Product Information
This document applies to IBM Cognos Version 10.1.0 and may also apply to subsequent releases. To check for newer versions of this document, visit the IBM Cognos Information Centers (http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp).

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Introduction

This document is intended for use with IBM® Cognos® Mobile.

IBM Cognos Business Intelligence is a Web product with integrated reporting, analysis, scorecarding, and event management features. IBM Cognos Mobile extends the functionality of your existing IBM Cognos BI installation so that users can view and interact with IBM Cognos BI reports on the following mobile devices:

- Apple iPhone
- Research In Motion BlackBerry devices running BlackBerry 4.2, 4.3, 4.5, 4.6, 4.7, 5.0, or later
  Note: IBM Cognos Mobile does not support thumbwheel BlackBerry devices. The product requires a trackball or other type of directional pad.
- devices running Microsoft® Windows® Mobile 5.0, 6, or 6.5, such as Palm Treo 700w, Palm Treo 750w, or HTC
- devices running Symbian S60 3rd Edition, such as Nokia Eseries and Nokia Nseries

Audience
To use this document, you should be familiar with

- the existing IBM Cognos BI environment, including the location of distributed components
- IBM Cognos BI reports
- one or more devices running BlackBerry, Symbian operating system, or Windows Mobile
- Windows or UNIX® operating system administration, or both

Finding information
To find IBM® Cognos® product documentation on the web, including all translated documentation, access one of the IBM Cognos Information Centers at http://publib.boulder.ibm.com/infocenter/cogic/v1r0m0/index.jsp. Updates to Release Notes are published directly to Information Centers. You can also read PDF versions of the product release notes and installation guides directly from IBM Cognos product disks.

Accessibility features
This product does not currently support accessibility features that help users with a physical disability, such as restricted mobility or limited vision, to use this product.

Forward-looking statements
This documentation describes the current functionality of the product. References to items that are not currently available may be included. No implication of any future availability should be inferred. Any such references are not a commitment, promise, or legal obligation to deliver any material,
code, or functionality. The development, release, and timing of features or functionality remain at the sole discretion of IBM.

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Chapter 1: What’s New?

This section contains a list of new, changed, and removed features for this release. It will help you plan your upgrade and application deployment strategies and the training requirements for your users.

For information about upgrading IBM® Cognos® Business Intelligence, see the Installation and Configuration Guide for your product.

For information about new features for this release of IBM Cognos BI, see the New Features Guide.

For changes to previous versions, see:
- New Features in Version 8.4
- Changed Features in Version 8.4
- New Features in Version 8.2

To review an up-to-date list of environments supported by IBM Cognos products, including information on operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers, visit the IBM Cognos Customer Center (http://www.ibm.com/software/data/cognos/customercenter/).

New Features in IBM Cognos Mobile Version 10.1.0

Listed below are new features since the last release.

Support for iPhone Devices

IBM® Cognos® Mobile now supports Apple iPhone devices. Users can use the look and feel of the Web-based iPhone to access the same business intelligence content and IBM Cognos Mobile features that have been available on other devices in previous releases. In addition, users can create a list of favorites and select one dashboard or report to automatically display on the Welcome screen whenever they start IBM Cognos Mobile.

Support for Dashboards

Along with reports and analyses, users can now have dashboards that were created in IBM® Cognos® Business Insight delivered to their devices.

Drill Up and Drill Down

IBM® Cognos® Mobile now offers drill up and drill down capabilities. These features allow users to gain additional insight into the information they are consuming.

Users can see which fields within the Business Intelligence content on their devices they can drill up or drill down on. After drilling up or drilling down on one or more of those fields, they can return to the original report where they began the drilling process.
Mobile Sample Reports

In this release, IBM® Cognos® Business Intelligence provides sample reports that are optimized for mobile devices. The sample reports illustrate product features and technical and business best practices. Users can also use them for experimenting with and sharing report design techniques and for troubleshooting. For more information about the IBM Cognos Mobile sample reports, see "IBM Cognos Mobile Samples" (p. 53).

The Mobile sample reports are included with the IBM Cognos BI samples. For information about installing and setting up the IBM Cognos BI samples, including the Mobile samples, see the Installation and Configuration Guide.

Changed Features in Version 10.1.0

Listed below are changes to features since the last release. Links to directly-related topics are included.

Enhanced User Interface for BlackBerry Devices

IBM® Cognos® Mobile now uses an enhanced user interface for all Research in Motion BlackBerry editions. These devices offer an enhanced user interface that is easier to navigate than traditional devices and so provide the user with an improved overall experience.

Improved Prompting

IBM® Cognos® Mobile now offers improved prompting in the Web application for the Apple iPhone. Now, prompting does not use prompt identifiers only but can include the surrounding text and formatting that desktop users see. Users are able to run prompted reports intuitively using prompting mechanisms that suit the mobile device.

Improved Navigation and Performance

In previous releases, navigation was sometimes awkward and performance was slow, particularly with large tables. The latest version of IBM® Cognos® Mobile offers significant improvements in these areas, resulting in a better overall user experience, including easier navigation and enhanced performance.

Removed Features in Version 10.1.0

Research in Motion BlackBerry Version 4.1 is No Longer Supported

IBM® Cognos® Mobile no longer supports the Research in Motion BlackBerry version 4.1 mobile device.

New Features in Version 8.4

Listed below are new features since the last release. Links to directly-related topics are included.
Support for Prompts

IBM® Cognos® 8 Go! Mobile now supports all prompts except multiselect range prompts and prompts that appear directly within a report. This new feature enables mobile device users to use IBM Cognos BI prompts on their devices.

For more information about setting up prompts, see the IBM Cognos Report Studio User Guide.

Bursting Reports

IBM® Cognos® 8 Go! Mobile now supports bursting reports to distribute the contents to different mobile device users. These reports can be scheduled.

For more information about setting up bursted reports, see the IBM Cognos Report Studio User Guide.

IBM Cognos 8 Go! Mobile User Guide

There is now a user guide available. Device users can access it from the Help menu on their mobile devices.

Changed Features in Version 8.4

Listed below are changes to features since the last release. Links to directly-related topics are included.

Scheduling

In earlier versions of IBM® Cognos® 8 Go! Mobile, scheduling was handled by the administrator using the mobadmin tool. Scheduling was also available through the user interface on the mobile device so that users could schedule reports for themselves. Both the mobadmin tool and mobile device scheduling have been removed. All scheduling is now done through the standard IBM Cognos 8 mechanisms.

For more information, see the IBM Cognos Administration and Security Guide.

Alternate Databases

In earlier versions of IBM® Cognos® 8 Go! Mobile, there was an advanced setting that enabled you to define a database other than Content Manager. This functionality is now available in IBM Cognos Configuration.

For more information, see "Install IBM Cognos Mobile" (p. 21).

New Features in Version 8.2

Listed below are new features since the last release. Links to directly-related topics are included.
Chapter 1: What’s New?

Support for the Windows Mobile and Symbian Operating Systems

IBM® Cognos® 8 Go! Mobile now supports the Microsoft® Windows® Mobile and Symbian operating systems in addition to the Research in Motion BlackBerry (p. 17).

Support for Derby

IBM® Cognos® 8 Go! Mobile now supports IBM Cognos Content Database. For more information, see the IBM Cognos Installation and Configuration Guide.

Ability to Connect to More Than One IBM Cognos 8 Environment

IBM® Cognos® 8 Go! Mobile users can now connect to more than one IBM Cognos 8 environment. Administrators can package the settings for the appropriate IBM Cognos 8 environments and push them to the end users using the mobadmin tool. Alternatively, users can enter connection information to multiple IBM Cognos 8 servers manually from the rich client.
Chapter 2: IBM Cognos Mobile

IBM Cognos Mobile extends IBM Cognos Business Intelligence and performance management to mobile devices.

With its rich client, IBM Cognos Mobile enables users to view on their devices IBM Cognos BI reports, dashboards, and analyses produced by tools such as Report Studio, Query Studio, and Analysis Studio. IBM Cognos Mobile delivers timely, informative, and interactive information to support mobile users in their decision-making processes, regardless of where they are located.

IBM Cognos Mobile processes each IBM Cognos BI report that it receives and renders it in a mobile-friendly version.

IBM Cognos Mobile uses the IBM Cognos BI prompts functionality and scheduling mechanisms to deliver customized reports in a timely fashion.

For more information about prompts, see the Report Studio User Guide.

For more information about schedules, see the Administration and Security Guide.

IBM Cognos Mobile uses IBM Cognos BI security, implements additional security measures specific to a mobile application, leverages various vendor-specific security architectures, and takes advantage of device-based and server-based security measures.

For example, many device-specific management servers and administration tools offer the ability to remotely remove content from a device or to disable the device completely. So, for example, if a device is lost or stolen, the IBM Cognos BI administrator can use this functionality to protect sensitive content on the device. Or, an IBM Cognos BI administrator could set an expiry date for a report after which the report becomes inaccessible until the user re-authenticates.

For more information about IBM Cognos BI security, see the Administration and Security Guide.

For more information about device management and security, see the documentation for the device.

IBM Cognos Mobile can also support requests that are made between the mobile device and the server environment in the following areas:

- search
- browse
- run

You must have IBM Cognos BI version 10.1.0 installed and running.

IBM Cognos Mobile Components

To implement IBM® Cognos® Mobile, you add components to the application tier and the gateway where IBM Cognos Business Intelligence is installed.

Before you install the IBM Cognos Mobile components, you should understand the architecture of your existing IBM Cognos BI environment. For more information, see the IBM Cognos BI Architecture and Deployment Guide.
IBM Cognos Mobile includes the following components:

- IBM Cognos Mobile service (p. 14)
- IBM Cognos Mobile rich client (p. 15)

On Research in Motion BlackBerry devices, IBM Cognos Mobile also interacts with BlackBerry Enterprise Server and the BlackBerry MDS Connection Service component (p. 15).

**IBM Cognos Mobile Service**

The IBM® Cognos® Mobile service manages the activities related to the IBM Cognos Mobile client. The service handles the following operations:

- transforms IBM Cognos Business Intelligence reports and analyses for mobile consumption
- compresses IBM Cognos BI report and analysis content for fast distribution over-the-air to the mobile devices and access from those devices
- pushes report and analysis content to the mobile devices
- facilitates incoming and outgoing report-related and analysis-related requests between the mobile device and the environment to search, browse, or run reports
- synchronizes the mobile content store on the server with the mobile database on the mobile device
- translates IBM Cognos BI Simple Object Access Protocol (SOAP) messages into wireless-friendly messages
communications with the mobile device

The BlackBerry Enterprise Server Component

Research In Motion’s BlackBerry Enterprise Server manages security, devices, content, and data flow between BlackBerry devices and resources internal to an organization. BlackBerry Enterprise Server is installed and maintained by your organization. The IBM® Cognos® Business Intelligence administrator must work with the BlackBerry administrator to validate required settings and configuration options to support IBM Cognos Mobile functionality.

BlackBerry MDS Connection Service

BlackBerry MDS Connection Service is a component of BlackBerry MDS Services.

BlackBerry Enterprise Server provides BlackBerry MDS Services support to enable secure connections behind the corporate firewall. Through the existing secure connection, BlackBerry devices and BlackBerry applications can communicate easily with resources throughout the corporate infrastructure.

Connection Service allows BlackBerry device users to communicate with the IBM Cognos BI server. Connection Service must be enabled for IBM Cognos Mobile to function correctly.

IBM Cognos BI uses Connection Service functionality to install the IBM Cognos Mobile rich client remotely, either by pushing the installation to the BlackBerry device or by providing an over-the-air installation for the user.

IBM Cognos BI also uses Connection Service functionality to deliver reports, dashboards, and analyses to BlackBerry devices. To enable IBM Cognos BI to deliver reports, dashboards, and analyses, you must provide the location of Connection Service and its Web listen port number during configuration.

For more information about BlackBerry Enterprise Server and BlackBerry MDS Connection Service, see the Research In Motion BlackBerry Enterprise Server documentation.

IBM Cognos Mobile Rich Client Components

The mobile device contains the IBM® Cognos® Mobile rich client and the compressed and encrypted mobile content store. These components provide the functionality that the mobile device user needs to work with IBM Cognos Business Intelligence reports, dashboards, and analyses.
IBM® Cognos® Mobile must be installed and configured so that users of mobile devices can access IBM Cognos Business Intelligence reports and analyses.

Before the IBM Cognos Mobile service can be used, you must do the following:

- Install the IBM Cognos Mobile Application Tier Component in the same location where IBM Cognos Business Intelligence is installed.
  
  In a distributed installation, the IBM Cognos Mobile Application Tier Component must be installed on the systems that will run the IBM Cognos Mobile service.

- Install the gateway and IBM Cognos Mobile client components on your gateway systems.
  
  The gateway and IBM Cognos Mobile client components include the sample IBM Cognos Mobile over-the-air installation pages and the IBM Cognos Mobile client components.

- Have the user install the IBM Cognos Mobile rich client components on the mobile device or push it over-the-air to IBM Cognos Mobile users.

**Installing and Configuring the IBM Cognos Mobile Service**

To install the IBM® Cognos® Mobile service, use the installation wizard to select the components that you want to install and the location on your computer where you want to install them. Only the components that you choose to install are copied to your computer.

You must install the IBM Cognos Mobile service on a system where a dispatcher is installed.

Before implementing IBM Cognos Mobile, decide how you will install and configure it to provide the best integration with the existing IBM Cognos Business Intelligence environment. The options that you choose depend on your reporting requirements, resources, and preferences. For more information, see the IBM Cognos BI Architecture and Deployment Guide.

You must first have the following:

- IBM Cognos BI version 10.1.0 installed and working

- If your installation uses Research in Motion BlackBerry devices, BlackBerry Enterprise Server with the BlackBerry MDS Connection Service component enabled on the server. This service allows BlackBerry device users to browse the Web. If the users are currently able to browse the Web, then this service is already enabled.

- If your installation uses devices running Microsoft® Windows® Mobile or Symbian, network connectivity from the mobile device to your IBM Cognos BI gateway computer, such as through a VPN or Wi-Fi connection
For more information about BlackBerry Enterprise Server and BlackBerry MDS Connection Service, see the Research In Motion BlackBerry Enterprise Server documentation.

To install and configure the IBM Cognos Mobile service in your existing IBM Cognos BI environment, do the following:

- Review and select a distribution option (p. 18).

- If you are using a BlackBerry device, configure IBM Cognos Mobile to communicate with the BlackBerry MDS Connection Service on the BlackBerry Enterprise Server (p. 25).
  
  **Note:** For each Research In Motion operating system version, IBM Cognos Mobile is packaged with cognos_mobile-for-whitelist.alx files that can be used to configure the BlackBerry Enterprise Server whitelist, or approved list, feature.

- Test the server installation and configuration (p. 25).

- Install the IBM Cognos Mobile client components and test the installation (p. 26).

**Distribution Options for IBM Cognos Mobile**

IBM® Cognos® Mobile is an integrated component of the IBM Cognos Business Intelligence architecture. You can install all IBM Cognos Mobile components on one computer, or distribute them across a network. IBM Cognos Mobile consists of the following:

- an Application Tier Component
- a gateway component
- Mobile client component

If you are installing IBM Cognos Mobile on one computer, you must install the Application Tier Component and the gateway and Mobile client components where IBM Cognos BI is installed.

If IBM Cognos BI is installed on different computers, you must install the components as follows:

- the IBM Cognos Mobile Application Tier Component with the IBM Cognos BI Application Tier Component
- the IBM Cognos Mobile gateway and Mobile client components with the IBM Cognos BI gateway

When you install IBM Cognos Mobile, all required components are installed and enabled by default.

**All Components on One Computer**

You can install and configure IBM Cognos Mobile on a single computer.

In the following diagram, all server components are installed on one computer.
Components on Separate Computers

You distribute IBM Cognos Mobile components using the same installation and configuration method that you use to distribute IBM Cognos BI components. Run the installation on each computer and then complete the configuration by specifying the location of distributed IBM Cognos BI components.

In a distributed installation, you install the Application Tier Component on the systems where you want to run the IBM Cognos Mobile service. You must install the IBM Cognos Mobile gateway components on your gateway systems. These components include the sample mobile over-the-air installation pages, and the Mobile client components themselves.

All instances of the IBM Cognos Mobile service must be able to access the database where the IBM Cognos Mobile tables are stored. If an IBM Cognos BI server instance is not configured with the database details for the IBM Cognos content store, or if you want IBM Cognos Mobile to use a database instance other than the IBM Cognos content store, use IBM Cognos Configuration to add a database (p. 21).

The following diagram shows the gateway and Application Tier Component installed on separate computers.
Chapter 3: Installing and Configuring IBM Cognos Mobile

The following diagram shows the gateway components installed on one computer and the Application Tier Component installed on three computers. This installation would be suitable for a medium to large environment.
Install IBM Cognos Mobile

Download the IBM® Cognos® Mobile package, and then use the installation wizard to install the IBM Cognos Mobile components to your computer.

Before installing the IBM Cognos Mobile components, ensure that IBM Cognos Business Intelligence version 10.1.0 is installed and working.

Review Supported Environments

To ensure IBM Cognos Mobile works properly, apply all required operating system patches and use only the versions of third-party software that are supported for an IBM Cognos product.

To review an up-to-date list of environments supported by IBM Cognos products, such as operating systems, patches, browsers, Web servers, directory servers, database servers, and application servers,
visit the Cognos Customer Center Web site (http://www-01.ibm.com/software/data/cognos/customercenter/).

**Steps**

1. If you are installing to a directory that contains other IBM Cognos BI components, stop the IBM Cognos BI service.

2. Go to the location where you downloaded IBM Cognos Mobile and choose the setup program for your operating system:
   - On Microsoft® Windows®, in the operating system directory, double-click the issetup.exe file.
   - On UNIX® or Linux® operating systems, in the directory that is appropriate for your operating system, if you use XWindows, type ./issetup.
     
     If you do not use XWindows, run an unattended installation. For more information, see the Installation and Configuration Guide.

   **Note:** When you use the issetup command with XWindows, Japanese characters in messages and log files may be corrupted. When installing in Japanese on UNIX or Linux, first set environment variables LANG=C and LC_ALL=C (where C is the language code, for example ja_JP.PCK on Solaris), and then start the installation wizard.

3. Select the language to use for the installation.

4. Follow the directions in the installation wizard.

   You are installing Application Tier Components and gateway and IBM Cognos Mobile client components. The Application Tier Components are those used by the IBM Cognos Mobile service. The gateway and Mobile client components are those used for an over-the-air installation or a connected installation.

   Next, you need to configure IBM Cognos Mobile.

5. In the Finish page of the installation wizard, click **Start IBM Cognos Configuration**.

6. To enable the IBM Cognos Mobile service, in the Explorer window, under Environment, IBM Cognos services, set Mobile service enabled to True.

7. To enable the Research in Motion BlackBerry push feature, you must set the BlackBerry MDS Connection Service host names and port numbers as follows:
   - Obtain the host names and port numbers from your BlackBerry Administrator.
   - In the Explorer window, click Environment.
   - In the Properties window, under Mobile BlackBerry Settings, for the MDS host names and port numbers property, click in the Value column and then click the edit icon.
   - In the Value - MDS host names and port numbers dialog box, click Add.
   - Type a value, using the format

     `host_name_of_Blackberry_Server:port`
**Tips:**

The port used for the push feature is usually port 8080 of the Blackberry Enterprise Server.

Test the URL in a browser first: the result will display a status page.

For distributed installations, specify multiple servers.

- Repeat the previous two bulleted steps until you have entered all of the values and then click **OK**.

For more information, see "BlackBerry MDS Connection Service" (p. 25).

8. If Content Manager and IBM Cognos Mobile are not installed in the same location, or if you want to use a different Content Manager for IBM Cognos Mobile, you must add an IBM Cognos Mobile database, as follows:

   In the **Explorer** window, under **Data Access**, **Mobile**, do the following:
   - From the **Edit** menu, click **New resource**, **Database**.
   - In the **Name** field, type the name you want to call your database.
   - In the **Type** field, click the database type that you want.
   - Click **OK**.
   - In the **Database - Resource Properties** window, type the **Database name** and other details for the database that you chose.

   Note that IBM Cognos Mobile can use its own separate content store.

9. From the **File** menu, click **Save**.

10. From the **Actions** menu, click **Restart**.

   The mobile service also starts. The first time that the mobile service runs, tables are created in the content store in the same database and with the same credentials currently set up for IBM Cognos BI, unless you have specified another database.

   If these tables were not created, perhaps because the IBM Cognos BI security credentials do not allow it, you can create them manually.

   You can find the creation scripts in the \c10_location\configuration\schemas\mobile directory.

11. Click **Close**.

**Set Up the Database Client**

The IBM® Cognos® Mobile service must access the content store database directly rather than through Content Manager. Therefore, the service must have access to the same JDBC drivers that are installed on the IBM Cognos Business Intelligence installation. The service has direct access if IBM Cognos Mobile uses the same Content Manager as IBM Cognos BI or if it uses a Microsoft® SQL Server database or a Derby database. However, if IBM Cognos Mobile does not use the IBM Cognos BI Content Manager or if it uses a DB2® database or Oracle database, you need to set up the database client software to allow direct access to the content store database.
For information about setting up database connectivity for the content store database, see the IBM Cognos Installation and Configuration Guide.

If you use Oracle as the database server for the content store, you must set up the JDBC driver.

If you use DB2, you must set up the database client software and the JDBC 2.0 driver. You must do this on every computer where Content Manager is installed after installing and before configuring IBM Cognos BI.

If you want to use a database other than the Content Manager database that IBM Cognos BI is configured to use, you must define the other database using IBM Cognos Configuration. Ensure that you use one of the supported database servers to create the database. For more information about creating a content store, see the Installation and Configuration Guide.

### Steps for Oracle

1. On the computer where the Oracle client is installed, go to the ORACLE_HOME/jdbc/lib directory.

2. Copy the .jar file for your version of Oracle to the c10_location/webapps/p2pd/WEB-INF/lib on computers where IBM Cognos Mobile is installed as follows:
   - For Oracle 10g, copy the ojdbc14.jar file.
   - For Oracle 11g, copy the ojdbc5.jar file.

These files include the driver required by the content store.

### Steps for DB2

1. Install the DB2 client software on the appropriate computers.

2. If the content store is on a different computer from IBM Cognos Mobile, do the following:
   - Configure a database alias to the content store by running the DB2 Client Configuration Assistant.

   On UNIX® or Linux® operating systems, use the DB2 command line interface.
   - When you configure the IBM Cognos Mobile computers, ensure that they are all configured to use the same content store.

3. On Microsoft Windows® operating system, stop the DB2 services and the HTML Search Server.

4. On UNIX, ensure that the 32-bit DB2 libraries are in the library search path, which is usually the $DB2DIR/lib directory or the $DB2DIR/lib32 directory.

5. Copy the following files from the DB2_installation/sqllib/java directory to the c10_location/webapps/p2pd/WEB-INF/lib directory:
   - the universal driver file, db2jcc.jar
   - one of the following license files:
     - for DB2 on Linux, UNIX, or Windows, db2jcc_license_cu.jar
     - for DB2 on z/OS, db2jcc_license_cisuz.jar
If you are connecting to DB2 on z/OS, use the driver version from Linux, UNIX, or Windows version 9.1 fix pack 5 or version 9.5 fix pack 2.

Tip: To check the driver version, run the following command:

```
java -cp path\db2jcc.jar com.ibm.db2.jcc.DB2Jcc -version
```

6. On Windows, restart the DB2 services and the HTML Search Server.

7. On UNIX, if you are using type 2 JDBC connectivity, ensure that the 32-bit DB2 libraries are in the library search path, which is usually the $DB2DIR/lib directory or the $DB2DIR/lib32 directory.

8. Repeat steps 1 to 8 on the other IBM Cognos BI computers where the software must be installed.

You can tune the database to take advantage of DB2 features. For more information, see the Architecture and Deployment Guide.

Redeploy IBM Cognos BI to the Application Server

If IBM® Cognos® Business Intelligence is running on an application server other than Tomcat, then after installing and configuring IBM Cognos Mobile, you must regenerate the EAR or WAR files and redeploy them to the application server.

For more information, see the IBM Cognos Installation and Configuration Guide.

Test the Installation and Configuration

You can test your configuration settings before you start the IBM® Cognos® Mobile service.

Steps

1. From the Start menu, click Programs, IBM Cognos BI, IBM Cognos Configuration.

2. In the Explorer window, click Environment.

3. Click IBM Cognos BI service.

   In the properties window, if you see Mobile service enabled displayed and set to True, your installation is working.

You can now install and configure IBM Cognos Mobile Client Components (p. 26).

BlackBerry MDS Connection Service

Before Research in Motion BlackBerry devices can communicate with the IBM® Cognos® Mobile service, the Connection Service component of BlackBerry MDS Services must be enabled. If NTLM is used, HTTP Authentication Support must also be enabled. This instructs the BlackBerry Enterprise Server to help the BlackBerry mobile devices navigate the security exchange needed by Microsoft Internet Information Services (IIS).

Additionally, IBM Cognos Mobile can use Connection Service capabilities to automatically push reports to BlackBerry device users and to synchronize the reports. The push notifications that allow the IBM Cognos server to proactively notify a BlackBerry device that new content is available for
it on the server, are very small messages that do not impact the server in any significant way. The IBM Cognos administrator must work with the BlackBerry administrator to ensure that this is configured correctly.

If you have multiple BlackBerry MDS Connection Service servers and you have users across these servers who need to connect to the same IBM Cognos Business Intelligence server, you must designate one of the servers as the primary Connection Service push server. Then, you must set IBM Cognos Mobile to use that server, which will in turn pass connection requests to the appropriate Connection Service server.

You can have multiple primary servers. For example, if your organization has a Sales department and a Finance department, each with multiple BlackBerry Enterprise Servers, you would designate one server in each department as the primary server.

After the BlackBerry MDS Connection Service is enabled, BlackBerry device users can browse the Web using the BlackBerry browser on their devices. Browsing increases the load on the BlackBerry Enterprise Server. If this is a concern, it is most likely possible to configure the BES to restrict MDS-CS data services to only the IBM Cognos Mobile application. An alternative would be to have a firewall on the BES server to allow access only to the IBM Cognos Mobile server.

IBM Cognos Mobile uses data in the same way that the browser on the BlackBerry does. Push notifications are very small messages that don’t impact the server in any significant way.

For information about enabling Connection Service and primary push servers, see the Research In Motion BlackBerry Enterprise Server documentation.

Methods of Installing and Configuring IBM Cognos Mobile Client Components

After you install and configure IBM® Cognos® Mobile server components, with the exception of the iPhone, you must install the IBM Cognos Mobile client components on each mobile device that must access IBM Cognos Business Intelligence reports or analyses. With the iPhone, you do not install the client components. Instead, you configure IBM Cognos Mobile using a Web application that you access using a URL.

IBM Cognos Mobile client components can be installed in one of the following ways:

- using a push deployment

  For Research in Motion BlackBerry installations, the BlackBerry administrator can use the BlackBerry Handheld Configuration tool and then push the configured software over-the-air to users (p. 28).

  For Microsoft® Windows® Mobile installations, the Windows Mobile administrator can use Microsoft Exchange Server 2003 or later, Microsoft Systems Management Server (SMS) 2003 or later, or other third-party management solutions. For further information, see the product documentation.

  For Symbian installations, the Symbian administrator can use IBM WebSphere® Everyplace Device Manager, Nokia Intellisync, or other third-party management solutions. For further information, see the product documentation.
• installing from the device

Users of BlackBerry devices or devices running Windows Mobile and Symbian can download the client from the Web (p. 28).

• using a desktop deployment (p. 30).

• using a Web application (iPhone)

With the Web application, the IBM Cognos Mobile client components are not installed on the iPhone device. Instead, users configure and run IBM Cognos Mobile using a Web application which they access using one of the following URLs.

• For the default IBM Cognos BI location, type http://servername/ibmcognos and, when prompted, select the Mobile portal or the desktop portal

• For the CGI gateway, type http://servername/ibmcognos/m

• For an ISAPI gateway, type http://servername/ibmcognos/m/isapi

If you want IBM Cognos Mobile users to use only ISAPI, in IBM Cognos Configuration, under Environment, Gateway settings, change the Gateway URI to http://<servername>/ibmcognos/m/isapi/index.html

Tip: After opening the Web application in the browser, add this page to your home screen.

For BlackBerry device installations, BlackBerry Enterprise Server must have the BlackBerry MDS Connection Service component enabled for each BlackBerry account that needs access to IBM Cognos Mobile. For more information, see the Research In Motion BlackBerry Enterprise Server documentation.

Deploy IBM Cognos Mobile to a Device Running Windows Mobile

IBM® Cognos® Mobile on devices running Microsoft® Windows® Mobile uses the Microsoft .NET Compact Framework.

You must install the Microsoft .NET Compact Framework version 2.0 SP1 or later on all devices running Windows Mobile. Although you can complete the client installation without it, you will not be able to run IBM Cognos Mobile.

Generally, you can assume that the Microsoft .NET Compact Framework is installed. But, if you try to install IBM Cognos Mobile and the Microsoft .NET Compact Framework is not installed, you will receive a message and will need to install it.

For a list of supported versions of the Microsoft .NET Compact Framework, see the Cognos Customer Center Web site (http://www-01.ibm.com/software/data/cognos/customercenter/).

Note: All devices running Windows Mobile 6 already include the .NET Compact Framework.
Tip: After the application is installed, users need to enter the server URL on their mobile devices to access the gateway computer. To avoid users having to do this, you can set the gateway URL using the buildSettings tool (p. 37).

Step
- Go to the Microsoft MSDN Web site, find a link to a compatible version of the Microsoft .NET Compact Framework for your device, and follow the download instructions.

Installing IBM Cognos Mobile Client Using the BlackBerry Handheld Configuration Tool

An IBM Cognos Mobile installation includes all the files needed for a Research in Motion BlackBerry administrator to package and push the rich client to mobile device users. This is done by copying the rich client files to a shared location. Using a tool available with the BlackBerry Enterprise Server, BlackBerry administrators package the application that will be pushed to the mobile device users.

Typically, the BlackBerry administrator pushes the IBM Cognos Mobile client components to the BlackBerry device users. We recommend that the BlackBerry administrator perform this type of installation during off peak hours.

The user is not involved but may notice some background activity and server communication during the installation. For most first time installations or upgrades, no reboot is needed. If a reboot is needed, the BlackBerry device prompts the user before it reboots the device.

Follow this process:

- Use the BlackBerry Handheld Configuration tool to generate a software configuration that specifies the base operating system software for a BlackBerry device, and includes the IBM Cognos Mobile client application.
  
  For more information, see the Research In Motion BlackBerry Enterprise Server documentation.

- Push the configuration to the BlackBerry device users.

Install and Configure IBM Cognos Mobile Client So That Users Can Install From the Web

You can configure IBM Cognos Mobile so that users can install the client over-the-air from their mobile devices. This type of installation is useful for remote users who must upgrade their installation without intervention by the device administrator.

The IBM Cognos Mobile rich client program files are located in the c10_location\webcontent\mobile directory.

For mobile device browsers to recognize the file extensions that are used to install mobile applications over-the-air, you must also register additional files or MIME types with your Web server. You must register MIME types for the BlackBerry devices and devices running Symbian. You only need to register MIME types for devices running Microsoft Windows Mobile if you are not using a Microsoft Internet Information Services (IIS) Web server.
Before installing IBM Cognos Mobile client on the mobile device, ensure that the user has access to the Web browser application on the device and that the browser can access the IBM Cognos BI server through its regular webpage address, c10_location.

You must register the following MIME types on your Web server:

<table>
<thead>
<tr>
<th>File extension</th>
<th>MIME type</th>
</tr>
</thead>
<tbody>
<tr>
<td>.cab</td>
<td>application/vnd.ms-cab-compressed</td>
</tr>
<tr>
<td>.cod</td>
<td>application/vnd.rim.cod</td>
</tr>
<tr>
<td>.jad</td>
<td>text/vnd.sun.j2me.app-descriptor</td>
</tr>
<tr>
<td>.jar</td>
<td>application/java-archive</td>
</tr>
</tbody>
</table>

Only the steps for IIS Web server versions 5.x and 6.0 are included here. If you are creating MIME types for a different Web server, see the documentation for that Web server.

**Steps for IIS**

1. From the Windows Control Panel, click Administrative Tools, Internet Information Services.
2. Right-click the IBM Cognos BI Web site, and click Properties.
3. On the HTTP Headers tab
   - for IIS 5.x, click File Types
   - for IIS 6.0, click MIME Types
4. Click New Type.
5. For a BlackBerry installation, do the following:
   - In the Associated extension box, type .cod.
   - In the Context type (MIME) box, type application/vnd.rim.cod.
   - Click OK.
   - Click New Type.
6. For a BlackBerry or Symbian installation, do the following:
   - In the Associated extension box, type .jad
   - In the Context type (MIME) box, type text/vnd.sun.j2me.app-descriptor
   - Click OK.
7. For a Symbian installation, do the following:
Click New Type.

- In the Associated extension box, type .jar
- In the Context type (MIME) box, type application/java-archive
- Click OK.

8. For a Windows Mobile installation, do the following:

- Click New Type.
- In the Associated extension box, type .cab
- In the Context type (MIME) box, type application/vnd.ms-cab-compressed
- Click OK.

9. Click OK.

10. Stop and restart your IIS service. From the Windows Control Panel, click Administrative Tools, Services. Click World Wide Web Publishing to stop the service and click it again to start the service.

After you install the IBM Cognos Mobile server components and configure your Web server as needed to support an over-the-air installation by users, mobile device users can install the IBM Cognos Mobile client.

The default URL for the Web installation is http://c10_location/mobile/index.html.

**Installing IBM Cognos Mobile Client Components Using a Desktop Deployment**

Device users can install IBM® Cognos® Mobile and manage synchronization settings (p. 32) for their devices using a desktop deployment.

**BlackBerry Devices**

For a desktop deployment using a BlackBerry device, users can use the Research in Motion BlackBerry Desktop Manager.

The files are located in the c10_location\webcontent\mobile\rim_desktop directory.

For information about installing client components using a desktop deployment, see the BlackBerry Desktop Application Loader documentation.

**Devices Running Windows Mobile**

For a desktop deployment using a device running Microsoft® Windows® Mobile, users can use Microsoft ActiveSync.

The files are located in the c10_location\webcontent\mobile\winmo directory.

**Nokia Devices Running Symbian**

For a desktop deployment using a Nokia device running Symbian, users can use the Nokia PC Suite software.
The files are located in the c10_location\webcontent\mobile\symbian directory.

Users must have installed the Nokia PC Suite software that corresponds to their carrier and device model. For more information, see the documentation for the carrier and device.

Performance Maintenance

This section includes topics about estimating and maintaining the performance of your IBM® Cognos® Mobile environment.

**Estimate the Bandwidth That IBM Cognos Mobile Needs**

IBM® Cognos® Mobile sends compressed versions of reports from the server to the mobile device. The size of a compressed report might range from 2 KB for a single-page report that contains text and a crosstab, up to possibly 500 KB for a 10-page report that contains multiple detailed charts on every page.

Each version of a report is sent only once. It is then stored in a cache on the mobile device. A mobile user can then view the report any number of times on the device without consuming any additional bandwidth.

Other operations, such as browsing the content store and answering prompts, also consume bandwidth. The bandwidth consumed is proportional to that used by a desktop browser performing the same action, but smaller because extraneous formatting information would not be exchanged.

IBM Cognos Mobile engages in intelligent polling to detect changes on the server. In an idle state, each mobile device sends a small data message to the server every 24 hours. (Note that this value is configurable.). If there is heavy usage, where a mobile device user runs many reports throughout the day and schedules many reports for delivery to the mobile device, the device automatically checks in with the server more frequently.

To estimate bandwidth costs, an administrator can use the following formula as a guide:

\[(\text{number of users}) \times (\text{average size of a report}) \times (\text{number of ad-hoc reports run each day per user} + \text{number of scheduled reports sent to each user per day})\]

Research in Motion offers a tool called the Performance Engineering Resource Kit (PERK). You could use this tool to benchmark IBM Cognos Mobile’s resource usage given the specific usage patterns in your environment. For more information, see the Research in Motion documentation.

**Estimate the Number of Servers You Need**

The load generated by one user using IBM® Cognos® Mobile on a given server (dispatcher) is roughly equal to the load generated by that same user using the IBM Cognos desktop products.

Specifically, if you compare the resources it takes for a desktop user to browse some folders, run a report, answer some prompts, and view the resulting report, and the resources it takes for a mobile user to do the same thing, the resources consumed are roughly the same.

So, you can use the same formula that you use to estimate the number of servers needed for your desktop users to estimate the number of servers needed for your mobile users.
Estimate the Size of a Report

You can use typical reports to determine the size of the content that is transferred over the wireless carrier’s network to the mobile device.

Steps

1. Remove all reports from the mobile device.
2. Run the report that you want to know the size of.
3. On your desktop browser, type the following request:
   
   http://servername/alias/cgi-bin/cognos.cgi/mobileService?mob_op=about

4. If you have security enabled, log in.

   Ensure that you log in as the same user that ran the report on the mobile device.

   A small XML document appears.

   Within the document there is a section that looks like the following example showing the number 28. The actual number you see depends on your report:

   <s2><inbox>28</inbox></s2>

   Note: Because you only have one report, only one number should appear. If you see multiple numbers separated by colons, this means that you did not delete all the reports. You must delete all the reports and repeat the steps above.

5. Type the following request, replacing the number 28 with the actual number you obtained above:

   http://servername/alias/cgi-bin/cognos.cgi/mobileService?mob_op=downloadDB&mob_ir=28

   The response to this request is the actual report contents.

6. Save this response as a file, and look at its size.

   This file is what is transferred over the network.

7. Repeat these steps for a number of typical reports to get an idea of the amount of data that your mobile users use.

Background Synchronization

With a default installation of the IBM® Cognos® Mobile service, users can run and view all supported reports. With background synchronization, which uses the Research in Motion Blackberry push feature, you can automatically push reports to a device as it becomes available.

To support background synchronization, the BlackBerry MDS host names and port numbers must be configured, as shown in "Install IBM Cognos Mobile" (p. 21).

After configuration, background synchronization is always available on the server for Microsoft® Windows® Mobile, Symbian, and BlackBerry.

Clients automatically use background synchronization by default.
Uninstall IBM Cognos Mobile

To uninstall IBM® Cognos® Mobile, uninstall the components from the server and the rich client from the device.

All mobile device administration programs, such as Research in Motion BlackBerry Enterprise Server, provide a process for uninstalling client software over the air. For more information, see the documentation for the device.

Uninstall from the Server

IBM Cognos Mobile components on the server are removed when you uninstall IBM Cognos Business Intelligence. You can uninstall IBM Cognos Mobile server components all at once if they are all installed on one computer, or individually for a distributed installation. For instructions, see the IBM Cognos BI Installation and Configuration Guide.

Location-aware Reports

A location-aware report filters report data based on the user’s current location as determined by the mobile device’s Global Positioning System (GPS) coordinates. For example, a vice president of sales travels frequently to visit his regional sales managers. When he arrives at an airport, he wants to filter his sales report to show information about the region he is visiting.

The Mobile administrator must set up location-aware parameters so that report authors can create location-aware reports in Report Studio with at least one prompt that asks for the location information. This location information can use either GPS coordinates or defined regions, such as states, provinces, cities, or voter regions. The administrator defines the parameter names for the prompts, which the report author must know when adding the location prompt.

Set Up Location-aware Parameters for Prompts

Before specifying the location-aware prompts, consider whether the prompts will use parameters based on coordinates or defined regions. If your data does not have associated latitude and longitude information for each data point, use geographic regions. For example, sales data can be associated with a city or sales territory. However, if your data is geo-encoded, that is, the data has associated latitude and longitude coordinates that can pinpoint a precise location, use these coordinates to specify the location-specific information for users.

Location aware reports that use prompts based on pre-defined regions, such as states, provinces, cities, or voter regions can also use prompts based on GPS coordinates. Prompts based on GPS coordinates can also use prompts based on predefined regions.

Tip: Differentiate the parameter names used in location-aware reports from the parameter names used in other reports. Choosing a generic name, such as city, will extend the search to every prompt named city in any report.

Steps to define report prompts based on region
1. Create a text file that defines the regions for the reports.
   Define one region per line, as follows:
11.1111;-22.2222;Region1

where 11.1111 is the latitude at the center of Region1, and -22.2222 is the longitude at the center of Region1. For example, 40.7499;-73.9980;Manhattan.

You can format the entries differently from the example. The entries are parsed based on the regular expression that you define in step 4.

2. Save the text file in the same directory as your mobile server location.xml file.

The location.xml file is located in the c10_location/configuration/mobile/ directory.

3. In an XML editor, open the location.xml file located on the server where you installed the IBM Cognos Mobile server components.

The file is located in the c10_location/configuration/mobile directory.

Note that all entries in this file are case-sensitive.

4. Edit the regular expression in the regex element to match the format that is used in the text file that you created in step 1. In the example here, the regular expression, ^(.*);(.*);(.*);$ includes three capture-group elements that match the three items separated by semi-colons:

   <location>
   <file active="true" filename="regions.data"
   <regex latitude="1" longitude="2">
   ^(.*);(.*);(.*);$  
   capture-group index="3" name="CityCenter"/>
   </regex>
   </file>
   </location>

If you are using more than one location-aware prompt in a report, you can accommodate the prompts by inserting additional file elements.

5. Edit the latitude and longitude attributes to identify the capture-groups within the regular expression that contain the latitude and longitude data.

In the example, the first capture group is latitude, so the latitude attribute is 1.

6. Within the regex element, add capture-groups to indicate which capture-groups correspond to the parameter fields in the location-aware report.

In the example, the third capture-group in the expression identifies the parameter value for "CityCenter" as Manhattan.

7. Save your changes.
When the user runs a report in IBM® Cognos® Mobile, the GPS coordinates are retrieved from the device. In the text file that defines the regions for the report, the entry that most closely matches the user’s location populates the parameters values.

**Steps to define report prompts based on GPS coordinates**

1. In an XML editor, open the location.xml file located on the server where you installed the IBM Cognos Mobile server components. The file is located in the `c10_location/configuration/mobile` directory. Note that all entries in this file are case-sensitive.

2. Add the following sample code into the file. After adding the code, you will need to edit certain elements.

   ```xml
   <?xml version="1.0" encoding="UTF-8"?
   <location>
   <projection active="true">
     <proj4>
       +init=epsg:2263+x_0+984252
     </proj4>
     columns x="x_coord" y="y_coord"
   </projection>
   </location>
   ```

3. In the `columns` element, enter the parameters that were created in the location-aware report. Use the `x_coord` attribute to specify the latitude and the `y_coord` attribute to specify the longitude.

   When the user runs a report in IBM Cognos Mobile, the GPS coordinates are retrieved from the device.

   Note that the GPS information is returned to the server as raw latitude and longitude data. This data may need to be converted to match the geo-encoding used by your existing enterprise data. The server handles the conversion automatically using a mathematical algorithm based on the PROJ.4 specification.

4. Enter the PROJ.4 description of your coordinate system into the location.xml file. In the example, the description `"+init=epsg:2263 +x_0=984252"` is used.

5. Save your changes.
Chapter 3: Installing and Configuring IBM Cognos Mobile
Chapter 4: Managing IBM Cognos Mobile

After IBM® Cognos® Mobile is installed and configured, you can use IBM Cognos Business Intelligence to set up and manage schedules related to the delivery of IBM Cognos content to mobile devices.

You can also use IBM Cognos BI to manage users. IBM Cognos Mobile uses the same set of users as IBM Cognos BI.

For information about administering IBM Cognos BI, see the Administration and Security Guide.

Using IBM Cognos Connection, you can also set advanced settings (p. 38).

For information about IBM Cognos Connection, see the IBM Cognos Connection User Guide.

You can also use the buildSettings tool to embed a specified IBM Cognos BI server URL so that users do not need to enter it when they first start the IBM Cognos Mobile client (p. 37).

**buildSettings Tool (Windows Only)**

Use the buildSettings tool to generate a deployment package for a given platform, which embeds a specified IBM® Cognos® Business Intelligence server URL so that users do not need to enter the URL.

The buildSettings tool preconfigures the list of available server URLs in the IBM Cognos Mobile client. Client configurations are created and stored in the `c10_location/configuration/mobile` directory.

You can have a maximum of four server URLs.

The buildSettings tool is run from the command line.

**Syntax**

```
buildSettings "url1" ["url2" "url3" "url4"]
```

**Example**

```bash
buildSettings "http://server1/c10/cgi-bin/cognos.cgi" "http://server2/c10/cgi-bin/cognos.cgi"
```

**Using the buildSettings Tool**

The rapc.exe Research in Motion BlackBerry compiler and Microsoft® utility cabwiz.exe are required to configure the BlackBerry and Microsoft Windows® Mobile clients. These only run on the Windows operating system. To customize the Windows Mobile client, you must install cabwiz.exe and cabwiz.ddf files from Microsoft in the current directory.

**Note:** To use the rapc.exe BlackBerry compiler, a JDK must be installed.

Due to licensing restrictions, cabwiz and supporting files cannot be redistributed.
Note: We recommend that you back up any existing build settings before continuing.

Steps
1. For a BlackBerry configuration, overwrite the rim_desktop/*/cognos_mobile_settings.cod file and the rim_ota/*/cognos_mobile_settings.cod file.
2. For a Symbian configuration, overwrite the symbian/cognos_mobile.jad file.
3. For a Windows Mobile configuration, add the cognos_mobile_settings.cab to the winmo folder and tell your users to install this file after they have installed IBM Cognos Mobile.
   You must modify the index.html file before users can install the client application.

Advanced Settings
You can set advanced settings to manage various functions related to IBM® Cognos® Mobile. These functional areas include the following:

- reports stored in the database (p. 38)
- thread pool size on the server (p. 39)
- database connection pool size (p. 39)
- maximum duration of a lease key (p. 49)
- maximum duration of IBM Cognos Business Intelligence authentication credentials (p. 49)
- restrictions on browsing or searching (p. 40)
- storing credentials on a device (p. 41)
- limitations on access to local data (p. 42)
- out of date tolerance with scheduled reports (p. 42)
- packet sizing for report transfers from the IBM Cognos Mobile server to a Research in Motion BlackBerry device, a Symbian device or a Microsoft® Windows® Mobile device (p. 43)

Some settings are optional. They do not appear in the list of settings for a new installation, but if you add them, the Mobile service retains them even if you upgrade your installation, and uses them.

Note: Do not change or remove the advanced setting _internal.

To reset the value of any setting to its default, delete the setting.

Managing Stored Reports
Reports are stored in the database for consumption by mobile device users. You can set an expiry time and a maximum number of pages for these reports.

For information about how to set the following parameters, see "Set Advanced IBM Cognos Mobile Settings" (p. 44).
### Managing Thread Pool Size

You can set the size of the thread pool on the server.

This setting is hidden by default with a new installation. If you want to use the setting, you must add it to the list of advanced settings. For information about how to set the following parameters, see "Set Advanced IBM Cognos Mobile Settings" (p. 44).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ThreadPool.MaxSize</td>
<td>Maximum size of the thread pool on the server that is used to manage IBM® Cognos® Mobile operations.</td>
</tr>
<tr>
<td>Value 1 to 999.</td>
<td>Default: 20</td>
</tr>
</tbody>
</table>

### Managing Database Connection Pool Size

IBM® Cognos® Mobile uses database connections to communicate with the database. You can change connection pool settings to increase performance.

You can manage the connections by limiting the maximum number.

This setting is hidden by default with a new installation. If you want to use the setting, you must add it to the list of advanced settings. For information about how to set the following parameters, see "Set Advanced IBM Cognos Mobile Settings" (p. 44).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reports.MaxAgeDays</td>
<td>Maximum time in days that a report is stored in the database. Reports that exceed the limit are deleted to recover space.</td>
</tr>
<tr>
<td>Value: 1 to 999.</td>
<td>Default: 30</td>
</tr>
<tr>
<td>Reports.MaxPages</td>
<td>Maximum number of pages to store for each report. Pages over the specified limit are discarded.</td>
</tr>
<tr>
<td>Value: 1 to 999.</td>
<td>Default: 5</td>
</tr>
</tbody>
</table>
### Parameter Description

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Database.MaxConnectionPoolSize</td>
<td>Maximum number of connections allowed for the IBM Cognos Mobile service to communicate with the content store database.</td>
</tr>
<tr>
<td>Value: 1 to 999.</td>
<td>Default: 5</td>
</tr>
</tbody>
</table>

## Restricting Content Browsing or Searching

You can specify the root folder that mobile users must start from when browsing or searching content from a mobile device. For more information, see the IBM® Cognos® Administration and Security Guide.

For information about how to set the following parameters, see "Set Advanced IBM Cognos Mobile Settings" (p. 44).
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portal.ConsumerRoot</td>
<td>Name of the root folder that users can browse or search from. Default: blank If the setting is blank, IBM Cognos Mobile uses the root content folder or the root folder that is specified in the portal system.xml file stored in the c10_location/templates/ps/portal directory. If you add a root folder, use the syntax of the consumer-root setting in the system.xml file. The entry needs to be a Content Manager search path. Example: /content/package[@name='root_folder_name'] Finding an Entry or Syntax To find the entry you want to add or the syntax to use if you are adding a root folder, do the following Steps 1. Start IBM Cognos Connection by connecting to the IBM Cognos Business Intelligence portal and clicking IBM Cognos Content on the Welcome page. 2. Click the Public Folders tab. 3. Click More beside the package or folder you want to use as the IBM Cognos Mobile root folder. 4. Next to the package or folder, click the set properties button. 5. Click View the search path, ID and URL link. 6. Copy the entry in Search path into the Portal.Consumer-Root field on the Mobile Advanced Settings page.</td>
</tr>
</tbody>
</table>

### Storing Credentials On A Device

You can specify that credentials can be stored on a device and for how long. As long as users are logged on, they will have access to their cached credentials. The credentials are only held in memory, so there is no security risk. For information about how to set the following parameters, see "Set Advanced IBM Cognos Mobile Settings" (p. 44).
Limiting Access to Local Data

You can specify the length of time that the mobile device user is able to access the IBM® Cognos® Mobile local data that is encrypted and stored on the device (p. 49).

For information about how to set the following parameters, see "Set Advanced IBM Cognos Mobile Settings" (p. 44).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| Lease.DurationHours   | Maximum number of hours that users can access stored data on a device.  
                         | Valid settings are 0 to 8760.  
                         | The default is 36.                                                      |

Specifying Out of Date Tolerance With Scheduled Reports

You can specify how long a client can remain out of date with scheduled reports. This setting applies to cases where an administrator schedules reports for a user on the server and the user does not otherwise communicate with the server before the time expires, for example, to retrieve other reports or to browse the IBM® Cognos® Business Intelligence portal.

In the majority of cases, such as reports originating from existing schedules or from user-initiated actions, this setting will not come into play because, typically, the device lags behind the server by only a matter of seconds.

For information about how to set the following parameters, see "Set Advanced IBM Cognos Mobile Settings" (p. 44).
**Specifying the Packet Size for Reports Sent From the IBM Cognos Mobile Server to a Mobile Device**

You can specify the maximum packet size for reports that are sent from the IBM® Cognos® Mobile server to a mobile device.

For information about how to set the following parameters, see "Set Advanced IBM Cognos Mobile Settings" (p. 44).

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reports.BlackBerryMaxMessageSizeBytes</td>
<td>Maximum size in KB of one packet.                                                                                                           Must be equal to or less than the corresponding maximum packet size setting on the BlackBerry Enterprise Server.</td>
</tr>
<tr>
<td></td>
<td>Value: 0 to 1000000000                                                                                                                        A value of 0 means that there is no size restriction.</td>
</tr>
<tr>
<td></td>
<td>Default: 128 KB (recommended)</td>
</tr>
<tr>
<td>Reports.SymbianMaxMessageSizeBytes</td>
<td>Maximum size in KB of one packet.                                                                                                           Value: 0 to 1000000000</td>
</tr>
<tr>
<td></td>
<td>A value of 0 means that there is no size restriction.                                                                                         Default: 0</td>
</tr>
<tr>
<td>Reports.WinMoMaxMessageSizeBytes</td>
<td>Maximum size in KB of one packet.                                                                                                           Value: 0 to 1000000000</td>
</tr>
<tr>
<td></td>
<td>A value of 0 means that there is no size restriction.                                                                                         Default: 0</td>
</tr>
</tbody>
</table>
Device Storage Security

You can define the method by which data stored on a device running Microsoft® Windows® Mobile or Symbian is encrypted. BlackBerry device storage is also encrypted, but you cannot configure it.

For information about how to set the following parameters, see "Set Advanced IBM Cognos Mobile Settings" (p. 44)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cache.WinMoStorageEncryption</td>
<td>Method by which data stored on a device running Windows Mobile is encrypted.</td>
</tr>
<tr>
<td></td>
<td>Values:</td>
</tr>
<tr>
<td></td>
<td>● NONE</td>
</tr>
<tr>
<td></td>
<td>● AES128</td>
</tr>
<tr>
<td></td>
<td>● AES192</td>
</tr>
<tr>
<td></td>
<td>● AES256</td>
</tr>
<tr>
<td></td>
<td>Default: AES128</td>
</tr>
<tr>
<td>Cache.SymbianStorageEncryption</td>
<td>Method by which data stored on a device running Symbian is encrypted.</td>
</tr>
<tr>
<td></td>
<td>Values:</td>
</tr>
<tr>
<td></td>
<td>● NONE</td>
</tr>
<tr>
<td></td>
<td>● AES128CBC</td>
</tr>
<tr>
<td></td>
<td>● AES192CBC</td>
</tr>
<tr>
<td></td>
<td>● AES256CBC</td>
</tr>
<tr>
<td></td>
<td>Default: AES128CBC</td>
</tr>
</tbody>
</table>

Set Advanced IBM Cognos Mobile Settings

You can set advanced IBM® Cognos® Mobile settings, such as the maximum time a report is stored in the database.

Steps
1. Start IBM Cognos Connection.
2. In the upper-right corner, click Launch, IBM Cognos Administration.
3. On the Configuration tab, click Dispatchers and Services.
4. Under Name, click the dispatcher.
5. Next to MobileService, in the Actions column, click the set properties button.

44 IBM Cognos Mobile
6. Click the Settings tab.

7. Next to Advanced settings, click the Edit link.

8. If the parameter is not listed, type the name.

9. Next to the parameter you want to set, type the appropriate value.

10. Continue entering parameters and values as required.

11. Click OK.

12. On the Set properties page, click OK.
Chapter 5: Security

Security is a primary concern when mobile devices are used to send and receive corporate information. IBM® Cognos® Mobile combines the security measures of IBM Cognos Business Intelligence with the extra measures needed for mobile devices. This extra security is especially important when corporate information is stored on the device, as it is with IBM Cognos reports. These security measures offer protection against loss and theft and against unauthorized access to the wireless network. The security applies whether the device is used in connected or disconnected mode.

The IBM Cognos Mobile solution includes the following security measures that are implemented in the IBM Cognos and device-specific environments:

- standard IBM Cognos data encryption
- standard IBM Cognos authentication, including support for custom IBM Cognos authentication providers
- lease key technology (p. 49)
- device user authentication policies (p. 50)
- device-based mobile encrypted database
- standard device-specific secure data transmission and encryption
- device-based password protection
- remote device wiping

For information about IBM Cognos BI security, see the Administration and Security Guide. For information about device security, see the documentation for that device.

IBM Cognos Mobile supports Web servers that are configured to use Basic Authentication. Research in Motion BlackBerry devices and devices running Microsoft® Windows® Mobile support Integrated Microsoft Windows authentication (NTLM) and Microsoft Active Directory.

IBM Cognos Mobile supports single signon security configurations. However, typically, mobile device users are not preauthenticated to the security domain the way desktop users are. Therefore, mobile device users usually have to provide their single signon credentials the first time they access the IBM Cognos BI server.

Optionally, logon credentials can be cached on the mobile device so that the user must log on only once to access both the device and IBM Cognos Mobile. IBM Cognos Mobile offers encrypted database technology as the content store on the device. Access to local device storage is controlled by a centrally-granted lease key that must be renewed periodically. You can configure the length of the lease, so that if the device is lost or stolen, the data will be inaccessible.

You can have different levels of security, depending on the needs of your organization. In addition to storing logon credentials on the device, you can allow anonymous logon or rely on the network security features of the mobile device.
For a higher level of security, you can use IBM Cognos security for all communication or use lease key technology to control access to data. IBM Cognos Mobile includes a default set of encryption keys that you can customize for your organization to restrict access to holders of specific keys.

**Password Protection**

Typically, your organization will want to have password protection on mobile devices. After a specified period of inactivity, users are prompted to reenter their device password and there may be a limit on the number of times they can try to enter a password. For example, by default, a BlackBerry user can try up to 10 times to enter the correct password. After that, the mobile device is reset, removing all data from the device. The user must reregister the device with the BlackBerry Enterprise Server. The data will then be restored to the device.

You can store users' IBM Cognos credentials on their mobile devices so that they only need to enter their credentials the first time they access IBM Cognos Mobile. After that, they are still asked for their credentials each time they log on but, similar to the way a browser works when it stores passwords, IBM Cognos Mobile fills in their passwords for them. Only when the time limit is reached on the stored credentials do users need to reenter their credentials.

For information about how to enable or set password policies for a mobile device, see the product documentation for the device.

**HTML and HTTP Support During Login**

The IBM® Cognos® Mobile product is a native application, as opposed to a web application. This means that it does not use a web browser, and does not use HTML to display reports on mobile devices.

However, IBM Cognos Mobile does use HTTP to communicate with the IBM Cognos BI server, and so it must interoperate with any web-based security mechanisms that are in place to govern access to the IBM Cognos BI server.

To allow users to authenticate and to navigate through these security mechanisms, IBM Cognos Mobile shows basic HTML form elements and allows the user to perform the actions associated with them.

The following table shows the HTTP and HTML functions that are supported by IBM Cognos Mobile.

<table>
<thead>
<tr>
<th>Name</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>HTTP Redirects</td>
<td>Supports HTTP 301 Moved Permanently and HTTP 302 Moved Temporarily. It will follow both relative and absolute URLs given in the Location header.</td>
</tr>
<tr>
<td>HTML Redirects</td>
<td>Supports the HTML equivalent of an HTTP redirect, for example <code>&lt;meta http-equiv=&quot;Refresh&quot; content=&quot;3;URL=http://...&quot;&gt;</code>.</td>
</tr>
</tbody>
</table>
**HTTP Authentication**

Supports HTTP 401 Unauthorized both with the basic scheme and with NTLM. NTLM is predominantly a Microsoft® authentication scheme, known also as Windows Integrated Authentication. Support for NTLM is always present on Microsoft Windows® Mobile devices, is not present on Symbian devices, and is present on BlackBerry devices if the HTTP Authentication Assistance setting is enabled on the BES.

**HTML Forms**

Shows the text of an HTML page (including text with anchor tags), buttons, and the input field types text, password, and hidden. It also shows the select input type, which is used to show a list of items that you can choose from, such as a list of security namespaces.

**Report Data Security**

All compiled and compressed versions of IBM Cognos BI reports are encrypted and stored locally in the mobile encrypted database of the mobile device (p. 32). These reports can be read or otherwise interpreted only by the IBM Cognos Mobile client application.

You can use lease key technology to set an expiry time for report data that is stored on the mobile device. After the expiry time, the report data cannot be accessed on the device until the device can reestablish communications with the server, and the user is able to re-authenticate with the server.

**Erasing Content from a Device**

You may need to erase all content from a mobile device. This may be necessary if a device is lost or stolen or an employee changes roles or leaves the company. Device passwords and lease key technology ensure that content is only available to authorized users.

You can erase content from the device in one of the following ways:

- For BlackBerry devices, you can issue a command from the BlackBerry Enterprise Server console.
- For devices running Windows Mobile, you can use Microsoft Exchange Server 2003 or later, Microsoft Systems Management Server (SMS) 2003 or later, or other third-party management solutions.
- For devices running Symbian, you can use IBM WebSphere® Everyplace Device Manager, Nokia Intellisync, or other third-party management solutions.

For data to be erased remotely from the mobile device, the device must be on and connected to the server. If it is not turned on or is not connected to the server, IBM Cognos data becomes inaccessible from the mobile device when the lease key expires.

**Set a Lease Key**

IBM® Cognos® Mobile uses the concept of a lease to govern access to data stored on mobile devices. Data is leased from the server for a length of time controlled by the IBM Cognos administrator.
through the Lease.DurationHours advanced setting (p. 42). The device renews its lease whenever it communicates with the server, so the Lease.DurationHours setting indicates the maximum amount of time that a user can access data on a device that is out of contact with the server, for example, offline, out of wireless range, and so on. If a device is unable to renew its lease within the specified period of time, the data on the device becomes inaccessible.

**Steps**

1. Start IBM Cognos Connection.

2. In the upper-right corner, click Launch, IBM Cognos Administration.

3. On the Configuration tab, click Dispatchers and Services.

4. Under Name, click the dispatcher.

5. Next to MobileService, in the Actions column, click the set properties button.

6. Click the Settings tab.

7. Next to Advanced settings, click the Edit link.

8. Next to Lease.DurationHours, type a value in hours.

   Valid settings are 0 to 8760. The default is 36 hours.

**Set Mobile Device User Authentication Policies**

IBM® Cognos® Mobile device user authentication policies define whether IBM Cognos Business Intelligence authentication credentials are cached on the mobile device and how often users must reenter these credentials. Users must enter their credentials at least once.

All IBM Cognos BI timeouts apply to the mobile device user. The device user authentication policies are on top of timeouts associated with IBM Cognos BI.

There are one or two timeouts that affect the duration of a user session, depending on the device. The first is the CAM (security control mechanism) passport setting in IBM Cognos BI, which applies to all devices. The second is the Research in Motion BlackBerry MDS HTTP authentication cache, which applies only to BlackBerry devices and is used for any HTTP authentication, including Microsoft® Windows® Integrated Authentication (NTLM).

If your IBM Cognos BI logins are based on NTLM, you can cache this information on your BlackBerry MDS Services server and prevent the login dialog from appearing for the duration of this cache timeout. You can enable the BlackBerry MDS Services HTTP authentication cache time limit, or increase it on the BlackBerry Enterprise Server.

When the passport setting limit expires or, in the case of BlackBerry devices, when the lower of the two time limits is reached, the user session ends. However, if the device authorization time limit exceeds the timeout that ended the session, the device authorization time limit remains in effect after the user session ends. Only when the device authentication time limit is reached do users need to reenter their credentials.
To simplify the authentication process for the user, the IBM Cognos administrator can allow credentials to be cached on the mobile device.

**Steps**

1. Start IBM Cognos Connection.
2. In the upper-right corner, click **Launch, IBM Cognos Administration**.
3. On the **Configuration** tab, click **Dispatchers and Services**.
4. Under **Name**, click the dispatcher.
5. Next to **MobileService**, in the **Actions** column, click the set properties button.
6. Click the **Settings** tab.
7. Next to **Advanced settings**, click the **Edit** link.
8. Next to **CredentialCache.DurationHours**, type a value in hours.
   Valid settings are 0 to 8760. The default is 0.

**Set the Timeout for the CAM Passport Setting**

You can set the CAM timeout on the computer where Content Manager is installed.

**Steps**

1. From the **Start** menu, click **Programs, IBM Cognos component, IBM Cognos Configuration**.
2. In the Explorer window, under **Security**, click **Authentication**.
3. In the Properties window, beside **Inactivity timeout in seconds**, type the value you want.
   For more information about IBM Cognos Configuration, see the IBM Cognos Configuration User Guide.

**Set the Timeout for the NTLM-Based BlackBerry MDS HTTP Authentication Cache**

If your IBM® Cognos® Business Intelligence logins are based on NTLM, you can cache this information on your Research in Motion BlackBerry MDS Services server and prevent the login dialog from appearing for the duration of this cache timeout. You can enable the BlackBerry MDS HTTP authentication cache time limit, or increase it on the BlackBerry Enterprise Server.

**Steps**

1. In the BlackBerry MDS Services Connection Service properties window, on the BlackBerry administration page, click the **HTTP** tab.
2. Click the **Allow the Mobile Data Service to support HTTP Authentication** checkbox.
3. Beside **HTTP Authentication timeout (milliseconds)**, enter a value.
Chapter 5: Security

The higher the value the less often users will need to login.
Chapter 6: IBM Cognos Mobile Samples

The IBM® Cognos® Business Intelligence server installation includes a set of sample reports optimized for mobile devices. The sample reports illustrate product features and technical and business best practices. Users can use them for experimenting with and sharing report design techniques and for troubleshooting. The sample reports let users try the following features:

- Drilling through from one IBM Cognos Mobile report to another
- Using tree prompts to filter reports
- Viewing different report types, such as charts, crosstab, and list reports
- Using calculated values and show the results as a percentage

The Mobile sample reports include

- Running Total For Promotion
  This report shows planned revenue by percentage for each product line. The report uses charts, crosstab reports, and list reports.

- Sales Revenue Expectation
  This reports shows the goal for the percentage change in sales revenue for retailers. It uses a calculated value for forecasted revenue.

- Tree Prompt Retailers Set
  This report shows the revenue for a set of retailers. The report is a drill-through target for the Sales Revenue Expectation report.

For more information about the IBM Cognos BI samples, including how to setup and install the Mobile samples, see the IBM Cognos BI Installation and Configuration Guide.

Before you can use the Mobile samples, the IBM Cognos BI server must be installed, configured, and running. For information about the Cognos BI server installation, see the IBM Cognos Installation and Configuration Guide.
Chapter 7: Troubleshooting IBM Cognos Mobile

This section describes some common problems you may encounter while using IBM® Cognos® Mobile. Problems may occur on the server (p. 55) or on the client (p. 58).

For troubleshooting problems related to IBM Cognos Business Intelligence, see the Troubleshooting section of the Administration and Security Guide.

Logging

By default, critical errors from IBM® Cognos® Mobile are saved in the IBM Cognos Business Intelligence cogserver.log file. In addition, IBM Cognos Mobile includes a set of log files that enable you to monitor activities and troubleshoot problems. These files are stored in the c10_location/logs folder with the Application Tier Components.

For information about IBM Cognos BI logging, see the IBM Cognos BI Installation and Configuration Guide.

The mob.log File

IBM® Cognos® Mobile records activities related to such things as service startup, configuration and running reports in the mob.log file. The logging information that appears in this file is determined by configuration/mob.log4j.xml.

The following table lists the logging levels and the details for each level.

<table>
<thead>
<tr>
<th>Logging Level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error</td>
<td>Indicates serious error condition that requires intervention</td>
</tr>
<tr>
<td>Warn</td>
<td>Indicates a suspicious occurrence that may warrant further investigation</td>
</tr>
<tr>
<td>Info</td>
<td>Provides information about how IBM Cognos Mobile</td>
</tr>
<tr>
<td>Debug</td>
<td>Provides debugging information. Typically used for debugging specific problems.</td>
</tr>
</tbody>
</table>

IBM Cognos Mobile Service Server Problems

You may encounter server problems while working with IBM® Cognos® Mobile.
Charts and Images Do Not Appear When IBM Cognos Mobile is installed on UNIX Systems That Do Not Have X Server Software Installed

Charts and other images do not appear in reports on a mobile device if IBM® Cognos® Business Intelligence and IBM Cognos Mobile have been installed on a UNIX® operating system that does not have X server software installed.

To resolve this problem, configure IBM Cognos BI to run with X server software as follows:

**Steps**

1. Find the "bootstrap_*.xml" file located in the `c10_location\bin` directory or in the `c10_location\bin64` directory.
   
The exact bootstrap_*.xml filename depends on the version of UNIX that you are using.

2. Add the line `<param>-Djava.awt.headless=true</param>` as shown below to the "bootstrap_*.xml" file to add the following startup parameter:

   ```xml
   <process name="catalina">
     <start>
       <spawn sync="1" wait_time="5">
         <path>${java_home}/bin/java</path>
         <param>-d64</param>
         <param>-Djava.awt.headless=true</param>
         <param condName="${ip_protocol}" condValue="IPv6">-Djava.net.preferIPv6Addresses=true</param>
         <param>-Xmx${dispatcherMaxMemory}m</param>
         <param>-XX:MaxNewSize=${dispatcherMaxMemoryBy2}m</param>
       </spawn>
       <param>-classpath</param>
       <param>-Djava.class.path=/c10_location</param>
       <param>-Dcatalina.path=/c10_location</param>
       <param>-Dcatalina.home=/c10_location</param>
       <param>-Djava.net.preferIPv6Addresses=true</param>
       <param>-Djava.awt.headless=true</param>
     </start>
   </process>
   ```

3. Save the modified file, and then restart the IBM Cognos BI server from the IBM Cognos Configuration tool.

   For more information, see the IBM Cognos Installation and Configuration Guide.

List Prompt Items Consisting of Only a Single Space Are Not Supported

While running a report, a user chooses an item from a list prompt that consists of only a single space and the report generates an error and fails to run.

To resolve this problem, either do not include single space items in list prompts or, if you do include the single space then ensure that the user does not select it when running the report.

IBM Cognos Mobile Server Advanced Settings Are Reset to the Defaults After Upgrading

The IBM® Cognos® Mobile advanced settings may be reset to their defaults after IBM Cognos Business Intelligence is upgraded.

To resolve this problem, reapply the settings.
MOB-SVR-1164 (HTTP error 413 (Too large)) the server was not configured correctly (BlackBerry 4.2, 4.3, 4.5 Only)

The Research in Motion BlackBerry Enterprise Server MDS Connection Service stops transferring data to the mobile device. This happens when reports are sent in packet sizes that are larger than the packet sizes that are acceptable to the BlackBerry Enterprise Server.

To resolve this problem, ensure that the packet size in the advanced setting Reports.BlackBerryMaxMessageSizeBytes (p. 43) on the IBM® Cognos® Mobile server is equal to or less than the Connection Service packet size on the BlackBerry Enterprise Server.

Advanced HTML Functionality Is Not Supported

Some advanced HTML functionality, such as Javascript™ and HTML tables, cannot be viewed in IBM® Cognos® Mobile.

To obtain table functionality, you can use IBM Cognos Report Studio to create a table.

java.lang.InternalError: Can't connect to X11 windows server using ':0.0' as the value of the DISPLAY variable

The server cannot run a report because the DISPLAY environment variable was not set or was set incorrectly.

To render a report to a .png file, IBM® Cognos® Mobile invokes graphics routines. As part of this process, IBM Cognos Mobile must also invoke the Java™ Abstract Windows Toolkit (AWT) libraries. This error occurs when the DISPLAY environment variable was not set or was set incorrectly and IBM Cognos Mobile cannot find the AWT libraries.

To resolve this problem, ensure that the DISPLAY environment variable is set to X11.

java.lang.NoClassDefFoundError

This error can occur while a report is running on UNIX® operating system if the server is running in headless mode.

To resolve this problem, in the c10_location/bin directory, in the IBM® Cognos® Business Intelligence startup.sh file, add the following parameters:
JAVA_OPTS=-Djava.awt.headless=true

Problems Configuring IBM Cognos Mobile

After you install IBM® Cognos® Mobile, you may encounter problems when you save changes in IBM Cognos Configuration.

Run Database Cleanup Scripts

In some situations, you may need to revert to the default configuration.

You can run an SQL script to delete all the IBM® Cognos® Mobile tables in the content store. Note that this script only deletes data that is specific to IBM Cognos Mobile, such as IBM Cognos Mobile
inboxes. The script does not remove any existing reports, users, or other information from the content store that are not part of the IBM Cognos Mobile service.

When you delete a table, its structural definition and data are deleted permanently from the database.

When you restart the IBM Cognos Business Intelligence service, a new set of required database tables is created automatically in the location specified by your configuration settings.

**Steps**

1. On each computer where Content Manager is located, stop the IBM Cognos BI service.

2. Go to the database directory at \c10_location\configuration\schemas\mobile.

3. Depending on the database and database type, run one of the following scripts in the appropriate database tool to delete the tables.

<table>
<thead>
<tr>
<th>Database</th>
<th>Database Type</th>
<th>Script Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content store</td>
<td>IBM® DB2®</td>
<td>db2/dbClean_mobile.sql</td>
</tr>
<tr>
<td></td>
<td>Microsoft® SQL Server</td>
<td>sqlserver/dbClean_mobile.sql</td>
</tr>
<tr>
<td></td>
<td>Oracle</td>
<td>oracle/dbClean_mobile.sql</td>
</tr>
<tr>
<td></td>
<td>Derby</td>
<td>derby/dbClean_mobile.sql</td>
</tr>
</tbody>
</table>

4. Start the IBM Cognos BI service.

**IBM Cognos Mobile Service Starts But Then Stops**

IBM® Cognos® Mobile service fails during system startup. This means that the service has encountered a fatal error, such as being unable to create database tables.

Check the logs for additional information, take the appropriate action to correct the problem, and restart the service.

**IBM Cognos Mobile Service Client Problems**

Users may encounter problems when working with IBM® Cognos® Mobile on their mobile devices.

**Images Do Not Appear on Mobile Devices**

Report images do not appear on the mobile devices. This happens when users use their own SSL certificates, which are not trusted by the JVM.

To resolve this problem, users need to use the Sun keytool utility to import their SSL certificate into their JVM. For more information, see the Sun documentation.
IBM Cognos 8 Go! Mobile 8.3 and 8.4 Clients Are Unable to Access the Server After Upgrading Server Components

After upgrading the IBM® Cognos® 8 Go! Mobile server component from version 8.3 to 8.4, devices running IBM Cognos 8 Go! Mobile 8.3 client software will not be able to connect to the server and will receive an error if they try to connect.

To resolve this problem, upgrade the client software to IBM Cognos 8 Go! Mobile version 8.4.

IBM Cognos Mobile Does Not Filter Downstream Prompts for Cascading Prompts Using Reprompt

Users do not see the expected results in reports that have been set up with cascading prompts that require reprompting, that is where the user must click Reprompt in Cognos® Viewer. IBM® Cognos Mobile does not apply the filters correctly downstream for the cascading prompts.

To resolve this problem, change the report’s prompt options to Auto-Submit. With this option, IBM Cognos Business Intelligence will apply the filters to the downstream prompts as expected.

IBM Cognos Mobile May Cause Nokia E61i Devices To Fail

Due to a known bug with Nokia E61i devices earlier than the S60 3rd Edition, Feature Pack 1, multiple HTTP headers of the same type cannot be handled properly. As a result, the device may either fail or not function correctly when IBM® Cognos® Mobile is started.

If you experience this problem, upgrade your device firmware to the latest version.

IBM Cognos Mobile Client Should Not Be Installed Over a Previous Client (BlackBerry Devices Only)

The IBM® Cognos® Mobile icon does not appear on the mobile device, so you cannot launch the application. This may happen when the IBM Cognos Mobile client is installed on top of an older version of the client application.

To resolve this problem, delete the old client application from the Research in Motion BlackBerry device before installing a new version of the client application.

Repeater Tables Render Incorrectly

A report that includes a repeater table that is within a block or table element does not render correctly on a mobile device.

To resolve this problem, rewrite the report so that repeater tables are not within blocks or table elements.

IBM Cognos Mobile Does Not Support Multi-Select Range Prompts (BlackBerry 4.2, 4.3, 4.5, Symbian and Windows Mobile Only)

Multi-select range prompts, which allow users to select more than one range of values, (for example, both January 1-15 and June 1-15 for a multi-select range date prompt) do not behave correctly in
reports on mobile devices. Users will experience one of the following situations, depending on whether the prompt is mandatory or optional:

- For a mandatory prompt, the user sees an error on the prompt page when trying to run the report and the report does not run.
- For an optional prompt, the user sees a warning on the prompt summary page when trying to run the report and cannot enter values in that prompt. However, the report will run using other prompt values, if any.

**Calendar Prompts Show Only the Gregorian Calendar**

When a report with a non-Gregorian calendar date prompt is displayed in IBM® Cognos® Mobile, the prompt appears in the Gregorian calendar format. The report runs after the user enters values in the prompt, but the results may be empty or inaccurate.

**Two TO Fields Appear on the Email Form (BlackBerry 4.2 and 4.3 Only)**

Two To fields appear on the email form that users use to email an IBM® Cognos® Mobile report. One of the To fields can be edited. Users can fill in this field, ignore the other To field, and email the report.

To resolve this problem, users must upgrade to a Research in Motion BlackBerry version 4.5 or 4.6 device.

**Multi-select Tree Prompts Are Not Supported on Windows Mobile Smartphone Devices**

IBM® Cognos® Mobile does not support multi-select tree prompts on Microsoft® Windows® Mobile Smartphones (Windows Mobile devices that do not use a stylus). Users with a Windows Mobile Smartphone can respond to multi-select tree prompts by selecting a single item at any level in the tree prompt.

**BuildSettings Generated for Windows Mobile Are Not Automatically Deployed**

In a Microsoft® Windows® Mobile pull deployment where the administrator uses buildSettings to embed URLs in the deployment package for client installations, a new settings .cab file is created. There is no default settings file for Windows Mobile, so simply copying the file into the deployment package will not deliver the settings to the end users when they install the IBM Cognos Mobile client application.

To resolve this problem, the administrator must edit the deployment package index.html file, adding a link to this new settings file. The additional link will enable users to download the settings after installing the software on their devices.

**IBM Cognos Mobile Fails to Connect to the Database**

IBM® Cognos® Mobile accesses Microsoft® SQL Server through the JDBC driver, which uses a TCP socket to connect to the database. If Microsoft SQL Server is not configured to allow TCP connections, then IBM Cognos Mobile will not connect to the database and will report errors in the logs.
To resolve this problem, enable TCP connectivity in Microsoft SQL Server.

Long Text Messages May Be Truncated

Long text messages may appear truncated on some parts of the device user interface for some languages. For example, the user may observe that reports with long names or some translated text messages are truncated.

907 invalid cod Error Message (BlackBerry 4.2, 4.3, 4.5 Only)

This error can occur while you are installing the client application on a Research in Motion BlackBerry device that runs out of space and stops the installation.

To resolve this problem, consider removing such items as emails, especially those with attachments, or other applications, to increase the space available, clear the browser cache and restart the download.

BlackBerry Browser Does Not Pick Up Configuration Changes During Over the Air Installations (BlackBerry 4.2, 4.3, 4.5 Only)

The first time a Research in Motion BlackBerry user uses the link http://server/cognos10/mobile/index.html to install IBM® Cognos® Mobile client over the air, the BlackBerry browser caches the content by default. Because it does not clear the cache automatically, subsequent attempts to install using this link may not pick up file or server configuration changes.

From the BlackBerry browser, the user must clear the cache and then click the link again.

User Cannot Log On From the Mobile Device

A user cannot log on to the server from the mobile device.

For a Research in Motion BlackBerry device, the user must ensure that Connection Service is enabled for the device and for the user’s BlackBerry account and that the connection to the IBM® Cognos® Business Intelligence server is valid.

Steps to Check Device Connectivity

1. Run the device browser program.

2. Use the browser to open the main Web page of your IBM Cognos BI server, for example, http://myserver/cognos10.

   Note that you may need to enter the full URL to the IBM Cognos BI gateway.
   
   ● On the Options page of the mobile device, ensure that the server URL shows the correct, fully-qualified path to the IBM Cognos BI gateway, for example, http://server/cognos10/cgi-bin/cognos.cgi or http://server:5999/c10/cgi-bin/cognosisapi.dll.
   
   ● If necessary, navigate to the IBM Cognos BI installation in a browser and copy the full path from the browser’s address field.

If the main Web page does not appear, the user may have a connectivity issue that the mobile device administrator will need to resolve.
No Reports Available When Logged On From the Mobile Client

The user is logged on to IBM® Cognos® Mobile but cannot access any reports.

Reports need to be run before they appear in the mobile device inbox.

Steps to Run Reports

1. On the mobile device, click Browse.
2. Click a report.
3. Click Run Report.
   - The report runs on the server.
4. If the refresh inbox is available, click Refresh inbox to refresh the inbox.
   - The report appears in the list.
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