



TIBCO iProcess® Engine

Administration Console User Guide

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Introduction

This section introduces TIBCO iProcess® Administration Console and provides an overview of its functions and administrative uses.

TIBCO iProcess Administration Console Overview

The iProcess Administration Console is a Graphical User Interface (GUI)-based tool that runs on the web. It can be used to perform the following administrative tasks:

- Control process operations (start, stop, pause, enable/disable, and delete).
- Configure resources, like process attributes, MBox queues, databases, port ranges, debug settings, and so on.
- Monitoring information, such as processes, queue information, logs, and so on.
- Monitoring performance based on CPU usage, memory usage, and so on.

Configuring TIBCO iProcess Administration Console

Host Name

For Windows environment, edit %SystemRoot%\System32\drivers\etc\hosts to add this entry.

<Host IP> <Hostname>

i Note: For the Cloud environment, <Host IP> is the Private IP address of the VM (it is used in `$SWDIR/config/ipac.properties`).

Properties

To configure the Administration Console properties, perform the following steps:

1. Edit the `$SWDIR/config/ipac.properties` file to update the following values:
 - a. The `IP_ADDR` field with the IP address or hostname of the machine on which iProcess Engine is installed.
For example: `IP_ADDR=203.0.113.1`
 - b. The `PORT_FROM` and `PORT_TO` fields define the start and end port and the number of ports that the iProcess Administration Console can use.
For example: `PORT_FROM=49664` and `PORT_TO=49674`, where 49664 is the start port, 49674 is the end port, and the number of ports is 10.
2. Edit the `$SWDIR/tomcat/webapps/ipac/config/ipac.properties.json` file and update the IP address in the URL with the IP address or hostname of the machine on which iProcess Engine is installed.
For example: `"apiUrl":"https://203.0.113.1:8443/"`

i Note: Do not use the IP Address or hostname of the machine on which the iProcess Engine is installed. Instead in the Windows Cluster environment, use the “Role” IP address or name.

HTTPS Configuration

Overview

The iProcess Administration Console is configured by default to use HTTPS. However, the default SSL certificate used by the HTTPS configuration is self-signed. TIBCO recommends replacing the default SSL certificate with a certificate from a trusted and secure certificate authority.

The following section lists steps to configure a new SSL certificate on Tomcat.

Configuring a New SSL Certificate

To enable a new custom SSL certificate for Tomcat, perform the following steps:

1. Setup the environment to run iProcess Engine
2. Stop the iProcess Administration Console by running the following command:
cmd>ipac stop
3. Edit \$SWDIR/tomcat/conf/server.xml file to include the following changes.
 - a. Look for the following line in the server.xml file. This line is available between the </Engine> and </Service> tags.

```
<Connector SSLEnabled="true" acceptCount="100" clientAuth="false"
  disableUploadTimeout="true" enableLookups="false"
  maxThreads="25" port="8443"
  keystoreFile="path/to/ipac.keystore" keystorePass="password"
  protocol="org.apache.coyote.http11.Http11NioProtocol"
  scheme="https" secure="true" sslProtocol="TLS" ciphers="TLS_
  ECDHE_RSA_WITH_AES_128_CBC_SHA256,TLS_ECDHE_RSA_WITH_AES_128_CBC_
  SHA,TLS_ECDHE_RSA_WITH_AES_256_CBC_SHA384,TLS_ECDHE_RSA_WITH_AES_
  256_CBC_SHA,TLS_ECDHE_RSA_WITH_RC4_128_SHA,TLS_RSA_WITH_AES_128_
  CBC_SHA256,TLS_RSA_WITH_AES_128_CBC_SHA,TLS_RSA_WITH_AES_256_CBC_
  SHA256,TLS_RSA_WITH_AES_256_CBC_SHA,SSL_RSA_WITH_RC4_128_SHA"/>
```

- b. In this line, replace the keystoreFile value to point to the complete path of the keystore file. This keystore file can be obtained from the certification authority.
 - c. Replace the keystorePass value with the valid password used while generating the certificate.
4. Start iProcess Administration Console by running the command:
cmd>ipac start
5. For detailed information about enabling SSL, see [SSL/TLS Configuration HOW-TO](#).

The CORS Filter Configuration on TIBCO iProcess Administration Console

By default, the web.xml (\$SWDIR/tomcat/webapps/API/WEB-INF/web.xml) file contains the cross-origin resource sharing (CORS) filter with the following highlighted section commented out with param-value as '*'.

To introduce the filter without any restriction, you can remove the highlighted comment in filter param.

To introduce the filter with added restriction, you can replace ‘*’ with the following iPAC login url:

iPAC login URL: `https://rhel76.centralindia.cloudapp.azure.com:8443/ipac/`

Entry in web.xml (\$SWDIR/**tomcat/webapps/API/WEB-INF/web.xml**) file to apply CORS filter is given in the following example.

```
<filter>
    <filter-name>CorsFilter</filter-name>
    <filter-
class>org.apache.catalina.filters.CorsFilter</filter-class>
    <init-param>
        <param-name>cors.allowed.origins</param-name>
        <param-
value>https://rhel76.centralindia.cloudapp.azure.com:8443</param-
value>
        </init-param>
        <init-param>
            <param-name>cors.allowed.methods</param-name>
            <param-value>GET,POST,HEAD,OPTIONS,PUT</param-
value>
        </init-param>
        <init-param>
            <param-name>cors.allowed.headers</param-name>
            <param-value>login,token,isSlave,Pragma,Cache-
Control,Content-Type,X-Requested-With,accept,Origin,Access-Control-
Request-Method,Access-Control-Request-Headers,Access-Control-Allow-
Origin</param-value>
        </init-param>
        <init-param>
            <param-name>cors.exposed.headers</param-name>
            <param-value>Access-Control-Allow-Origin,Access-
Control-Allow-Credentials</param-value>
        </init-param>
        <init-param>
            <param-name>cors.preflight.maxage</param-name>
            <param-value>10</param-value>
        </init-param>
    </filter>
    <filter-mapping>
        <filter-name>CorsFilter</filter-name>
```



```
<url-pattern>*</url-pattern>  
</filter-mapping>
```

Debugging

To enable debugging for the Administration Console, perform the following steps:

1. Edit the `$SWDIR/config/log4j.properties` file.
2. In this file, replace `WARN` with `debug` in the following line:
`"rootLogger.level=WARN"`

The updated line should look like this:

```
rootLogger.level=debug
```

The Administration console logs are stored in the `ipac.log` file located in the `$SWDIR/config` directory.



Warning: Do not delete the `ipac.log` file. If deleted, it cannot be recreated and is restored only when you restart the Administration Console.



Note: Take a backup of the original file and apply those changes in the new `log4j.properties` file as the format has changed.

Running TIBCO iProcess Administration Console

Starting the Administration Console

To start the Administration Console, perform the following steps:

1. Start Apache Tomcat in one of the following ways based on your operating system:

i Note: If you want to run the Administration Console on multiple nodes, perform this step on each node at the same time to ensure proper synchronization between all nodes.

- On UNIX, run the following command:
`ipac start`
- On Windows, from the control panel navigate to Administrative Tools>Computer Management>Services and Applications>Services

Then, start the iProcess *<ipe_node>* AdminConsole service, where *<ipe_node>* is the name of the machine on which iProcess Engine is installed.

2. In a web browser, go to the URL that you defined in the `$SWDIR/tomcat/webapps/ipac/config/ipac.properties.json` file. See [Host Name](#) for more information.

✓ Tip: TIBCO iProcess Administration Console is designed to function even when iProcess Engine is shut down, and therefore must be always running on the machines where it is installed.

It is a good practice to enable starting the Administration Console automatically when the machine starts. On a UNIX machine, you can do this by adding the Administration Console to the startup script. On Windows, you can do this by setting the Startup Type for the Administration Console service to Automatic.

Stopping the Administration Console

To stop the Administration Console, perform the following steps:

1. Logout and close all instances of the Administration Console on all nodes.
2. Stop Apache Tomcat in one of the following ways based on your operating system
 - On UNIX, run the following command:
`ipac stop`
 - On Windows, from the control panel navigate to Administrative Tools>Computer Management>Services and Applications>Services

Then, stop the iProcess *<ipe_node>* AdminConsole service, where *<ipe_node>* is the name of the machine on which iProcess Engine 11.8.0 is installed.

i Note: Stopping the Administration Console might even stop TIBCO iProcess Workspace (Browser) if it is installed on the same machine as the Administration Console.

Logging In

To access iProcess Administration Console, enter an Administrator Username and Password and click **Login**.

i Note: Any user with the Menuname ADMIN can use the Administration Console.

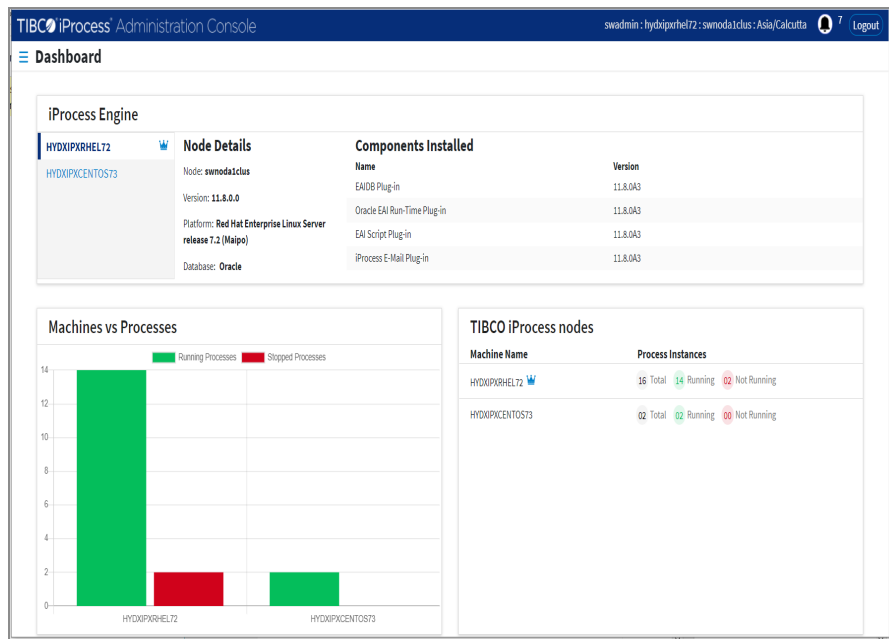
i Note: In case of a changed or expired database password, you cannot log in to the Administration Console. See [Updated Database Passwords](#) for steps to reset the database password and log in to the Administration Console.


Dashboard

The dashboard enables you to see information about iProcess Engine, such as node details and the components installed on iProcess Engine. The Machines vs Processes panel displays graphical information about process instances (running or stopped) on different machines on which iProcess Engine is running.



Clicking on a Machine Name under TIBCO iProcess nodes redirects you to the process configuration page (in the Administration section) for that node.

Figure 1: TIBCO iProcess Administration Console Dashboard




You can use the Main Menu  to navigate to different sections in the Administration Console. The following sections are included:




- Dashboard
- [Administration](#)
- [Configuration](#)
- [Utilities](#)
- [Monitoring](#)
- [Details](#)

Note: For Internet Explorer Version 11.1.18362, the Main Menu  does not work with a single click. So double-click the , if you are working with Internet Explorer Version 11.1.18362.

Notifications

You can view system notifications by using the bell icon . Notifications can be categorized into the following three types:

Notification Types

Type	Description
Informational	These notifications are distinguished by a blue circular icon with an "i" symbol  . They provide general notification-level information that does not require any action.
Warning	You can identify a warning by its yellow triangular icon with an exclamation mark  . These notifications are cautionary statements that might require an action depending on their nature.
Critical	These notifications are distinguished by a red circular icon with a cross mark  and require immediate action.

Configuring Notification Properties

You can configure when to receive a certain type of notification for a particular system event based on certain threshold values which are defined in the notification properties file.

For example, if CPU usage exceeds a value of 50 percent, an Informational notification is triggered. If it exceeds a value of 70 percent, a Warning notification is triggered. Similarly, if it exceeds a value of 90 percent, a Critical notification is triggered. So, 50, 70, and 90 are thresholds for the Informational, Warning, and Critical notifications respectively.

To change the notification thresholds for system events, perform the following steps:

1. Edit the `$SWDIR/config/notification.properties` file.
2. In this file, system events and threshold values for each notification type are listed in the following format:
`<SYSTEM EVENT>_THRESHOLD_<NOTIFICATION TYPE -
INFO/WARN/CRITICAL>=<THRESHOLD VALUE>`
For example: `CPU_THRESHOLD_INFO=50`
3. Modify the threshold values for the system events as per your requirement and save the file.

Note: To turn off notifications for a system event for a particular notification type, enter 0 as the threshold value.

The following table lists system events in the notification properties file:

System Events in Notification Properties

System Event	Description
THREAD	The number of threads used by iProcess Engine.
CPU	The amount of CPU (in percentage) used by iProcess Engine.
MEMORY	The Memory (in KB) used by iProcess Engine.
MSGCOUNT	The number of messages in a particular queue. The notification for this system event includes the name of the queue.
ACTIVELOGIN	The number of users logged in to iProcess Engine at a given point in time.
CASENUM	The number of cases opened for a particular procedure.
PROCVERS	The number of versions for each procedure.

Logging Out

To log out from the Administration Console at any time, click **Logout** .

i Note: After 60 minutes of inactivity, the Administration Console times out and automatically logs out. In this case, the user needs to log back in.

To modify the timeout value, edit the `$SWDIR/config/ipac.properties` file and update the value (in seconds) for the `IDLE_SESSION_TIMEOUT` line. The default value is 3600.

Standard Functionality

Overview

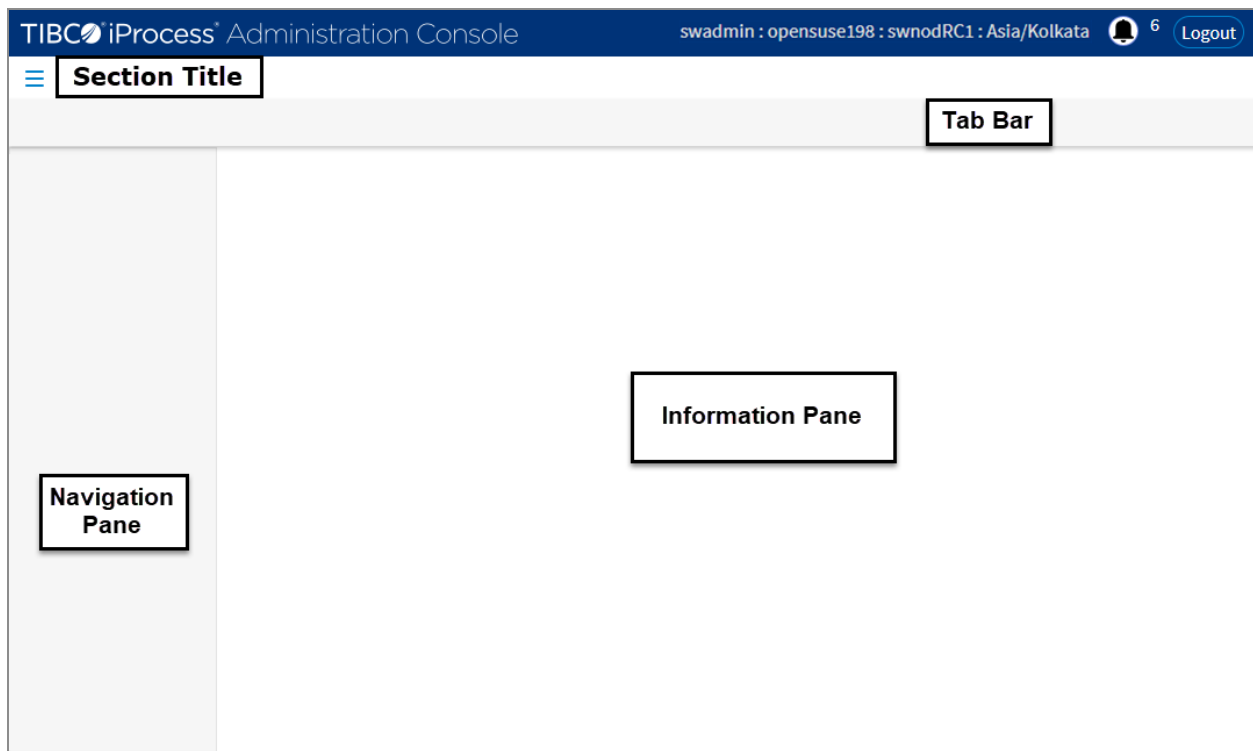
TIBCO iProcess Administration Console is a web-based console that allows you to perform administrative operations by using a simple Graphical User Interface (GUI).

However, before using the tool, it is helpful to understand how the tool works and get attuned to some of the standard functionality that has been employed in several sections of the tool.

Layout

The tool is divided into five main sections which are Configuration, Administration, Utilities, Monitoring, and Details. The section title for each section is listed on the top bar next to the Main Menu icon.

Each section has a two-pane layout. The left pane is a navigation pane and lists the topics included in the selected section. As you navigate to a topic, the right pane displays information corresponding to that topic (see illustration).

Figure 2: Administration Console Layout

Tabs

Some sections have a tab layout that facilitate branching information or functions based on a particular set of classifiers. For example, the Administration section displays two tabs, the **Processes** tab lists processes for a particular machine, and the Queue Messages tab lists messages for a particular MBox queue.

The Tabs Bar as marked in the illustration in the Layout section displays such tabs. You can click each tab to view information pertaining to that tab in the Information Pane.

Tables

Several sections and topics like Administration, Process Attributes, System Events, and others have information displayed in the form of tables. These tables support filtering, sorting, editing, creating, deleting, and even exporting information. Such functionality has been described in the sections where it is applicable.

Panels

Panels are elements that allow you to configure a particular operation or function of iProcess Engine. A typical panel looks like the illustration.


▼ **Set Search Parameters** Save

Search start DN
o=base
Example:o=base

Search filter
cn=*
Example:cn=*

Pattern to construct DN from the user id
Example:uid=%s,ou=users,ou=system

Tooltips

A tooltip provides helpful information about important elements like a configuration setting, a classification parameter in a table, or an information filter, and so on. It is characterized by the 'i' icon .

To view tooltip information, hover over the tooltip icon.

Infinite Scroll


Several sections in the iProcess Administration Console that can list large amounts of information feature an infinite scroll. This means that content loads continuously as you scroll down the page and is not split into several pages.

Pagination

Information in some sections of the iProcess Administration Console are separated into discrete pages. For example, the Process Attributes page in the Configuration section has a paginated layout.

To navigate to the next or previous page in a sequence or to navigate to a specific numbered page, scroll to the bottom of the page you are viewing and click **<< Previous**, **Next >>**, or a specific page number depending on the page you want to view.

Filtering Information

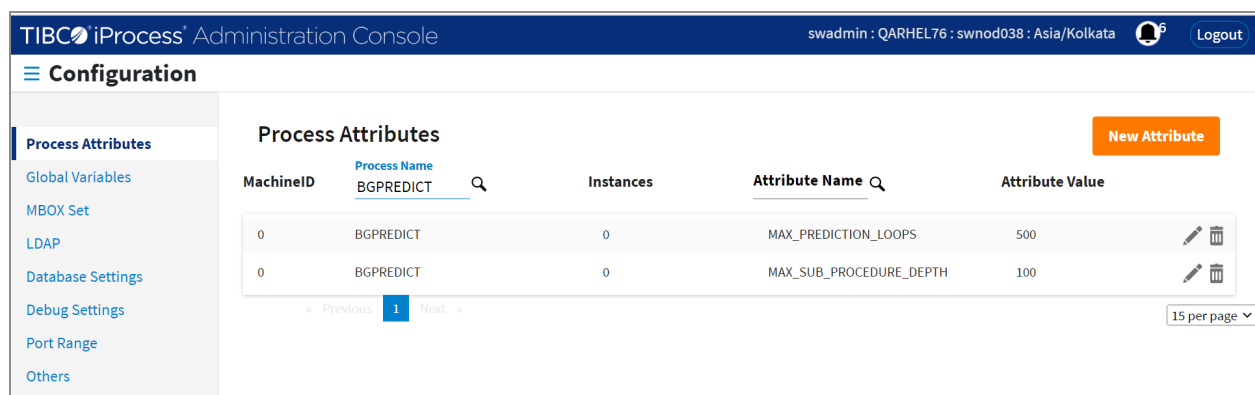
Sections such as System Events, Log Viewer, Process Attributes allow you to filter the information available so that you can view what is most important and of interest. Filters are present as table or list headers and are defined by using text fields that require you to enter filter names or values to get the specific information you desire. Filters can be identified by their magnifying glass icon .



Note: Use the filter button to apply filters in the System Events Page, Queue messages, and the Queue Information page.

For example, if you want to list system events for a particular process, type the process name in the corresponding filter and the console automatically populates the list based on your filter. You can also type a part of the process name based on which the console populates a list of all entries that include the entered characters. The following illustration shows an example of information filtered by using a Process Name.

Figure 3: Filtering Information



The screenshot shows the TIBCO iProcess Administration Console interface. The top navigation bar includes the title 'TIBCO iProcess Administration Console', the user 'swadmin : QARHEL76 : swnod038 : Asia/Kolkata', a notification bell icon with '5', and a 'Logout' button. The left sidebar is titled 'Configuration' and lists various settings: Process Attributes (selected), Global Variables, MBOX Set, LDAP, Database Settings, Debug Settings, Port Range, and Others. The main content area is titled 'Process Attributes' and features a 'New Attribute' button. Below the title is a table with columns: MachineID, Process Name (with a magnifying glass icon and the value 'BGPREDICT'), Instances, Attribute Name (with a magnifying glass icon), and Attribute Value. The table contains two rows of data for MachineID 0, both for the process 'BGPREDICT'. The first row shows 'MAX_PREDICTION_LOOPS' with a value of 500, and the second row shows 'MAX_SUB_PROCEDURE_DEPTH' with a value of 100. Each row has edit and delete icons. At the bottom of the table, there are pagination controls showing 'Previous', '1' (selected), and 'Next', along with a '15 per page' dropdown menu.

MachineID	Process Name	Instances	Attribute Name	Attribute Value
0	BGPREDICT	0	MAX_PREDICTION_LOOPS	500
0	BGPREDICT	0	MAX_SUB_PROCEDURE_DEPTH	100

For filters that require you to enter a date or a date range, you must select "From Date" or "To Date" or both by using the date picker.


Sorting Information

Some sections also enable you to sort content based on parameters like "File Size", "Modified Date", and so on. To sort content by using a parameter, click the sort icon (up/down arrow) ↑↓ or the parameter name. The following illustration shows information sorted in a descending order (high to low) based on the File Size parameter.

The screenshot shows the TIBCO iProcess Administration Console interface. The top navigation bar includes the TIBCO iProcess logo, the text "Administration Console", the user "swadmin : opensuse198 : swnodRC1 : Asia/Kolkata", a notification bell icon, and a "Logout" button. The left sidebar shows a "Utilities" menu with options for "System Events", "Queue Information", and "Log Viewer" (which is selected). The main content area is titled "Log Viewer" and displays two tabs: "HYDXIPXRHEL72" and "HYDXIPXCENTOS73". Below the tabs, there are three buttons: "View", "Filter", and "Download". A table of log files is displayed, sorted by "File Size" in descending order. The table has three columns: "File Name", "File Size", and "Modified Date".

File Name	File Size	Modified Date
swadm_49664_01.log.sav	18.63 GB	2019-01-28 23:35:59
swadm_49664_01.log	578.81 MB	2019-01-28 23:37:21
plist01.log	372.55 MB	2019-01-28 23:37:19
procmgr02.log	143.08 MB	2019-01-15 14:36:01
pstafffc01.log	101.76 MB	2019-01-28 23:29:25
sweaireg00.log	55.41 MB	2019-01-28 23:29:28
dlimgr01.log	49.33 MB	2019-01-15 14:36:00

Toggle Switch

A toggle switch  works like an on/off button. When the switch is to the left and is gray, it is in the disabled state. Click the toggle switch to enable it. Once enabled, the switch moves to the right and is blue.

Administration

The section describes how you can monitor the processes and perform the process operations on different machines, and also view live and dead queue messages for different MBox message queues.

Overview

The Administration page in its default view shows a list of processes on the right pane corresponding to each machine listed on the left pane.

Figure 4: Administration

The screenshot shows the TIBCO iProcess Administration Console. The left pane lists machines: HYDXIPXRHEL72 (selected) and HYDXIPXCENTOST3. The right pane shows the 'Processes' tab for HYDXIPXRHEL72. At the top of the right pane, it displays '16 Total', '14 Running', and '02 Not running'. Below this is a table of processes:

Process Name	Instances	Comments
● BG	4	● ● ● ●
● BGPREDICT	1	● ● ● ●
▲ DIRECTOR	1	▶ ● ● ●
● DLMGR	1	● ● ● ●
▲ IAPJMS	1	▶ ● ● ●
● RPCBG	1	● ● ● ●
● RPC_TCP_LI	1	● ● ● ●
● RPC_UDP_LI	1	● ● ● ●
● SPO	1	● ● ● ●
● WIS	2	● ● ● ●
● WISMBD	1	● ● ● ●
● WQS	1	● ● ● ●

Buttons at the top right of the process list include: EVLOOPBACK, Stop Processes, and Stop Sentinels.

The total number of instances, the running instances, and the instances that are not running are displayed at the top.

A close-up of the instance status summary bar for machine HYDXIPXRHEL72. It shows a dropdown arrow, the machine name 'HYDXIPXRHEL72', and three colored circles with numbers: a grey circle with '16' for 'Total', a green circle with '14' for 'Running', and a red circle with '02' for 'Not running'.











































For example, the machine CENTOS199 has a total of 28 instances, out of which 26 are running and 2 are not running. You can also use the Expand/Collapse toggle icon  to view details of all instances underlying every process. Alternatively, you can click the Process Name of a particular process to view instance-level information specific to that process. The following illustration shows an expanded process with its underlying instance.

Figure 5: Administration: Process Details

 CENTOS199 28 Total 26 Running 02 Not running			EVLOOPBACK Stop Processes Stop Sentinels	
Process Name	Instances	Comments		
 BG	13		  	
 BGPREDICT	1		  	
BGPREDICT 1		BG process started: 2019-01-15 17:20:15	   Disable	
 DBQD	1		  	
 DIRECTOR	1		  	
 DLMGR	1		  	
 IAPJMS	1		 	
 RPCBG	1		  	
 RPC_TCP_LI	1		  	
 RPC_UDP_LI	1		 	

The number of instances in a process is indicated by the number in the instances column.

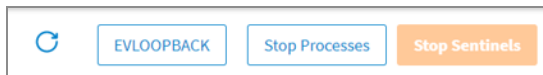
A running process or process instance is characterized by a green circular icon with a check-mark , whereas a paused or stopped process or process instance is characterized by a red diamond-shaped icon with a cross mark . A disabled process or process instance can be identified by a yellow triangular icon with an exclamation mark .

Process Operations

Apart from monitoring processes, you can perform operations, such as starting, stopping, pausing, enabling/disabling, and deleting process or process instances.

Macro Operations

You can use the following operations on all processes on each machine.



Refresh

Click the **Refresh** icon to get the status update on each process and view it in expanded mode.

EVLOOPBACK

The iProcess Engine uses an event mechanism to handle the inter-process communication. To test the event mechanism, click EVLOOPBACK. If the event mechanism is working correctly, a loopback message is received in the following format:

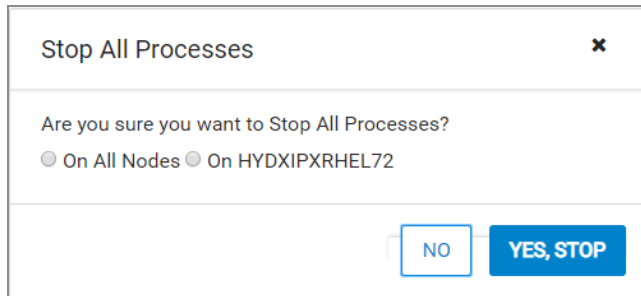
Events working correctly. Received loopback message in <number> second(s).

Start/Stop Processes

Click the **Stop Processes** or the **Start Processes** to stop or start all the processes, respectively.

i Note: This is a toggle button and display "Start Processes" when all processes are stopped, or "Stop Processes" when all processes are running.

A confirmation dialog box is displayed. On this dialog box, you can choose the machine on which you want to start or stop processes, you can also click the **On All Nodes** radio button if you want to start or stop processes on all nodes in the cluster. To confirm starting or stopping processes, click **YES, START** or **YES, STOP** respectively.



Start/Stop Sentinels

The iProcess Engine server processes are controlled by Sentinels. Click **Start Sentinels** or **Stop Sentinels** to start or stop Sentinels respectively. If you are using more than one server to host iProcess Engine (a node cluster), start sentinels on each server.

i Note: This is a toggle button and displays "Start Sentinels" typically at start-up or if Sentinels are stopped.

As Sentinels control the start-up of server processes, the "Stop Sentinels" option is disabled when processes are running. This option is enabled only after all processes are stopped.

A confirmation dialog box is displayed. To confirm starting or stopping Sentinels, click **YES, START** or **YES, STOP** respectively.









Process-Specific Operations

You can control or configure a specific process or instance by using different operators displayed against each instance or process.

The following table provides information about each operator and its function.

Process/Instance Operators

Operator	Function
Start ►	Starts all instances for the selected process when used at the process level. Starts only the specific instance when used at the instance level.

Operator	Function
Stop 	Stops all instances for the selected process when used at the process level. Stops only the specific instance when used at the instance level.
Pause 	Pauses all instances for the selected process when used at the process level. Pauses only the specific instance when used at the instance level.
Resume 	Resumes all paused instances for the selected process when used at the process level. Resumes only the specific paused instance when used at the instance level.
Configure 	Redirects to the Process Attributes page under Configuration. For more information about configuring a process, see Process Attributes .
Delete 	Deletes a process instance.
	Disables a process instance.
	Enables a process instance.
	Creates a new process instance.

Queue Messages

On the Administration page, click the Queue Messages tab to see messages for different MBox queues. This tab displays live and dead messages for a given MBox queue. The interface of this tab is a little different for the Oracle database server, the SQL Server, and DB2 database servers. The following sections provide an overview of the different interfaces.

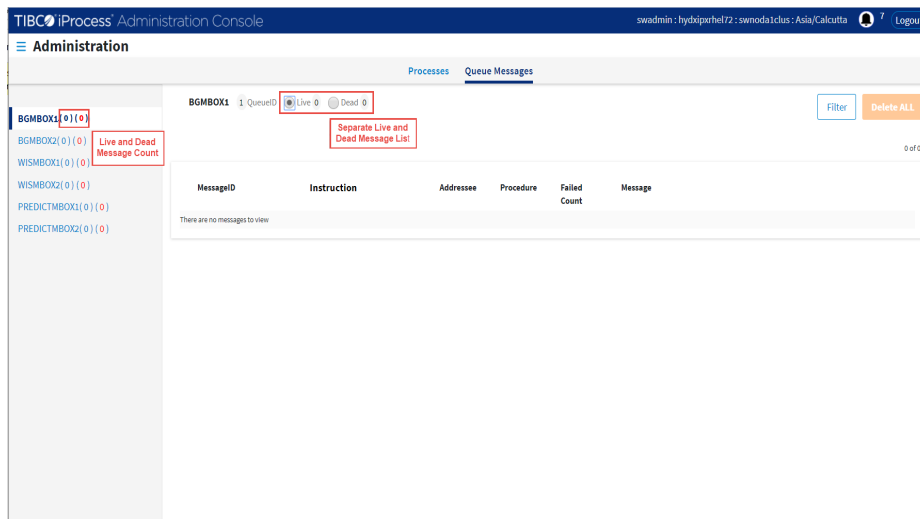


Note: From version 11.8, the Queue Messages can display and filter against ALL System Events, instead of just the first 30000, as was the case in version 11.7.

For Oracle Database Server

If you are using an Oracle Database server, the live and dead messages are indicated in brackets next to each queue name. Also, there is a separate list for live messages and dead messages. See the following illustration.

Figure 6: Queue Messages for Oracle Database Server



The **QueueID** 1 QueueID indicates the sequence of the queue in the queue list on the left pane. For instance, in this illustration, as the first queue is selected, the QueueID is 1.

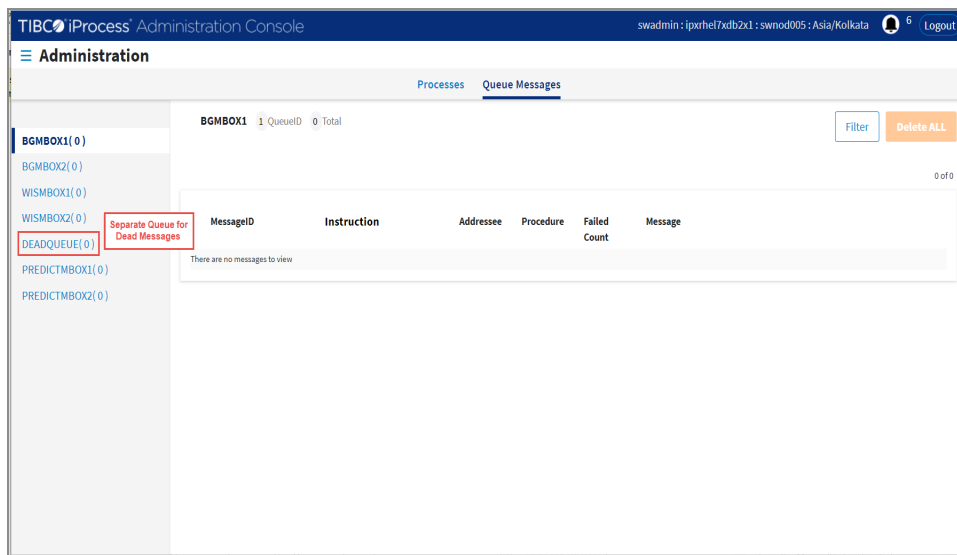
To view all live messages, select the **Live** radio button ☒ Live at the top of the page. Similarly, to view all dead messages, select the **Dead** radio button ☐ Dead at the top of the page.

Click **Filter** to apply a filter for the Queue Messages. For more details, see [Filtering Queue Messages](#).

For SQL Server and DB2 Database Server

For SQL Server and DB2 database servers, dead messages are listed in a separate queue named DEADQUEUE. See the following illustration.

Figure 7: Queue Messages for SQL Server and DB2 Database Server

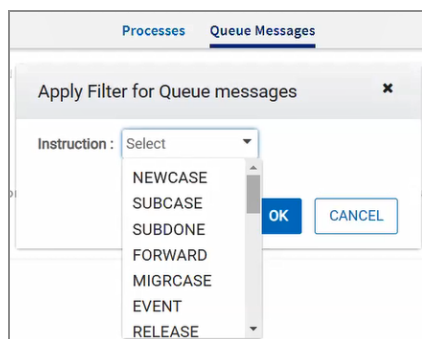


The **QueueID** ¹ QueueID indicates the sequence of the queue in the queue list on the left pane.

Click **Filter** to apply a filter for the Queue Messages. For more details, see [Filtering Queue Messages](#).

Filtering Queue Messages

You can filter Queue Messages based on the Instruction provided in the message.



On selecting the Instruction, a list of all the queue messages with the selected instruction are filtered and displayed. You can then Restore Filtered, or Delete Filtered messages by clicking on the relevant option.

If you select one or more check boxes, **Restore Filtered** and the **Delete Filtered** change to **Restore** and **Delete**.

If you remove the filter, by clicking on the red-colored cross icon next to the filter, **Restore Filtered**, and **Delete Filtered** change to **Restore ALL** and **Delete ALL**.

For more information on how to filter information, see [Filtering Information](#).

Deleting Messages

To delete a single message, click the **Delete** icon on the message row.

You can also delete multiple messages simultaneously. The following topics list steps to do the same.

Selective Deletion

1. Select the check box for the message that you want to delete. To delete multiple messages, select multiple check boxes. The **Delete All** button changes to **Delete**.
2. Click **Delete** to delete the selected message or messages. A confirmation dialog box is displayed.
3. Click **YES**. A final confirmation dialog box is displayed.
4. Click **YES, REMOVE**.

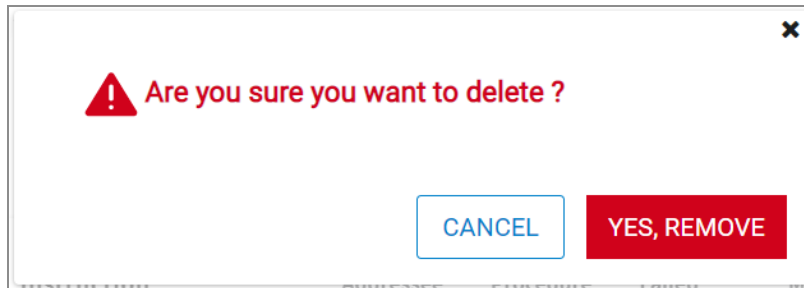
Deleting Filtered Messages

1. To delete all the messages fetched by applying a filter, **Delete All** changes to **Delete Filtered**.
2. Click **Delete Filtered** to delete the filtered messages. A confirmation dialog box is displayed.
3. Click **YES**. A final confirmation dialog box is displayed.
4. Click **YES, REMOVE**.

Deleting All Messages for an MBox Queue

i Note: The **Delete ALL** option is disabled when a filter is applied.

1. To delete all messages for the selected MBox Queue, click **Delete ALL**. A confirmation dialog box is displayed.
2. Click **YES**. A final confirmation dialog box is displayed.



3. Click **YES, REMOVE**.

Restoring Dead Messages

You can use this option to restore dead messages. To restore a single message, click the **Restore** icon on the message row.

You can also restore multiple messages simultaneously. The following sections list steps to do the same.

i Note: For Oracle Database Server, select the Dead radio button for the MBox Queue for which you want the messages restored.


For SQL Server and DB2 Database Server, click the **DEADQUEUE** tab on the left pane to view a list of dead messages.

Selective Restoration

1. Select the check box for the message that you want to restore. If you want to restore multiple messages, you can select multiple check boxes.

2. Click **Restore** to restore the selected message or messages. A confirmation dialog box is displayed.
3. (Only for SQL and DB2 Database Servers) A dialog box is displayed prompting you to choose the queue to which you want to restore the selected message. Select the queue and click **Restore** or **Cancel**.
4. On the confirmation dialog box, click **YES, RESTORE**.
5. On successful restoration, a confirmation message stating “**Message/Messages from DEADQUEUE have been restored successfully**” is displayed. If restoration fails, a message informing about the failure is displayed.

Restoring All Dead Messages

 **Note:** The **Restore ALL** option is disabled when a filter is applied.

1. To restore all dead messages on a page, click **Restore ALL**. A confirmation dialog box is displayed.
2. (Only for SQL and DB2 Database Servers) A dialog box is displayed prompting you to choose the queue to which you want to restore the selected message. Select the queue and click **Restore**.
3. On the confirmation dialog box, click **YES, RESTORE**.
4. On successful restoration, a confirmation message is displayed.

Configuration

This section outlines how to use the Administration Console to configure TIBCO iProcess Engine.

Process Attributes

Overview

The iProcess Engine server uses configuration attributes to specify how it operates. The Administration Console allows you to create, modify, and delete process attributes.

To view the Process Attributes page, perform the steps given:

1. From the dashboard, click the Main Menu icon.
2. Click the **Configuration** tab.
3. In **Configuration**, the Process Attributes page is displayed by default. The Process Attribute page lists all defined process attributes on different machines.

i Note: DEBUG is classified as a process attribute and follows the same precedence conventions as other process attributes. For instance, if the process instance value is 0, it means all machines or all process instances.

However, if two process attributes apply to the same process, then a more specific value is applied. For example, if for a process attribute, machine 1 is handling process instance 0 (which means all instances), machine 2 is also handling process instance 0, but machine 2 is also SPECIFICALLY handling process instance 1. In this case, the debug settings are applied to process instance 1 on machine 2.

The debug-related attributes are not displayed on this page. For more information on configuring debug settings, see [Debug Settings](#).

Process Attributes

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The debug-related attributes are not displayed on this page. For more information on configuring debug settings, see [Debug Settings](#).

Editing a Process Attribute

To edit a process attribute, perform the following steps:

1. On the Process Attributes page, click the **Edit** icon  on the process attribute that you want to modify.





















i Note: You can only modify the value of a process attribute.

- After editing the attribute value, click the **Accept** icon  to apply the modified value. Otherwise, click the **Decline** icon .

Creating a Process Attribute

You can create a new process attribute for a specific server process. To do this, perform these steps:

Figure 8: New Process Attribute

Process Attributes						New Attribute	
MachineID	Process Name 	Instances	Attribute Name 	Attribute Value			
0	ALL	0	GUID	B787CBC0-13CD-11ED-9C12-5BYH77SMRC84			 
0	ALL	0	MBSET_READ_BG	1			 
0	ALL	0	MBSET_WRITE_BG	1			 
0	ALL	0	MBSET_READ_WIS	2			 
0	ALL	0	MBSET_WRITE_WIS	2			 
0	BG	1	MBSET_READ_BG	3			 
0	BG	2	MBSET_READ_BG	3			 
0	BG	3	MBSET_READ_BG	4			 
0	BG	4	MBSET_READ_BG	4			 

- Click **New Attribute**.
The Add Attribute window is displayed.
- On the Add Attribute window, specify a value for all parameters. For information about these parameters, see the [Attribute Parameters](#) table.
- After specifying appropriate values for all parameters, click **Add** to create the new parameter.


Attribute Parameters

Field	Description
Machine ID	The unique identifier for the server. If you specify a value of 0, the command applies to all servers in iProcess Engine on a single node or even in a node cluster.

Field	Description
Process Name	The name of the iProcess Engine process. If you specify a value of ALL, the command applies to all process types.
Process Instance	The instance number of the process. If you specify a value of 0, the command applies to all instances of the process.
Attribute Name	The name of the attribute to be set.
Attribute Value	The value for the specified process attribute.

Deleting a Process Attribute

To delete a process attribute, perform the following steps:

1. On the Process Attributes page, click the **Delete** icon  against the attribute that you want to delete.
2. On the confirmation dialog box, click **YES, REMOVE**.

Global Variables

Overview

The iProcess Engine server uses global variables to configure settings and behavior of procedures. For example, IP addresses, hosts, databases, optional behavior and so on. You can access global variables using the `GlobalVariable` expression in scripts. You can then use the values of global variables to make procedures more portable as configuration is stored in the global variables rather than hard-coded or is external to iProcess Engine.

The Administration Console allows you to create, modify, delete, import, and export global variables.

To view the Global Variables page, perform the following steps:




1. From the dashboard, click the **Main Menu** icon.
2. Click the **Configuration** tab.
3. In **Configuration**, click **Global Variables**. The Global Variables page lists all defined global variables.

i Note: Global Variable names can be up to 15 characters long and can contain letters, digits, underscore characters, and must start with an alphabet. Global Variable names are converted to uppercase irrespective of how they are originally entered.

For more information about Global Variables, see *TIBCO iProcess® Engine Administrator's Guide* and *TIBCO iProcess® Expressions and Functions Reference Guide*.

Editing the Value of a Global Variable

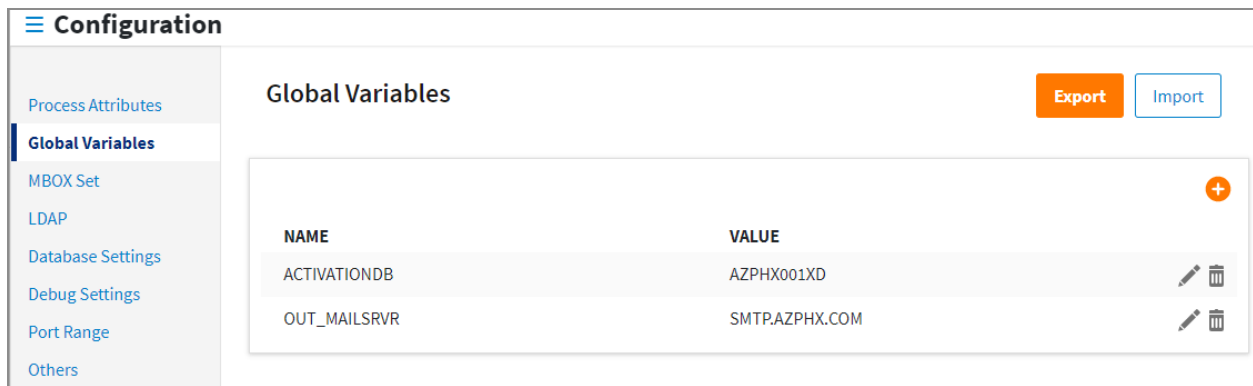
To edit the value of a global variable, perform the following steps:


1. On the Global Variables page, click the **Edit** icon  on the global variable that you want to modify.
2. After editing the global variable value, click the **Accept** icon  to apply the modified value. Otherwise, click the **Decline** icon .

Creating a Global Variable

You can create a new global variable for use by any and all procedures. To do this, perform these steps:

Figure 9: New Global Variable



1. Click the **Add new Global Variable** icon  .
The Add New Global Variable window is displayed.
2. On the Add New Global Variable window, specify a value for the **Name** and **Value** parameters. For information about these parameters, see the [Global Variable Parameters](#) table.

**Note:**

- Global Variable names can be up to 15 characters long and can contain letters, digits, underscore characters, and must start with an alphabet. Global Variable names are converted to uppercase irrespective of how they are originally entered.
- Global Variable value can be up to 511 characters long.


3. After specifying appropriate values for the parameters, click **ADD** to create the new global variable.

Global Variable Parameters

Field	Description
Name	The name of the global variable to be set.
Value	The value for the specified global variable.

Deleting a Global Variable

To delete a global variable, perform the following steps:

1. On the Global Variables page, click the **Delete** icon  against the global variable that you want to delete.
2. On the confirmation dialog box, click **YES, REMOVE**.

Exporting Global Variables

You can export global variables as a CSV file into your local machine. To do this, perform the following steps:

1. On the Global Variables page, click the **Export** button.
On successful exporting of global variables, a message "**Download request for GlobalVariable.csv has been submitted successfully**" is displayed.

i Note: After exporting the global variables, GlobalVariable.csv file is downloaded to your local machine.

The CSV file has a new header with two parameters - GlobalVariable and Value.

Importing Global Variables

You can import global variables from a CSV file. To do this, perform the following steps:

1. Click the **Import** button.
The Import Global Variable window is displayed.
On the Import Global Variable window, you have two toggle switches:
 - **Clear all records and insert?**
 - **Ignore header line from CSV file**

By default, both the toggle switches are enabled.

The following table describes the behavior of toggle switches when you import the CSV file.

Toggle Switches Behavior

Toggle Switch	When enabled...	When disabled...
Clear all records and insert?	Deletes the existing global variables and imports new global variables from the GlobalVariable.csv file.	<ul style="list-style-type: none"> • Updates the global variable value if the global variable name in the import file matches with the existing global variable name • Adds a new row if the global variable names do not match • Does not delete the global variable that is present in the system
Ignore header line from CSV file	Ignores importing the header record from CSV file.	Imports the header record from the CSV file.

2. After enabling or disabling the appropriate toggle switches, click **YES**.
3. Browse for the CSV file that contains the global variable details on your machine and click **Open**.

On successful import, a message "**Import has been done successfully**" is displayed.

MBox Set

Overview

TIBCO iProcess Engine uses several message queues to enable high volumes of transactions to be processed. These message queues are logically grouped and are

referred to as MBox Sets. Instead of a process writing messages to or reading messages from a specific queue, it can be configured to use an MBox Set. An MBox Set enables you to dynamically configure the queues used in a set as system resources change. For more information on MBox Sets, see *TIBCO iProcess Engine Architecture Guide*.

Each MBox Set is configured for a specific purpose. Different processes require access to different MBox sets. For example, background processes require write access to a background MBox and the WIS MBox.

The Administration Console allows you to configure processes that write to MBox Queues and processes that read from them. The MBox Set page looks like the following illustration.



Figure 10: Configuration: MBox Set

The screenshot displays the TIBCO iProcess Administration Console interface. The top navigation bar includes the title 'TIBCO iProcess Administration Console', user information 'swadmin : QARHEL76 : swnod038 : Asia/Kolkata', and a 'Logout' button. The left sidebar shows the 'Configuration' menu with options like 'Process Attributes', 'Global Variables', 'MBOX Set' (selected), 'LDAP', 'Database Settings', 'Debug Settings', 'Port Range', and 'Others'. The main content area is titled 'MBox Set' and features a table with three columns: 'Writing Processes', 'MBOX Set Name', and 'Reading Processes'.

Writing Processes	MBOX Set Name	Reading Processes
All Machines ALL Add Machine	1 - BGMBSET (2) BGMBOX1 BGMBOX2 Add Queue	All Machines ALL Add Machine
All Machines	2 - WMDMBSET (2)	All Machines
All Machines	3 - WISBGMBSET1 (1)	All Machines
All Machines	4 - WISBGMBSET2 (1)	All Machines

The table on this page has three columns that list the Writing Processes, Reading Processes, and the MBox Set Name. Each row highlights the machine or node cluster that is/are writing to queues in the MBox Set and those that are reading from them.

For instance, the illustration shows two rows, the first one with a node cluster writing to and another one reading from the queues in the MBox Set. The second row shows only one machine writing to and another one reading from the queues in the MBox Set.


The arrow with a circle on the blunt end  symbolizes processes writing to the MBox Set, whereas the arrow with a circle at the pointed end  symbolizes processes reading from the MBox Set. If you hover over any of these arrows, a tool-tip displays information indicating if the messages being written to or read from the MBox Set are from a foreground or a background process. For instance, if a Work Item Server (WIS) process is writing to the MBox Set and a Background process (BG) is reading from the MBox Set, the

tooltip displays "Foreground to Background" (see illustration). For more information on foreground and background processes, see *TIBCO iProcess Engine Architecture Guide*.



If you take a closer look at the MBox Set Name, you can see that the name is preceded and succeeded by a number `1 - BGMBSET (2)` .

The number on the left "1" indicates the chronological order of the MBox Set, and the number on the right "(2)" indicates the number of queues under that MBox Set.

To view the details of an MBox Set, such as writing processes, reading processes, queues, and other information, click the blue expand arrow icon  .

The following topics describe how you can configure writing processes, reading processes, and the number of queues for each MBox Set.

Configuring a Writing Process


If you expand an MBox Set by clicking the expand arrow icon  , you can see the configured processes that are writing to the MBox Set. These processes can be a part of one or multiple machines or a node cluster. Writing processes running on a machine are listed under that machine's name. Similarly, writing processes for a node cluster are listed under the title "All Machines" (see the following illustrations).

Figure 11: Writing Processes for Individual Machines

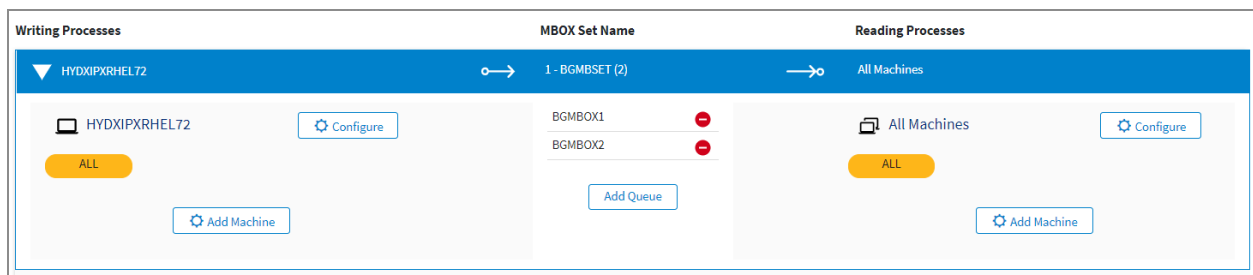
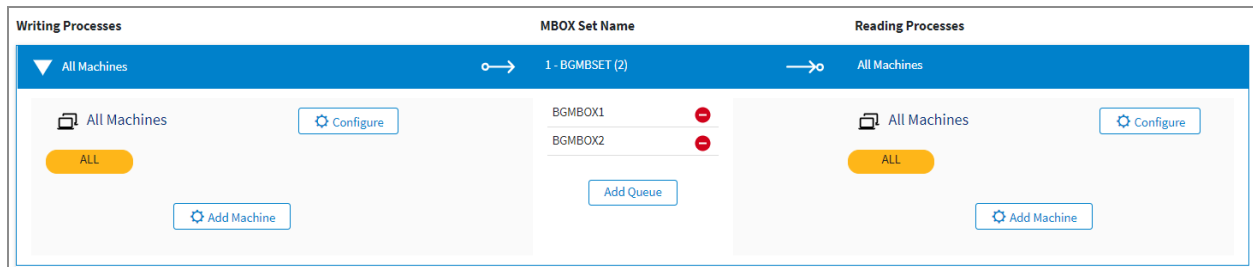


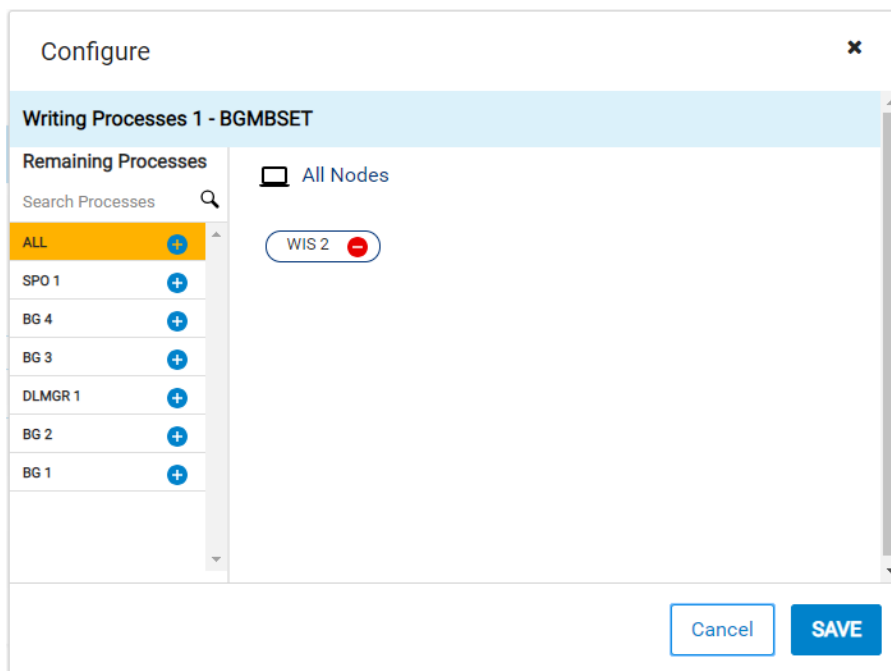
Figure 12: Writing Processes for Node Clusters




To configure writing processes for an existing machine or node cluster, perform the following steps:

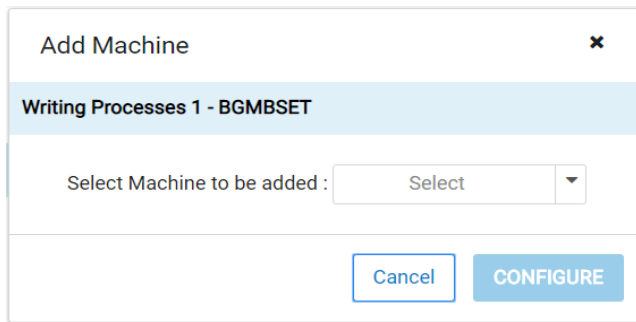
1. Click Configure. A configuration dialog box is displayed (see the following illustration).

Figure 13: Writing Processes Configuration



2. The left pane displays processes that can be configured for the selected machine or node cluster. To search the process by its name, you can type the process name in the Search Processes field to filter the list of processes. To configure a new process, click the add icon + next to the process name, or just drag the process to the right pane.

3. On the right pane, the processes already configured for the selected machine are displayed. To remove a configured process, click the remove icon  next to the process name, or drag the process to the left pane.
4. After configuring the desired processes for a machine or node cluster, click **SAVE** to save the configuration. On successful configuration, a message **Configured All Nodes Successfully** is displayed.
5. To configure processes for a new machine or node cluster, click **Add Machine**. A dialog box titled "Add Machine" is displayed (see the following illustration).



6. On the dialog box, use the drop-down menu to select the machine or node cluster to be added. Then, click **CONFIGURE** to add the machine or node cluster.
7. To configure processes for the new machine or node cluster, follow steps 2 to 4 of this section.

Configuring a Reading Process


If you expand an MBox Set by clicking the expand **Arrow** icon  , you can see the configured processes that are reading from the MBox Set. These processes can be a part of one or multiple machines or a node cluster. Reading processes running on a machine are listed under that machine's name. Similarly, reading processes for a node cluster are listed under the title "All Nodes" (see the following illustrations).

Figure 14: Reading Processes for Individual Machines

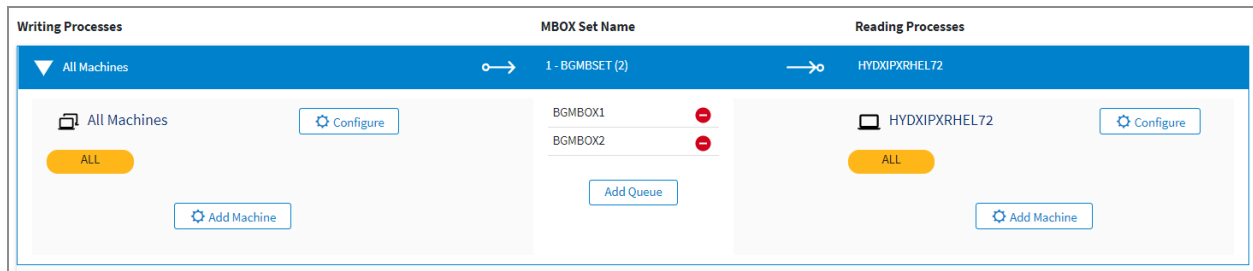
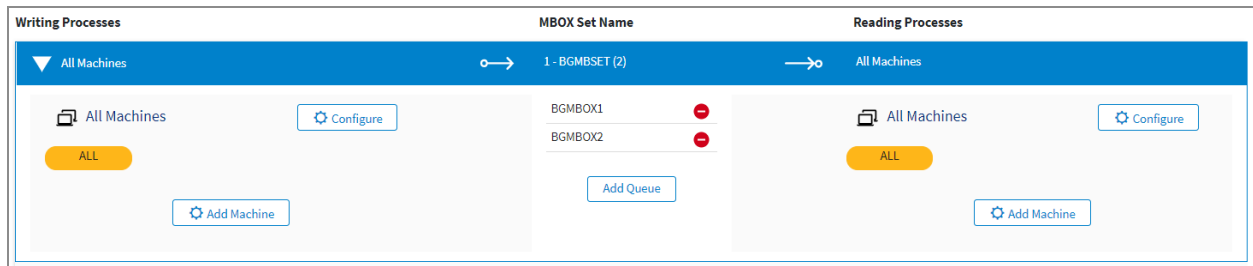


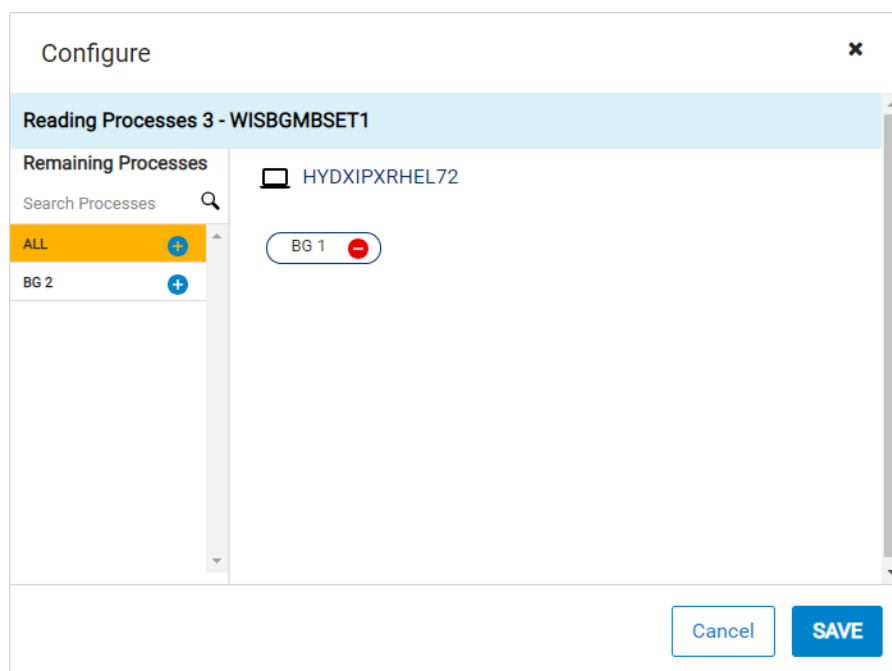
Figure 15: Reading Processes for Node Clusters





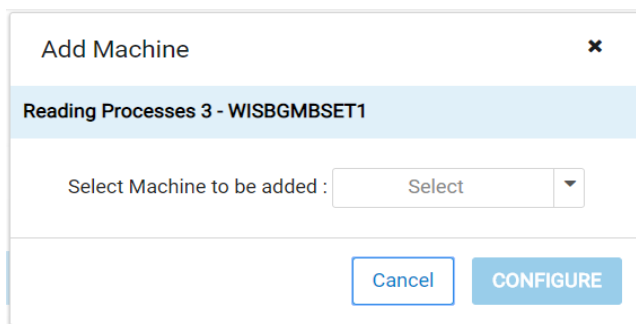
To configure reading processes for an existing machine or node cluster, perform the following steps:

1. Click **Configure**. A configuration dialog box is displayed (see the following illustration).

Figure 16: Reading Process Configuration



2. The left pane displays processes that can be configured for the selected machine or node cluster. To search the process by its name, you can type the process name in the Search Processes field to filter the list of processes. To configure a new process, click the **Add** icon  next to the process name, or just drag the process to the right pane.
3. On the right pane, the processes already configured for the selected machine are displayed. To remove a configured process, click the **Remove** icon  next to the process name or drag the process to the left pane.
4. After configuring the desired processes for a machine or node cluster, click **SAVE** to save the configuration. On successful configuration, a message "**Configured All Nodes Successfully**" is displayed.
5. To configure processes for a new machine or node cluster, click **Add Machine**. A dialog box titled "Add Machine" is displayed (see the following illustration).



6. On the dialog box, use the drop-down menu to select the machine or cluster node to be added. Then, click **CONFIGURE** to add the machine or node cluster.
7. To configure processes for the new machine or node cluster, follow steps 2 to 4 of this section.

Adding an MBox Queue

You can scale the number of messages handled by an MBox Set by adding more queues. To do this, perform the following steps:

1. Expand the MBox Set for which you want to add a queue.
2. Click Add Queue. An Add Queue dialog box is displayed.

3. Use the drop-down menu to select the queue that you want to add from the list of available queues.
4. Click ADD to add the queue to the MBox Set.

LDAP

Overview

This section provides an overview of how you configure an LDAP directory service with the iProcess Engine to manage iProcess User, Group, Role and Attribute data.

To configure an LDAP directory, define the connection information, search parameters, and attribute mappings by using the respective tabs (see illustration).

Figure 17: LDAP

Setting Connection Information

On the Set Connection Information tab (see the following illustration), perform the following steps to configure an LDAP directory:

1. Enter the LDAP Server host name.
2. In the Port Number field, enter the TCP port number that is required to connect to the hostname. This must be a valid numeric value greater than 1. The default value is 389, used for all LDAP servers.
3. In the Distinguished Name field, enter the name that is used to authenticate the connection to the LDAP server.
4. In the Password field, enter the password associated with the distinguished name.
5. If you are using the Microsoft Active Directory LDAP server, click the toggle switch to enable this option.
6. Select a Directory Information Tree or DIT. A Directory Information Tree, as its name implies, is LDAP or IPE directory information represented in a hierarchical tree structure.
If you want to obtain user data from the iProcess Engine database, select IPE, in which case LDAP syncing is disabled. Alternately if you want to obtain user data from the LDAP directory, select LDAP, in which case LDAP syncing is enabled.
7. If you want the value of an LDAP <GROUPUSERS> directory attribute to be read as a list of iProcess user names, select Member List. Alternately if you want the value of the LDAP <GROUPUSERS> directory to be read as a list of LDAP Distinguished Names (DN), select LDAP DN.

8. Click the UTF-8 toggle switch if you want to enable this option. This defines whether attribute values are translated from UTF-8 format to the iProcess Engine's locale when they are downloaded from the LDAP server.
9. Click the Enable SSL toggle switch if you want to secure LDAP communication by using an SSL tunnel.
10. If you enable SSL, a field is displayed where you must specify the path to the SSL certificate.

i Note: This step is required only if you enable SSL in step 9.

11. Click **Save**.
12. To test if the LDAP connection works, click Test Connection. On a successful connection, a message "**Test Connection Succeeded**" is displayed. However, if the connection is not successful, review the connection information and try again.

Setting Search Parameters

After configuring the LDAP connection, define where to start searching the LDAP directory for iProcess users, and any filter criteria to use in the search.

To do this, click the expand arrow to view the Set Search Parameters tab (see illustration), then perform the following steps:



▼ **Set Search Parameters** Save

Search start DN
o=base
Example: o=base

Search filter
cn=*
Example: cn=*

Pattern to construct DN from the user id
Example: uid=%s,ou=users,ou=system

1. In the Search start DN field, enter the distinguished name (DN) of the LDAP directory entry from which to start searching for iProcess data.

2. In the Search filter field, Enter the filter criteria to be used to widen or refine the search. By default, the search finds any entries that have a cn attribute.
3. In the Pattern to construct DN from the user id, enter a C/C++ style pattern to construct the DN string from the user ID. For example, if your DN is:
`uid=michael,dc=people,dc=company,dc=com`
for the ID michael, you should enter: `uid=%s,dc=people,dc=company,dc=com`

You can nullify this field by entering NULL.

4. Click **Save** to save the search parameters.

Setting Attribute Mappings

To define the mappings of LDAP directory attributes to iProcess properties, click the expand arrow to view the Set Attribute Mappings tab (see illustration) and perform the following steps.

IPE Attribute	LDAP Attribute
username	cn
Groupname	groupname
Rolename	rolename
description	description
language	language
menuname	menuname
sortmail	sortmail
groupusers	groupusers
roleuser	roleuser
Qsupervisors	qsupervisors
Userflags	userflags

Extra Mappings

1. Enter LDAP mappings (on the right pane) for the IPE Attributes (on the left pane) that you want to define. See the following table for more information about the IPE Attributes.

IPE Attributes

IPE Attribute	Default Mapping	Description
Username	sn	Enter the name of the LDAP directory attribute that maps to the iProcess user name.
Groupname	groupname	Enter the name of the LDAP directory attribute that maps to the iProcess group name.
Rolename	rolename	Enter the name of the LDAP directory attribute that maps to the iProcess role name.
Description	description	Enter the name of the LDAP directory attribute that maps to the iProcess DESCRIPTION attribute.
Language	language	Enter the name of the LDAP directory attribute that maps to the iProcess LANGUAGE attribute.
Menu Name	menuname	Enter the name of the LDAP directory attribute that maps to the iProcess MENU_NAME attribute. Note: This attribute is used to determine whether an LDAP directory entry found as a result of a search is an iProcess user, group, or role.
Sortmail	sortmail	Enter the name of the LDAP directory attribute that maps to the iProcess SORTMAIL attribute.
iProcess Group User	groupusers	Enter the name of the LDAP directory attribute that contains the members of a group.
iProcess Role User	roleuser	Enter the name of the LDAP directory attribute that contains the name of the iProcess user who is assigned to a role.

IPE Attribute	Default Mapping	Description
Qsupervisors	qsupervisors	Enter the name of the LDAP directory attribute that maps to the iProcess QSUPERVISORS attribute.
Userflags	userflags	Enter the name of the LDAP directory attribute that maps to the iProcess USERFLAGS attribute.

2. Click Add Attribute Mapping to define the mappings of LDAP directory attributes to iProcess properties.
3. Click Save to save the attribute mappings.

Synchronization

Once the iProcess Engine is configured to use the LDAP directory, you must synchronize iProcess Engine with the LDAP service to generate or update user information entries. To do this, you can use Partial Sync or Full Sync.



Note: A full sync is required in case you are configuring LDAP with iProcess Engine for the first time.

Partial Sync

Click Partial Sync if you intend to perform a synchronization in a short timescale (every hour or every day, depending on the frequency with which user information changes). This works best if you want to update user information for existing user information entries.

Full Sync

Click Full Sync if you intend to perform a synchronization in a longer timescale (every day or every week). This works best for new user information entries.

Database Settings

Overview

This topic describes how you can configure iProcess Engine to connect to a database server. On the Database Settings page, a table lists database parameters for which you must enter the appropriate values in the adjacent column (see illustration).

Note: Use these settings only if required. These settings are configured during installation and do not change frequently. Use these settings in cases when the database is moved or the database passwords are changed. However, you can always test the connection to the database from here.

Figure 18: Database Settings

TIBCO iProcess® Administration Console

swadmin : opensuse198 : swnodRC1 : Asia/Kolkata 13 Logout

Configuration

Process Attributes

MBOX Set

LDAP

Database Settings

Debug Settings

Port Range

Others

Database Settings


Database Parameter	Value		
Oracle TNS Identifier	orcl		<button>Test</button>
DB User (swuser7a7) password	*****		<button>Test</button>
DB Schema Owner (swpro7a7) password	*****		<button>Test</button>

Connecting to a Database Server

To establish a connection with a database server, perform the following steps:

i Note: In case the database passwords are updated or auto-reset after expiry, you will not be allowed to log in to iProcess Administration Console unless you authenticate using the updated password. See [Logging In](#) for more details.

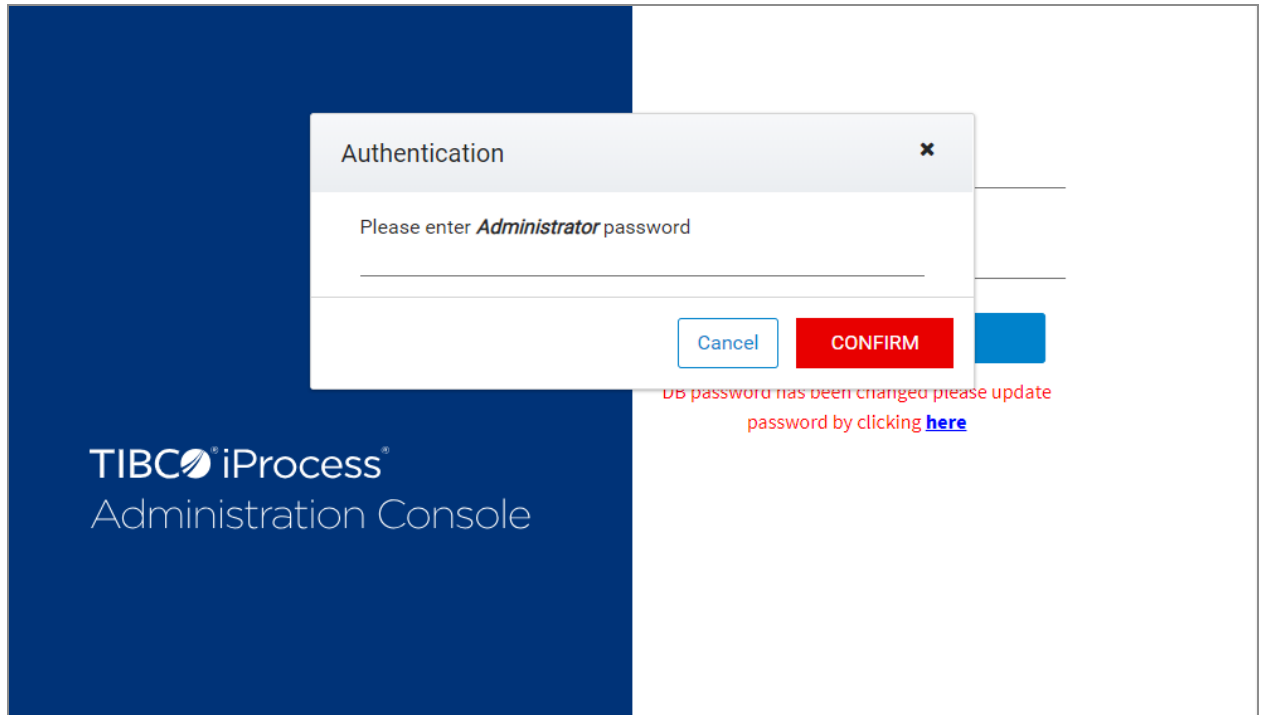
i Note: To change database settings, you need a PRO user password to confirm the change.

1. You must specify a Connection Identifier for your database server. This can be an Oracle TNS Identifier, SQL Identifier, or a DB2 Instance Name, depending on the database server you are using. Click the **Edit** icon  to enter the connection identifier value.
2. To test if a connection can be established to the database server by using the connection identifier, click **Test** adjacent to the connection identifier value field. On a successful connection, a message “**Test connection successful**” is displayed.
3. Next, enter a user password to authenticate your connection. Click the **Edit** icon  to enter the DB User password.
4. To verify if the DB User password entered is correct, click **Test** adjacent to the password field. On a successful verification, a **Password verification successful** message is displayed.
5. Finally, specify a Schema Owner Password. This is required to authenticate the user schema (database objects specific to a user). Click the **Edit** icon  to enter the Schema Owner password.
6. To verify if the Schema Owner password entered is correct, click **Test** adjacent to the password field. On a successful verification, a **Password verification successful** message is displayed.

Updated Database Passwords

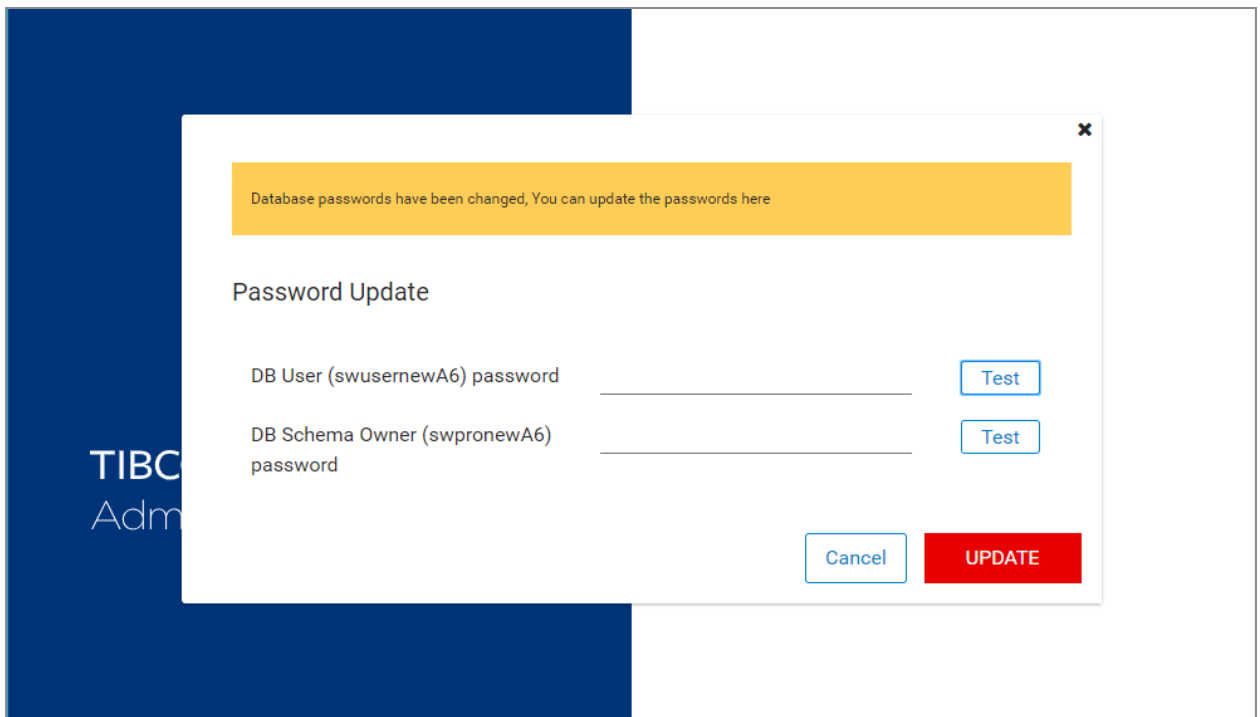
In case a database password has been changed by an administrator or has auto-reset due to expiry, you cannot log in to the Administration Console, but are prompted to perform the following steps to successfully login:

1. After clicking Login, a message "DB password has been changed please update password by clicking here" is displayed. Click the link.
2. On the Authentication dialog box, enter the PRO user password and click **CONFIRM**. A Password Update dialog box is displayed.

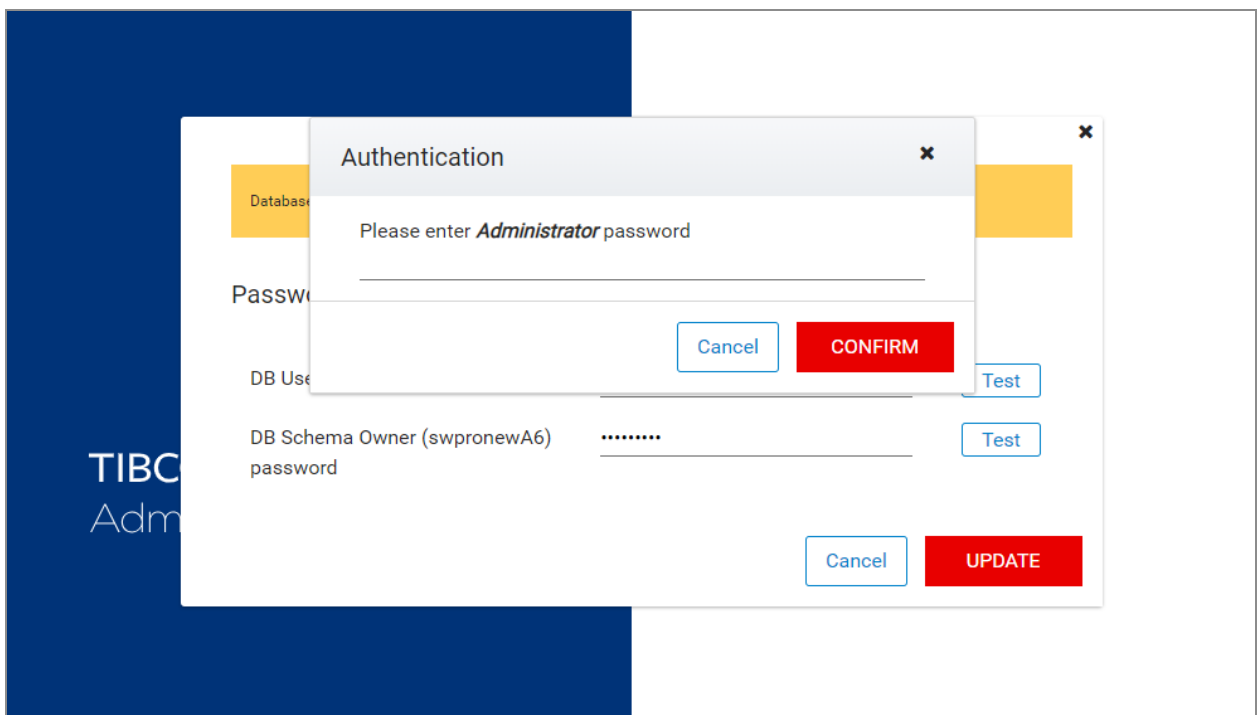


3. On the Password Update dialog box, enter the DB User and DB Schema Owner passwords in their corresponding fields. Then, click UPDATE. To test authentication for any of the two password fields, click Test on the respective password field.

i Note: Even if a single password has changed, you must enter both passwords, the new one and the unchanged one. You can however test authentication for each password individually.



4. Enter the PRO user password on the Authentication dialog box. Then, click **CONFIRM**.



Debug Settings

Overview

You can configure debug settings for iProcess Engine, TIBCO iProcess® Objects Server, TIBCO iProcess® Director, and TIBCO iProcess® Java Plug-in.

Note: TIBCO recommends that you modify these settings only if you are sure and understand what you are changing or if you are directed by TIBCO support. Beware that setting the debug level to too high can seriously affect system performance.

Figure 19: Debug Settings

The screenshot shows the 'TIBCO iProcess Administration Console' interface. The left sidebar contains a 'Configuration' menu with options: Process Attributes, Global Variables, MBOX Set, LDAP, Database Settings, Debug Settings (selected), Port Range, and Others. The main content area is titled 'Debug Settings' and displays three tables for different components.

iProcess Engine			
MachineID	Process Name	Instances	Debug Setting®
0	ALL	0	ALL=5

iProcess Object Server			
MachineID	Instances	Debug parameter	Debug Setting
0	1	LOG_FILE_MAX_SIZE	3

iProcess Director			
MachineID	Instances	Debug parameter	Debug Setting
1	0	LOG_LEVEL	2
1	0	LOG_FILE_MAX_SIZE	15

Configuring Debug Settings for iProcess Engine

To write a debug log file for a process, perform the following steps:

iProcess Engine +			
MachineID	Process Name	Instances	Debug Setting
No records found			

1. On the iProcess Engine panel, click the **Add** icon +.
An **Add New Debug Settings** dialog box is displayed.

Add New Debug Setting ×

Machine ID

Process Name

Process Instance

Debug Setting Value

Cancel

ADD

2. Enter the values for the following fields.

iProcess Engine Debug Settings

Field	Description
Machine ID	The unique identifier of the server. If you specify a value of 0 in this field, the debug settings are applied to all nodes in case of a node cluster.
Process Name	The process name of the server process for which you want to create a debug log file. To create a debug log file for all processes, enter ALL in this field.
Process Instance	The instance of the process for which you want to create a debug log file. If you specify a value of 0, all process instances are debugged.
Debug Setting Value	<p>This value indicates the level of detail that is included in the debug log. The log levels are hierarchical, from the least amount of information to the most, with each higher level including the information from the levels following it.</p> <p>The iProcess Engine processes have a debug value from 1 to 255. The value 1 denotes errors and the value 255 denotes all debugging.</p>

- For more information about iProcess Engine debug parameters, see *TIBCO iProcess Engine Administrator's Guide*.
- Click **ADD** to add the new debug settings.





Configuring Debug Settings for iProcess® Objects Server (SPO)

i Note: When configuring debug settings from the iProcess Administration Console, do not restart the iProcess Objects Server (also referred to as SPO). The settings are automatically applied while the iProcess Objects Server is running.

This is not true if you are modifying these settings from the configuration file.

Note: This panel is active only if at least one instance of SPO exists on any of the machines in a cluster. Otherwise, the panel is disabled.

To write a debug log file for iProcess Objects Server, perform the following steps:

iProcess Object Server					
MachineID	Instances	Debug parameter	Debug Setting		
1	1	LOG_LEVEL	4		
1	1	LOG_FILE_MAX_ARCHIVES	2		

1. On the iProcess Objects Server panel, click the **Add** icon .

An **Add New Debug Settings** dialog box is displayed.

Add New SPO Debug Setting

Machine ID

Process Instance

SPO Debug Parameter

Debug Setting Value

Cancel

ADD

- On the **Add New SPO Debug Settings** dialog box, enter the values for the following fields.

iProcess Objects Server Debug Settings

Field	Description
Machine ID	The unique identifier of the server.
Process Instance	The instance of the process for which you want to create a debug log file.
SPO Debug Parameter	You can choose the parameters for which you want the debug information logged. For a list of debug parameters and their description, see SPO Debug Parameters .
Debug Setting Value	This value indicates the level of detail that is included in the debug log.

SPO Debug Parameters

Parameter	Description
LOG_FILE_MAX_SIZE	<p>Maximum size in MB of the log file before it is truncated (rolls over). Note that the log file rolls over when the maximum size is reached regardless of the LOG_LEVEL setting.</p> <p>You can specify a file size in MB from 1 to 9999. The default is 15.</p>
LOG_FILE_MAX_ARCHIVES (Disk Log Parameter)	<p>This specifies the number of archive log files that is saved when the log rolls over as a result of reaching the maximum size limit (LOG_FILE_MAX_SIZE).</p> <p>You can specify a file size in MB. The default is 0, which means archives are not logged.</p>
LOG_LEVEL (Disk Log Parameter)	<p>Level of detail to write to a log file.</p> <p>The log levels are hierarchical, from the least amount of information to the most, with each higher level including the information from the levels following it. The default log level is Warning.</p>

Parameter	Description
	<p>You can specify a value from one of the four values listed here:</p> <ul style="list-style-type: none"> • Value: 1 LOG_LEVEL: Error • Value: 2 LOG_LEVEL: Warning • Value: 3 LOG_LEVEL: Informational • Value: 4 LOG_LEVEL: Debug <p>The default value is 2.</p> <p>Warning: Unless directed by TIBCO Support, the log level should be specified as “Error” or “Warning.” Setting the level to “Debug” causes an extremely large number of messages to be written to the log file. This causes the performance and response time of the iProcess Objects Server to be seriously degraded. It also causes the possibility of critical error messages being lost if the log file fills up and rolls over.</p>
LOG_CATEGORIES (Disk Log Parameter)	<p>Specifies which categories of information to write to the log.</p> <p>Specify an individual category, or combine the category values, then set this attribute to the calculated value. You can select from one of the following values. The default is 0xFFFFFFFF which means information from all categories is logged.</p> <ul style="list-style-type: none"> • 0xFFFFFFFF - LOGCAT_ALL • 0x00000001 - LOGCAT_MAIN_THREAD • 0x00000002 - LOGCAT_STATUS_UPDATE_THREAD • 0x00000004 - LOGCAT_PERIODIC_STATS_THREAD • 0x00000008 - LOGCAT_STATS_SEND_THREAD • 0x00000010 - LOGCAT_STATS_RECV_THREAD • 0x00000020 - LOGCAT_RECV_UDP_THREAD

Parameter	Description
	<ul style="list-style-type: none"> • 0x00000040 - LOGCAT_MESSAGE_SEND_THREAD • 0x00000080 - LOGCAT_MESSAGE_RECV_THREAD • 0x00000100 - LOGCAT_GET_ONE_NODE • 0x00000200 - LOGCAT_GET_ALL_NODES • 0x00000400 - LOGCAT_LOAD_BALANCE_THREAD • 0x01000000 - LOGCAT_LOG • 0x02000000 - LOGCAT_SAL_TIMING <p>Note that request/response messages are written to the log if the LOG_LEVEL attribute is set to 4 (Debug), regardless of the setting of this attribute.</p> <p>Warning: Do not change this parameter unless you are advised to do so by TIBCO Support.</p>
TRACE_MSG (Disk Log Parameter)	<p>A flag specifying if request and response messages should be traced and written to the log. You can select one of the following values. The default value is 0.</p> <ul style="list-style-type: none"> • 0 - No • 1 - Yes <p>Warning: Unless directed by TIBCO Support, it is highly recommended that TRACE_MSG be set to “0” (No) since setting this parameter to “1” could cause the log file to quickly fill, causing the possibility of critical error messages being overlooked or lost when the log reaches its maximum size and is truncated. Turning this parameter on degrades the performance and response time of the iProcess Objects Server.</p>
MEMLOG_LEVEL (Memory Log Parameter)	<p>This parameter is used to set the level of in-memory logging.</p> <p>You can also use this parameter to enable or disable in-memory logging.</p> <p>The log levels are hierarchical, from the least amount of information</p>

Parameter	Description
	<p>to the most, with each higher level including the information from the levels following it. The default log level is Warning.</p> <p>You can specify a value from one of the four values listed here:</p> <ul style="list-style-type: none"> • Value: 1 LOG_LEVEL: Error • Value: 2 LOG_LEVEL: Warning • Value: 3 LOG_LEVEL: Informational • Value: 4 LOG_LEVEL: Debug <p>The default value is 2.</p> <p>Warning: Unless directed by TIBCO Support, the log level should be specified as “Error” or “Warning.” Setting the level to “Debug” causes an extremely large number of messages to be written to the log file. This causes the performance and response time of iProcess Objects Server to be seriously degraded. It also causes the possibility of critical error messages being lost if the log file fills up and rolls over.</p>
MEMLOG_TRACE_MSG (Memory Log Parameter)	<p>A flag specifying if request and response messages should be traced and written to the in-memory iProcess Objects Server log.</p> <p>You can select one of the following values. The default value is 0.</p> <ul style="list-style-type: none"> • 0 - No • 1 - Yes <p>Warning: Unless directed by TIBCO Support, it is highly recommended that TRACE_MSG be set to “0” (No) since setting this parameter to “1” could cause the log file to quickly fill, causing the possibility of critical error messages being overlooked or lost when the log reaches its maximum size and is truncated. Turning this parameter on degrades the performance and response time of the iProcess Objects Server.</p>

Parameter	Description
MEMLOG_CATEGORIES	The categories of messages to include in the in-memory iProcess Objects Server log.
(Memory Log Parameter)	<p>You can select from one of the following values. The default is 0xFFFFFFFF which means information from all categories is logged.</p> <ul style="list-style-type: none"> • 0xFFFFFFFF - LOGCAT_ALL • 0x00000001 - LOGCAT_MAIN_THREAD • 0x00000002 - LOGCAT_STATUS_UPDATE_THREAD • 0x00000004 - LOGCAT_PERIODIC_STATS_THREAD • 0x00000008 - LOGCAT_STATS_SEND_THREAD • 0x00000010 - LOGCAT_STATS_RECV_THREAD • 0x00000020 - LOGCAT_RECV_UDP_THREAD • 0x00000040 - LOGCAT_MESSAGE_SEND_THREAD • 0x00000080 - LOGCAT_MESSAGE_RECV_THREAD • 0x00000100 - LOGCAT_GET_ONE_NODE • 0x00000200 - LOGCAT_GET_ALL_NODES • 0x00000400 - LOGCAT_LOAD_BALANCE_THREAD • 0x01000000 - LOGCAT_LOG • 0x02000000 - LOGCAT_SAL_TIMING <p>Note that request/response messages are written to the log if the LOG_LEVEL attribute is set to 4 (Debug), regardless of the setting of this attribute.</p> <p>Warning: Do not change this parameter unless you are advised to do so by TIBCO Support.</p>

For more information about iProcess Objects Server debug parameters, see *TIBCO iProcess Objects Server Administrator's Guide*.


3. Click **ADD** to add the new debug settings.

Configuring Debug Settings for iProcess® Director

Note: This panel is active only if at least one instance of iProcess Director exists on any of the machines in a cluster. Otherwise, the panel is disabled.

To write a debug log file for iProcess Objects Director, perform the following steps:

iProcess Director					
MachineID	Instances	Debug parameter	Debug Setting		
1	0	LOG_LEVEL	2		
1	0	LOG_FILE_MAX_SIZE	15		
1	0	LOG_FILE_MAX_ARCHIVES	0		
1	0	LOG_CATEGORIES	0xffffffff		

1. On the iProcess Director panel, click the **Add** icon .

An Add New Debug Settings dialog box is displayed.

Add New DIRECTOR Debug Setting
✕

Machine ID

Process Instance

DIRECTOR Debug Parameter

Debug Setting Value

Cancel

ADD

2. On the Add New DIRECTOR Debug Settings dialog box, enter the values for the following fields.

iProcess Director Debug Settings

Field	Description
Machine ID	The unique identifier of the server. Specify 0 to include all nodes in a node cluster.
Process Instance	The instance of the process for which you want to create a debug log file. Specify 0 to include all instances in the specified node or nodes.
DIRECTOR Debug Parameter	You can choose the parameters for which you want the debug information logged. For a list of debug parameters and their description, see iProcess Director Debug Parameters .
Debug Setting Value	This value indicates the level of detail that is included in the debug log.

iProcess Director Debug Parameters

Parameter	Description
LOG_FILE_MAX_SIZE	<p>Maximum size in MB of TIBCO iProcess Objects Director log file before it is rolled over.</p> <p>You can specify a file size in MB from 1 to 9999. The default is 15.</p>
LOG_FILE_MAX_ARCHIVES	<p>Maximum number of archived log files created if the log rolls over.</p> <p>You can specify a file size in MB from 0 to 9999. The default is 0 which means archives are not logged.</p>
LOG_LEVEL	<p>Level of information written to TIBCO iProcess Objects Director log file.</p> <p>The log levels are hierarchical, from the least amount of information to the most, with each higher level including the information from the levels following it. The default log level is Warning.</p> <p>You can specify a value from one of the four values listed here:</p> <ul style="list-style-type: none"> • Value: 1 Log Level: Error

Parameter	Description
	<ul style="list-style-type: none"> • Value: 2 Log Level: Warning • Value: 3 Log Level: Informational • Value: 4 Log Level: Debug <p>Warning: Unless directed by TIBCO Support, the log level should be specified as “Error” or “Warning.” Setting the level to “Debug” causes an extremely large number of messages to be written to the log file. This causes the performance and response time of iProcess Objects Server to be seriously degraded. It also causes the possibility of critical error messages being lost if the log file fills up and rolls over.</p>
LOG_CATEGORIES	<p>A set of bit flags to indicate which logging areas should be switched on. Note that request/response messages are written to the log, if the LOG_LEVEL attribute is set to 4 (Debug), regardless of the setting of this attribute.</p> <p>You can select from one of the following values. The default is 0xFFFFFFFF which means information from all categories is logged.</p> <ul style="list-style-type: none"> • 0xFFFFFFFF - LOGCAT_ALL • 0x00000001 - LOGCAT_MAIN_THREAD • 0x00000002 - LOGCAT_STATUS_UPDATE_THREAD • 0x00000004 - LOGCAT_PERIODIC_STATS_THREAD • 0x00000008 - LOGCAT_STATS_SEND_THREAD • 0x00000010 - LOGCAT_STATS_RECV_THREAD • 0x00000020 - LOGCAT_RECV_UDP_THREAD • 0x00000040 - LOGCAT_MESSAGE_SEND_THREAD • 0x00000080 - LOGCAT_MESSAGE_RECV_THREAD • 0x00000100 - LOGCAT_GET_ONE_NODE

Parameter	Description
	<ul style="list-style-type: none"> • 0x00000200 - LOGCAT_GET_ALL_NODES • 0x00000400 - LOGCAT_LOAD_BALANCE_THREAD • 0x01000000 - LOGCAT_LOG • 0x02000000 - LOGCAT_SAL_TIMING
Warning: Do not change this parameter unless you are advised to do so by TIBCO Support.	

For more information about iProcess Objects Server debug parameters, see *TIBCO iProcess Objects Director Administrator's Guide*.

3. Click **ADD** to add the new debug settings.

Configuring Debug Settings for the EAIJAVA Log

i Note: These settings are applicable only if you are using TIBCO iProcess® Technology Plug-ins.

For these settings to take effect, restart the background processes.

i Note: This panel is active only if the EAIJAVA plug-in is installed on any of the machines in a cluster. Otherwise, the panel is disabled.

Debug settings for the EAIJAVA log are written to the `log4j.properties` file. To configure the log level for EAIJAVA, perform the following steps:

EAIJAVA Log Setting

Updating Debug Level to:

DEBUG ▼

Save

1. Select one of the following parameters from the "Updating Debug Level to" drop-down menu based on the level of log information you require.
The log levels are hierarchical, from the least amount of information to the most,

with each higher level including the information from the levels following it. The default log level is Warning.

EAIJAVA Log Debug Parameter

Parameter	Log Level
ERROR	Logs include errors.
WARN	Logs include errors and warnings.
INFO	Logs include errors, warnings, and information.
DEBUG	Logs include errors, warnings, information, and debug.

2. Click **Save** to save the debug settings.

Port Range

The Port Range tab allows you to configure port ranges to connect to TIBCO iProcess Engine in a firewalled environment.

TIBCO iProcess Administration Console swadmin : QARHEL76 : swmod038 : Asia/Kolkata Logout

Configuration

- Process Attributes
- Global Variables
- MBOX Set
- LDAP
- Database Settings
- Debug Settings
- Port Range**
- Others

Port Range

RPC Port Range [Add RPC Port Range](#)

Range Mode [®]	Port Range Start [®]	RPC Range Start	Range Size	Machine ID	Ports In Use
1	10000	200000	1	1	6

AQ Port Range [Add AQ Port Range](#)

Port Range Start [®]	Range Size	Machine ID
1224	1	1

Adding, Editing, or Deleting an RPC Port Range

An RPC port range restricts iProcess Engine processes to accept incoming RPC requests from within that port range. For more information, see Administering Firewall Port Ranges in *TIBCO iProcess Engine Administrator's Guide*.

Adding an RPC Port Range

To add an RPC port range from the Administration Console, perform the following steps:

RPC Port Range					Add RPC Port Range
Range Mode	Port Range Start	RPC Range Start	Range Size	Machine ID	Ports In Use
No records found					

1. On the RPC Port Range panel, Click **Add RPC Port Range**.
An **Add RPC Port Range** dialog box is displayed.
2. On the **Add RPC Port Range** dialog box, you must define the fields listed in the table here:

RPC Port Range Fields




Field	Description
Range Mode	<p>Defines how servers that use this port range configuration should allocate ports. Specify one of the following values:</p> <p>0 - Do not use port or RPC ranges. A process can use any port number and RPC number (as assigned by the operating system).</p> <p>1 - Use port ranges. A process must use a port number allocated from within the defined range but can use any RPC number.</p> <p>2 - Use RPC ranges. A process must use an RPC number allocated from within the defined range but can use any port number.</p> <p>3 - Use port ranges and RPC ranges. A process must use both a port number and an RPC number allocated from within the defined ranges.</p> <p>If this value is omitted the range mode defaults to 3.</p>
Port Range Start	The port number that the range should start from. (The range, therefore, ends at Port_range_start + Range_size.)
RPC Range Start	The RPC number that the range should start from. (The range, therefore, ends at RPC_range_start + Range_size.)

Field	Description
Range Size	(Optional) The number of slots in the defined port and/or RPC number ranges. The range size cannot exceed 65535. If this field is omitted, the range size defaults to 20.
Machine ID	The server ID of the machine that you want to add to a port range.

3. On populating all fields, click **ADD** to add the specified RPC port range.


Editing an RPC Port Range

To edit the port range, perform the following steps:

1. Click the **Edit** icon .
2. Update the required values.
3. After updating the values, click the **Accept** icon  to apply the new values. Otherwise, click the **Decline** icon .

Deleting an RPC Port Range

To delete a port range, perform the following steps:

1. Click the **Delete** icon .
2. On the confirmation dialog box, click **YES, REMOVE**.

Adding, Editing, or Deleting an AQ Port Range (For Oracle Users Only)

Adding an AQ Port Range

An AQ Port Range is specific to iProcess Engine setup with an Oracle database. To add an AQ port range, perform the following steps:

AQ Port Range			Add AQ Port Range
Port Range Start	Range Size	Machine ID	
No records found			




1. On the AQ Port Range panel, click **Add AQ Port Range**.
An Add AQ Port Range dialog box is displayed.
2. On the Add AQ Port Range dialog box, you must define the fields listed in the table here:

AQ Port Range Fields

Field	Description
Port Start	The port at which the port range starts.
Range Size	The range size for the port range.
Machine ID	The ID of the machine to which the port range is added. If this field is input as "ALL" or "0", the port range is added to all machines.


Editing an AQ Port Range

To edit the port range, perform the following steps:

1. Click the **Edit** icon .
2. Update the required values.
3. After updating the values, click the **Accept** icon  to apply the new values.
Otherwise, click the **Decline** icon .

Deleting an AQ Port Range

To delete a port range, perform the following steps:

1. Click the **Delete** icon .
2. On the confirmation dialog box, click **YES, REMOVE**.

Other Configuration Options

Overview

To access configuration options, such as UTF-8 encoding, custom UVAPI, and so on, click the Others tab on the left pane. The following section describes each configuration option in detail.

Figure 20: Others

The screenshot shows the 'Others' configuration page in the TIBCO iProcess Administration Console. The left sidebar lists navigation options: MBOX Set, LDAP, Database Settings, Debug Settings, Port Range, and Others (selected). The main content area is divided into three sections:

- Date Format:** Includes dropdowns for 'dd', 'mm', 'yyyy', and a 'Date delimiter' set to '/'. A 'Time delimiter' is also present.
- Working Days:** A row of buttons for days of the week: Su, Mo, Tu, We, Th, Fr, Sa. The 'Mo' through 'Sa' buttons are highlighted in blue.
- UTF-8:** A section with a 'Save' button in the top right. It contains a label 'UTF-8' and a toggle for 'Engine Level' which is currently set to 'Enabled'.
- Custom UVAPI:** A section with a 'Save' button in the top right. It contains a label 'Custom UVAPI' and a toggle which is currently set to 'Disabled'.

Note: If you modify values for any of these options, restart iProcess Engine for the new settings to take effect.

Date Format

Note: At any point, if you want to save your settings for this option, click **Save** in the top-right corner.

On this panel, you can specify the format in which you want to see the date in iProcess Engine. This includes any information like logs or system events that display a date. To create a custom date format, use the drop-down menu for each of the three parts of the

date and select the appropriate option. For example, if you want to see the date as 01/28/2019 (mm/dd/yyyy), select mm from the first drop-down menu, dd in the second drop-down menu, and yyyy in the third drop-down menu.

Date Delimiter

To change the date delimiter from a slash to a hyphen or vice-versa, select the appropriate option from the date delimiter drop-down menu. Consider the above example, if you change the slash to hyphen, the date should look like mm-dd-yyyy.

Time Delimiter

For information that also displays time, you can configure the time delimiter. You can select from a colon or a period (":" or ".") by using the Time delimiter drop-down menu.

Working Days

You can also specify the number of working days in a week. A working day is highlighted in blue and a non-working day is not highlighted and is white.

To configure a working day or a non-working day, click the respective day's icon to select it as a working day (highlighted blue) or clear it to change it to a non-working day (no highlight). For example, a five day working week looks like the following illustration.



UTF-8

Note: At any point, if you want to save your settings for this option, click Save in the top-right corner.

Enter the PRO user password to modify this setting.

This option allows you to configure UTF-8 encoding at the iProcess Engine level.

To enable this option, click Enabled on the UTF-8 panel. To disable this option, click Disabled.

Custom UVAPI

i Note: At any point, if you want to save your settings for this option, click Save on the top-right corner.

i Note: To specify a custom User Validation API (UVAPI), you need a PRO user password.

From this panel, you can specify a custom User Validation API (UVAPI). To do this, click Enabled.

In the resulting "Path to Custom UVAPI library" field, enter the path where your custom user validation API library is located.

For more information on UVAPI, see *TIBCO iProcess User Validation API User's Guide*.

Utilities

This section lists the utility features in the iProcess Administration Console.

System Events

This section serves as an event log. You can use filters to search for specific system events. Similarly, you can also export the event log to a Comma Separated Value file and purge events.

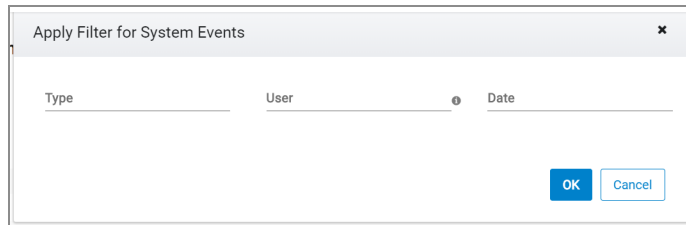
Type	User	Date	Details
48	pro	04/23/2020 23:18:36	Shutdown process (Machine ID = 1, Process Name = BG, Process Instance = 1)
48	pro	04/23/2020 23:18:36	Shutdown process (Machine ID = 1, Process Name = BG, Process Instance = 2)
48	pro	04/23/2020 23:18:36	Shutdown process (Machine ID = 1, Process Name = BG, Process Instance = 3)
48	pro	04/23/2020 23:18:36	Shutdown process (Machine ID = 1, Process Name = BG, Process Instance = 4)
43	pro	04/23/2020 23:18:36	Send the request of shutting down process by swsrmgr (Machine ID = 1, Process Name = BG, Process Instance = 0)
1	swadmin	04/23/2020 23:08:07	Successful Login from admin console username is swadmin
1	swadmin	04/23/2020 23:08:02	Failure Login from admin console username is swadmin
1	swadmin	04/23/2020 23:07:55	Failure Login from admin console username is swadmin
49	pro	04/23/2020 23:05:58	Restart process (Machine ID = 1, Process Name = SPO, Process Instance = 1)
49	pro	04/23/2020 23:05:56	Restart process (Machine ID = 1, Process Name = WISMBD, Process Instance = 1)
49	pro	04/23/2020 23:05:56	Restart process (Machine ID = 1, Process Name = WISMBD, Process Instance = 2)
47	pro	04/23/2020 23:05:54	Start process (Machine ID = 1, Process Name = WISMBD, Process Instance = 2)
47	pro	04/23/2020 23:05:54	Start process (Machine ID = 1, Process Name = WISMBD, Process Instance = 1)
49	pro	04/23/2020 23:05:54	Restart process (Machine ID = 1, Process Name = WIS, Process Instance = 2)
47	pro	04/23/2020 23:05:54	Start process (Machine ID = 1, Process Name = SPO, Process Instance = 1)



Note: From version 11.8, the System Event display and filter against ALL System Events, instead of just the first 30000, as was the case in version 11.7.

Filtering Events

Use Filter to filter system events by applying Type, User, or Date filters, as shown in the figure.



Apply Filter for System Events

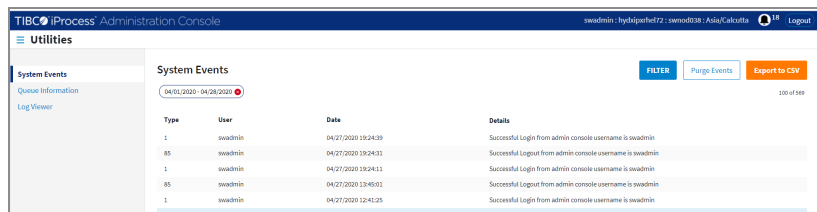
Type _____ User _____ Date _____

OK Cancel

Input the Type, User or Date in the appropriate field to search for System Events based on that criterion.

Filter by date feature allows you to search for different timezone events by advancing the end date by a day. By default, the end date is incremented by day (internally) to ensure that the system events that have occurred in timezones that are ahead of the local timezones are also included.

The following image shows System Events filtered by selecting April 1 as the start date and April 27 as the end date. Notice that the end date shown in the filter criterion shows April 28.



TIBCO iProcess Administration Console

Utilities

System Events

Queue Information

Log Viewer

System Events

04/01/2020 - 04/28/2020

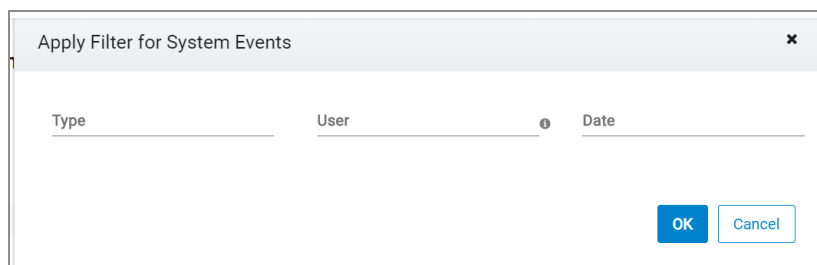
Filter Purge Events Export to CSV

100 of 149

Type	User	Date	Details
1	swadmin	04/27/2020 13:24:39	Successful Login from admin console username is swadmin
85	swadmin	04/27/2020 13:24:51	Successful Logout from admin console username is swadmin
1	swadmin	04/27/2020 13:24:51	Successful Login from admin console username is swadmin
85	swadmin	04/27/2020 13:46:01	Successful Logout from admin console username is swadmin
1	swadmin	04/27/2020 13:46:05	Successful Login from admin console username is swadmin

To remove the applied filter, click the small red-colored cross icon that appears next to the applied filter name. You can see all the System Events without filters.

For more information on filters, see [Filtering Information](#).



Apply Filter for System Events

Type _____ User _____ Date _____

OK Cancel

Exporting Events


To save all or specific system events for future reference, click Export to CSV. This exports the event log to a Comma Separated Value (CSV) file. To export events specific to a type, user or date range, use the respective filters, then click Export to CSV. See [Filtering Events](#) for more information.

Purging Events

To clear or delete logged system events, click Purge Events. A “Select End Date or Event types” dialog box is displayed. Here you can select the events that you want to delete based on an end date and the type of event or only the event type.

Select End Date or Event types X

Select End Date:

Select End Date 

Select Event Type:

- ☐ 1 - Successful login
- ☐ 2 - Failed user validation
- ☐ 3 - Change password
- ☐ 4 - Movesysinfo
- ☐ 5 - Add attribute for users and groups
- ☐ 6 - Delete attribute for users and groups

End Date and Event Type

If you want to delete events prior to a specific date, perform the following steps:

1. Click the **Calendar** icon next to the **Select End Date** field.
A date picker is displayed.
2. From the date picker, select an end date.

i Note: To clear the specified date, select the date and clear it.

3. From the **Event Type** search box, search for the event type.
4. Click **OK** to delete the system events.
5. On the confirmation dialog box, click **PURGE**.
On successful deletion, a message “**Selected Events have been Purged Successfully**” is displayed.

Event Type

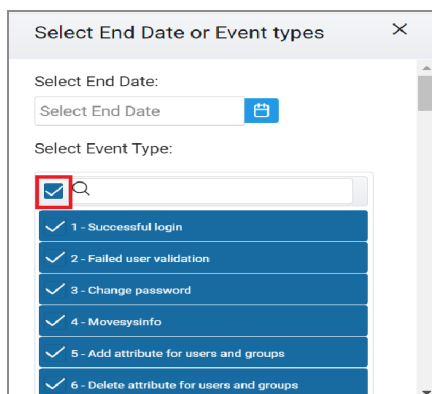
To delete events based on their type, perform the following steps:

1. Use the search box to search for the type of event you want to delete.
2. Then, select the check box for that event.
3. Click **OK** to delete the system events.
4. On the confirmation dialog box, click **PURGE**.
On successful deletion, a message "Selected Events have been Purged Successfully" is displayed.

All Events

To purge all events, perform the following steps:

1. Select the first check box under the **Select Event Type** field



2. Click **OK** to purge all events.

3. On the confirmation dialog box, click **PURGE**.

On successful deletion, a message "**Selected Events have been Purged Successfully**" is displayed.



Warning: Events once purged cannot be restored. To avoid accidentally deleting important information, TIBCO recommends that you use the Export to CSV option to keep a backup of events before using this option.

Queue Information

This section provides information about a Work Item Server (WIS) Queue.

WIS Number	Queue Name	Flags ⁰	Items	New	Dead	Urgent
1	swadmin		0	0	0	0

The information can be classified into the following parameters.

Queue Information

Parameter	Description
WIS	The number of the WIS (starting from 1). For example, if you have 5 WISes, the number of each WIS should be 1, 2, 3, 4, and 5.
QueueName	The name of the queue allocated to WIS.
Flags	See the following to understand the meaning of each flag: <ul style="list-style-type: none"> • D specifies the queue is disabled (this would normally be when the system has just been started and the queues have not yet been

Parameter	Description
	<p>allocated to a WIS).</p> <ul style="list-style-type: none"> • U specifies there are urgent items in this queue. • G specifies this is a group queue. • T specifies this is a test queue. • D specifies there are items in this queue with deadlines set. • N specifies there is new mail in this queue. • M specifies there is mail in this queue (i.e. it is not empty).
Items	The number of items in the queue.
New	The number of new items in the queue.
Dead	The number of items in the queue with deadlines.
Urgent	The number of urgent items in the queue.

i Note: Click the Filter to apply filter for Queue information. You can filter by WIS Number, and Queue Name. To remove the filter, click the cross mark next to the filter name.

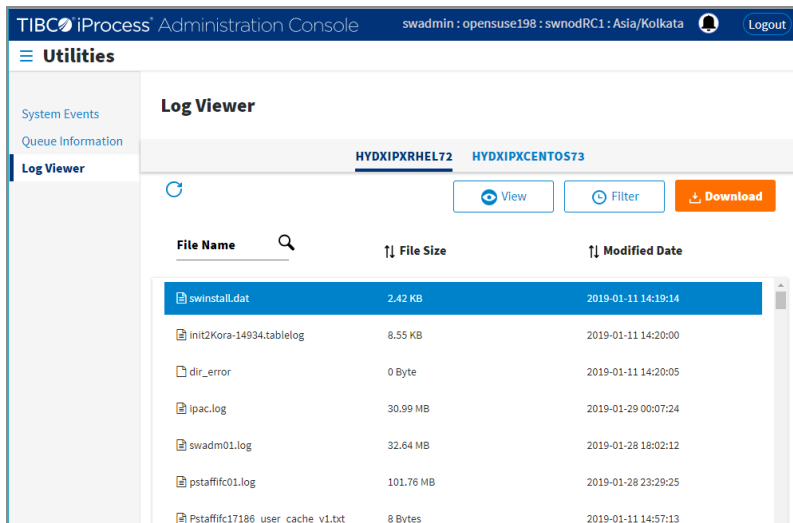
i Note: From version 11.8, the Queue Information can display and filter against ALL System Events, instead of just the first 30000, as was the case in version 11.7.

Exporting Queue Information

To save queue information for future reference, click Export to CSV. This exports the information to a Comma Separated Value (CSV) file.

Log Viewer

This section lists the logs for one machine or multiple machines in a cluster. You can use the Tabs on the top to view logs for different machines.



Filtering Logs

You can filter logs by using the File Name filter. For more information on how to filter information, see [Filtering Information](#).

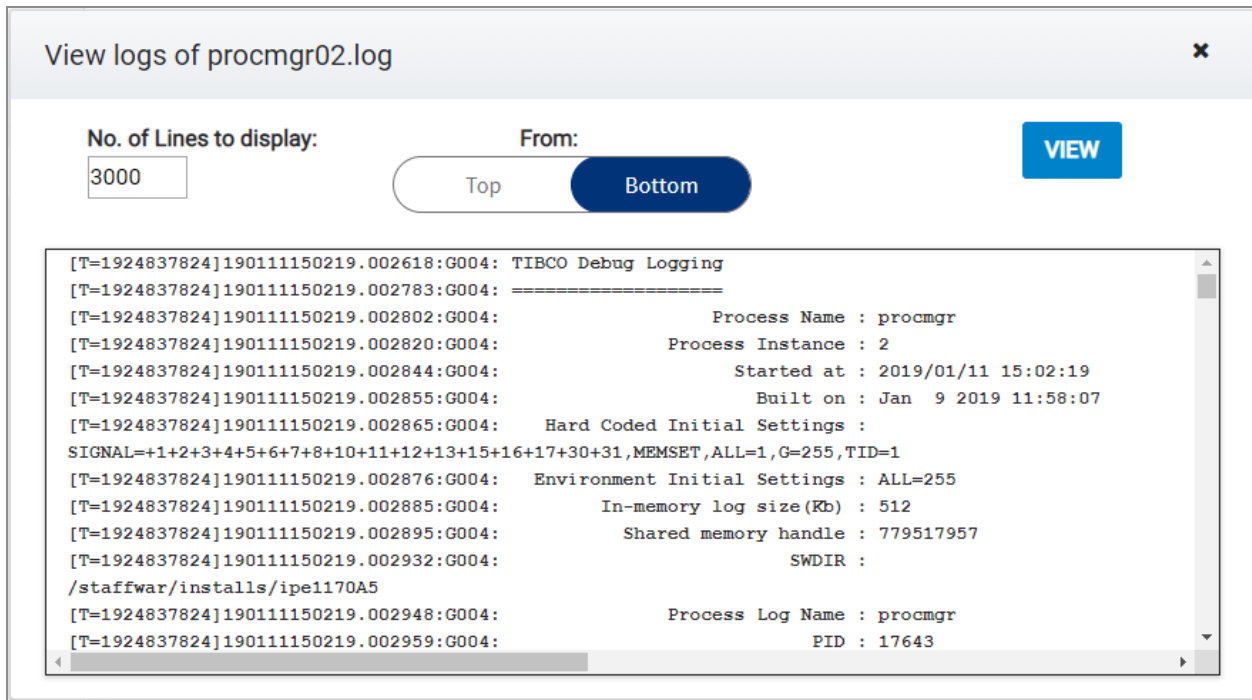
Sorting Logs

You can sort logs by using the File Size or Modified Date parameters. For more information on how to sort information, see [Sorting Information](#).

Viewing Logs

To view a log, double-click the log file name. Alternatively, you can also view a log by selecting it and clicking View.

Note: Viewing log files that are large in size in the log viewer window can severely affect performance. TIBCO recommends that you download large-sized log files and view them locally.



On the log viewer window, select Top to view the top lines in a file's log. Alternatively, select Bottom to view the bottom lines of a file's log.

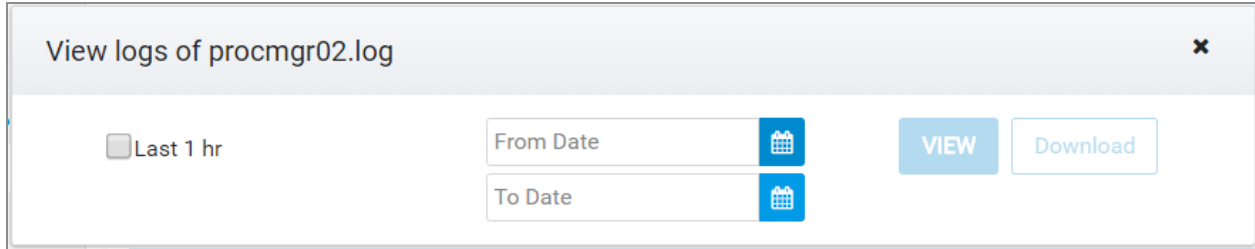
In each case, you can select the number of lines to be displayed for the selected log.

Note: To avoid performance issues, the log viewer window loads only a part of a log file by default, which is 3000 lines. You can increase the number of lines being displayed, but increasing this to a level high above the default value can seriously affect performance.

The log viewer window can load a maximum of 100,000 lines. If you want to view more than 100,000 lines, you must download the log file.


Filtering Logs for a Specific Time


To view or download logs for a file for a specific time period, select the file and click **Filter Logs**. The following prompt is displayed.



View logs of procmgr02.log

☐ Last 1 hr


From Date 

To Date 

VIEW Download

To view lines of a log for the last hour, select the **Last 1 hr** check box.

To view logs for a specific time period, you can enter a date and time in the From Date and To Date fields by using the date and time picker. Then, click **VIEW** to view these logs, or click **Download** to download the specified logs.

 **Note:** The Filter Logs feature can load a maximum of 10,000 lines. If the log includes more than 10,000 lines for the specified time period, the system prompts you to download the log file.

Downloading Logs

To download a log, select the log and click Download. You can also download multiple logs; to do this, hold the Ctrl key and select the logs you want to download, then click Download.

An archived log file is downloaded as a TAR file, if you are using a UNIX server, or as a ZIP file, if you are using a Windows server.

Monitoring

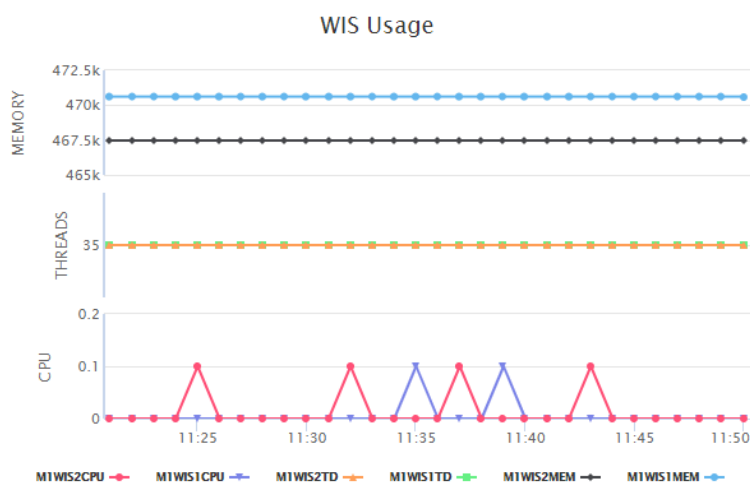
This section describes how you can monitor system performance for iProcess Engine and its associated components.

Overview

The Monitoring section in the Administration Console allows you to monitor system parameters like CPU usage, memory usage, server load, and so on, for different iProcess Engine components and services.

For a particular component or service, you can configure parameters for which you require graphical data, and also the time interval for which you need the data to be collected. For example, a graph to view the Work Item Server's CPU, thread, and memory usage data for every minute would look like the following illustration.

Figure 21: WIS Usage Graph (Per Minute)



Frequency Type

The data in the Monitoring section is divided into three pages based on frequency type. These are listed :

- Minute

- Hourly
- Daily

i Note: Some metrics are gathered only at an hourly or a daily level. This is because these metrics do not vary significantly enough to require monitoring more frequently, and are also resource-expensive to be captured at lower levels.

Metrics for daily or hourly levels that are captured in minutes are aggregate values, such as minimum, maximum, or average of the minute or hourly metrics respectively.

The Minute page displays graphical data for every minute, the Hourly page displays data for every hour, whereas the Daily page displays data for each day.

For each frequency type, you can configure graphs from a list of templates. The subsequent topics list steps to configure graphs and effectively monitor the required system information.

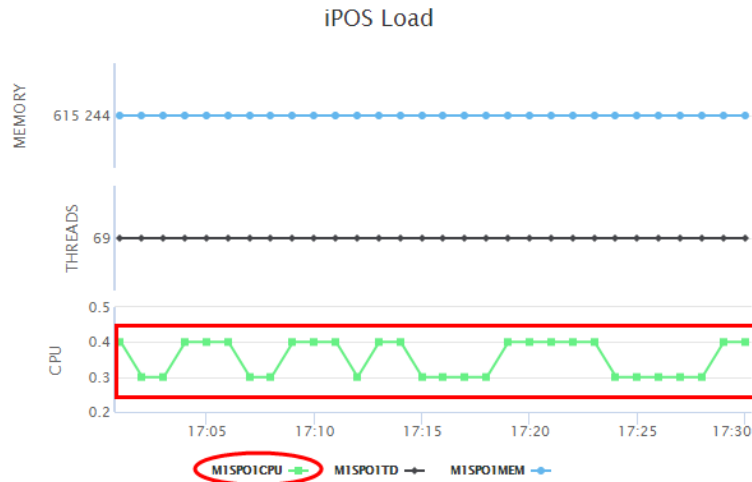
Dashboard

Each page (Minute, Hourly, and Daily) has a dashboard that displays real-time graphical data based on the parameters configured.

i Note: You can add up to eight graphs to each dashboard.

Show/Hide Parameters

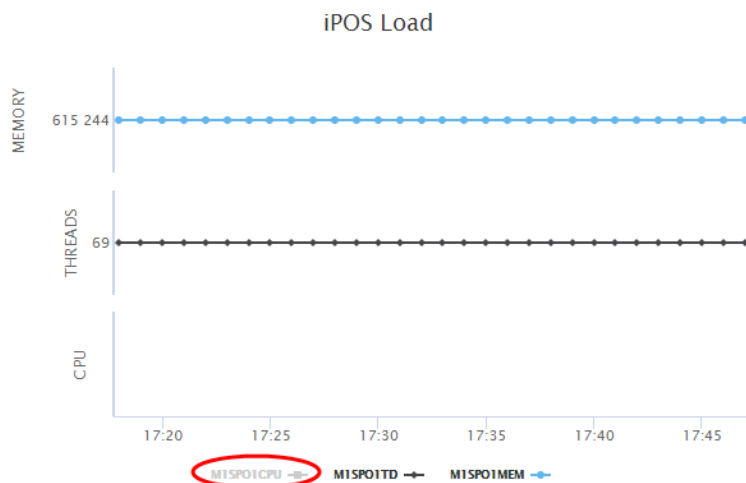
For any graph that displays statistical data for more than one parameter for multiple components, you can choose to see or hide data for a specific parameter. To show or hide a parameter's data, click the parameter name. The parameter name can be seen in the illustration with a circular highlight.



A parameter (for a component) when visible displays a small colored line in which the data corresponding to that parameter is displayed. For instance, the illustration above shows the parameter name "M1SPO1CPU" with a small green line next to it, and the corresponding green plotted line for CPU usage for the iProcess Objects Server (iPOS). In the parameter name, "M1" implies machine name, "SPO1" implies the process instance 1 for SPO, and CPU is the metric that is computed.

However, when hidden, the parameter name is grayed out and the corresponding data for the parameter is no longer displayed on the graph (see the following illustration).

Clicking the parameter name again restores displaying the data for that parameter.



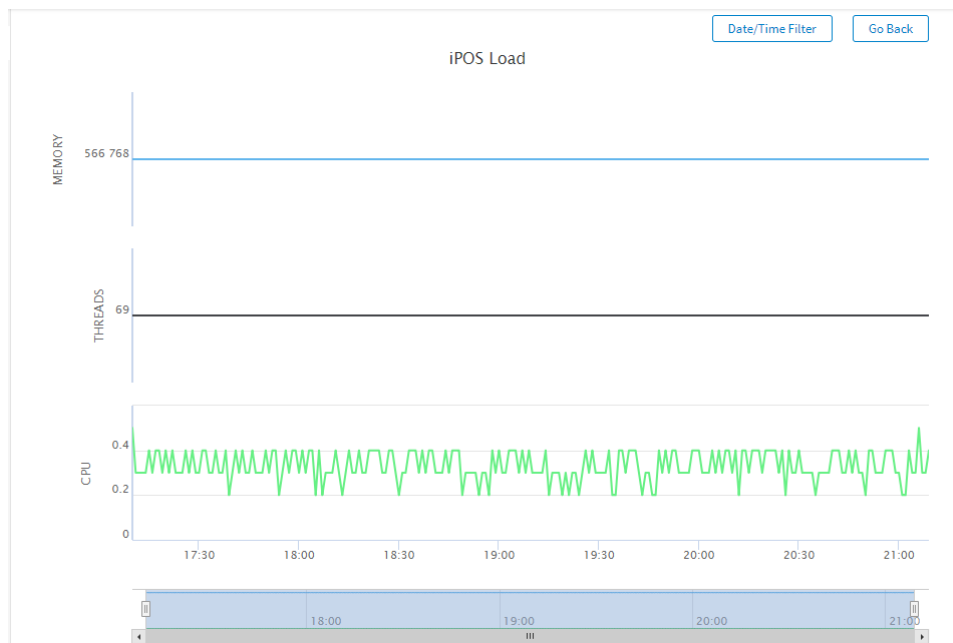
Date/Time-Specific Graphs

You can view graphical data for a specific time period by providing the date and time or by using the timeline slider on the expanded view of the graph. For example, if there is a

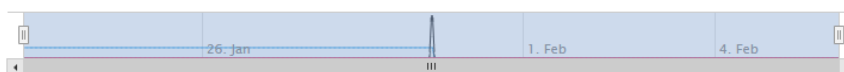
spike in the CPU usage for a given process at around 1:30 PM, you can zoom-in to a 10-minute time span on either side to get a closer picture, which means you can see data only between 1:20 to 1:40. In this way you can spot the issue better, which otherwise isn't so obvious when the data covers a longer timeline.

To view the expanded view for a graph, perform the following steps:

1. Double-click the graph for which you require data for a specific time period. This displays an expanded view of the graph with an extended timeline. For instance, the iPOS Load graph, when expanded, looks like the following illustration.



2. On the expanded view of the graph, you can see more data than what you saw on the dashboard. For example, on the Hourly dashboard, if you could see data for thirty hours, on the expanded view you can see about ten times more data which is approximately three hundred hours or thirteen days.
3. If you want to see data for a specific period, you can use the timeline slider to filter the data.



4. To narrow down data to a specific date or time range, click **Date/Time Filter**. The Choose Date/Time Range dialog box is displayed.
5. On the Choose Date/Time Range dialog box, click the **From Date** field to select the start date. You can also specify a start time if required.

6. Then, click the **To Date** field to select an end date. You can also specify a start time if required.
7. Click **APPLY** to view graphical data for the specified date and time.

Exporting Metrics Using the swadm Utility

You can use the swadm utility to export metrics to a file in the CSV format from the iProcess Engine Server. For more information, see iProcess Engine Metrics in the *TIBCO iProcess Engine Administrator's Guide*.

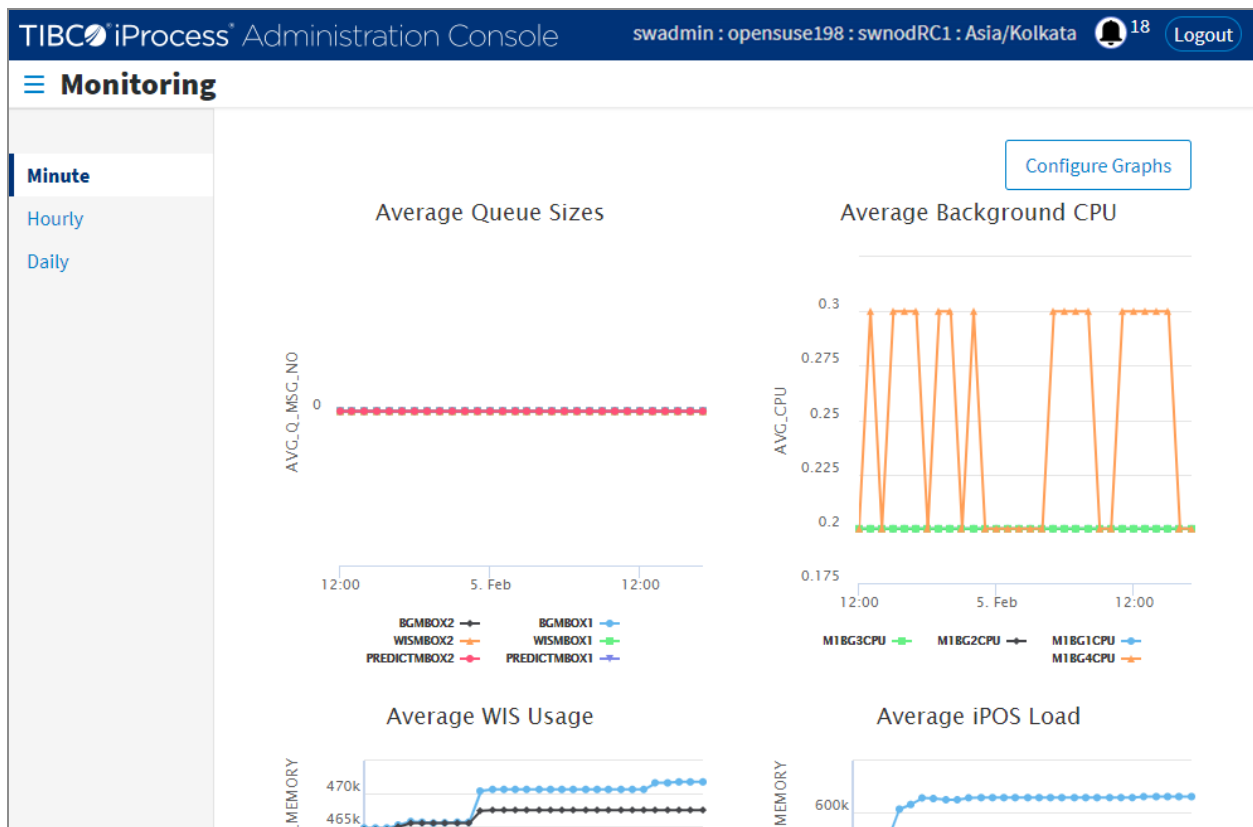
Configuring Per Minute Graphs

To configure graphs to display data on a per minute frequency, navigate to the Monitoring section by performing the following steps:

1. From the dashboard, click the **Main Menu** icon on the top-left corner.
2. Click the **Monitoring** tab.
3. The "Minute" page is displayed by default. If it is not, click the **Minute** tab on the left pane.

On the Minute page's dashboard, four graphs are displayed by default. These are Queue Sizes, WIS Usage, iPOS Load, and Background CPU.

Figure 22: Per Minute Graph Dashboard



To delete the default graphs or configure additional graphs, perform the following steps:

1. Click **Configure Graphs** in the top-right corner.
A page titled Configured Graphs is displayed.

Figure 23: Configured Graphs

The screenshot shows the TIBCO iProcess Administration Console Monitoring page. The left sidebar has a 'Monitoring' section with 'Minute', 'Hourly', and 'Daily' options. The main area is titled 'Configured Graphs' and contains a table with the following data:

Title	Template	
Queue Sizes	Queue Message Counts	
Background CPU	BG Usage	
WIS Usage	Total Resources	
s1	FG CPU	
iPOS Load	Total Resources	

Buttons: 'Add Configuration' and 'Return to Graph View' are in the top right. An 'Edit' button is at the bottom right of the table.

Below the table, the 'Viewing WIS Usage graph configuration' section shows a table with the following data:

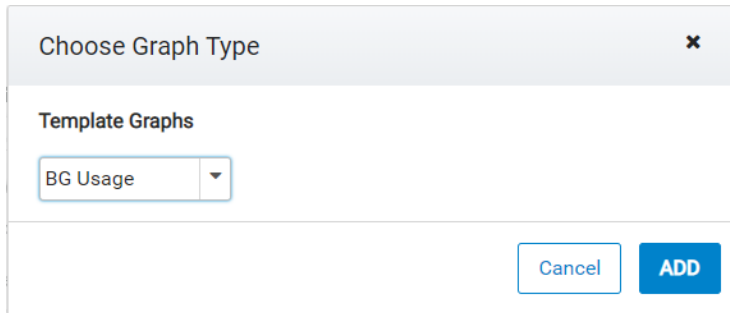
Process Name	Machine Name	Instance	Options
WIS	ALL Machines	0	CPU
WIS	ALL Machines	0	MEMORY
WIS	ALL Machines	0	THREADS

Note: At any point, if you want to return to the page's dashboard, click **Return to View**.

- (Optional) On the Configured Graphs page, the four default graphs are listed. To delete a default graph, click the **Delete** icon adjacent to the graph title.
- Click **YES, REMOVE** in the confirmation dialog box.

The screenshot shows the same 'Configured Graphs' page as before, but with a confirmation dialog box open in the center. The dialog box has the title 'Are you sure you want to delete WIS Usage graph?' and two buttons: 'CANCEL' and 'YES, REMOVE'.

- To configure a new graph, click **Add Graph**. A "Choose Graph Type" dialog box is displayed.



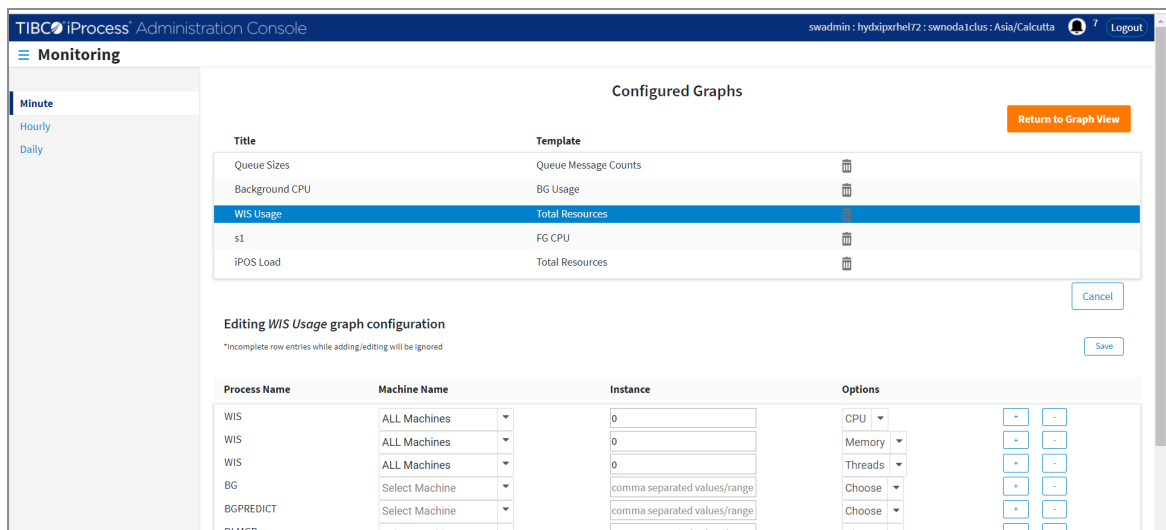
Choose Graph Type

Template Graphs

BG Usage

Cancel ADD

5. Select a Template Graph from the drop-down menu. For example, let's consider that you selected the BG Usage template graph.
6. Click **ADD**.
The configuration options for the selected graph are displayed.
7. Configure one or multiple background processes as required by performing the following steps:



TIBCO iProcess Administration Console

Monitoring

Minute
Hourly
Daily

Configured Graphs

Title	Template
Queue Sizes	Queue Message Counts
Background CPU	BG Usage
WIS Usage	Total Resources
s1	FG CPU
iPOS Load	Total Resources

Editing WIS Usage graph configuration



*Incomplete row entries while adding/editing will be ignored

Process Name	Machine Name	Instance	Options
WIS	ALL Machines	0	CPU
WIS	ALL Machines	0	Memory
WIS	ALL Machines	0	Threads
BG	Select Machine	comma separated values/range	Choose
BGPREDICT	Select Machine	comma separated values/range	Choose
DI MGR	Select Machine	comma separated values/range	Choose

- a. Select a machine from the Machine Name drop-down menu for each background process for which you require the data plotted on the graph. You can select a specific machine or ALL Machines. For the purpose of this example, let's consider that you selected ALL Machines for the BG process.
- b. Next, enter the instances in the Instance field for which you require the data plotted on the graph. For multiple instances, list each instance separated by a comma. You can also enter a range in this field, such as, 1-10 which includes all instances between 1 to 10 including 1 and 10. Let's consider you entered 1, 2 in this field for the BG process.

- c. Finally, choose the parameter for which the data should be obtained from the Options drop-down menu. This can be CPU, Memory, Threads, and so on. You can also select all parameters. Let's consider that you selected Memory in this field.

i Note: If the graph template you are configuring is for a specific parameter like FG CPU or FG Memory, then step "c" is not applicable.

8. If you want to plot data for a process on different machines separately, click the **Add** icon  to add another row of the same process. In case you want to remove a process from the list, click the **Remove** icon .
9. (Optional) You can also narrow down the data to be plotted by specifying a particular MBox queue. To do this, select an MBox queue from the Queues List drop-down menu. If this information is not specified, the graph is plotted with data for all MBox queues which have the configured processes listed. Let's consider that you did not select a specific MBox queue.
10. Before you can save your graph and view it on the dashboard, enter a name for your graph. Let's consider that you named your graph as BGMonitor.

i Note: The name for your graph must be unique and should not include any special characters.

11. Click **Save**.

On successfully configuring the graph, a Graph Added Successfully message is displayed. The graph is added to the Configured Graphs list and to the dashboard.

TIBCO iProcess® Administration Console swadmin : hydxipxrhel72 : swnoda1clus : Asia/Calcutta 7 Logout

Monitoring

Minute
Hourly
Daily

Configured Graphs [Add Configuration](#) [Return to Graph View](#)

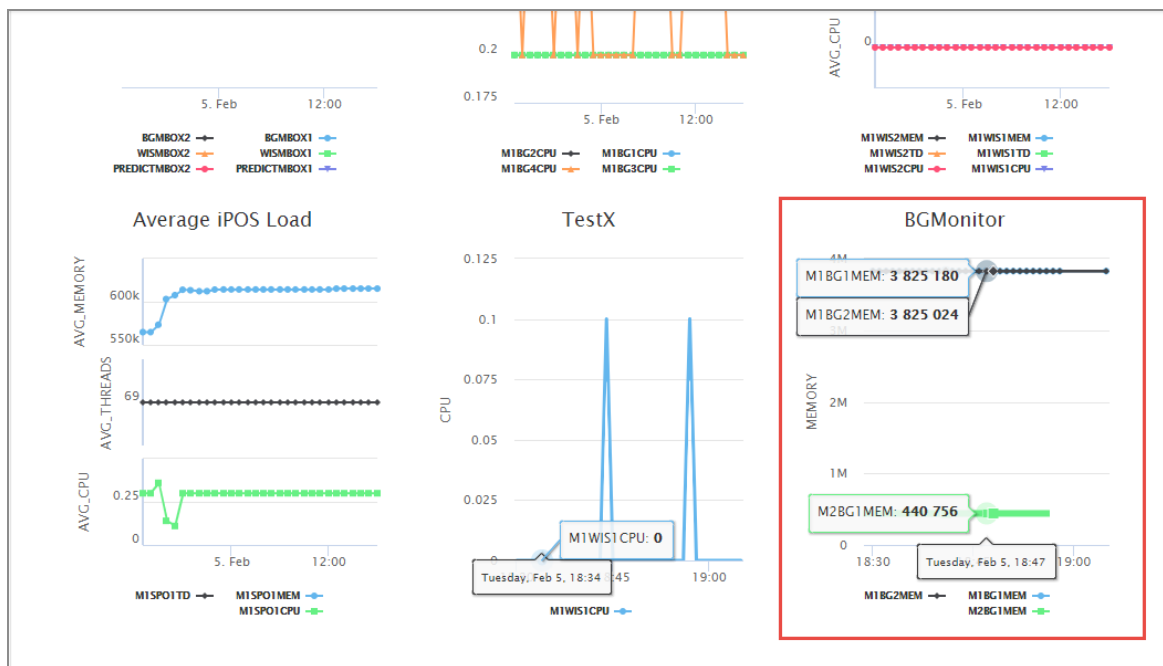
Title	Template
Queue Sizes	Queue Message Counts
Background CPU	BG Usage
WIS Usage	Total Resources
s1	FG CPU
iPOS Load	Total Resources

[Edit](#)

Viewing WIS Usage graph configuration

Process Name	Machine Name	Instance	Options
WIS	ALL Machines	0	CPU
WIS	ALL Machines	0	MEMORY
WIS	ALL Machines	0	THREADS

12. Click **Show Graphs** to go back to the dashboard and view the graph that you just added.



Likewise, you can configure the following graphs by performing the steps given above.

Per Minute Template Graphs

Graph	Description
FG CPU	<p>Allows you to monitor the CPU usage for foreground processes (responsible for communicating with TIBCO iProcess Workspaces and for passing any TIBCO iProcess Workspace requests, such as released work items to the background area for processing).</p> <p>Also, you can choose to add an Active Logins parameter to compare CPU usage of the processes with the number of users logged in at a given point in time.</p>
FG Memory	<p>Allows you to monitor the memory usage for foreground processes. Also, you can choose to add an Active Logins parameter to compare memory usage of the processes with the number of users logged in at a given point in time.</p>
FG Threads	<p>Allows you to monitor the number of threads used by foreground processes. Also, you can choose to add an Active Logins parameter to compare the number of threads for the processes with the number of users logged in at a given point in time.</p>
FG Queues	<p>Allows you to monitor CPU usage for foreground MBox Queues.</p>
BG Usage	<p>Allows you to monitor the CPU and memory usage for background processes (responsible for processing message instructions received from the clients, such as releasing a step or forwarding a step).</p> <p>Additionally, you can also monitor processes specific to a particular MBox Queue.</p>
Queue Message Counts	<p>Allows you to monitor the message count for all MBox queues.</p>
Active Logins	<p>Allows you to monitor the number of active logins.</p>
Total Resources	<p>Allows you to monitor the CPU, memory, and thread usage for all iProcess Engine resources.</p>

Graph	Description
Work Item Load	<p>Allows you to monitor the load on the Work Item Server (WIS).</p> <p>In this case, load can be defined as:</p> <ul style="list-style-type: none">• Largest queue (lg_queue_size).• Work items count on WIS that is processing a large number of Queues (wis_most_que_items).• Work items count on WIS that is processing a large number of work items (wis_item_sum).

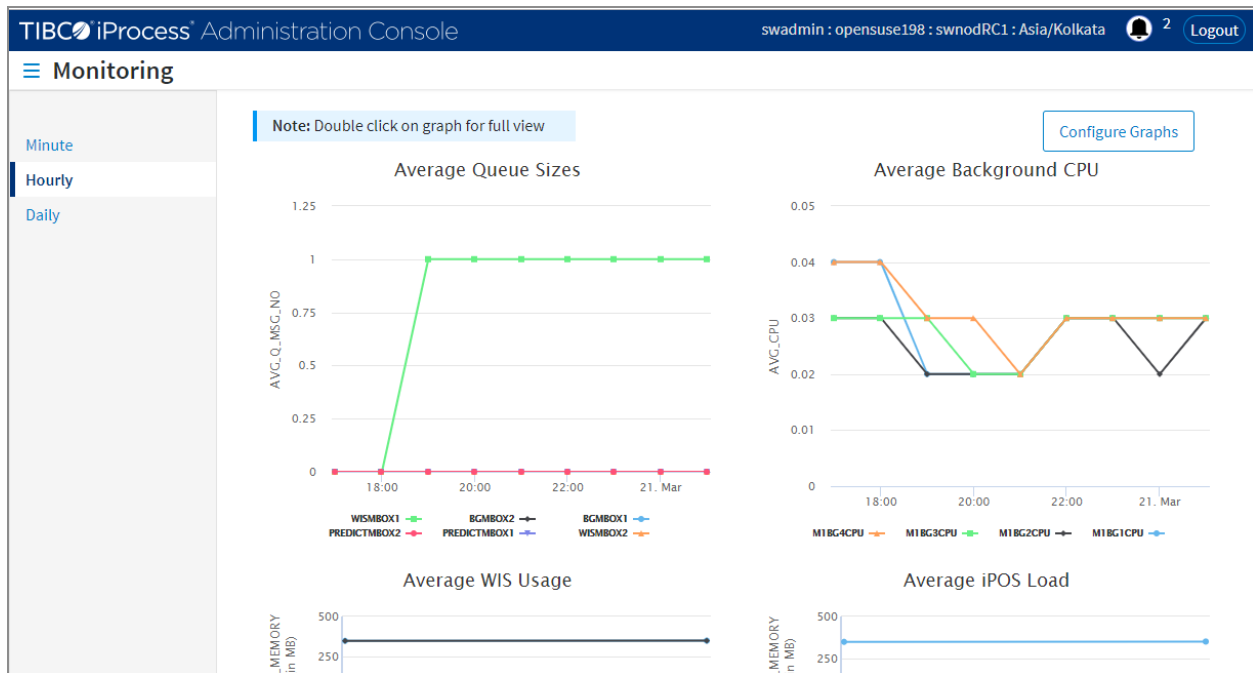
Configuring Hourly Graphs

To configure graphs to display data on a hourly frequency, navigate to the Monitoring section by performing the following steps:

1. From the dashboard, click the **Main Menu** icon on the top-left corner.
2. Click the **Monitoring** tab.
3. Click the **Hourly** tab on the left pane.

On the Hourly page's dashboard, four graphs are displayed by default. These are Average Queue Sizes, Average WIS Usage, Average iPOS Load, and Average Background CPU.

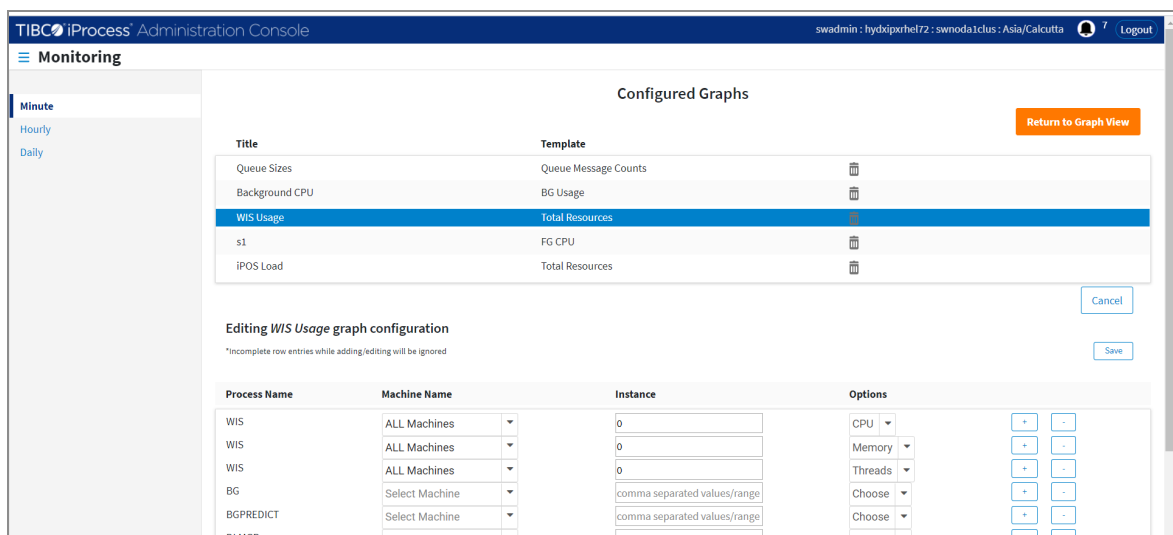
Figure 24: Hourly Graph Dashboard




To delete the default graphs or configure additional graphs, perform the following steps:

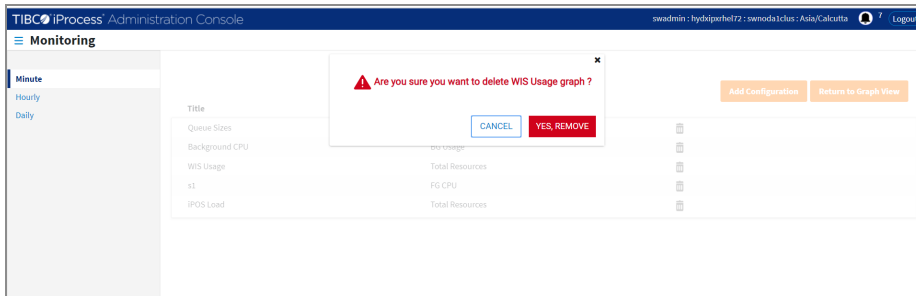
1. Click **Configure Graphs** in the top-right corner.
A page titled Configured Graphs is displayed.

Figure 25: Configured Graphs

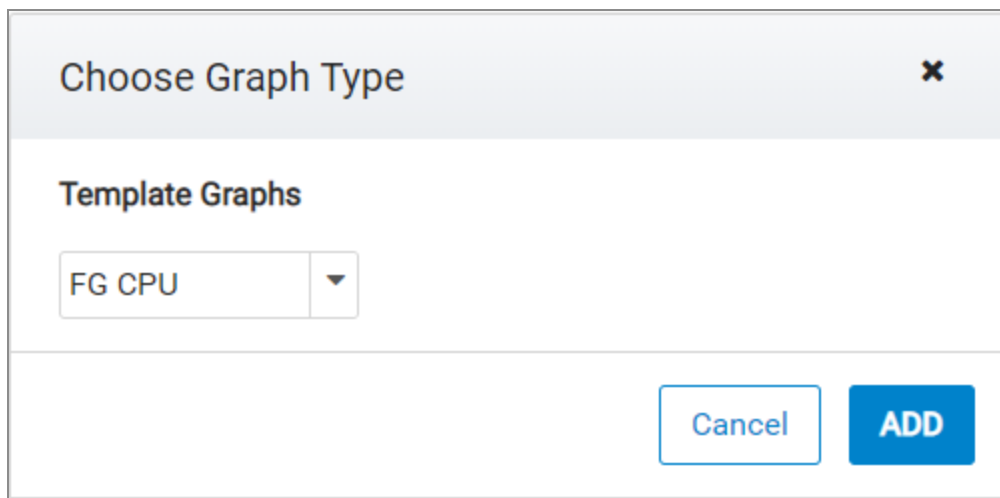


Note: At any point, if you want to return to the page's dashboard, click **Return to View**.

- (Optional) On the Configured Graphs page, the four default graphs are listed. To delete a default graph, click the **Delete** icon  against the graph title.
- Click **YES, REMOVE** in the confirmation dialog box.



- To configure a new graph, click **Add Graph**. A "Choose Graph Type" dialog box is displayed.



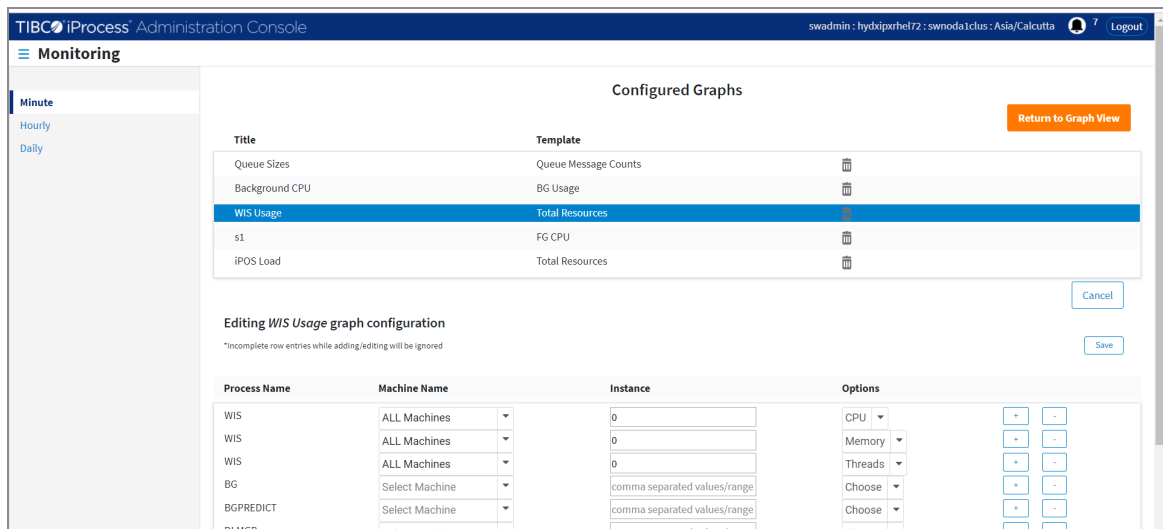
- On the Choose Graph Type dialog box, select a Template Graph from the drop-down menu. For example, let's consider that you selected the FG CPU template graph.
- Click **ADD**. A Choose Plot Type dialog box is displayed.
- On the Choose Plot Type dialog box, you must select whether you want the average values to be plotted or the maximum values to be plotted. Select **AVERAGE** or

MAXIMUM from the **Plots** drop-down menu. Let's consider that you selected AVERAGE.

8. Click **ADD**.

The configuration options for the selected graph and plot type are displayed.



9. Configure one or multiple background processes as required by performing the following steps:



a. Select a machine from the Machine Name drop-down menu for each background process for which you require the data plotted on the graph. You can select a specific machine or ALL Machines. For the purpose of this example, let's consider that you selected ALL Machines for the WISMBD process.

b. Next, enter the instances in the Instance field for which you require the data plotted on the graph. For multiple instances, list each instance separated by a comma. You can also enter a range in this field, such as, 1-10 which includes all instances between 1 to 10 including 1 and 10. Let's consider you entered 2 in this field for the WISMBD process.

10. Select the **Select Active Logins** check box if you also want to add and analyze data for the number of employees logged in.

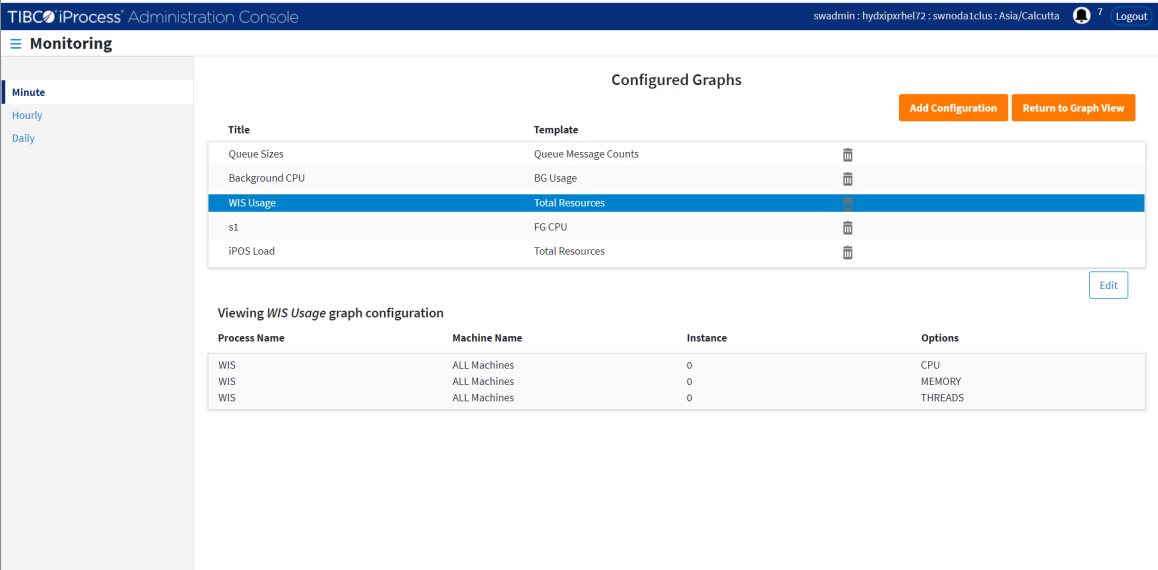
11. If you want to plot data for a process on different machines separately, click the **Add** icon  to add another row of the same process. In case you want to remove a process from the list, click the **Remove** icon .

12. Before you can save your graph and view it on the dashboard, enter a name for your graph. Let's consider that you named your graph as FGWISMBD.

i Note: The name for your graph must be unique and should not include any special characters.

13. Click **Save**.

On successfully configuring the graph, a Graph Added Successfully message is displayed. The graph is added to the Configured Graphs list and to the dashboard.

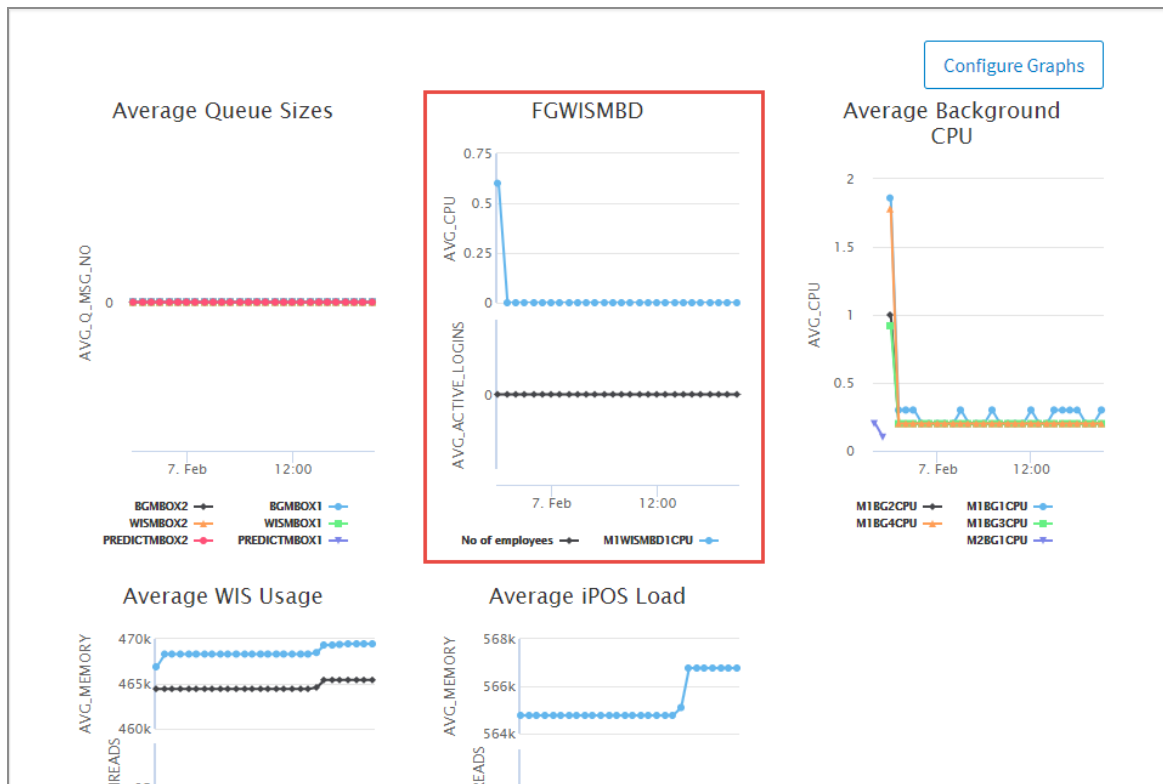


The screenshot shows the TIBCO iProcess Administration Console interface. The top navigation bar includes the title 'TIBCO iProcess Administration Console', a user profile 'swadmin : hydxipxrhel72 : swnodes1clus : Asia/Calcutta', and a 'Logout' button. The main section is titled 'Monitoring' and contains a sidebar with time range options: 'Minute' (selected), 'Hourly', and 'Daily'. The main content area displays a table of 'Configured Graphs' with columns 'Title' and 'Template'. The 'WIS Usage' graph is highlighted. To the right of the table are buttons for 'Add Configuration' and 'Return to Graph View'. Below the table is an 'Edit' button. Underneath, the 'Viewing WIS Usage graph configuration' section shows a table with columns 'Process Name', 'Machine Name', 'Instance', and 'Options'.

Title	Template
Queue Sizes	Queue Message Counts
Background CPU	BG Usage
WIS Usage	Total Resources
s1	FG CPU
IPOS Load	Total Resources

Process Name	Machine Name	Instance	Options
WIS	ALL Machines	0	CPU
WIS	ALL Machines	0	MEMORY
WIS	ALL Machines	0	THREADS

14. Click Show Graphs to go back to the dashboard and view the graph that you just added.



Likewise, you can configure the following graphs by performing the steps given above.

Hourly Template Graphs

Graph	Description
FG CPU	Allows you to monitor the CPU usage for foreground processes. Also, you can choose to add an Active Logins parameter to compare CPU usage of the processes with the number of users logged in at a given point in time.
FG Memory	Allows you to monitor the memory usage for foreground processes. Also, you can choose to add an Active Logins parameter to compare memory usage of the processes with the number of users logged in at a given point in time.
FG Threads	Allows you to monitor the number of threads used by foreground processes. Also, you can choose to add an Active Logins parameter to compare the number of threads for the processes with the number of users logged in at a given point in time.
FG Queues	Allows you to monitor the CPU usage for foreground MBox Queues.

Graph	Description
BG Usage	Allows you to monitor the CPU and memory usage for background processes. Additionally, you can also monitor processes specific to a particular MBox Queue.
Queue Message Counts	Allows you to monitor the message count for all queues.
Active Logins	Allows you to monitor the number of active logins.
Total Resources	Allows you to monitor the CPU, memory, and thread usage for all iProcess Engine resources.
WIS CPU Load	Allows you to monitor CPU usage for the Work Item Server.
WIS Memory Load	Allows you to monitor memory usage for the Work Item Server.
WIS Threads Load	Allows you to monitor number of threads used for the Work Item Server.
Work Item Load	Allows you to monitor the work item load on the Work Item Server (WIS).

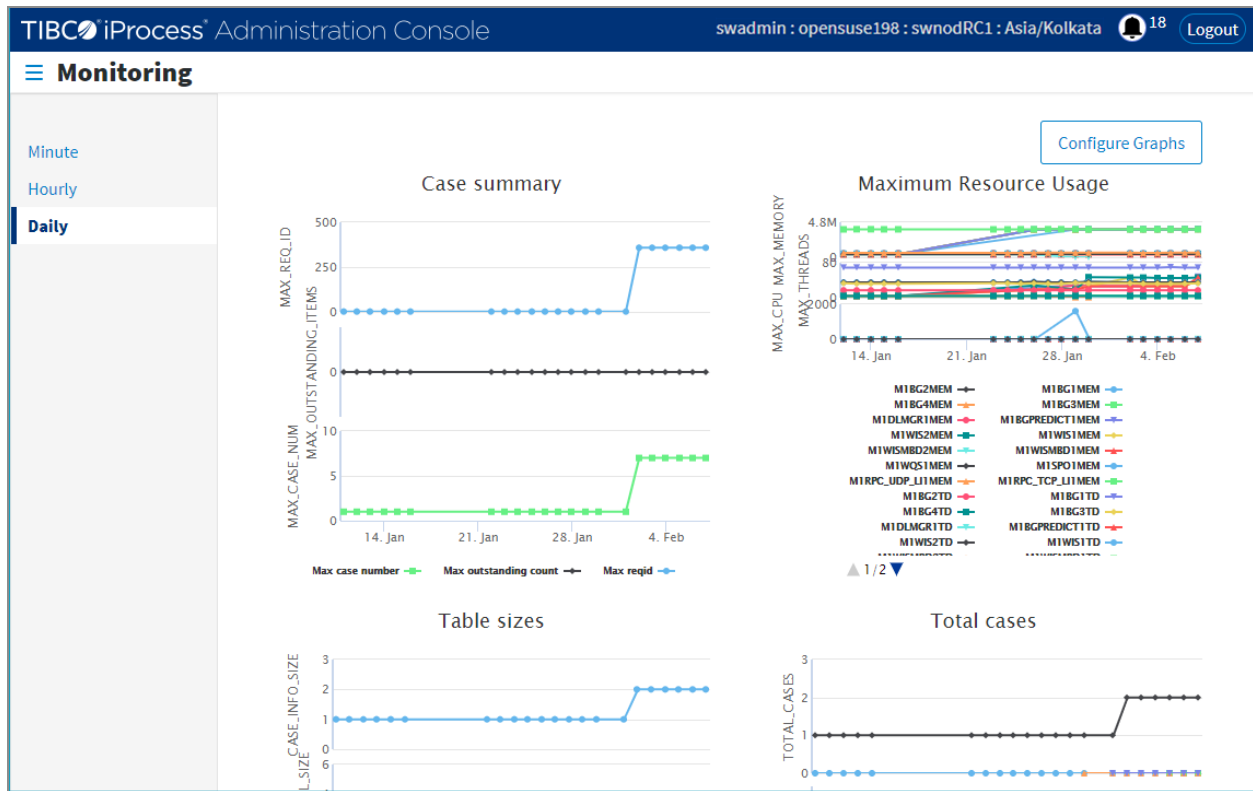
Configuring Daily Graphs

To configure graphs to display data on a daily frequency, navigate to the Monitoring section by performing the following steps:

1. From the dashboard, click the **Main Menu** icon on the top-left corner.
2. Click the **Monitoring** tab.
3. Click the **Daily** tab on the left pane.

On the Daily page's dashboard, four graphs are displayed by default. These are Case Summary, Maximum Resource Usage, Table sizes, and Total cases.

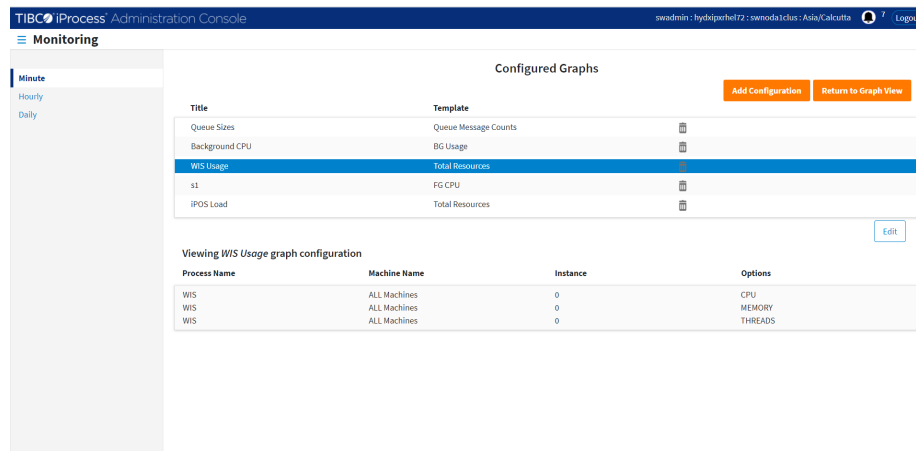
Figure 26: Daily Graph Dashboard




To delete the default graphs or configure additional drafts, perform the following steps:

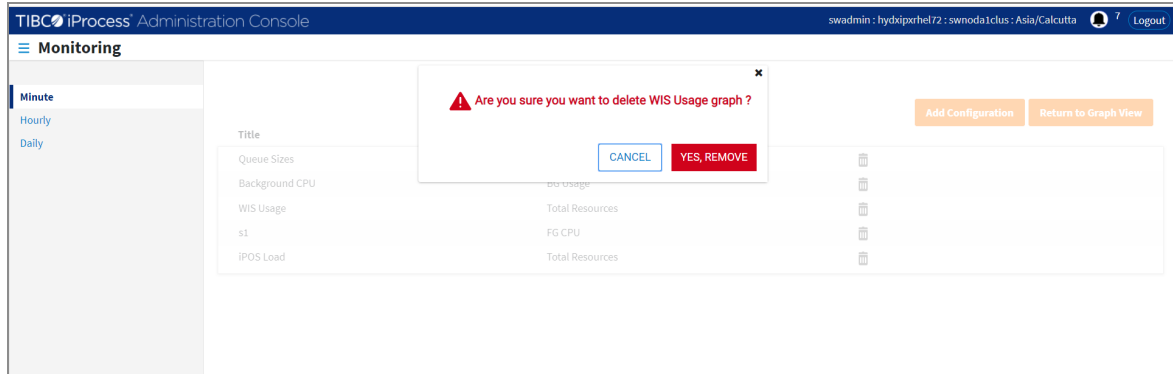
1. Click **Configure Graphs** in the top-right corner. A page titled Configured Graphs is displayed.

Figure 27: Configured Graphs

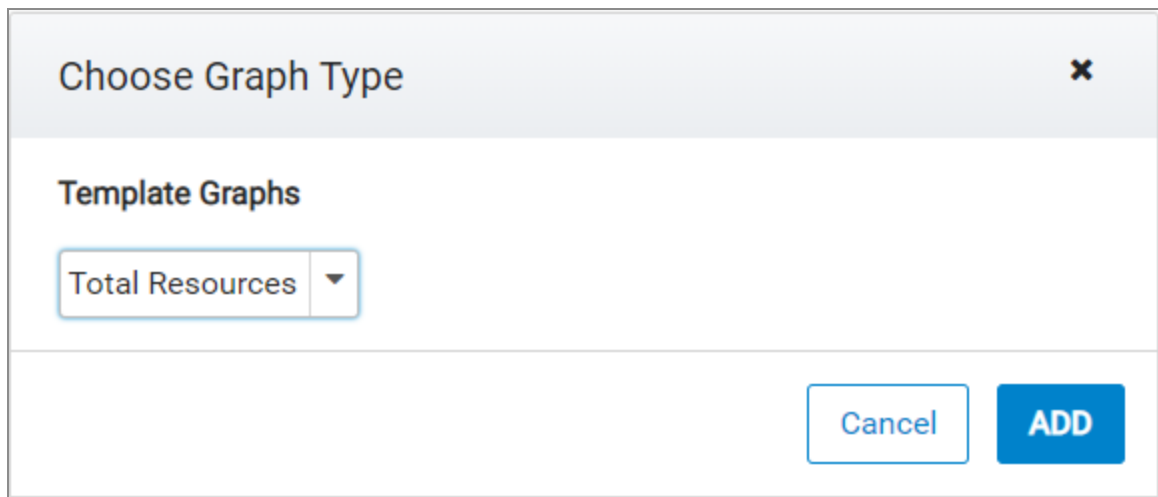


Note: At any point, if you want to return to the page's dashboard, click **Return to View**.

- (Optional) On the Configured Graphs page, the four default graphs are listed. To delete a default graph, click the **Delete** icon  against the graph title.
- Click **YES, REMOVE** in the confirmation dialog box.



- To configure a new graph, click **Add Graph**. A "Choose Graph Type" dialog box is displayed.



- On the Choose Graph Type dialog box, select a Template Graph from the drop-down menu. For example, let's consider that you selected the Total Resources template graph.
- Click **ADD**. A Choose Plot Type dialog box is displayed.

7. On the Choose Plot Type dialog box, you must select whether you want the average values to be plotted or the maximum values to be plotted. Select AVERAGE or MAXIMUM from the **Plots** drop-down menu. Let's consider that you selected MAXIMUM.
8. Click **ADD**.
The configuration options for the selected graph and plot type are displayed.
9. Configure one or multiple processes as required by performing the following steps:

Configured Graphs



Title	Template
Queue Sizes	Queue Message Counts
Background CPU	BG Usage
WIS Usage	Total Resources
s1	FG CPU
iPOS Load	Total Resources

Editing WIS Usage graph configuration
*Incomplete row entries while adding/editing will be ignored

Process Name	Machine Name	Instance	Options
WIS	ALL Machines	0	CPU
WIS	ALL Machines	0	Memory
WIS	ALL Machines	0	Threads
BG	Select Machine	comma separated values/range	Choose
BGPREDICT	Select Machine	comma separated values/range	Choose
DLMGR	Select Machine	comma separated values/range	Choose

- a. Select a machine from the Machine Name drop-down menu for each background process for which you require the data plotted on the graph. You can select a specific machine or ALL Machines. For the purpose of this example, let's consider that you selected ALL Machines for the WISMBD process.
- b. Next, enter the instances in the Instance field for which you require the data plotted on the graph. For multiple instances, list each instance separated by a comma. You can also enter a range in this field, such as, 1-10 which includes all instances between 1 to 10 including 1 and 10. Let's consider you entered 2 in this field for the WISMBD process.
- c. Finally, choose the parameter for which the data should be obtained from the Options drop-down menu. This can be CPU, Memory, or Threads. You can also select all parameters. Let's consider that you selected Memory in this field.

Note: If the graph template you are configuring is for a specific parameter like FG CPU or FG Memory, step "c" is not applicable.

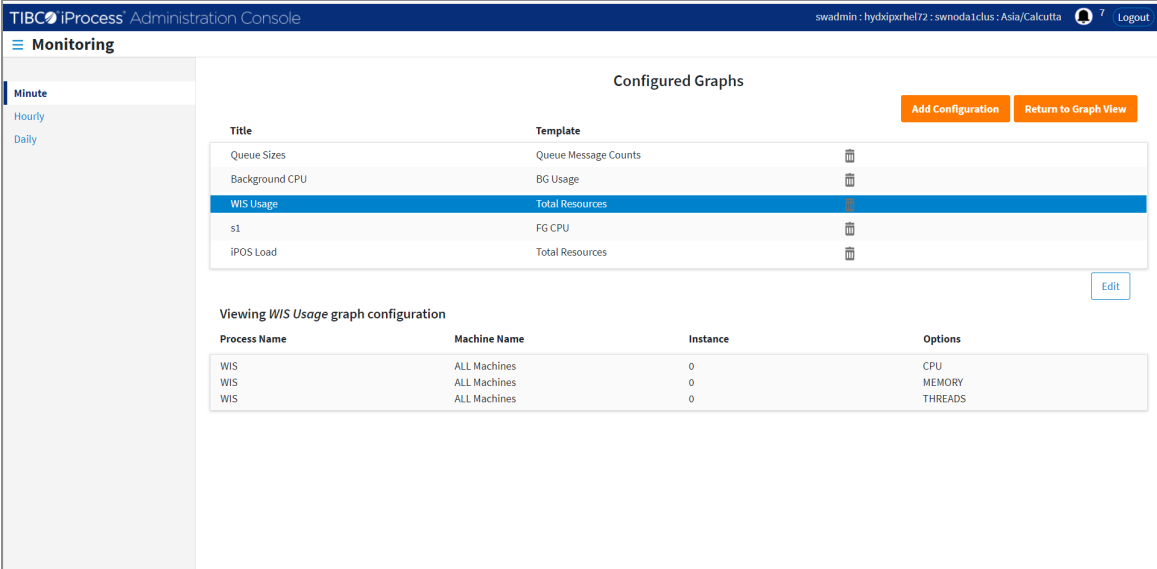
10. If you want to plot data for a process on different machines separately, click the **Add** icon  to add another row of the same process. In case you want to remove a process from the list, click the **Remove** icon .

11. Before you can save your graph and view it on the dashboard, enter a name for your graph. Let's consider that you named your graph as ALLPROCESSES.






Note: The name for your graph must be unique and should not include any special characters.

12. Click **Save**.

On successfully configuring the graph, a Graph Added Successfully message is displayed. The graph is added to the Configured Graphs list and to the dashboard.



The screenshot shows the TIBCO iProcess Administration Console interface. The left sidebar has a 'Monitoring' section with options for 'Minute', 'Hourly', and 'Daily'. The main area displays 'Configured Graphs' with a table of existing graphs. The 'WIS Usage' graph is selected, and its configuration is shown below.

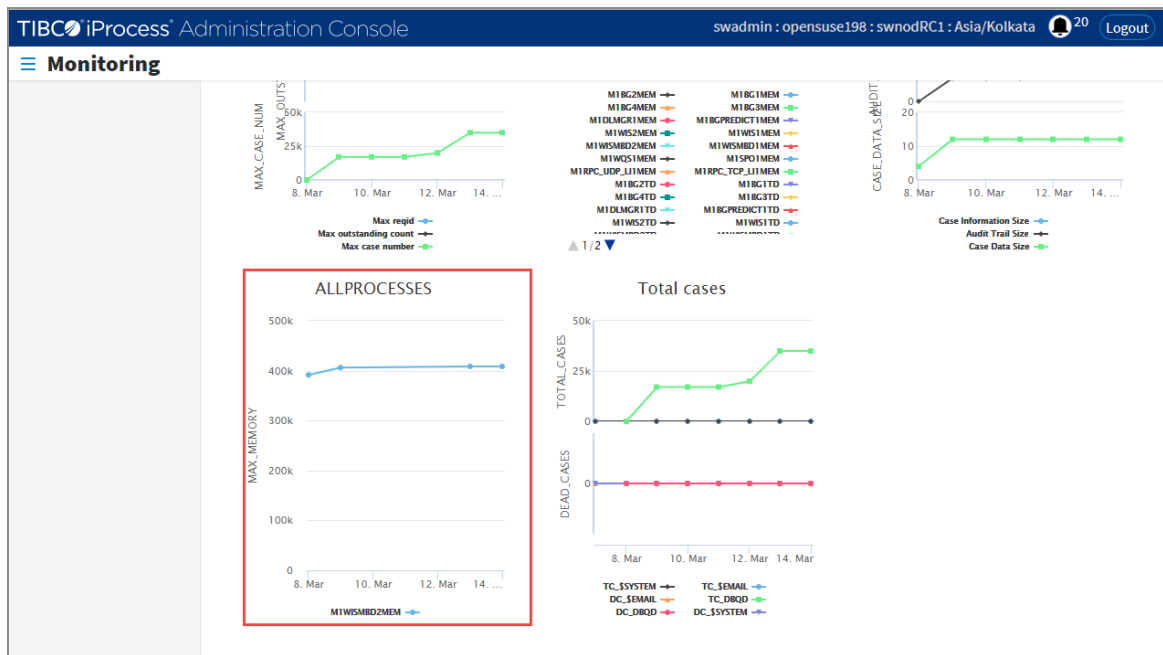
Title	Template	
Queue Sizes	Queue Message Counts	
Background CPU	BG Usage	
WIS Usage	Total Resources	
s1	FG CPU	
IPOS Load	Total Resources	

[Add Configuration](#) [Return to Graph View](#) [Edit](#)

Viewing WIS Usage graph configuration

Process Name	Machine Name	Instance	Options
WIS	ALL Machines	0	CPU
WIS	ALL Machines	0	MEMORY
WIS	ALL Machines	0	THREADS

13. Click Show Graphs to go back to the dashboard and view the graph that you just added.



Likewise, you can configure the following graphs by performing the above steps.

Daily Template Graphs

Graph	Description
FG CPU	Allows you to monitor the CPU usage for foreground processes. Also, you can choose to add an Active Logins parameter to compare CPU usage of the processes with the number of users logged in at a given point in time.
FG Memory	Allows you to monitor the memory usage for foreground processes. Also, you can choose to add an Active Logins parameter to compare memory usage of the processes with the number of users logged in at a given point in time.
FG Threads	Allows you to monitor the number of threads used by foreground processes. Also, you can choose to add an Active Logins parameter to compare number of threads for the processes with the number of users logged in at a given point in time.
FG Queues	Allows you to monitor the CPU usage for foreground MBox Queues.
BG Usage	Allows you to monitor the CPU and memory usage for background

Graph	Description
	processes. Additionally, you can also monitor processes specific to a particular MBox Queue.
Queue Message Counts	Allows you to monitor the message count for all queues.
Active Logins	Allows you to monitor the number of active logins.
Total Resources	Allows you to monitor the CPU, memory, and thread usage for all iProcess Engine resources.
Work Item Load	Allows you to monitor the load on the Work Item Server (WIS).

VIEW and EDIT Graphs Configuration

To edit a graph type, navigate to the Monitoring section by performing the following steps:

The screenshot shows the TIBCO iProcess Administration Console interface. The top navigation bar includes the title 'TIBCO iProcess Administration Console', a user profile 'swadmin : hydxipxrhel72 : swnode1clus : Asia/Calcutta', and a 'Logout' button. The left sidebar has a 'Monitoring' tab selected, with sub-options 'Minute', 'Hourly', and 'Daily'. The main content area is titled 'Configured Graphs' and contains a table with the following data:

Title	Template	
Queue Sizes	Queue Message Counts	
Background CPU	BG Usage	
WIS Usage	Total Resources	
s1	FG CPU	
iPOS Load	Total Resources	

Buttons 'Add Configuration' and 'Return to Graph View' are located at the top right of the 'Configured Graphs' section. An 'Edit' button is located at the bottom right of the table.

Below the 'Configured Graphs' section, there is a section titled 'Viewing WIS Usage graph configuration' which contains a table with the following data:

Process Name	Machine Name	Instance	Options
WIS	ALL Machines	0	CPU
WIS	ALL Machines	0	MEMORY
WIS	ALL Machines	0	THREADS

1. Click the **Main Menu** icon on the top-left corner.
2. Click the **Monitoring** tab.

3. Click one of the three tabs, **Minute**, **Hourly**, or **Daily**, on the left pane.
4. Click **Configure Graphs** in the top-right corner. A page titled Configured Graphs is displayed.
5. Click the graph title to select the graph. A list of tables is displayed with the title "Viewing graph configuration".
6. Click **Edit**.
7. Edit one or multiple processes as required by performing the following steps:

Configured Graphs



Title	Template
Queue Sizes	Queue Message Counts
Background CPU	BG Usage
WIS Usage	Total Resources
s1	FG CPU
iPOS Load	Total Resources

Editing WIS Usage graph configuration
*Incomplete row entries while adding/editing will be ignored

Process Name	Machine Name	Instance	Options
WIS	ALL Machines	0	CPU
WIS	ALL Machines	0	Memory
WIS	ALL Machines	0	Threads
BG	Select Machine	comma separated values/range	Choose
BGPREDICT	Select Machine	comma separated values/range	Choose
DLMGR	Select Machine	comma separated values/range	Choose

- a. Select a machine from the Machine Name drop-down menu for each background process for which you require the data plotted on the graph. You can select a specific machine or ALL Machines. For the purpose of this example, let's consider that you selected ALL Machines for the WISMBD process.
- b. Next, enter the instances in the Instance field for which you require the data plotted on the graph. For multiple instances, list each instance separated by a comma. You can also enter a range in this field, such as, 1-10 which includes all instances between 1 to 10 including 1 and 10. Let's consider you entered 2 in this field for the WISMBD process.
- c. Finally, choose the parameter for which the data should be obtained from the Options drop-down menu. This can be CPU, Memory, or Threads. You can also select all parameters. Let's consider that you selected Memory in this field.

Note: If the graph template you are configuring is for a specific parameter like FG CPU or FG Memory, step "c" is not applicable.

8. If you want to plot data for a process on different machines separately, click the **Add** icon  to add another row of the same process. In case you want to remove a process from the list, click the **Remove** icon .
9. Click **Save**.
On successfully configuring the graph, a **Graph Updated Successfully** message is displayed.

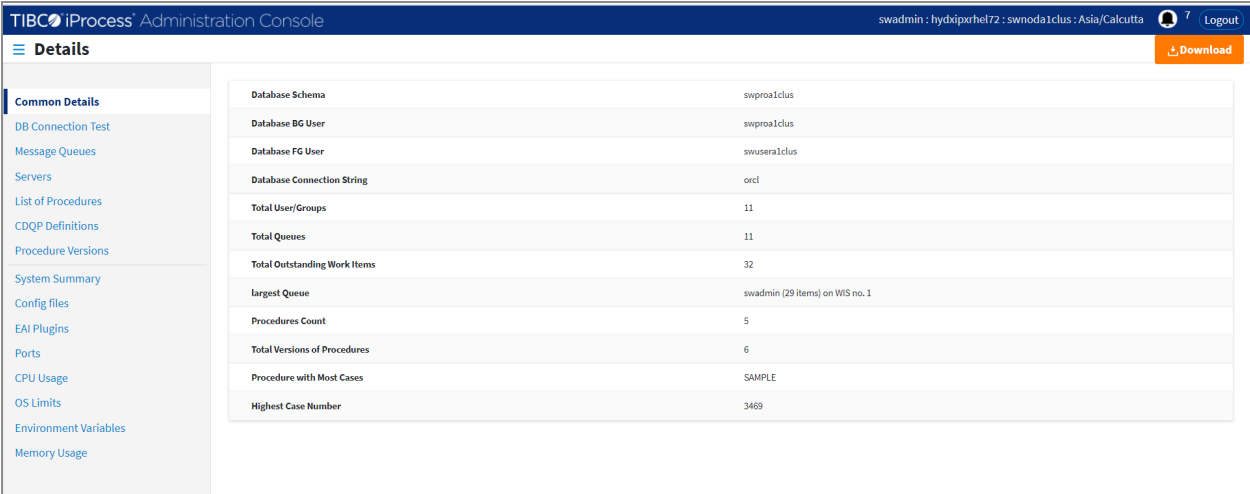
Details

This section provides broad-ranging information like system performance, version information, configured ports, database connection status, list of nodes, and so on specific to your setup of iProcess Engine and its subsidiary components or services.

Overview

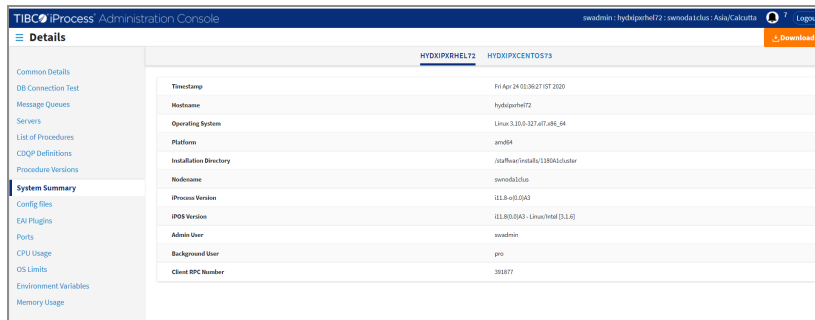
The Details page provides a complete profile of your iProcess Engine setup. It includes two sections:

- **Common Details:** Enlists features common to all the nodes in a multi-node environment.



TIBCO iProcess Administration Console		swadmin : hydxipxrhel72 : swnode1clus : Asia/Calcutta	7	Logout
Details Download				
Common Details				
DB Connection Test				
Message Queues				
Servers				
List of Procedures				
CDQP Definitions				
Procedure Versions				
System Summary				
Config files				
EAI Plugins				
Ports				
CPU Usage				
OS Limits				
Environment Variables				
Memory Usage				
Database Schema	swproa1clus			
Database BG User	swproa1clus			
Database FG User	swusera1clus			
Database Connection String	orcl			
Total User/Groups	11			
Total Queues	11			
Total Outstanding Work Items	32			
Largest Queue	swadmin (29 items) on WIS no. 1			
Procedures Count	5			
Total Versions of Procedures	6			
Procedure with Most Cases	SAMPLE			
Highest Case Number	3469			

- **System Summary:** Enlists features specific to the node selected at the top. In a multi-node environment, you can see all nodes listed at the top as tabs. Select a node to see the system summary details specific to the node tab at the top. Click Config files, EAI Plugins, or CPU Usage to view details of the configuration files, EAI Plug-ins, and CPU Usage of the node selected at the top.



Both these sections together provide information about iProcess Engine and its associated components (installed on the node or node cluster), performance information, server information, port information, and so on.

This information is referential and is mostly helpful to investigate problems with iProcess Engine or any of its subsidiary components or services. The next topic lists all sections in the Details page and briefly describes each section.

Viewing or Downloading Information

You can view information specific to a section by clicking the tab corresponding to that section on the left pane. The table lists all sections on this page and a brief description for each section.

To download a detailed profile of your iProcess Engine setup that includes all information listed on this page at any point in time, click Download on the top-right corner of this page. This generates an HTML page.

Details

Section	Description
Common Details	
DB Connection Test	Defines if the database connection is successful or not.
Message Queues	Lists the message queues and their sizes used by iProcess Engine.

Section	Description
Servers	Lists the machines in a node or node cluster.
List of Procedures	Lists all procedures and the number of live and dead cases for each procedure.
CDQP Definitions	Lists the Case Data Queue Parameter (CDQP) definitions on iProcess Engine.
Procedure Versions	Lists the version numbers for procedures on iProcess Engine.
System Summary	Lists the information about iProcess Engine, installed components, and platform details.
Config Files	Lists the configuration files and the contents for each file.
EAI Plugins	Lists the version details of the components installed on iProcess Engine.
Ports	Lists the ports that are actively used by iProcess Engine.
CPU Usage	Lists the iProcess Engine processes sorted according to their CPU usage.
(Linux Only) OS Limits	Lists the limits for the operating system in use. For instance, the core file size, open files, system message queues, maximum user processes, and so on.
Environment Variables	Lists the environment variables configured on the server.
Memory Usage	Lists the processes sorted according to their respective memory usage.

Troubleshooting

This section describes problems you might encounter and recommended courses of action to resolve them.

Http Failure Error in Cloud Environment

Problem

Http failure response for (unknown url): 0 Unknown Error.

Description

While logging into the iProcess Administration Console, sometimes the server returns the above stated authentication error in the cloud environment, whether it is AWS, or Azure.

What to do

To resolve this, check and perform the following tasks:

- Update the entry IP_ADDR in the `$SWDIR/config/ipac.properties` with the private IP address.
- Update the IP address value of the attribute `apiUrl` present in the json file at `$SWDIR/tomcat/webapps/ipac/config/ipac.properties.json` with the public IP address. If

Given public IP address : 13.126.165.172

Given private IP address : 172.31.17.169

In the `$SWDIR/config/ipac.properties`, IP_ADDR should be updated as

IP_ADDR= 172.31.17.169

In `$SWDIR/tomcat/webapps/ipac/config/ipac.properties.json`, `apiUrl` should be updated as

"apiUrl":"https://13.126.165.172:8443/",

- The browser's cache (related to Administrator console) is cleared before launching the Administrator console Login page.

TIBCO Documentation and Support Services

For information about this product, you can read the documentation, contact TIBCO Support, and join TIBCO Community.

How to Access TIBCO Documentation

Documentation for TIBCO products is available on the [TIBCO Product Documentation](#) website, mainly in HTML and PDF formats.

The [TIBCO Product Documentation](#) website is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

Documentation for TIBCO iProcess® Engine is available on the [TIBCO iProcess® Engine Product Documentation](#) page.

To directly access documentation for this product, double-click the following file:

`TIBCO_HOME/release_notes/TIB_ipe_11.9.0_docinfo.html` where `TIBCO_HOME` is the top-level directory in which TIBCO products are installed. On Windows, the default `TIBCO_HOME` is `C:\tibco`. On UNIX systems, the default `TIBCO_HOME` is `/opt/tibco`.

The following documents for this product can be found in the TIBCO Documentation site:

- *TIBCO iProcess® Engine Architecture Guide*
- *TIBCO iProcess® Engine Configuration Guide for Cloud*
- TIBCO iProcess® Engine Administrator's Guides:
 - *TIBCO iProcess® Engine Administrator's Guide*
 - *TIBCO iProcess® Objects Director Administrator's Guide*
 - *TIBCO iProcess® Objects Server Administrator's Guide*
 - *TIBCO iProcess® Engine Administration Console User Guide*
- TIBCO iProcess® Engine Database Administrator's Guides:
 - *TIBCO iProcess® Engine (DB2) Administrator's Guide*

TIBCO iProcess® Engine (Oracle) Administrator's Guide

TIBCO iProcess® Engine (SQL) Administrator's Guide

TIBCO iProcess® swutil and swbatch Reference Guide

- *TIBCO iProcess® Engine System Messages Guide*
- *TIBCO iProcess® User Validation API User Guide*
- *LDAPCONF Utility User Guide*

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