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iSeries Navigator for Wireless







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iSeries Navigator for Wireless



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## iSeries™ Navigator for Wireless



Managing multiple systems is one of the more challenging aspects of running a growing business. IBM introduced Management Central to help administrators manage their systems. Users have enjoyed the ease, flexibility, and power of Management Central. From managing fixes and running commands across multiple systems to viewing real-time graphs of their systems performance, administrators have used Management Central to do their jobs much more efficiently.

With iSeries Navigator for Wireless, administrators have even more flexibility in how they access and interact with Management Central. iSeries Navigator for Wireless allows administrators to remotely monitor and manage system performance, status, jobs, and messages using an Internet-ready telephone, a personal data assistant (PDA) with a wireless modem, or a traditional Web browser on a workstation.

After you have configured iSeries Navigator for Wireless to run on a Web server on your central system, you can simply enter the URL into your Internet-ready telephone, PDA, or browser to perform the following:

- Watch system status.
- View properties of the system.
- View detailed summaries of the following Tasks:
  - Commands
  - Packages and Products
  - Inventory
  - Fixes
  - Collection Services
  - Users and Groups
  - System Values
- Manage Integrated xSeries Servers for iSeries. Run commands on all Integrated xSeries Servers at the same time or on just a single Integrated xSeries Server, start the Integrated xSeries Servers, or shut them down.
- Run OS/400 commands across multiple systems.
- View and interact with monitors
  - **System monitors:** View the metrics and current values being monitored, as well as the top 20 items (jobs, disk units, and so forth) that make up the metric value. Work with jobs listed in the monitor (display details, hold, release, end).
  - **Job and message monitors:** View all jobs and messages across systems matching monitor criteria. See metrics and current values being monitored. Work with the jobs and messages listed in the monitor (display details, hold, release, end, delete, reply).
  - **File monitors:** View detailed status of files, including system path, size, date modified, and the text that triggered the file.
  - **B2B activity monitors:** View business-to-business transaction details, and see metrics and current values being monitored.
- Limit what users can do by enabling read-only support, or by setting user-access levels with Application Administration. Allow users to view status information without the ability to take action.

This information is intended to help you start using iSeries Navigator for Wireless by providing tips on which devices to use, how to install and configure the required elements, and by giving you an overview of the functions.

#### **What's new for V5R2**

You can now work with Management Central tasks, work with File monitors and B2B Activity monitors, and customize your display.

#### **Print this topic**

Download and print a PDF of this topic.

#### **Set up iSeries Navigator for Wireless**

This covers the software and hardware that is required to use iSeries Navigator for Wireless. This also helps you decide which kind of wireless device to use and what kind of applications you may need to install and configure.

#### **Manage iSeries Navigator for Wireless**

Find out how to manage iSeries systems from a wireless device. Use iSeries Navigator for Wireless to interact with monitors in both Management Central and Integrated xSeries Servers. Run commands, work with tasks and systems, and control user access.

#### **Related information**

IBM<sup>(R)</sup> related information contains technical, know-how, and "how to" information.

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## **What's new for V5R2**

Originally introduced as Management Central Pervasive in V5R4, MC Pervasive is now known as iSeries Navigator for Wireless in V5R2.

Now in V5R2, iSeries Navigator for Wireless monitor support has been expanded. The ability to work with file monitors and B2B activity monitors has been added to the already existing capability to work with system monitors, job monitors, and message monitors.

Also new is the ability to view detailed summary information about tasks you are running in Management central. View detailed summaries of the following tasks:

- Commands
- Packages and Products
- Inventory
- Fixes
- Collection Services
- Users and Groups
- System Values

You can now customize your connection to limit or grant access to functions in Management Central using Application Administration, and change the duration of time task details are displayed on your wireless device.



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## Print this topic

To view or download the PDF version, select iSeries Navigator for Wireless (about 447 KB or 36 pages).

### Save PDF files

To save a PDF on your workstation for viewing or printing:

1. Open the PDF in your browser (click the link above).
2. In the menu of your browser, click **File**.
3. Click **Save As...**
4. Navigate to the directory in which you would like to save the PDF.
5. Click **Save**.

### Download Adobe Acrobat Reader

If you need Adobe Acrobat Reader to view or print these PDFs, you can download a copy from the Adobe Web site ([www.adobe.com/prodindex/acrobat/readstep.html](http://www.adobe.com/prodindex/acrobat/readstep.html))



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## Set up iSeries Navigator for Wireless

There are many choices to make when entering the wireless world. This section describes what is required to use iSeries Navigator for Wireless, as well as helps you decide which kind of device to use with iSeries Navigator for Wireless. The following pages also help you to determine what kind of applications you may need to install and configure.

### Hardware and software requirements

Determine if you have all the necessary software and hardware to run iSeries Navigator for Wireless.

### Select a device

Choose devices that are compatible with iSeries Navigator for Wireless.

### Develop an Internet protection program

Develop an internet protection program that works for you.

### Choose a Web application server

Determine which web application server works for you.

### Configure your wireless environment

Modify your web application server and firewall configuration so that iSeries Navigator for Wireless will run properly.

### Connect to your central system

Connect to the central system using your wireless device.

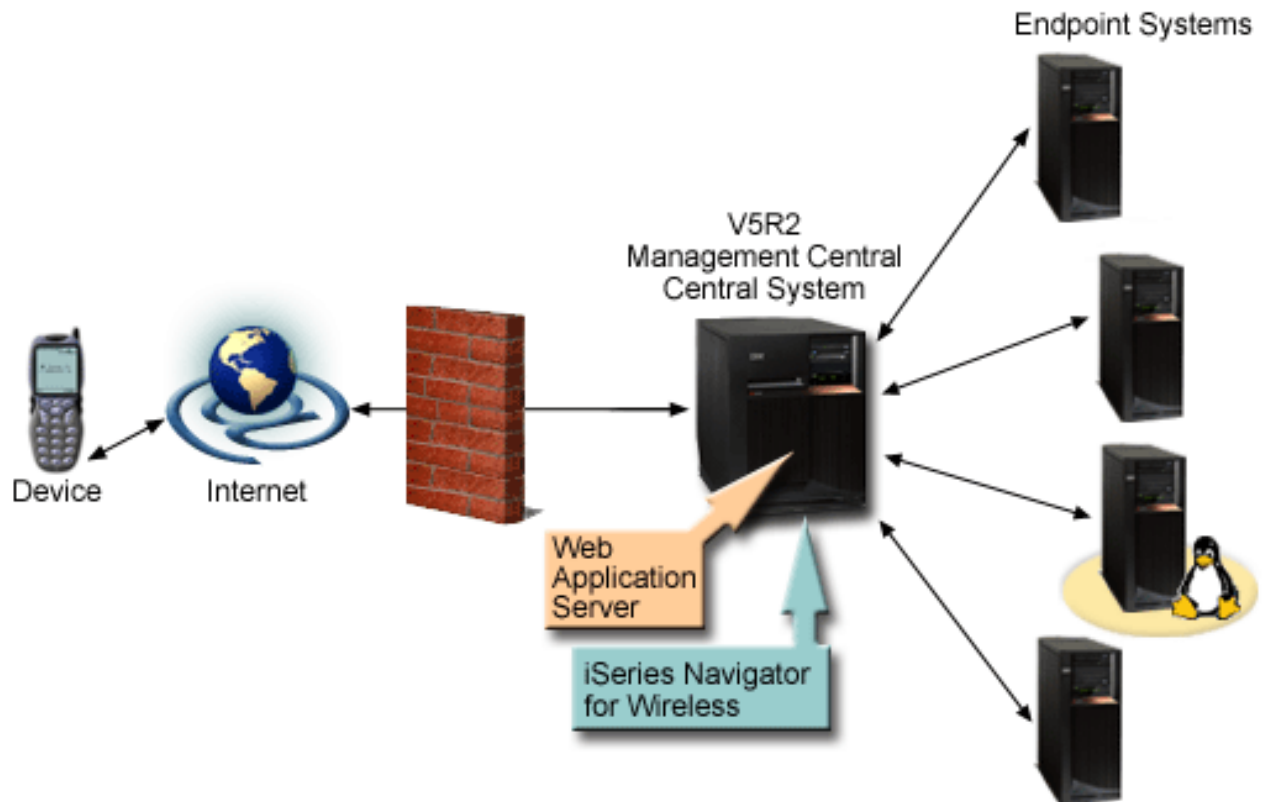
### Customize your connection

You may choose not to give users the ability to run commands from a wireless device but still provide users with the ability to view monitors and system status. You may also want to change your task details expiration. This page shows you how to limit user access to iSeries Navigator for Wireless functions using Application Administration, as well as customize your task details retrieval length.

## Hardware and software requirements

The following elements are required to run the latest enhancements of iSeries Navigator for Wireless:

- Licensed Product 5722-XP1:  
The iSeries Access for Wireless product that includes iSeries Navigator for Wireless.
- A device to run the function
  - An Internet-enabled telephone with a wireless internet service
  - A PDA with a web browser, a wireless modem, and a wireless internet service
  - A traditional web browser on a workstation
- A server running OS/400 V5R2 or later in a TCP/IP network.  
This will be your central system used by Management Central.
- A web application server running on your central system, such as any of the following:
  - ASF Jakarta Tomcat Application server
  - WebSphere Application Server
  - Any other application server that runs on the central system, having the capability to host servlets



\*

Figure 1: Wireless device connecting to Management Central

## Select a device

Internet-ready telephones and wireless PDAs are a rapidly changing technology. They differ in screen size, in look-and-feel, and in many other significant characteristics. The following sections help you choose devices that are compatible with iSeries Navigator for Wireless. Other wireless devices may also be compatible if they support wireless internet browsing, but the interaction may be different.

## Internet-ready telephones

Select an Internet-ready telephone to use with iSeries Navigator for Wireless.

## PDA's

Select a PDA to use with iSeries Navigator for Wireless.

## PCs

You can also use a traditional web browser with iSeries Navigator for Wireless.

## Select a Device: Internet-ready telephones

Consider the following elements when you select an Internet-ready telephone to use with iSeries Navigator for Wireless:

- The physical characteristics of the telephone itself (display size, button location, and so forth)
- The web browser (often called a microbrowser or a minibrowser) supported on the telephone
- The wireless internet services available with the Internet-ready telephone in the geographical areas where you want to use it

The display size of the Internet-ready telephone often affects how easy it is to use. In general, the more horizontal lines the telephone displays, the easier it is to view data. Regardless of the display size, you will often need to scroll down in the telephone display using buttons or other scrolling mechanism. The width of the displayed lines should also be a consideration.

An Internet-ready telephone is typically already loaded with a microbrowser. Once you select a particular telephone, you are also making your browser choice. iSeries Navigator for Wireless currently supports the Openwave Mobile Browser version 3.1 and above (formerly called UP.browser). For best results, choose a telephone that supports this microbrowser.

The wireless internet service is what transports the data to and from your Internet-ready telephone. It is not the same as the voice service for your telephone, although the two may be packaged together by a particular provider. Make sure that the telephone you select is supported by a wireless internet service available in the geographical areas where you want to use it.

## Compatibility with iSeries Navigator for Wireless

The following Internet-ready telephones are compatible with iSeries Navigator for Wireless.

Telephone	Type of testing	Wireless service	Comments
Mitsubishi T250	Device	AT&T PocketNet	Small font preference is recommended.

**Table Note:** Other phones have been tested with a simulator, including the Ericsson R280 LX.

Other Internet-ready telephones may also be compatible. As stated earlier, iSeries Navigator for Wireless supports the Openwave Mobile Browser 3.1 or greater from Openwave. The Openwave Mobile Browser is licensed by a number of telephone manufacturers around the world. In addition, many of the manufacturers offer support on more than one model of telephone. The list of telephones supported by the OpenWave Mobile Browser can be found at the Openwave Web site [http://upmkt.openwave.com/dev\\_phones/phones.cfm](http://upmkt.openwave.com/dev_phones/phones.cfm)



. Other information on this browser can be found at the Openwave Web site: <http://www.openwave.com>



## Select a Device: PDAs

iSeries Navigator for Wireless makes use of a web browser running on your PDA. Unlike Internet-ready telephones, the selection of a browser is not tied to your choice of PDA device. If a web browser was packaged with your PDA when you bought it, you can install additional web browsers. You can download many web browsers for PDA devices over the Internet.

### PDA browser compatibility with iSeries Navigator for Wireless

Many different web browsers exist for PDA devices. Often, the browsers differ in the HTML elements they support. Some browsers handle text differently than others. Some display images and tables, while others do not. Some browsers offer higher levels of protection or security than others. The following browsers support the necessary elements to run iSeries Navigator for Wireless from a PDA:

- AvantGo



Version 3 or later

- EudoraWeb



Version 1.1 or later

- Go.Web



Version 6.0 - for RIM Blackberry

Other web browsers that run on PDAs may also be compatible. Be aware that the differences in how another browser displays HTML can cause iSeries Navigator for Wireless to appear and behave differently than one of the browsers listed previously.

Also, if you need extra security look for browsers that support SSL .

### PDA compatibility with iSeries Navigator for Wireless

The following PDAs are compatible with iSeries Navigator for Wireless:

PDA	Operating system	Wireless modem	Wireless service
Palm V or Vx	Palm OS Version 3.3	Minstrel V	AT&T
Palm III or IIIx	Palm OS Version 3.3	Minstrel III	AT&T
RIM Blackberry	RIM	Built in	GoAmerica
Kyocera QCP 6035	Palm OS	Built in	Sprint

Many other PDAs are most likely compatible. Since iSeries Navigator for Wireless runs in a browser, the choice of PDA should not make a difference, but only the PDAs listed above were tested. Also, any device that allows you to perform web browsing and supports HTML may be compatible with iSeries Navigator for Wireless.

### Modem and wireless Internet service for the PDA

You need to choose a modem that is compatible with your PDA selection. In addition, you need to find a wireless Internet Service Provider (ISP). The wireless Internet service transports the data to and from your PDA using the modem. When choosing a modem and service, make sure that you select a combination that is supported in the geographical areas where you want to use your PDA.

## Select a Device: PCs

iSeries Navigator for Wireless is designed to run on an Internet-ready telephone or PDA. However, because it runs on a browser in a PDA, iSeries Navigator for Wireless will also run on a traditional web browser. Any current workstation web browser should work because PDA browsers have more limitations.

Because iSeries Navigator for Wireless only needs a small display, one suggestion is for you to put a small window of your browser in the corner of your workstation. Then you can keep current on your systems and monitors without having to clutter your desktop.

If you are using a traditional Internet browser on your PC, you can select **Get Report** from the main menu to display all information on a full browser screen.

## Develop an Internet protection program

Because the iSeries Navigator for Wireless servlet needs to obtain the user ID of the remote user, the web application server will need to be configured or set up to authenticate the user. The servlet uses this user ID to communicate with Management Central. Because this authentication can take place over the internet, the user needs to develop a protection plan to protect this authentication information (user ID and password).

Also, the data that is transferred between the client and the server contains systems management information. An analysis should be done to determine the level of protection you require for this data. The following questions need to be considered in developing this plan.

- What services will be used to access the servlet (use the Internet, use browsers on clients attached to the central system, or both)?
- What client devices will be used and what are the security capabilities of the browsers used on the devices?
- How will the desired protection be configured or be set up on a Web application server such as IBM WebSphere or ASF Tomcat servlet engine, and IBM HTTP Server for iSeries?
- What is the sensitivity of the data transferred between the client and server?

In developing this protection plan, refer to AS/400 Internet Security Scenarios: A Practical Approach



The following IBM WebSphere Application Server



web page and ASF Jakarta Tomcat



home page may also be helpful in developing a protection plan. These pages also provide documentation on the security protection capabilities of the client devices and browsers to be used.

## Choose a Web application server

You can use several web application servers to run the iSeries Navigator for Wireless servlet. The following Web application servers are recommended:

- Apache Software Foundation Jakarta Tomcat (ASF Tomcat) servlet engine for HTTP Server (powered by Apache)
- IBM WebSphere Application Server, Advanced Edition for iSeries, version 4.0

The Information Center provides setup documentation for configuring your ASF Jakarta Tomcat servlet engine for HTTP Server (powered by Apache).

For more information about WebSphere, go to: <http://www.ibm.com/eserver/series/products/websphere>



## Configure your wireless environment

Before you begin using iSeries Navigator for Wireless, make sure that you have properly configured or set up the following items:

### **Create your HTTP server (powered by Apache)**

Install the IBM HTTP Server for iSeries licensed product and create an HTTP server (powered by Apache) on your Management Central central system .

### **Configure your ASF Jakarta Tomcat servlet engine for HTTP Server (powered by Apache)**

Add the iSeries Navigator for Wireless servlet to your ASF Jakarta Tomcat servlet engine.

### **Configure your firewall**

Determine if you need to modify your firewall to gain access to systems from a wireless device.

### **Configure Management Central**

Take full advantage of the capability that iSeries Navigator for Wireless provides when you interact with Management Central. This page helps you to fully use the functions available in Management Central.

### **Select a language**

The default language is set to English, but you can configure your device to display your language of choice.

After you have completed these steps, you are ready to connect to your central system and begin using iSeries Navigator for Wireless.

## **Create an HTTP Server (powered by Apache)**

You must have the IBM HTTP Server for iSeries licensed product installed. Once you have the licensed product installed, use the IBM HTTP Server for iSeries to create an HTTP Server (powered by Apache). In order for iSeries Navigator for Wireless to work properly with your HTTP server, you need to create this HTTP Server (powered by Apache) on the endpoint system you have designated as your Management Central central system.

For more information on installing the IBM HTTP Server for iSeries licensed product and creating an HTTP Server (powered by Apache), see Web serving.

After you create your HTTP Server (powered by Apache), you should set up your HTTP server (powered by Apache) to implement the Web application protection program that you have developed to provide proper authentication security based upon your client devices, browsers and network. IBM recommends implementing HTTP with SSL (HTTPS) whenever possible.

After you create your HTTP Server powered by Apache, you need to Configure your ASF Jakarta Tomcat servlet engine to work with iSeries Navigator for Wireless.

## Configure your ASF Jakarta Tomcat servlet engine for HTTP Server (powered by Apache)

The following tasks help you add the iSeries Navigator for Wireless servlet to the Apache Software Foundation Jakarta Tomcat servlet engine for HTTP Server (powered by Apache). Before you begin, you need to create an HTTP Server (powered by Apache).

After you have successfully created an IBM HTTP Server (powered by Apache), follow these steps to enable the ASF Tomcat servlet engine, and add the iSeries Navigator for Wireless servlet to your ASF Tomcat servlet engine:

### Steps to configure your ASF Tomcat servlet engine

1. Add directories to your HTTP Server (powered by Apache)
2. Create your XML file
3. Update your classpath information
4. Edit your configuration file
5. Give proper authority to users

For more information about ASF Jakarta Tomcat, go to <http://jakarta.apache.org/tomcat/index.html>



**Add directories to your HTTP Server (powered by Apache):** After you have successfully set up your HTTP Server (powered by Apache), you need to make sure that the following directories are created. If not, you need to create them.

From the `IntegratedFileSystem/Root/www/InstanceName/` directory (where *InstanceName* is the name you have given your Web server), create this directory structure:

```
/www/InstanceName/tomcat
/www/InstanceName/tomcat/webapps
/www/InstanceName/tomcat/webapps/InstanceName
/www/InstanceName/tomcat/webapps/ROOT
/www/InstanceName/tomcat/webapps/InstanceName/WEB-INF
/www/InstanceName/tomcat/webapps/InstanceName/WEB-INF/classes
/www/InstanceName/tomcat/webapps/InstanceName/WEB-INF/lib
```

After you have created these directories and files, you need to create your XML file.

### Steps to configure your ASF Tomcat servlet engine

1. Add directories to your HTTP Server (powered by Apache)
2. Create your XML file
3. Update your classpath information
4. Edit your configuration file
5. Give proper authority to users

**Create your XML file:** When your ASF Tomcat servlet engine is running, the following XML file will enable ASF Tomcat to look for the iSeries Navigator for Wireless servlet. Follow these steps to create your XML file:

1. Navigate to the following directory: `IntegratedFileSystem/Root/www/InstanceName/Conf`
2. In this directory, create an XML text file and name it **Server.xml**.
3. Open the file.

#### 4. Copy the following text and paste it into the Server.xml file:

##### Begin copying

```
<?xml version="1.0" encoding="ISO-8859-1"?>

<Server>
  <!-- Debug low-level events in XmlMapper startup -->
  <xmlmapper:debug level="0" />

  <!--

  Logging:

      Logging in Tomcat is quite flexible; we can either have a log
      file per module (example: ContextManager) or we can have one
      for Servlets and one for Jasper, or we can just have one
      tomcat.log for both Servlet and Jasper. Right now there are
      three standard log streams, "tc_log", "servlet_log", and
      "JASPER_LOG".

  Path:

      The file to which to output this log, relative to
      TOMCAT_HOME. If you omit a "path" value, then stderr or
      stdout will be used.

  Verbosity:

      Threshold for which types of messages are displayed in the
      log. Levels are inclusive; that is, "WARNING" level displays
      any log message marked as warning, error, or fatal. Default
      level is WARNING.

      verbosityLevel values can be:
          FATAL
          ERROR
          WARNING
          INFORMATION
          DEBUG

  Timestamps:

      By default, logs print a timestamp in the form "yyyy-MM-dd
      hh:mm:ss" in front of each message. To disable timestamps
      completely, set 'timestamp="no"'. To use the raw
      msec-since-epoch, which is more efficient, set
      'timestampFormat="msec"'. If you want a custom format, you
      can use 'timestampFormat="hh:mm:ss"' following the syntax of
      java.text.SimpleDateFormat (see Javadoc API). For a
      production environment, we recommend turning timestamps off,
      or setting the format to "msec".

  Custom Output:

      "Custom" means "normal looking". "Non-custom" means
      "surrounded with funny xml tags". In preparation for
      possibly disposing of "custom" altogether, now the default is
      'custom="yes"' (i.e. no tags)

  Per-component Debugging:

      Some components accept a "debug" attribute. This further
      enhances log output. If you set the "debug" level for a
      component, it may output extra debugging information.
  -->

  <!-- if you don't want messages on screen, add the attribute
```



```

        path="logs/tomcat.log"
    to the Logger element below
-->
<Logger name="tc_log"
    verbosityLevel = "INFORMATION"
/>

<Logger name="servlet_log"
    path="logs/servlet.log"
/>

<Logger name="JASPER_LOG"
    path="logs/jasper.log"
    verbosityLevel = "INFORMATION" />

<!-- You can add a "home" attribute to represent the "base" for
all relative paths. If none is set, the TOMCAT_HOME property
will be used, and if not set "." will be used.
webapps/, work/ and logs/ will be relative to this ( unless
set explicitly to absolute paths ).

You can also specify a "randomClass" attribute, which determines
a subclass of java.util.Random will be used for generating session IDs.
By default this is "java.security.SecureRandom".
Specifying "java.util.Random" will speed up Tomcat startup,
but it will cause sessions to be less secure.

You can specify the "showDebugInfo" attribute to control whether
debugging information is displayed in Tomcat's default responses.
This debugging information includes:
    1. Stack traces for exceptions
    2. Request URI's that cause status codes >= 400
The default is "true", so you must specify "false" to prevent
the debug information from appearing. Since the debugging
information reveals internal details about what Tomcat is serving,
set showDebugInfo="false" if you wish increased security.
-->
<ContextManager debug="0" workDir="work" showDebugInfo="true" >

<!-- ===== Interceptors ===== -->

<!--
ContextInterceptor className="org.apache.tomcat.context.LogEvents"
-->

<ContextInterceptor className="org.apache.tomcat.context.AutoSetup" />

<ContextInterceptor
    className="org.apache.tomcat.context.WebXmlReader" />

<!-- Uncomment out if you have JDK1.2 and want to use policy
<ContextInterceptor
    className="org.apache.tomcat.context.PolicyInterceptor" />
-->

<ContextInterceptor
    className="org.apache.tomcat.context.LoaderInterceptor" />
<ContextInterceptor
    className="org.apache.tomcat.context.DefaultCMSetter" />
<ContextInterceptor
    className="org.apache.tomcat.context.WorkDirInterceptor" />

<!-- Request processing -->
<!-- Session interceptor will extract the session id from cookies and
deal with URL rewriting ( by fixing the URL )
-->
<RequestInterceptor

```

```

        className="org.apache.tomcat.request.SessionInterceptor" />

<!-- Find the container ( context and prefix/extension map )
    for a request.
-->
<RequestInterceptor
    className="org.apache.tomcat.request.SimpleMapper1"
    debug="0" />

<!-- Non-standard invoker, for backward compat. ( /servlet/* )-->
<RequestInterceptor
    className="org.apache.tomcat.request.InvokerInterceptor"
    debug="20" prefix="/servlet/" />

<!-- "default" handler - static files and dirs
-->
<RequestInterceptor
    className="org.apache.tomcat.request.StaticInterceptor"
    debug="0" />

<!-- Plug a session manager. You can plug in more advanced session
    modules.
-->
<RequestInterceptor
    className="org.apache.tomcat.session.StandardSessionInterceptor" />

<!-- Check if the request requires an authenticated role.
-->
<RequestInterceptor
    className="org.apache.tomcat.request.AccessInterceptor"
    debug="0" />

<ContextInterceptor
    className="org.apache.tomcat.context.LoadOnStartupInterceptor" />

<!-- ===== Connectors ===== -->

<Connector className="org.apache.tomcat.service.JNIEndpointConnector">
    <Parameter name="native_lib" value="/QSYS.LIB/QHTTPSVR.LIB/QZTCJK.SRVPGM"/>
</Connector>

<!-- ===== webapps ===== -->

<Context path="/HTTPAdmin"
    docBase="webapps/HTTPAdmin"
    debug="0"
    reloadable="false" >
</Context>

<Context path="/IPAdmin"
    docBase="webapps/IPAdmin"
    debug="0"
    reloadable="false" >
</Context>

</ContextManager>
</Server>

```

End copying

5. Save your changes to **Server.xml**.

Next, you will need to update your classpath information.

## Steps to configure your ASF Tomcat servlet engine

1. Add directories to your HTTP Server (powered by Apache)
2. Create your XML file
3. Update your classpath information
4. Edit your configuration file
5. Give proper authority to users

**Update your classpath information:** To update your classpath information, you need to add the jar files used by the iSeries Navigator for Wireless servlet to your ASF Tomcat servlet engine. Follow these steps to update your classpath:

1. Navigate to the following directory: `IntegratedFileSystem/Root/www/InstanceName/Conf`.
2. In this directory, create a text file and name it **Workers.properties**.
3. Open the file.
4. Copy the following text and paste it into the open **Workers.properties** file:

Begin copying

```
#
# Admin server worker configuration file for Jakarta-Tomcat
#

worker.list=jni
worker.jni.type=jni

worker.jni.class_path=/qibm/proddata/java400/jdk12/lib/tools.jar
worker.jni.class_path=/QIBM/ProdData/HTTP/Java/lib/jaxp.jar
worker.jni.class_path=/QIBM/ProdData/HTTP/Java/lib/parser.jar
worker.jni.class_path=/QIBM/ProdData/HTTP/Java/lib/servlet.jar
worker.jni.class_path=/QIBM/ProdData/HTTP/Java/lib/webserver.jar
worker.jni.class_path=/QIBM/ProdData/HTTP/Java/lib/jasper.jar
worker.jni.class_path=/QIBM/ProdData/HTTP/Java/lib/cwbuntpi.jar
worker.jni.class_path=/QIBM/ProdData/OS400/jt400/lib/jt400Native.jar

worker.jni.class_path=/QIBM/ProdData/Access/Wireless/McPervasive/lib/mcypvperv.jar
worker.jni.class_path=/QIBM/ProdData/Access/Wireless/McPervasive/lib/mcypvmri.jar
worker.jni.class_path=/QIBM/ProdData/OS400/MGTC/McOSClient.jar
worker.jni.class_path=/QIBM/ProdData/OS400/MGTC/McClient.jar
worker.jni.class_path=/QIBM/ProdData/OS400/MGTC/McPrivServer.jar
worker.jni.class_path=/QIBM/ProdData/OS400/MGTC/McRscMonClient.jar
worker.jni.class_path=/QIBM/ProdData/OS400/MGTC/McJobMonClient.jar
worker.jni.class_path=/QIBM/ProdData/OS400/MGTC/McMsgMonClient.jar
worker.jni.class_path=/QIBM/ProdData/OS400/MGTC/McFileMonClient.jar
worker.jni.class_path=/QIBM/ProdData/OS400/MGTC/mcysv400.jar
worker.jni.class_path=/QIBM/ProdData/OS400/MGTC/AppMgrClient.jar

worker.jni.jvm_lib=/QIBM/ProdData/java400/jdk12/lib/rt.jar

worker.jni.cmd_line=-config
worker.jni.cmd_line=/www/mcp/conf/server.xml

worker.jni.sysprops=java.version=1.2
worker.jni.sysprops=tomcat.home=/www/mcp/tomcat

#worker.jni.java2opts=-verbose
#worker.jni.sysprops=tomcat.classloader.debug_level=30
worker.jni.stderr=/www/mcp/logs/jvmstderr.txt
worker.jni.stdout=/www/mcp/logs/jvmstdout.txt
```

End copying

5. Save your changes to **Workers.properties**.

After you update your classpath by creating and editing your **Workers.properties** file, you need to edit your configuration file to set up basic authentication.

## Steps to configure your ASF Tomcat servlet engine

1. Add directories to your HTTP Server (powered by Apache)
2. Create your XML file
3. Update your classpath information
4. Edit your configuration file
5. Give proper authority to users

**Edit Your Configuration File:** Make sure that you have installed the IBM HTTP Server and created an HTTP Server (powered by Apache) on your Management Central central system before you begin. The following steps will allow you to edit your HTTP server (powered by Apache) configuration to set up Basic Authentication for iSeries Navigator for Wireless:

1. Start the IBM HTTP Server for iSeries. When connecting, be sure to specify the port as 2001:  
`http://host.domain:2001`
2. Open the Configuration and Administration forms.
3. Click the **Manage** tab.
4. Select your HTTP server from the **Server** list. (your HTTP server is the HTTP Server (powered by Apache) that you have already created on your Management Central central system).
5. Select **Global Server Configuration** from the **Server area** list.
6. Expand **Tools** and click **Edit Configuration**
7. Delete any text that currently appears in the configuration text box.
8. Copy and paste the the following text into the configuration text box:

Begin copying

```
# Configuration originally created by Apache Setup Wizard Mon Dec 10 16:15:11 GMT+00:00 2001
Listen 8110
DocumentRoot /www/your server name/htdocs
DefaultType text/plain
Options None
ErrorLog logs/basic_error_log
LogLevel warn
DirectoryIndex index.html
LogFormat "%h %l %u %t \"%r\" %>s %b \"%{Referer}i\" \"%{User-Agent}i\"" combined
LogFormat "%{User-agent}i" agent
LogFormat "%{Referer}i -> %U" referer
LogFormat "%h %l %u %t \"%r\" %>s %b" common
CustomLog logs/access_log combined
BrowserMatch "Mozilla/2" nokeepalive
BrowserMatch "JDK/1\.\0" force-response-1.0
BrowserMatch "Java/1\.\0" force-response-1.0
BrowserMatch "RealPlayer 4\.\0" force-response-1.0
BrowserMatch "MSIE 4\.\0b2;" nokeepalive force-response-1.0
<Directory />
    AllowOverride None
    order deny,allow
    deny from all
</Directory>
<Directory /www/your server name/htdocs>
    AllowOverride None
    order allow,deny
    allow from all
</Directory>
<Location /servlet/>
    Require valid-user
    AuthType Basic
    AuthName Pervasive
    PasswdFile %%SYSTEM%%
    UserID %%SERVER%%
</Location>
LoadModule jk_module /QSYS.LIB/QHTTPSVR.LIB/QZTCJK.SRVPGM
```

```

JkLogFile /www/your server name/logs/jk.log
JkLogLevel debug
JkWorkersFile /www/your server name/conf/workers.properties
JkMount /servlet/* jni

```

End copying

- After you have pasted the text above into the configuration text box, you need to change all instances of **your server name** to the name of your HTTP server.

**Note:** The configuration file above uses port 8110. To change the port, edit the second line of configuration file, **Listen 8110**, to use the port of your choice.

- Click **OK** to save your changes. You need to stop and start your HTTP server for changes to take effect.

After you edit your configuration file, you need to give proper authority to users.

### Steps to configure your ASF Tomcat servlet engine

- Add directories to your HTTP Server (powered by Apache)
- Create your XML file
- Update your classpath information
- Edit your configuration file
- Give proper authority to users

**Give proper authority to users:** Specify that the user profile that will run the iSeries Navigator for Wireless servlet (McYpvPervasive) has read/write authority to the directory /QIBM/UserData/OS400 (the ASF Apache user profile is QTMHHTTP). The servlet will create and update text files in this directory with the name QPVxxxxx.txt, where xxxxx is the user ID. Each text file has the list of endpoint systems a user is interested in monitoring. A default list can be specified if the user creates a text file with the name *qypv\_systems.txt*. The file should contain a record with a list of names of the endpoint systems (separated by commas) that are used for a new user of the servlet if one is not found for that user ID.

### Service programs

To give the Management Central service programs QUSRGFA, QYPSCOLL, and QYPVJNI (found in library **QSYS**) \*USE authority for the profile (QTMHHTTP) running the iSeries Navigator for Wireless servlet, follow these steps:

- In iSeries Navigator, expand **My Connections**.
- Right-click the system that contains the iSeries Navigator for Wireless servlet, and select **Run command**.
- Copy and paste the following text into the Run Command window:

```

GRTOBJAUT OBJ(QSYS/QUSRGFA) OBJTYPE(*SRVPGM) USER(QTMHHTTP) AUT(*USE)
GRTOBJAUT OBJ(QSYS/QYPSCOLL) OBJTYPE(*SRVPGM) USER(QTMHHTTP) AUT(*USE)
GRTOBJAUT OBJ(QSYS/QYPVJNI) OBJTYPE(*SRVPGM) USER(QTMHHTTP) AUT(*USE)

```
- Click **OK**.

### Files and Directories

You need to give permissions to the following files and directories.

The following files need \*RX (Read Execute authority) for the profile (QTMHHTTP) running the iSeries Navigator for Wireless servlet:

```

/QIBM/ProdData/OS400/jt400/lib/jt400Native.jar
/QIBM/ProdData/Access/Wireless/McPervasive/lib/mcypvperv.jar
/QIBM/ProdData/Access/Wireless/McPervasive/lib/mcypvmri.jar
/QIBM/ProdData/OS400/MGTC/McOSClient.jar

```

```
/QIBM/ProdData/OS400/MGTC/McClient.jar
/QIBM/ProdData/OS400/MGTC/McPrivServer.jar
/QIBM/ProdData/OS400/MGTC/McRscMonClient.jar
/QIBM/ProdData/OS400/MGTC/McJobMonClient.jar
/QIBM/ProdData/OS400/MGTC/McMsgMonClient.jar
/QIBM/ProdData/OS400/MGTC/McFileMonClient.jar
/QIBM/ProdData/OS400/MGTC/mcysv400.jar
/QIBM/ProdData/OS400/MGTC/AppMgrClient.jar
```

The following directory needs \*RWX (Read Write Execute authority) for the profile (QTMHHTTP) and any user profile using the iSeries Navigator for Wireless servlet:

```
/QIBM/UserData/OS400/Mgtc/Pervasive
```

If you have completed all the steps needed to configure your HTTP Server (powered by Apache) and ASF Tomcat servlet engine, then you have successfully added the iSeries Navigator for wireless servlet to your HTTP server.

### Steps to configure your ASF Tomcat servlet engine

1. Add directories to your HTTP Server (powered by Apache)
2. Create your XML file
3. Update your classpath information
4. Edit your configuration file
5. Give proper authority to users

**Give permissions to files in iSeries Navigator:** To give files and directories the proper permissions, follow these steps:

1. In iSeries Navigator, expand **My Connections**.
2. Expand the system that contains the iSeries Navigator for Wireless servlet.
3. Expand **File Systems**.
4. Expand **Integrated File Systems**.
5. Expand **ROOT**.
6. Expand **QIBM**.
7. Continue to expand directories within QIBM, until you reach the JAR file you want to change.
8. Right-click on the JAR file you want to change, and select **Permissions**.
9. Click **Add** and then enter QTMHHTTP as the user profile and click **OK**.
10. Select the permissions you want associate with the selected file, and click **OK** to save your changes.

A list of the files that need permissions are listed here:

Configure your ASF Tomcat servlet engine for HTTP Server (powered by Apache): Give proper authority to users

### Configure your firewall

When you use iSeries Navigator for Wireless, you will be accessing at least one of your systems from the Internet. If you access any of your systems from the Internet today, you probably have a firewall set up to prevent unauthorized access. Depending on your firewall configuration, you may have to modify your firewall setup to run iSeries Navigator for Wireless.

If you have never accessed your systems from the Internet and do not have a firewall set up, the following IBM Redbook provides strategies for doing so in the chapters about screened host architecture and screened subnet architecture. See AS/400 Internet Security Scenarios: A Practical Approach"



## Configure Management Central

iSeries Navigator for Wireless does not need a PC to run, but a PC is needed to set up Management Central. Management Central is an integral part of iSeries Navigator, the graphical interface for iSeries servers. You install iSeries Navigator on the PC as a component of iSeries Access for Windows. No additional installation is needed. When installing iSeries Access for Windows, select iSeries Navigator from the list of available components, and then select the components you want (Monitors, Commands). Next, you can set up Management Central (central system, endpoint systems, monitors, commands). To connect to Management Central from a wireless device, your Web application server must be set up on the endpoint server you have configured as your Management Central central system.

Because iSeries Navigator for Wireless is a companion to Management Central, iSeries Navigator for Wireless uses endpoint systems and monitors defined in Management Central to report status and to monitor metric information.

Do the following tasks in Management Central before you begin using your wireless device:

1. **Add endpoint systems**

Add systems to your network so that you can monitor status. Only systems defined as endpoint systems in Management Central will show up in iSeries Navigator for Wireless. This includes systems with integrated xSeries servers. If you want to manage your integrated servers on a particular system, be sure it has been added as an endpoint system.

When all of your endpoint systems have been added, collect inventory so information about each endpoint system is available for you to view from iSeries Navigator.

2. **Create monitors**

Monitors in Management Central can be powerful. You have the flexibility to have simple or complex monitors, to set up thresholds, and to perform automation if those thresholds occur. The goal of iSeries Navigator for Wireless is to keep you informed of the status of these monitors wherever you are. Create monitors with meaningful names (but try to keep them short or they will scroll on the wireless devices). When you give a monitor a meaningful name, you can easily recognize it on a wireless device, and you will know what it is monitoring for, if it has triggered, and the severity of a problem you are looking at. With iSeries Navigator for Wireless, you can also view metrics and values on a specific system.

3. **Start and stop monitors**

You have the ability to start and stop monitors from iSeries Navigator for Wireless, but if you start them in Management Central, your monitors will be active and on the lookout for problems, and data will have already been collected when you access your monitors from a wireless device.

Many times a problem will occur and you will need to monitor something in more detail. If you predefine these "troubleshooting" monitors in Management Central, you can then start them later using iSeries Navigator for Wireless.

4. **Create command definitions**

You can run commands from iSeries Navigator for Wireless. However, entering a long command into a Internet-ready telephone can be quite cumbersome. That is why your command definitions are also displayed so you can run the commands in the definitions directly from iSeries Navigator for Wireless. Create as many command definitions as you would like, but keep the names short so you can see them on a small display.

## Select a language

The iSeries Navigator for Wireless default language is English, but you have the ability to select different languages. Once you install the optional language support fix (PTF), the language can be set on the device being used, the browser used on your PC, or specified on the URL. Use the following URL and language choice:

*host.domain:port/servlet/McYpvPervasive?lng=lang*

*host*: The host name of the central system  
*domain*: The domain the central system is located  
*port*: The port that the instance of the Web server is listening to  
*lang*: The language to be viewed

**Available languages:**

Language	Language identifier	Character set
Belgium Dutch	nl_BE	iso-8859-1
Chinese Simplified	zh	gb2312
Chinese Traditional	zh_TW	big5
Croatian	hr	iso-8859-2
Czech	cs	iso-8859-2
Dutch	nl	iso-8859-1
English	en	iso-8859-1
French	fr	iso-8859-1
French Belgium	fr_BE	iso-8859-1
French Canadian	fr_CA	iso-8859-1
French Swiss	fr_CH	iso-8859-1
German	de	iso-8859-1
German Swiss	de_CH	iso-8859-1
Greek	el	iso-8859-7
Hungarian	hu	iso-8859-2
Italian	it	iso-8859-1
Italian Swiss	it_CH	iso-8859-1
Japanese	ja	shift-jis
Korean	ko	euc-kr
Polish	pl	iso-8859-2
Portuguese	pt	iso-8859-1
Portuguese Brazilian	pt_BR	iso-8859-1
Romanian	ro	iso-8859-2
Russian	ru	windows-1251
Slovakian	sk	iso-8859-2
Slovenian	sl	iso-8859-2
Spanish	es	iso-8859-1

**To Set the Default Language and Character Set for Netscape:**

To set the language, select **Edit** → **Preferences**, and then click **Languages** (click **Add** to see a list of language possibilities). Only the first one in the list is used.

To set the character set, select **View** → **Character Set**.

**To Set the Default Language and Character Set for Internet Explorer:**



To set the language, select **Tools** → **Internet Options**, and then click **Languages** button (click **Add** to see a list of language possibilities). Only the first one in the list is used.

To set the character set, select **View** → **Encoding**. (You may have to select **More** to see the entire list.)

## Connect to your central system

To begin using iSeries Navigator for Wireless, enter the URL of your central system into your wireless device. When pointing your device to the URL on your central system, use the following format. Carefully specify that the end of the URL (/servlet/McYpvPervasive) is entered exactly as shown:

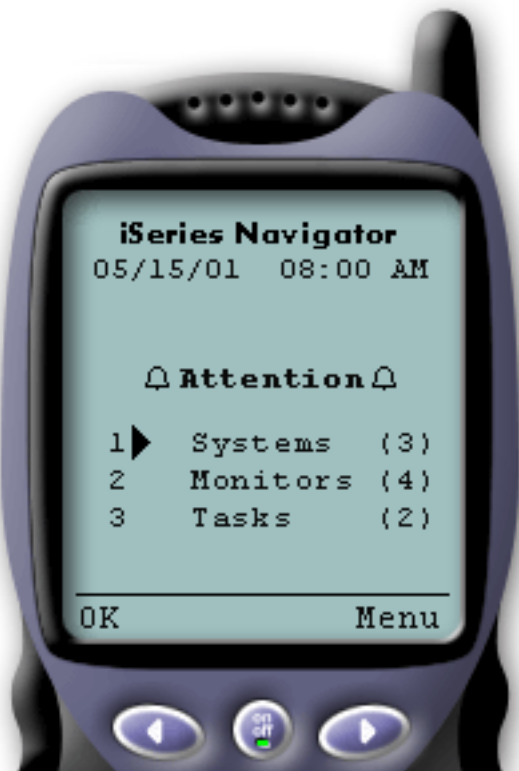
*host.domain:port/servlet/McYpvPervasive*

*host*: The host name of the central system.

*domain*: The domain where the central system is located.

*port*: The port that the instance of the Web server is listening to.

### Internet-ready telephone layout



If you have successfully connected to your central system, the first thing you see when using iSeries Navigator for Wireless on an Internet-ready telephone is the summary. It shows you how current the information is, how many systems are in your list, how many monitors you have running, and how many tasks you have run in the last 24 hours. It will also tell you if any item needs attention by showing an overall status of **OK** or **Attention** at the top of your display.

If **OK** is shown, all of your systems, monitors, and tasks are running smoothly.

If **Attention** is shown, a system, monitor, or task needs more attention. If a system is unavailable or if a monitor or task has failed, an exclamation point is shown next to the link with the item that needs attention. If a monitor has triggered, a bell is shown next to the Monitors link.

**Note:** For telephones that do not support graphics, an asterisk will be shown instead of a bell.

### PDA browser layout

The PDA browser layout is similar to the Internet-ready telephone. You will see a summary when first using iSeries Navigator for Wireless, but because there is more room, the PDA browser also displays the number of systems that are unavailable, the number of monitors that have triggered or failed, and the number of tasks that have failed. Because some compatible browsers do not support graphics, an asterisk (\*) is used instead of a bell when displaying a triggered status.

### Traditional browser layout

The traditional browser layout is exactly the same as the PDA browser layout. However, because of the increased display size, it looks more basic. To make better use of desktop space, you can put a small

browser window in the corner of your PC to take advantage of Management Central functions while working with other applications. If you are using a traditional Internet browser on your PC, you can select **Show all** from the main menu to display all information on a full browser window.

After you have successfully connected to your system, you may want to customize your connection and begin managing iSeries Navigator for Wireless.

## Customize your connection

Limit user access to Management Central by manually removing functions from iSeries Navigator for Wireless and by configuring Application Administration, and customize how long summary information stays on your display before it is cleared.

### Limit user access

Because you may want to limit a user's capability to work with Management Central from a wireless device, the following steps provide a way to let users view monitors and system status but not take any action from iSeries Navigator for Wireless.

The following functions can be removed:

- Running commands on iSeries and integrated xSeries servers
- Starting or shutting down integrated xSeries servers
- Performing any action on a job (Hold, Release, End)
- Performing any action on a message (Reply, Delete)
- Starting, stopping, or restarting any monitor

To limit access, you must create the following options file:

1. In the integrated file system, create a file in the following directory:

**Directory:** QIBM/UserData/OS400/MGTC/Pervasive/  
**File:** QYPV\_OPTIONS.OPT

2. Enter one of the following text strings into your file:

- readonly=yes
- readonly=no

A specific user can also have an options file named QYPVxxxxxx.OPT, where xxxxxx is the user ID. This specific user file will override the QYPV\_OPTIONS.OPT file allowing you to grant all users readonly=yes authority, while granting specific users all access.

### Set task details retrieval length

Detailed information about tasks are available on the summary screen. These details are set to expire in 24 hours (tasks will still run, but no new data about a task will be retrieved from the central system and displayed on your wireless device after 24 hours). You can change the expiration time by editing the following option file:

**Directory:** QIBM/UserData/OS400/MGTC/Pervasive/  
**File:** QYPV\_OPTIONS.OPT

Add the following new entry to the option file (where XXXX, any number between 1-9999, is the number of hours):

HOURS\_OLD=XXXX

This is not case sensitive and can be either on a separate line or separated by a space from the READONLY entry.

For example, your newly edited file might read:

```
READONLY=no  
HOURS_OLD=48
```

This will give you full access and show tasks that have run in the last 48 hours.

### **Configure Application Administration**

You can use Application Administration to control user access to the following functions in Management Central: limit or grant access to monitors and commands. You should check to make sure the functions selected in Application Administration are configured to match your desired preferences for connecting to Management Central with a wireless device.

Examples:

- If a user is not authorized to Management Central but has a valid user ID on the iSeries, when they try to connect to Management Central with a wireless device an authorization error message is displayed.
- If a user is authorized to Management Central but does not have Application Administration authority to access monitors, no monitor information is displayed on the wireless device.
- If a user is not authorized to commands in Management Central, they will not be able to run a command definition or run a command on an Integrated xSeries Server.

For more information on configuring and using Application Administration, see: Application Administration

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## Manage iSeries Navigator for Wireless



Using iSeries Navigator for Wireless is quite simple. Once your central system is set up properly, you can connect to your central system by pointing your internet-ready telephone, PDA, or traditional web browser to the URL on your central system. It connects to your central system, asks you to log on, and shows you a summary of the status of all your systems, monitors, and tasks. iSeries Navigator for Wireless is designed with the assumption that as long as you can find out that your systems, monitors, and tasks are running smoothly, no other information is required. You always have the option to view more information, and you can even check the detailed monitor metrics on systems that are running smoothly. But generally, if everything is OK, it is assumed that the summary is all you need to look at.

When you manage your systems with iSeries Navigator for Wireless, you can feel confident when your wireless device tells you that everything in your network of iSeries servers is OK because you define what OK means in your environment. If you set up the systems and monitors you are interested in, and you tell the monitor to trigger at a certain threshold, then all you have to do is view the iSeries Navigator for Wireless summary page and you can easily determine if everything is running smoothly or if something needs attention.

The following pages help you use iSeries Navigator for Wireless to interact with monitors in both Management Central, iSeries, and Integrated xSeries Servers, run commands, to work with tasks and systems, and to control user access.

### **Work with iSeries systems**

iSeries Navigator for Wireless allows you to view the properties of systems, add or remove a system, and customize the system list.

### **Work with Integrated xSeries Servers**

iSeries Navigator for Wireless provides you with the ability to manage your Integrated xSeries Servers from your wireless device.

### **Work with tasks**

You can view summary details for all your Management Central tasks.

### **Run commands across multiple systems**

iSeries Navigator for Wireless makes it easy to run commands on iSeries systems from your wireless device.

### **View and interact with monitors**

If you have preconfigured monitors to run in Management Central, you can view and interact with system monitors, message monitors, job monitors, file monitors, and B2B activity monitors using iSeries Navigator for Wireless.

## **Work with iSeries systems**

You can interact with your iSeries systems from a wireless device by using iSeries Navigator for Wireless. When the **Systems** link is selected, the list of all systems in your list is shown. You can customize your system list, and add only the systems you want to see, but the system must first be predefined as an endpoint system in Management Central. If any systems in your list are not available, an exclamation point is shown next to the system, and it is in bold. You can add and remove systems from your system list, and you can also create a default system list, or create system lists for specific users.

### **Add and remove systems from your list:**

1. Go to the menu, and select **Add System** or **Remove System**.
2. Select the system to add or remove.

Each system is also a link. Select a system to view properties on that system, as well as all the Integrated xSeries Servers on that system.

Because adding systems to your list can be cumbersome, administrators can create a default system list that becomes the default list for any user. The user can then customize that list to their own liking. This feature can be useful if a group of users is interested in data stored on the same five to ten systems.

### **Create a default system list:**

In the following directory, create the following file:

**Directory:** QIBM/UserData/OS400/MGTC/Pervasive/  
**File:** QYPV\_SYSTEMS.txt

After you have created this file, add all the systems that you want to include in your default list on one line, separated by a comma. You can also create a system list for a specific user by creating the file QYPVxxxx.txt, where xxxx is the user profile name.

## **Work with Integrated xSeries Servers for iSeries**

If you have iSeries systems that have Integrated xSeries Servers (IXS), simply add the IXS systems to your system list, and you have the ability to manage your Integrated xSeries Servers.

When you select an iSeries system, you can either link to the system properties, or you can view the IXS. You will notice right away that the link to the IXS uses the same status as other iSeries Navigator for Wireless functions. It tells you if any IXS needs attention, or if all of them are OK.

You can run NT commands on a single or all Integrated xSeries Servers, and see the properties of each one. The NT commands are started as Management Central tasks, so you can keep track of the commands you run. The image below shows IXS support in iSeries Navigator for wireless running in a

traditional browser format.

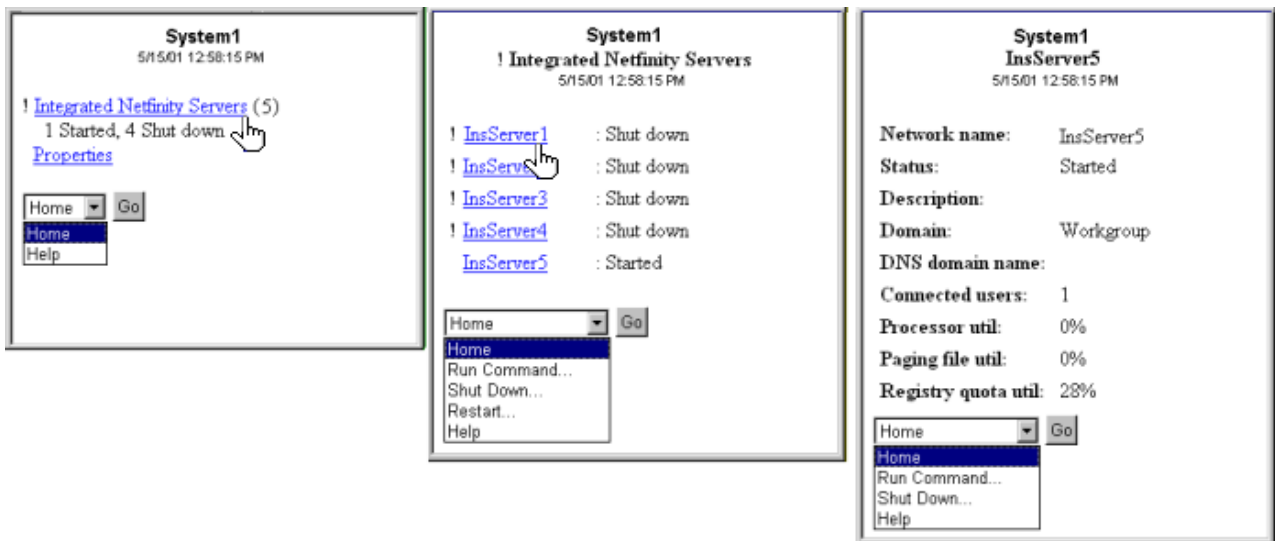


Figure 1: Clicking on your Integrated xSeries Servers expands and displays the details of each system.

**Note:** To manage integrated xSeries servers from the iSeries, the user ID and password must be the same on both the xSeries and iSeries.

For more information see Integrated xSeries Servers

## Work with tasks

Click **Tasks** from the main summary window to view summary details for the following Management Central tasks:

- Commands
- Packages and Products
- Inventory
- Fixes
- Collection Services
- Users and Groups
- System Values

For each type of task, the task summary displays the total number of tasks, the number of tasks that have failed, and the number of tasks that have completed. Only the tasks run in the last 24 hours will display in your list; if you have not run a Command in the last 24 hours, no information on Commands will display on the task summary screen. Task information is set to expire in 24 hours, but you can change this expiration by customizing your connection.

Click a specific task such as **Commands** to view the name or names of command tasks that are starting, or that have completed or failed. Click the name of a specific task to view the endpoint system that the task was or is running on.

## Run commands across multiple systems

Use iSeries Navigator for Wireless to run any OS/400 command across multiple iSeries systems. You can select **Run Command** from the summary page, which then asks you to select the system or system group to run the command on. Or you can select a system from your system list and run a command on it.

When you select **Run Command**, you have the option of selecting an existing command definition (defined by you in Management Central), or you can enter any command. Because entering text on a telephone is cumbersome, using command definitions is extremely useful.

When commands are started, they are started as Management Central tasks. That way you can keep a record of them, view the status across all systems, and view the overall status by looking at the summary page. The summary page displays all the tasks you have run with Management Central (including iSeries Navigator for Wireless) over the last 24 hours on your wireless device. After 24 hours, you need to use iSeries Navigator on your PC to view a Command task. If you want to display task details on your wireless device for longer than 24 hours, you can customize your connection.

The graphic below shows a sample of iSeries Navigator for Wireless command support in a PDA format. Notice that if the command works, a plus sign (+) is displayed. On an internet telephone that supports graphics, a successful command is represented by a smiley face icon.

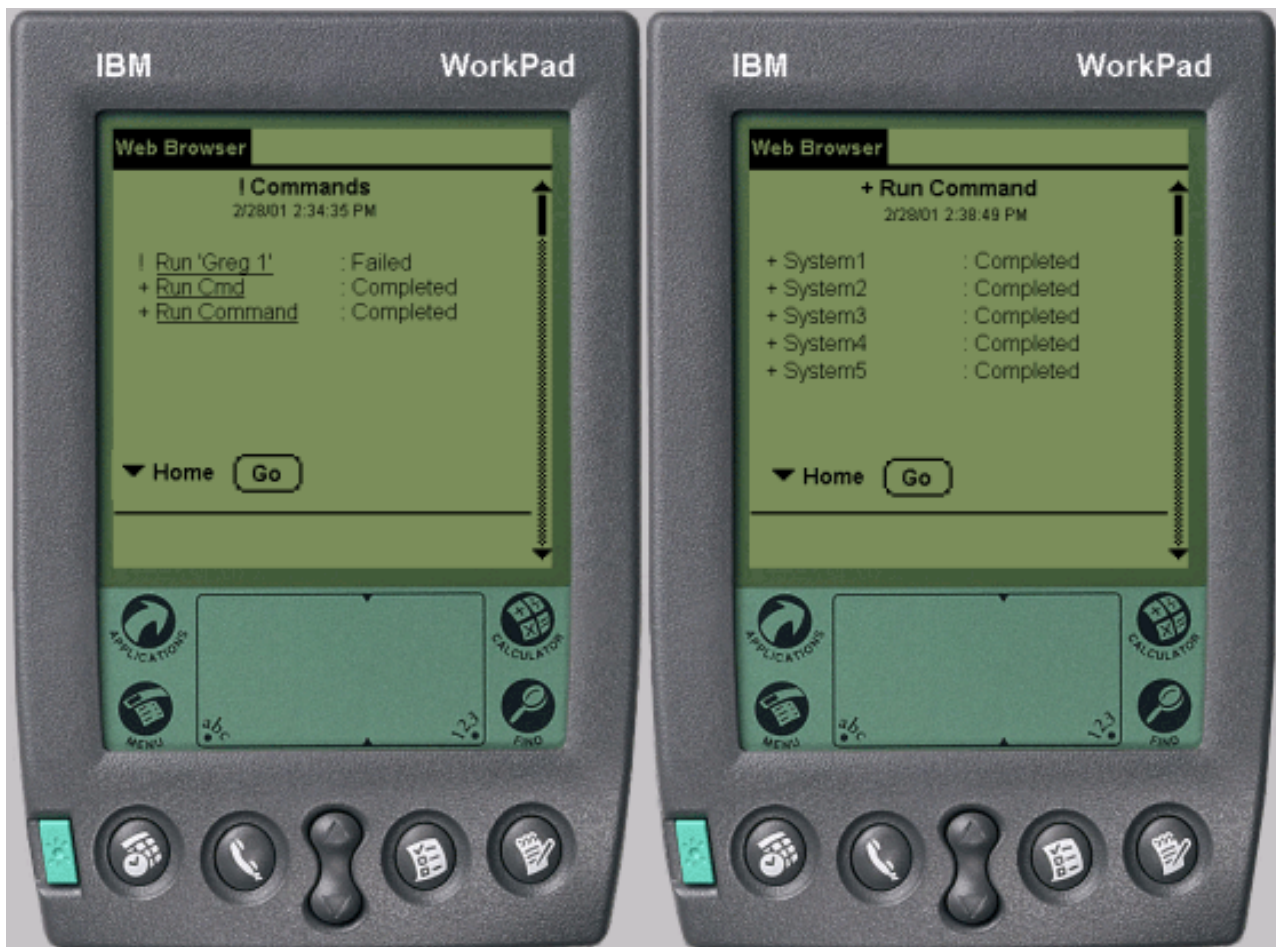


Figure 1: Viewing the status of your commands

## View and interact with monitors

iSeries Navigator for Wireless allows you to view and interact with system monitors, job monitors, message monitors, file monitors, and B2B activity monitors from a wireless device.

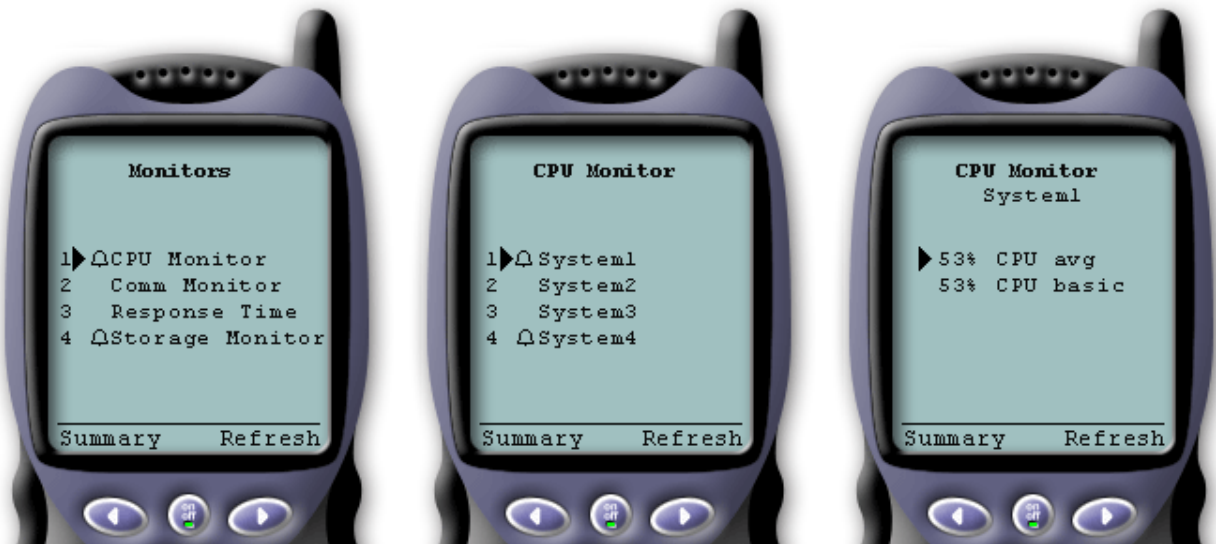


Figure 1: Viewing monitor metrics on a wireless device

### System monitors

You can work with system monitors to view the metrics and current values being monitored, as well as the top 20 items (jobs, disk units, and so forth) that make up the metric value. You can also work with jobs listed in the monitor (display details, hold, release, and end).

### Job monitors

You can work with job monitors to view all jobs across systems that match monitor criteria. You can see metrics and current values being monitored, and you can work with the jobs listed in the monitor (display details, hold, release, and end).

### Message monitors

You can work with message monitors to view all messages across systems that match monitor criteria. And you can work with the messages listed in the monitor (display details, reply, and delete).

### File monitors

You can use a file monitor to notify you whenever a selected file has changed. Or, you can monitor for a specified size or for specified text strings.

### B2B activity monitors

If you have an application like **Connect for iSeries** configured, you can use a B2B activity monitor to monitor your B2B transactions. From a wireless device, you can view metrics and current B2B transaction values being monitored.

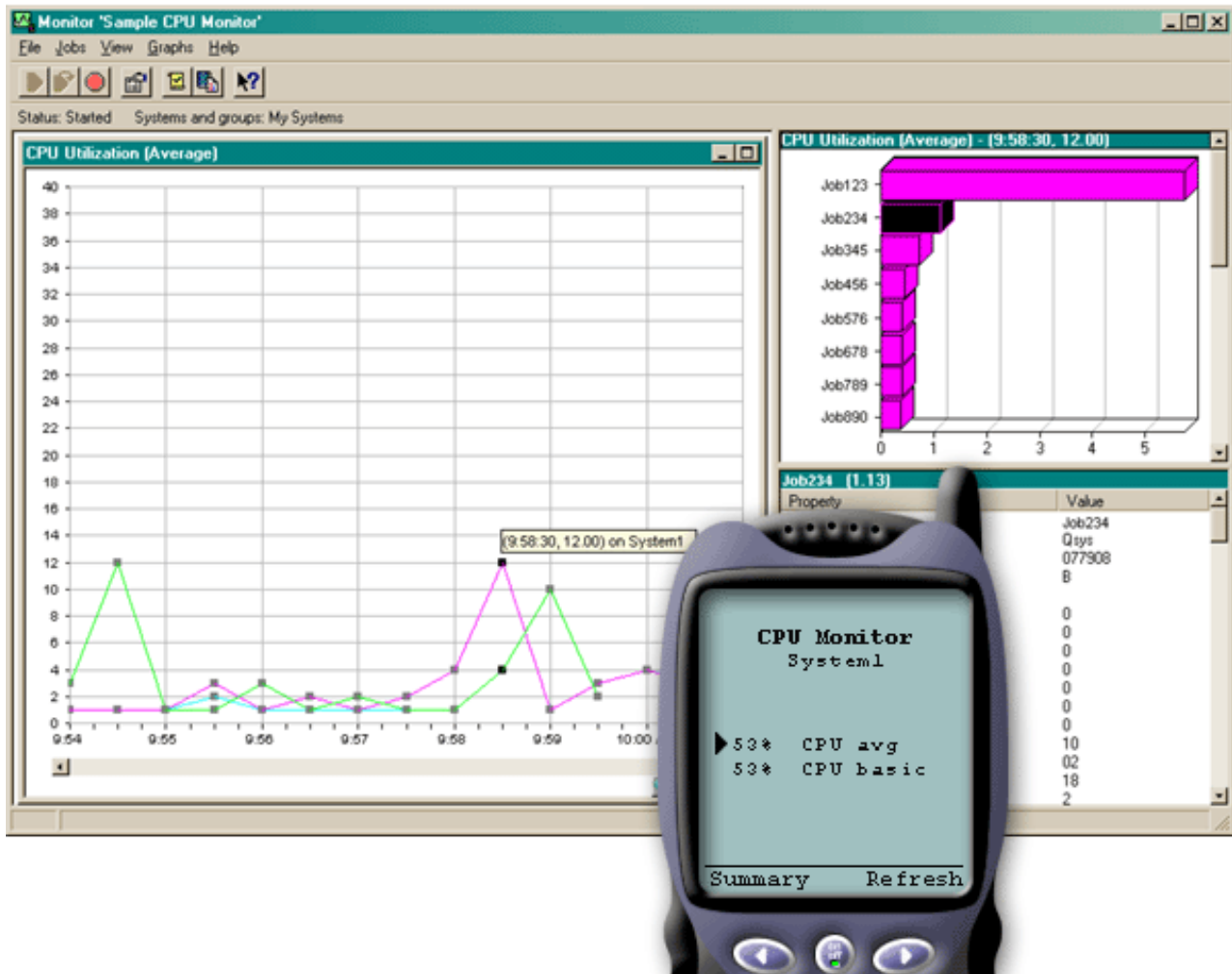
### System monitors

Select the System monitors link to display a list of all your active system monitors (any monitors that are stopped are not shown). If any monitors failed or are triggered, an exclamation point or bell appears next to the monitor.

When you select a monitor, it shows all systems where that monitor is running, and if you select a system, it shows you all metrics in that monitor and the values for the selected system.



Once you see the metric you are interested in, you can select the metric and it shows you the top 20 items that caused that metric value. For example, if you select **CPU average**, it shows you the top 20 jobs. Or, if you select **Disk utilization**, it shows you the top 20 disk units.



\*

Figure 1: Viewing system monitor metrics on a wireless device

From the list of jobs, you can also select a job to see details, and you can work with that job by selecting **Hold**, **Release**, or **End**.

You can refresh each page to refresh the list at any time. You can also select **Home** to display an updated summary page.

Because display size is minimal, the system monitor metric names are shortened. Here is a table that describes what iSeries Navigator for Wireless displays:

**Monitor metric names in iSeries Navigator for Wireless:**

System monitor metric names	iSeries Navigator for Wireless name	Unit of measure
CPU Utilization (Average)	CPU avg	% busy
CPU Utilization (Interactive Jobs)	CPU int jobs	% busy
CPU Utilization (Interactive Feature)	CPU int feature	%

System monitor metric names	iSeries Navigator for Wireless name	Unit of measure
CPU Utilization Basic (Average)	CPU basic	% busy
CPU Utilization (Secondary Workloads)	CPU 2nd workload	%
CPU Utilization (Database Capability)	CPU DB	%
Interactive Response Time (Average)	Int resp avg	Seconds
Interactive Response Time (Maximum)	Int resp max	Seconds
Transaction Rate (Average)	Trans rate avg	Transactions per second
Transaction Rate (Interactive)	Trans rate int	Transactions per second
Batch Logical Database I/O	Batch DB IO	IO/second
Disk Arm Utilization (Average)	Disk util avg	% busy
Disk Arm Utilization (Maximum)	Disk util max	% busy
Disk Storage (Average)	Disk stg avg	% full
Disk Storage (Maximum)	Disk stg max	% full
Disk IOP Utilization (Average)	Disk IOP avg	% busy
Disk IOP Utilization (Maximum)	Disk IOP max	% busy
Communications IOP Utilization (Average)	Comm IOP avg	% busy
Communications IOP Utilization (Maximum)	Comm IOP max	% busy
Communications Line Utilization (Average)	Comm line avg	% busy
Communications Line Utilization (Maximum)	Comm line max	% busy
LAN Utilization (Average)	LAN avg	% busy
LAN Utilization (Maximum)	LAN max	% busy
Machine Pool Faults	Mch pool fault	Faults per second
User Pool Faults (Average)	Usr pool fault avg	Faults per second
User Pool Faults (Maximum)	Usr pool fault max	Faults per second

## Job monitors

Job monitors work the same way as the system monitors do in iSeries Navigator for Wireless. After you create a job monitor in Management Central, you can start, stop, and view it in iSeries Navigator for Wireless. You can also view the overall status of the job monitor, view the list of systems it is running on, view the jobs that match the monitor criteria for each system, and work with a job using **Hold**, **Release**, or **End**.

### Note:

In Management Central, you can share job monitors across multiple users. However, when using iSeries Navigator for Wireless, only the job monitors that you have created are shown.

## Message monitors

Message monitors work the same way as system monitors do in iSeries Navigator for Wireless. After you create a message monitor in Management Central, it shows up in iSeries Navigator for Wireless, and you can view the overall status of the message monitor, view the list of systems it is running on, view the messages that match the monitor criteria for each system, and work with a message using **Details**, **Reply**, or **Delete**.

**Note:**

In Management Central, you can share message monitors across multiple users. However, when using iSeries Navigator for Wireless, only the message monitors that you have created are shown.

**File monitors**

After you have created a file monitor in Management Central, you can start, stop, and display details about the file monitor in iSeries Navigator for Wireless. The file monitor summary window displays the iSeries system the monitor is running on, the path to the current file you are viewing, the size of the file, the last date and time the file was modified, and the changed text that triggered the file.

**Note:**

In Management Central, you can share file monitors across multiple users. However, when using iSeries Navigator for Wireless, only the file monitors that you have created are shown.

**B2B activity monitors**

To use a business-to-business activity monitor, you must configure a consolidated system to log B2B transactions collected from an application like Connect for iSeries.

After you set up a B2B activity monitor in Management Central, you can start, stop, and view details about the activity monitor in iSeries Navigator for Wireless. View summary status on active transaction duration and active transaction count triggers collected from the B2B activity monitor.

**Note:**

The B2B activity monitor data you want to view with iSeries Navigator for Wireless must be on a V5R2 system. Any B2B activity monitor data stored on a V5R1 system will not work with iSeries Navigator for Wireless.

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**Related information for iSeries Navigator for Wireless**

Listed below are the IBM Redbooks(TM) (in PDF format), Web sites, and Information Center topics that relate to the iSeries Navigator for Wireless topic. You can view or print any of the PDFs.

- AS/400 Internet Security Scenarios: A Practical Approach



Learn how to exploit your AS/400 integrated network security functions. Today, network administrators face the challenge of implementing layered security architectures to protect their networks from the increasing sophistication of "hackers". To provide all of the security needed within a manageable budget is a complex task. This redbook explores all the native network security features available on the AS/400 system such as IP filters, NAT, VPN, HTTP proxy server, SSL, DNS, mail relay, auditing, and logging. It describes their use through practical examples.

Although OS/400 is not intended to be a firewall, the correct implementation of its rich set of network security services, combined with routers or other Internet security appliances, may eliminate the need for a separate firewall product. In some cases, it can provide an affordable solution for smaller sites. The AS/400 network security functions can be used to enhance the security of environments where routers with firewall security features are also used. This redbook is designed to meet the needs of network administrators, consultants, and AS/400 specialists who plan to design, implement, and configure AS/400 networks connected to the Internet and are evaluating alternatives to traditional firewall products.

**Websites**

For V4R5 and V5R1 information about iSeries Navigator for Wireless (previously known as Management Central Pervasive), see:

- iSeries Navigator for Wireless



Access Management Central functions on the go! The iSeries Navigator for Wireless homepage gives you more information about this exciting solution for pervasive computing. This homepage covers V4R5 and V5R1 release information.

For more information about Management Central and iSeries Navigator, see:

- Management Central



The homepage for Management Central provides a variety of information including release updates, functional overviews, FAQs, and more.

- iSeries Navigator



In addition to Management Central function, iSeries Navigator provides a wide variety of tools to simplify iSeries management. Go to the iSeries Navigator homepage to find information about iSeries Navigator, including functional release overviews, news about technical conferences, and other hot topics. Click the link to Management Central for a variety of information including release updates, functional overviews, FAQs, and more. For information about installing and getting started with iSeries Navigator, be sure to see the iSeries Navigator topic in the Information Center.

For more information about Web application servers, see:

- ASF Jakarta Tomcat



The Apache Software Foundation Jakarta project homepage provides detailed information covering the Tomcat servlet engine.

- WebSphere Application server



The latest information about the WebSphere Application Server for iSeries is located in the WebSphere Application Server for iSeries product Web site.

To save a PDF on your workstation for viewing or printing:

1. Right-click the PDF in your browser (right-click the link above).
2. Click **Save Target As...**
3. Navigate to the directory in which you would like to save the PDF.
4. Click **Save**.

If you need Adobe Acrobat Reader to view or print these PDFs, you can download a copy from the Adobe Web site ([www.adobe.com/products/acrobat/readstep.html](http://www.adobe.com/products/acrobat/readstep.html))



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