Interaction Concentrator Deployment Guide

Troubleshooting

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Troubleshooting

This section describes problems that you might encounter when starting or running your Interaction Concentrator (ICON) application, and how to resolve them.

- Startup Problems
- Runtime Problems
- Merge Problems
- Purge Problems

> ## Warning
>
> To avoid a wide range of startup and runtime problems, observe the following restrictions:
>
> - Do not disconnect ICON from Configuration Server during startup.
> - Do not change any connections on the **Connections** tab of the ICON Application during runtime.

Startup Problems

The following are the most common startup problems:

- ICON does not connect to the Configuration Server
- ICON Exits at Startup

ICON does not connect to the Configuration Server

Possible causes of this problem are as follows:

Command-line parameters on the ICON Application object's **Server Info** tab incorrectly specify the Configuration Server host and port.

- **Solution:** Correct the command-line parameters and restart the application. For more information about the command-line parameters, see Command-Line Parameters.

Configuration Server is not running, or it is inaccessible over the network.

- **Solution:** Start Configuration Server or re-establish the network connection.

ICON Exits at Startup

See the ICON log file for the reasons for the startup failure. Possible reasons include:

The `Application` name specified in the ICON startup command line does not correspond to any existing `Application` object in the Configuration Layer.

- **Solution:** Create the `Application` object. For more information about creating and configuring the ICON Application, see Deploying Interaction Concentrator.

The `Application` name specified in the ICON startup command line refers to an `Application` object that is not of the Call Concentrator application type.

- **Solution:** Remove the `Application` object of the incorrect type, and then use the correct template to create a new `Application` object of the Call Concentrator type. For more information about creating and configuring the ICON `Application` object, see Deploying Interaction Concentrator.

There is no assignment to a Database Access Point (DAP) Application object on the **Connections** tab of the ICON `Application` object.

- **Solution:** Add to the ICON `Application` object's **Connections** tab any DAP `Application` objects through which this ICON instance will access Interaction Databases (IDBs).

The DAP `Application` object assigned on the ICON `Application` object's **Connections** tab does not have an associated DB Server `Application`.

- **Solution:** Associate a DB Server with the DAP `Application` object. For more information, see Deploying DAP.

The ICON instance has been configured to process call attached data (role = gud), but ICON cannot open the file specified in the adata-spec-name configuration option. The following error message in the log file indicates the existence of this condition:

Std 02016 Unable to open attached data file **attached_data_specification_file_name**, error code *XXX*

- **Solution:** Verify the following and correct as required.

  - The file specified in the adata-spec-name configuration option exists. If the file does not exist, create a new one or use the default attached data specification file (**ccon_adata_spec.xml**) provided in the Interaction Concentrator installation package.

  - The Interaction Concentrator user (the account under which ICON has been started) has the required permissions to read the attached data specification file.

> ### Important
> If you make changes to the attached data specification file, you must restart ICON for them to take effect.

The persistent queue (pq) file has become corrupted.

- **Solution:** Force ICON to create a new persistent queue file by doing one of the following:

  - Using operating system commands, move or rename the corrupted **.pq** file. On restart, ICON will create a new **.pq** file with the original file name in the original location.

  - Reset the pq-dbname configuration option in the ICON `Application` object. On restart, ICON will create a new **.pq** file with the new file name in the specified location.
    With either method, all unprocessed data in the old **.pq** file will be lost to ICON and IDB.

There is no free disk space on the disk where the **apstorage.db** file resides.

- **Solution:** Free up memory on the disk or add more disk memory. For more information about the **apstorage.db** file, see Populating Agent Login Session Data.

Runtime Problems

The following are the most common runtime problems:

- ICON does not connect to T-Server or Interaction Server
- ICON Does Not Receive Call-Related Events from T-Server
- ICON Does Not Write Information to the Database
- CON Has Lost Synchronization with the Configuration Database
- ICON Does Not Function Correctly

ICON does not connect to T-Server or Interaction Server

Possible causes of this problem are as follows:

There is no assignment to the T-Server `Application` object or the Interaction Server `Application` object on the ICON `Application` object's **Connections** tab.

- **Solution:** Add to the ICON `Application` object's **Connections** tab any T-Server or Interaction Server `Application` objects from which this ICON instance will receive interaction-related information.

The T-Server or Interaction Server application is not running, or it is not accessible over the network.

- **Solution:** Start the application or re-establish the network connection.

The T-Server or Interaction Server `Application` object cannot connect to its Switch link.

- **Solution:** See the applicable troubleshooting guide for your particular T-Server or Multimedia Interaction Server.

The release of the T-Server or Interaction Server `Application` object is not compatible with Interaction Concentrator. T-Server release 7.2 is the minimum version required by any release of Interaction Concentrator. Interaction Server release 7.5 is the minimum version required for Interaction Concentrator support of eServices. For more information about Interaction Concentrator compatibility and interoperability with other Genesys components, see "Compatibility" on the Planning Your Deployment page.

- **Solution:** Upgrade the T-Server or Interaction Server `Application` object to a compatible release.

The `Switch` object associated with the T-Server `Application` object does not have all the necessary DN objects configured.

- **Solution:** Create the DN objects. For more information, see the *Deployment Guide* for your particular T-Server.

ICON Does Not Receive Call-Related Events from T-Server

Possible causes of this problem are as follows:

ICON was not restarted after changes were made on the ICON `Application` object's **Connections** tab.

- Solution: Stop ICON, then restart.

ICON was not restarted after a backup instance was configured of a T-Server to which Interaction Concentrator has a connection configured on the **Connections** tab.

- **Solution:** Stop ICON, then restart.

There is no connection between the ICON `Application` object and T-Server.

- **Solution:** See No Connection to T-Server or Interaction Server.

ICON Does Not Write Information to the Database

Possible causes of this problem are as follows:

The database parameters are incorrectly specified on the DAP `Application` object. These parameters include the user name and password.

- **Solution:** Specify the correct values on the DAP `Application` object's **DB Info** tab, then restart ICON. For more information, see Deploying DAP.

DB Server is not running, or it is inaccessible over the network.

- **Solution:** Start DB Server or re-establish the network connection.

The RDBMS server is not available, or the IDB to which DB Server is trying to connect is not available.

- **Solution:** Take the necessary steps to make the database server and database available.

The DAP Application object has been configured for a role that prevents it from writing certain classes of information to the database.

- **Solution:** Reconfigure the role option for the DAP `Application` object. Restart ICON. For more information about configuring a DAP, see Deploying DAP.

IDB has not been initialized by the Interaction Concentrator initialization scripts.

- **Solution:** Run the Interaction Concentrator initialization scripts. For more information, see Deploying IDB.

ICON was not restarted after changes were made on the ICON `Application` object's **Connections** tab.

- **Solution:** Stop ICON, then restart.

ICON was not restarted after a backup instance was configured of a T-Server to which Interaction Concentrator has a connection configured on the **Connections** tab.

- **Solution:** Stop ICON, then restart it.

Records are accumulating in the in-memory queue and are not being written to IDB.

- **Solution:** This might not be a problem. Configuration options control whether a size threshold or timeout triggers the transfer of records from the in-memory queue to the persistent queue, from which the records are then written to IDB. Wait for the event that triggers the transfer, and re-evaluate your configuration as necessary. For more information see the following options: acc-proc-tout, acc-queue-

lifespan, and acc-queue-size.

The program logic consistently produces an error because of incorrect RDBMS settings. For example, there may be insufficient free space available on the RDBMS for data storage, or the rollback segment may be too small.

- **Solution:** Review the error messages reported in the ICON log file. If you have an ICON release earlier than 8.1.512.08 and have configured an HTTP Listener, you can also view the error messages on the Database Writer performance counter web page (for more information, see Monitoring Interaction Concentrator in the *Interaction Concentrator User's Guide*).

> ### Important
> From release 8.1.512.08 forward, the HTTP Listener functionality is no longer supported.

Provide the appropriate fix on the RDBMS side. For example, if the error messages cite no free space available for data storage, increase the table space.

- If the error was entirely related to the RDBMS problem, you do not need to restart ICON or perform any manipulation of the persistent queue (**.pq** file). However, if the **.pq** file has become corrupted and there are additional errors in the program logic, you must replace the **.pq** file.

ICON Has Lost Synchronization with the Configuration Database

There are a number of reasons why ICON might lose synchronization with the Configuration Database, especially following a shutdown of ICON.

Loss of synchronization has the following impact on IDB:

- ICON fails to capture data about configuration objects created while ICON was stopped.
- ICON does not mark configuration data as deleted in cases where the applicable configuration objects were deleted while ICON was stopped.
- ICON fails to capture changes in associations between objects (while it is stopped).

Solution: If you suspect that your configuration data in IDB is inconsistent with Configuration Database, perform a manual resynchronization. For more information, see Resynchronizing Configuration Changes in the *Interaction Concentrator User's Guide*.

ICON Does Not Function Correctly

Possible causes of this problem are as follows:

A connection configured on the **Connections** tab of the ICON `Application` object was removed or changed while ICON was operating.

- **Solution:** Stop ICON. Verify that the connections that have been configured on the **Connections** tab of the ICON `Application` object are as required for the deployment, then restart ICON. For more information about configuring connections, see Configure the Connections tab.

Merge Problems

> ## Important
>
> - The merge stored procedure described on this page is necessary only if you are running Genesys Info Mart 7.6 or earlier or you are running Interaction Concentrator *without* Genesys Info Mart. Genesys Info Mart provides a merge procedure that supplants the one documented on this page.
>
> - This merge procedure is not supported on PostgreSQL RDBMSs.

For more information about the merge procedure, see Merge Stored Procedure in the *Interaction Concentrator User's Guide*.

The most common problems encountered in executing the merge procedure (**gsysIRMerge** or **gsysIRMerge2**) are as follows:

- Merge Procedure Does Not Complete Successfully
- Merge Procedure Does Not Execute
- Merge Procedure Performance Is Slow or Unstable

Merge Procedure Does Not Complete Successfully

Possible causes of this problem are as follows:

In MS SQL Server 2019 Cluster deployments, switchover to another host in the cluster occurred while the merge procedure was executing. The error message is similar to the following:

```
Remote harden of transaction 'implicit_transaction'...failed.
Msg 596, Level 21, State 1, Line 0
Cannot continue the execution because the session is in the kill state.
Msg 0, Level 20, State 0, Line 0
A severe error occurred on the current command. The results, if any, should be discarded.
...
```

- **Solution:** Restart the procedure.

In general, the most likely reason the merge procedure fails is an inconsistency in IDB. The database

inconsistency might be introduced by ICON, by the downstream reporting application, through manual intervention, or in some other way. For example, if ICON writes a duplicate G_IS_LINK record while the merge procedure is executing, the RDBMS might report a primary key violation. Describing the possible causes of this problem in detail is beyond the scope of this document.

The following tables store information about the state of the merge procedure:

- GSYS_PENDING_IR

- GSYS_PENDING_LINK

- GSYS_SYSPROCINFO

- **Solution:** Review the error messages reported in the ICON log file, and take appropriate action to resolve the cause of the failure. You might also have to reset the merge procedure so that it recovers from its failed state (see Merge Procedure Recovery). Then restart the merge procedure.

Merge Procedure Recovery
Interaction Concentrator provides a stored procedure, **gsysIRMergeReset**, to simplify the steps to reset the merge procedure to recover from a failed state. To invoke the procedure, use an SQL statement like the following (the exact syntax depends on the RDBMS):

EXEC gsysIRMergeReset

> ## Important
>
> Under some circumstances, merge procedure recovery is not required. For example, the merge procedure may fail to complete successfully as a result of a deadlock condition. In this case, no special action is required other than to run the procedure again. However, if an error is discovered in the merge procedure, execute the stored procedure to reset the merge procedure.

Merge Procedure Does Not Execute

Possible causes of this problem are as follows:

The stored procedure was called incorrectly.

- **Solution:** Verify the syntax of the call to execute **gsysIRMerge** or **gsysIRMerge2**, and correct the execution command as required. For more information, see Executing the Merge Procedure in the *Interaction Concentrator User's Guide*.

There is an error in the database or in database performance that is not specifically related to the merge procedure or to ICON—for example, insufficient disk space or insufficient privileges.

- **Solution:** Review the error messages reported in the ICON log file. Provide the appropriate fix that the RDBMS requires, then restart the merge procedure.

The database error might be related to an inconsistency in IDB, in the sense that it was exposed or induced by an inconsistency in IDB, or resulted in an inconsistency in IDB. In these cases, reset the merge procedure (see Merge Procedure Recovery), then restart the merge procedure. If the merge procedure still fails to execute, contact Genesys Customer Care.

Merge Procedure Performance Is Slow or Unstable

Possible causes of this problem are as follows:

On a DB2 platform, default values of certain database parameters result in an excessive number of deadlocks.

- **Solution:** Contact Genesys Customer Care for assistance with database locking issues.

There is an inconsistency in IDB that does not cause the merge procedure to fail, but that significantly interferes with merge procedure performance.

- **Solution:** Reset the merge procedure (see Merge Procedure Recovery), then restart the merge procedure. If the problem persists, review database settings and try general database tuning adjustments. If the problem still persists, contact Genesys Customer Care.

Purge Problems

For more information about the purge procedures, see Purge Procedures in the *Interaction Concentrator User's Guide*.

The most common problems encountered in executing the purge procedures are as follows:

- PurgeProcedure Does Not Complete Successfully

Purge Procedure Does Not Complete Successfully

Possible causes of this problem are as follows:

In MS SQL Server 2019 Cluster deployments, switchover to another host in the cluster occurred while the purge procedure was executing. The error message is similar to the message shown above for the merge procedure.

- **Solution:** Restart the procedure.