

# HP Operations Content Pack for BlackBerry Enterprise Server Software

for HP Business Service Manager Software

Software Version 9.01

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## BlackBerry Content Pack

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Document Release Date: September 2010

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Software Release Date: September 2010

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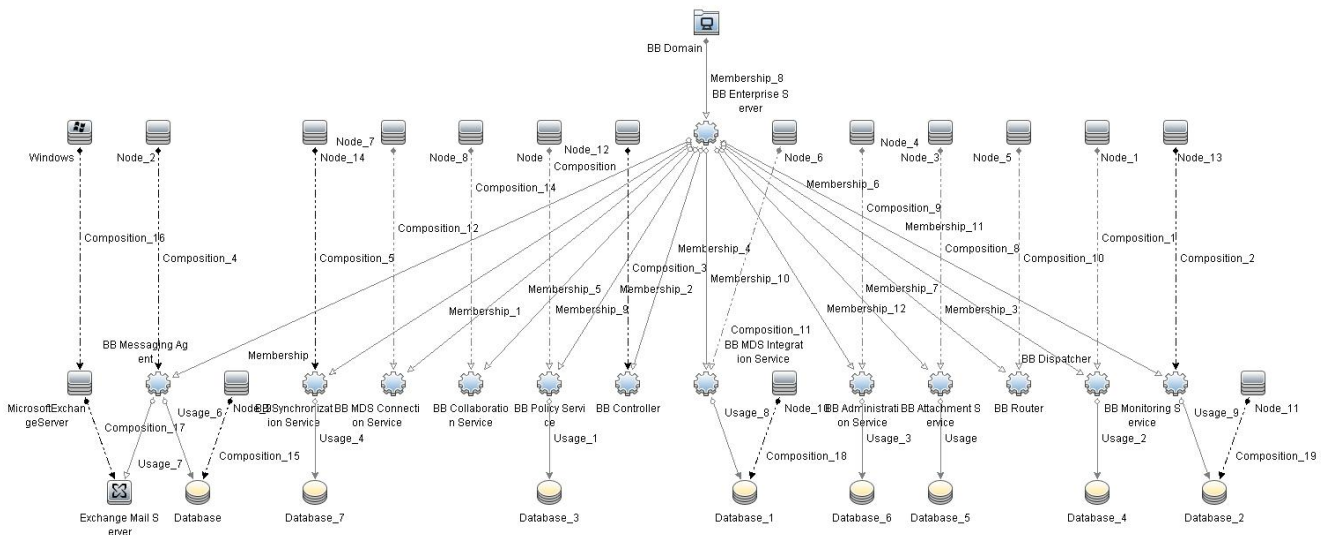
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# BlackBerry Content Pack Reference

The BlackBerry Content Pack contains the following artifacts:

## ODB Views

The ODB package in the BlackBerry Content Pack includes the BlackBerry Domain and BlackBerry Topology views, which refers to the BB Enterprise Server, BB Domain and BB Component CI types. The following image shows the relationship among the CI types.



## Health Indicators

The BlackBerry Content Pack includes the following Health Indicators (HIs) to monitor the BlackBerry-related events:

CI Type	HI	Value
bb_messaging_agent	BB Average Delivery Time Per User	High, Normal
bb_messaging_agent	BB Average MAPI Response Time Per User	High, Normal
bb_component	BB CPU Time	
bb_component	BB Database Average Response Time	High, Normal
bb_component	BB Database Transaction In 24H	
bb_component	BB DB Connection Status	Established, Disconnected
bb_messaging_agent	BB Dispatcher Connection Status	Established, Disconnected
bb_component	BB High Availability Mode	
bb_component	BB Memory Use	High, Normal
bb_messaging_agent	BB Message Server Average Response Time	High, Normal
bb_controller	BB Number Of Active Agents	
bb_router	BB Number Of BlackBerry Devices Connected	
bb_messaging_agent	BB Number Of Failed Connections Per User	
bb_messaging_agent	BB Number Of Failed Messages	
bb_messaging_agent	BB Number Of Pending Messages	
bb_component	BB Number Of Pending Transactions	
bb_dispatcher	BB Number Of Processing Threads	
bb_messaging_agent	BB Number Of Transactions Detected During Rescan	High, Normal
bb_component	BB Number Of Transactions Waiting To Be Sent	



bb_messaging_agent	BB Number of User Initialization Failures	
bb_messaging_agent	BB Percentage Of Hung Threads	High, Normal
bb_component	BB Service Status	Up, Down
bb_component	BB SRP Connection Status	Established, Disconnected
bb_component	BB SRP Link Latency	High, Normal

## Event Type Indicators

The BlackBerry SPI Content Pack includes the following Event Type Indicators (ETIs) to monitor BlackBerry-related events.

CI Type	ETI	Description	Value
bb_messaging_agent	BB_Average_Delivery_Time_Per_User	Average Delivery Time Per User	High, Normal
bb_messaging_agent	BB_Average_MAPI_Response_Time_Per_User	Average MAPI Response Time Per User	High, Normal
bb_component	BB_CPU_Time	BlackBerry CPU Time	
bb_component	BB_Database_Average_Response_Time	BB Database Average Response Time	High, Normal
bb_component	BB_Database_Transaction_In_24H	BB Database Transaction In 24H	
bb_component	BB_DB_Connection_Status	BB DB Connection Status	Established, Disconnected
bb_messaging_agent	BB_Dispatcher_Connection_Status	BB Dispatcher Connection Status	Established, Disconnected
bb_component	BB_High_Availability_Mode	BB High Availability Mode	
bb_component	BB_Memory_Use	BB Memory Use	High, Normal
bb_messaging_agent	BB_Message_Server_Average_Response_Time	BB Message Server Average Response Time	High, Normal
bb_controller	BB_Number_Of_Active_Agents	BB Number Of Active Agents	
bb_router	BB_Number_Of_BlackBerry_Devices_Connected	BB Number Of BlackBerry Devices Connected	

bb_messaging_agent	BB_Number_Of_Failed_Conn ections_Per_User	BB Number Of Failed Connections Per User	
bb_messaging_agent	BB_Number_Of_Failed_Mess ages	BB Number Of Failed Messages	
bb_messaging_agent	BB_Number_Of_Pending_Mes sages	BB Number Of Pending Messages	
bb_component	BB_Number_Of_Pending_Tra nsactions	BB Number Of Pending Transactions	
bb_dispatcher	BB_Number_Of_Processing_T hreads	BB Number Of Processing Threads	High, Normal
bb_messaging_agent	BB_Number_Of_Transactions _Detected_During_Rescan	BB Number Of Transactions Detected During Rescan	High, Normal
bb_component	BB_Number_Of_Transactions _Waiting_To_Be_Sent	BB Number Of Transactions Waiting To Be Sent	
bb_messaging_agent	BB_Number_of_User_Initializa tion_Failures	BB Number of User Initialization Failures	
bb_messaging_agent	BB_Percentage_Of_Hung_Thr eads	BB Percentage Of Hung Threads	High, Normal
bb_component	BB_Service_Status	BB Service Status	Up, Down
bb_dispatcher	BB_SRP_Connection_Errors	BB SRP Connection Errors	
bb_component	BB_SRP_Connection_Status	BB SRP Connection Status	Established, Disconnected
bb_component	BB_SRP_Link_Latency	BB SRP Link Latency	High, Normal
bb_messaging_agent	BB_Transactions_Detected_D uring_Rescan	BB Transactions Detected During Rescan	

## Correlation Rules

The BlackBerry SPI Content Pack includes the following rules to correlate BlackBerry-related events.

For more information on how the correlation rules work, see the *Operations Manager i Concepts Guide*.

### BB:BB Dispatcher:Service Status >> BB Dispatcher Connection Status

<b>DESCRIPTION: Cause: BB Dispatcher:BB Service Status</b>		
<b>Symptom: BB Message Agent:BB Dispatcher Connection Status</b>		
Cause:		
CIT: BB Dispatcher	ETI: Service Status	Value: Down
Symptom		
CIT: BB Component	ETI: BB DB Connection Status	Value: Disconnected

### BB:BB Message Agent:Percentage Of Hung Threads >> BB Average Delivery Time Per User

<b>DESCRIPTION: Cause: BB Message Agent:Percentage Of Hung Threads</b>		
<b>Symptom: BB Message Agent:Average Delivery Time Per User</b>		
Cause:		
CIT: BB Messaging Agent	ETI: BB Percentage Of Hung Threads	Value: High
Symptom		
CIT: BB Message Agent	ETI: Average Delivery Time Per User	Value: High

### BB:Computer:CPU Load >> BB DB Average Response Time

<b>DESCRIPTION: Cause: Computer:CPU Load</b>		
<b>Symptom: BB Component:BB Database Average Response Time</b>		
Cause:		
CIT: Computer	ETI: CPU Load	Value: Bottlenecked

Symptom		
CIT: BB Component	ETI: BB Database Average Response Time	Value: High

### BB:Computer:System Status >> BB DB Connection Status

<b>DESCRIPTION: Cause: Computer:System Status:Down</b>		
<b>Symptom: BB Component:BB DB Connection Status:Disconnected</b>		
Cause:		
CIT: Computer	ETI: System Status	Value: Down
Symptom		
CIT: BB Component	ETI: BB DB Connection Status	Value: Disconnected

### BB:Database:CPU by SQL >> BB Database Average Response Time

<b>DESCRIPTION: Cause: Database:CPU by SQL</b>		
<b>Symptom: BB Component:BB Database Average Response Time</b>		
Cause:		
CIT: Database	ETI: CPU by SQL	Value: High
Symptom		
CIT: BB Component	ETI: BB Database Average Response Time	Value: High

### BB:Database:Database Server Status >> BB DB Connection Status

<b>DESCRIPTION: Cause: Database:Database Server Status</b>		
<b>Symptom: BB Component:BB DB Connection Status</b>		
Cause:		
CIT: Database:	ETI: Database Server Status	Value: Down
Symptom		
CIT: BB Component	ETI: BB DB Connection Status	Value: Disconnected

BB:Exchange Mail Server:Average Mail Delivery Time >> BB Average Delivery Time Per User

<b>DESCRIPTION: Cause: Exchange Mail Server:Average Mail Delivery Time</b>		
<b>Symptom: BB Message Agent:BB Average Mail Delivery Time</b>		
Cause:		
CIT: Exchange Mail Server	ETI: Average Mail Delivery Time	Value: High, Very High
Symptom		
CIT: BB Message Agent	ETI: BB Average Mail Delivery Time	Value: High

BB:Exchange Mail Server:Mapi Connectivity >> BB Average MAPI Response Time Per User

<b>DESCRIPTION: Cause: Exchange Mail Server:Mapi Connectivity</b>		
<b>Symptom: BB Message Agent:BB Average MAPI Response Time Per User</b>		
Cause:		
CIT: Exchange Mail Server	ETI: Mapi Connectivity	Value: Down
Symptom		
CIT: BB Message Agent	ETI: BB Average MAPI Response Time Per User	Value: High, Very High

BB:Exchange Mail Server:Memory Status >> BB Message Agent Average Delivery Time

<b>DESCRIPTION: Cause: Exchange Mail Server: Exchange Memory Status</b>		
<b>Symptom: BB Message Agent:BB Message Server Average Response Time</b>		
Cause:		
CIT: Exchange Mail Server	ETI: Exchange Memory Status	Value: Critical
Symptom		
CIT: BB Message Agent	ETI: BB Message Server Average Response Time	Value: High

## Tool Definitions

Additional tools may be found in the HP Operations Manager GUI, where BlackBerry SPI is installed. Refer to the *BlackBerry SPI Administration Guide* for detailed information.

## Graph Templates

The BlackBerry SPI includes the BlackBerry SPI graph family, which is mapped to the BlackBerry CI types BB Component and BB Enterprise Server. Refer to the BlackBerry SPI documentation for a list of graphs.

## Policy Setting ETIs

The following table lists the Content Pack ETIs and SPI threshold policies that set the ETIs.

For more information refer to the BlackBerry SPI Reference Guide.

ETI / HI	Metric Number	Policy Description
BB_Dispatcher_Connection_Status	00100	Specifies whether the connection is currently established.
BB_Message_Server_Average_Response_Time	00101	The average response time for the connection.
BB_DB_Connection_Status	00102 00209 00305 00407	Specifies whether the connection is currently established.
BB_Database_Average_Response_Time	00104	The average response time for the connection.
BB_Average_Delivery_Time_Per_User	00105	The time when an email or calendar message is delivered to the BlackBerry device. The average delivery time is the difference between the time when a transaction is sent to the device and the time when the device returns an acknowledge.
BB_Average_MAPI_Response_Time_Per_User	00107	In the BlackBerry Enterprise Server for IBM Lotus Domino, the response time of the IBM Lotus Notes API. In BlackBerry Enterprise Server for Microsoft Exchange, the response time of specific MAPI functions.
BB_Number_Of_Transactions_Detected_During_Rescan	00113	In the BlackBerry Enterprise Server for Microsoft Exchange and for Novell GroupWise, it is the number of new messages found during a rescan. (This does not include the notification messages)

		sent from the messaging server).
BB_Percentage_Of_Hung_Threads	00115	The number of user threads that are detected to be hung.
BB_High_Availability_Mode	00116 00216	Specifies whether the high availability mode of the component is primary or standby.
BB_Service_Status	00120 00217 00300 00400 00510 00609	The status of a Component Service
BB_Database_Average_Response_Time	00211	The average response time for the connection.
BB_Memory_Use	00304 00406	The amount of real system memory allocated to the process, in KB.
BB_Number_Of_Processing_Threads	00301 00401	The number of threads that are running in the BlackBerry Enterprise Server environment.
BB_SRP_Connection_Status	00600	Specifies whether the connection is currently established.
BB_SRP_Link_Latency	00602	The link latency on the SRP connection for the BlackBerry Router.

## Operations Orchestration Flow

The following table lists the Oracle Operations Orchestration (OO) Flows:

OO Flows	Description	CI Type
Kill Device	This tool kills a handheld device which means that data on the Blackberry device is deleted and the device is disabled.	BB Enterprise Server
Cancel Kill Device	Cancel the kill command for a specific user.	BB Enterprise Server
Resend Service Book	Resend the service book to one or several specified user.	BB Enterprise Server
Send Message	Send a message to a recipient with a specific subject.	BB Enterprise Server
Send PIN Message	Send a PIN message to a recipient.	BB Enterprise Server
Password Reset	Resets the password of a device.	BB Enterprise Server

## Kill Device

User input when executing OO flow “Kill Device”:

Flow input	Required / Optional	Default	Description
EmailAdress	Required	Prompt User	Email address of the device where the “Kill Device” command should be executed.
BESHost	Required	Prompt User	BES host to execute the “Kill Device” command.
BESUser	Required	Prompt User	BES user to execute the “Kill Device” command.
BESPassword	Required	Prompt User	Password for the BES user.
BESAuthType	Optional	AD	Authorization may be checked either using Active Directory (AD) or BAS authentication.  To use BAS authentication, the optinal parameter “BESAuthType” needs to be set to “BAS” when executing the BlackBerry Flows.
userOverride	Optional	Prompt User	Select True or False from a list.
Delay	Optional	Prompt User	Delay time in seconds.

## Cancel Kill Device

User input when executing OO flow “Cancel Kill Device”:

Flow input	Required/Optional	Default	Description
EmailAdress	Required	Prompt User	Email address of the device where the “Kill Device” command should be canceled.
BESHost	Required	Prompt User	BES host to cancel the “Kill Device” command.
BESUser	Required	Prompt User	BES user to cancel the “Kill Device” command.
BESPassword	Required	Prompt User	Password for the BES user.
BESAuthType	Optional	AD	Authorization may be checked either using Active Directory (AD) or BAS authentication.  To use BAS authentication, the optinal parameter “BESAuthType” needs to be set to “BAS” when executing the BlackBerry Flows.



## Resend Service Book

User input when executing OO flow “Resend Service Book”:

Flow input	Required / Optional	Default	Description
EmailAdressPart	Required	Prompt User	The Service book may be sent to one or several recipients, according to the Email address part. “user@mydomain.com” sends the service book to one device “@mydomain.com” sends the service book to all users of mydomain. “@” sends the service book to all known user.
ExchangeHost	Required	Prompt User	The exchange server associated with the BES host.
ExchangeUser	Required	Prompt User	User for the exchange server associated with the BES host.
ExchangePassword	Required	Prompt User	Password for the exchange server associated with the BES host.
BESHost	Required	Prompt User	BES host to execute the “Resend Service Book” command.
BESUser	Required	Prompt User	BES user to execute the “Resend Service Book” command.
BESPassword	Required	Prompt User	Password for the BES user.
BESAuthType	Optional	AD	Authorization may be checked either using Active Directory (AD) or BAS authentication.  To use BAS authentication, the optional parameter “BESAuthType” needs to be set to “BAS” when executing the BlackBerry Flows.

## Send Message

User input when executing OO flow “Send Message”:

Flow input	Required / Optional	Default	Description
EmailAdress	Required	Prompt User	The email address of the recipient.
Subject	Required	Prompt User	Subject of the mail message.
Message	Optional	Prompt User	Message text of the mail message.
BESHost	Required	Prompt User	BES host to execute the “Send Message” command.
BESUser	Required	Prompt User	BES user to execute the “Send Message” command.
BESPassword	Required	Prompt User	Password for the BES user.
BESAuthType	Optional	AD	Authorization may be checked either using Active Directory (AD) or BAS authentication.  To use BAS authentication, the optional parameter “BESAuthType” needs to be set to “BAS” when executing the BlackBerry Flows.

## Send PIN Message

User input when executing OO flow “Send PIN message”:

Flow input	Required / Optional	Default	Description
EmailAdress	Required	Prompt User	The email address of the recipient.
Subject	Required	Prompt User	Subject of the PIN message.
Message	Optional	Prompt User	Message text of the PIN message.
BESHost	Required	Prompt User	BES host to execute the “Send PIN Message” command.
BESUser	Required	Prompt User	BES user to execute the “Send PIN Message” command.
BESPassword	Required	Prompt User	Password for the BES user.
BESAuthType	Optional	AD	Authorization may be checked either using Active Directory (AD) or BAS authentication.  To use BAS authentication, the optional parameter “BESAuthType” needs to be set to “BAS” when executing the BlackBerry Flows.

## Password Reset

User input when executing OO flow “Password Reset”:

Flow input	Required / Optional	Default	Description
BESHost	Required	Prompt User	BES host to execute the “Password Reset” command.
BESUser	Required	Prompt User	BES user to execute the “Resent Password” command.
BESPassword	Required	Prompt User	Password for the BES user.
BESAuthType	Optional	AD	Authorization may be checked either using Active Directory (AD) or BAS authentication.  To use BAS authentication, the optional parameter “BESAuthType” needs to be set to “BAS” when executing the BlackBerry Flows.
EmailAdress	Required	Prompt User	Email address of the device where the kill command should be canceled.
NewDevicePassword	Required	Prompt User	String to use as the new device password.
ExchangeHost	Required	Prompt User	The exchange server associated with the BES host.
ExchangeUser	Required	Prompt User	User for the exchange server associated with the BES host.
ExchangePassword	Required	Prompt User	Password for the exchange server associated with the BES host.
SendMailDelay	Optional	Prompt User	Delay time in seconds.