



System i

# Connecting to System i System i Navigator for Wireless

*Version 6 Release 1*







System i

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System i Navigator for Wireless

*Version 6 Release 1*

**Note**

Before using this information and the product it supports, read the information in "Notices," on page 25.

This edition applies to version 6, release 1, modification 0 of IBM i5/OS (5761-SS1) and to all subsequent releases and modifications until otherwise indicated in new editions. This version does not run on all reduced instruction set computer (RISC) models nor does it run on CISC models.

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## System i Navigator for Wireless

System i<sup>®</sup> Navigator for Wireless is an i5/OS<sup>®</sup> program that runs on a Web application server. With System i Navigator for Wireless, administrators can remotely monitor and manage system performance, status, jobs, and messages using an Internet-ready telephone, a personal digital assistant (PDA) with a wireless modem, or a traditional Web browser on a workstation.

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 System i Navigator for Wireless, administrators have more flexibility in how they access and interact with Management Central.

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

- Watch system status.
- View properties of the system.
- View detailed summaries:
  - Commands
  - Packages and products
  - Inventory
  - Fixes
  - Collection services
  - Users and groups
  - System values
- Manage integrated servers: Run commands on all integrated servers at the same time or on just one server, and start or shut down the servers.
- Run i5/OS 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 get started with System i 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.

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## What's new for V6R1

Read about new or significantly changed information for the System i Navigator for Wireless topic collection.

## Lightweight Infrastructure Web application server

Beginning in V6R1, System i Navigator for Wireless can run using only the Lightweight Infrastructure Web application server as the servlet engine. Previously, you could choose from an Apache Software Foundation (ASF) Jakarta Tomcat servlet engine or a WebSphere® Application Server to run the servlet.



## What's new as of 6 May 2008

The following topics are new or updated:

- "Configuring a Web application server" on page 7
- "Starting and stopping System i Navigator for Wireless" on page 14

## How to see what's new or changed

To help you see where technical changes have been made, the information center uses:

- The  image to mark where new or changed information begins.
- The  image to mark where new or changed information ends.

In PDF files, you might see revision bars (|) in the left margin of new and changed information.

To find other information about what's new or changed this release, see the Memo to users.

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## PDF file for System i Navigator for Wireless

You can view and print a PDF file of this information.


To view or download the PDF version of this document, select System i Navigator for Wireless (about 637 KB).

## Saving PDF files

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

1. Right-click the PDF link in your browser.
2. Click the option that saves the PDF locally.
3. Navigate to the directory in which you want to save the PDF.
4. Click **Save**.

## Downloading Adobe Reader

You need Adobe® Reader installed on your system to view or print these PDFs. You can download a free copy from the Adobe Web site ([www.adobe.com/products/acrobat/readstep.html](http://www.adobe.com/products/acrobat/readstep.html)) .

### Related reference



“Related information for System i Navigator for Wireless” on page 23  
IBM® Redbooks® publications and Web sites contain information that relates to the System i Navigator for Wireless topic collection. You can view or print any of the PDF files.

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## Setting up System i Navigator for Wireless

To use System i Navigator for Wireless, you must meet certain software and hardware requirements. You must decide which kind of wireless device to use and what kind of applications you need to install and configure.

### Related concepts

“Managing your systems with System i Navigator for Wireless” on page 14

You can manage your systems from a wireless device. Use System i Navigator for Wireless to interact with monitors in Management Central and in integrated servers. You can run commands, work with tasks and systems, and control user access.

## Hardware and software requirements

Before setting up System i Navigator for Wireless, you need to determine whether you have all the necessary software and hardware to run System i Navigator for Wireless.

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

- The System i Access for Wireless licensed program (5722-XP1), which includes System i Navigator for Wireless.
- A device to run the function:
  - An Internet-enabled telephone with a wireless Internet service
  - A personal digital assistant (PDA) with a Web browser, a wireless modem, and a wireless Internet service
  - A traditional Web browser on a workstation
- A system 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, such as Lightweight Infrastructure, running on your central system.

**Note:** For V6R1, System i Navigator for Wireless can only run using the Lightweight Infrastructure Web application server as the servlet engine.

The following figure shows that a wireless device sends and receives information through the Internet and through a firewall when it is connected to a Management Central central system. System i Navigator for Wireless and your Web application server are both installed on the central system. The central system points to four endpoint systems.

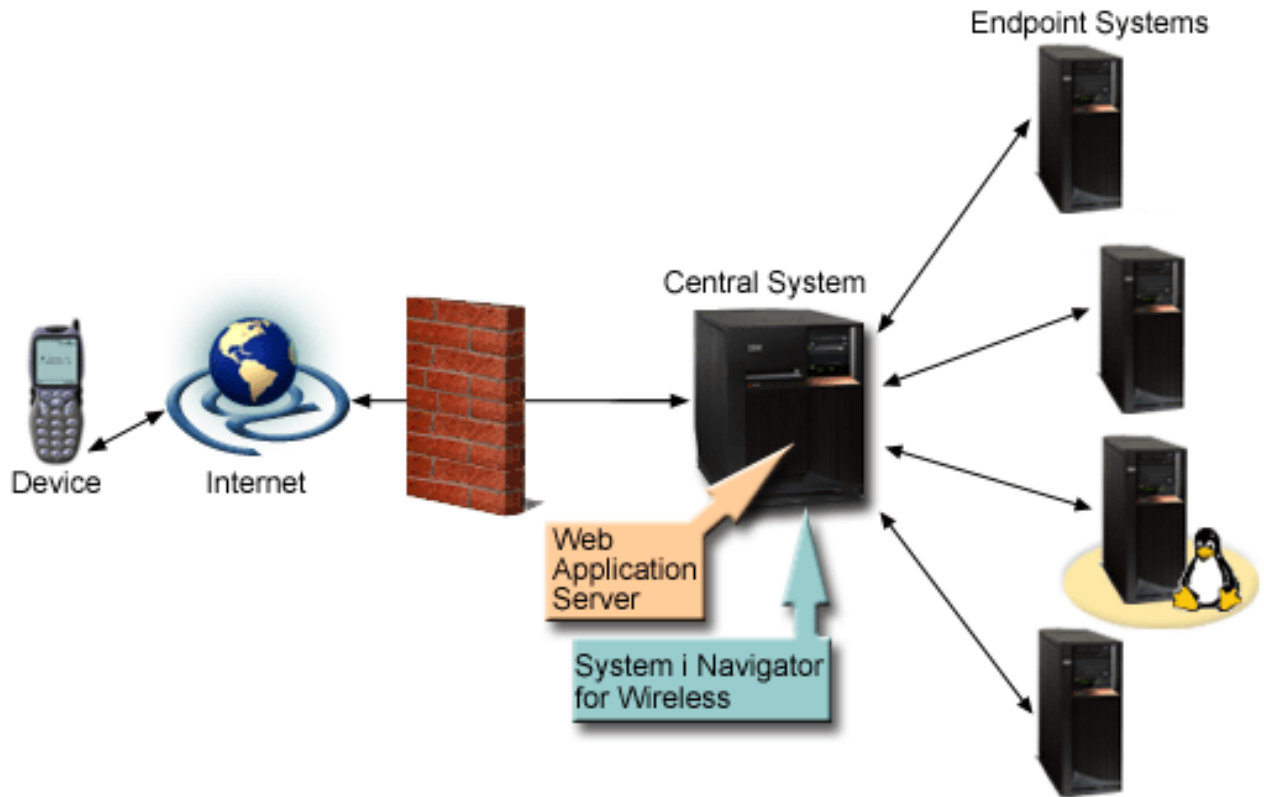


Figure 1. Wireless device connecting to Management Central

## Selecting a device

You must choose devices that are compatible with System i Navigator for Wireless.

Internet-ready telephones and wireless personal digital assistants (PDAs) are a rapidly changing technology. They differ in screen size and many other significant characteristics. This information helps you choose devices that are compatible with System i Navigator for Wireless. Other wireless devices might also be compatible if they support wireless Internet browsing, but the interaction might be different.

### Selecting a device: Internet-ready telephones

When you select an Internet-ready telephone to use with System i Navigator for Wireless, you should consider the telephone's physical characteristics, its compatibility with System i Navigator for Wireless, the Web browser supported, and the wireless Internet services available.

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

- The physical characteristics of the telephone itself (display size, button location, and so forth)
- The Web browser supported on the telephone (often called a microbrowser or a minibrowser)
- 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. When you select a particular telephone, you are also making your browser choice. System i Navigator for Wireless currently supports the Openwave Mobile Browser, Version 3.1, and later (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 might 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 System i Navigator for Wireless

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

Telephone	Type of testing	Wireless service	Comments
Mitsubishi T250	Device	AT&T PocketNet	Small font preference is recommended.
<b>Note:</b> Other phones have been tested with a simulator, including the Ericsson R280 LX.			

Other Internet-ready telephones might also be compatible. The Openwave Mobile Browser is licensed by a number of telephone manufacturers around the world. Any HTML browsers, Wireless Markup Language (WML) telephones, and Blackberries with the OS version 4.0, which contains an HTML browser, can work with System i Access for Wireless. 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: Supported Phones Web page.

#### Related information

 [Openwave: Supported Phones Web page](#)

 [Openwave Web site](#)

### Selecting a device: PDAs

System i Navigator for Wireless uses a Web browser running on your personal digital assistant (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 System i 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 from 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 System i 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 might also be compatible. Be aware that the differences in how browsers display HTML can cause System i Navigator for Wireless to appear and behave differently from the browsers listed in the preceding paragraph.

If you need extra security, use a browser that supports Secure Sockets Layer (SSL).

## PDA compatibility with System i Navigator for Wireless

The following PDAs are compatible with System i 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. Because System i Navigator for Wireless runs in a browser, the choice of PDA should not make a difference. However, only the PDAs listed in the preceding table were tested. Any device that lets you perform Web browsing and that supports HTML might be compatible with System i 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.

### Related information

-  [AvantGo](#)
-  [Eudora Web site](#)
-  [GoAmerica Communications Web site](#)

## Selecting a device: PCs

You can also use a traditional Web browser with System i Navigator for Wireless.

IBM System i Navigator for Wireless runs on an Internet-ready telephone or PDA. However, because it runs on a browser in a PDA, System i Navigator for Wireless can also run on a traditional Web browser. Any current workstation Web browser should work because PDA browsers have more limitations.

Because System i Navigator for Wireless needs only 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 in a full browser.

## Developing an Internet protection program

Because user authentication of System i Navigator for Wireless takes place over the Internet, you need to develop an Internet protection program to protect authentication information.

Because the System i Navigator for Wireless servlet needs to obtain the user ID of the remote user, the Web application server needs 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, a protection plan is necessary to protect the 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 protection that you want be configured or set up on a Web application server?
- What is the sensitivity of the data transferred between the client and server?

| When you are developing a protection plan, refer to *AS/400® Internet Security Scenarios: A Practical Approach*.

#### **Related information**

 [AS/400 Internet Security Scenarios: A Practical Approach](#)

## **Configuring your wireless environment**

Before you use System i Navigator for Wireless, ensure that you have properly configured your Web application server and firewall.

#### **Related concepts**

“Connecting to your central system” on page 10

To begin using System i Navigator for Wireless, you must first establish your connection to the central system. Enter the URL of your central system into your wireless device.

### **Configuring a Web application server**

| You can use the Lightweight Infrastructure Web application server to run the System i Navigator for Wireless servlet.

#### **Prerequisites**

| You must have QSECOFR authority and must have the following products installed:

- | • IBM HTTP Server (5761-DG1)
- | • The Lightweight Infrastructure Web application server
- | • IBM System i Access for Wireless (5722-XP1)

| In addition, ensure that you apply the following corequisite PTFs:

- | • PTF SI31126
- | • PTF SI30251

| To configure the Lightweight Infrastructure Web application server, you must start the HTTP QIWIRELESS server by running the following command:

```
| STRTCPSVR SERVER(*HTTP) HTTPSVR(QIWIRELESS)
```

| The Lightweight Infrastructure Web application server is then automatically configured.

| To access the main page, go to this URL address: `http://[systemname]:9004/McYpvPervasive`, where `[systemname]` is the system name (or system short name) in the network or the IP address of the system.  
| You might need the DNS for the system name in the network.

| Now that you have finished setting up your Web application server, you can continue to configure your wireless environment.

#### **Related tasks**

- | “Starting and stopping System i Navigator for Wireless” on page 14
- | You can start and stop System i Navigator for Wireless from a command-line interface or from the
- | IBM Web Administration for i5/OS interface.

## Configuring your firewall

When you use System i Navigator for Wireless, you access your system from the Internet. If you have a firewall, you might have to modify your firewall setup to run System i Navigator for Wireless.

If you have never accessed your systems from the Internet and do not have a firewall set up, see the chapters about screened host architecture and screened subnet architecture in the IBM Redbooks publication *AS/400 Internet Security Scenarios: A Practical Approach* for strategies to set up a firewall.

### Related information

 [AS/400 Internet Security Scenarios: A Practical Approach](#)

## Configuring Management Central

You can take full advantage of the capability that System i Navigator for Wireless provides when you interact with Management Central. System i Navigator for Wireless does not need a PC to run, but you need a PC to set up Management Central.

### Before you begin

Before you begin configuring Management Central, you must complete the following tasks:

1. Install System i Navigator on the PC as a component of the System i Access for Windows<sup>®</sup> licensed program.  
No additional installation is needed. When you install System i Access for Windows, select System i Navigator from the list of available components, and then select the components you want (Monitors, Commands).
2. 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 system you have configured as your Management Central central system.

### About this task

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

To configure Management Central for use by System i Navigator for Wireless, follow these steps:

1. Add systems to your network so that you can monitor status. To add endpoint systems, follow the steps in *Adding endpoint systems to your Management Central network*.  
Only systems defined as endpoint systems in Management Central show up in System i Navigator for Wireless. This includes systems with integrated servers. If you want to manage your integrated servers on a particular system, make sure that the system 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 System i Navigator.
2. Create monitors with meaningful names, and keep the names short to prevent them from scrolling on the wireless devices. To create monitors, follow the steps in *Creating a new monitor*.  
When you give a monitor a meaningful name, you can easily recognize the monitor on a wireless device, and you will know what it is monitoring for, if it has been triggered, and the severity of a problem you are looking at.

Monitors in Management Central enable you to set up thresholds, and to perform automation if those thresholds occur. The goal of System i Navigator for Wireless is to keep you informed of the status of these monitors wherever you are. With System i Navigator for Wireless, you can also view metrics and values on a specific system.

### 3. Start and stop monitors.

You can start and stop monitors from System i Navigator for Wireless, but if you start them in Management Central, your monitors are active and looking for problems, and data will have already been collected when you access your monitors from a wireless device. Many times after a problem occurs, you will need to monitor something in more detail. If you predefine these troubleshooting monitors in Management Central, you can start them later using System i Navigator for Wireless.

### 4. Create command definitions.

You can run commands from System i Navigator for Wireless. However, entering a long command into an Internet-ready telephone can be quite cumbersome. That is why your command definitions are also displayed; you can run the commands in the definitions directly from System i 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.

To create command definitions, follow these steps:

- a. Expand **Management Central** → **Definitions**.
- b. Right-click **Command** and select **New Definition**. The New Command Definition window opens.

#### Related concepts

Management Central

#### Related tasks

Installing System i Navigator

Creating command definitions

## Selecting a language

The System i Navigator for Wireless default language is English, but you can configure your device to display your language of choice.

After you install the optional language support fix (PTF), the language can be set on the device being used, can be set for the browser used on your PC, or can be specified on the URL. If you specify the language on the URL, follow this URL pattern:

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

*host*: The host name of the central system

*domain*: The domain on which 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



Language	Language identifier	Character set
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

## Setting 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**.

## Setting 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 might need to select **More** to see the entire list.)

## Connecting to your central system

To begin using System i Navigator for Wireless, you must first establish your connection to the central system. 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 the end of the URL (/McYpvPervasive) exactly as shown:

| *host.domain:port*/McYpvPervasive

|

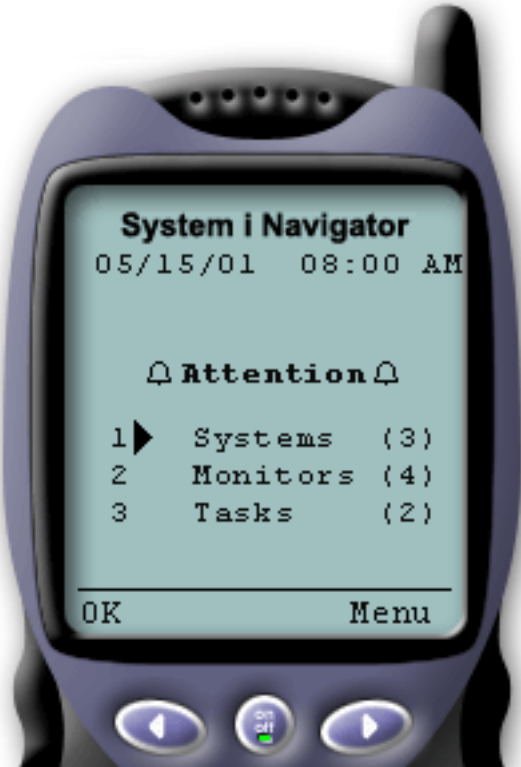
| *host*: The host name of the central system.

| *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 System i 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 also tells 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 item that needs attention. If a monitor has been triggered, a bell is shown next to Monitors.

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

## PDA browser layout

The personal digital assistant (PDA) browser layout is similar to the Internet-ready telephone. When you first use System i Navigator for Wireless, a summary is displayed, as well as the number of systems that are unavailable, the number of monitors that failed or were triggered, 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 the device displays 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 might want to customize your connection and begin managing System i Navigator for Wireless.

### Related concepts

“Configuring your wireless environment” on page 7

Before you use System i Navigator for Wireless, ensure that you have properly configured your Web application server and firewall.

“Customizing your connection” on page 12

You can use several methods to customize connections to System i Navigator for Wireless. You can control whether users can run commands and use monitors, and can customize how long summary information stays on your display before it is cleared.

“Managing your systems with System i Navigator for Wireless” on page 14

You can manage your systems from a wireless device. Use System i Navigator for Wireless to interact with monitors in Management Central and in integrated servers. You can run commands, work with tasks and systems, and control user access.

## Customizing your connection

You can use several methods to customize connections to System i Navigator for Wireless. You can control whether users can run commands and use monitors, and can customize how long summary information stays on your display before it is cleared.

You can limit user access to Management Central by manually removing functions from System i Navigator for Wireless and by configuring Application Administration.

## Limiting user access

You can limit a user’s ability to work with Management Central from a wireless device. Follow these steps to enable users to view monitors and system status but to prevent them from performing any action from System i Navigator for Wireless.

The following functions can be removed:

- Running commands on the System i platform and integrated servers
- Starting or shutting down integrated 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

If you specify readonly=yes in QYPV\_OPTIONS.OPT, users cannot perform any actions.

- readonly=no

If you specify readonly=no in QYPV\_OPTIONS.OPT, all users can perform the following actions:

- Running commands on the System i platform and integrated servers
- Starting or shutting down integrated servers
- Performing any action on a job (hold, release, end)
- Performing any action on a message (reply, delete)
- Starting, stopping, or restarting any monitor

You can also create a user options file named QYPV *xxxxxx*.OPT, where *xxxxxx* is the user ID. This user file overrides QYPV\_OPTIONS.OPT, which allows you to grant all users readonly=yes authority by default while granting specific users all access.

## Setting task details retrieval length

Detailed information about tasks is available in the summary window. These details are set to expire in 24 hours. Tasks can still run, but no new data about a task is retrieved from the central system and displayed on your wireless device before that time.

To change the expiration time, edit the following option file:

**Directory:** QIBM/UserData/OS400/MGTC/Pervasive/

**File:** QYPV\_OPTIONS.OPT

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

```
HOURS_OLD= nnnn
```

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 gives you full access and shows tasks that have run in the last 48 hours.

## Showing shared monitors

In the user options file, the SHARE\_MON property specifies whether shared monitors display on the wireless device.

- SHARE\_MON=yes

If you specify yes for this value, shared monitors appear on the display.

- SHARE\_MON=no

If you specify no for this value, shared monitors do not appear on the display. This is the default value.

## Configuring Application Administration

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

Examples:

- If users are not authorized to Management Central but have valid user IDs on the system, when they try to connect to Management Central with a wireless device, an authorization error message is displayed.
- If users are authorized to Management Central but do not have Application Administration authority to access monitors, no monitor information is displayed on the wireless device.
- If users are not authorized to commands in Management Central, they cannot run a command definition nor run a command on an integrated server.

### Related concepts

“Connecting to your central system” on page 10

To begin using System i Navigator for Wireless, you must first establish your connection to the central system. Enter the URL of your central system into your wireless device.

“Running commands across multiple systems” on page 18

You can use System i Navigator for Wireless to run any i5/OS command across multiple systems.

Select **Run Command** from the summary page, which then asks you to select the system or system group on which to run the command. Or, select a system from your system list and run a command on it.

### Related information

Managing Application Administration

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## Starting and stopping System i Navigator for Wireless

You can start and stop System i Navigator for Wireless from a command-line interface or from the IBM Web Administration for i5/OS interface.

- To start and stop System i Navigator for Wireless from the Web Administration for i5/OS interface, follow these steps:

1. Ensure that the HTTP Web Administration is running by using this command: `STRTCPSVR SERVER(*HTTP) HTTPSVR(*ADMIN)`
2. Access the HTTP Web Administration through this URL: `http://[systemname]:2001/HTTPAdmin`
3. Select **Manage** → **Application Servers**.
4. From the Server list, select the System i Navigator for Wireless instance (QIWIRELESS). The Web page displays the status of the server and the operations you can perform to the server.
5. Click the **Start** or **Stop** button, and then click **Start** or **Stop** on the Start or Stop wizard.

- To start System i Navigator for Wireless from a command-line interface, use this command: `STRTCPSVR SERVER(*HTTP) HTTPSVR(QIWIRELESS)`

- To stop System i Navigator for Wireless from a command-line interface, use this command: `ENDTCPSVR SERVER(*HTTP) HTTPSVR(QIWIRELESS)`

### Related concepts

“Configuring a Web application server” on page 7

You can use the Lightweight Infrastructure Web application server to run the System i Navigator for Wireless servlet.

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## Managing your systems with System i Navigator for Wireless

You can manage your systems from a wireless device. Use System i Navigator for Wireless to interact with monitors in Management Central and in integrated servers. You can run commands, work with tasks and systems, and control user access.



Using System i Navigator for Wireless is quite simple. After your central system is set up, you can connect to it by entering its URL into your Internet-ready telephone, personal digital assistant (PDA), or traditional Web browser. The device 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.

System i 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 System i Navigator for Wireless, you can feel confident when your wireless device tells you that everything in your network of systems 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 be triggered at a certain threshold, then all you have to do is to view the System i Navigator for Wireless summary page and you can easily determine whether everything is running smoothly or whether something needs attention.

### Related concepts

“Connecting to your central system” on page 10

To begin using System i Navigator for Wireless, you must first establish your connection to the central system. Enter the URL of your central system into your wireless device.

“Setting up System i Navigator for Wireless” on page 3

To use System i Navigator for Wireless, you must meet certain software and hardware requirements. You must decide which kind of wireless device to use and what kind of applications you need to install and configure.

## Working with System i models

You can use System i Navigator for Wireless to view system properties and to customize which systems are displayed.

To view your systems, select the **Systems** link. Any systems that are not available are listed in a bold font and marked by an explanation point. By default, the Systems link displays all of the systems to which you are authorized.

Each system is also a link. Select a system to view the system properties and all the active integrated servers on that system. If no integrated servers are active on that system, only the system properties link appears. To see the properties of an active integrated server, click **Integrated Servers** and *your server*.

You can customize your system list. You can add and remove systems from your system list, create a default system list, or create system lists for specific users.

## Adding and removing systems from your list

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

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.

## Creating 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 QYPV xxxxx.txt, where xxxxx is the user profile name.

### Related concepts

“Working with integrated servers”

With System i Navigator for Wireless, you can manage your integrated servers from your wireless device.

## Working with integrated servers

With System i Navigator for Wireless, you can manage your integrated servers from your wireless device.

If your System i platform has integrated servers, you can manage the servers with System i Navigator by adding the platform to your system list.

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

When you select a system, you can either link to the system properties, or view the integrated servers. The link to the integrated servers uses the same status as other System i Navigator for Wireless functions. It tells you whether any integrated server needs attention, or whether all of them are OK.

You can run Windows commands on a single or on all integrated servers, and see server properties.

1. To run Windows commands on the servers, select **Run IS command** from the menu and click **Go**.
2. To see the properties of a server, select the server on the Integrated Server page.

The Windows commands are started as Management Central tasks, so you can keep track of the commands you run. Figure 2 on page 17 shows the integrated server support in System i Navigator for Wireless running in a traditional browser format.

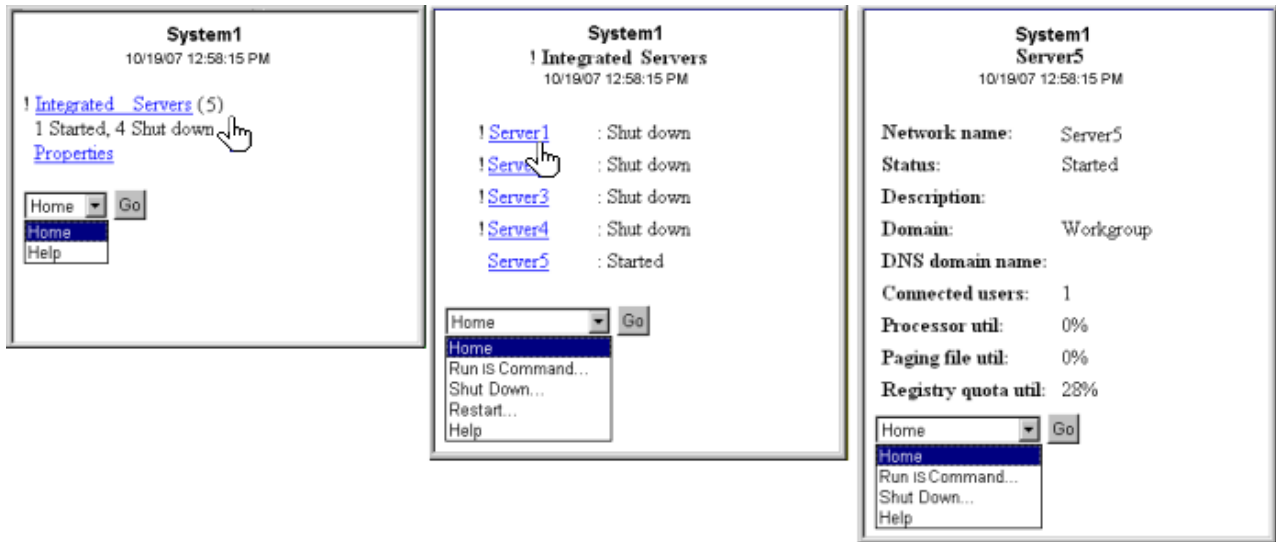


Figure 2. Clicking your integrated servers expands and displays the details of each system.

### Related concepts

“Working with System i models” on page 15

You can use System i Navigator for Wireless to view system properties and to customize which systems are displayed.

System i integration with BladeCenter and System x

## Working with tasks

With System i Navigator for Wireless, you can view summary details for all your Management Central 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 display in your list. If you have not run a command in the last 24 hours, no information about commands is displayed in the task summary window. 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.

### Related concepts

“Customizing your connection” on page 12

You can use several methods to customize connections to System i Navigator for Wireless. You can



control whether users can run commands and use monitors, and can customize how long summary information stays on your display before it is cleared.

## Running commands across multiple systems

You can use System i Navigator for Wireless to run any i5/OS command across multiple systems. Select **Run Command** from the summary page, which then asks you to select the system or system group on which to run the command. Or, 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 System i Navigator for Wireless) over the last 24 hours on your wireless device. After 24 hours, you need to use System i 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.

Figure 3 shows a sample of System i Navigator for Wireless command support in a personal digital assistant (PDA) format. If the command completes successfully, a plus sign (+) is displayed. On an Internet telephone that supports graphics, a successful command is represented by a smiley face icon.

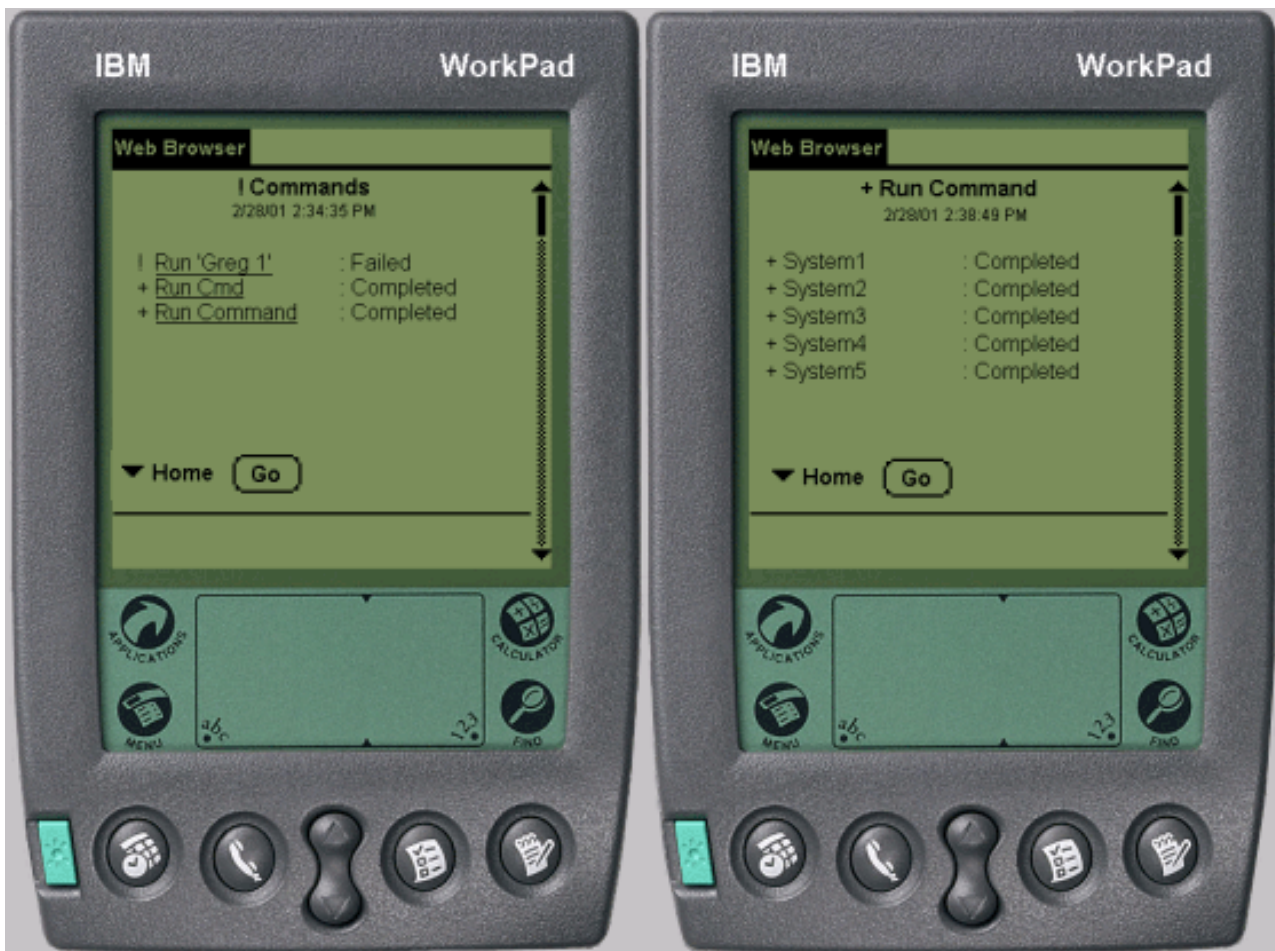


Figure 3. Viewing the status of your commands



## Related concepts

“Customizing your connection” on page 12

You can use several methods to customize connections to System i Navigator for Wireless. You can control whether users can run commands and use monitors, and can customize how long summary information stays on your display before it is cleared.

## Related reference

Creating command definitions

## Viewing and interacting 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 business-to-business (B2B) activity monitors using System i Navigator for Wireless.

In the following figure, each Internet-ready telephone is displaying detailed metric information for a system.

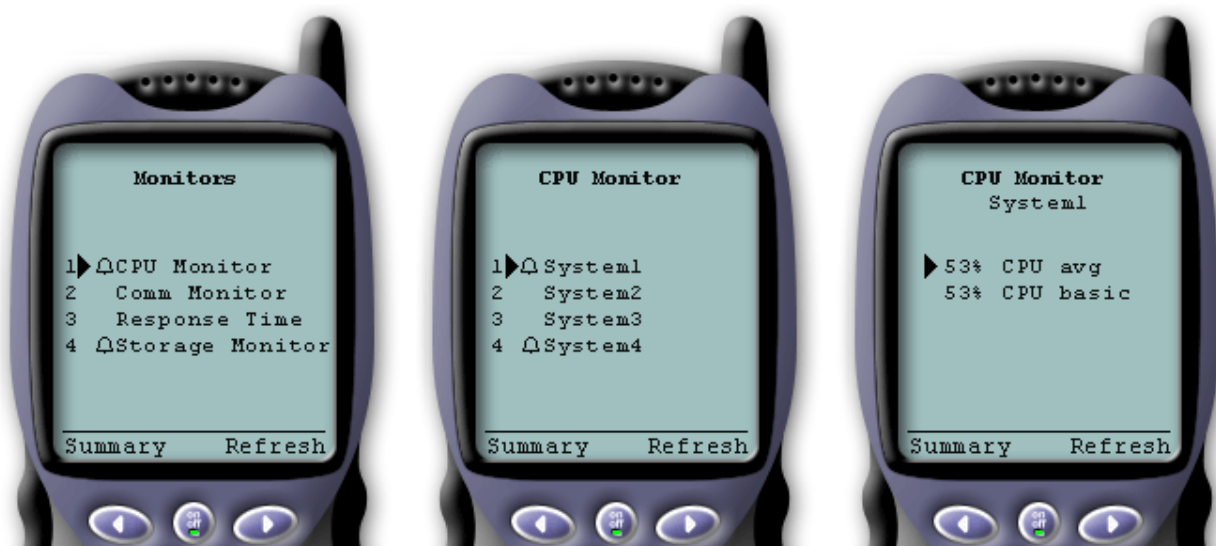


Figure 4. Viewing monitor metrics on a wireless device

## 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).

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.

When you see and select the metric you are interested in, it shows you the top 20 items for that metric value. For example, if you select **CPU average**, it shows you the top 20 jobs that use the most CPU. Or, if you select **Disk utilization**, it shows you the top 20 disk units that have the highest disk utilization.

**Note:** In Management Central, multiple users can share system monitors. When using System i Navigator for Wireless, you can view all shared monitors, not just the system monitors that you have created.

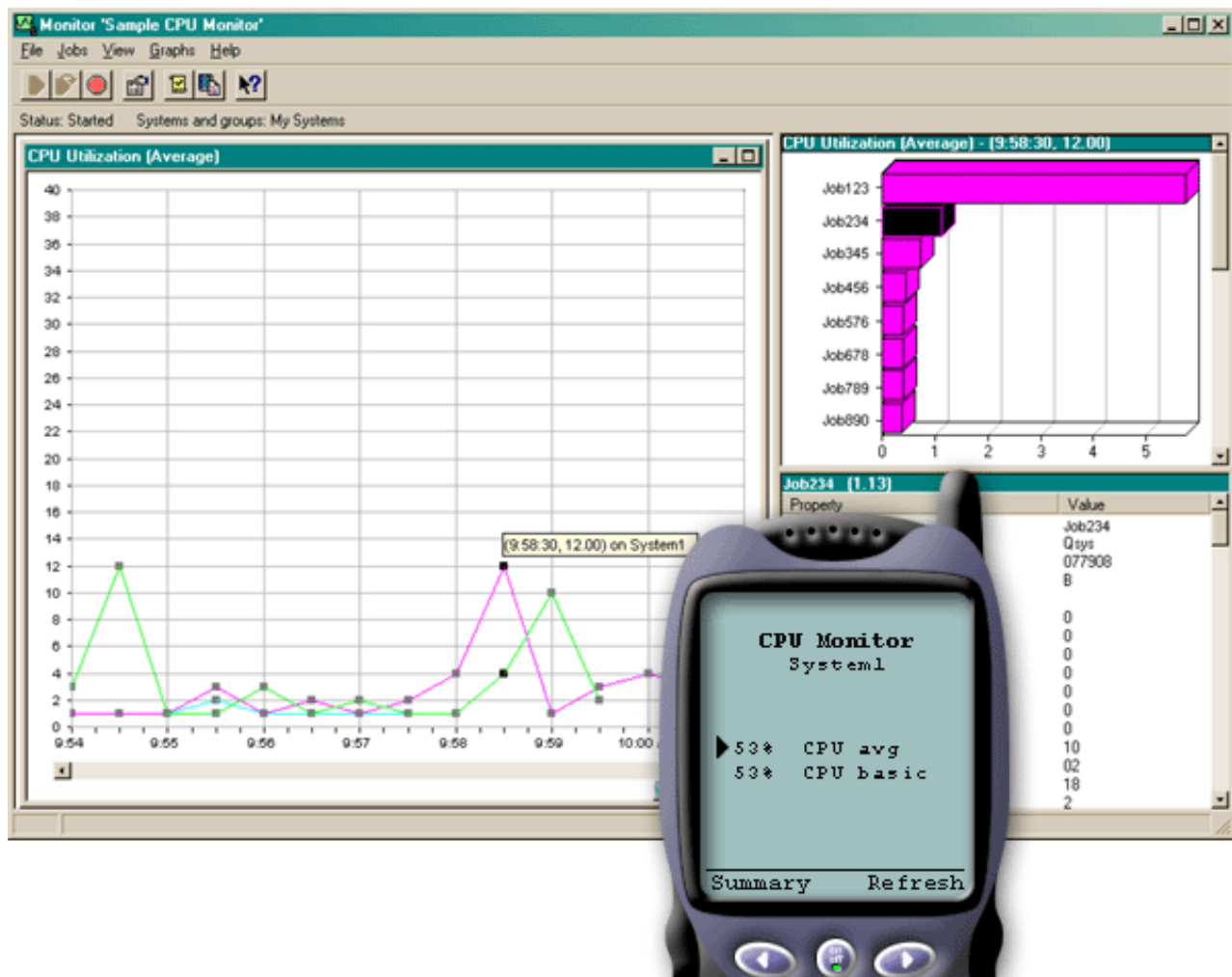


Figure 5. Viewing system monitor metrics on a wireless device

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. The following table describes what System i Navigator for Wireless displays for each system monitor metric name.

### Monitor metric names in System i Navigator for Wireless

System monitor metric names	System i 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	%
CPU Utilization Basic (Average)	CPU basic	% busy

System monitor metric names	System i Navigator for Wireless name	Unit of measure
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

### Related concepts

“Message monitors” on page 22

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).

“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).

### 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).

Job monitors work in the same way as the system monitors do in System i Navigator for Wireless. After you create a job monitor in Management Central, you can start, stop, and view it in System i Navigator

for Wireless. You can also view the overall status of the job monitor, view the list of systems on which it is running, 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, multiple users can share job monitors. When using System i Navigator for Wireless, you can view all shared monitors, not just the job monitors that you have created.

#### **Related concepts**

“System monitors” on page 19

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).

## **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).

Message monitors work in the same way as system monitors do in System i Navigator for Wireless. After you create a message monitor in Management Central, it shows up in System i Navigator for Wireless, and you can view the overall status of the message monitor, view the list of systems on which it is running, 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, multiple users can share message monitors. When using System i Navigator for Wireless, you can view all shared monitors, not just the message monitors that you have created.

#### **Related concepts**

“System monitors” on page 19

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).

## **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.

After you have created a file monitor in Management Central, you can start, stop, and display details about the file monitor in System i Navigator for Wireless. The file monitor summary window displays the system on which the monitor is running, 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, multiple users can share file monitors. When using System i Navigator for Wireless, you can view all shared monitors, not just the file monitors that you have created.

## **B2B activity monitors**

If you have an application like Connect for System i configured, you can use a business-to-business (B2B) activity monitor to monitor your B2B transactions. From a wireless device, you can view metrics and current B2B transaction values being monitored.

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 System i.

After you set up a B2B activity monitor in Management Central, you can start, stop, and view details about the activity monitor in System i 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 that you want to view with System i Navigator for Wireless must be on a system running OS/400 V5R2, or later. Any B2B activity monitor data stored on a system running OS/400 V5R1, or earlier, does not work with System i Navigator for Wireless.

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## Related information for System i Navigator for Wireless

IBM Redbooks publications and Web sites contain information that relates to the System i Navigator for Wireless topic collection. You can view or print any of the PDF files.


### IBM Redbooks

AS/400 Internet Security Scenarios: A Practical Approach 

Learn how to use the 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. Providing all of the security needed within a manageable budget is a complex task. This IBM Redbooks publication explores all the network security features available on the system, such as IP filters, Network Address Translation (NAT), virtual private network (VPN), HTTP proxy server, Secure Sockets Layer (SSL), Domain Name System (DNS), mail relay, auditing, and logging. It describes their use through practical examples.

Although the system 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, might eliminate the need for a separate firewall product. In some cases, it can provide an affordable solution for smaller sites. The network security functions can be used to enhance the security of environments where routers with firewall security features are also used. This publication is designed to meet the needs of network administrators, consultants, and specialists who plan to design, implement, and configure networks connected to the Internet and are evaluating alternatives to traditional firewall products.

### Web sites

- For more information about System i Navigator for Wireless, see the System i Navigator for Wireless home page .

The System i Navigator for Wireless home page gives you more information about this solution for pervasive computing. This page contains information for supported releases.

- For more information about System i Navigator, see the System i Navigator home page .

In addition to the Management Central functions, System i Navigator provides a wide variety of tools to simplify System i management. The System i Navigator home page includes functional release overviews, news about technical conferences, and other topics.

#### Related reference

“PDF file for System i Navigator for Wireless” on page 2  
You can view and print a PDF file of this information.



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