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Performance Management Advisors Deployment Guide

Data Manager

Data Manager

Data Manager feature provides the following functionality:

- Support for multiple Genesys and Cisco Adapters.
- Load balancing across multiple adapters using the same data source in a single Genesys environment.
- Management of the flow of statistics from Advisors Genesys Adapters (AGA) to both Frontline Advisor (FA) and Contact Center Advisor/Workforce Advisor (CCAdv/WA).
- Maintenance of the authoritative configuration data. Data Manager monitors adapters to ensure that the issued statistics conform to its configuration.
- Use of statistics template definitions to determine the statistics requests that need to be sent to the Genesys Adapters for each Advisors module (such as CCAdv or FA).
- Use of a handshake protocol to establish connection with all adapters.

Data Migration

In Advisors release 8.1.5, source metric definitions and statistics templates stored in the Adapter database had to be migrated to the corresponding platform tables. The migration included any custom metrics you use in your enterprise and had to be done for all Advisors modules that use Genesys Adapter.

- The source metrics that migrated to the platform tables were for the CCAdv, WA, and FA modules that require Genesys data sources.
- The statistics templates that migrated to the platform tables were only for the CCAdv and WA modules. Because the FA statistics templates are of a transient nature, there was no need to migrate them and the migration tool ignored them.

For more information, see the [Genesys 8.1 Performance Management Advisors Deployment Guide](#).

Installation and Configuration

During the installation of any Adapter, the installer optionally prompts for:

- The connection details for the Platform database.
- A unique name for the Adapter and the source environment (the source environment is not prompted for in a Genesys environment).

This information, along with the Adapter's host name, port and type (GENESYS or

CISCO) is written to the Platform database. Data Manager uses this configuration information to establish connections to all installed Adapters.

The Adapter type is always set to either GENESYS or CISCO. You must register all Genesys Adapters, although you can choose to bypass Cisco Adapter registration.

Object Configuration User account

You must configure a user account in Configuration Server so that security permissions can be assigned to allow object configuration for the CCAdv module in the Advisors Administration module (Base Object Configuration page). This is the *Object Configuration User*.

Important

This user must be created in the Configuration Server *before* you install Advisors Platform. Advisors Platform installer prompts you for the account name.

Account Permissions for Data Manager

Object Configuration User—You must create the Object Configuration User account in the Genesys Configuration Layer. You create this user account in Configuration Server as a container for security permissions for objects (Agent Groups, Queues, and Calling Lists). The Object Configuration User requires Read permission for any object that should be considered a configured or monitored object.

Platform Configuration Server User—The Platform Configuration Server user (that is, the Advisors User account) also requires specific permissions to manage object configuration in Configuration Manager related to Data Manager. See [Create the Advisors User Account](#).

Configuration in Advisors Administration Module

The **Manage Adapters** page is read-only.

- To make changes to the properties for an Advisors Genesys Adapter, update the configuration in the database (see [Update AGA Properties in the Database](#)).
- To manage objects, use the **Base Object Configuration** page in the **Administration** Module.

Base Object Configuration Considerations

- Starting in release 8.5.0, you must deploy the Contact Center Advisor application (including XML Generator) and configure the Genesys metric sources before you can use the Genesys **Base Object Configuration** page in the Administration module. Data manager requests no statistics for pre-configured objects until the CCAdv module, XML Generator, and Genesys metric data sources are deployed and working.
- The object configuration is done once and independently of any underlying adapters.
- You can identify and filter objects by object type on both mapping screens.
- The page displays the count of configured objects. Calling list objects are counted as queues.
- The page prevents contradictory configuration. If you select **No Filter** for an object and then later attempt to assign a filter, you receive an error message. You must de-select **No Filter** before you can assign a filter to that object.
- The associations that display on the **Base Object Configuration** page represent a global configuration for CCAdv/WA.

Configuration Server Integration

Data Manager uses the Configuration Server connection provided by Platform to load Genesys object metadata from Configuration Server. Changes in configuration made on the **Base Object Configuration** page are saved in the Configuration Server for incorporation. Therefore, the Configuration Server system user that is configured on the platform installation (that is, the Advisors user account) should have Change and Change Permissions privileges on the agent groups or queues that are monitored, as well as Read and Read Privilege access permissions for the Advisors User account (see [Create the Advisors User Account](#)).

In Genesys Configuration Manager, you create the Object Configuration User account and assign security permissions for objects (agent groups, calling lists, and queues) to the account. The agent groups, calling lists, and queues to which the Object Configuration User has **Read** access permission are treated as the configured objects for CCAdv/WA. If this user has access to agent groups, calling lists, or queues when Data Manager starts, Data Manager immediately issues statistics requests to the configured Genesys Adapter(s).

Integration with Configuration Server involves a number of aspects, discussed in the following sections:

[+] How Configuration Objects Are Identified

The Configuration Server metadata includes:

- Object Type
- Object ID
- External ID
- Source Environment

The Object Type/Object ID combination (known as the *node ID*) enables an object to be uniquely identified. This node ID is used when applications need to reference a specific object in Configuration Server. The object referenced by the node ID will have a different identifier in the external source environment. Data Manager is responsible for translating the node ID provided by the application into the appropriate external ID when forwarding requests to the appropriate Adapter.

The object identifier in metadata is composed of the following:

- **ObjectId:** The DBID for the object (provided by Configuration Server).
- **ObjectType:** One of Agent, AgentGroup, or Queue.
- **TenantName**
- **ObjectName:**
 - For Genesys agents: EmployeeId
 - For Agent Groups and Queues: the name provided by Configuration Server
 - For Cisco Agents: N/A

Genesys recommends that one single data source supplies all statistics of a specific statistic type for a given object.

Propagation of Configuration Changes Made in Configuration Manager

Changes made to configured objects (Agent Groups, Queues, Calling Lists, or Interaction Queues) affect the **Base Object Configuration** page in the Administration module in the following ways:

- The addition of an object to the Configuration Server is reflected on the **Base Object Configuration** page when the page is reloaded.
- A name change to an existing object is reflected on the **Base Object Configuration** page when the page is reloaded.
- Any change in an object's Annex properties, such as Filter or Queue Type, is reflected on the **Base Object Configuration** page on restart of the Platform server.
- The addition of the **Read** permission for an object (either new or existing) for the Object Configuration User is reflected on the **Base Object Configuration** page only after the overnight refresh or on restart of the Platform server. If you change one or more configuration objects to make them monitored objects, the additional statistics for those additional objects are not immediately requested. They are scheduled to be picked up during the overnight refresh, at which time the additional statistics are requested. Similarly, if you remove the **Read** permission on an object for the Object Configuration User, statistics are not closed immediately—that happens during the overnight refresh.

If you need any of the above changes (adding an object or removing an object to or from being monitored) to be immediately available, make the changes on the **Base Object Configuration** page instead of making them in Configuration Manager or Genesys Administrator.

[+] Base Object Configuration Page Users and Permissions

The master list of objects on the **Base Object Configuration** page in the Administration Module is the list of agent groups, calling lists, and queues for which the Advisors User account has **Read** access permission.

When the administrator adds more objects to monitor from the available objects, the Object

Configuration User is automatically granted **Read** access permission for those objects in Configuration Server. When the administrator removes existing configured objects, the **Read** access permission for those objects is revoked for the Object Configuration User.

The objects for which the Object Configuration User has **Read** permission should always be the same set or a subset of the objects for which the Advisors User account has **Read** access permission.

Important

- If there are objects for which the Object Configuration User has **Read** access permission, but the Advisors User account does not, those objects are not considered and do not display on the Object Configuration page.
- Genesys recommends that you always configure the Advisors User account and the Object Configuration User to be two distinct accounts (not one user account used as both). If one account is used for both users, the administrative user could not add new objects using the Object Configuration page (all objects would be configured objects); the user could view and remove currently configured objects only.

[+] Filter Configuration

The master list of filters for Advisors (for CCAdv, WA, or FA) comes from the Business Attributes configured in the Configuration Server. You can see the list under **Advisors Filters** in the Advisors Business Attributes section of Configuration Manager or Genesys Administrator.

Important

The Advisors Filters business attribute must exist on one—and only one—tenant. Genesys recommends you configure the Advisors Filters business attribute on a tenant that is the default tenant for the Advisors suite installation, on which you configure all Advisors metadata. If there are Advisors Filters business attributes configured on multiple tenants, an error message displays when Genesys Adapter starts, and the filters are not loaded.

Configuring the Advisors Filters

The filter expression is in the **Description** field on the **General** tab of the filter's **Properties** window.

Tip

In a migration scenario, the Migration utility migrates existing filters from the previously-used Stat Server configuration to be the Advisors Filter business attributes, and populates the **Description** field with the filter expression. You configure any additional filters you require by entering the filter expression as the description of the filter.

When filters are associated with configured objects on the **Base Object Configuration** page in the Administration module, the filter and object combination is stored on the **Annex** tab of the object's **Properties** window.

Data Manager uses the configured filters from the **Annex** properties of the object when it requests statistics. When one or more filter combinations are applied, Data Manager requests statistics for each filter. If no filters are applied to an object, then only one statistic is requested for each source metric for that object.

For example, if three filters (Gold, Silver and Platinum) are combined with an ACD Queue object, then three variations of CallsHandled are requested. The three filters are individually applied to yield three statistics: CallsHandled.Gold, CallsHandled.Silver, and CallsHandled.Platinum.

Filters and Interaction Queues

Filter categorization is not applicable for interaction queue statistics. **No Filter** is the only option you can successfully apply to interaction queues. If you attempt to combine filters with an interaction queue, the filters are discarded and the **No Filter** option is automatically selected again.

Filters and Calling Lists

Do not associate a statistic filter with a calling list because Stat Server ignores this type of filter on a calling list statistic.

Frontline Advisor Base Object Configuration

For each source environment in which a given object is present, a corresponding object must exist in the Genesys environment.

When the object already exists in the Genesys environment (that is, it handles interactions monitored by Genesys components), the External ID has the format:

[Tenant Name] Employee ID

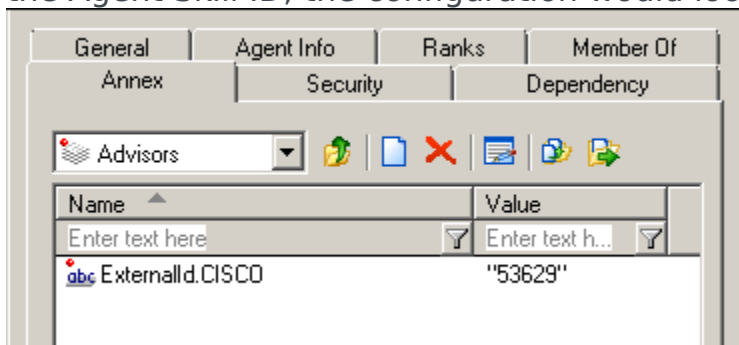
For all other source environments, the object must be created and an entry must be added to the object's Annex tab under an Advisors section. The key for each such entry has the format:

ExternalId.SourceEnvironment

The value is the ExternalID itself.

- For Genesys Adapters, the source Environment is always GENESYS.
- The Cisco Adapter installer prompts for the environment name, with the default value CISCO.

For example, if you are using a Cisco Adapter and want to set the External ID to the Agent Skill ID, the configuration would look as shown in the following figure:



Setting the External ID for a Cisco Agent to their Agent Skill ID

Load Balancing

When two or more Adapters share the same source environment, this indicates that they are connected to the same underlying data provider infrastructure and, therefore, are all able to provide the same set of source metrics. Data Manager is free to select from any adapter with the same source environment to issue a given statistic. Data Manager attempts to distribute sets of statistics for a given source evenly across all adapters associated with that source.

Starting in release 8.5.0, if you add adapters to your deployment after the initially-installed adapters are running, the existing statistics are not automatically re-routed to the newly added adapters. That is, load balancing is not re-distributed among all the adapters, including the ones you added. For the procedure to re-distribute the statistics load balancing to include newly-deployed adapters, see [Re-distribute Stats Load when Adapters are Added](#).

Once a statistic is opened for a given object with an Adapter, all subsequent statistics for that object will be opened using the same Adapter. This helps maintain (but does not guarantee) consistency among related metrics reported for this object.

Statistics for a given object can span multiple Adapters, but only if the associated metrics have different Stat Server Type (SST) attributes. Examples of SST include **Core** (which all Stat Servers can provide), **Interaction Queue**, and **Open Media**. Statistics are partitioned by (object, SST). Each (object, SST) group is issued against the same Adapter. The Adapter requires the following:

- A source environment that matches the object's External ID
- A Stat Server Type supported by the Adapter

If a limited number of Adapters support metrics of a specific Stat Server Type, such as **Open Media**, statistics of this type constitute the bulk of statistics issued to these Adapters. Statistics for more generally-supported metrics, such as **Voice**, are concentrated with Adapters that do not support such specialized statistic types.

If you have multiple adapter instances installed, make sure that you start, or restart, all of them at the same time.

Cisco Impact

Advisors Cisco Adapter is used with FA only. Because the Cisco Adapter automatically collects metrics for all agents in that source environment, there is no benefit to load balancing across multiple instances. The only scenario in which multiple Cisco Adapters should be installed is if they provide metrics from separate HDS/AWDB source environments.

Troubleshooting Data Manager

If you are experiencing issues with Data Manager, check for the following problems:

Genesys Adapter is Unavailable

If there is one or more Genesys Adapter installed and configured for a given module, but the Adapter is not running or is unreachable, Data Manager cannot request statistics for that module. Monitor the status of the AGA applications in Genesys Administrator or the Solution Control Interface (SCI).

Data Manager does not Re-distribute Stat Requests to other Adapters when one Adapter's Service is Stopped

When one or more adapter (ACA or AGA) instances are installed, ensure that they are always in use. A deployed adapter that is not running can prevent Data Manager from sending requests to the other live adapters. If you have a deployed adapter that is not going to be in use, Genesys recommends that you remove the adapter configuration from the Advisors Platform table ADAPTER_INSTANCES to prevent disruption of service in the active adapters. If you have multiple adapter instances installed, make sure that you start, or restart, all of them at the same time. If you have a deployed, but inactive adapter, use the following procedure to remove all the objects from its configuration.

1. Determine which objects are associated with the inactive adapter:

- Run the following statement against the Advisors Platform database – this provides the ID value for each adapter instance:

```
select adapter_instance_id, name from adapter_instances
```

- Run the following statement against the Advisors Platform database – this shows you which Stat Server pairs are associated with the adapter and which objects are associated with the Stat Server pair for each adapter:

```
SELECT * FROM STAT_GROUP_OBJ_MAPPING where STAT_GROUP_ID in (select STAT_GROUP_ID from  
STAT_GROUP_CONFIG where  
ss_pair_id in (select ss_pair_id from ADAPTER_STAT_SERVER where ADAPTER_INSTANCE_ID =
```

```
<ID of adapter>))
```

Remove the objects associated with the Stat Server pair for the adapter that you must delete from the table.

2. To remove the identified objects, run the following statement:

```
DELETE FROM STAT_GROUP_OBJ_MAPPING where STAT_GROUP_ID in (select STAT_GROUP_ID from  
STAT_GROUP_CONFIG where  
ss_pair_id in (select ss_pair_id from ADAPTER_STAT_SERVER where ADAPTER_INSTANCE_ID = <ID  
of adapter>))
```

3. To remove the Stat Server pair rows associated with the adapter, run the following statement:

```
Delete from adapter_stat_server where adapter_instance_id = <ID of adapter to delete>
```

4. To delete the adapter_instance row, run the following statement:

```
Delete from adapter_instances where adapter_instance_id = <ID of adapter to delete>
```

No Object Configuration User Specified when Installing Platform

For the CCAAdv module, an Object Configuration User must be specified when you install Advisors Platform. The same is true when you install CCAAdv XML Generator; you must specify the Object Configuration User. If configuration of this user name is omitted, no statistics are issued with the Adapters. This is indicated by an information message in the XMLGen.log file. The information message indicates that no statistics are requested because no agent groups and queues are found. To correct this:

1. Update `genesys.configServer.objectconfig-username` in the Platform `GenesysConfig.properties` file.
2. Restart the Advisors server and XML Generator after you update the properties file.

No Object Configuration User Exists in Configuration Server

If the Object Configuration User does not exist in the Genesys Configuration Server, an error message is logged in the form of an exception. To correct this issue:

1. Create the user in Configuration Server.
2. Update `genesys.configServer.objectconfig-username` in the Platform `GenesysConfig.properties` file.
3. Restart the Advisors server and XML Generator after you update the properties file.

Base Object Configuration page is empty - unable to publish CCAAdv base objects

Ensure the Administration user who is logged in to the Administration module (workbench) has been assigned the Read permission for the tenant under which the source objects exist that the user must monitor.

Data Manager reports an error - no Stat Server connections are open

If Data Manager reports that no Stat Server connections are open, check the following:

- Ensure your Advisors Genesys Adapters are configured with Stat Servers. See [Manage Advisors Stat Server Instances](#), particularly the section called [Register a New Stat Server and Link the Stat Server to an Adapter](#).
- Ensure that the configured Stat Servers are up and running.