

Oracle® Hospitality Cruise Shipboard Property Management System Quick Check-In Synchronization User Guide



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Preface

The Quick Check-In Synchronization (QCI Sync) is an interface that connects the Quick Check-In stations to the Shore-side database server through a separate network, enabling users to continue to work in an off-line mode.

Audience

This document is intended for project managers, application specialists and users of Oracle Hospitality Cruise Shipboard Property Management System.

Customer Support

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<https://support.oracle.com>

When contacting Customer Support, please provide the following:

- Product version and program/module name
- Functional and technical description of the problem (include business impact)
- Detailed step-by-step instructions to re-create
- Exact error message received
- Screenshots of each step you take

Documentation

Oracle Hospitality product documentation is available on the Oracle Help Center at <http://docs.oracle.com/en/industries/hospitality/>.

Revision History

Table 1 Revision History

Date	Description of Change
September 2021	Initial publication.
March 2022	Made minor grammatical changes.

Prerequisites, Supported Systems and Compatibility

This section describes the minimum requirements for Quick Check In Synchronization application.

Prerequisites

QCI Shore Database Server

- Oracle Database Server 12c and Oracle Data Access Components (ODAC) Installation
- OHC Web Service Installation
- OHC SPMS Version 20.1 Installation
- Latest version of OHC Advanced Quick Check In

PC running QCI Sync Interface

- Oracle 12c Full Client and ODAC Installation
- OHC SPMS Version 20.1 Installation
- Latest version of QCI Sync Interface

PC running OHC Advanced Quick Check In at Shore-Side

- Oracle 12c Full Client and ODAC Installation
- OHC SPMS Version 20.1 Installation
- Latest version of OHC Advanced Quick Check In

Supported Operating System

- See Compatibility Matrix at <http://docs.oracle.com/en/industries/hospitality/>.

Compatibility

SPMS version 20.2 or later. For customers operating on version 20.2 and below, database upgrade to the recommended or latest version is required.

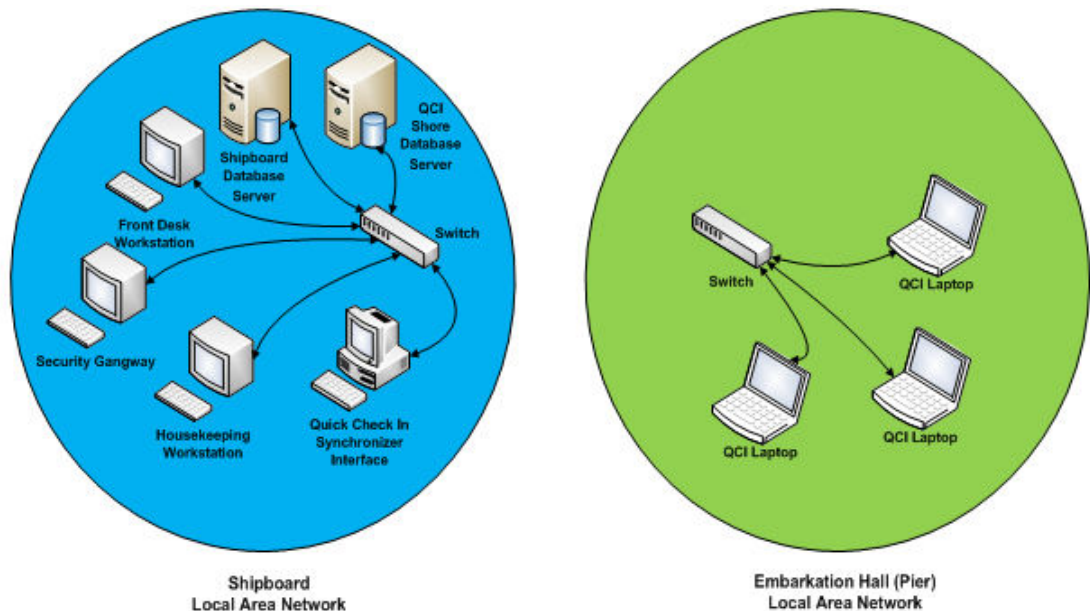
1

Technical Workflow

The Quick Check In (QCI) Sync Interface enables pier-side stations to continue working in an off-line mode, yet the data is updated in realtime. This is accomplished by connecting the Quick Check-In stations to a shore-side database server that resides on a separate network within the Embarkation Hall. The external network remains linked to the shipboard environment, allowing data synchronization between the shipboard database and the shore-side database through an interface. If there is a loss of connectivity, transactions are temporary held and written to the shore-side database server when the connectivity resumes, and synchronizes the changed transactions between both the shipboard and shore-side environments.

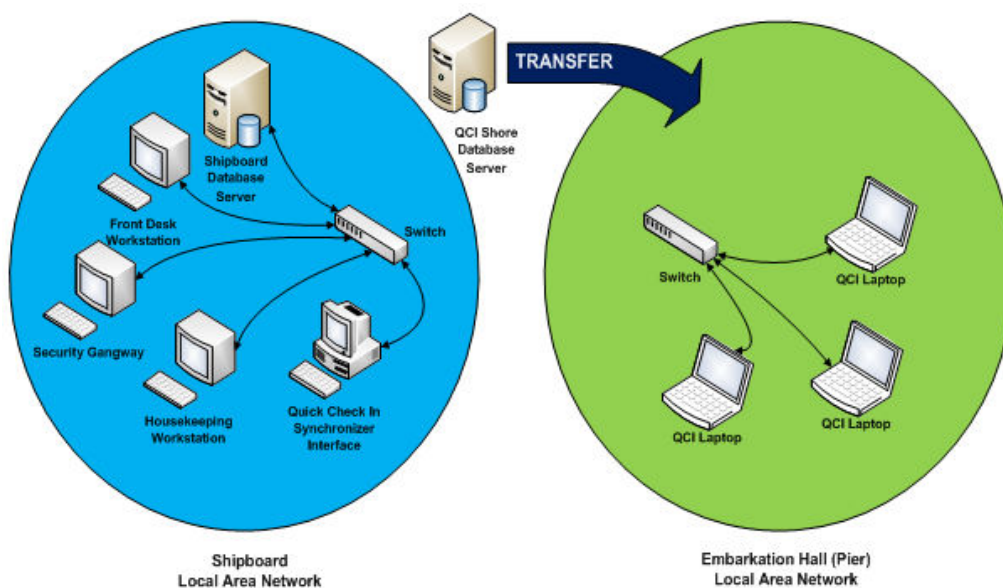
Before the ship embark at the pier, the person in charge onboard the ship will start up and connects the QCI Shore database server to the shipboard network. The QCI Sync Interface then performs the backup and restores database activities as illustrated in the diagram below.

Figure 1-1 QCI Sync Interface Data Flow



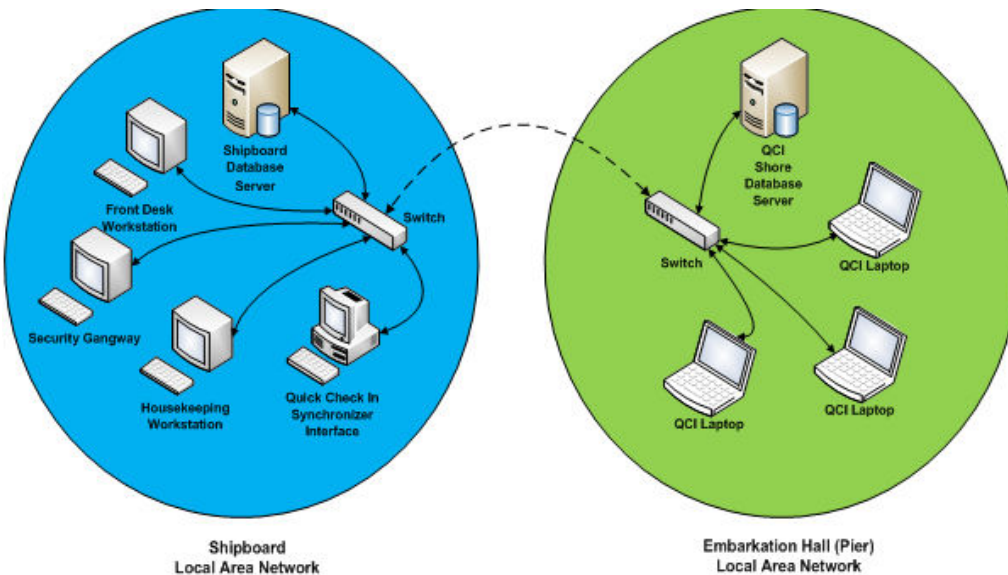
After the backup and restore database activities completes, you must shutdown the QCI Shore database server in a proper manner before relocating it to the pier Embarkation Hall.

Figure 1-2 QCI Sync Data Transfer



At the pier-side, a network connection between the shipboard and the pier must be established before starting up and connecting the QCI Shore database server to the pier network. The synchronization between the ship and the QCI Shore database is activated from the QCI Sync Interface on the shipboard.

Figure 1-3 QCI Sync Stretch

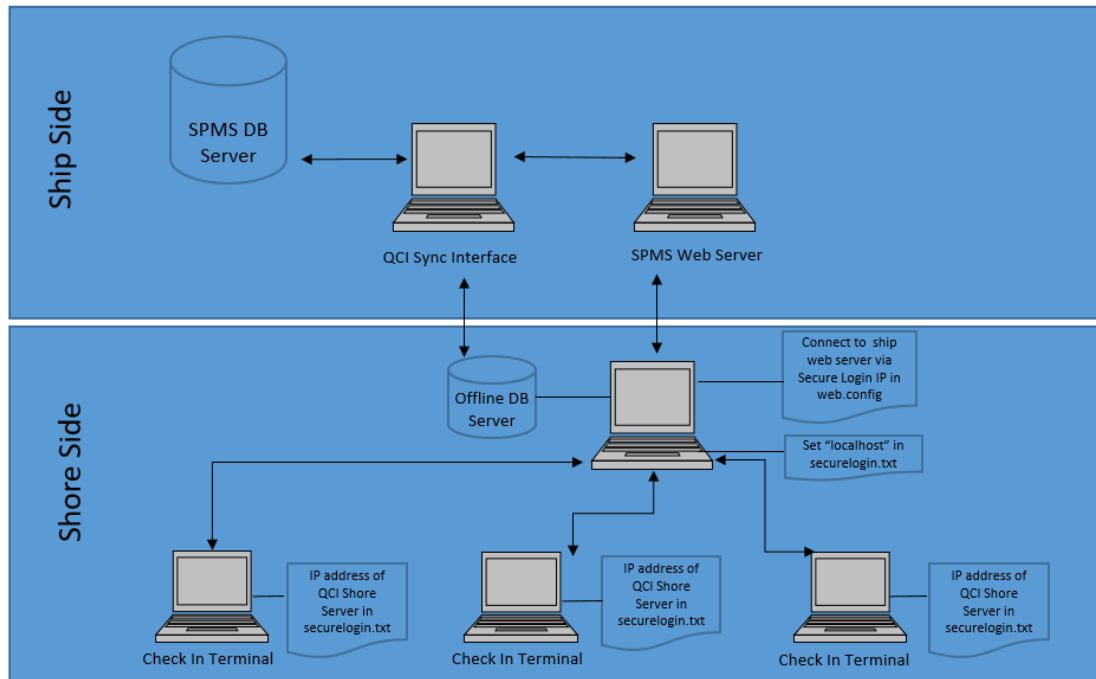


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Environment Setup

The diagram below illustrates the data flow for QCI Offline Check In environment at the Shore Side.

Figure 2-1 Environment Setup



Environment Setup for PC Running QCI Sync Interface

- The interface computer must be pre-installed with an Oracle Full Client installation that allows the QCI Sync Interface to access the Oracle import and export utility.
- Ensure the connection to the ship database is established. If the connection is not established, create an instance to connect the QCI Sync Interface running on shipside, and connect to the ShipDB. The **Connection Name** of the ship database is **SPMSShipDB** and points to the database service name (SID) **UID**.
- Establish the database connection to the Shore database. The **Connection Name** of the Shore database is **QCISHORE** and points to database SID **QCISHORE**.
- The Client PC will obtain the **OHCSecurity.par** file from the ship IIS Web Server when connected.

Environment Setup for QCI Shore Database Server

- The server must be pre-installed with Oracle Database Server 12c and ODAC Installation. The version of Oracle Database Edition of the QCI Shore database and Ship

database must be identical. For example, if the ship is running on Oracle 12c, then the Shore QCI database must also run on Oracle 12c.

- Create a blank QCISHORE database that has an existing user. Both the ship and the Shore QCISHORE database password must be identical. If a different password is used, the connection will show **Disconnected**.
- Ensure that the database connection to the Shore Database is established. The **Connection Name** of the Shore Database (ShoreDB) must be the same as the Ship Database (ShipDB). For example, the Connection Name of ShoreDB is SPMSShoreDB and is pointing to database SID 'QCISHORE'.
- The server must be pre-installed with SPMS Web Service. Define the Ship WebService IP at SecureLogin, web.config file. This is to obtain the encryption password (OHCSecurity.par) from the ship's web service when connected.

Figure 2-2 QCI Sync WebService Configuration

```
<configuration>
  <appSettings>
    <add key="Server" value="..." />
    <add key="DB Transaction Timeout" value="60"/>
    <add key="Debug" value="False"/>
    <add key="..." value="..." />
    <add key="..." value="..." />
    <add key="..." value="..." />
    <add key="NoneRefundableCreditMaxCount" value="5"/>
    <add key="SecureLogin" value="..." />
  </appSettings>
```

- The server must be pre-installed with SPMS for OHC Advanced Quick Check In to run and connect to the Shore Database. The **securelogin.txt** must point to QCI Shore Database Server's web server. This is to obtain the encryption password (OHCSecurity.par) from ship's web service and store in the QCI Shore Database Server's Web Server.

Environment for PC Running OHC Advance Quick Check In at Shore Side.

- The server must be pre-installed with Oracle 12c Full Client and ODAC Installation.
- Ensure the database connection to the Shore Database is established.
- The SID of the Shore Database (ShoreDB) must be the same as the Ship Database (ShipDB). For example; the SID of ShoreDB is SPMSShoreDB and points to the QCI SHORE database.
- The server must be pre-installed with OHC SPMS for the OHC Advanced Quick Check In to run and connect to shore database. The **securelogin.txt** must point to QCI Shore Database Server's web server in order to obtain encryption password (OHCSecurity.par) at the shore.

 Important:

Before you perform a new **Start Offline Mode**, remove the OHCSecurity.par in the QCI Shore Server if that exists, and restart the IIS. Ensure the OHCSecurity.par at all check in terminals are removed too

3

System Parameter

This section describes the **parameters** available to the QCI Sync module and is accessible through the **Administration** module, **System Setup, Parameter, General** group. You must configure these parameters before running the QCI Sync Interface.

Table 3-1 PAR Group General

PAR Name	PAR Value	Description
QCI Offline DB Terminate	24	Disallow the QCI Office DB to run if it is older than x hours. Specify in the parameter value. The default value is 24 hours.
QCI Offline DB Warning	12	Define when to prompt a warning message when the QCI Offline DB is older than x hour. The default value is 12 hours.
Pax BCard Track2 Length	16	The length of the 'BoardCC' coded on Track 2. The value must be > 15.
QCI Sync Active Warning	12	Prompt a warning message when the QCI Offline DB is running more than x hours. The default value is 12 hours.

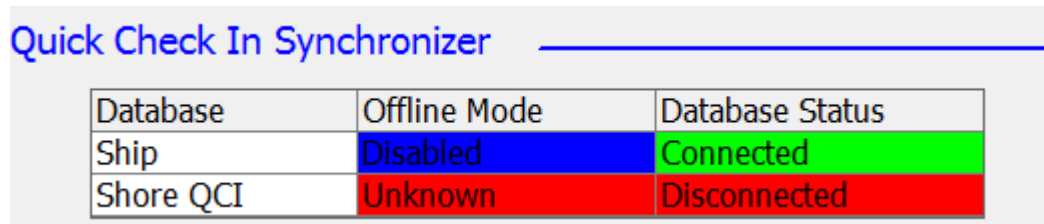
4

QCI Sync Interface

The QCI Sync Interface is an application that connects and synchronizes the Shipside database with the Shoreside database, with its database mode and connection statuses for both of the database shown. Apart from that, the synchronization progress is also shown in the **Messages** tab of the interface.

At the program start up, the application checks the status of both databases, followed by the state of the database, whether it is in 'Offline' or in 'Unknown' mode before synchronization commences. The status of the ShipDB and the Shore QCI database are shown. See the table below for an explanation of the status.

Figure 4-1 QCI Sync Mode



The screenshot shows a window titled "Quick Check In Synchronizer". Inside, there is a table with three columns: "Database", "Offline Mode", and "Database Status". The table has two rows of data. The first row is for "Ship" with "Disabled" in the Offline Mode column and "Connected" in the Database Status column. The second row is for "Shore QCI" with "Unknown" in the Offline Mode column and "Disconnected" in the Database Status column.

Database	Offline Mode	Database Status
Ship	Disabled	Connected
Shore QCI	Unknown	Disconnected

Table 4-1 QCI Sync Modes

Offline Mode	Database Status	Description
Unknown	Disconnected	The QCI Sync Interface is disconnected from the Shore QCI database. Possibly due to a network issue, user UID does not exist or the Oracle Database Listener has not started and results in the interface being unable to determine the Offline Mode. The message "Getting Shore QCI DB Status, please wait..." appears when the interface tries to reconnect to the QCI Shore database every x seconds.
Disabled	Connected	The QCI Sync Interface is connected to the Ship and the Shore QCI database has Offline Mode as Disabled. The synchronization is not able to start and prompts this message "Off-line mode not yet enable cannot sync." appears.

Table 4-1 (Cont.) QCI Sync Modes

Offline Mode	Database Status	Description
Enabled	Connected	The QCI Sync Interface is connected to the Ship and the Shore QCI database has Offline Mode as Enabled. This indicates the synchronization has started.
Invalid	Invalid	The QCI Sync Interface is connected directly to the Shore QCI database. The system prompts this message 'Ship DB and Shore DB is the same'.

Configuring the Interface

This section describes the settings available in the interface Settings tab. To configure the interface, start the **QCI Sync Interface**, select the appropriate **check boxes** in the Settings tab, and then click **Apply** to save the changes.

These settings are saved to the OHCSetstings.par file in C:\Public Document\Oracle Hospitality Cruise folder

Figure 4-2 QCI Sync Interface Settings

Messages | Debug | Settings

Offline Database:

Synchronization Interval in Second

Backup DB Filename

☐ Backup and Restore Silverwhere Schema

☐ Check Out Guest in Offline DB after Backup and Restore

☐ Exclude SEC Table content from restore to QCI Offline DB

☐ Automatic move actual posting/payment to route account during sync

☐ Exclude SIG Table content from restore to QCI Offline DB

☐ Exclude VIS_BLOB Table content from restore to QCI Offline DB

☐ Exclude CRD Table content from restore to QCI Offline DB

☒ Validate the charset between server and offline DB

eMail Recipient (Separate by ;)

Step 1
This will transfer your current Database to the Offline Server and prepare the system for offline check in mode. Do not move the server shoreside before the procedure has completed and both systems show offline mode Enable in the status screen above

Step 2
This will stop the offline check in mode. Do not stop the offline mode before check in has been completed and the offline server has been brought back onboard

Start Offline Mode procedure

Stop Offline Mode

Apply

Figure 4-3 QCI Sync Interface Setting —TDE

Messages | Debug | Settings

Offline Database:

Synchronization Interval in Second

Backup DB Log File

☐ Backup and Restore Silverwhere Schema

☐ Check Out Guest in Offline DB after Backup and Restore

☐ Exclude SEC Table content from restore to QCI Offline DB

☐ Automatic move actual posting/payment to route account during sync

☐ Exclude SIG Table content from restore to QCI Offline DB

☐ Exclude VIS_BLOB Table content from restore to QCI Offline DB

☐ Exclude CRD Table content from restore to QCI Offline DB

☒ Validate the charset between server and offline DB

eMail Recipient (Separate by ;)

Step 1
This will transfer your current Database to the Offline Server and prepare the system for offline check in mode. Do not move the server shoreside before the procedure has completed and both systems show offline mode Enable in the status screen above

Step 2
This will stop the offline check in mode. Do not stop the offline mode before check in has been completed and the offline server has been brought back onboard

Start Offline Mode procedure

Stop Offline Mode

Apply

Table 4-2 QCI Sync Interface Settings

Parameter	Description
Offline Database	Defines the SID of the QCI Shore database. It must be identical to the one created in Oracle Net Manager.
Synchronization Interval in Second	Defines the interval time when the synchronization process starts. At every x second between the ship and the QCI Shore Database. The default value is ten (10) seconds.

Table 4-2 (Cont.) QCI Sync Interface Settings

Parameter	Description
Backup DB Filename	Defines the ship database backup filename. The same backup file is used for both the backup and restores processes. The user must define the full path of the name where the backup file resides and the filename extension must be .dmp. For example, C:\Shipname.dmp. When TDE is used, the field name changes to Backup DB Log File. You should provide only the file name excluding the full path, for example; backup. This file name will be used as the data import log file.
Backup and Restore Silverwhere Schema	Enables the interface to backup and restore the SilverWhere dining schema (BKSTG_DINING) from the ship database to the QCI Shore database and enable passenger's board card to be printed with dining details. The SilverWhere dining schema is imported once and no update is required from the ship to the QCI Shore Database.
Check Out Guest in Offline DB after Backup and Restore	Enables the interface to automatically check out all previous cruise passenger's reservations in the QCI Shore database, due to the backup and restore process that was not performed before the actual embarkation day. For example, user enabled the QCI Sync Interface using the last backup and restore.
Exclude SEC Table content from restore to QCI Offline DB	Excludes the pictures from the ship to the QCI Shore database when restoring from the backup and restore process. The time taken to backup and restore takes longer when this feature is checked.
Automatic move actual posting/payment to route account during sync	Enables the interface to move actual posting and payment automatically to routed account when the Offline server is synched. The process commences after the database synchronization completes.
Exclude SIG Table content from restore to QCI Offline DB	Excludes the credit card signature captured when restoring from ship to QCI Shore database during the backup and restore process. The time taken to backup and restore takes longer when the feature is checked.
Exclude VIS_BLOB Table content from restore to QCI Offline DB	Excludes the Travel Document image when restoring from ship to QCI Shore database during the backup and restore process. The time taken to backup and restore takes longer when the feature is checked.

Table 4-2 (Cont.) QCI Sync Interface Settings

Parameter	Description
Exclude CRD Table content from restore to QCI Offline DB	Excludes the credit card records when restoring data from ship to QCI Shore database during backup and restore process. In the Guest Info window, the payment method will show as 'Credit Card' without the card details to comply with the Payment Card Industry (PCI) standards.
Validate the charset between server and offline DB	Verifies both the ship and Shore Database to ensure it has the same Charset before you are allowed to proceed. The system prompts this message <i>"Ship DB charset is xxx – shore DB charset is xxx. They do not match. Please inform Oracle Hospitality Cruise support so these can be adjusted. This is an informational message only and will not impact your current sync process."</i> .
eMail Recipient	Defines the system administrator's email address for notification to be sent when an error occurs during the synchronization process. The notification email is sent after every third synchronization. This requires the email server to be setup in the Administration module, Parameter, Promo, SMTP Server IP Address .

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Starting the Offline Mode

The Information Technology (IT) Officer is responsible for switching on the QCI Shore database server and connecting to the SPMS local area network before the ship arrives at the port for a new cruise embarkation.

1. At the QCI Sync Interface PC, run the QCI Sync application.
2. Ensure both the ship and QCI Shore database status are as follow:
 - Database Status shows: *'Connected'*
 - Offline Mode shows: *'Disabled'*
 - Messages shows: *'Offline mode not yet enable cannot sync'*

Figure 5-1 QCI Sync Offline Mode

Quick Check In Synchronizer		
Database	Offline Mode	Database Status
Ship	Disabled	Connected
Shore QCI	Disabled	Connected
Messages Debug Settings		
Action	Description	
	Interface Started 12/6/2016 8:42:33 AM	
Shore->	Getting Shore QCI DB Status, please wait....	
Shore->Ship	Offline mode not yet enable cannot sync	

When the Ship or Shore QCI Database Offline Mode status shows *Enabled*, then the database mode must be stopped first, before clicking the **Start Offline Mode Procedure**. Otherwise, the system prompts an error message *Please stop the Offline Mode first before continue*.

To stop the database mode, click the **Stop Offline Mode** of the Settings tab to refresh the Shore Database to a clean state.

3. On the interface **Settings** tab, click the **Start Offline Mode Procedure** button. The start of the backup process is indicated in the **Messages** tab as shown below.

Figure 5-2 QCI Sync Backup

Shore->Ship	Offline mode not yet enable cannot sync User Press Start Offline Mode Procedure
Ship	Backup Ship DB to c:\temp\qcishore.dmp.2

 Note:

If TDE applies, the system does not backup the database.

4. If the check box **Backup and Restore Silverwhere Schema** is selected, you must enter the Silverwhere Schema password at the prompt, and then click **Confirm** to continue.

6

Synchronization Process

This section describes the synchronization process in chronological order during the backup of the shipboard database in the current state, and then restores the backup to the QCI Shore Database. The process differs if TDE is applied. See process listed in [Table 6-2](#).

Table 6-1 Synchronization Process For Non TDE Database

Process	Description of Synchronization Tasks
Process 1	Performs the ship's database first backup routine on database schema only. The backup file refers to "QCISHORE.dmp.2".
Process 2	After the first backup routine completes, the interface then drops the QCI Shore database "UID" object and then the BKSTG_DINING" user. The interface waits for approximately 120 seconds for the QCI Shore database user "UID" to disconnect before the backup process begin.
Process 3	The interface creates all necessary triggers (TRIGGER_NAME like 'TR_QCI%') on the ship database for Offline Mode enabled. At this point, the ship database Offline Mode status change to "Enabled". All reservation changes made on the ship database from this point are updated to the CHG table for synchronization at a later stage.
Process 4	Perform ship's database second backup routine on database data and it excludes some non-required tables such as POS, MIB, and others. The backup file refers to "QCISHORE.dmp.1".
Process 5	Perform ship's database third backup routine that only contains VIS data and XDOC data without blog contents. The third backup file name is QCISHORE.dmp.1.VIS and QCISHORE.dmp.1.XDOC.
Process 6	Perform ship's database forth backup routine on BKSTG_DINING user data if user BKSTG_DINING exists in the ship database. The forth backup file name is QCISHORE.dmp.3.
Process 7	At the end of the ship database data backup routines, the command prompt window shall close automatically.
Process 8	Perform the first (1 st) database restore routine on "UID" database data. (filename=QCISHORE.dmp.1). During the restore routine, the command prompt window opens, showing the restoration progress and closes when the process completes.

Table 6-1 (Cont.) Synchronization Process For Non TDE Database

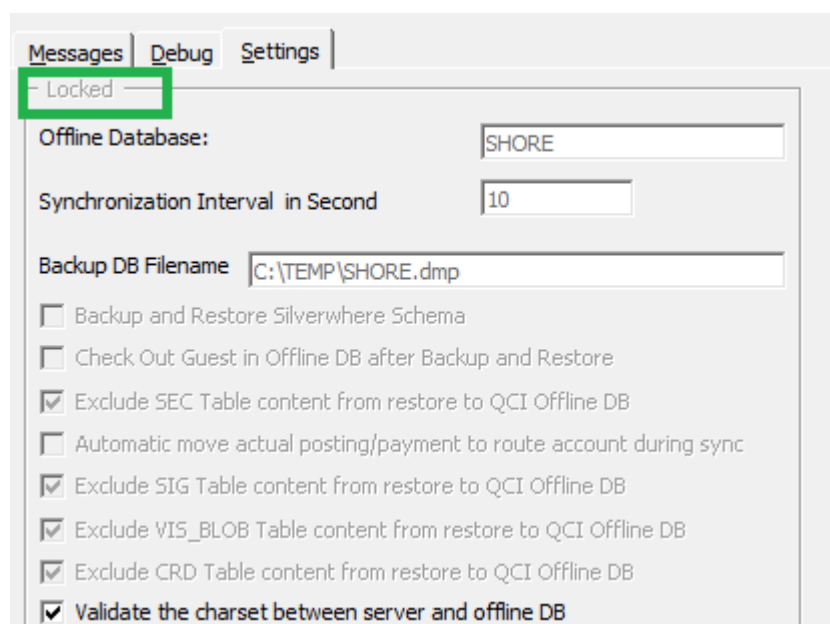
Process	Description of Synchronization Tasks
Process 9	Perform the second (2 nd) database restore routine on "UID" data table VIS and XDOC (filename= <i>QCISHORE.dmp.1.VIS</i> and <i>QCISHORE.dmp.1.XDOC</i>). During the restore routine, the command prompt window opens, showing the restoration progress and closes when the process completes.
Process 10	Perform the third (3 rd) database restore routine on "UID" database structure (filename= <i>QCISHORE.dmp.2</i>). During the restore routine, the command prompt window opens, showing the restoration progress and closes when the process completes.
Process 11	After completing all the restorations on the "UID" schema, the interface performs the forth database restore routine for user "BKSTG_DINING" data to the QCI Shore Database. (filename= <i>QCISHORE.dmp.3</i>). This process only applicable when the "Backup and Restore Silverwhere Schema" is selected.
Process 12	After the database restoration completes, the interface then updates the last backup date and time to the QCI Shore database parameter "QCI Offline DB Backup Date" and "QCI Offline DB Backup Date Server". For example, 20090306172359.
Process 13	All guests in the QCI Shore database are checked out if the checkbox "Check Out Guest in Offline DB after Backup and Restore" is selected in the Settings tab.
Process 14	If option "Automatic move actual posting to route account during sync" is checked, when user enabled the routing at shore-side database, the posting and payment auto route to the payer when routing information is sync to ship database. If option "Automatic move actual posting to route account during sync" is deselected, when user enabled the routing at the shore-side database, only the routing information syncs to ship's database. The program allows routing the posting and payment to payer while synchronizing the routing information from shore to ship.
Process 15	Creates all necessary triggers and sequences and then disable all interfaces such as PBX, ITV, DR, VIP, ADPI and Door Lock Interfaces parameters in the QCI Shore Database.
Process 16	The QCI Shore database offline mode is "Enabled" and the message "SPMS DB already ready with offline embarkation" appears in the Messages tab.

Table 6-1 (Cont.) Synchronization Process For Non TDE Database

Process	Description of Synchronization Tasks
Process 17	The system prompts a QCI Sync dialog box indicating the system is ready for Offline Mode and the server can be taken offline, ready to be taken into the terminal. Click OK to close the dialog box.

Synchronization Process for DB Using TDE

The synchronization process for a database that uses TDE are lesser from the standard process, and are listed in below table.

Figure 6-1 QCI Synchronization DB Locked**Table 6-2 QCI Synchronization Process for DB Using TDE**

Process	Description of Synchronization Tasks on DB using TDE
Process 1	The interface drops the QCI Shore database "UID" object and then the "BKSTG_DINING" user. The interface waits for approximately 120 seconds for the QCI Shore database user "UID" to disconnect before the backup process begins.

Table 6-2 (Cont.) QCI Synchronization Process for DB Using TDE

Process	Description of Synchronization Tasks on DB using TDE
Process 2	The interface creates all necessary triggers (TRIGGER_NAME like 'TR_QCI%') on the ship database for Offline Mode enabled. At this point, the ship database Offline Mode status changes to "Enabled". All reservation changes made on the ship database from this point are updated to the CHG table for synchronization at a later stage.
Process 3	QCI Shore database performs the first database import routine on "UID" data schema only. During the import routine, the command prompt window opens, showing the import progress and closes when the process completes.
Process 4	QCI Shore database performs the second data import routine on "UID" data table VIS and XDOC without blob contents. During the data import routine, the command prompt window opens, showing the import progress and closes when the process completes.
Process 5	QCI Shore database perform the third data import routine on "UID" database structure. During the import routine, the command prompt window opens, showing the import progress and closes when the process completes.
Process 6	After completing all the restoration on "UID" schema, the interface performs the forth database import routine for user "BKSTG_DINING" data to the QCI Shore Database. This process is applicable only when the check box, "Backup and Restore Silverwhere Schema" is checked.
Process 7	After the database restoration completes, the interface then updates the last backup date and time to the QCI Shore database parameter, "QCI Offline DB Backup Date" and "QCI Offline DB Backup Date Server". For example, 20090306172359.
Process 8	All guests in the QCI Shore database are checked out if the checkbox "Check Out Guest in Offline DB after Backup and Restore" is selected in the Settings tab.

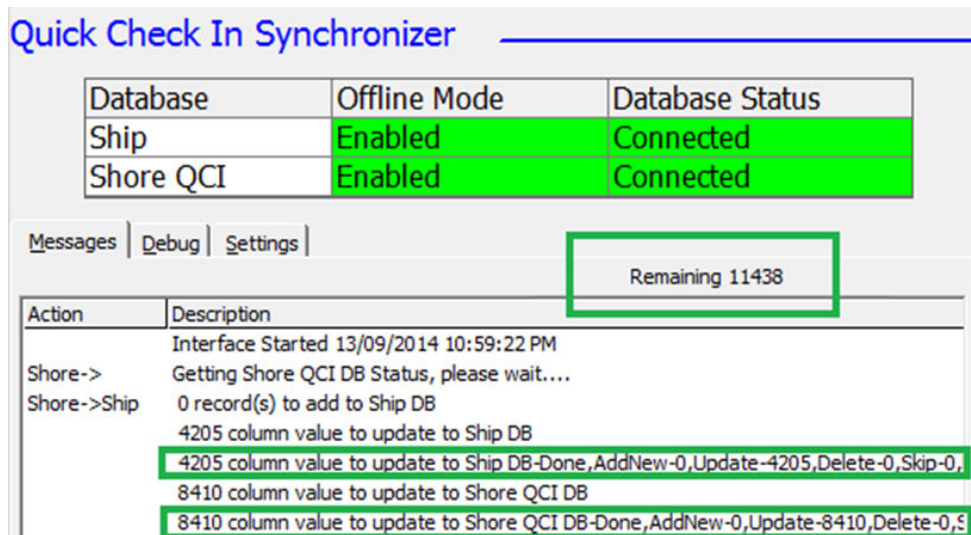
Table 6-2 (Cont.) QCI Synchronization Process for DB Using TDE

Process	Description of Synchronization Tasks on DB using TDE
Process 9	If option “<i>Automatic move actual posting to route account during sync</i>” is selected, when the user enables the routing at the shore-side database, the posting and payment auto route to payer when routing information is synchronized to the ship database. If the “<i>Automatic move actual posting to route account during sync</i>” option is deselected, when the user enables the routing at shore-side database, only the routing information is synchronized to the ship database. Program allows routing the posting and payment to payer while synchronizing the routing information from shore to ship.
Process 10	Creates all necessary triggers and sequences and then disable all interfaces such as PBX, ITV, DR, VIP, ADPI and Door Lock Interfaces parameters in the QCI Shore Database.
Process 11	The QCI Shore Database offline mode is "ENABLED" and the message, “ <i>SPMS DB already ready with offline embarkation</i> ” appears in the Messages tab.
Process 12	The system prompts a QCISync dialog box indicating the system is ready for Offline Mode. Click OK to close the dialog box.
Process 13	The system disables all parameters in the Settings tab and a dimmed 'Locked' is shown on the window when the Offline Mode is ready.

Below are some examples of records that were added from the QCI Shore database to the ship database or vice versa.

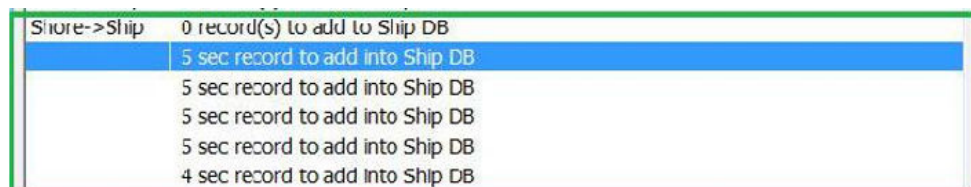
- The system indicates the number of remaining records to process, update, or skip during synchronization in the **Messages** tab.

Figure 6-2 Quick Check In Synchronizer



- The synchronization processes five pictures data (SEC records) per batch and is only applicable when adding new SEC records from Shore to Ship. Messages shown in the **Messages** tab are 'x value Update to Ship DB' when updating of SEC from shore to ship and 'Adding new record to shore' when a new record is added in Ship DB and transferred to shore DB. Any changes made to the SEC table from the ship do not transfer to the Shore Database.

Figure 6-3 QCI Sync Number of Picture Record Processed



- The QCI Sync process excludes the data below by default when synchronizing the shipboard database to the offline database:
 - Fleet Management System (FMS) data
 - Material Management System (MMS) data
 - Payroll data such as ADC, ADP, ADS, ADT, ADU, COH, COS, CTR, CTT, DDT, DPL, PAY, PCY, PGD, PGE, PGL, SED, SGT, SLB, SPD, SPO, SPP, SPT, SSH.
 - ResOnline data and Crew Management System (CMS) data such as RSP, RSL, RSD, FCCMSMSGs, CMSCHG, CMSRSL, CMSRSP, CMSRSD, FMS_TRANSFER, CHG_MOBILE_IN, CMS_UPL, CMS_UPL_RSP.
 - Data from table starts with 'X' for example, XAPP, XCET, XCTY, XDET, XMVW, XPDF, XSCP, XTIM, XUAF, XUSP, XUSR, XUST, XVEN, XDOC, with the exception of XDOC_GROUP < 12
- The QCI Sync does not synchronize the credit card (CCA) records to an offline database. When obtaining the credit card in an offline mode, the QCI Sync Interface checks if the parameter **Card Interface Name** is **Enabled** in the ship database. If it is, the CCA record is created in the ship database. Otherwise, the

Synchronization interface only synchronizes the credit card registration (CRD) record.

- When the QCI Shore Database server is ready for transfer from the ship to the terminal, the IT Officer will shutdown the QCI server and relocate the server to the terminal for embarkation preparation.
- When the QCI Shore Database server is down, the interface for QCI Shore Database status will indicate as “Disconnected” and the message “*Shore QCI DB is offline, cannot sync*” appears in the Messages tab. The message “*Resetting connection*” indicates the interface continues to check and attempt to reconnect to the database. This is due the interface application were not running or closed without pressing the **Stop Offline Mode**
- After transferring the QCI Shore Database server to the terminal, start it up and connect to the shore network. The Shore QCI Database Status changes to ‘*Connected*’ within a few minutes. If the terminal does not have network access to the ShipDB, the IT Officer is required to shut down the Shore QCI database server and transfer the server back to the ship at the end of the pier embarkation, before connecting the shore Offline Database Server to the shipboard network.

The QCI Sync Interface starts the synchronizing of the ship and shore QCI database once a connection is established.

Below is the Offline Mode Notification that might prompt when the program is running a database in QCI Offline Mode and the QCI Shore database parameter settings are:

- QCI Offline DB Warning = 12
- QCI Offline DB Terminate = 24

Table 6-3 Offline Mode Notification

Notification	Description
Notification 1	The system prompts the message <i>The QCI offline DB is older than 12 hours</i> , when running the QCI program with date time older than the client computer date time by 12 hours. Click OK closes the program.
Notification 2	The QCI program opens when the QCI Synchronization interface is <i>Enabled</i> . Otherwise, the system prompts the message <i>QCI Offline Sync is not enabled, cannot proceed</i> , and clicking OK closes the program.
Notification 3	The system prompts a message <i>The QCI offline DB is older than 24 hours, program will terminate now</i> , when running the QCI program date/time is older than the client computer date time by 24 hours. Click OK closes the program.

Below is the Offline Mode Notification that might prompt when the program is running on a database that is in QCI Offline Mode and the QCI Shore database parameter QCI Sync Active Warning =12.

Table 6-4 Offline Mode Notification With QCI Sync Active Warning —12

Notification	Description
Notification 1	The system prompts the message <i>QCI Sync have been running for more than 14 hours, please call IT.</i> , when these applications are started and running; Management, Administrator, Crew, and others with date/time older than the client computer date/time by 12 hours. Click OK allows you to proceed.
Notification 2	The system prompts the message <i>The record had been sync to server, cannot edit, please retry</i> when you add travel document in shore-side database while the record is being synchronized over to the ship database.
Notification 3	The system prompts the message <i>This application is connected to Quick Check In Offline database. Please take note that any changes made in this application might not synchronize back to ship database. The Quick Check In Offline database is only work with Advance Quick Check In and Quick Check In application.</i> when an application other than AQCI is started.
Notification 4	When the connection drops while processing transfer data, the application stops processing the record and prompts a message <i>QCISHORE DB is offline or Ship DB is down.</i> The application continues to process the records when the connection is restored.
Notification 5	If QCI Sync retries to synchronize those invalid records when user presses the Stop Offline Mode , the application prompts a message <i>There is error sync 1 record(s), do you want to continue? Click Yes will Ignore and Continue, No - Contact Admin to fix the invalid record in CHG table,</i> and ignores the invalid record or fixes the records before stopping the Offline mode.
Notification 6	The application continues to retry the invalid records (CHG records) and sends an email alert after every three retries. The system then displays Message <i>eMail Send Successful to...</i>
Notification 7	The system does not allow multiple instances running on a different workstation and prompts the message <i>OHC QCI Sync.exe is running at workstation xxx.</i>

7

Log Messages

The system logs all messages onto a log file in the following format:

<timestamp><location><message>

For example: <2018-09-11 00:45:11>Ship SELECT statement

Log Message during data sync

Table 7-1 Log Message Type In Data Sync

Log Message Type	Log Message Format with Sample Data
Initialization - QCI Sync interface started	Start<HT>Interface Started - (<version number>) (<work station>) (<IP address>) 9/11/2018 12:45:05 AM
Sync Reservation Records	- Shore->Ship<HT> 3 record(s) to add to Ship DB Note: There are 3 new reservation found at shore. System detects new reservation by running SELECT statement. - Ship-><HT> Adding RES record. Note: System is creating reservation at shipside. It will sync record in UXP, RES, VIS, SEC, and CRD. - Ship->Insert statement. Note: Insert new IDs into QCI table at ship DB. This table links ship and shore reservation records. <HT>ResAcc - UID sync to Ship DB. Note: New reservation record with ID UID is created at ship DB.
Sync Posting Records	<HT>Shore->SELECT statement Note: QCI Sync checks number of new records found in POS table at shore DB. If record is found, it will synchronize the record over to ship DB.

Table 7-1 (Cont.) Log Message Type In Data Sync

Log Message Type	Log Message Format with Sample Data
Sync Changes	- Ship->SELECT statement. Note: Load changes in CHG table at ship and shore DB. It skips log message. - Same Update Found, remove old value - 0, key=UXPUXP_A_POS_DEBITUD(UID) Note: Same update found in CHG tables. Old value = chg_value; key = chg_table, chg_column and chg_record_id. QCI Sync compares CHG records at shore and ship DB. Concatenation of 3 columns - chg_table, chg_column and chg_record_id is used in this comparison. Old value will be removed. <HT> 775 column value to update to Ship DB Note: There are 775 of changes found in shore. - Ship->update statement. Note: updating changes from shore DB to ship DB. - Ship->SELECT statement. Note: System sync image in sec_image at SEC table. <HT>Update Skip for RES->RES_EMB_PC->UID->TO_DATE('2018-09-11 03:31:25', 'YYYY-MM-DD HH24:MI:SS')->9/10/2018 3:31:25 PM->9/10/2018 9:26:32 PM Note: QCI Sync skips the update if modify date (9/10/2018 3:31:25 PM) is less than record's last modified date (9/10/2018 9:26:32 PM).
Error	- Error<HT>Shore->UpdateChg\Line#\2253\ORA-12899: value too large for column "UID"."UXP"."UXP_A_CITY" (actual: 31, maximum: 30)<CR><LF>chg_id = UID, chg_table = UXP, chg_column = ALL, chg_record_id = UID, chg_value = , chg_moddate = 9/10/2018 11:51:13 AM Note: We have to make sure columns in both shore and ship database have the same length. <HT> 232 column value to update to Shore QCI DB- Done, AddNew-230, Update--228, Delete-0, Skip-0, Error-230 Note: Summary of records after sync is complete. Data sync will start again after x seconds, it is based on the setting at the interface.

8

Stop Offline Mode

At the end of the embarkation at the pier, both the shipboard and the QCI Shore database are synchronized. If no activities appear in the **Messages** tab, the IT Officer can then proceed to stop the Offline Mode process.

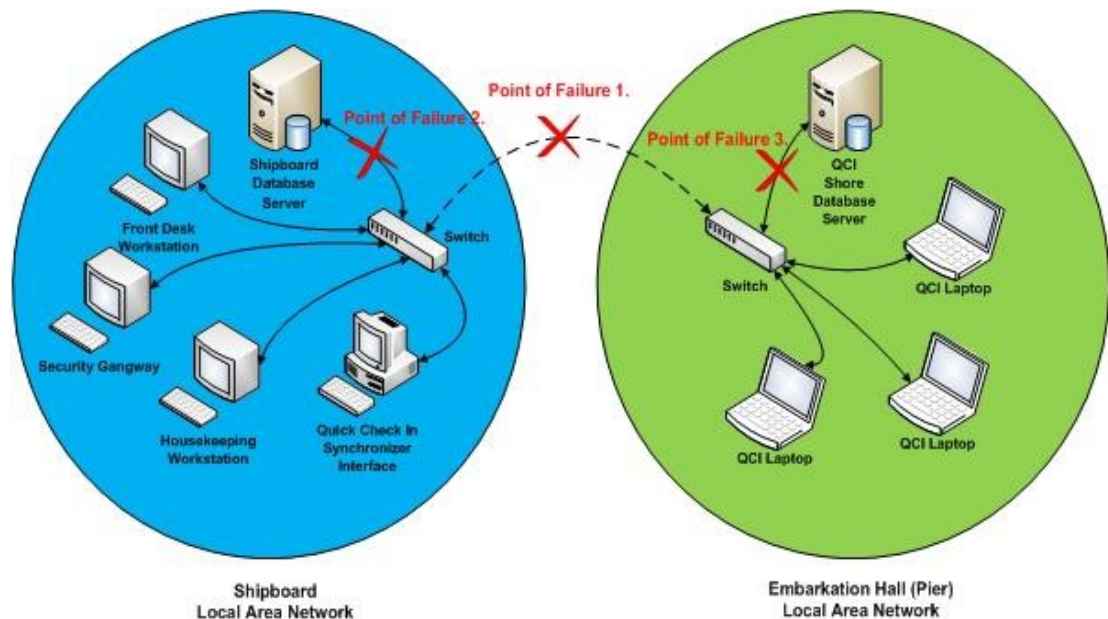
1. At the Settings tab, click **Stop Offline Mode**.
2. The system prompts, *Are you sure you want to stop the Offline Mode. You should only stop the Offline Mode when all embarkation is finished.* Click **Yes** to stop the offline mode process.
3. When the security login dialog box opens, you must provide a valid user name and the password. Click **Login** to continue.
4. When one of the Quick Check-In clients remains connected to the shore QCI database, the system prompts an error message in the **Messages** tab with the workstation/source name that has the application open and terminates the **Stop Offline Mode Procedure**. The IT Officer must close the application and then restart the **Stop Offline Mode Procedure** again.
5. The interface starts to remove the offline triggers from the QCI Shore database and the ship database when the process begins, and set the Offline Mode to *Disabled* for the ship and shore QCI. At this point, you may then close the QCI Sync Interface.

9

Troubleshooting

This section describes the failure possibilities that you may encounter during the embarkation day.

Figure 9-1 QCI Sync Failure Points



- **Failure 1**

Network connection lost between the shipboard database and the shore-side QCI database.

- The database synchronization between the ship and the QCI Shore database has stopped.
- Check and ensure the Oracle Database Listener has started and user 'UID' and password exist in the database schema.
- This does not affect the ship operations and the shore embarkation operation. All the reservation changes made on both databases are logged to CHG table for synchronization at a later stage.
- The interface tries to reconnect to the shore QCI database every number of seconds, depending on the time interval set up on the interface and synchronization resumes after the network connection is restored.

- **Failure 2**

The Ship database server network cable disconnected or database service has stopped.

- The database synchronization between the ship and the QCI Shore database has stopped.

- This does not affect the shore embarkation operation and all the reservation changes are logged to CHG table to be synchronized later. The shipboard operation is affected due to the lost connection from the shipboard database server.
- The error message popup on QCI Synchronizer Interface is: "ORA-03114: not connected to ORACLE". The error message popup on ship workstation is "ORA-03113: end-of-file on communication channel".
- **Failure 3**
QCI Shore database server network cable is disconnected or database service has stopped.
 - The synchronization between the ship and the QCI Shore database has stopped. The shipboard operation is not affected and all the reservation changes are logged in the CHG table for synchronization at a later.
 - This affects the shore embarkation operation due to the lost connection from the QCI Shore database server.
 - The error message popup on QCI workstation is: "ORA-03113: end-of-file on communication channel.".
- **Failure 4**
One of the DMP failed to restore.
 - When the program tries to restore the 'BKSTG_DINING' schema, one of the DMP is missing due to certain reasons, the import log shows: 'IMP-00037: Character set marker unknown' and 'IMP-00000: Import terminated unsuccessfully'.
 - This error is written to the QCISyncLog.
 - The 'Start QCI Offline Mode' process aborts.
- **Failure 5**
Failed to run Database Installer or Tools Encryption Key Manager.
 - The QCI Sync is shut down, possibly preformed using End Task Program but Offline Mode is still shown Enabled.
 - You are not allowed to run the DB Installer or Change Encryption Key. A message prompts: *QCI Sync is running, please stop QCI Sync first.*
 - You are required to run QCI Sync to perform Stop Offline Mode.
- **Failure 6**
QCI Sync returned 'Error sending to DR'
 - The application tries to send a check-in status to an offline Dining Interface.
 - Verify that the Dining Interface is running.
- **Failure 7**
QCI Sync hang
 - Run the 1st script to find out which session ID could possibly lock the database and the 2nd script to kill that session. For further assistance, contact Customer Support.