BlackBerry Enterprise Server v4.0 for IBM Lotus Domino Administration

Presenter Name
Regional Technical Manager
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Agenda

- BlackBerry Enterprise Server Architecture
- Configuring BlackBerry Enterprise Server Properties
- Supporting BlackBerry Enterprise Server Functionality
- Configuring and Supporting the Mobile Data Service
Module 1:
BlackBerry Enterprise Server Architecture
BlackBerry Enterprise Server Architecture
Module Objectives

• By the end of this module you should be able to do the following:
  – Identify and describe the components of the BlackBerry Enterprise Server
  – Describe the purpose of BlackBerry Enterprise Server logs
  – Configure BlackBerry Enterprise Server logging properties
BlackBerry Enterprise Server Architecture
Overview

• BlackBerry Enterprise Server™ v4.0 for IBM® Lotus® Domino®
  – Add-In Task Leveraging Lotus Domino Platform
  – Supports 2,000 Users
  – Extends the Desktop Groupware Environment
    • New Email Sent to Device, Synchronization of Sent Items, Deletes, Filing to Folders
    • Full Wireless Sync of PIM: Calendar, Tasks, MemoPad
    • Wireless Lookup from Domino Directory
  – Foundation for Supporting Mobile Data Applications
    • Web-Based Applications
    • Client/Server Applications
  – Allows Users to Self Activate Over the Air with Enterprise Activation
BlackBerry Enterprise Server Architecture
Version 4.0 Components
BlackBerry Enterprise Server Architecture
Log Files

• Each component creates a daily log file
• Located by default at C:\Program Files\Research In Motion\BlackBerry Enterprise Server\Logs\Date

• Named according to server name, component, instance #, date:
  – servername_component_instance_instance_yyyymmdd_log #.txt
BlackBerry Enterprise Server Architecture
Logging Properties

- Event logs used for proactive monitoring
- Used for troubleshooting server and user issues
- Write to text files called debug logs
- Generally stored on BlackBerry Enterprise Server host machine
- By default, each component writes daily debug log file
BlackBerry Enterprise Server Architecture

Log File Format

- [40423] (08/10 22:25:52):{0x64C} {user40@classdomain.local} Queuing new mail through notification (external). EntryId=44
  - Event ID = [40423]
  - Date/Time = (08/10 22:25:52)
  - Thread ID = {0X64C}
  - Description = {user40@classdomain.local} Queuing new mail through notification (external). EntryId=44
Commonly used event logs include:

- BlackBerry Messaging Agent
- BlackBerry Dispatcher
- BlackBerry Synchronization Service
- BlackBerry Policy Service
- BlackBerry Attachment Service
- Mobile Data Service
- BlackBerry Router
- BlackBerry Controller
BlackBerry Enterprise Server Architecture

Lab 1.1

• Lab 1.1: Customizing BlackBerry Enterprise Server Logging
  – Exercise 1: Configuring Logging Options
  – Exercise 2: Analyzing Server Logs

• 10 minutes to complete lab exercises
BlackBerry Enterprise Server Architecture
Exercise 1: Configuring Logging Options

• Using the procedures outlined in this module, configure your BlackBerry Enterprise Server so that the following is true:
  – BlackBerry Enterprise Server logs can be found in the folder C:\BESLogs
  – A new log file is created every day.
  – Each day’s log file is contained in a separate folder.
  – The maximum size for a log file is 200 MB.
  – The default log level for all messaging related components is set to 4.
In this exercise you will analyze various BlackBerry Enterprise Server event logs.

1. Using the BlackBerry Enterprise Server log files provided by the instructor, identify the approximate time when the BlackBerry Enterprise Server started.

2. Using the BlackBerry Enterprise Server log files provided by the instructor, identify at least 5 events that occurred on the BlackBerry Enterprise Server. Note the time it occurred and the associated Event ID.
Module 2:
Configuring BlackBerry Enterprise Server Properties
Configuring Enterprise Server Properties

Module Objectives

• By the end of this module you should be able to do the following:
  – Configure Attachment Service properties
  – Identify the purpose of the BlackBerry Manager
  – Configure BlackBerry Enterprise Server properties
  – Add users to the BlackBerry Enterprise Server
  – Assign a handheld to a user
  – Configure user properties
Configuring Enterprise Server Properties
Attachment Service Properties

• The Attachment Service consists of:
  – Connector:
    • Controls the connections between the Messaging Agent and Attachment Service when attachments handheld requests attachments
  – Attachment Server:
    • Controls the retrieval, distillation, and conversion of attachment data, and which attachments are supported
## Configuring Enterprise Server Properties

**Supported Attachment Formats**

<table>
<thead>
<tr>
<th>File extension</th>
<th>Format (supported by default)</th>
</tr>
</thead>
<tbody>
<tr>
<td>.pdf</td>
<td>Adobe® Acrobat® versions 1.1, 1.2, 1.3, 1.4</td>
</tr>
<tr>
<td>.xls</td>
<td>Microsoft® Excel versions 97, 2000, 2003, XP</td>
</tr>
<tr>
<td>.ppt</td>
<td>Microsoft® PowerPoint versions 97, 2000, 2003, XP</td>
</tr>
<tr>
<td>.doc, .dot</td>
<td>Microsoft® Word versions 97, 2000, 2003, XP</td>
</tr>
<tr>
<td>.wpd</td>
<td>Corel® WordPerfect® versions 6.0, 7.0, 8.0, 9.0(2000)</td>
</tr>
<tr>
<td>.txt</td>
<td>ASCII text</td>
</tr>
<tr>
<td>.hmtl, .htm</td>
<td>HTML</td>
</tr>
<tr>
<td>.zip</td>
<td>ZIP archives</td>
</tr>
<tr>
<td>.bmp, .jpg, .gif, .png, .tif</td>
<td>images</td>
</tr>
</tbody>
</table>
Configuring Enterprise Server Properties
Attachment Service

- Recommended file sizes for BlackBerry Enterprise Server environments with heavy attachment usage:

<table>
<thead>
<tr>
<th>File format</th>
<th>Recommended size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adobe Acrobat versions 1.1, 1.2, 1.3, 1.4</td>
<td>less than 2000 KB</td>
</tr>
<tr>
<td>Microsoft Excel versions 97, 2000, 2003, XP</td>
<td>less than 2000 KB</td>
</tr>
<tr>
<td>Microsoft PowerPoint versions 97, 2000, 2003, XP</td>
<td>less than 2000 KB</td>
</tr>
<tr>
<td>Microsoft Word versions 97, 2000, 2003, XP</td>
<td>less than 2000 KB</td>
</tr>
<tr>
<td>Corel WordPerfect versions 6.0, 7.0, 8.0, 9.0 (2000)</td>
<td>less than 2000 KB</td>
</tr>
<tr>
<td>ASCII text</td>
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</tr>
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<td>HTML</td>
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<td>ZIP archives</td>
<td>less than 2000 KB</td>
</tr>
<tr>
<td>Images</td>
<td>less than 2000 KB</td>
</tr>
</tbody>
</table>
Administrators can manage all aspects of the BlackBerry environment:

- BlackBerry Domain properties
- BlackBerry servers
- User accounts
- BlackBerry devices
General properties allow you to configure the following:

- SRP Identifier
- SRP Authentication Key
- SRP Host
- SRP Port
- Host Routing Information
- Encryption Algorithm
Configuring Enterprise Server Properties

Messaging Properties

- Messaging properties allow you to configure the following:
  - Wireless message reconciliation
  - Disclaimer text
  - Auto BCC addresses
  - Message prepopulation
Global filters allow administrators to define which messages will be redirected to handhelds based on specific conditions.

Global filters have the following characteristics:

- Override user-defined filters
- Users cannot see global filters
- When you apply a global filter, the server checks no further
BESAlert notifications allows you to do the following:

- Send a copy of events to selected users whenever an Error, Warning, or Information event is logged.
- Define alerts at both the server and user levels.
- Identify and troubleshoot problems as effectively as possible.
Enterprise Server Security
Wireless IT Policies

• Over 190 Policies
• Policy/Regulatory Compliance
• Device Security
  – Force Content Protection
  – Enforce Password Rules
• Configuration Management
  – Wireless Synchronization Options
  – Default/Mandatory Settings
  – Application Controls
Wireless PIM synchronization can be configured at both a server or user level:
Lab 2.1: Configuring BlackBerry Enterprise Server properties

- Exercise 1: Configuring BlackBerry Attachment Service properties
- Exercise 2: Creating global filters
- Exercise 3: Configuring IT policies
- Exercise 4: Configuring PIM synchronization properties
- Exercise 5: Configuring message options

20 minutes to complete lab exercises
In this exercise you will configure your BlackBerry Attachment Service so that the following is true:

- The maximum supported attachment size is 2000KB.
- Adobe PDF attachments cannot be viewed on BlackBerry devices.
- The maximum number of documents cached by the BlackBerry Attachment Service is 25.
Configuring Enterprise Server Properties
Exercise 2: Creating Global Filters

• Using the procedures outlined in this module, create global filters so that the following is true:
  – Messages containing the words “Press Release” in the subject are not sent to BlackBerry devices.
  – Messages sent from ithelp@company.com are always sent with Level 1 notification.
  – BlackBerry device recipients that have been CC’d on a message only receive the header of the message.
• Using the procedures outlined in this module, create IT policies such that the following is true for one group of BlackBerry device users:
  – PIN messaging is disallowed.
  – BlackBerry device users are not able to use the BlackBerry Browser on the BlackBerry device.
  – Short Message Service (SMS) messaging is disallowed.
  – Other message services (such as the BlackBerry Internet Service) are disallowed.
  – Bluetooth® connectivity is disabled.
  – BlackBerry device passwords must have at least one number and one character.
Using the procedures outlined in this module, create IT policies such that the following is true for another group of BlackBerry device users:

- The maximum BlackBerry device password age is 60 days.
- The minimum password length is 10 characters.
- A new BlackBerry device password cannot be the same as the last BlackBerry device password.
- The BlackBerry device user will be required to enter a password on the BlackBerry device after 60 minutes.
- BlackBerry device users are able to change the password timeout value.
Using the procedures outlined in this module, configure global PIM synchronization properties such that:

- Bidirectional synchronization is enabled for the address book and task list for all BlackBerry device users.
- Synchronization is disabled for memo pad for all BlackBerry device users.
- The BlackBerry Enterprise Server is always taken as correct when a conflict occurs between it and the BlackBerry device.
• Using the procedures outlined in this module, configure BlackBerry Enterprise Server email options such that the following is true:
  – All email sent from a BlackBerry device contains the following disclaimer: “This transmission (including any attachments) may contain confidential information. Any use of this information by anyone other than the intended recipient is prohibited. If you have received this transmission in error, please immediately reply to the sender and delete this information from your system.”
  – The address ithelp@company.com will receive a copy of any email sent from a BlackBerry device.
When you add a user to the BlackBerry Enterprise Server, you are telling the server to do the following:

- Monitor a specific user’s Domino message file (located on the Lotus Domino Server) for incoming messages
- Redirect incoming messaging to the user’s handheld
- Compress, encrypt, and transmit messaging to the specified handheld using a unique encryption key generated by the user or by the BlackBerry administrator
You can assign a handheld to a user in two ways:
- The Handheld Configuration Tool
- Wireless Enterprise Activation
Assign a handheld to a user via Enterprise Activation

1. The user must be added to the BlackBerry Enterprise Server
2. The administrator must specify an Enterprise Activation password
3. The user must activate the handheld
The BlackBerry Enterprise Server v4.0 allows you to monitor and administer a user’s settings and account properties from the BlackBerry Manager console.

- Redirection
- Filters
- Security
- IT Policy
- PIM Sync
Lab 2.2: Configuring BlackBerry Enterprise Server User Properties

– Exercise 1: Administering BlackBerry Enterprise Server users

15 minutes to complete lab exercises
Configuring Enterprise Server Properties
Exercise 1: Administering BlackBerry Enterprise Server users

1. Add two BlackBerry device users to the BlackBerry Enterprise Server.
2. Assign the provided BlackBerry devices to the users added to the BlackBerry Enterprise Server in the previous step. Email each of the BlackBerry device users to verify the accounts are working properly.
3. Add the BlackBerry device users to a separate IT policy. Test the BlackBerry devices to verify the policies were applied successfully.
4. Create user filters for the BlackBerry device users such that the following is true:
   1. Messages that the user is CC’d on are not forwarded to the BlackBerry device.
   2. Messages with the words “Press Release” in the subject line are forwarded to the BlackBerry device with Level 1 notification.
5. Send an email to a BlackBerry device user where they are CCed and the words “Press Release” appear in the subject line.
6. What happens? Why?
Module 3: Supporting BlackBerry Enterprise Server Functionality
By the end of the module you should be able to do the following:

- Discuss BlackBerry message flow
- Identify potential causes and resolutions for:
  - Messaging issues
  - Attachment service issues
  - Wireless calendar synchronization issues
  - Wireless Enterprise Activation issues
  - Wireless PIM synchronization issues
1. A new message arrives. The Messaging Agent polls the mail file and detects a new message.
2. The Messaging Agent applies any applicable filters.
Supporting Enterprise Server Functionality
Tracing a Message

3. The Messaging Agent creates a new entry in the user’s State Database.
Supporting Enterprise Server Functionality
Tracing a Message

4. The Messaging Agent sends the message to the Dispatcher.
5. The Dispatcher compresses and encrypts the message. The State Database shows the message status.
Supporting Enterprise Server Functionality

Tracing a Message

6. The Router sends the message to wireless network.
7. The wireless network identifies the location of the handheld and sends the message to it.
Supporting Enterprise Server Functionality
Tracing a Message

8. The Handheld sends a delivery confirmation, which written to the State Database.
9. The Handheld decrypts and decompresses the message.
Supporting Enterprise Server Functionality
Message Flow Troubleshooting

• Troubleshoot messaging issues with BlackBerry Enterprise Server event logs
  – Log files can be used to identify specific errors or can be used to trace a message through the system to identify where the process is breaking down.
  – Common logs used include Messaging Agent, Dispatcher or Router logs.
1. Handheld sends activation request to the BlackBerry Enterprise Server.
2. BlackBerry Enterprise Server receives activation request, generates the encryption key and authentication information based on password and sends a hash to the handheld.
3. The handheld generates the encryption key and sends a hash of the key to the BlackBerry Enterprise Server.
4. The BlackBerry Enterprise Server receives the response and verifies it is correct, sends service records and IT Policy to the handheld. User is notified that they have been activated.
Potential Wireless Enterprise Activation Issues:

- No Enterprise Activation application exists on the handheld.
- The handheld is displaying:
  - “Activating...” but nothing has happened for a long period of time.
  - “Activating” then “Activation error: Contact Service Administrator”.
  - “Activating”, “Verifying encryption...”, then “Activation error: Contact Service Administrator”.
  - “An activation request is already in progress”.
  - “Activation error: Handheld is already registered with another account”.
- The data synchronization process does not finish.
To help diagnose a wireless enterprise activation issue the following questions should be asked:

– Does the handheld have sufficient wireless network coverage?
– Has the user entered the correct messaging address and password in the activation screen on the handheld?
– Has the user been added to the BlackBerry Enterprise Server?
– Did the user receive the activation messaging in their inbox?
– Did the corporate firewall modify the activation request message?
– Does the user have inbox rules that may have filed the activation messaging?
Module 4: Configuring and Supporting Mobile Data Service
By the end of this module you should be able to do the following:

- Define what the Mobile Data Service is and how it works.
- Start and enable the Mobile Data Service.
- Configure Mobile Data Service properties.
- Identify potential causes and resolutions for Mobile Data Service issues.
Functions of the Mobile Data Service

- **Pull Requests:**
  - Manage BlackBerry Browser and Java application requests

- **Push Requests:**
  - Accept and respond to push requests from server-side push applications

- **Authentication**
- **Access control**
Configuring and Supporting MDS
Pull and Push Requests

• **Examples of Pull requests**
  – Handheld browser (e.g., request HTML web content)
  – Custom Enterprise Applications or third-party ISV solutions (e.g., requests for corporate data from back-end databases and intranet content)

• **Examples of Push requests**
  – Custom Enterprise Applications or third-party ISV solutions (e.g., database updates – for instance, changes inventory – pushed to a users’ handheld)
1. The user requests Internet or intranet content on the handheld.
2. The request is sent to the BlackBerry Enterprise Server.
3. The Mobile Data Service retrieves the requested content.
4. The Mobile Data Service converts the content for viewing on the handheld and sends it to the Dispatcher.
5. The Dispatcher compresses and encrypts the content and sends it to the Router.
6. The Router sends the content to the handheld.
7. The handheld confirms that it has received the content.
Configuring and Supporting MDS
Tracing MDS Data Traffic

8. The content is decrypted, decompressed and displayed on the handheld.
Mobile Data Service Properties:
- General
- Local Access Control
- HTTP
- Proxy
- LDAP
- OCSP
- TLS/HTTPS
- PAP
- Stats
- Logs
• Mobile Data Service Proxy settings:
  – Use a specific proxy server when a BlackBerry user accesses a specific URL from the handheld
  – Apply normal web filtering rules for external URLs
BlackBerry Enterprise Server administrators have the ability to control:

- Which application servers are allowed to push content to BlackBerry devices using the BlackBerry Mobile Data Service
- Which application servers that a BlackBerry device user can access using the BlackBerry Mobile Data Service.
Thank you for attending!

For more resources, please visit:
www.blackberry.com/go/domino
www.blackberry.com/go/dominoresources