

RBI RTGS

Participant Interface Frequently Asked Questions

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1 Introduction and Summary

1.1 Purpose and Scope

This document is a cumulative set of Frequently Asked Questions (FAQ) relating to the Stand-alone RTGS Release (SRR) phase of the RTGS rollout.

References to the Participant Interface user documentation has been provided in the relevant sections, as well as additional information answering specific issues and topics.

1.2 Amendment History

Issue	Description	Date
1.4	Draft	16 August 2004
2.0	Definitive	04 October 2004
2.1	Technical FAQs updated	11 January 2004

1.3 References

Document Name	Doc. Reference No.
Participant Interface User Guide	292.EC28113:50.02.01
Participant Interface Operations Guide	292.EC28113:50.03.01

1.4 Abbreviations and Acronyms

Abbreviation	Description
DR	Disaster Recovery
EOD	End-of-day
IFSC	Indian Financial System Code
IFTP	Interbank Funds Transfer Processor
PI	Participant Interface
RTGS	Real Time Gross Settlement
SRR	Stand-alone RTGS Release

2 Participant Interface Application FAQs

1. **When a new participant is added, only the new IFSC code is sent by the RBI in the Participant Code Change Notification. As a result, the bank and/or branch name is not available during message creation. Can this be added?**

When a new bank and/or branch is added to the RTGS system, all participants receive a Participant Code Change Notification. This notification updates the PI database with the code of the new bank/branch but does not update the bank and branch details. This update ensures message validation occurs at the PI.

After this notification is received, the bank/branch details have to be added using the Organisation Code Maintenance option in PI, to make the use of the IFSC easier.

Refer to section 25.2 in the PI User Guide for more information on maintaining Organisation Codes.

2. **IFSC Codes are not displayed in alphabetical order in the Receiver Participant drop-down list during Message Creation. Why is this?**

Currently, all participant IFSC codes are sorted and displayed in alphabetical order.

3. **Can PI automatically print outward messages as they are sent?**

No, automatic printing of outward messages is not available in PI. To print an outward Message, right-click the relevant message in the queue and select the Print menu option.

4. **Can PI automatically print inward messages as they are received from the RTGS system?**

Yes! This is possible. The printer used for inward message printing must be a shared printer and located in the PI server domain.

Use the System Parameters option in PI to configure inward message printing.

Refer to section 24.2 in the PI User Guide for more information on configuring System Parameters.

5. Why is the amount not displayed for inward messages in the grid view?

The fields in the grid are generic for all transaction types. The amount field is not used in all transaction types and therefore, the message amount is not currently supported in this view.

To view the amount of a payment message, double-click message to open it, and select the Message Details tab folder.

Refer to section 13.1.1 in the PI User Guide for more information viewing message details.

6. Is there an option to search for messages in the History database?

Yes. In PI, right-click on any of the queues or sub-queues and select the Find History Message menu option.

Refer to section 19.1.2 in the PI User Guide for more information on searching the History database.

7. How do I view the amount of a payment message using the Find History Message option?

1. In PI, right-click the required queue or sub-queue and select the Find History Message menu option.
2. Double-click the required message to open it.
3. Select the message details tab folder to view the amount.

8. How do I generate a report on all the inward messages that have been sent to the HOST?

1. In PI, select the Go to > Menu Options > List Reports menu option.
2. Select the Inward Messages > Payments > Sent to Host sub-queue.
3. Select the Print menu option to print the report.

Refer to section 13.2 in the PI User Guide for more information on the Sent to Host sub-queue

Refer to section 27 in the PI User Guide for more information on Printing.

9. Are there any invalid characters, which should not be used in RTGS messages?

Yes. The following characters should not be used in RTGS messages:

Not permitted by system							
:		{	}				
Configurable using System Parameters option							
!	@	\$	#	%	^	&	*

Refer to section 24.2 in the PI User Guide for more information on configuring System Parameters.

10. How often does the list of queues in PI automatically refresh? Is this refresh interval configurable?

The default queue refresh interval is 60 seconds. This is not configurable.

11. Can I customise the message grid view in PI?

You can customise the grid view in the PI client, to suit the individual user's requirements. This customisation is queue-dependant as well as user-specific. This means that customisations that been applied to one queue will not be reflected in other queues; also, customisations made by one user will not affect other users.

Refer to section 3 in the PI User Guide for more information on customising PI views.

This customized view will be stored and displayed for the respective queue the next time you log in.

12. I require that supervisors should manually enter the message amount during message authorisation, which is compared to the original amount entered during message creation. Can PI be configured to display a blank Amount field for message authorisation?

Yes, PI can be configured to display a blank Amount field during message authorisation. This is called Key Verification.

When the PI key verification configurations are changed in any way, this change must be authorised by a supervisor using Remote Supervisor Authorisation option.

Refer to section 24.1.1 for more information on enabling Key Verification in PI.

Refer to section 18 in the PI User Guide for more information on Remote Supervisor Authorisation in PI.

13. Why are End-of-Day related events displayed in next day's event report?

During the End-of-Day (EOD) process, all events raised by the system since last EOD process, are moved into the PI history database (PIHIST). EOD-process-related events are logged by the system only after completion of the EOD of the respective business day and hence they are displayed in the next day's reports.

These events can be viewed after EOD is completed.

Refer to section 5.4 in the PI User Guide for more information on viewing events.

14. Can PI be configured such that the user who created a payment message can also authorise it?

Yes, it is possible to configure PI in this way. Before making this change, it is important to for the bank to understand the results of this change and incorporate it into its business processes.

Remember that this change is applicable to the PI system as a whole, and cannot be configured for any particular user. This means that once configured, all PI users (who have message authorisation rights) will be able to authorise their own messages (as per the defined authorisation levels).

Refer to section 24.1.5 in the PI User Guide for more information on enabling authorisation by the user who created the message (step no. 3 describes this configuration).

15. Can Interbank and Customer Payment messages imported using the File Import option; or messages from the HOST, be modified in PI?

In the PI, messages can be modified only if they are in any of the following sub-queues:

- Received;
- Awaiting Completion;
- Awaiting Repair.

If STP (Straight Through Processing) is not configured, imported Interbank and Customer Payment messages or messages from the Host, are displayed in

the Received Queue and can therefore be modified prior to being 'completed' by a user.

The fields that can be modified in an imported message are configurable using the Message Control Parameters option in PI.

Any change in this configuration must be authorised by a supervisor using Remote Supervisor Authorisation option

Refer to section 24.1.1 in the PI User Guide for more information on specifying which fields can be modified in an imported message.

Refer to section 18 in the PI User Guide for more information on Remote Supervisor Authorisation in PI.

16. When starting the PI EOD process, the system displays a message stating that some of the messages are not sent to Host. Why does this happen?

This message is displayed in case the Bank has configured the PI system to send inward messages to the Host, but PI is unable to send the messages to the Host.

This is just a warning message. You can either continue with the EOD process or stop the EOD process, export the inward messages and then start the EOD process again.

17. How do I verify the current status of the link with IFTP?

A user with appropriate permissions can use the Status Monitor option in PI to view the current status of the link with IFTP.

Refer to section 5.2 in the PI User Guide for more information on the Status Monitor.

18. How can I view the Reason for Rejection mentioned by a supervisor during message authorisation?

When the Awaiting Repair sub-queue is selected, the Reason for Rejection is displayed in the grid view.

3 Technical FAQs

1. What do I do if the MQ Series Sender Channel becomes Inactive?

To start the MQ Series Sender Channel:

1. Select the Start > Programs > IBM Websphere MQ Server > MQ Explorer menu option.
2. Expand the Console Root > Websphere MQ > QueueManagers > XXXXQMGR (XXXX is the bank's IFSC 4 character bank code) > Advanced > Channels.
3. Right-click **TO.XXXXQMGR.IFTPQMGR** (Sender Channel) and select the Start menu option.

To prevent the MQ channels from becoming inactive:

1. Select the Start > Programs > IBM Websphere MQ Server > MQ Explorer menu option.
2. Expand the Console Root > Websphere MQ > QueueManagers > XXXXQMGR (XXXX is the bank's IFSC code) > Advanced > Channels.
3. Right-click **TO.XXXXQMGR.IFTPQMGR** (Sender Channel) and select the **Properties** menu option.
4. Select the Extended tab folder and select **Disconnect Interval**.
5. Specify the Disconnect Interval as '0'.

2. What files are generated during End-of-Day processing?

The Live database backup results in the generation of two files:

- Live database backup file
- Live database backup log file

History database archival results in the generation of seven files

- Financial message archive file
- Financial message archive log file
- Financial GM message archive file
- Financial GM message archive log file
- Non-financial message archive file
- Non-financial message archive log file
- Control File - containing a list of the archive files

The names of the files listed above are configurable by the Bank (this configuration is done using the **TechConfig.bat** file available in the PI Setup CD).

The number of files generated during PI End-of-Day (EOD) depends on the Purge Interval and Purge Period specified for archival of the messages from the PI history database (PIHIST).

For example, in case the Purge Interval is set to 1 day, then the system will generate **seven archive files** (apart from two live database backup files) for every alternate EOD process.

3. What files must be backed up after PI EOD?

All the files listed in question 2 above must be backed up after a PI EOD.

In addition, the PI history database (PIHIST) must be exported using Oracle and backed up.

4. What do I do if the status of the Sender Channel is Retry/Binding?

Use the Ping command to ping IP address 10.21.1.45 (for LIVE run banks) or IP address 10.21.1.44 (for TRIAL run banks) and ensure network connectivity is available between your bank and RBI.

1. To do this, select the Start > Run menu option.
2. Enter Command.

3. Press Enter
 4. Enter **Telnet <IP Address> <Port>**. For example, Telnet 10.21.1.45 1419 (for LIVE run banks) or Telnet 10.21.1.44 1419 (for TRIAL run banks)
 5. If a **blank DOS window** is displayed, then network connectivity is available between your bank and RBI. In case network connectivity is not available, contact the RBI Help desk.
- 5. On every Startup PIDB and PIHIST databases service needs to be started manually**

If Oracle Advanced Security is enabled, then the PIDB and PIHIST databases must be started manually on every server startup.

- 6. Is it mandatory to shutdown the PIDB and PIHIST databases after PI EOD?**

After the PI EOD is complete, it is recommended to stop PI Server and Cryptoserver. Shutdown of the PIDB and PIHIST databases is not mandatory.

- 7. Can I change the amount ranges for Supervisor Authorisation?**

Yes, you can change the amount ranges used for supervisor authorisation levels, for individual message types.

The steps given below describe this procedure:

1. Select the Go to > Menu Options > PI Configuration > Message Control Parameters menu option.
2. Select the Configuration of Multiple Authorisation tab folder.
3. Select the appropriate Message Type from the drop down list.
4. Select the Authorisation Bypass as All.
5. Log out from the PI client. Shut down all PI server applications.
6. On the PI server, run the **TechConfig.bat** file (available in the PI Setup CD) and change the authorisation amount Ranges for the required message type.

8. How do I enable or disable the Host interface after PI has been setup?

Ensure that all PI server and client applications are stopped.

Enabling the Host Interface:

1. On the PI server, run the TechConfig.bat file (available in the PI Setup CD).
2. Set the parameter Host Enabled to 1 and specify the Host Queue Manager Name (the name of the MQ Queue Manager, from where the PI server will send/receive host messages. This should be always XXXXQMGR, where XXXX is the first four characters of the bank's IFSC code).
3. The PI server startup batch file (StartPIServer.bat) and PI server shut-down batch file (StopPIServer.bat) must be edited to include the HOSTIntf.exe file. These files are located in the installation directory on the PI server.
4. Add the following command to StartPIServer.bat:
 - **start hostintf.exe**
5. Add the following command to StopPIServer.bat
 - **start hostintf.exe /Quiet**

Disabling the Host interface:

1. On the PI server, run the TechConfig.bat file (available in the PI Setup CD).
2. Set the parameter Host Enabled to 0.
3. Remove the following command from StartPIServer.bat:
 - **start hostintf.exe**
4. Remove the following command from StopPIServer.bat
 - **start hostintf.exe /Quiet**

9. What is the thread count of PI server executables?

PI server applications should maintain following number of threads:

- Gm.Exe – From 20 to 24
- GmRouter.exe – 5
- Immsrv.exe – From 7 to 9
- Ommsrv.exe – From 7 to 9

In case the thread count has decreased, stop all PI server applications and re-start them

10. How do I restore a backup into the PIDB database?

Refer to section 6.4.1 in the PI Operations Guide for information on restoring backups.

11. Is it possible to configure Inward payment messages to be displayed in order of received time?

Yes, this is possible. The following steps describe how inward messages can be displayed in order of received time:

1. Select the Inward Messages > Received > Payments sub-queue.
2. Right-click the column heading and select the Customize Current View menu option.
3. Click [Sort]. The Sort dialog box is displayed.
4. Click [Clear All]. Existing sort criteria is deleted.
5. Select CreateDate from the Sort Items By drop-down list.
6. Select the Descending radio button.
7. Click [OK].

Remember that PI queue customisation is specific to the user and the sub-queue.

Alternatively, if a user has the appropriate permissions, this information is also available in the Status Monitor > Messages tab folder.

Refer to section 5.2 in the PI User Guide for more information on the Status Monitor.

12. what configuration changes must be done when changing the PIDB database password?

When the PIDB database password is changed, all the server INI files must be updated with the new password, as given below (where XXX is the new PIDB password):

- **RTGS\PISERVER\PI.ini**

Under section [Main]

```
RBSDBConnStr=ODBC;DBQ=PIDB;Server=RBIRTGS;UID=PIDB;PWD=XX  
X;APP=PI
```

```
PIDBConnStr=ODBC;DBQ=PIDB;Server=RBIRTGS;UID=PIDB;PWD=XXX  
;APP=PI
```

- **RTGS\PISERVER\GM.ini**

Under section [Main]

```
DBConnStr=ODBC;DBQ=PIDB;Server=RBIRTGS;UID=PIDB;PWD=XXX;A  
PP=PI
```

- **RTGS\UCT\UCT.ini**

Under section [Main]

```
Database=ODBC;Server=RBIRTGS;UID=pidb;PWD=XXX;DBQ=pidb
```

- **RTGS\UCT\CopyCert\CopyCert.ini**

Under section [Main]

```
Database=ODBC;Server=RBIRTGS;UID=pidb;PWD=XXX;DBQ=pidb
```

- **RTGS\OfflineCryptoTool\OfflineCryptoTool.ini**

Under section [Main]

```
Database=ODBC;Server=RBIRTGS;UID=pidb;PWD=XXX;DBQ=pidb
```

- **RTGS\OnlineCryptoTool\OnlineCryptoTool.ini**

Under section [Main]

```
Database=ODBC;Server=RBIRTGS;UID=pidb;PWD=XXX;DBQ=pidb
```

13. Which files must I update when changing the PIHIST database password?

When the PIHIST database password is changed, the following steps must be performed in the order defined:

1. PIHIST password must be changed in the PI.ini file on the server (where XXX is the new PIHIST password).

Under Section [HISTORY]

```
PIDBConnStr=ODBC;DBQ=PIHIST;Server=RBIRTGS;UID=PHIST;PWD=XXX;APP=PI
```

2. The History database link (HistoryDB) must to be recreated.
 - a. Login to the **PIDB** database using an SQL editor.
 - b. Execute the following statements, where <XXX> must be replaced by the new PIHIST password:

```
DROP DATABASE LINK HISTORYDB;  
CREATE DATABASE LINK HISTORYDB CONNECT TO  
PIHIST IDENTIFIED BY <XXX> USING 'PIHIST';
```

3. Two stored procedures (PROC_EOD and PROC_EOD_COMMS) must be recompiled.
 - a. Login to the PIDB database using an SQL editor
 - b. Execute the following SQL statements:

```
ALTER PROCEDURE PROC_EOD COMPILE;  
ALTER PROCEDURE PROC_EOD_COMMS COMPILE;
```

14. How do I test the connectivity between the PI Disaster Recovery (DR) server and the IFTP?

The procedure to test the connectivity between the PI DR server and the IFTP is given below.

Before testing the connectivity, ensure the following:

- PI server and client workstations at the DR site are in the same network domain.
- Synchronisation of PIDB and PIHIST databases between Primary site and DR site is complete.
- Port 1419 in the firewall at the DR site is opened for bi-directional communication with the RBI Primary (IP address 10.21.1.45) and Secondary (IP address 10.24.1.45) IFTP site.

- Port 389 in the firewall at the DR site is opened for bi-directional communication with the LDAP server at IDRBT.
- Configure an external IP address (i.e. IP address of 10 series) for the standalone PI server at the DR site.
- If a cluster server is used for PI at the DR site, then the cluster's virtual IP address of the PI queue manager, at DR site, is natted with the external IP address (i.e. IP address of 10 series).
- PING process from the DR site to the RBI Primary IFTP site (IP address 10.21.1.45) is successful.
- PING process from RBI Primary IFTP site to the DR site is successful.
- TELNET process from DR site to the RBI Primary site on port 1419 (i.e. 10.21.1.45(1419)) is successful.
- TELNET process from RBI Primary site to the DR site on port 1419 (i.e. 10.21.1.45(1419)) is successful.
- Provide the IP address of the PI server at the DR site to the RTGS Helpdesk before performing the connectivity test.

Perform the following steps to test the connectivity between the DR site and the IFTP:

1. Ensure that the PI EOD process at the Primary site is complete.
2. Call up the RTGS Helpdesk and ask them to change the IP address of the sender channel at RBI Primary IFTP site for the participant institution.
3. After the RTGS Helpdesk confirms the change in the sender channel IP address from the RBI Primary site, select the Start > Programs > IBM Websphere MQ > IBM MQ Explorer
4. Expand 'XXXXQMGR' (where XXXX is the main IFSC code of the participant institution).
5. Select the 'XXXXQMGR' > Advanced > Channels menu option (where XXXX is the main IFSC code of the participant institution).
6. Right-click the Sender Channel 'TO.XXXXQMGR.IFTPQMGR' and click [Start]. Ensure that the status turns to Running.
7. Ensure that the status of the Receiver Channel 'TO.XXXXQMGR.PIQMGR' is Running.
8. Start CryptoServer and PI server applications.
9. Open Windows' Task Manager and select the Processes tab. Ensure that gm.exe, gmrouter.exe, immsrv.exe and ommsrv.exe are running.
10. Login to a PI client workstation at the DR site.

11. Perform Start-Of-Day operations.
12. In PI, select the Menu Option > GM Control Functions > Up Link menu option, and click [Apply].
13. Enter your PIN and click [OK]. Verify that the Link status turns to Up.
14. Confirm the connection with the RTGS Helpdesk and verify that the Link status has turned to Up at the IFTP.
15. In PI, select the Menu Option > GM Control Functions > Down Link menu option and click [Apply].
16. Enter your PIN and click [OK]. Verify that the Link status turns to Down.
17. Perform End-Of-Day operations.
18. Logout from the PI client workstation.
19. Stop all PI and CryptoServer applications.
20. Open Windows' Task Manager and select the Processes tab. Ensure that gm.exe, gmrouter.exe, immsrv.exe and ommsrv.exe are stopped.
21. Inform the RTGS Helpdesk about the completion of the connectivity test. They will then restore the settings of the RBI Primary IFTP site of the participant institution.