



IBM STG Technical Conference

# **IBM Systems and Technology Group Technical Conference I106 - Part 1 of 2 – Version 1**

**New Orleans, Louisiana  
February 5 - 9, 2007**



IBM STG Technical Conference

# **Best Practices for Portal 6.0 on i5/OS Deployments**

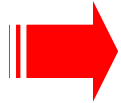
## **I106 – Part 1 of 2 – Version 1**

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# Agenda



- Sizing the hardware
- Sizing example exercise
- LPAR or not LPAR , that is the question
- Preparing your system before installing Portal
- Downloading WebSphere Portal Installation Images
- Prerequisite Software
- Verifying your Environment Before Installing WebSphere Portal
- Installing WebSphere Portal 6.0 overview
- Portal Configuration Wizard in Web Administration for i5/OS
- Multiple Portal Profiles
- Portal Logs
- Back up and Restore
- Tuning your Portal Environment
- Running Portal on a Separate Storage Pool
- Autostarting a Portal Profile
- Publishing User Profiles to your LDAP Directory
- Configuring SSO End-to-End for iSeries Access for Web portlets Using EIM
- More Tips and Best Practices

## Ensure your System Meets Minimum Hardware Requirements

- 3800 CPW, 5/6GB memory, 6 disk drives
  - At least one full processor (no partial processor)
  - L3 cache
  - For example, 1-way 1.9GHz POWER5 processor
- Minimum was increased due to field experiences with install and configuration performance and reinforced by lab experiments on memory- and disk-constrained systems
- Moving from 2GB to 4GB of memory reduced profile creation time by over 11 hours
- Moving from 4GB of memory and 4 drives to 5GB of memory and 6 drives reduced profile creation and database transfer time by about 1.5 hours
  - **No tuning can provide so dramatic improvements!!!**
- Heavier workloads like PDM and WCM also benefit from faster processors and increased memory

## Portal Installation and Configuration Performance on Minimum System

- End-to-end install and configuration on minimum system (worst case scenario)
- Only includes time for major tools to run
- Does not include user think time, updating files, etc
- Does not include HTTP server setup

Step	Step Time (minutes)	Cumulative Time (minutes)
Install	15	15
Create new profile	125	140
Transfer databases	131	271
Transfer security	101	372

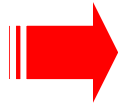
# Size the System Carefully

- Take time to understand the customer's environment and to provide good input to the sizing tools
- **Plan for a staging or test environment with similar characteristics (topology) to the production environment**
- Workload Estimator
  - Traditional System i sizing tool
  - <http://www-912.ibm.com/wle/EstimatorServlet>
  - **Refresh the downloaded version often to pick up updates**
- Consult with IBM Techline for formal proposals
  - Techline may have internal tools to size workloads not yet available in WLE
  - EMEA Techline: <http://w3-5.ibm.com/support/emea/techline/index.shtml>  
Sizing: <http://w3-5.ibm.com/support/emea/techline/sizing.html>
  - Americas Techline: <http://w3-03.ibm.com/support/americas/techline>  
Sizing: <http://w3-03.ibm.com/support/americas/techline/sizewise.html>
  - Techline Access for Business Partners: <http://ibm.com/partnerworld/techline>



**Important:** sizing does not replace capacity planning and stress test

# Agenda



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## Sizing Exercise - Workload requirements and general recommendations


- Workload requirements
  - WebSphere Portal 6.0
    - General portlet workload
    - PDM workload
  - Domino mail accessed via DWA
  - Sametime 7.5 for chat via portlet
- General recommendations
  - Assign full processors to partitions running WebSphere Portal and Domino workloads
    - Partial processor LPARs are *not* recommended for Domino and WebSphere Portal workloads based on field experience confirmed by measurements performed in the Rochester lab
  - When sizing with WLE use single partition option to size each LPAR (as opposed to “Partition” option)
  - When presenting a proposal to a customer, be sure to check the customer’s eligibility and the price of the following System i editions which can be used as a base for the proposal:
    - 550 Domino or Workplace edition:  
<http://www-03.ibm.com/servers/eserver/series/software/workplace/wpedetails.html>
    - 520 Collaboration edition:  
<http://www-03.ibm.com/systems/i/hardware/520collaboration/details.html>

# Portal Workload Sizing

# Portal Workload Sizing Information

- Total users = 1000
- Concurrent users = 750
  - 150 users x 60 transactions/hr= 9000 tx/hr
  - 200 users x 45 transactions/hr= 9000 tx/hr
  - 400 users x 10 transactions/hr= 4000 tx/hr
- Total pages / hr = 22000 transactions/hr
- Average portlets / page = 4
- Portlet complexity
  - 20% simple
  - 70% average (using DWA portlet)
  - 10% complex = percent of portlets accessing local database
- Total size of all the pages and files to be stored in IFS = 1500 GB
- LDAP running on same partition
- PDM users = 200
  - 100 % concurrency
  - 50% Moderate
  - 50 % Heavy

# Portal sizing – Custom workload (1 of 4)

Address  <http://www-912.ibm.com/wle/EstimatorServlet>

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Version: 2006.5.fix.2 17-Dec-06 www-912 **IBM Systems Workload Estimator**

**IBM Systems**


- Why IBM Systems
- BladeCenter
- Cluster servers
- Mainframe
- System i5
- OpenPower servers
- Intel processor-based servers
- UNIX servers
- Solutions
- Storage
- Support
- Developers
- Education
- Literature
- News and events

**Workload Selection** **Help/Tutorials**

- New System i estimation
- New System p estimation
- New System x estimation
- Options
- Restore Saved Estimation
- Edit Estimation Info
- Tier: Add, Move, Delete
- System: Add, Move, Delete
- Partition: Add, Move, Delete
- Workload: Add, Move, Delete

Shown below is the structure of the current estimation. Use the options shown in the tabs above to modify the structure of this estimation.

- MySolution
  - Tier #1 System i
    - System #1 (1 interval defined)
      - Partition: Main #1, i5/OS™ - V5R4, No LPAR
        - WebSpherePortal #1

 **Continue**

<http://www-304.ibm.com/jct01004c/systems/support/tools/estimator/index.html>

# Portal sizing – Custom workload (2 of 4)

Version: 2007.1.alpha.5 11-Jan-07 wletest IBM Systems Workload Estimator

Workload Selection Workload Definition Help/Tutorials

- WebSpherePortal #1
- Options
- Reset This Workload
- Save This Workload
- Edit Workload Name
- Modify Intervals

WebSpherePortal #1 Partition Name: Main #1  
WebSphere Portal Workload Definition i5/OS™ - V5R4  
No LPAR

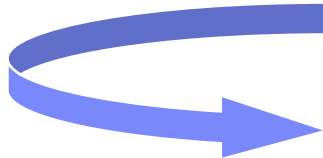
**Attention:**

If you have not sized a WebSphere Portal Application using this tool before, please read through the [help text](#) for important information.

1. Please Indicate which version you wish to size.

- ☐ WebSphere Portal 5.1
- ☒ WebSphere Portal 6.0

[Back](#) [Continue](#)



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Version: 2007.1.alpha.5 11-Jan-07 wletest IBM Systems Workload Estimator

Workload Selection Workload Definition Help/Tutorials

- WebSpherePortal #1
- Options
- Reset This Workload
- Save This Workload
- Edit Workload Name
- Modify Intervals

WebSpherePortal #1 Partition Name: Main #1  
WebSphere Portal Workload Definition i5/OS™ - V5R4  
No LPAR

1. Select the products used with your Websphere Portal install.

☒ Custom Application

☒ Portal Document Manager

[Back](#) [Continue](#)

# Portal sizing – Custom workload (3 of 4)

Version: 2007.1.alpha.5 11-Jan-07 wletest IBM Systems Workload Estimator

**Workload Selection** **Workload Definition** **Help/Tutorials**

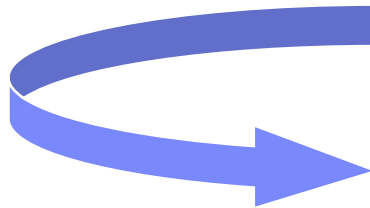
- WebSpherePortal #1
- Options
- Reset This Workload
- Save This Workload
- Edit Workload Name
- Modify Intervals

**WebSpherePortal #1** Partition Name: Main #1  
 WebSphere Portal Workload Definition i5/OS™ - V5R4  
 No LPAR

## Profile Attributes

1. Will LDAP be running on the same system?  
☐ No  
☒ Yes
2. Will Apache HTTP Server be running on the same system?  
☐ No  
☒ Yes
3. DBCS Support for this workload:
4. RAID Support for this workload:

[Back](#) [Continue](#)



Version: 2007.1.alpha.5 11-Jan-07 wletest IBM Systems Workload Estimator

**Workload Selection** **Workload Definition** **Help/Tutorials**

- WebSpherePortal #1
- Options
- Reset This Workload
- Save This Workload
- Edit Workload Name
- Modify Intervals

**WebSpherePortal #1** Partition Name: Main #1  
 WebSphere Portal Workload Definition i5/OS™ - V5R4  
 No LPAR

**Custom Application**

1. How many portal pages per hour will be served during the busiest hour of the day?
2. On average, how many portlets make up a portal page?
3. What is the percentage breakdown of portlet complexity?  
 0  100  
 Simple Moderate Complex  
 20 70 10
4. Do you use Database access in your portlets?  
☐ No  
☒ Yes, Local  
☐ Yes, Remote
5. What percentage of the portlets served access the database?  
 0 %  100 %  
 10 %
6. What is the total size of all the pages and files to be stored in IFS and database? (GB)  GB

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# Custom Portal sizing – PDM workload (4 of 4)

## WebSpherePortal #1

WebSphere Portal Workload Definition

Partition Name: Main #1

i5/OS™ - V5R4

No LPAR

### Portal Document Manager

1. What is the total number of PDM users?
2. What is the concurrency of the PDM users?
3. What is the percentage of each kind of user?

%



### Transaction type

- ☐ documentsTab
- ☐ expandFolder
- ☐ createFolder
- ☐ updateDocDesc
- ☐ folderNavigation
- ☐ homePage
- ☐ importDoc
- ☐ openDoc
- ☐ openForm
- ☐ searchForTitle
- ☐ selectFolder
- ☐ submitLogin



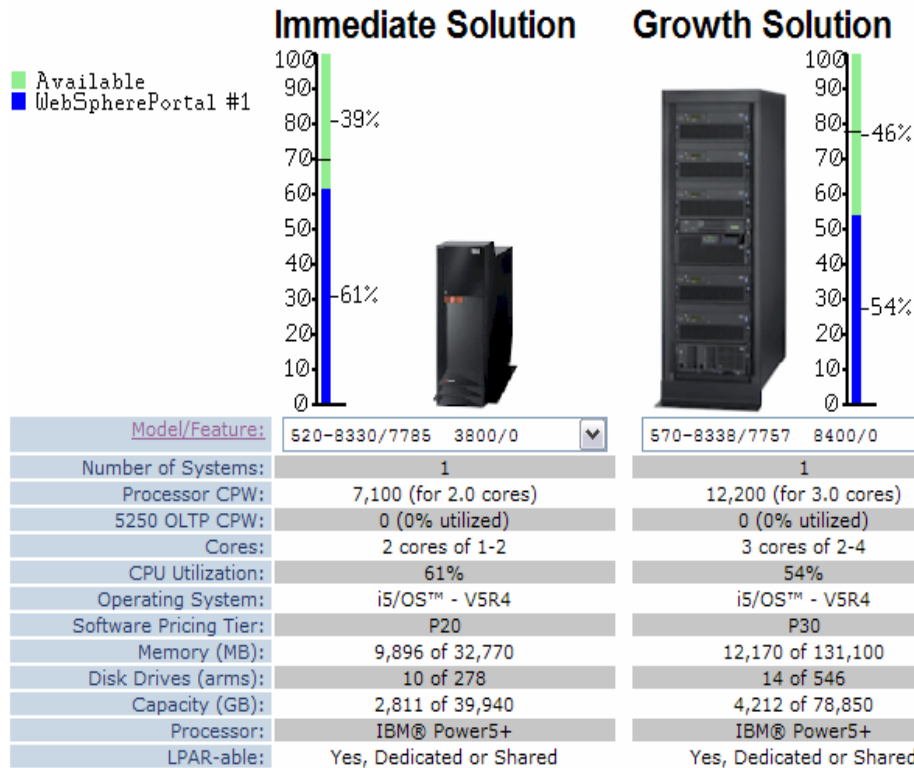
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# Selected System – Custom and PDM Workloads

## Selected System



### Immediate Solution Comments and Information

Model:	520-8330/7785
Number of Systems:	1
Processor CPW:	7,100 (for 2.0 cores)
5250 OLTP CPW:	0 (0% utilized)
Cores:	2 cores of 1-2
CPU Utilization:	61%
Operating System:	i5/OS™ - V5R4
Software Pricing Tier:	P20
Memory (MB):	9,896 of 32,770
Disk Drives (arms):	10 of 278
Capacity (GB):	2,811 of 39,940
Processor:	IBM® Power5+
LPAR-able:	Yes, Dedicated or Shared



- The 520-8330/7785 is a 'Capacity Upgrade on Demand (CUoD)' model. It has a CPW rating in the range of 3,800(1 cores) to 7,100(2 cores).
- Note:** The *Selected System* for the Immediate Solution is the smallest system that meets the workload requirements under the constraints defined in "User Options" or by the workloads.



[List of systems that do not meet the minimum requirements.](#)

### DASD Groups

Name	Arms	Storage	Busy	Attachment	Protection	Speed
Main #1	10	2,810.3GB	25%	IOA Feature #2780/5580	RAID-5	15,000 RPM



# DWA and Sametime Domino Workload Sizing

# Domino Workload Sizing Information

- Mail concurrent users (DWA portlet) = 525
- Sametime concurrent users = 750

# DWA Domino sizing – 1 of 4

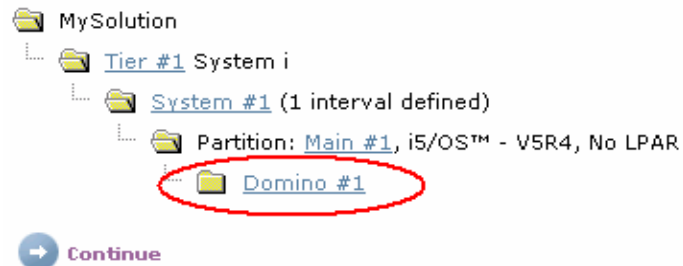
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Version: 2006.5.fix.2 17-Dec-06 www-912 IBM Systems Workload Estimator

**Workload Selection** Help/Tutorials

- New System i estimation
- New System p estimation
- New System x estimation
- Options
- Restore Saved Estimation
- Edit Estimation Info
- Tier: Add, Move, Delete
- System: Add, Move, Delete
- Partition: Add, Move, Delete
- Workload: Add, Move, Delete

Shown below is the structure of the current estimation. Use the options shown in the tabs above to modify the structure of this estimation.



## DWA Domino sizing – 2 of 4

Version: 2006.5.fix.2 17-Dec-06 www-912 IBM Systems Workload Estimator

**Workload Selection** **Workload Definition** **Help/Tutorials**

- Domino #1
- Options
- Reset This Workload
- Save This Workload
- Edit Workload Name
- Modify Intervals

---

**Domino #1** Partition Name: [Main #1](#)  
Domino Workload Definition i5/OS™ - V5R4  
No LPAR

---

1. [Domino Version](#)

2. What is your [planned usage](#) for this Domino instance?

3. [DBCS support](#) for this workload:

4. [RAID support](#) for this workload:

☐ Domino 6 and 6.5  
☒ Domino 7

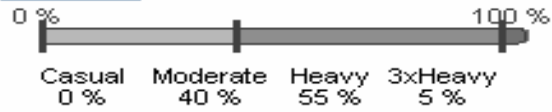
☒ Mail  
☐ Applications  
☐ Inbound Cluster Replication

Default (No)   
RAID-5

## DWA Domino sizing – 3 of 4

**Domino #1** Partition Name: Main #1  
i5/OS™ - V5R4  
No LPAR

Mail Definition

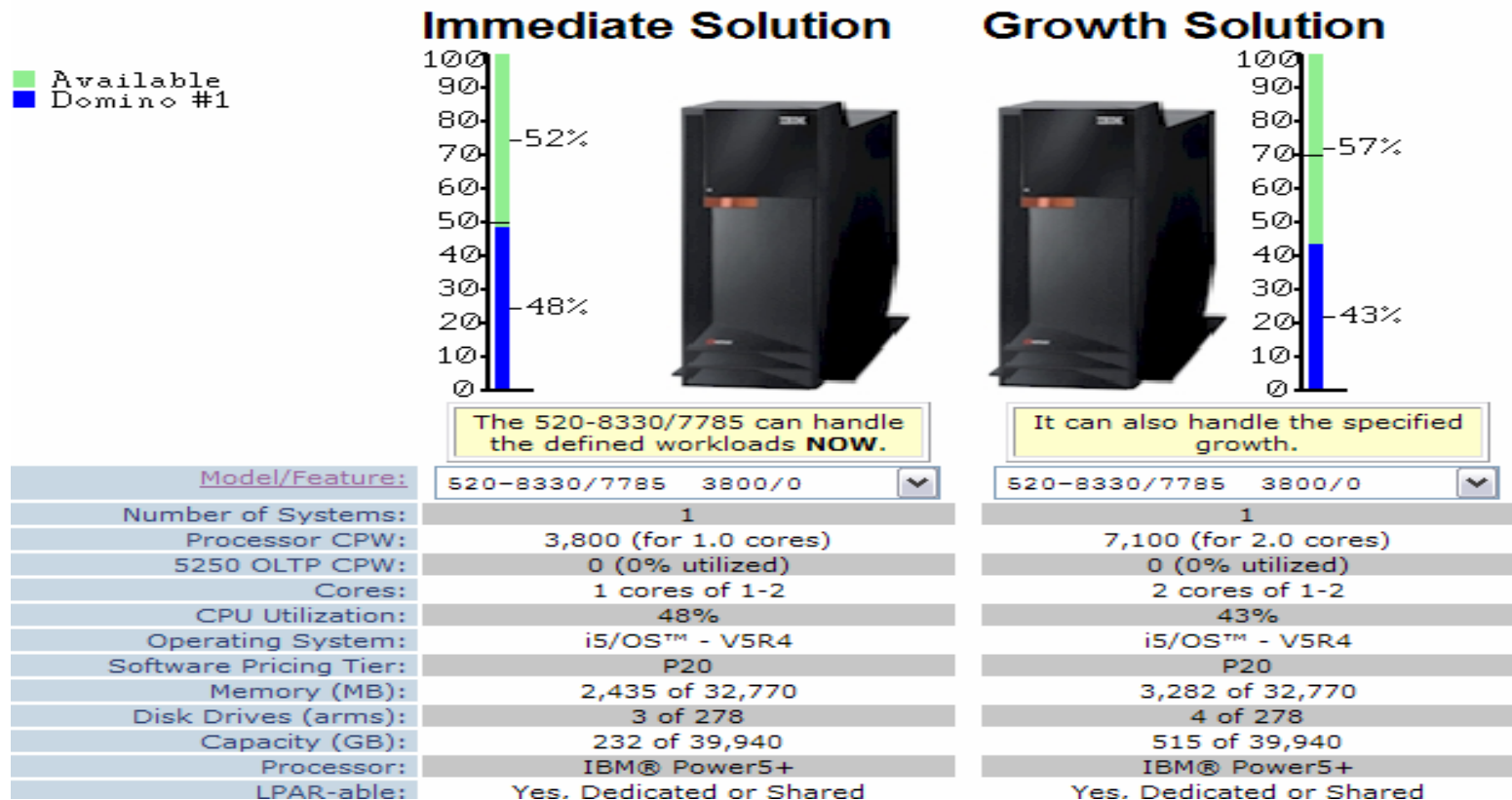
1. Number of registered users that are mail users:
2. Percent of mail users active at the same time (Concurrent):
3. Type of concurrent mail users:  

4. Type of mail access: Domino™ Web Access via WSE Portlet
5. Amount of disk storage per registered user needed for mail databases: (MB)
6. How are you implementing clustering for this mail workload?
7. Transaction Logging factor (0-30):
8. Anti-Virus Protection factor (0-30):
9. Number of partitions for MAIL in this instance of the Domino Workload (\*CALC will automatically include 0.0 partitions):

So far a total of **0.0** partition(s) are being used by **this** instance of the Domino Workload.  
A total of **1** partition(s) are being used for all instances of Domino in this estimation

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Assumption: 70% of 750 portal users (525 users) are using the DWA portlet to access Domino mail

# DWA Domino sizing – 4 of 4



# Sametime Workload

Version: 2007.1.alpha.5 11-Jan-07 wletest

## IBM Systems Workload Estimator

## Workload Selection

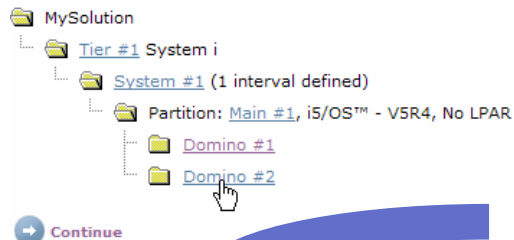
## Workload Definition

## Selected System

## Help/Tutorials

- New System i estimation
- Options
- Tier: Add, Move, Delete
- New System p estimation
- Restore Saved Estimation
- System: Add, Move, Delete
- New System x estimation
- Edit Estimation Info
- Partition: Add, Move, Delete
- Workload: Add, Move, Delete

Shown below is the structure of the current estimation. Use the options shown in the tabs above to modify the structure of this estimation.



## Domino #2

### Domino Workload Definition

Partition Name: Main #1  
i5/OS™ - V5R4  
No LPAR

1. Domino Version

- ☐ Domino 6 and 6.5  
☒ Domino 7

2. What is your planned usage for this Domino instance?

- ☐ Mail  
☒ Applications  
☐ Inbound Cluster Replication

3. DBCS support for this workload:

Default (No) ▼

4. RAID support for this workload:

RAID-5 ▼

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# Sametime Workload

## Domino #2

### Application Definition

Partition Name: Main #1  
i5/OS™ - V5R4  
No LPAR

Keep in mind that the performance of Domino applications varies widely.  
Please refer to the

[help text](#) before continuing with the estimation.

1. Number of [application users](#):


750

2. Percent of application users active at the same time  
([Concurrent](#)):

100% ▼

3. Select the [type](#) of application:

Sametime Instant Messaging ▼

0  11 **0.08**

Will use IBM supplied values.

#### [Application Rating](#)

4. Type of [application access](#):

Browser ▼

5. How would you classify the local [DB2 Universal Database access](#)  
of the applications?

None ▼

6. Amount of disk storage needed for shared and/or [application  
databases](#): (MB)

500

7. How are you implementing [clustering](#) for this application  
workload?

None ▼

8. [Transaction Logging](#) factor (0-30):

0

9. Number of [partitions](#) for Written Applications in this instance of  
the Domino workload (\***CALC** will automatically include 0.0  
partitions):

\*CALC

So far a total of **0.0** partition(s) are being used by **this** instance of the Domino Workload.  
A total of **1** partition(s) are being used for all instances of Domino in this estimation

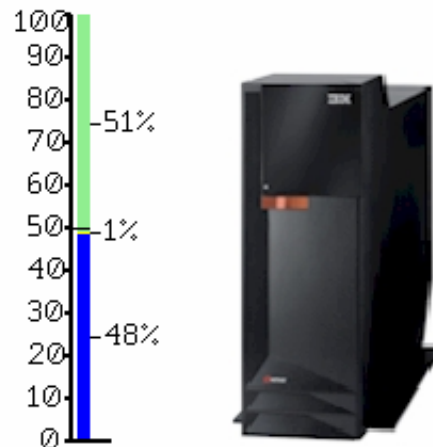
← Back → [Continue](#)



# Selected System – DWA and Sametime

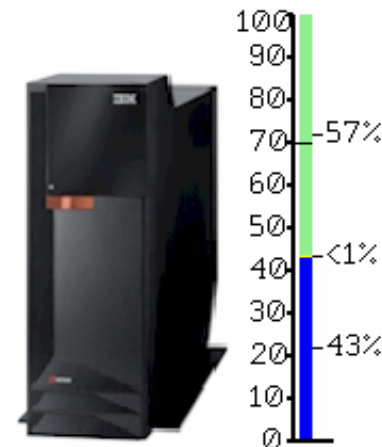
■ Available  
■ Domino #2  
■ Domino #1

## Immediate Solution



The 520-8330/7785 can handle the defined workloads **NOW**.

## Growth Solution



It can also handle the specified growth.


Model/Feature:	520-8330/7785 3800/0	520-8330/7785 3800/0
Number of Systems:	1	1
Processor CPW:	3,800 (for 1.0 cores)	7,100 (for 2.0 cores)
5250 OLTP CPW:	0 (0% utilized)	0 (0% utilized)
Cores:	1 cores of 1-2	2 cores of 1-2
CPU Utilization:	49%	43%
Operating System:	i5/OS™ - V5R4	i5/OS™ - V5R4
Software Pricing Tier:	P20	P20
Memory (MB):	2,791 of 32,770	3,654 of 32,770
Disk Drives (arms):	3 of 278	4 of 278
Capacity (GB):	233 of 39,940	516 of 39,940
Processor:	IBM® Power5+	IBM® Power5+
LPAR-able:	Yes, Dedicated or Shared	Yes, Dedicated or Shared

## Selected system combined DWA portlet and Sametime

### Immediate Solution Comments and Information

Model:	520-8330/7785
Number of Systems:	1
Processor CPW:	3,800 (for 1.0 cores)
5250 OLTP CPW:	0 (0% utilized)
Cores:	1 cores of 1-2
CPU Utilization:	49%
Operating System:	i5/OS™ - V5R4
Software Pricing Tier:	P20
Memory (MB):	2,791 of 32,770
Disk Drives (arms):	3 of 278
Capacity (GB):	233 of 39,940
Processor:	IBM® Power5+
LPAR-able:	Yes, Dedicated or Shared




- The 520-8330/7785 is a 'Capacity Upgrade on Demand (CUoD)' model. It has a CPW rating in the range of 3,800(1 cores) to 7,100(2 cores).
  - The average mail database size specified in the Domino workload named 'Domino #1' is over 200MB. Observations have been made that this characteristic would be indicative of having heavy mail users.
  - The average mail database size specified in the Domino workload named 'Domino #1' is over 200MB. The Estimator has attempted to include resource utilization representative of mail users with large databases. Included in this resource utilization representation are those resources associated with **UPDATE** processing as well as other custom agents. Due to the complexity associated with large mail sizes, consider contacting your technical support team.
  - The Domino workload named 'Domino #1' has specified '3xHeavy' mail users. This type of mail user is considered to consist of approximately 60 transactions per minute. Please consider checking your SH STAT data to verify this number of transactions. Your technical support can assist with this collection.
  - The Domino workload named 'Domino #2' has specified 750 Sametime Instant Messaging users. Due to extra processing generated when users Log On to Lotus Instant Messaging, there could be additional resources consumed if many users Log On simultaneously. A Lotus Instant Messaging and Web Conferencing Server (Sametime Server) on the 520-8330/7785 is capable of performing approximately 1050 Sametime Instant Messaging Log Ons per minute. For iSeries servers with 2 or more processors it may be possible to achieve higher Log On rates using multiple Lotus Instant Messaging and Web Conferencing Server (Sametime server) instances.
  - The Domino workload named 'Domino #2' has specified 750 concurrent Sametime Instant Messaging users. For optimal performance, you should consider limiting each Lotus Instant Messaging and Web Conferencing Server (Sametime server) instance to 20,000 Sametime Instant Messaging concurrent users. Sametime 3.0 supports multiple Sametime server instances on a single iSeries system.(See technote 194857 - a link is provided in the Bibliography section below.)
  - **Note:** The *Selected System* for the Immediate Solution is the smallest system that meets the workload requirements under the constraints defined in "User Options" or by the workloads.
-  [List of systems that do not meet the minimum requirements.](#)

# Final Results

- 2 LPARs
  - LPAR 1: Portal workload
    - 2 core processors, 61% CPU utilization, 10 GB RAM, 10 disk arms at 25 % disk utilization
  - LPAR 2: Domino DWA portlet + Sametime IM
    - 1 core processor, ~50% % CPU utilization, 3 GB RAM, 3 disk arms

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- 
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## Deciding on number of LPARs – General considerations

One LPAR for all environments on 1-way

- Advantages

- Less hardware and software expense
- Good utilization of resources for multiple, light workloads

- Disadvantages

- May need to tune resource usage for each environment
- Problems in one environment may affect the others
- System PTFs affect all environments
- Need extra caution with developer access rights
- May need to schedule administrative tasks
- Installing products
- Restarting servers
- Creating and configuring new profiles
- Applying fix packs
- Testing new developer code

## Deciding on number of LPARs - General considerations

One LPAR per environment on N-way

- Advantages

- Complete separation of resources
- Each environment protected from all others
- Can apply system PTFs in isolation
- No conflict between development and production
- Less risk of accidents
- Customer rules on data privacy?
- Can perform administrative tasks without affecting other environments

- Disadvantages


- More hardware and software expense
- Resources underutilized with light workloads

## Deciding on number of LPARs - General considerations

One LPAR per environment on 1-way

- Advantages
  - Same advantages as one LPAR per environment on N-way
- Disadvantages
  - Partial processors not recommended for:
    - Domino
    - WebSphere
    - Portal
  - Response time issues
  - Inadequate resource for administration (what is tolerance threshold?)

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  - More Tips and Best Practices



# Installation checklist

- Provide a picture of the topology where Portal will be deployed.
  - Include main infrastructure components (for example, LDAP server, mail server)
- Size the hardware
- Obtain installation media (physical DVDs or download electronic images)
- Request an IP address to use with Portal or use the system's host IP address.
- Verify TCP/IP configuration
- Install latest version of iSeries Navigator on your PC
- Read Information Center and become familiar with InfoCenter flow
- Verify the environment
  - WebSphere
  - CCSID
  - Time zone
  - LDAP
  - User profiles
- Install and verify software prerequisites and PTFs
- Install Portal 6.0
- Configure the portal profile
- Verify the run time environment – first steps



# Preparing your system – TCP/IP configuration

- CFGTCP option 10

```

Work with TCP/IP Host Table Entries
System:

Type options, press Enter.
  1=Add  2=Change  4=Remove  5=Display  7=Rename

  Internet      Host
Opt  Address      Name
  -  -
  -  -            ITCJEMT1
  -  9.5.110.53    DOMMAIL.RCHLAND.IBM.COM
  -  9.5.110.62    ITCST.RCHLAND.IBM.COM
  -  9.5.110.62    ITCST
  -  9.5.110.62    ITCJEMT1
  -  9.5.110.62    ITCJEMT1.RCHLAND.IBM.COM
  -  127.0.0.1     LOOPBACK
  -  127.0.0.1     LOCALHOST
  
```

- CFGTCP option 12

```

Change TCP/IP Domain (CHGTCPDMN)

Type choices, press Enter.

Host name . . . . . 'ITCJEMT1'
Domain name . . . . . 'RCHLAND.IBM.COM'
Domain search list . . . . . *DFT
Host name search priority . . . *LOCAL *REMOTE, *LOCAL, *SAME
Domain name server:
  Internet address . . . . . '9.10.244.100'
  Internet address . . . . . '9.10.244.200'
  
```

# Preparing your system

- Work with RDB Directory Entry (WRKRDBDIRE)

Work with Relational Database Directory Entries

```
Position to . . . . .
Type options, press Enter.
  1=Add   2=Change  4=Remove  5=Display details  6=Print details

Option  Entry              Remote
  _      _                Location
  _      ITCJEMT1          *LOCAL
  _
```

- Set the time for your time zone

- WRKSYSVAL SYSVAL(QTIME)
- WRKSYSVAL SYSVAL(QTIMZON)


iSeries Information Center Time zone article

<http://publib.boulder.ibm.com/infocenter/iseriess/v5r4/index.jsp?topic=/rzati/rzatitimezone.htm>

- Set system value QCCSID not equal to 65535

- CHGSYSVAL SYSVAL(QCCSID) VALUE(37)

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## Obtaining WebSphere Portal 6.0 and WebSphere prereqs

- Customers – Passport Advantage
  - <https://www-306.ibm.com/software/howtobuy/passportadvantage/>

- Business Partners – Software Mall


<http://www.developer.ibm.com/isv/welcome/softmall.html>

A prerequisite before starting this download is for the company to be registered with PartnerWorld and for the person performing this task to be listed as a contact. If they are not, he/she needs to locate the primary contact in the company for the PartnerWorld membership information before continuing with this paper.

- IBMers (IBM internal only): Xtreme Leverage Portal

<http://w3-103.ibm.com/software/xl/portal> > Software Downloads

# Downloading WebSphere Portal 6.0

Address  <http://w3-103.ibm.com/software/xl/portal>

Learn [Technical](#) [Redbooks, Service](#)  
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**4Q Sales Play\$**

**IBM acquires Bowstreet:**  
Acquisition shortens clients' path to SOA benefits

**IBM acquires Bowstreet**  
IBM drives WebSphere Portal deployments with Bowstreet acquisition.

**In the news**

If you missed it the first time ... a weekly snapshot of software media coverage

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Date posted

# Assembling the e-images



- Download the eAssembly you choose. For example CR45FML
  - See “WebSphere Portal V6.0 Download Document” for a complete list of eAssembly names and descriptions
  - <http://www-1.ibm.com/support/docview.wss?uid=swg24012958>
- Download and unzip the following files

Image Part Number	Image Description	Download Directory
C92J7ML	IBM WebSphere Portlet Factory V6.0	<directory of your choice>
C92J8ML	IBM WebSphere Portlet Factory Designer V6.0	<directory of your choice>
C93LQML	Portal Setup CD (I-Setup)	C:\wp6_images
C93N2ML	WebSphere App Server Base (I-1)	C:\wp6_images\WAS_Base
C93NIML	WebSphere App Server ND (I-2)	C:\wp6_images\WAS_ND
C93LSML	Portal Server 1 of 2 (I-3)	C:\wp6_images
C93M4ML	Portal Server 2 of 2 (I-4)	C:\wp6_images
C93LUML	Personalization (I-5)	C:\wp6_images

# Assembling the e-images

Address: C:\DownloadDirector\wp6\_images

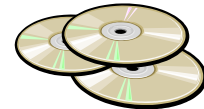
Name	Size	Type
wp6_images		
common		File Folder
Portal		File Folder
WAS_Base		File Folder
WAS_ND		File Folder
JDK		
WAS		
WAS_ND		
jdk		
was		
componentmaps		
docs		
repository		
Drivers		
i387		
icons		
lotus		
LS_TOOLS		
New Project		
notes		
...		
common		File Folder
Portal		File Folder
WAS_Base		File Folder
WAS_ND		File Folder
autorun.inf	1 KB	Setup Information
C92J7ML.zip	237,319 KB	WinZip File
C92J8ML.zip	237,319 KB	WinZip File
C93LQML.zip	596,827 KB	WinZip File
C93LSML.zip	657,645 KB	WinZip File
C93LUMML.zip	382,858 KB	WinZip File
C93M1ML.pdf	601 KB	Adobe Acrobat 7.0 ...
C93M4ML.zip	526,583 KB	WinZip File
C93N2ML.exe	472,126 KB	Application
C93NIMML.exe	479,476 KB	Application
copyright.txt	1 KB	Text Document
dlnmgr.pro	3 KB	PRO File
license.txt	34 KB	Text Document
notices.txt	47 KB	Text Document
version.txt	1 KB	Text Document



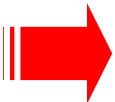
## i5/OS install physical media

CD structure depends on the platform

- I-Setup (common master) Portal Install Version 6.0 Version
- I-1 WebSphere Application Server Base for i5/OS Version 6.0.2.9
- I-2 WebSphere Application Server Network Deployment
- I-3 (common master) Portal Server (Disc 1 of 2)
- I-4 (common master) Portal Server (Disc 2 of 2)
- I-5 (common master) Personalization Version 6.0
- I-6 WebSphere Application Server PTF Group V5R3 Vol 1
- I-7 WebSphere Application Server PTF Group V5R3 Vol 2
- I-8 WebSphere Application Server PTF Group V5R3 Vol 3
- I-9 WebSphere Application Server PTF Group V5R4 Vol 1
- I-10 WebSphere Application Server PTF Group V5R4 Vol 2
- I-11 WebSphere Application Server PTF Group V5R4 Vol 3
- I-12 WebSphere Application Server PTF Group V5R4 Vol 4
- I-13 Lotus Domino Enterprise Server for i5/OS (Disc 1 of 2) English Release 7.0.1
- I-14 Lotus Domino Enterprise Server for i5/OS (Disc 2 of 2) English Release 7.0.1
- I-15 thru I-21 Lotus Domino Language Pack for i5/OS
- I-22 Lotus Sametime Server for i5/OS English Release 7.0 Release 7.0
- I-23 thru I-25 Lotus Sametime Components CD and Server Language Packs for i5/OS

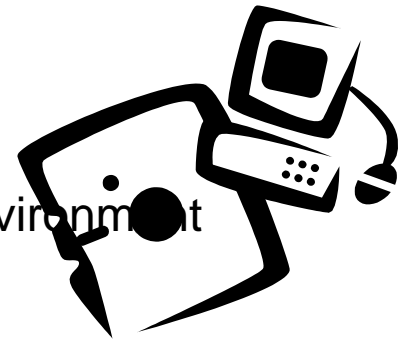


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## Software prerequisites


- 5722SS1 i5/OS® V5R4 or V5R3
- 5733W60 \*BASE and option 2 V6.0.2.15 or later
- 5733W60 option 3 WebSphere Application Server Network Deployment V6.0.2.15 or later for cluster environments
- 5722JV1 (Option \*BASE) IBM Developer Kit for Java™
- 5722JV1 (Option 6) Java Developer Kit (Version 1.4)
- 5722JV1 (Option 7) Java Developer Kit (Version 1.5)
- 5722SS1 (Option 12) Host Servers
- 5722SS1 (Option 30) QShell Interpreter
- 5722SS1 (Option 33) Portable Application Solution Environment (PASE)
- 5722SS1 (Option 34) Digital Certificate Manager
- 5722SS1 (Option 43) Additional Fonts
- 5722DG1 IBM HTTP Server for iSeries
- 5722TC1 TCP/IP Utilities
- 5722JC1 Toolbox for Java
- 5722AC3 Crypto Access Provider 128-bit (V5R3 only)
- 5722XW1 V5R4M0 IBM eServer iSeries Access Family (optional)
- 5722XH2 V5R4M0 IBM eServer iSeries Access for Web (optional)



# WAS PTF prerequisites

- 5722SS1 i5/OS V5R3
  - Cumulative PTF group SF99530 level 5298 or later
  - IBM DB2® for i5/OS® PTF group SF99502 level 8 or later  
PTF SI24550
  - WebSphere Application server V6 **fixpack 15** - PTF group SF99301 level 20 or later
- 5722SS1 i5/OS V5R4
  - Cumulative PTF group SF99540 level 6024 or later
  - IBM DB2 for i5/OS PTF group 99504 level 2  
PTF SI24569  
PTF SI24629
  - WebSphere Application server V6 **fixpack 15** - PTF group SF99312 level 8 or later
- Highly recommended:
  - Install latest CUM package and latest group PTFs for the prerequisite products before installing WebSphere Products
  - Read cover letter for SF99301 or SF99312 and follow instructions to run **UPDATE**. Fixpack is not applied until you run the UPDATE script
  - Group PTF information  
[http://www-912.ibm.com/s\\_dir/sline003.NSF/GroupPTFs?OpenView&view=GroupPTFs](http://www-912.ibm.com/s_dir/sline003.NSF/GroupPTFs?OpenView&view=GroupPTFs)

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# After installing WebSphere Application Server

- Change license information > Usage limit
  - CHGLICINF PRDID(5733W60) FEATURE(5102) USGLMT(\*NOMAX)
  - CHGLICINF PRDID(5733W60) FEATURE(5103) USGLMT(\*NOMAX)
- Verify WAS installation
  - /QIBM/ProdData/WebSphere/AppServer/V6/<edition>/bin/ivt server1 default

<edition> = Base or ND


- IVTL0035I: Scanning the file  
/QIBM/UserData/WebSphere/AppServer/V6/Base/profiles/default/logs/server1/SystemOut.log for errors and warnings
- IVTL0040I: 0 errors/warnings were detected in the file  
/QIBM/UserData/WebSphere/AppServer/V6/Base/profiles/default/logs/server1/SystemOut.log
- IVTL0070I: **IVT Verification Succeeded**
- IVTL0080I: **Installation Verification is complete**
- \$

# After installing WebSphere Application Server

- Run *checkprereqs*
  - cd /QIBM/ProdData/WebSphere/AppServer/V6/base/bin/
  - checkprereqs
  - CFGV7902I: Warnings:  
PRQV1013W: Required PTF group SF99114 not applied. PRQV1103W: 65535  
not recommended for system value QCCSID.
- Verify fixpack installation
  - cd /QIBM/ProdData/WebSphere/AppServer/V6/<edition>/bin
  - versioninfo

Name	IBM WebSphere Application Server - Base
Version	6.0.2.15
ID	BASE
Build Level	cf150636.04
Build Date	9/5/06
  - historyinfo
    - Verify Maintenance Package ID 6.0.2-WAS-WAS-OS400PPC64-FPfull0015 (or later) for all components
  - edtf '/QIBM/ProdData/WebSphere/AppServer/V6/<edition>/logs/update/6.0.2-WAS-WAS-OS400PPC64-FPfull0015.install/updatelog.txt'
    - Look for INSTCONFSUCCESS

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# Installation modes

The following installation modes are available for WebSphere Portal:

- Graphical interface mode:
  - Remote with graphical interface on Windows XP, Windows 2000, Windows 2003
- Console mode:
  - Remote console (command session) on Windows workstation
  - Local 5250 QSH session with console (text interface)
- Silent mode:
  - Remote silent install on Windows workstation with response file
  - Local silent install 5250 QSH session with response file (silent)
- Information Center documentation for all modes:
  - [http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/topic/com.ibm.wp.ent.doc/wpf/is\\_inst.html](http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/topic/com.ibm.wp.ent.doc/wpf/is_inst.html)

## Remote GUI Install and Config

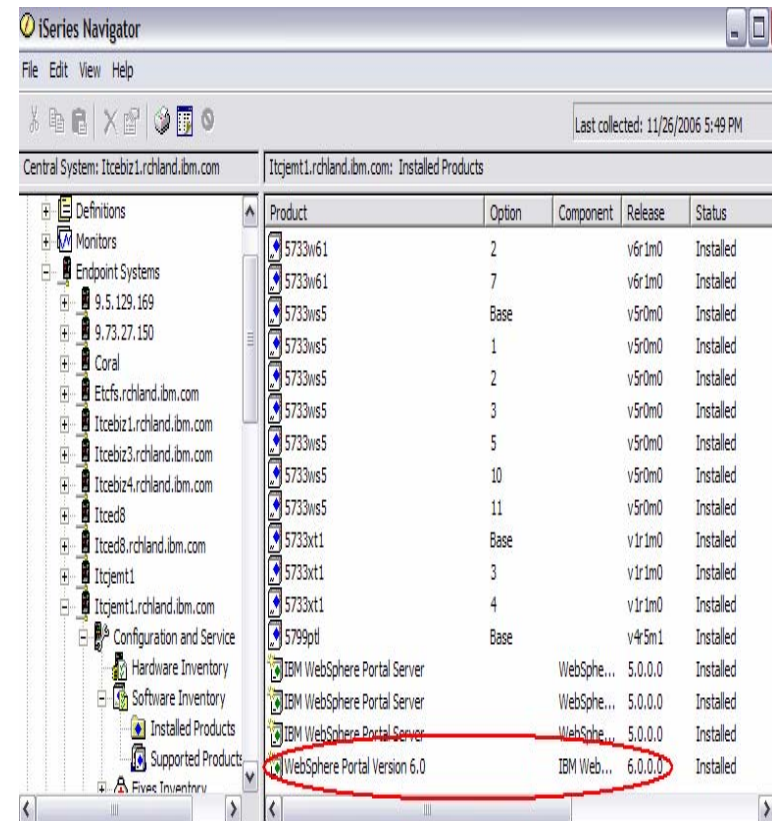
- Read Information Center at [http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/topic/com.ibm.w.p.ent.doc/wpf/is\\_inst\\_rem.html](http://publib.boulder.ibm.com/infocenter/wpdoc/v6r0/topic/com.ibm.w.p.ent.doc/wpf/is_inst_rem.html)
- LAN connection to the System i where you are performing the installation
- Verify communications in both directions (PC>host and host>PC)
- Stop personal firewall
- i5/OS user profile with \*ALLOBJ, \*SECADM, \*JOBCTL
  - Do NOT use QSECOFR user profile)
- STRHOSTSVR SERVER(\*ALL)
- STRSBS SBSD(QWAS6/QWAS6)



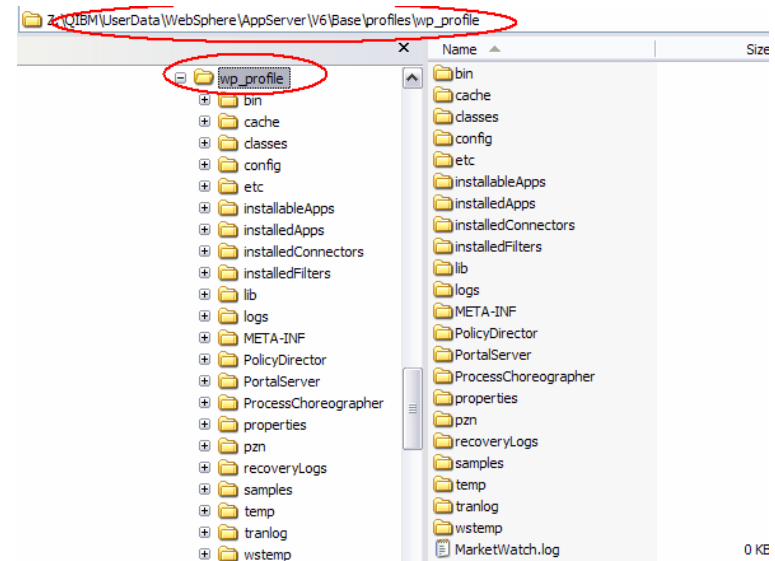
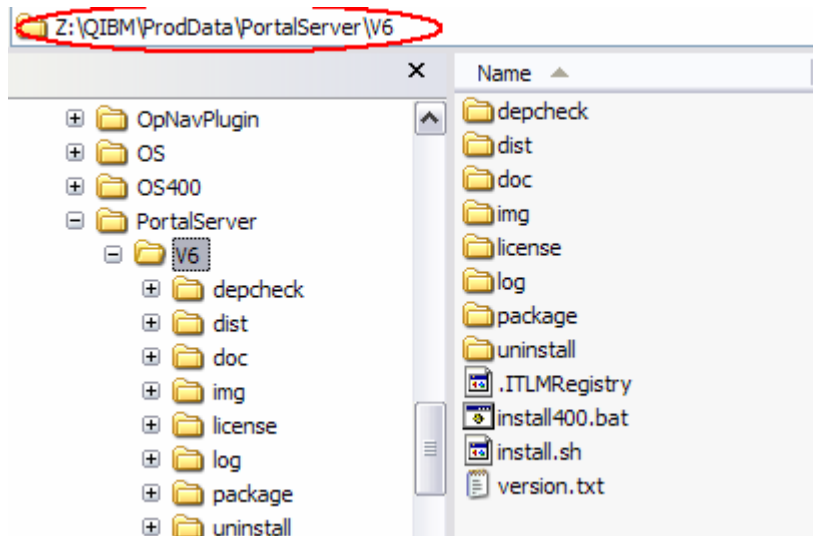
Remote install  
and config

# Verify WebSphere Portal installation

- Run the validation task
  - `cd /qibm/userdata/websphere/appserver/v6/base/profiles/wp_profile/portalserver/config`
  - `WPSconfig.sh -profileName profile_name validate-wps-admin-login`
- To view product WebSphere Portal through iSeries Navigator, do the following:
  1. Start iSeries Navigator.
  2. Right-click the name of the System i.
  3. Select **Inventory > Collect**.
  4. Select **Software > OK**.
  5. Expand the **Management Central** Section and double-click **Endpoint Systems**.
  6. Double-click the name of the System i
  7. Double-click **Configuration and Service**.
  8. Double-click **Software Inventory**
  9. Double-click **Installed Products**.



# Install and Configure results



```

Work with Active Jobs
11/26/06 17:21
CPU %: .0 Elapsed time: 00:00:00 Active jobs: 350

Type options, press Enter.
  2=Change  3=Hold  4=End  5=Work with  6=Release  7=Display message
  8=Work with spooled files 13=Disconnect ...

Current
Opt Subsystem/Job User Type CPU % Function Status
--- QWAS6 QSYS SBS .0 DEQW
--- WEBSHERE_ QEJBSVR BCH .0 PGM-QWASSTRSVR JVAW
--- WP_PROFILE QEJBSVR BCH .0 PGM-QWASSTRSVR JVAW
  
```


# Install Only

- Extracts the archived images into /QIBM/ProdData/PortalServer/V6
- Create Uninstall files

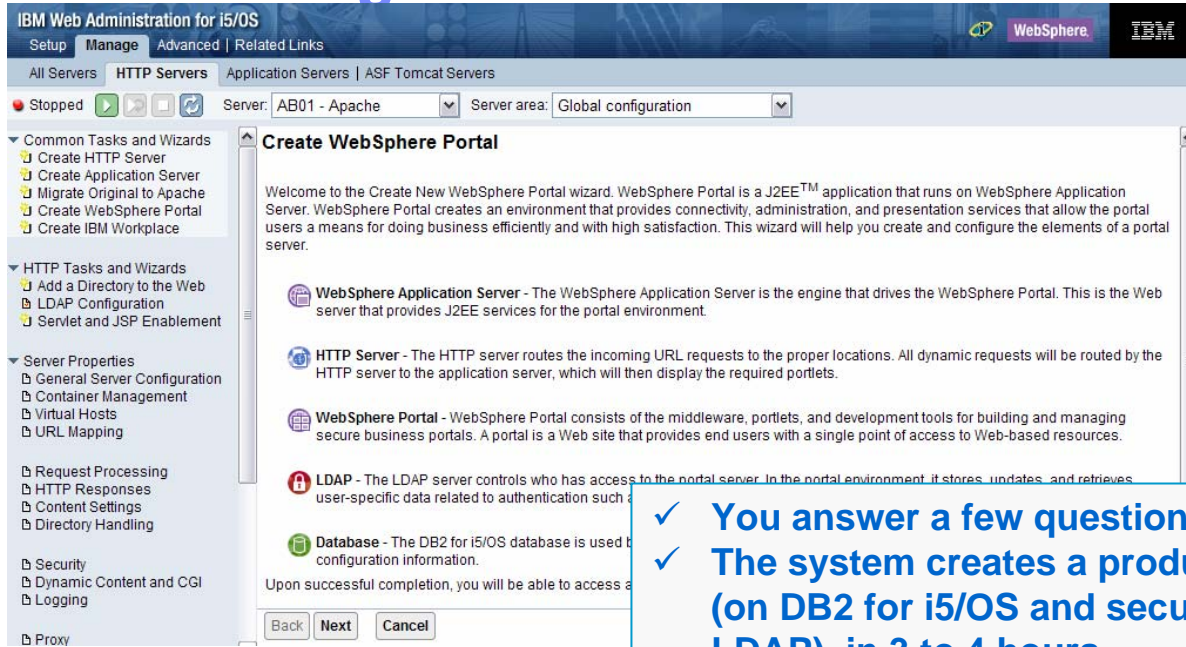


Install Only

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# i5/OS Configuration wizards for Portal and Workplace



- ✓ You answer a few questions
- ✓ The system creates a production Portal profile (on DB2 for i5/OS and security enabled with LDAP) in 3 to 4 hours

- Up front error detection
  - Validate user input
  - Verify infrastructure attributes
- Reduce skills required to configure Portal and Workplace
- This wizard is the preferred Portal on i5/OS configuration tool unless remote database or cluster (ND) configuration is required

# I5/OS Configuration wizard main features

- Upfront error detection
  - Validate user input
  - Verify infrastructure attributes
- Reduce skills required to configure Portal
- Main functions:
  - Product and PTF (fix) prerequisite checking
  - Configuration of Portal schemas on DB2 UDB for i5/OS
  - Enable security with LDAP
  - Configuration of external HTTP server on same i5/OS system
  - Automatic assignment of unused port range
    - Checking all WAS and HTTP servers configured on the system to avoid conflicts
  - User ID and password validation (e.g. LDAP admin user, DB user, WAS admin user)
  - Built-in LDAP browser for easy selection of user and group containers
  - Configure Portal to use Domino and extended products
  - SSO domain configuration
  - Deployment of iSeries Access for Web Portlets
  - Deployment of WCM Authoring server
  - Progress report and direct access to logs for each configuration phase
  - Comprehensive online Help
  - Frequently enhanced via i5/OS PTF



## i5/OS Configuration wizard special notes

- Default configuration values
  - Realm support (choice between real or non-realm)
  - LookAside=true (required for certain user mail preferences and other functions customers may want to use in the future)
- LDAP servers NOT supported on initial release
  - Microsoft Active Directory Application Mode (ADAM) 2003
- Database owner user profile must be unique for each portal profile
  - WebSphere Member Manager database schema will have the same name as the user ID that owns the databases
- Portal databases only local on initial release (remote databases are not supported)
  - Portal configured with i5/OS configuration wizard can NOT be used as Node 1 in a cluster deployment
- 5733-W60 \*BASE and option 2 must be installed even if option 3 (Network Deployment) is installed
- Cluster configuration is NOT supported



i5/OS Configuration  
Wizard Portal config

## IBM Web Administration for i5/OS Portal Configuration wizard

- Delivered with the following PTF groups:
  - V5R3 SF99099 level 12
  - V5R4 SF99114 level 7
- Requires WAS 6.0.2.15
  - V5R3 SF99301 level 20
  - V5R4 SF99312 level 8 or later
- Access for Web portlet deployment
  - 5722XH2 - PTF SI25551 (V5R4)