



IBM Software Group

WebSphere Business Monitor V6.2

Administration



@business on demand.

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This presentation should introduce you to the new features of administration in WebSphere® Business Monitor version 6.2.

Agenda

- Queue bypass
- Web services notification
- Topology status
- Event recording and playback
- Purge and archive
- Test server reset
- Scheduled services
- Registry support

This is the agenda for this presentation. You will learn about the new consumption mode called queue bypass and how it affects remote cell configuration. In this release you can now send events using Web services notification. There are some new administrative console pages for the topology, event recording, database record archiving, and scheduled services. Also in this release, you can easily reset the embedded test server in the monitor toolkit. Finally, WebSphere Business Monitor version 6.2 allows the use of any of the WebSphere Application Server supported registries.

Queue bypass

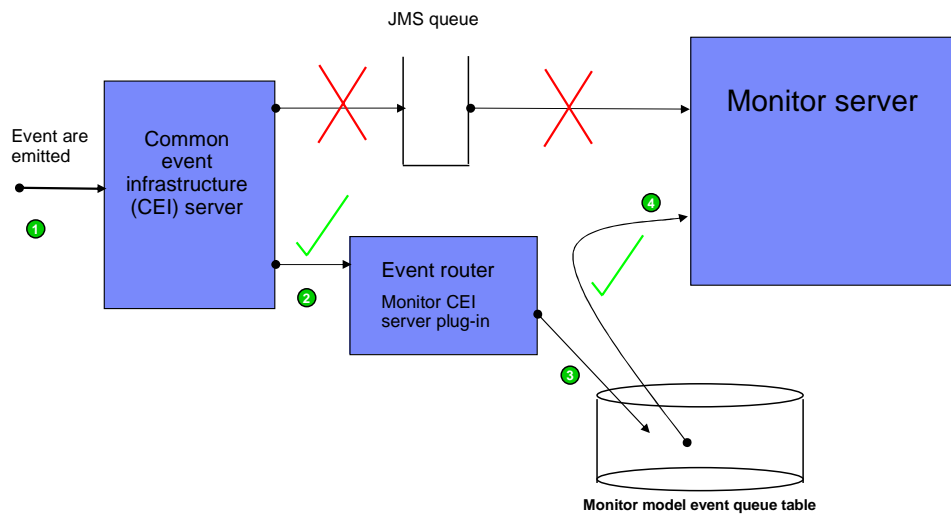
- Queue bypass is a new method for the consumption of events from the CEI server into the server moderator for a monitor model.
- Event flow skips the monitoring model's JMS queue and instead places all events directly into the monitor model's event database table.
- Increased server through-put



There is a new method called queue bypass for setting up the consumption of events by the monitor server. Queue bypass skips the use of the monitor model JMS queue and instead writes directly to the model event table. This avoids the additional database write step required by the JMS queue. Events flow from the application emitter directly to the Monitor database.

This should help to improve overall monitor server performance.

Event flow



This chart shows you the event flow for queue bypass. In the first step, events are emitted from the application to the Common Event Infrastructure (CEI) server. In step two, there is a monitor CEI server plug-in which is the event router, and the router filters the events to decide which monitor model event queue to target. In step three, the router places the event directly into the event queue table for the specific model version that will process the event. Then in step four, the monitor server reads the events from the model version queue table and processes them. Notice that this flow skips the JMS queue which is normally associated with a model version.

Queue bypass

- New CEI distribution modes
 - ▶ active queue bypass
 - ▶ active queue bypass no new instances
 - ▶ inactive queue recoverable queue bypass
- Monitor model install wizards gives you a selection for queue or queue bypass
- Common base event browser will continue to work



There are three new CEI distribution modes for use with queue bypass. During installation of the monitor model, you are given the choice to use queue bypass, however the default is queue bypass. For compatibility with the previous versions, you still have the option to use queued distribution.

The new event flow does not impact the use of the common base event browser since the event is stored in the event database before being sent to the model moderator.

Remote CEI

- Setting up monitor server to use a remote CEI server
- Queue option
 - ▶ configRemoteMonitorBus script – creates the remote service integration bus and configures link between local and remote buses
 - ▶ was_root\scripts.wbm\crossCell
- Queue bypass option
 - ▶ configQueueBypass script – creates data source
 - ▶ setupQueueBypass script – adds queue routing plug-ins
 - ▶ was_root\scripts.wbm\QueueBypass
- Information center topic
 - ▶ Configuring your environment > Configuring a remote CEI server to use WebSphere Business Monitor



If your CEI server is in a remote cell, then you will need to setup a cross-cell configuration. If you are using the queue option then you run a script which configures a remote service integration bus and the link between the remote bus with the monitor bus. If you are using the queue bypass option then you run a script to setup the monitor data source on the remote server and you run another script to add the router plug-ins.

For more information refer to the information center in the section for configuring your environment.

WS-Notification for publishing events

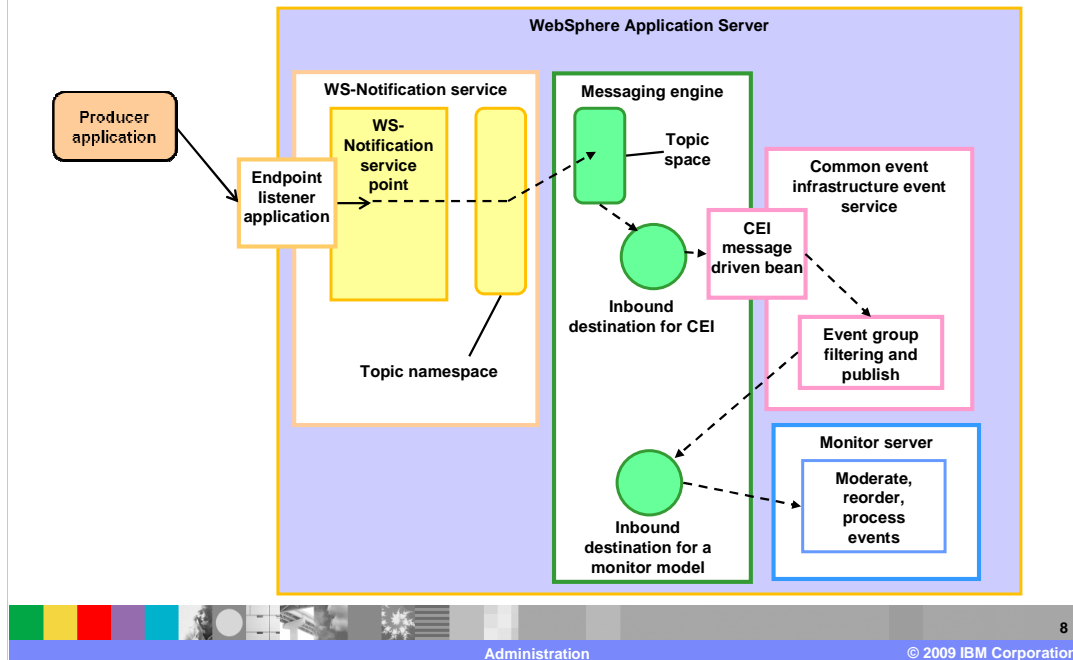
- Web service interface provides another choice for non-Java clients
- A wide variety of tools support development of Web service clients
- WebSphere Application Server 6.1 includes an implementation of WS-Notification



Web services notification is a publish and subscribe vehicle for Web services. You can send events from most sources to WebSphere Business Monitor through Web services using Web services notification. Web services notification can be used with both Java™ and .NET Web services for WebSphere Business Monitor.

You can use Web services to publish events from essentially any client application which is capable of being a Web service client.

Flow from WS-Notification producer



You can use Web services notification to publish an event message to CEI. CEI is still used for event filtering and distribution to the actual monitor model input queues. Hence, Web services notification serves as a simple Web services interface in front of CEI. This chart shows you the flow from the application to CEI and the model moderator.

A WS-Notification client, acting as a producer application, creates an event, and invokes the Notify() operation on the NotificationBroker interface exposed by the WS-Notification service configured in WebSphere Application Server.

The WS-Notification service puts a message on a bus destination. This is configured through a defined relationship between the WS-Notification topic namespace and the bus topic space. CEI is configured to listen on the topic. The CEI message-driven bean is triggered when the message arrives. CEI filters events based on event group definitions and publishes the event to the appropriate input destination for WebSphere Business Monitor, where the event is processed.

Additional information for WS-Notification

- Information center topic
 - ▶ Configuring your environment > Configuring WebSphere Business Monitor to use Web services notification
- WS-Notification in WebSphere Application Server V6.1
 - ▶ http://www.ibm.com/developerworks/websphere/library/techarticles/0611_roberts/0611_roberts.html
- Publishing event messages to IBM WebSphere Business Monitor V6.1 with Web services notification
 - ▶ <http://www.ibm.com/developerworks/architecture/library/i-bam6113/>
 - ▶ Shows how to run the scripts and to create a Web services client
- Publishing event messages to WebSphere Business Monitor V6.1 with WS-Notification: Enable .NET applications to send events through a Web service
 - ▶ <http://www.ibm.com/developerworks/library/i-bam6114/>
- Scripts to setup WS-Notification
 - ▶ C:\<serverPath>\scripts.wbm\wsn



Here are some additional sources of information for Web services notification. There is a topic in the configuration section of the information center. Also there are developerWorks® articles which provide information for WebSphere Application Server and WebSphere Business Monitor, including the use of .NET applications.

Event emitter using REST services

- API to emit events to monitor using representational state transfer (REST) services
- XSD style events using common base event and xs:any slot
- Invoke with any HTTP client application
- Return results as Javascript object notation (JSON) object
 - ▶ HTTP errors - 200 OK, 404 Not Found, 500 Internal Server Error
 - ▶ Monitor errors – return code and error text
- Event emitter service EAR file
 - ▶ EmitterRestServices.ear in was_root/installableApps.wbm
- For details, see the reference section of the information center



In version 6.2 you can also take advantage of the REST services in an HTTP client application for emission of events. You should format the event in the normal way using the common base event wrapper and loading the payload in the xs:any slot. The service takes an HTTP POST URI as input and the results are returned in JSON format. Also any error messages and status indicators are returned in the HTTP response as JSON output.

For more information the REST services, you can look at the reference section of the information center.

Monitor topology status

- Shows the state of the various Monitor components for stand-alone or cluster topology.
 - Does not matter if component was configured manually or using the configuration wizards.
- For each component a wizard is provided to configure the component.

The screenshot displays the 'WebSphere Business Monitor Configuration' page. On the left, a navigation tree shows 'Servers' expanded, with 'WebSphere Business Monitor configuration' selected and circled in red. The main content area is titled 'WebSphere Business Monitor configuration' and includes a table of components and their status.

Component	Status
<input checked="" type="checkbox"/> Messaging engine	Deployed on server1 on WBMonSrv_wps_Node
<input checked="" type="checkbox"/> Event emitter factory	Configured using the event service on server1 on WBMonSrv_wps_Node
<input checked="" type="checkbox"/> REST API service	Deployed on server1 on WBMonSrv_wps_Node
<input checked="" type="checkbox"/> Business Space	Deployed on server1 on WBMonSrv_wps_Node
<input checked="" type="checkbox"/> Action services	Deployed on server1 on WBMonSrv_wps_Node
<input checked="" type="checkbox"/> Data services scheduler	Deployed on server1 on WBMonSrv_wps_Node
<input checked="" type="checkbox"/> Dashboard for mobile devices	Deployed on server1 on WBMonSrv_wps_Node
<input checked="" type="checkbox"/> AlphaBlox	Deployed on server1 on WBMonSrv_wps_Node

In the administrative console, you can view the WebSphere Business Monitor configuration page which shows you the current installation and configuration of various monitor components. On this page you can see the status of the messaging engine, CEI, REST service, business space, action services, data services, mobile dashboard, and AlphaBlox.

This page shows the status for stand-alone or for clustered configurations. You can click many of the components to access wizards which guide you through the configuration of the component. You do not have to use the wizards, if you prefer to configure them manually or with scripts. Note that the component configuration status will display properly even if you configure the component manually without using the wizards.

Sample component wizard page

- Displays component status
- When the component has already been configured, the page displays configuration
- If the component has not been configured, a button that launches the component configuration wizard is displayed

Messaging Engine

WebSphere Business Monitor configuration > Messaging engine

Use this page to configure the messaging engine for WebSphere Business Monitor.

Messaging Engine Service Integration

Service integration bus for WebSphere Business Monitor = Buses

MONITOR.WBMonSrv_wps_Cell.Bus

Messaging engine status

Deployed on server1 on WBMonSrv_wps_Node

Configure Business Monitor Message Engine

Step 1: Select a bus member

Step 2: Select the type of message store

Step 3: Confirm

Select a bus member

A service integration bus named `MONITOR.cellname.Bus` will be created if it does not already exist.

Choose the server or cluster to add to the bus. A message engine will be created on the selected bus member.

Cluster
MessageEngineCluster

Server
MessageEngineServer

Next Cancel

This is a sample of the messaging engine component configuration page. It shows the current component status if the component has been configured previously. If the component is not configured, then you will also see a button that will launch the configuration wizard.

Event recording and playback

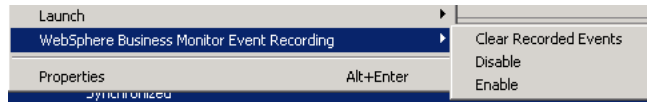
- Use event recording and playback in the Monitor toolkit to iteratively test a monitor model without having to re-run the BPEL application
- New functions:
 - ▶ Scripts provided to enable and disable event recording
 - ▶ Administrative pages to manage event recording and playback
 - ▶ Enable, disable and clear event recording in the Monitor toolkit without having to launch the administrative console
 - ▶ Import recorded events from an event recording file or directly from the Monitor toolkit into the integrated test console for re-submission



A new feature in version 6.2 allows you to record an event sequence for subsequent playback. This is very useful if you want to iteratively test a monitor model as you continually change and develop the model. For a BPEL application or any other application, you can enable event recording, then manually step through the process or application which will then generate the event sequence. The event sequence is saved to a database, so then you can replay the event sequence later to re-run the test. You can use scripts or the administrative console to manage these functions. Also, you can activate the event recording in the monitor toolkit. And you can import these events into an integrated test console script.

Enabling event recording

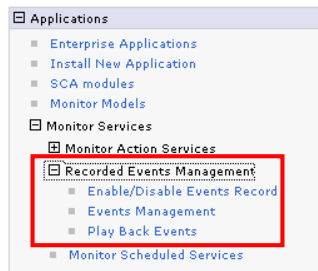
- C:\<serverPath>\scripts.wbm\EventArchiving\configureEventArchiving.bat
 - ▶ Functions
 - show archiving status
 - enable event archiving
 - disable event archiving
 - Toolkit



To enable event recording, you can run the script to configure event archiving. Or, you can also access a menu in the monitor toolkit to enable or disable event recording, or to clear existing recorded events.

Event recording and playback

- Use the administrative console to select events to playback or export



Events Management

Use this page to manage recorded events.

Preferences

Delete Delete All Export Export All Import Events

Select	Event	Time Recorded
<input type="checkbox"/>	2394	2008-11-13T20:57:55.889
<input type="checkbox"/>	2393	2008-11-13T20:57:55.655
<input type="checkbox"/>	2392	2008-11-13T20:56:55.858

Play Back Events

Use this page to play back recorded events.

Preferences

* Target Model Version
GlobalHTMM (2007-06-18T09:54:38)

Playback Play Back All

Select	Event	Time Recorded
<input type="checkbox"/>	2396	2008-11-13T20:58:55.874
<input type="checkbox"/>	2395	2008-11-13T20:58:55.639
<input type="checkbox"/>	2394	2008-11-13T20:57:55.889

You can use the administrative console to manage the events. On the events management page, you can list the events that have been recorded, and you can click an event to see the details of an individual event. You can also select options to delete, import and export. The import and export functions allow you to save events to the file system. On the play back page, you can select events and target model version and then you can initiate a play back.

Importing events and viewing detail

- Import events
- View event details

The screenshot displays the 'Events Management' interface. The top section shows a table of recorded events with columns for 'Select', 'Event', and 'Recorded'. The event ID '2392' is circled in red. Below the table, the 'Import Events' button is also circled in red. An arrow points from this button to the 'Import Events' dialog box on the right, which includes a 'Full path' input field and a 'Browse...' button. Another arrow points from the 'View Event XML' link in the 'View Event XML' section to the XML payload of event 2392.

Events Management

Use this page to manage recorded events.

Preferences

Delete Delete All Export Export All **Import Events**

Select	Event	Recorded
<input type="checkbox"/>	2394	-11-13T20
<input type="checkbox"/>	2393	-11-13T20
<input type="checkbox"/>	2392	-11-13T20

Events Management > View Event XML

Use this page to view the event XML data.

Expand All Collapse All

```
<CommonBaseEvent creationTime="2008-11-13T20:56:55.843Z" extensionName="globalinstanceId="CF67DF01B69D7FB3D41D0B1C59B04A791" priority="50" s
  <contextDataElements name="KpiID" type="string" >
    <contextValue> Percentage_of_Orders_Shipped_KPI </contextValue>
  </contextDataElements>
  <contextDataElements name="MonitoringContextID" type="string" >
    <contextValue> Order_Handling_KC </contextValue>
  </contextDataElements>
```

Events Management > Import Events

Use this page to import events from the Integrated Test Client file.

Full path

Browse...

Import Events Back

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On this slide you see the import events dialog which allows you to load a saved event sequence into the event recording database.

Also this shows you the detail page when you click an individual event. On the event detail page you can see the entire payload of the event in XML format.

Event filtering

- Use filtering in the recorded events
- Delete, delete all, export, export all - applied to filtered events only
- You can use multiple filters

The screenshot displays the 'Events Management' page. At the top, there are buttons for 'Delete', 'Delete All', 'Export', 'Export All', and 'Import Events'. A red circle highlights a filtering icon (a funnel) next to a 'Select Event' dropdown menu. Below this, there are checkboxes for 'Recorded Event Filter Properties (Optional)': 'Show Time Filter', 'Show Model Filter', 'Show XPath Filter', and 'Show Quick Filter'. The 'Record Time' section includes a 'Time Zone' dropdown set to 'UTC', and 'From' and 'To' fields for 'Record Date' (2008-11-13) and 'Record Time' (00:00:00 to 23:59:59). The 'Model Version' section contains a list of event entries with their IDs and timestamps. Below that is an 'XPath Expression' input field. At the bottom, the 'Return Number' section has radio buttons for 'Top Number' and 'Bottom Number'.

On the event management page, you can click the filtering icon to display filtering criteria. You can filter the list of events that are stored in the event recording database using many different criteria. You can filter on date and time, model version, XPath expression, or top and bottom count.

You can use one or more of the event filters in combination. When you filter and then click the buttons at the top of the page to delete or export, then the functions only apply to the filtered events.

Purge and archive instance data

- You can archive data on a one-time or scheduled periodic basis
 - ▶ This applies to instance data only, not KPI history
- The performance of the dashboard is improved since there is less data to access
- Functions
 - ▶ Purge, export, both
 - ▶ Import the exported data back into the database
 - ▶ Setup scheduled purge and archive services



To help you manage your monitored instance data in the monitor database, new functions are provided to purge and export. You can invoke these functions using the administrative console to run them as required. If you want to setup a periodic archive, then you can do that in the monitor scheduled services menu. These functions do not operate on KPI history.

You can purge data in the instance database, or you can export data to the file system, or you can do both. You can also import exported data back into the database.

Import, export, purge, archive instance data

- Menu is accessed from the model version

Manage Monitor Data

- Export Instance Data
- Import Instance Data
- Purge and Archive Instance Data

Purge and archive

Time Filter
Select the instance termination end time (UTC).

Purge instances before: Time:

Archive

Archive the purged instance to a directory on the server (CSV files).

Full path:

Export

Time Filter
How do you want to specify which instance data to export?

Based on instance creation time
Select the instance creation start and end times (UTC)

Export instances after: Time:

Export instances before: Time:

Based on instance termination time
Select the instance termination start and end times (UTC)

Export instances after: Time:

Export instances before: Time:

Export Options

Export the monitor model instance data to your browser (zip of CSV files).

Export the monitor model instance data to a directory on the server (CSV files).

Full path:

Import

Select a directory or files to import model instance data.

Local file system

Full path:

Server file system

Full path:



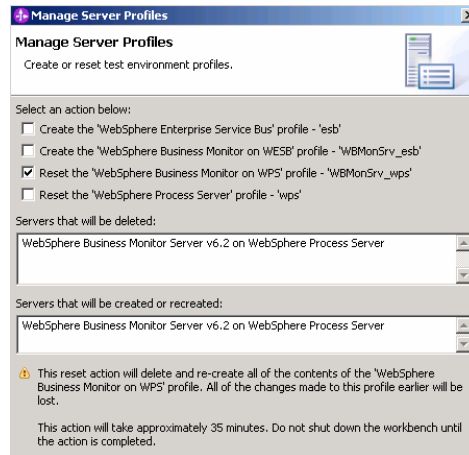
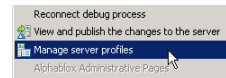
In the administrative console, you can access a model version to get to the page to manage monitor data. On the export page you can specify the date and time information either based on instance creation time or instance termination time. You can export the data to your browser or to the server.

On the page for purge and archive, you can specify the instance termination date and time. You can also optionally select to store the data on the server.

The import page allows you to load previously exported data, but this page is only enabled for a development server.

Test server reset

- The server profile and associated databases are reset to the same state following an initial install of WebSphere Business Monitor.
- This drops all installed monitor model applications and related runtime database tables.
- Development servers only
- Embedded server only



To reset the test server profile to the same state as you had immediately after the monitor install, then you can invoke the manage server profiles option in the toolkit server page. This function removes all monitor model applications and related database tables. If you have added an external server to the servers view, then you will not see the menu option for 'Manage server profiles'.

This feature only works for the embedded server in the monitor toolkit.

Monitor services

Applications

- Enterprise Applications
- Install New Application
- SCA modules
- Monitor Models
- Monitor Services**
 - Monitor Action Services
 - Recorded Events Management
 - Enable/Disable Events Recorder
 - Events Management
 - Play Back Events
 - Monitor Scheduled Services**

Select	Model	Priority
<input type="checkbox"/>	GlobalHTMM	1
<input type="checkbox"/>	MortgageLendingBAMShowcase	1
<input type="checkbox"/>	Order_Handling_CATOrderMgmt.Processes	1
Total 3		

General

General Properties

Model
Order_Handling_CATOrderMgmt.Processes

Status
Active

Additional Properties

Scheduled Services

		Suspend	Resume					
Select	Service	Interval	Last Run	Last Duration	Last Start	Last Completion	Status	
<input type="checkbox"/>	KPI History Calculation	1 hours	Success	0h 0m 2s	Nov 13, 2008 3:00:10 PM	Nov 13, 2008 3:00:13 PM	Active	
<input type="checkbox"/>	KPI Prediction Calculation	1 hours	Success	0h 0m 0s	Nov 13, 2008 3:00:13 PM	Nov 13, 2008 3:00:13 PM	Active	
<input type="checkbox"/>	Dynamic Alert Evaluation	1 minutes	Success	0h 0m 0s	Nov 13, 2008 3:22:10 PM	Nov 13, 2008 3:22:10 PM	Active	
<input type="checkbox"/>	Alphablox Cube Refresh	1 hours	None				Suspended	
<input type="checkbox"/>	Purge and Archive Instance Data	1 days	None				Suspended	

On the page for monitor scheduled services, you can see the status of all the scheduled monitor services. You can see the run interval, last run data, last run duration, last start, last completion, and current status. If you click a specific service, then you can view the details of the selected service, and you can update the interval for the service. For purge and archive instance data, you can also select the records to purge based on the instance termination date.

Enhanced registry support

- Since 6.1, Monitor supports federated repositories/VMM but not any of the other registries
- Added support for
 - ▶ Stand-alone custom registry

Security Configuration Wizard Security Configu

Administrative security

Enable administrative security [Administrative User Roles](#)
[Administrative Group Roles](#)

Application security

Enable application security

Java 2 security

Use Java 2 security to restrict application access to local resources

Warn if applications are granted custom permissions

Restrict access to resource authentication data

User account repository

Current realm definition: Federated repositories

Available realm definitions:

- Federated repositories
- Local operating system
- Standalone LDAP registry
- Standalone custom registry

Configure Set as current

WebSphere Business Monitor version 6.2 supports the use of federated repositories and custom registries. Federated repositories can be any of the supported LDAP servers or the built-in file based repository.

Summary

- Covered the new features for administering WebSphere Business Monitor V6.2



In summary, you have seen an overview of the new features that are available in version 6.2 to administer your WebSphere Business Monitor environment.

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