or a Windows platform, and with Oracle or MS SQL databases.

If you use a Genesys computer-telephony integration (CTI) installation, you must install Advisors Genesys Adapter with CCAdv and WA applications.

# **Important**

In release 9.0, there are changes to the installation wizard screens; therefore, you cannot reuse your previous setup for silent installation or any saved ant.install.properties file.

# Deployment Roadmap

The arrow icons in the following roadmap indicate where you are in the Advisors deployment process.

- 1. Install the databases that correspond to the Advisors products that you will deploy. Perform the database installation in the following order:
  - a. AGA metrics database
  - b. Grant select privileges on all AGA metrics views to the Platform user.
  - c. Metric Graphing database
  - d. Advisors Platform database

#### [+] REVIEW IMPORTANT INFORMATION HERE

If the Oracle Platform deployment script issues the following error, ORA-20001: spCreateOneSourceView ORA-01031: insufficient privileges, and you are sure that the Platform user has been issued all necessary privileges, then you might have role-based Oracle security set for the Platform user by your DBA. Make sure you take the deployment script from the current\_user sub-folder in the installation package. You can apply the correct script on top of the one that you applied previously, ignoring the exceptions about existing objects and primary key violations. Alternatively, you can ask your DBA to recreate the user and the privileges and apply the correct script.

If your installation package does not contain a **current\_user** folder, edit the following scripts by replacing all entries of DEFINER with CURRENT\_USER and repeat the database deployment process.

 If initially you used advisors-platform version>\_ObjectsPlus.sql, edit these scripts: advisors-platform advisors-platform-

```
advisors-platform-<version>_PIMPORT_xxx.sql
advisors-platform-<version>_Routine1.sql
```

• If initially you used advisors-platform-<version>\_ObjectsCustom.sql or advisors-platform-<version>\_ObjectsDefault.sql, this would be the only script to edit.

If you prefer, you can contact Genesys Support to obtain the edited scripts.

Alternatively, you can set up the enhanced Oracle security to run Advisors applications as an application user with least privileges. For instructions, see Least Privileges: How to Configure Advisors Database Accounts with Minimal Privileges.

If necessary, run the Advisors Object Migration utility. You must run the Advisors Object Migration utility when:

- You first install Advisors in an environment with a new Configuration Server or when you move an existing Advisors installation to a new Configuration Server.
- If any of the required Business Attributes folders that Advisors components use are not already present in the Configuration Server.
- · If you decide to enable metrics that are not yet present in your Configuration Server.
- If you decide to use the Advisors default rollup configuration. Starting with Advisors release 9.0.001.06, a brand new Platform database contains a set of Advisors default hierarchy objects that must be added to the Configuration Server to make the automatic configuration visible on the dashboard. The automatic configuration consists of all base objects mapped to the default hierarchy. For more information, see Contact Center Advisor Default Rollup Configuration in the Contact Center Advisor and Workforce Advisor Administrator User's Guide.
- If you perform a new installation in an environment that previously had an Advisors release installed that was older than release 8.5.1. In this case, remove all FA metrics that are in the Configuration Server and then run the migration wizard to populate all FA and CCAdv metrics and hierarchy business attributes.
- 2. Create the Advisors User account in Genesys Configuration Server.
- 3. Install the Platform service on servers where it is required for Advisors components. The Platform service is a prerequisite for installing the following components:
  - · Advisors Administration
  - · Advisors Web Services
  - WA Server
  - FA Server with rollup engine
  - CCAdv/WA/FA Accessibility services
  - CCAdv/WA Resource Management console
- 4. Install each adapter that you will use and configure the adapter Application objects with Stat Server connections. See additional information for CCAdv/WA installations.
- 5. Install the Advisors components for your enterprise:
  - Contact Center Advisor server (CCAdv XML Generator)
  - Workforce Advisor server
  - Frontline Advisor server
  - SDS and the CCAdv/WA Resource Management console
- 6. Make any required configuration changes.

You run a single . jar installation file to deploy any or all of the modules. Use the procedure below to start your installation. The installer guides you through the deployment. The screens displayed during your deployment are dependent on the selections you make on the **Modules to Install** screen. Information about each screen is available on the **Installation Screens** tab below.

# Before starting the XML Generator component

It is necessary to perform this step when deploying Pulse Advisors release 9.0.003.11 with Oracle. After you have deployed all the database schemas and have run the Contact Center Advisor/ Workforce Advisor (CCAd/WA) installer, but before you start the XML Generator component for the first time, you must connect as the Advisors Platform schema owner and apply the advisors-platform-<version> ValidateDatabaseInstall.sql script.

# Deploying CCAdv, CCAdv XML Generator, and WA

#### Procedure:

#### **Prerequisites**

• Review the General Prerequisites and prerequisites specific to CCAdv/WA deployment before beginning deployment.

#### Steps

- 1. Launch the installation file.
  - [+] Show Steps for Linux
  - a. As root, navigate to the Advisors home directory:
    - cd /home/advisors
  - b. As root, run the CCAdv/WA installer. The page format of this document might cause a line break in the following command, but you must enter it on one line in the command prompt window. The following example uses jdk1.8.0. When you run the command in your environment, be sure to enter the JDK version number that you use in your installation.
    - ./jdk1.8.0 <version>/bin/java -jar ccadv-wa-installer-<version>.jar

See the *Genesys Supported Operating Environment Reference Guide* for information about Java versions supported with each Advisors release.

#### [+] Show Step for Windows

Do one of the following:

- Open a command line window, and enter the following command: java -jar ccadv-wa-installer-<version>.jar
- Double-click the ccadv-wa-installer-<version>.jar file in the release bundle.

Double-clicking might not work due to system settings, but using the command line terminal should always work.

For 64-bit systems, if double-clicking to launch the installer, ensure that the Java instance associated with the jar file type is 64-bit. Running the installer with a 32-bit Java instance will create a Windows service with the wrong executable.

2. On the **Modules to Install** screen, select which Advisors application(s) you will install. You can install an individual application or as many applications as you require during a single run of the installation file.

Each of the modules can be installed on a different machine. Advisors Platform must be installed on each server where a module is installed, with the exception of CCAdv XML Generator. CCAdv XML Generator does not require Advisors Platform. When installing multiple modules on the same machine, the underlying components, such as Advisors Platform, are installed only once.

#### [+] Show Information about Selections

The modules are:

- Contact Center Advisor XML Generator application—Install this module no more than twice in one cluster of Advisors systems. One instance will run as the primary, and the second, if present, will run as the backup. CCAdv XML Generator runs independently of Advisors Platform.
- CCAdv Accessibility Services—(Optional) If you need the CCAdv accessible dashboard, you can install this on one or more of the presentation nodes.
- Workforce Advisor Server— Install this module no more than twice in one cluster of Advisors systems. One instance will run as the primary, and the second, if present, will run as the backup.
- Workforce Accessibility Services—(Optional) If you need the WA accessible dashboard, you can install this on one or more of the presentation nodes.
- Resource Management Console—(Optional) If you need access to the Resource Management console in CCAdv and WA, you can install this on one or more of the presentation nodes.
- 3. On the **Destination Directory** screen, specify the location and name of the base directory in which you will install Advisors. The installation directory for CCAdv/WA modules must be the same as the directory where Advisors Platform was installed. Contact Center Advisor XML Generator does not require Platform, so can be installed independently.
- 4. Use the information provided in the <u>Installation Screens</u> section on this page to complete the remaining deployment screens.

#### Installation Screens

# [+] Data Source

For each data source not already in the database, specify the following:

- the database name or linked server name
- the source type (Genesys or Cisco)
- (optional) the display name
- the threshold update delay. This is how long CCAdv will wait for new data from this data source before notifying users via the CCAdv dashboard, and, if configured to do so, administrators via e-mail.
- the Relational Database Management System (RDBMS) type

If you have additional data sources to add, select Add another data source and repeat this step.

Up to five data sources may be added using the installer.

# [+] Database Type

Specify the type of database you use in your enterprise.

## [+] Genesys Advisor Platform Database

Enter the database connectivity parameters for the already created or upgraded database (that is, the database must be present and at the current version prior to running the installer).

When using numerical IP addresses or names with dots in the installations with MS SQL, enclose the literal in brackets.

If the MS SQL database server is a named instance, then omit the port number and use double backslash: <host name>\\<instance name>

# [+] Genesys Advisor Platform Database - Advanced

- Database user and Database user password—The database schema and password created and used for the Platform database.
- Locate file—Enter the location of the file that contains the advanced database connection string. If you
  do not know how to correctly build the advanced database connection string, contact your database
  administrator. The installation wizard applies the specified advanced connection string when
  configuring the data sources.

# [+] Java Development Kit

Enter or select the folder location for the Java Development Kit.

# [+] Metric Graphing Database

Specify the connection parameters for the Metric Graphing database.

When using numerical IP addresses or names with dots in the installations with MS SQL, enclose the literal in brackets.

If the MS SQL database server is a named instance, then omit the port number and use double backslash: <host name>\\<instance name>

## [+] Metric Graphing Database - Advanced

- Database user and Database user password—The database schema and password created and used for the Metric Graphing database.
- Locate file—Enter the location of the file that contains the advanced database connection string. If you do not know how to correctly build the advanced database connection string, contact your database administrator. The installation wizard applies the specified advanced connection string when configuring the data sources.

# [+] Oracle setup type

Specify whether you use Oracle basic (single instance) or Oracle Real Application Cluster (RAC) databases.

# [+] RDBMS Type and JDBC Connectivity

On the **RDBMS Type And JDBC Connectivity** screen, select either the **SQL Server** or the **Oracle** option – whichever you use for database(s). You must also select the Java Database Connectivity (JDBC) type that matches your environment. Select **Basic** for standalone databases or **Advanced** for clustered database configurations. The screens that follow are dependent on your selections on this screen.

# [+] Workforce Advisor Page 1 - SCS Integration

Enter the WA Server Application name exactly as it is configured in Genesys Configuration Server.

# [+] Workforce Advisor Server Page 2 - WFM Systems

Select your sources for workforce management data.

# [+] Workforce Advisor Server Page 3 - EMail Addresses

Enter the e-mail address that will appear in the From: header of e-mail that WA sends about alerts, to users that are members of distribution lists configured in the Administration Workbench. For example, DONOTREPLY@genesys.com.

# [+] Workforce Advisor Server Page 4 - IEX TotalView

Enter the FTP Server port number on which the FTP connection in WA listens for data from TotalView.

## [+] Workforce Advisor Server Page 5 - Aspect eWFM

Enter the Aspect eWFM base retrieval URL.

The base retrieval URL should be file:/// followed by the location of the eWFM files.

If the component must read or write data kept on a drive accessible over the network, then enter the path name to the directory using the Uniform Naming Convention, which includes the host name and the name of the shared drive.

For example:

//host\_name/shared\_drive\_name/root\_directory\_name/directory\_1\_name/directory\_2\_name You can use forward slashes in the name even on Windows systems. If you use back slashes, they must be escaped.

For example:

\\\host\_name\\shared\_drive\_name\\root\_directory\_name\\directory\_1\_name\\directory\_2\_name

## [+] Workforce Advisor Server Page 6 - Genesys WFM

- Base URL—The base URL should contain the server name or IP address of the machine where the WFM server is installed, as well as the port on which the server is configured and listening. For example, http://192.168.98.215:5007. When using numerical IP v6 addresses, enclose the literal in brackets. To make a secure connection to the WFM Server, the base URL must include:
  - the https:// protocol (instead of http://)
  - the secure port number that is configured on the WFM Server
- Application name—The application name of the WFM server as configured in the Configuration Server or Genesys Administrator.
- User name—The user name with which WA Server will connect to Genesys WFM Server.
- Password—The password with which WA Server will connect to Genesys WFM Server.
- Polling interval (ms)—The interval at which the Genesys WFM Server is polled for forecast data.
- Number of hours to harvest—The number of hours of forecast metrics to get during each polling interval.

# [+] XML Generator Page 1 - Log Files Directory

Starting with release 9.0.001, the installation wizard prompts you to provide the log file storage location, and provides a default path. If you plan to use a log file storage location that is not the default location, then specify the location on the **Log Files Directory** screen. The installation wizard checks that the selected storage directory is present; if not present, then the wizard creates it. The installation wizard stores the selected log file storage location in one of the following files:

- The properties file specific to the module. The log file configuration file pick ups the location from the module's properties file.
- The log4j configuration file.

Specifying the log file directory in the installation wizard will not change the directory that was set for previous installations.

For more information about log files, see Adjust Logging Settings and Configure Administrative Actions Logs.

## [+] XML Generator Page 2 - Config Server

CCAdv XML Generator runs independently of Advisors Platform; it is not necessary to install Advisors Platform to support XML Generator. Also, XML Generator more actively communicates with Genesys Configuration Server, particularly in warm standby setups. You must, therefore, enter some of the same information for XML Generator's use that you entered for Advisors Platform.

On the **XML Generator Page 2 - Config Server** screen, enter information about the Genesys Configuration Server that is part of your deployment:

- Config Server Name The name of the primary configuration server; for example, confserv. The name is obtained from your Genesys configuration interface (for example, Genesys Administrator) and is case sensitive.
- Config Server Address The name or IP address of the machine hosting the Configuration Server. When using numerical IPv6 addresses, enclose the literal in brackets.
- Config Server Port Number The port on which the configuration server is listening; for example, 2020. If you enter a port number in this field, and then enable a TLS connection, this port number is ignored.
- Config Server Client Name Enter the name of the application that Advisors Platform will use to log in to the Configuration Server (for example, default).
- Config Server user The user name of the account that Advisors Platform will use to connect to the Configuration Server; for example, default.
- Config Server password The password of the account that Advisors Platform will use to connect to the Configuration Server. The Genesys Configuration Server password is encrypted and saved in the ..\GCTI\Advisors\conf\GenesysConfig.properties file by default (unless altered). To change the password, see Change Encrypted Passwords.
- Enable TLS connection To configure a TLS connection to the Configuration Server, select this option on the installation screen.
- Config Server TLS Port Number Enter the Configuration Server TLS port number. When TLS is enabled, Advisors Platform uses the TLS port number instead of the unsecured port number.
- Locate TLS properties file Identify the location of the TLS properties file. The TLS properties file contains all the properties required to connect successfully using TLS, as well as any other optional TLS attributes that you use.
- Add backup server Select this checkbox if you have a backup Configuration Server for this
  installation.
   If you select the Add backup server checkbox, the **Backup config server** screen displays after you
  click Next.

# [+] XML Generator Page 3 - Backup Config Server

The XML Generator Page 2 - Backup Config Server screen displays only if you selected the Add

backup server checkbox on the **XML Generator Page 1 - Config Server** screen. Enter the backup Configuration Server details:

- Backup Server Name
- Backup Server Address
- Backup Server Port Number

## [+] XML Generator Page 4 - Config Server

Enter the name of the default Genesys tenant.

## [+] XML Generator Page 5 - SCS Integration

Enter the XML Generator application name exactly as it is configured in the Genesys Configuration Server.

# [+] XML Generator Page 6 - Cluster Member

Configure this XML Generator installation as a unique node in the cluster. Each server on which you install XML Generator requires a unique cluster node ID. On this screen you also enter the port number that nodes in this cluster use to communicate. The data you enter on this screen, and the following screen (XML Generator Page 7 - Cluster Member), is entered in the ActiveMQ.properties and Caching.properties files in the Advisors Platform database. Configure the node with the following information:

- Node ID—A unique ID across all XML Generator installations. The ID must not contain spaces or any
  special characters, and must be only alpha numeric. Node IDs are not case sensitive. Within one
  cluster, Node1, node1, and NODE1 are considered to be the same ID. You can use node1, node2, and so
  on.
- IP Address/Hostname—The IP address or host name that other cluster members will use to contact this node; for example, 192.168.100.1. It is not localhost or 127.0.0.1.

  When using numerical IP v6 addresses, enclose the literal in brackets.
- Localhost address—The local host address: localhost or 127.0.0.1.
- XMLGen Port Number—The port number that the nodes in this cluster use to communicate. If you are
  installing only one deployment of Advisors, accept the default that the installer offers.
  The port number must be unique to this deployment of Advisors. All nodes in one cluster must use the
  same port number.

# [+] XML Generator Page 7 - Cluster Member

Enter information about port numbers used for communication within the cluster. The data you enter on the preceding screen (**XML Generator Page 6 - Cluster Member**) and on this screen is entered in the ActiveMQ.properties and Caching.properties files in the Advisors Platform database.

• JMS port—The Java Message Service (JMS) port number.

• The first port in range and The last port in range—Specify the port to be used by the distributed cache for communication. If you are installing only one deployment of Advisors, accept the default that the installer offers. The port number must be unique to this deployment of Advisors. All nodes in one cluster must use the same port number.

## [+] XML Generator Page 8 - SMTP Server

Enter the host name or IP address of the SMTP server that XML Generator will use to send e-mail with ERROR messages. You can see the ERROR messages in the log file for XML Generator.

# [+] XML Generator Page 9 - Generation Interval

Enter the interval for the Medium and Long groups of time profiles. For example, if you enter 120 seconds for this parameter, XML Generator stores metrics and threshold violations for these time profiles no more often than that. However, XML Generator might store the view data less frequently depending on load and the complexity of the configuration.

## [+] XML Generator Page 10 - DB Connection Retry

Enter the maximum number of retry attempts in the event of a database connection failure. This parameter is applicable to retry attempts when XML Generator is already running; that is, after establishing connections at startup.

Enter the number of seconds between XML Generator's reconnection attempts in the event of a database connection failure. This parameter is applicable to retry attempts when XML Generator is already running; that is, after establishing connections at startup.

# [+] XML Generator Page 11 - EMail Addresses

Alert E-mail From Address: Enter the e-mail address that will appear in the From: header of e-mail that XML Generator sends about alerts, to users that are members of distribution lists configured in the Administration Workbench. For example, D0N0TREPLY@genesys.com. Enter the e-mail address that will appear in the From: header of e-mail that WA sends about alertsFor example, D0N0TREPLY@genesys.com.

Support E-mail Address: Enter the e-mail address to which XML Generator will send e-mail about events other than alerts. For example, an e-mail sent when XML Generator has not been able to connect to an external data source within the configured number of minutes. The address entered in this field also appears in the From: header of these types of e-mails.

# [+] XML Generator Page 12 - Metric Graphing

Specify how frequently (in seconds) snapshots should be stored in the metric graphing database. For example, if you enter 60 seconds, XML Generator and WA Server store graphable snapshots no more often than that. However, they may store the snapshots less frequently depending upon load and the complexity of the configuration.

Specify whether graphs should display values from the previous day. If you select the Start at midnight checkbox, then graphs will not display values from the previous day. Also, an open graph will delete values from the previous day as it reaches midnight.

See Configure Metric Graphing Properties for detailed information.

## [+] XML Generator and Workforce Advisor - Page 1

Select the time profile for the historical agent group metrics that CCAdv and WA will display.

If you choose 5 minute sliding, then CCAdv and WA will display agent group metrics from the most recent 5 minutes. If you choose 30 minute growing, then they will display agent group metrics from the current half hour.

For metrics imported from CISCO ICM, Advisors always imports agent group metrics with the 5 minute sliding profile. If you are running Advisors with CISCO ICM, and you choose the 30 minute growing option here, then on the dashboards, historical agent group metrics will display as a dash. Genesys recommends that you use the five minute growing setting if you have a CISCO source of data.

## [+] XML Generator and Workforce Advisor - Page 2

Enter information to connect to the Genesys Management Layer on the **XML Generator and Workforce Advisor - Page 2** screen. You must configure these properties for both a basic Advisors setup, as well as a warm standby setup.

- LCA port—The LCA port number for the server on which you are currently deploying a CCAdv or WA component. Unless you changed the LCA port number, accept the default.
- SCS application name—The name of the Solution Control Server application in Genesys Administrator.

# Troubleshooting

The following Table shows parameter validation errors that you may encounter at the end of installation.

Installation Error Message	Cause
[java] Failed to connect to the database using connection URL:  [java]  jdbc:sqlserver://192.168.xx.yy:nnn;DatabaseName=ys_eadb;user=sa;password=very_secure_pwd; selectMethod=cursor  [java] The following exception was thrown: com.microsoft.sqlserver.jdbc.SQLServerException: The TCP/IP connection to the host 192.168.xx.yy, port nnn has failed. Error: "Connection refused. Verify the connection properties, check that an instance of SQL Server is running on the host and accepting TCP/IP connections at the port, and that no firewall is blocking TCP connections to the port.	Wrong database server name / IP address or port number
[java] Failed to connect to the database using connection URL:  [java]  jdbc:sqlserver://192.168.xx.yy:nnnn;DatabaseName=NotAPlatformDB;selectMethod=cursor;user=sa; password=very_secure_pwd  [java] The following exception was thrown: com.microsoft.sqlserver.jdbc.SQLServerException: The TCP/IP connection to the host 192.168.xx.yy, port nnnn has failed. Error: "connect timed out. Verify the connection properties, check that an instance of SQL Server is running on the host and accepting TCP/IP connections at the port, and that no firewall is blocking TCP connections to the port."	Wrong database name
<pre>[java] Exception while connecting: Login failed for user 'badUserId'. [java] url used: jdbc:sqlserver://192.168.xx.yy:nnnn;DatabaseName=ys_eadb;selectMethod=cursor;user=badUserId; password=very_secure_password</pre>	Wrong database user name or password
<pre>[loadfile] Unable to load file: java.io.FileNotFoundException: C:\ (The system cannot find the path specified)</pre>	Produced in error and can be ignored.
An error message in the XML Generator log that contains the following string: datamanager.adapters.MultiAdapterException	<ul> <li>Indicates that there is at least one (there might be more than one) configured Genesys Advisors Adapter (AGA) instance that is either not running or is not reachable. Genesys recommends the following actions to correct the condition:</li> <li>1. Check all configured AGA instances. Make sure that each one is running and reachable from XML Generator.</li> <li>2. If you have any AGA instances that are not absolutely</li> </ul>

Installation Error Message	Cause
	required for the operation of CCAdv/WA, remove those from the configuration.  If a configured adapter is reporting this error condition, and it is running correctly, then you need to look for other problems with the adapter. For example, the adapter Application that is registered in Configuration Server might not have any Stat Servers configured, or the configured Stat Server(s) might not be running.
C:\Users\ <username>\AppData\Local\Temp\antinstall\ build.xml:189: The following error occurred while executing this line:  C:\Users\<username>\AppData\Local\Temp\antinstall\ installer-common.xml:468: java.lang.NoClassDefFoundError: javax/xml/bind/DatatypeConverter at com.microsoft.sqlserver.jdbc.SQLServerConnection.sendLogon(SQLServerConnection.java:4061)</username></username>	Ensure that you are launching the installer with a supported version of the Java Development Kit (JDK). You can type javaversion in a Windows command prompt window or in the Linux terminal to see which version is currently configured on your system. If you are using a Windows OS, add the JDK folder path to both JAVA_HOME and PATH in environment variables. If you use Red Hat Enterprise Linux, add the JDK folder path to the PATH variable.