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# Operations Dashboard User Manual

# Sybase Money Mobiliser 5.1

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# Sybase Money Mobiliser

Sybase® Money Mobiliser is a state-of-the-art mCommerce solution that gives consumers the ability to bank, make payments, and transfer money through a mobile device. Money Mobiliser acts as an intermediary between a consumer and a member bank or third party vendors running Money Mobiliser.

**Note:** The current user interface is available in English language only.

# Operations Dashboard

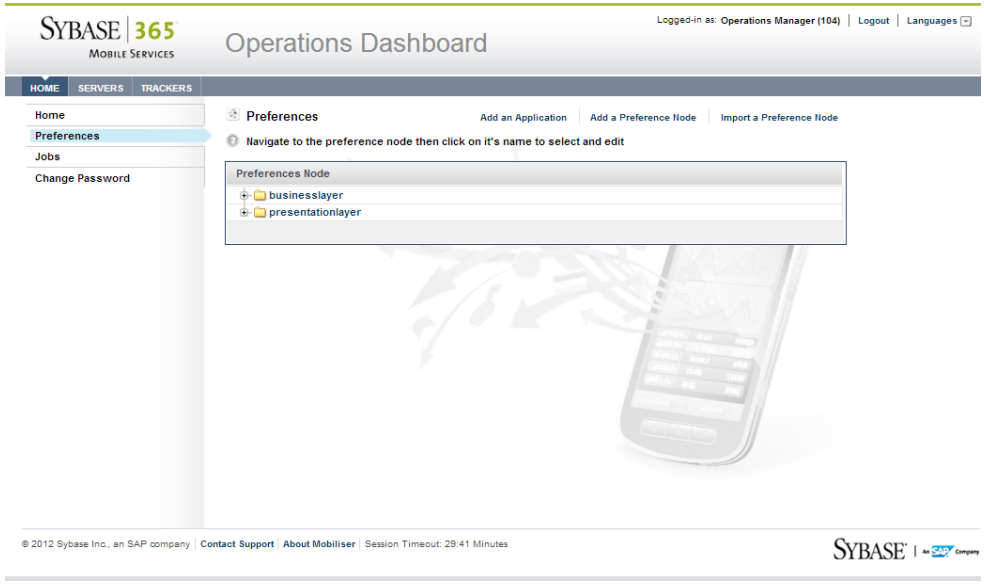
The Operations Dashboard provides system administrators a high-level operational view into Money Mobiliser. The dashboard aggregates the information to give you an overview on the application status, which aids in the operational support of the system. You can track individual statistics from your servers for monitoring the performance and general operational efficiency.

**Note:** The portal feature descriptions and illustrations pertain to the out-of-the-box version of Money Mobiliser.

# Preferences

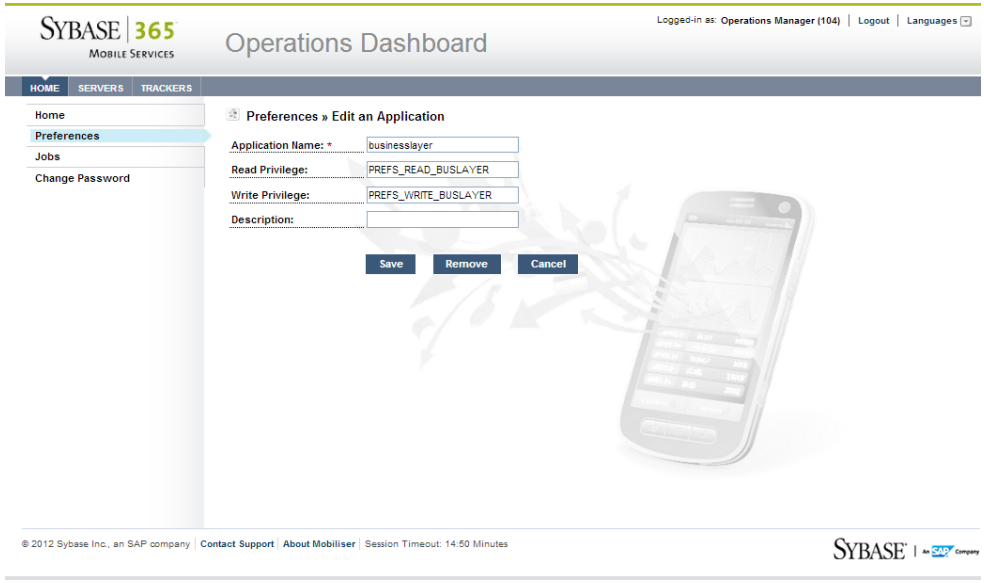
Preferences are the standard mechanism for application configuration in Money Mobiliser. Use the Preferences option to manage operation-level configuration data such as timeouts, retries when communicating with other systems, and thread pool sizes. The standard Money Mobiliser installation comes with two applications: businesslayer and presentationlayer.

You can add applications and preference nodes. Additionally, you can import the node information from an XML file, which contains the application name, path of the node, and preference keys and values. When you import the data it is added to the path of the node indicated in the XML file.




## Applications

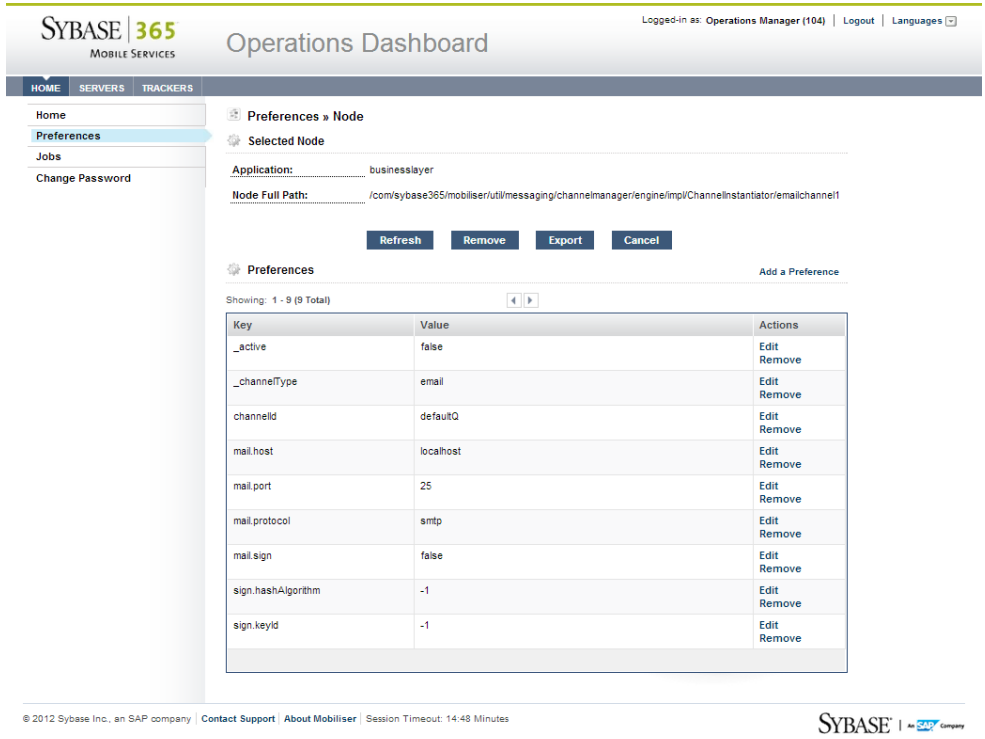
Preferences can be defined for multiple applications, each with a unique name and access rights. The application must have a unique name and may optionally have a description. You can define read or write privileges or both for the application. If read or write privileges are not defined, any user invoking Money Mobiliser services can retrieve or set preference values. You can also edit or remove applications.




## Nodes and System Preferences

Preference nodes store system preferences and configuration data. Each system preference contains a key-value pair associated with a preference path. You can add a preference node, which requires the application name and full node path. If the application does not exist, you must add the application before adding a preference node. You can remove preference nodes, but you cannot edit them.

Additionally, you can export the node information to XML, which contains the application name, path of the node, and preference keys and values.


SYBASE | 365
MOBILE SERVICES
Operations Dashboard
Logged-in as: Operations Manager (104) | Logout | Languages
HOME
SERVERS
TRACKERS
Home
Preferences
Jobs
Change Password
Preferences » Node
Selected Node
Application: businesslayer
Node Full Path: /com/sybase365/mobiliser/util/messaging/channelmanager/engine/impl/ChannelInstantiator/emailchannel1
Refresh
Remove
Export
Cancel
Preferences
Add a Preference
Showing: 1 - 9 (9 Total)
Key
Value
Actions
_active
false
Edit
Remove
_channelType
email
Edit
Remove
channelId
defaultQ
Edit
Remove
mail.host
localhost
Edit
Remove
mail.port
25
Edit
Remove
mail.protocol
smtp
Edit
Remove
mail.sign
false
Edit
Remove
sign.hashAlgorithm
-1
Edit
Remove
sign.keyId
-1
Edit
Remove
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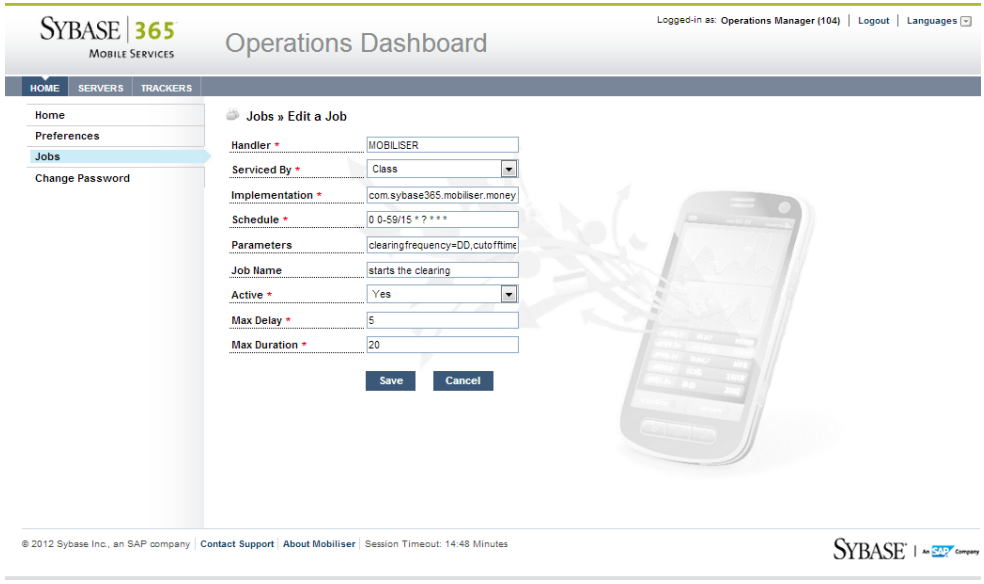
# Jobs

The Jobs option lets you schedule background jobs to run at certain times using cron expressions. For example, you can schedule a job to run at midnight to transfer commissions to the individual partners. You can also schedule a job to run every five minutes to generate new invoices. The cron job execution task retrieves jobs regularly from a database table according to the job handler name. The task makes sure that each job does not run in parallel multiple times, cancels jobs that are not responding, and synchronizes job execution across Java virtual machines (JVMs).




| Field | Description |
|---|---|
| Handler | Defines which cron job task handles the job. The handler corresponds to a defined value in the database. The default handler is MOBILISER. You can enter multiple handlers separated by commas (MOBILISER, MOBILISER1, and so on). |
| Seviced By | Indicates the filter for the job implementation: Class or Bean. |
| Implementation | Defines the service filter to find the proper implementation in the service registry.<br>• If the service filter is set to Class, then use the full class name.<br>• If the service filter is set to Bean, then use the job bean name. |

| Field | Description |
|---|---|
| Schedule | Defines the job schedule in cron expression format. For example, **0 0/5 * ? * * *** is a cron expression that is triggered every 5 minutes. The default expression is **0 0/1 * * * ?**, which is triggered to run every minute. |
| Parameters | Defines the parameters that the job handler requires for job processing. Parameters can be any string that depends on the expected result of the job. |
| Job Name | Defines the description of the job. |
| Active | Determines if the job is active or inactive. |
| Max Delay | Gives the maximum number of minutes a job is executed after the scheduled time. If max delay time is exceeded, the job is not started. |
| Max Duration | Gives the maximum duration in minutes. After this time the job is handled as failed. If max duration time is exceeded, such as running longer than indicated, the job is canceled and marked as failed. |

### See also

- *Cron Expression Reference* on page 25

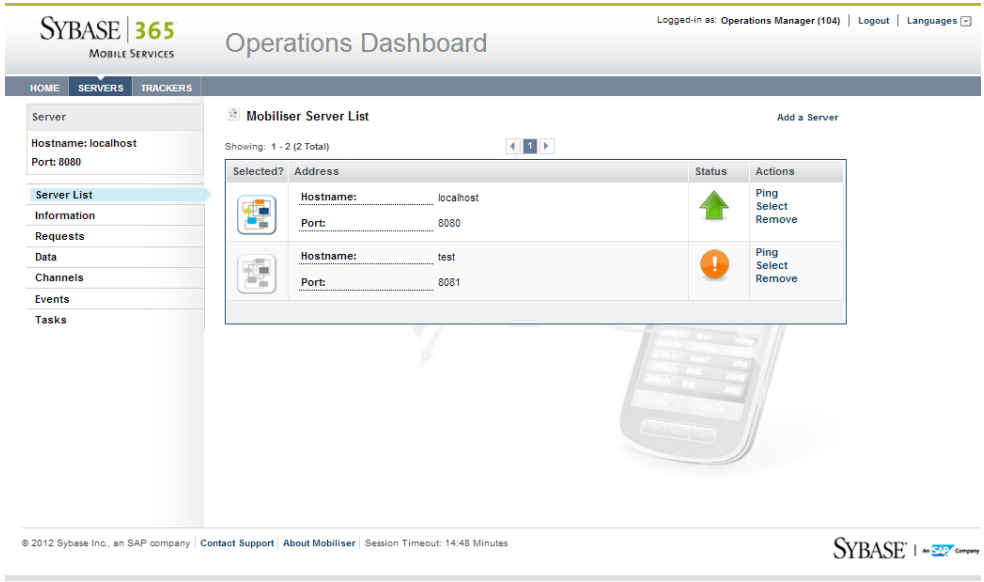
# Servers

The Servers option displays a list of available Money Mobiliser servers. You can select a server that is online to view information, requests, data, channels, events, or tasks.

## Server List

The Server List displays the online and offline servers in the Money Mobiliser environment. You can select a server that is online to view its information or ping its host. When you select a server, its hostname and port display in the left pane. If a server is offline, the visual indicator in the status column shows an orange circle with an exclamation mark. You cannot select or ping a server that is offline.

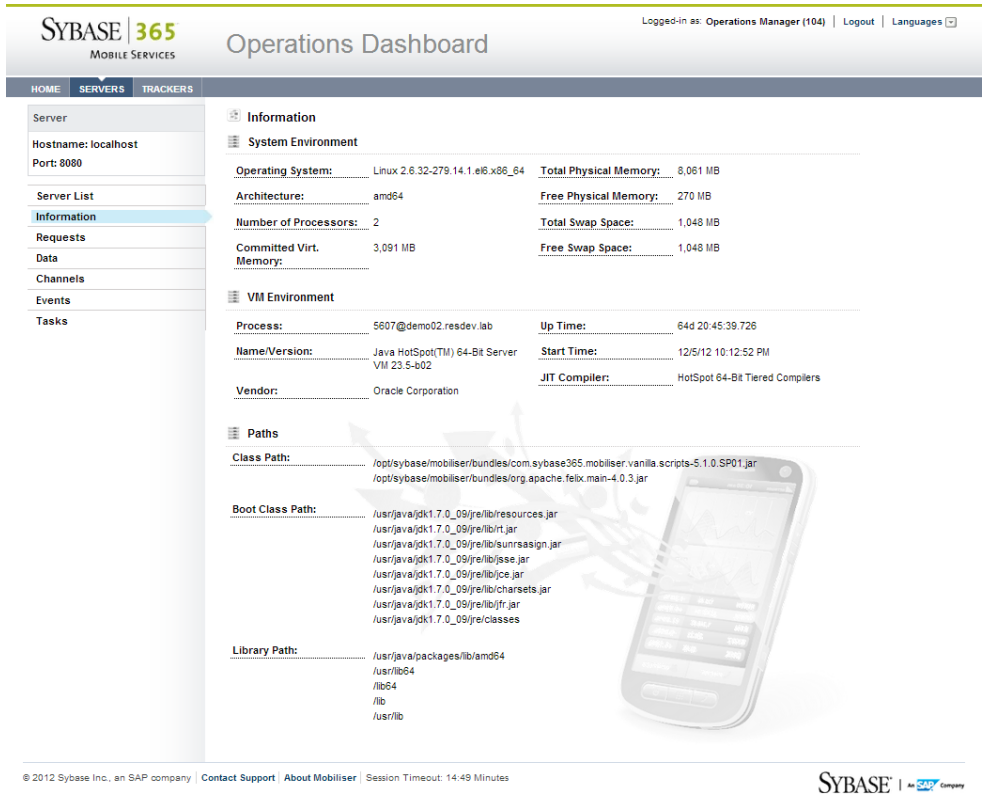
You can add other servers that are in the Money Mobiliser environment to the list. To add a server, click **Add a Server** and provide the host name or IP address, and the port number. In addition to adding servers to the list, you can remove servers.




## Information

The Information option summarizes the basic system environment information for the selected server, such as number of processors and operating system. You can also view the

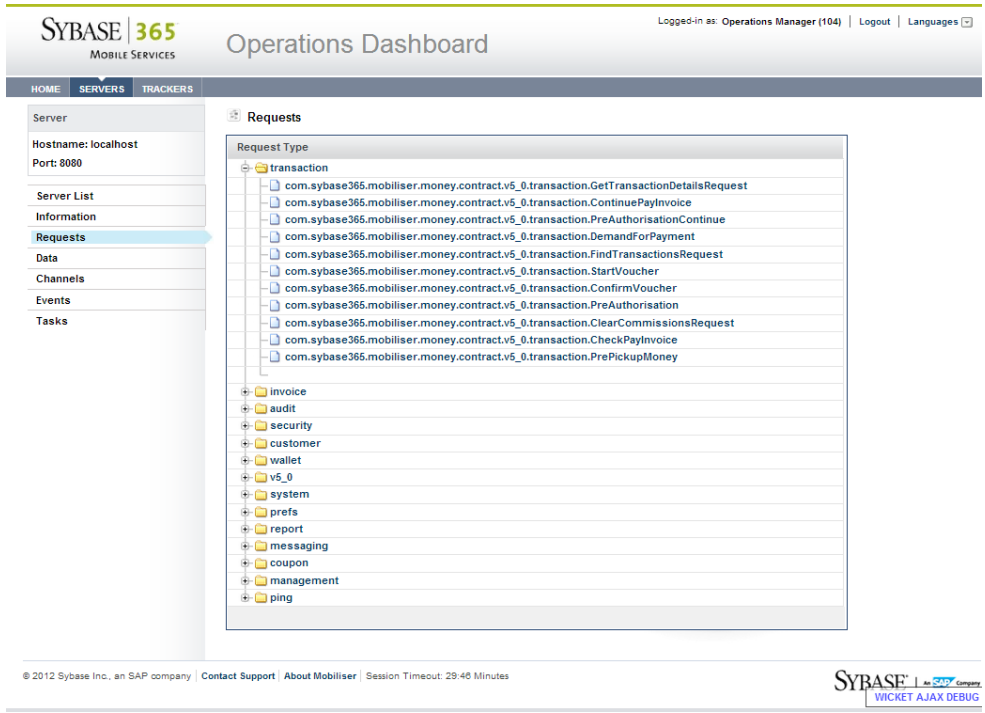
total and free physical memory, committed virtual memory, and swap space, as well as the time server has been available and class paths.




# Requests

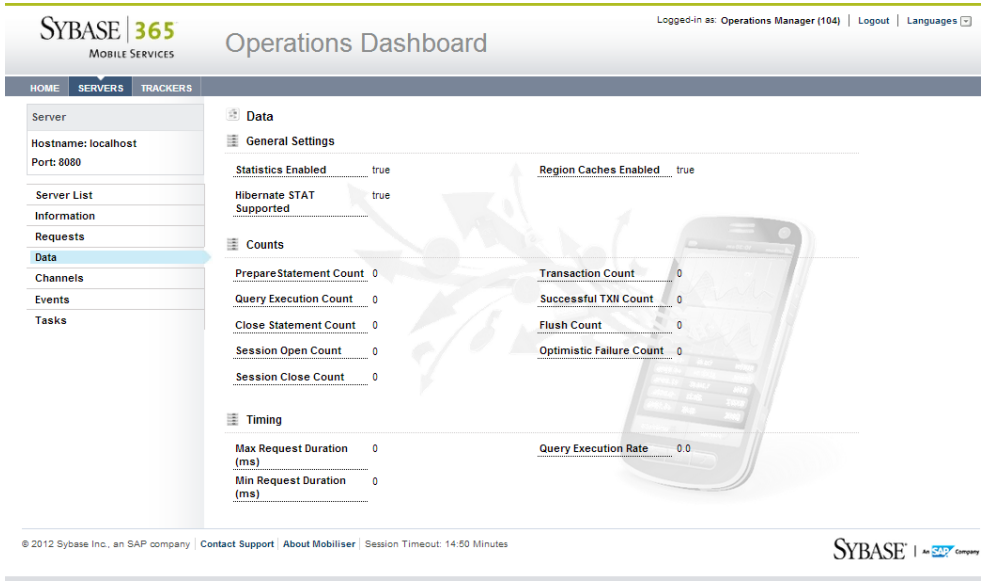
The Requests option displays all requests made to the Money Mobiliser server, for example, transaction requests. You can drill down into the statistics of each request. The statistics show

the total number of requests made, the success or failure count, and the average response time.



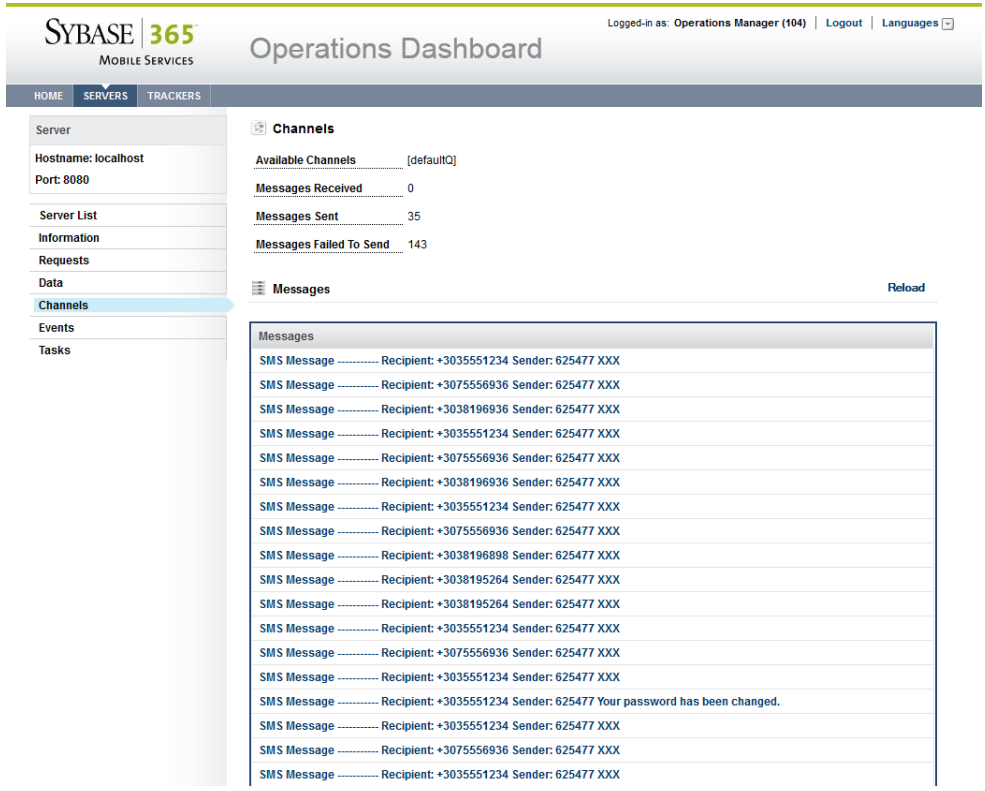
## Data

The Data option displays the data access statistics and information for the server, such as the number of sessions opened or closed, transactions from the database, maximum and minimum request duration, and query execution rate.



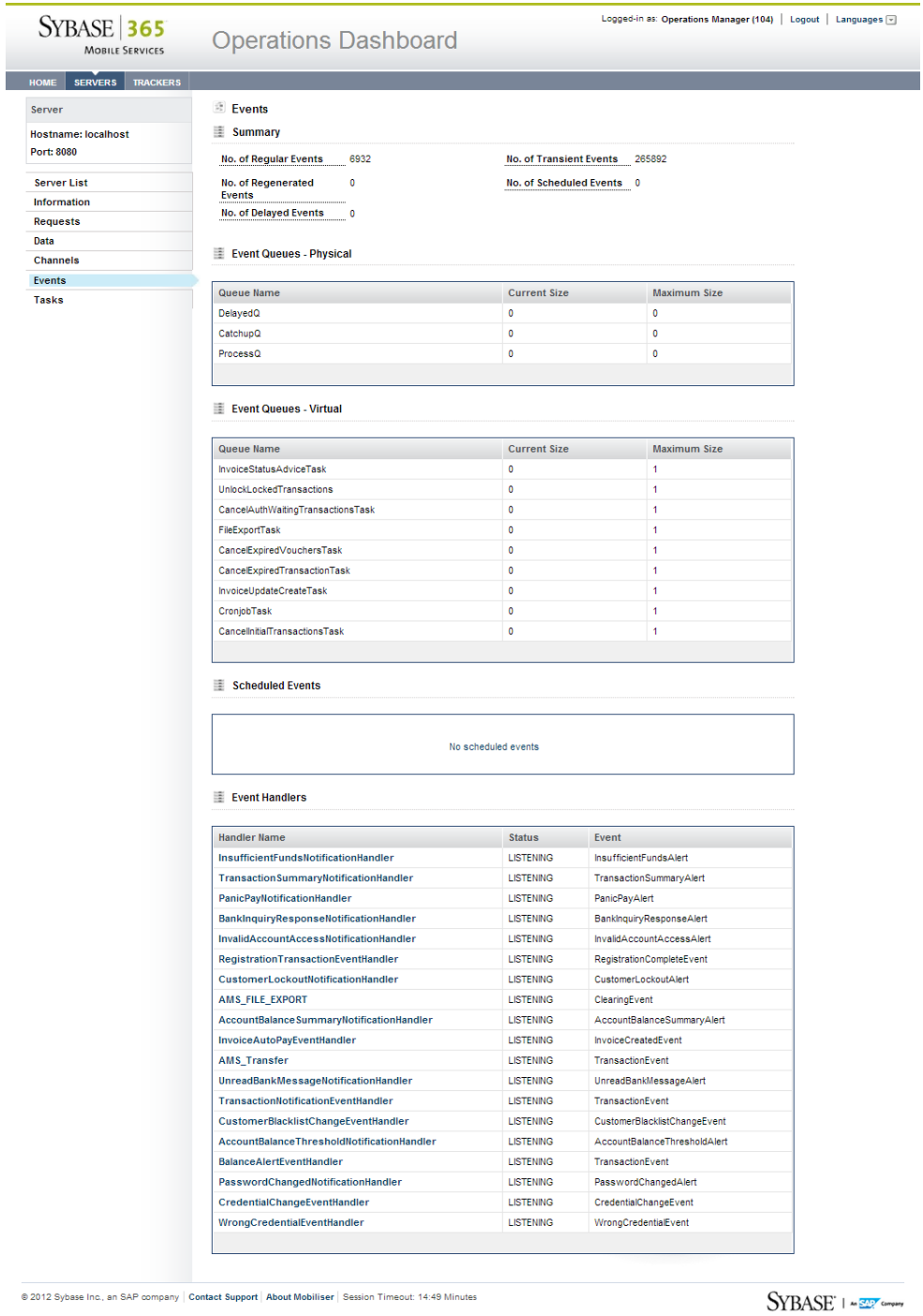

## Channels

The Channels option displays the number of messages received, sent, and failed to send. The list shows the last 100 messages that the Money Mobiliser messaging services generated. You can select a message to view the details, such as date and time stamp. You can also refresh the list to show the most recently sent or received messages.




# Events

The Events option displays statistics generated by the Money Mobiliser event system. The event summary displays the total number of events that the event handlers have generated and processed. An event handler is a procedure that is called when a corresponding event occurs. For an event to be processed by a handler, there has to be an event handler registered for the event name and an available thread from the process pool as determined by the event handler. A single event handler instance is associated with a single event name only.


SYBASE | 365
MOBILE SERVICES
Operations Dashboard
Logged-in as: Operations Manager (104) | Logout | Languages
HOME
SERVERS
TRACKERS
Server
Hostname: localhost
Port: 8080
Server List
Information
Requests
Data
Channels
Events
Tasks
Events
Summary
No. of Regular Events 6932
No. of Transient Events 265892
No. of Regenerated Events 0
No. of Scheduled Events 0
No. of Delayed Events 0
Event Queues - Physical
Queue Name | Current Size | Maximum Size
DelayedQ | 0 | 0
CatchupQ | 0 | 0
ProcessQ | 0 | 0
Event Queues - Virtual
Queue Name | Current Size | Maximum Size
InvoiceStatusAdviceTask | 0 | 1
UnlockLockedTransactions | 0 | 1
CancelAuthWaitingTransactionsTask | 0 | 1
FileExportTask | 0 | 1
CancelExpiredVouchersTask | 0 | 1
CancelExpiredTransactionTask | 0 | 1
InvoiceUpdateCreateTask | 0 | 1
CronjobTask | 0 | 1
CancelInitialTransactionsTask | 0 | 1
Scheduled Events
No scheduled events
Event Handlers
Handler Name | Status | Event
InsufficientFundsNotificationHandler | LISTENING | InsufficientFundsAlert
TransactionSummaryNotificationHandler | LISTENING | TransactionSummaryAlert
PanicPayNotificationHandler | LISTENING | PanicPayAlert
BankInquiryResponseNotificationHandler | LISTENING | BankInquiryResponseAlert
InvalidAccountAccessNotificationHandler | LISTENING | InvalidAccountAccessAlert
RegistrationTransactionEventHandler | LISTENING | RegistrationCompleteEvent
CustomerLockoutNotificationHandler | LISTENING | CustomerLockoutAlert
AMS_FILE_EXPORT | LISTENING | ClearingEvent
AccountBalanceSummaryNotificationHandler | LISTENING | AccountBalanceSummaryAlert
InvoiceAutoPayEventHandler | LISTENING | InvoiceCreatedEvent
AMS_Transfer | LISTENING | TransactionEvent
UnreadBankMessageNotificationHandler | LISTENING | UnreadBankMessageAlert
TransactionNotificationEventHandler | LISTENING | TransactionEvent
CustomerBlacklistChangeEventHandler | LISTENING | CustomerBlacklistChangeEvent
AccountBalanceThresholdNotificationHandler | LISTENING | AccountBalanceThresholdAlert
BalanceAlertEventHandler | LISTENING | TransactionEvent
PasswordChangedNotificationHandler | LISTENING | PasswordChangedAlert
CredentialChangeEventHandler | LISTENING | CredentialChangeEvent
WrongCredentialEventHandler | LISTENING | WrongCredentialEvent
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### See also

- *Event Queues* on page 17
- *Scheduled Events* on page 17
- *Event Handlers* on page 18

## Event Queues

Event queues display a list of physical and virtual queues, and an instantaneous count of events for the queues.

**Table 1. Event Queues**

| Queue | Description |
|---|---|
| Physical | Displays the number of events that are present in the physical queue at that instance in time. If the queue is empty, no events are pending for processing. |
| Virtual | Indicates how many events are in the physical queues for each event name at that instance in time. One virtual queue per event name. If no virtual queues are shown, then no events have been created. |

### See also

- *Events* on page 15

## Scheduled Events

Scheduled Events display the internal scheduler system view of all events that are scheduled for triggering. An empty list indicates no known scheduled events.

**Table 2. Scheduled Events**

| Field Label | Description |
|---|---|
| Scheduled Event Id | The internal identification of the scheduled event. |
| Time Zone | An optional time zone in which the cron expression is run. |
| Cron Expression | An expression conforming to UNIX cron standards for specifying repeats. |
| End Time | The time beyond which no more triggers will fire, or empty if never set. |
| Start Time | The time the first trigger fired. |
| Next Fire Time | The expected time of the next trigger fire. |
| Last Fire Time | The last time the trigger fired. |

| Field Label | Description |
|---|---|
| Trigger | A trigger is a set of criteria that, when met, starts the execution of an event.<br>**Simple – One-off:** Triggers the event once.<br>**Cron – Repeating:** Triggers the event at repeated intervals. |

### See also

- *Events* on page 15

## Event Handlers

Event handlers display a list of existing handlers registered with the event system.

**Table 3. Event Handlers**

| Field Label | Description |
|---|---|
| Status | Current status of the event.<br>**Listening:** Active and waiting to be notified when an event occurs.<br>**Catchup:** Regenerated events are still processing. |
| Event Name | Event name against which the handler is registered. |
| Current Active Thread | Threads running at this point in time. |
| Current Idle Thread | Threads allocated to this handler's pool, but not active at this time. |
| Max Active Thread | Maximum size of event handler thread pool. |
| Max Idle Thread | Maximum number of idle but not active threads in the pool. |
| Total Number of Runs | Number of times the task handler was invoked – might be different from Total Events Processed because a handler run does not cause an event to be processed if the handler cannot get a processing status lock on the event or if the event is expired. |
| Last Run At | Date and time of last run. |
| Total Events Processed | Number of times the handler process method was called. |
| Average Process Time (ms) | Average amount of time spent in the handler’s process method. |
| Total Events Success | Number of events that returned true from its handler process. |
| Total Events Fail | Number of events that returned false or through an exception from the handler process. |

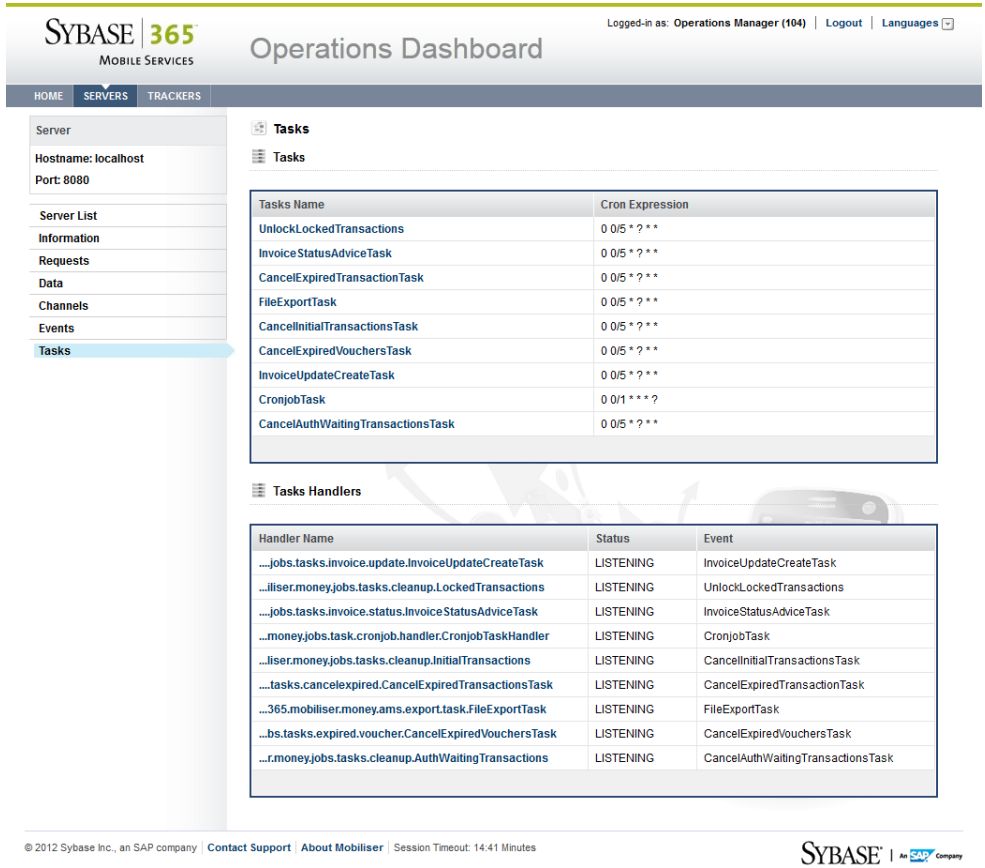
| Field Label | Description |
|---|---|
| Last Fail At | Date and time of last indicated failed processing event. |
| Events Marked Expired | Number of events whose expire time has been reached before processing. |
| Events Marked Catch Up | Number of events still processing regenerated events. |

### See also

- *Events* on page 15

## Tasks

The Tasks option displays statistics generated by the Money Mobiliser event system for tasks as well as the task handlers, which are called by the tasks. Tasks are internal date and time actions scheduled for execution at known repeated intervals. An empty list indicates no known scheduled events. A task is not directly related to an event because a task is not stored in the event system and does not require the regeneration of historical events for a task handler. However, the event system initiates and controls the processing of task actions.




### See also

- *Task Details* on page 20
- *Task Handlers* on page 21

## Task Details

Task Details display task information and statistics such as task start time, next and last fire time, and trigger.

**Table 4. Task Details**

| Field Label | Description |
|---|---|
| Scheduled Event Id | The internal identification of the scheduled event. |
| Time Zone | An optional time zone in which the cron expression should be run. |

| Field Label | Description |
|---|---|
| Cron Expression | An expression conforming to UNIX cron standards for specifying repeats. |
| End Time | The time beyond which no more triggers will fire, or empty if never set. |
| Start Time | The time the first trigger fired. |
| Next Fire Time | The expected time of the next trigger fire. |
| Last Fire Time | The last time the trigger fired. |
| Trigger | A trigger is a set of criteria that, when met, starts the execution of an event.<br>**Simple – One-off:** Triggers the event once.<br>**Cron – Repeating:** Triggers the event at repeated intervals. |

### See also

- *Tasks* on page 19

## Task Handlers

Task Handlers display a list of existing task handlers, which are called by the tasks. A task handler coordinates the activities of a task.

**Table 5. Task Handlers**

| Field Label | Description |
|---|---|
| Status | Current status of the event.<br>**Listening:** Active and waiting to be notified when an event occurs.<br>**Catchup:** Regenerated events are still processing. |
| Event Name | Event name against which the handler is registered. |
| Current Active Thread | Threads running at this point in time. |
| Current Idle Thread | Threads allocated to this handlers pool, but not active at this time. |
| Max Active Thread | Maximum size of event handler thread pool. |
| Max Idle Thread | Maximum number of idle but not active threads in the pool. |
| Total Number of Runs | Number of times the task handler was invoked – maybe different from Total Events Processed because a handler run does not cause an event to be processed if the handler cannot get a processing status lock on the event or if the event is expired. |
| Last Run At | Date and time of last run. |

| Field Label | Description |
|---|---|
| Total Events Processed | Number of times the handler process method was called. |
| Average Process Time (ms) | Average amount of time spent in the handler's process method. |
| Total Events Success | Number of events that returned true from its handler process. |
| Total Events Fail | Number of events that returned false or through an exception from the handler process. |
| Last Fail At | Date and time of last indicated failed processing event. |
| Events Marked Expired | Number of events whose expire time has been reached before processing. |
| Events Marked Catch Up | Number of events still processing regenerated events. |

### See also

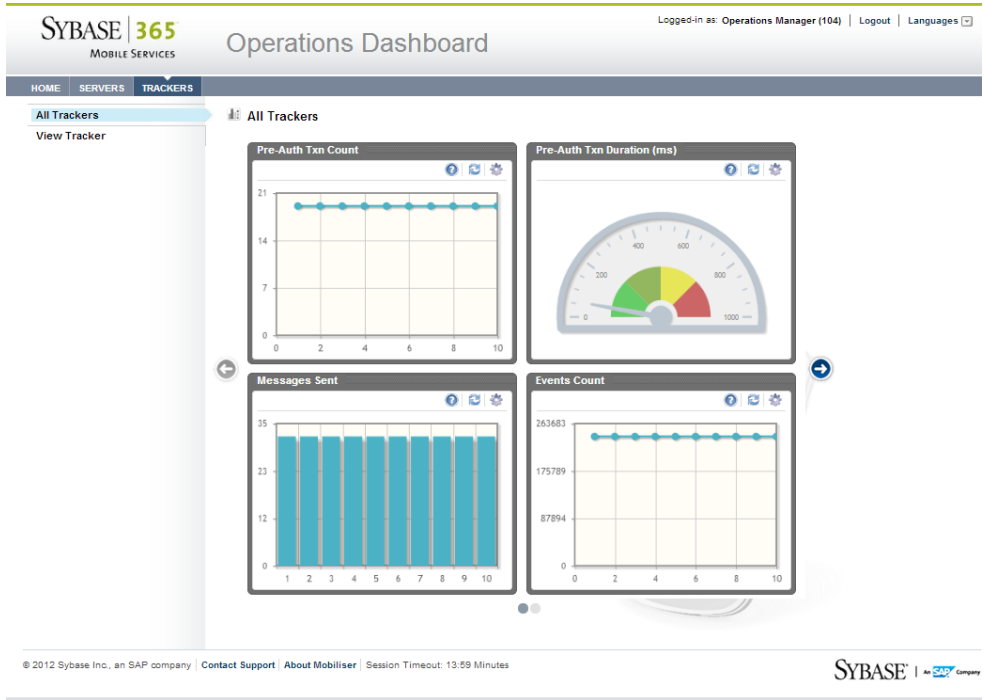
- *Tasks* on page 19

# Trackers

The Trackers option lets you visually monitor certain statistics of a Money Mobiliser system through a series of different chart types such line, bar, and gauge. For example, memory usage is presented as a bar chart, and pre-authorization of a transaction request is presented as a gauge chart.

You can monitor and track information such as statistics or status changes from a particular server information point. You can view trackers either on a summary page with easy navigation on the All Trackers page or individually on the View Tracker page.

**Note:** Trackers can be added via XML configuration by the dashboard developer.



# Cron Expression Reference

A cron expression is a string comprised of six or seven fields separated by white space. Fields can contain any of the allowed values, along with various combinations of the allowed special characters for that field. Cron expressions can be as simple as `* * * * ? *` or as complex as `0/5 14,18,3-39,52 * ? JAN,MAR,SEP MON-FRI 2002-2010`.

Fields can contain any of the allowed values alone with various combinations of the allowed special characters for that field.

**Table 6. Cron Expresson Format**

| Field Name | Allowed Value | Allowed Special Characters |
|---|---|---|
| Seconds | 0-59 | , - * / |
| Minutes | 0-59 | , - * / |
| Hours | 0-23 | , - * / |
| Day-of-Month | 1-31 | , - * ? / L W |
| Month | 1-12 or JAN-DEC | , - * / |
| Day-of-Week | 1-7 or SUN-SAT | , - * ? / L # |
| Year (Optional) | empty, 1970-2199 | , - * / |

**Table 7. Special Characters**

| Character | Description |
|---|---|
| * | Asterisks indicate that the cron expression matches for all values of the field. For example, "*" in the minute field means every minute. |
| ? | Question marks are used to specify 'no specific value' and is allowed for the day-of-month and day-of-week fields. It is used instead of the asterisk (*) for leaving either day-of-month or day-of-week blank. |
| - | Hyphens are used to define ranges. For example, "10-12" in the hour field means the hours of 10, 11, and 12. |
| , | Commas are used to separate items of a list. For example, "MON,WED,FRI" in the day-of-week field means the days Monday, Wednesday, and Friday. |
| / | Forward slash are used to indicate increments. For example. "0/15" in the seconds field means the seconds 0, 15, 30, and 45. Additionally, "1/3" in the day-of-month field means every 3 days starting on the first day of the month. |

| Character | Description |
|---|---|
| L | Short-hand for "last" and is allowed for the day-of-month and day-of-week fields. The "L" character has a different meaning in each of the two fields. For example, "L" in the day-of-month field means the last day of the month. If used in the day-of-week field, it means 7 or SAT. However, if used in the day-of-week field after another value, it means the last xxx day of the month. For example, "6L" in the day-of-week field means the last Friday of the month. |
| W | Short-hand for "weekday" and is allowed for the day-of-month field. The "W" character is used to specify the weekday nearest the given day. For example, "15W" in the day-of-month field means the nearest weekday to the 15th of the month. Therefore, if the 15th is a Saturday, the job runs on Friday the 14th. The "L" and "W" characters can be combined in the day-of-month field. For example, "LW" means the last weekday of the month. |
| # | Hash marks specify constructs. For example, "6#3' in the day-of-week field means the third Friday of the month. |

**Table 8. Cron Expression Examples**

| Expression | Description |
|---|---|
| 0 0 12 * * ? | Triggered to run at 12:00 p.m. (noon) every day |
| 0 15 10 ? * * | Triggered to run at 10:15 a.m. every day |
| 0 15 10 * * ? | Triggered to run at 10:15 a.m. every day |
| 0 15 10 * * ? * | Triggered to run at 10:15 a.m. every day |
| 0 15 10 * * ? 2005 | Triggered to run at 10:15 a.m. every day during the year 2005 |
| 0 * 14 * * ? | Triggered to run every minute starting at 2:00 p.m. and ending at 2:59 p.m., every day |
| 0 0/5 14 * * ? | Triggered to run every 5 minutes starting at 2:00 p.m. and ending at 2:55 p.m., every day |
| 0 0/5 14,18 * * ? | Triggered to run every 5 minutes starting at 2:00 p.m. and ending at 2:55 p.m., AND fire every 5 minutes starting at 6:00 p.m. and ending at 6:55 p.m., every day |
| 0 0-5 14 * * ? | Triggered to run every minute starting at 2:00 p.m. and ending at 2:05 p.m., every day |
| 0 10,44 14 ? 3 WED | Triggered to run at 2:10 p.m. and at 2:44 p.m. every Wednesday in the month of March |

| Expression | Description |
|---|---|
| 0 15 10 ? * MON-FRI | Triggered to run at 10:15 a.m. every Monday, Tuesday, Wednesday, Thursday and Friday |
| 0 15 10 15 * ? | Triggered to run at 10:15 a.m. on the 15th day of every month |
| 0 15 10 L * ? | Triggered to run at 10:15 a.m. on the last day of every month |
| 0 15 10 L-2 * ? | Triggered to run at 10:15 a.m. on the 2nd-to-last last day of every month |
| 0 15 10 ? * 6L | Triggered to run at 10:15 a.m. on the last Friday of every month |
| 0 15 10 ? * 6L 2002-2005 | Triggered to run at 10:15 a.m. on every last Friday of every month during the years 2002, 2003, 2004 and 2005 |
| 0 15 10 ? * 6#3 | Triggered to run at 10:15 a.m. on the third Friday of every month |
| 0 0 12 1/5 * ? | Triggered to run at 12:00 p.m. (noon) every 5 days every month, starting on the first day of the month |
| 0 11 11 11 11 ? | Triggered to run every November 11 at 11:11 a.m. |

### See also

- *Jobs* on page 9

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