



System i  
Migration  
Data Migrations

*Version 5 Release 4*







System i  
Migration  
Data Migrations

*Version 5 Release 4*

**Note**

Before using this information and the product it supports, read the information in "Notices," on page 17.

**Fifth Edition (February 2006)**

This edition applies to version 5, release 4, modification 0 of i5/OS (product number 5722-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.

© Copyright International Business Machines Corporation 1998, 2006. All rights reserved.

US Government Users Restricted Rights – Use, duplication or disclosure restricted by GSA ADP Schedule Contract with IBM Corp.

---

# Contents

|  |          |
|--|----------|
| <b>Data migrations . . . . .</b>   | <b>1</b> |
| Printable PDF . . . . .  | 1        |
| i5/OS data migration concepts . . . . .  | 3        |
| Migration terminology . . . . .  | 4        |
| Planning the i5/OS data migration . . . . .  | 4        |
| Performing the migration . . . . .   | 6        |
| Preparing for the migration . . . . .  | 6        |
| Preparing the target system . . . . .  | 7        |
| Preparing the source system . . . . .  | 7        |
| Stabilizing the source system . . . . .  | 8        |
| Completing the migration . . . . .   | 8        |
| Preparing for the migration from an iSeries system<br>that does not support V5R4 . . . . . | 9        |

|   |    |
|---|----|
| Preparing target system . . . . .   | 10 |
| Preparing the source system . . . . .   | 10 |
| Completing the migration from an iSeries system<br>that does not support V5R4 . . . . . | 11 |
| Scenarios: Data migration. . . . .  | 13 |
| Troubleshooting the data migration . . . . .  | 14 |
| Related information for i5/OS data migration . . . . .                                  | 15 |

|   |           |
|---|-----------|
| <b>Appendix. Notices . . . . .</b>          | <b>17</b> |
| Programming Interface Information . . . . . | 19        |
| Trademarks . . . . .                        | 19        |
| Terms and conditions . . . . .              | 19        |



---

## Data migrations

An i5/OS® data migration is the process of moving data from one system that is running OS/400® (i5/OS) V5R2, V5R3, or V5R4 to another system running V5R4.

- | This information does not describe how to migrate your data from an OS/400 release earlier than V5R2.

For information about migrating data to an eServer or IBM® Systems platform, see the Data migration topic in the IBM Systems Hardware Information Center.

A License Addendum is provided to allow customers to install and use the copy of i5/OS (received with the newly ordered system) on their source system for up to 70 days. This Addendum authorizes the customers to use the new version and release on the source system for the sole purpose of migrating their data. The previous version and release must be reinstalled after the migration is completed.

This information assumes that you are moving data from one system to another. If you are installing a new version of i5/OS on the same system, it is not necessary to perform an explicit data migration. You can use the Installing, upgrading, or deleting i5/OS and related software topic. If you are upgrading to a new system without changing the serial number, use the Upgrades topic. If you are migrating data from one logical partition to another logical partition on the same system, follow the instructions in Chapter 3. "Restoring a Logical Partition to Another Logical Partition--Checklist 22" of the Backup and Recovery Guide.

IBM offers a fee-based service for migrating your data. For more information, see the IBM Migration Services Web site.

### Related information

Data migration

Installing, upgrading, or deleting i5/OS and related software

Upgrades



Backup and Recovery Guide



IBM Migration Services

---

## Printable PDF



Use this to view and print a PDF of this information.

## Important additional resources

To view or download the PDF version of this document, select **Data migrations** (about 124 KB or 20 pages).

The Data migrations topic refers to information found in other topics in the information center. Use the online version of this topic to link to these other topics directly. However, if you use the printed or PDF version of the Data migrations topic, you should also print the following resources to use in conjunction with the Data migrations PDF.

| Plan for migration:                           |                         |
|---|-------------------------|
| Title   | Details                 |
| "Planning the i5/OS data migration" on page 4 | Plan for your migration |

| <b>Plan for migration:</b>  |   |
|---|---|
| <b>Title</b>  | <b>Details</b>  |
| <b>Prepare for migration:</b>   |   |
| Operations Consoles   | Find information to help you choose and set up a console.   |
| Creating logical partitions   | Use this information to create logical partitions on the target system.   |
| Backup and Recovery<br><br>(about 570 pages)   | Use this information to perform disk unit management before migrating your data (use Chapter 18. "Procedures for configuring disks and disk protection").   |
| Cleaning up disk storage space  | Cleaning up the source system before you migrate your data ensures that you are migrating only what is needed.  |
| Ensuring you have required fixes (program temporary fixes or PTFs)  | Install the most current software fixes before migrating your data to the target system.  |
| Preparing to install the i5/OS release  | Use this information to help you install i5/OS V5R4 on the source system before migrating your data.  |
| Installing the i5/OS release  | Use this information to help you install i5/OS V5R4 on the source system before migrating your data.  |
| Printing the system configuration list  | Document the current system configuration before migrating your data.   |
| Printing system configuration for logical partitions  | If you have a partitioned system, document the current partitioned system configuration before migrating your data.   |
| GO SAVE command   | Back up the source system in preparation for migrating your data. You migrate your data by restoring this copy of the data on the target system.  |
| Collecting system performance data  | Use this information to gather performance data so that you can compare system performance before and after the migration.  |
| <b>Complete the migration:</b>  |   |
| Backup and Recovery<br><br>(about 570 pages) | Use this information to: <ul style="list-style-type: none"> <li>• Migrate data from one partition to another on the same system.</li> <li>• Migrate your data from a source system that can run i5/OS V5R4 (use Appendix D. "Recovering your server to a different server").</li> <li>• Migrate your data from a source server that cannot run i5/OS V5R4 (use Chapter 14. "Previous Release-to-Current Release Support").</li> <li>• Restore your source server to its original state (use Appendix C. "Recovering your server").</li> </ul> |
| Fixing hardware resource names after an upgrade   | Use this information if a controller or device no longer has a valid resource on the system after the migration is complete.  |
| Installing additional licensed programs   | Use this information to install any additional licensed programs on the target system.  |
| GO SAVE command   | Back up the target systems when the data migration is complete.   |
| Printing the system configuration list  | Document the new target system configuration when the migration is complete.  |



| Plan for migration:                                  |  |
|--|--|
| Title  | Details  |
| Printing system configuration for logical partitions | Document the new target system configuration when the data migration is complete.  |
| Tuning performance                                   | Find information about enabling your system to make the best use of the system resources and enabling workloads to run as efficiently as possible. |

## Other information

You can also view or print any of the following PDFs that are closely related to this topic:

### Upgrades (about 285 KB or 43 pages)

You can use this information if you want to upgrade your server with new hardware while retaining its serial number.

### Installing, upgrading, or deleting i5/OS and related software (about 220 pages)

You can use this information if you are upgrading your system with a new i5/OS release.

### Logical partitions

If you are upgrading from or to a partitioned server, you can use this topic to choose from a number of PDFs that contain information about logical partitions.

### Backup and Recovery (about 570 pages)

You can use this information to back up your system before performing upgrade tasks. This allows you to recover a working configuration should you experience problems during any part of the upgrade.


For additional information related to migration, see Related information.

## Saving PDF files

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

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

## Downloading Adobe Acrobat Reader

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

---

## i5/OS data migration concepts

An i5/OS data migration is the process of moving data from one system to a new system where the source system and the target system have different serial numbers.

## Data migration process

The data migration process includes planning, ordering, preparing for, and performing the data migration. Planning is most involved and may require up to 6 weeks, depending on the complexity of your environment. Installing the i5/OS release on the source system requires at least one hour. Migrating the data from the source system to the target system can normally be accomplished in up to 3 days.

## Migration terminology

These terms are specific to the i5/OS data migration process.

If you are moving from one system, hardware feature, or software version to another system, hardware feature, or software version and you are retaining the same system serial number, see Upgrade terminology.

### migration

Any movement of software or data. When used in this topic, migration refers to any of the following:

- Movement of software or data where the data is used on a different system (with a different system serial number)
- Movement of software or data that skips one or more releases of the software
- A situation where one software feature is converted to another software feature

Contrast *migration* with *upgrade*, where the target system retains the serial number of the source system.

### data migration

The movement of data when the software is upgraded or the data is transferred to a different hardware system or model.

### source system

The existing system that is being migrated to a new level of software.

### target system

The planned hardware configuration and software level which will exist when the migration is completed.

#### Related information

Upgrade terminology

---

## Planning the i5/OS data migration

The time you spend planning for your i5/OS data migration can help minimize your downtime and make performing the migration easier.

You can view planning tasks or create a customized planning checklist using the information available in the Planning topic of the IBM Systems Hardware Information Center. To use this information, you need to know specific information about your order, such as model release, features, and any additional solutions you have ordered. Return to this topic when you have completed the planning tasks in the checklist for your environment. Before you can migrate your data, you must do the following:

Plan for the hardware, which includes the following:

- Ordering the target system with feature code 0205.

This feature code ensures that the target system is set up for the data migration and entitles you to run the new operating system on both the source and target systems for a maximum of 70 days so that you can complete the data migration. You must reinstall the previous operating system on the source system after the data migration is complete.

- Identifying disk storage requirements.

You must ensure that you have enough disk storage capacity for the new operating system and for the data from the source system, as well as for any new data and software planned for the target system.

- Identifying any tape incompatibilities.

You must ensure that you have a tape drive that is compatible with the target system. To determine if your tape drive is compatible, see the Storage Solutions Web site or the System Handbook. To learn more about tape devices, see the Tape topic.

- Ensuring that you have a physical plan for the target system.  
The target system is going to be set up and running beside the source system for a period of time. There are physical planning and setup implications that pertain to the target system.

Plan for the software, which includes the following:

- Evaluating disk storage space requirements.  
You must ensure that you will have adequate disk storage before you start to install or replace software.
- Identifying possible upgrade paths for licensed programs.  
When you install the new release of the i5/OS operating system, some licensed programs may no longer work. You should identify licensed programs that are no longer available at this release and their replacements where applicable. Additionally, to avoid losing data that depends on these licensed programs, migrate the data from your system to an accessible location before installing the new release.

Plan for your connection, which includes the following:

- Choosing a console.  
If you are using a twinaxial console on the source system and using Operations Console on the target system, ensure that you have a twinaxial controller for any twinaxial devices you plan to run from the target system.

When you have completed these tasks, you should have a final data migration plan that includes the following:

| When you are finished  |
|--|
| <input type="checkbox"/> <p>Record a final hardware and software plan that includes feature code 0205 and addresses disk storage capacity and compatible tape drives. This plan might cause you to change your software or hardware order.</p> |
| <input type="checkbox"/> <p>Record a physical plan for the target system.</p>  |

IBM Migration Services can help you in planning and migrating your data to the latest models. For more information, see the IBM Migration Services Web site.

The next step is to perform the migration.

**Related tasks**

“Performing the migration” on page 6

To prepare for and perform a data migration from both a source system that does support the V5R4 release of i5/OS and a source system that does not support the V5R4 release of i5/OS, follow these general procedures.

“Preparing for the migration” on page 6

To prepare to migrate your i5/OS data to a new target system, follow these procedures.

“Preparing for the migration from an iSeries system that does not support V5R4” on page 9

If you cannot install i5/OS V5R4 on your source system, you can still migrate your data by saving your source system and then performing a full system recovery onto the target system. This topic describes how to prepare to migrate your data from a system that does not support V5R4 to the new target system.

**Related information**

 Planning

 Storage Solutions

 IBM System i5 Handbook

Tape

 IBM Migration Services

---

## Performing the migration

To prepare for and perform a data migration from both a source system that does support the V5R4 release of i5/OS and a source system that does not support the V5R4 release of i5/OS, follow these general procedures.

Before you begin these tasks, be sure you have completed the necessary planning. You can migrate your data by using one of these paths:

If you can load i5/OS V5R4 on your source system, perform these procedures.

1. Prepare for the migration.
2. Complete the migration.

If you cannot load i5/OS V5R4 on your source system, perform these procedures.

1. Prepare for the migration from an iSeries™ system that does not support V5R4.
2. Complete the migration from an iSeries system that does not support V5R4.

### Related concepts

“Planning the i5/OS data migration” on page 4

The time you spend planning for your i5/OS data migration can help minimize your downtime and make performing the migration easier.

## Preparing for the migration

To prepare to migrate your i5/OS data to a new target system, follow these procedures.

Before you begin this procedure, be sure you have completed these prerequisite tasks:

- Obtain and review the preventive service planning (PSP) information. The PSP document for V5R3 data migrations is SF98167. Review this document for the most current information about conditions that could affect your data migration.
- Plan the migration.

Then, to prepare to migrate your data, perform these tasks:

### Related concepts

“Planning the i5/OS data migration” on page 4

The time you spend planning for your i5/OS data migration can help minimize your downtime and make performing the migration easier.

“Scenarios: Data migration” on page 13

These scenarios show different migration situations of moving i5/OS data to another system.

### Related tasks

“Completing the migration” on page 8

To migrate data to the target system or partition, perform these procedures.

### Related information

Preventive service planning (PSP) information

Operations Console

Creating logical partitions



Backup and Recovery Guide

Preparing to install the i5/OS release

Completing the installation of the i5/OS release

Printing the system configuration list

Printing system configuration for logical partitions

GO SAVE

## Preparing the target system

1. Ensure that your console is set up and ready.

**Note:** If you are using a twinaxial console on the source system and using Operations Console on the target system, ensure that you have a twinaxial controller for any twinaxial devices you plan to run from the target system.

2. Verify that the target system is set up and is running with only the Licensed Internal Code and the i5/OS operating system installed (feature code 0205).
3. If you are configuring a system with logical partitions, you must create logical partitions on the target system and then install the Licensed Internal Code and i5/OS on each secondary partition. Allow at least two additional hours to do this for each partition.
4. Perform disk unit management (for example, manage disk protection and disk configuration). To do this, you can use the Work with Disk Units option from the Dedicated Service Tools display. For more information, see the chapter that contains Procedures for configuring disks and disk protection in the Backup and Recovery Guide.

## Preparing the source system

1. Prepare to install the i5/OS release.

Ensure that you do the following:

- Use the Work with Line Descriptions command (WRKLIND) to view and delete unused lines and line descriptions.
- Use the Work with Device Descriptions command (WRKDEVD) to delete unused device descriptions.

**Note:** You can use the Work with Line Descriptions and Work with Device Descriptions commands to view and verify that all of the descriptions listed are in use. If you are sure one is not in use, delete it. If you are not sure, you should leave it.

- Save the entire system so you can restore it to its original state after performing the data migration.

**Note:** It is recommended that you have two copies of the backup media.

Feature code 0205 entitles you to run the new operating system on both the source and target systems for a maximum of 70 days so that you can complete the data migration. When the data migration is complete, you must reinstall the previous operating system on the source system to restore the system to its original state. To restore the system to its original state, follow the steps in Recovering your server in Appendix C of the Backup and Recovery manual. Use the Backup and Recovery manual for the release that you want to restore.

2. Complete the installation of the i5/OS release.
3. Print your system configuration information as follows:
  - a. On the i5/OS command line, enter PRTSYSINF and then print the resulting spooled file. This prints reports of the hardware resources, software resources, system values, installed fixes (program temporary fixes or PTFs), and other configuration information.
  - b. Print a new system configuration list and keep this list for future reference.
  - c. On the i5/OS command line, enter WRKDEVD. Use option 6 (Print) to print the device descriptions.

- d. On the i5/OS command line, enter WRKCTLD. Use option 6 (Print) to print the controller descriptions.
- e. If you have a partitioned system, print the system configuration for logical partitions.

### Stabilizing the source system

1. Run the source system at the new release level for 2 weeks.
2. Save the entire system using option 21 of the GO SAVE command. Make sure that you specify the following options:
  - a. Vary off the network server...\*ALL
  - b. Unmount file systems.....Y

**Note:** It is recommended that you have two copies of the backup media.

The next step is to complete the migration.

### Completing the migration

To migrate data to the target system or partition, perform these procedures.

Be sure you have completed the necessary preparation before you begin.

1. Perform the steps in Appendix D: "Recovering your server to a different server" of the Backup and Recovery Guide. If a controller or device no longer has a valid resource on the system, follow the steps in fix hardware resource names after an upgrade to make the necessary corrections.
2. Install any new licensed programs (LPs).
3. Print your system configuration information as follows:
  - a. On the i5/OS command line, enter PRSYSINF and then print the resulting spooled file. This prints reports of the hardware resources, software resources, system values, installed fixes (program temporary fixes or PTFs), and other configuration information.
  - b. Print a new system configuration list and keep this list for future reference.
  - c. On the i5/OS command line, enter WRKDEVD. Use option 6 to print the device descriptions.
  - d. On the i5/OS command line, enter WRKCTLD. Use option 6 to print the controller descriptions.
  - e. If you have a partitioned system, print the system configuration for logical partitions.
4. Save the entire system using option 21 of the GO SAVE command. Make sure that you specify the following options:
  - a. Vary off the network server...\*ALL
  - b. Unmount file systems.....Y

**Note:** It is recommended that you have two copies of the backup media.

5. Resume normal operations and verify that all your applications run properly.
6. Tune the system performance.  
This ensures that your systems make the best use of the system resources and allows workloads to run as efficiently as possible.

#### Related concepts

"Scenarios: Data migration" on page 13  
These scenarios show different migration situations of moving i5/OS data to another system.

#### Related tasks

"Preparing for the migration" on page 6  
To prepare to migrate your i5/OS data to a new target system, follow these procedures.

#### Related information



Backup and Recovery Guide

Fixing hardware resource names after an upgrade  
Installing additional licensed programs  
Printing the system configuration list  
Printing system configuration for logical partitions  
GO SAVE  
Tuning performance

## Preparing for the migration from an iSeries system that does not support V5R4

If you cannot install i5/OS V5R4 on your source system, you can still migrate your data by saving your source system and then performing a full system recovery onto the target system. This topic describes how to prepare to migrate your data from a system that does not support V5R4 to the new target system.

Before you begin this procedure, be sure you have completed these prerequisite tasks:

- Obtain and review the preventive service planning (PSP) information. The PSP document for V5R3 data migrations is SF98167. Review this document for the most current information about conditions that can affect your data migration.
- Plan the migration.
- Review the introductory information about Previous Release-to-Current Release Support in the Backup and Recovery Guide.

Then, to prepare to migrate your data from a system that does not support V5R4, perform the following tasks.

### Related concepts

“Planning the i5/OS data migration” on page 4

The time you spend planning for your i5/OS data migration can help minimize your downtime and make performing the migration easier.

“Scenarios: Data migration” on page 13

These scenarios show different migration situations of moving i5/OS data to another system.

### Related tasks

“Completing the migration from an iSeries system that does not support V5R4” on page 11

This topic describes how to complete the data migration from your system that does not support V5R4 to the new target system.

### Related information

Preventive service planning (PSP) information



Backup and Recovery Guide

Creating logical partitions

Operations Console

Cleaning up disk storage space

Ensuring you have required fixes (program temporary fixes or PTFs)

Collecting system performance data

Printing the system configuration list

Printing system configuration for logical partitions

Saving and restoring spooled files

GO SAVE



## Preparing target system

1. Verify that the target system is set up and is running with only the Licensed Internal Code and the i5/OS operating system installed (feature code 0205).
2. If you are configuring a system with logical partitions, you must create logical partitions on the target system and then install the Licensed Internal Code and i5/OS on each secondary partition. Allow at least two additional hours to do this for each partition.
3. Ensure that your console is set up and ready.

**Note:** If you are using a twinaxial console on the source system and using Operations Console on the target system, ensure that you have a twinaxial controller for any twinaxial devices you plan to run from the target system.

4. Perform disk unit management (for example, manage disk protection and disk configuration). To do this, you can use the Work with Disk Units option from the Dedicated Service Tools display. For information, see the chapter that contains procedures for configuring disks and disk protection in the Backup and Recovery Guide.
5. Make sure that you have a copy of the distribution media for the target system.

## Preparing the source system

1. Clean up the source system:
  - a. Use the Work with Line Descriptions command (WRKLIND) to view and delete unused lines and line descriptions.
  - b. Use the Work with Device Descriptions command (WRKDEVD) to delete unused device descriptions.

**Note:** You can use the Work with Line Descriptions and Work with Device Descriptions commands to view and verify that all of the descriptions listed are in use. If you are sure one is not in use, delete it. If you are not sure, you should leave it.

- c. Clean up disk storage space.
2. Ensure you have required fixes (program temporary fixes or PTFs).
3. Collect performance data.

This gives you a basis for comparing performance before and after the data migration.
4. On the i5/OS command line, enter RTVSYSINF.

When you run this command, you will need to specify the library to use. Typically, you should specify the QUPGRADE library. If this library does not exist, create it with the Create Library (CRTLIB) command.
5. Print your system configuration information:
  - a. On the i5/OS command line, enter PRTSYSINF and then print the resulting spooled file. This prints reports of the hardware resources, software resources, system values, installed fixes (program temporary fixes or PTFs), and other configuration information.
  - b. Print a new system configuration list and keep this list for future reference.
  - c. On the i5/OS command line, enter WRKDEVD. Use option 6 (Print) to print the device descriptions.
  - d. On the i5/OS command line, enter WRKCTLD. Use option 6 (Print) to print the controller descriptions.
  - e. If you have a partitioned system, print the system configuration for logical partitions.
  - f. If necessary, save spooled files.

For more information, see Save spooled files in the Information Center.
  - g. Job scheduler entries will not be restored on the target system. Use the print option on the Work with Job Scheduler Entries (WRKJOBSCDE) command to record your current job scheduler entries. Then you can manually re-create them on the target system.



6. Save the entire system using option 21 of the GO SAVE command. Make sure that you specify the following options:
  - a. Vary off the network server...\*ALL
  - b. Unmount file systems.....Y

**Note:** It is recommended that you have two copies of the backup media.

The next step is to complete the migration from an iSeries system that does not support V5R4.

## Completing the migration from an iSeries system that does not support V5R4

This topic describes how to complete the data migration from your system that does not support V5R4 to the new target system.

Before you begin these tasks, be sure you have completed the necessary preparation.

If your target system is set up and is running with only the Licensed Internal Code and the i5/OS operating system installed (feature code 0205), you can begin at step 1 in this procedure. If you did not get a new system with feature code 0205, follow steps 1 through 33 in the topic Restoring previous release user data to a new system: Step-by-step instructions in Chapter 14 of the Backup and Recovery Guide to install the Licensed Internal Code and i5/OS on the target system. When you have completed these steps, continue with step 8 in this topic.

1. Sign on to the target system as user QSECOFR. You do not need to enter a password at this time.
2. At the IPL Options screen, enter the correct date and time. Verify that the following values are set as follows:
  - Start to system to restricted state = Y
  - Define or change system at IPL = Y
  - Set major system options = Y
3. On the Set Major System Options screen, select **N** to not enable automatic configuration.
4. On the Define or Change the System at IPL screen, do the following:
  - a. Select option 3 (System value commands).
  - b. On the System Value Commands screen, select option 3 (Work with System Values).
  - c. On the Work with System Values screen, type 2 next to the following system values:
    - Change QALWOBJRST to \*ALL
    - Change QIPLTYPE to 2
    - Change QJOBMSGQFL to \*PRTWRAP
    - Change QJOBMSGQMX to a minimum of 30
    - Change QPFRADJ to 2
    - Change QVIFYOBJRST to 1
  - d. After the system changed the system values, press F3 twice to return to the Define or Change the System at IPL screen
5. On the Define or Change the System at IPL screen, press F3 to exit and continue the IPL.
6. On the Change Password screen, type QSECOFR as the current password. Enter a new password. Re-enter the password to verify and press Enter.
7. Perform steps 25 through 31 in the topic, Restoring previous release user data to a new system: Step-by-step instructions in Chapter 14 of the Backup and Recovery Guide.
8. If a controller or device no longer has a valid resource on the system, follow the steps in fix hardware resource names after an upgrade to make the necessary corrections.
9. Install any new licensed programs (LPs).
10. Follow the steps in Installing, upgrading, or deleting i5/OS and related software.

11. Use the Add Job Schedule Entry (ADDJOBSCDE) command and the information you printed from your source system to add job scheduler entries.
12. If you installed an integrated Windows® server on your system and you saved it while it was varied off, follow these steps:
  - a. Add the links for the server descriptions. Enter the following for each server description:  
ADDNWSSTGL NWSSTG (storage\_name) NWSD(server\_description)
  - b. Vary on your integrated server by entering WRKCFGSTS \*NWS and selecting option 1 to vary on each server.
13. Print your system configuration information:
  - a. On the i5/OS command line, enter PRSYSINF and then print the resulting spooled file. This prints reports of the hardware resources, software resources, system values, installed fixes (program temporary fixes or PTFs), and other configuration information.
  - b. Print a new system configuration list and keep this list for future reference.
  - c. On the i5/OS command line, enter WRKDEVD. Use option 6 to print the device descriptions.
  - d. On the i5/OS command line, enter WRKCTLD. Use option 6 to print the controller descriptions.
  - e. If you have a partitioned system, print the system configuration for logical partitions.
14. Save the entire system using option 21 of the GO SAVE command. Make sure that you specify the following options:
  - a. Vary off the network server...\*ALL
  - b. Unmount file systems.....Y

**Note:** It is recommended that you have two copies of the backup media.

15. Resume normal operations and verify that all your applications run properly.
16. Tune the system performance.  
This ensures that your systems make the best use of the system resources and allows workloads to run as efficiently as possible.

#### Related concepts

“Scenarios: Data migration” on page 13

These scenarios show different migration situations of moving i5/OS data to another system.

#### Related tasks

“Preparing for the migration from an iSeries system that does not support V5R4” on page 9

If you cannot install i5/OS V5R4 on your source system, you can still migrate your data by saving your source system and then performing a full system recovery onto the target system. This topic describes how to prepare to migrate your data from a system that does not support V5R4 to the new target system.

#### Related information



Backup and Recovery Guide

Fixing hardware resource names after an upgrade

Installing additional licensed programs



Installing, upgrading, or deleting i5/OS and related software

Printing the system configuration list

Printing system configuration for logical partitions

GO SAVE

Tuning performance

---

## Scenarios: Data migration

These scenarios show different migration situations of moving i5/OS data to another system.

### Data migration scenario 1: Migrating from V5R1 on a model 620 to V5R4 on a model 520 system

In this scenario, you have a model 620 system, you are running V5R1, and you want to migrate your data to a model 520 system.

#### What to do:

You cannot install i5/OS V5R4 on your 620 system. To migrate your data, you will save the data to a tape drive that is compatible with the model 520 and then restore the data on the model 520. To perform this data migration, first prepare for the migration and then complete the migration.

### Data migration scenario 2: Migrating from V5R1 on a model 740 to V5R4 on a partitioned model 570 system

In this scenario, you have a 740 system, you are running V5R1, and you want to migrate your data to a partitioned 570 system.

#### What to do:

You can install i5/OS V5R4 on your 740 system. To migrate your data, you first install V5R4 on your 740 system, then save the data to a tape drive that is compatible with the partitioned 570 system and restore the data on the 570 system. To perform this data migration, first prepare for the migration and then complete the migration.

### Data migration scenario 3: Migrating from V5R1 on a partitioned 830 system to V5R4 on an 825 system

In this scenario, you have an 830 system with multiple V5R1 partitions, and you want to migrate your data to an 825 system.

#### What to do:

You can install i5/OS V5R4 on your 825 system. To migrate your data, you first install V5R4 on all partitions of your 830 system, then save the data from each partition to a tape drive that is compatible with the model 825 system and restore the data on the 825 system. To perform this data migration, first prepare for the migration; then complete the migration.

### Data migration scenario 4: Installing a new version of i5/OS on your system

In this scenario, you are running V5R2, or V5R3 on your system and you want to upgrade to V5R4.

#### What to do:

If you are installing a new version of i5/OS on the same system, it is not necessary to perform an explicit data migration. You can use the Install the i5/OS release topic to install V5R4.

### Data migration scenario 5: Upgrading your system to a model 890 system

In this scenario, you want to upgrade to the 890 system.

#### What to do:

If you are upgrading to a new system without changing the serial number, it is not necessary to perform an explicit data migration. You can follow the directions in the Upgrades topic.

### Data migration scenario 6: Migrating data from one partition to another

In this scenario, you want to migrate data from one partition to another on your system.

#### What to do:

If you are migrating data from one system partition to another partition on the same system, follow the instructions for Restoring a Logical Partition to Another Logical Partition--Checklist 22 in Chapter 3 of the Backup and Recovery Guide.

#### Related tasks

“Preparing for the migration from an iSeries system that does not support V5R4” on page 9

If you cannot install i5/OS V5R4 on your source system, you can still migrate your data by saving

your source system and then performing a full system recovery onto the target system. This topic describes how to prepare to migrate your data from a system that does not support V5R4 to the new target system.

“Completing the migration from an iSeries system that does not support V5R4” on page 11  
 This topic describes how to complete the data migration from your system that does not support V5R4 to the new target system.

“Preparing for the migration” on page 6  
 To prepare to migrate your i5/OS data to a new target system, follow these procedures.

“Completing the migration” on page 8  
 To migrate data to the target system or partition, perform these procedures.

**Related information**

Installing the i5/OS release

Upgrades



Backup and Recovery Guide

## Troubleshooting the data migration

This information describes specific problems that might occur when you migrate data.

Error messages and reference codes (also known as system reference codes or SRCs) let you know that an error occurred during the process.

*Table 1. Data migration problems and resolutions*

| Description   | Resolution  |
|---|---|
| SRC A900 2000 appears on the control panel display.   | This SRC appears if the QIPLTYPE is set to 2 or if there is no device description for the console display. This SRC and message are normal during the data migration procedure. The SRC will disappear when you perform a normal IPL. If no workstation on your system is operational when you receive SRC A900 2000, call your service provider. |
| You see Message ID CPF3717: File not selected. File label or file name mismatch for file <i>filename</i> .                      | This type of message occurs most frequently when the incorrect tape is inserted into the tape drive or when you have incorrect parameters for the RESTORE command.  |
| Job scheduler entries are not restored on the target system when you migrate from an iSeries system that does not support V5R4. | You must manually re-create the job scheduler entries on the target system. If you did not print these entries before you migrated your data, you can get them from the source system.  |
| The target system cannot read the tapes you used to save the data from your source system.                                      | Save the data from the source system using a tape drive that is compatible with the target system.  |
| You cannot configure your twinaxial devices.  | If you are using a twinaxial console on the source system and using Operations Console on the target system, you must have a twinaxial controller for any twinaxial devices you plan to run from the target system.   |

For more information, see the preventive service planning (PSP) document. The PSP document for V5R3 data migrations is SF98167. This PSP document describes High-Impact and PERvasive (HIPER) problems.

**Related information**

Preventive service planning (PSP)

---

## Related information for i5/OS data migration

These additional resources could help you with the data migration process. This topic shows related i5/OS technical information in IBM Redbooks™, in other information center topics, and on IBM Web sites. You can view or print any of the PDFs.

### Manuals

- **Memo to Users**

This document provides information about software and hardware changes that can potentially affect your system operations.

- **Installing, upgrading, or deleting i5/OS and related software**  (about 220 pages)

Use this information if you are upgrading your system with a new i5/OS release. This manual is also a topic in the i5/OS Information Center. See *Installing, upgrading, or deleting i5/OS and related software*.

### Web sites

- **IBM Migration Services** 

This Web site contains information about the services IBM has available for helping you upgrade your system. This service includes a planning session that concludes with a final hardware and software configuration and installation plan. The services specialist can also perform on-site services to upgrade the system to the latest release of i5/OS, convert your SPD-attached I/O to PCI-attached I/O, perform disk unit migration, system consolidation and more.

- **Migration** 

This Web site includes information about the current migration and upgrade paths, a link to the Migration Redbook, and information about converting from SPC-attached I/O to PCI-attached I/O.

- **IBM FACT** 

This Web site contains the Find and Compare Tools (FACT) that deal with System i™ models and upgrade paths.

- **IBM System i Support: Planning** 

This Web site provides links to a variety of planning tools and information.

- **System i Support Planning: Migration and Upgrades** 

This Web site provides information about products or features that may not be supported in future releases of the i5/OS operating system or on future models, Product Previews, and Statements of Directions.

- **IBM System Planning tool** 

The IBM System Planning tool (LPAR Validation tool) is a Web-based tool that assists users in planning for a partitioned environment.

- **Dynamic logical partitioning** 

This Web site contains an introduction to logical partitioning as well as information about planning, services, and education.

- **Performance Management for IBM System i** 

This reference provides highly technical information about system performance useful for performance benchmarking, capacity planning, and planning for system performance.


- **IBM Systems Workload Estimator** 

The Workload Estimator tool is a Web-based tool that provides users with a recommended model, processor, interactive feature, memory, and disk storage necessary for a mixed set of workloads.

## Redbooks

- **IBM System i5™ Handbook** 

This book provides hardware concepts and technical specifications for System i models and features.

- **IBM System i5, eServer i5, and iSeries System Builder** 

This book provides detailed information and configuration rules for these models and features.

- **iSeries Server Migration** 

This book discusses the various topics that are involved in migrating to PCI technology. It also looks at other significant functions like High Speed Link (HSL) and concurrent maintenance capability. This book includes upgrade scenarios to assist with your planning. It explains such upgrade functions as load source migration and migrating to LPAR functions. And it describes the expansion unit options that preserve an investment in hardware or that migrate to new technology.

## Other information in the i5/OS Information Center

- **Preventive service planning (PSP) information**

Information within the PSP describes corrections that apply to migrations. Review this information before you migrate your data between systems.

- **Upgrades**

Use this information if are upgrading your system with new hardware while retaining its serial number.

- **Logical partitions**


Logical partitions allow you to distribute resources within a single system to make it function as if it were two or more independent systems. This information steps you through the logical partition process from creation to management.

## Saving PDF files

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

1. Right-click the PDF in your browser (right-click the link above).
2. Click **Save Target As** if you are using Internet Explorer. Click **Save Link As** if you are using Netscape Communicator.
3. Navigate to the directory in which you would like to save the PDF.
4. Click **Save**.

## Downloading Adobe Acrobat Reader

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

---

## Appendix. Notices

This information was developed for products and services offered in the U.S.A.

IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not grant you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing  
IBM Corporation  
North Castle Drive  
Armonk, NY 10504-1785  
U.S.A.

For license inquiries regarding double-byte (DBCS) information, contact the IBM Intellectual Property Department in your country or send inquiries, in writing, to:

IBM World Trade Asia Corporation  
Licensing  
2-31 Roppongi 3-chome, Minato-ku  
Tokyo 106-0032, Japan

**The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:** INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATION "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.

Any references in this information to non-IBM Web sites are provided for convenience only and do not in any manner serve as an endorsement of those Web sites. The materials at those Web sites are not part of the materials for this IBM product and use of those Web sites is at your own risk.

IBM may use or distribute any of the information you supply in any way it believes appropriate without incurring any obligation to you.

Licensees of this program who wish to have information about it for the purpose of enabling: (i) the exchange of information between independently created programs and other programs (including this one) and (ii) the mutual use of the information which has been exchanged, should contact:

IBM Corporation



Software Interoperability Coordinator, Department YBWA  
3605 Highway 52 N  
Rochester, MN 55901  
U.S.A.

Such information may be available, subject to appropriate terms and conditions, including in some cases, payment of a fee.

- | The licensed program described in this information and all licensed material available for it are provided
- | by IBM under terms of the IBM Customer Agreement, IBM International Program License Agreement,
- | IBM License Agreement for Machine Code, or any equivalent agreement between us.

Any performance data contained herein was determined in a controlled environment. Therefore, the results obtained in other operating environments may vary significantly. Some measurements may have been made on development-level systems and there is no guarantee that these measurements will be the same on generally available systems. Furthermore, some measurements may have been estimated through extrapolation. Actual results may vary. Users of this document should verify the applicable data for their specific environment.

Information concerning non-IBM products was obtained from the suppliers of those products, their published announcements or other publicly available sources. IBM has not tested those products and cannot confirm the accuracy of performance, compatibility or any other claims related to non-IBM products. Questions on the capabilities of non-IBM products should be addressed to the suppliers of those products.

All statements regarding IBM's future direction or intent are subject to change or withdrawal without notice, and represent goals and objectives only.

All IBM prices shown are IBM's suggested retail prices, are current and are subject to change without notice. Dealer prices may vary.

This information is for planning purposes only. The information herein is subject to change before the products described become available.

This information contains examples of data and reports used in daily business operations. To illustrate them as completely as possible, the examples include the names of individuals, companies, brands, and products. All of these names are fictitious and any similarity to the names and addresses used by an actual business enterprise is entirely coincidental.

#### COPYRIGHT LICENSE:

This information contains sample application programs in source language, which illustrate programming techniques on various operating platforms. You may copy, modify, and distribute these sample programs in any form without payment to IBM, for the purposes of developing, using, marketing or distributing application programs conforming to the application programming interface for the operating platform for which the sample programs are written. These examples have not been thoroughly tested under all conditions. IBM, therefore, cannot guarantee or imply reliability, serviceability, or function of these programs.

Each copy or any portion of these sample programs or any derivative work, must include a copyright notice as follows:

© IBM 2006. Portions of this code are derived from IBM Corp. Sample Programs. © Copyright IBM Corp. 2006. All rights reserved.

If you are viewing this information softcopy, the photographs and color illustrations may not appear.



---

## Programming Interface Information

This Data migration publication documents intended Programming Interfaces that allow the customer to write programs to obtain the services of i5/OS.

---

## Trademarks

The following terms are trademarks of International Business Machines Corporation in the United States, other countries, or both:

- | AS.400e
- | i5/OS
- | IBM
- | iSeries
- | OS/400
- | Redbooks
- | System i
- | xSeries

Microsoft, Windows, Windows NT, and the Windows logo are trademarks of Microsoft Corporation in the United States, other countries, or both.

Other company, product, and service names may be trademarks or service marks of others.

---

## Terms and conditions

Permissions for the use of these publications is granted subject to the following terms and conditions.

**Personal Use:** You may reproduce these publications for your personal, noncommercial use provided that all proprietary notices are preserved. You may not distribute, display or make derivative works of these publications, or any portion thereof, without the express consent of IBM.

**Commercial Use:** You may reproduce, distribute and display these publications solely within your enterprise provided that all proprietary notices are preserved. You may not make derivative works of these publications, or reproduce, distribute or display these publications or any portion thereof outside your enterprise, without the express consent of IBM.

Except as expressly granted in this permission, no other permissions, licenses or rights are granted, either express or implied, to the publications or any information, data, software or other intellectual property contained therein.

IBM reserves the right to withdraw the permissions granted herein whenever, in its discretion, the use of the publications is detrimental to its interest or, as determined by IBM, the above instructions are not being properly followed.

You may not download, export or re-export this information except in full compliance with all applicable laws and regulations, including all United States export laws and regulations.

IBM MAKES NO GUARANTEE ABOUT THE CONTENT OF THESE PUBLICATIONS. THE PUBLICATIONS ARE PROVIDED "AS-IS" AND WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT, AND FITNESS FOR A PARTICULAR PURPOSE.







Printed in USA