

# IBM Tivoli Storage Manager 6.2

## Upgrade from V5, Part 2: Performing the upgrade



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Welcome to the IBM Education Assistant module for upgrading IBM Tivoli® Storage Manager from version 5 to version 6.2. Before you continue with this module, ensure that you completed part one, which is entitled IBM Tivoli Storage Manager 6.2, Upgrade from V5, Part 1: Preparing to upgrade.

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## Assumptions

You are familiar with Tivoli Storage Manager version 5.5 or higher

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## Objectives

After completing this module, you should be able to:

- Access the upgrade utilities package
- Use the upgrade wizard
- Move the V5 database to a V6.2 server

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## Steps to upgrade from V5 to V6.2

1. Prepare for the upgrade
2. Uninstall the V5 program
3. Install the V6.2 server
4. Install the upgrade utilities on the original server
5. Upgrade the server by using one of these methods:
  - Using the upgrade wizard
  - Using the utilities manually
6. Complete the upgrade by taking important first steps

After you prepare for the upgrade, you install the upgrade utilities on the version 5 server. For information about the upgrade preparations, review the module, Upgrade from V5, Part 1: Preparing to upgrade.

## Accessing the upgrade utilities package

The upgrade utilities package is available to download from an IBM FTP site

1. Go to <ftp://ftp.software.ibm.com/storage/tivoli-storage-management/maintenance/server-upgrade>
2. Navigate to the directory where you see the platform on which your V5 server runs
3. In that directory, open the V5 directory
4. Open the V6.2.0 directory
5. Download the .tar or .exe file to a convenient location on the server system
6. Use the upgrade utilities to prepare and extract the database from the original server

Install the upgrade utilities package even if you use the upgrade wizard

The upgrade utilities are available from the IBM FTP site shown on this slide. You can also find this web address in the *IBM Tivoli Storage Manager: Server Upgrade Guide*. When you extract the utilities file, save it in a directory for your version 5 server, but not in the installation directory.

## Upgrading manually with the upgrade utilities

1. Prepare the V5 database  
Use the utility: DSMUPGRD PREPAREDB
2. Extract the V5 database to external media  
Use the utility: DSMUPGRD EXTRACTDB
3. Format an empty database to receive the data  
Use the utility: DSMSERV LOADFORMAT
4. Insert the data from the media to which it was extracted. You must have the manifest file  
Use the utility: DSMSERV INSERTDB

To perform the upgrade manually, use the utilities that are listed on this slide. Refer to the *IBM Tivoli Storage Manager: Server Upgrade Guide* for details about your server platform.

## Upgrading with the upgrade wizard

1. Install the upgrade utilities package on the system
2. Run the dsmupgdx.exe file in the Tivoli Storage Manager V6.2 server directory
3. Log on as administrator
4. Run the executable package for the upgrade utilities
5. Install the utilities package in its own directory  
Do not install the utilities in the installation directory for the original server that is to be upgraded

After you download the upgrade utilities package, launch the upgrade wizard and run the executable file for the upgrade utilities. Install the upgrade utilities in their own directory on the V5 server. Do not install the utilities in the installation directory. This type of installation requires administrator authority.

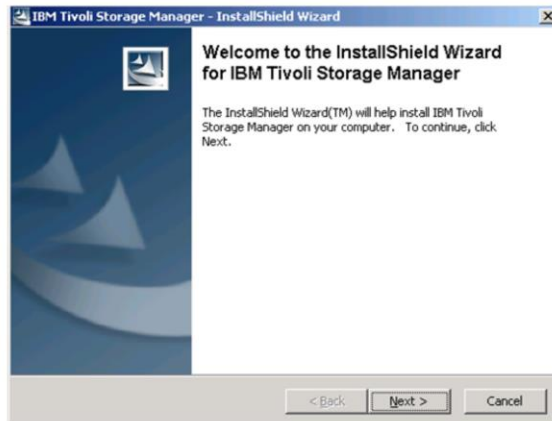
## Starting the upgrade wizard

Windows®:

C:\Program Files\Tivoli\TSM\server\dsmupgdx.exe

UNIX® and Linux®:

/opt/tivoli/tsm/server/bin/dsmupgdx



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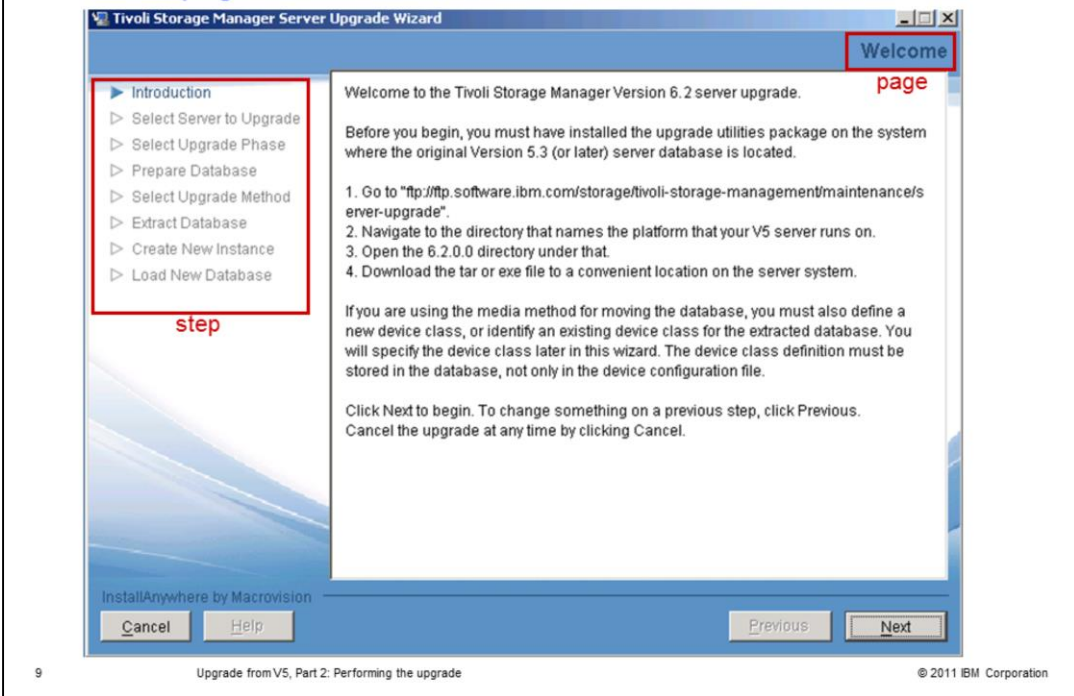
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The upgrade wizard executable, `dsmupgdx.exe`, is located in the server directory that you specify during installation. For Windows, the default location is **C:\Program Files\Tivoli\TSM\server\dsmupgdx.exe**. For UNIX and Linux, the default directory is **/opt/tivoli/tsm/server/bin/dsmupgdx**.

Click the executable file to begin the wizard.



## Welcome page



The first page of the upgrade wizard is the Welcome page. The instructions for accessing the upgrade utilities package are displayed in the center panel of the page. In the left navigation panel are breadcrumbs that you use to track your progress through the upgrade utility steps. Refer to the *IBM Tivoli Storage Manager: Server Upgrade Guide* for additional information.

Click **Next** to continue.

## Target system authentication

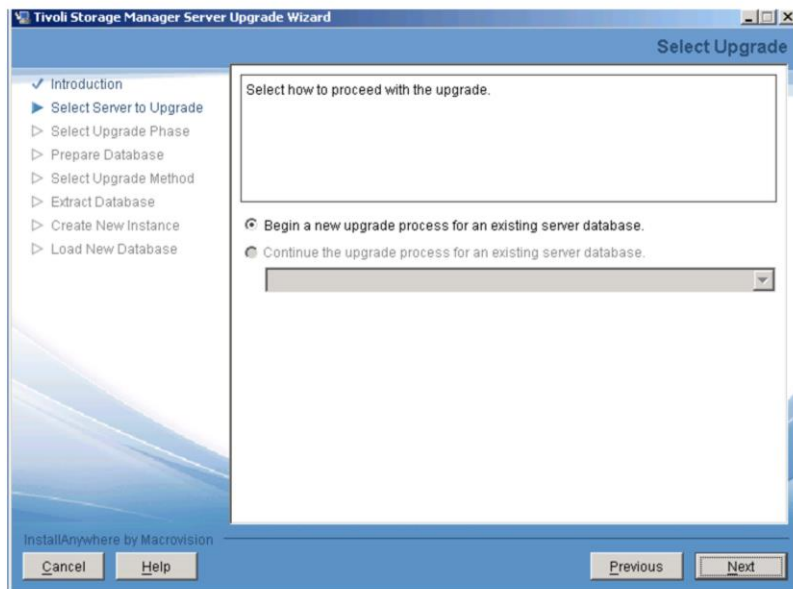
The screenshot shows the 'Target System Authentication' window of the Tivoli Storage Manager Server Upgrade Wizard. The window title is 'Tivoli Storage Manager Server Upgrade Wizard' and the subtitle is 'Target System Authentication'. On the left, a navigation pane lists the following steps: Introduction (checked), Select Server to Upgrade (highlighted), Select Upgrade Phase, Prepare Database, Select Upgrade Method, Extract Database, Create New Instance, and Load New Database. The main content area contains the following text: 'Specify the system on which the server to be upgraded resides. If the system is not the local system, specify the necessary credentials with which to log in.' Below this, there are two radio button options: 'The server being upgraded is on this system' (selected) and 'The server being upgraded is on a remote system'. A red box highlights these two options, with red text to the right stating 'scenarios 1 and 2' for the first option and 'scenarios 3 and 4' for the second. Below the radio buttons are three text input fields: 'Host name of remote system:' (empty), 'Administrator or root user ID:' (containing 'administrator'), and 'Administrator or root password:' (containing '\*\*\*\*\*'). A note at the bottom states: 'Note: When you click Next, the wizard will attempt to establish a connection to the local machine. Ensure that File and Print Sharing is enabled and that your firewall allows connections to port 445.' At the bottom of the window, there are 'Cancel', 'Help', 'Previous', and 'Next' buttons. The footer of the window shows 'InstallAnywhere by Macrovision' on the left, '10 Upgrade from V5, Part 2: Performing the upgrade' in the center, and '© 2011 IBM Corporation' on the right.

On the Target System Authentication page, the Select Server to Upgrade step is highlighted. You select whether you will upgrade on the same system (scenarios 1 and 2) or a new system (scenarios 3 and 4). If you are upgrading to a new system, enter the host name for that system. You must also supply the administrator or root ID and password for the system to be upgraded. This ID is the system ID, not the Tivoli Storage Manager ID.

In this example, you see scenario 2, where the upgrade is on the same system.

Click **Next** to continue.

## Select upgrade



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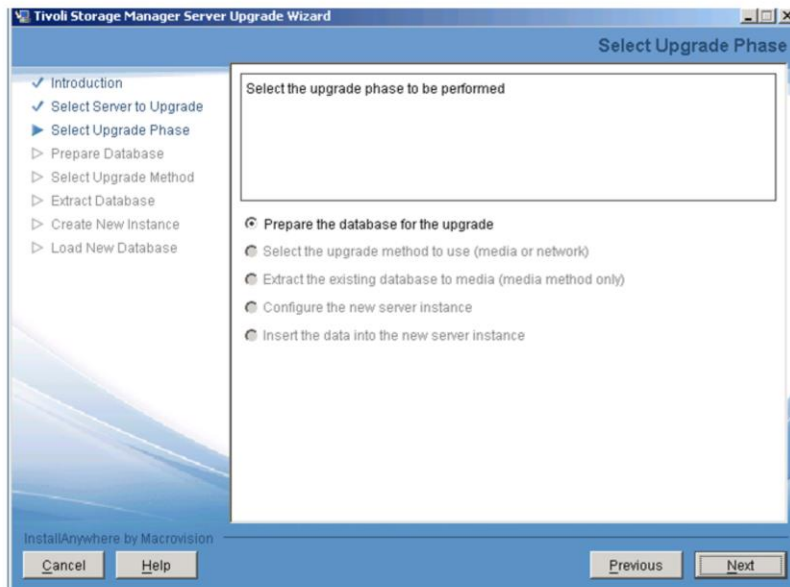
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On the Select Upgrade page, the option **Begin a new upgrade process for an existing server database** is selected. The *Continue the upgrade process for an existing server database* option is available if the upgrade fails and you begin again.

Click **Next** to continue.

## Select upgrade phase



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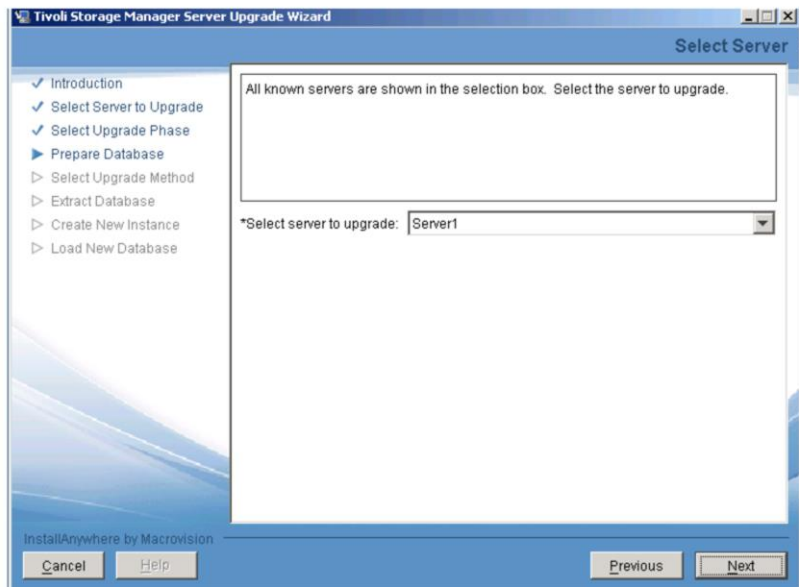
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On the Select Upgrade Phase page, the **Prepare the database for the upgrade** option is selected.

Click **Next** to continue.

## Select server



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Upgrade from VS, Part 2: Performing the upgrade

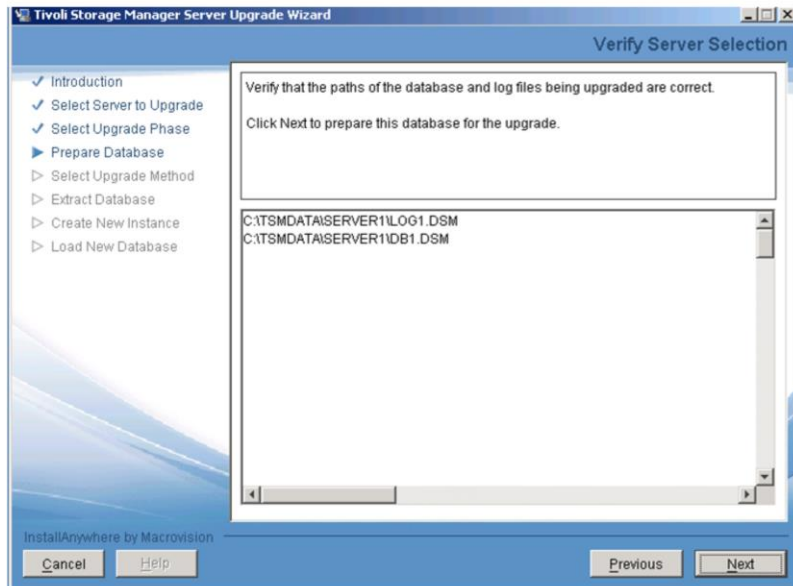
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On the Select Server page of the Prepare Database step, identify the Tivoli Storage Manager server instance.

For systems with multiple instances, perform the upgrade for each server instance separately.

Click **Next** to continue.

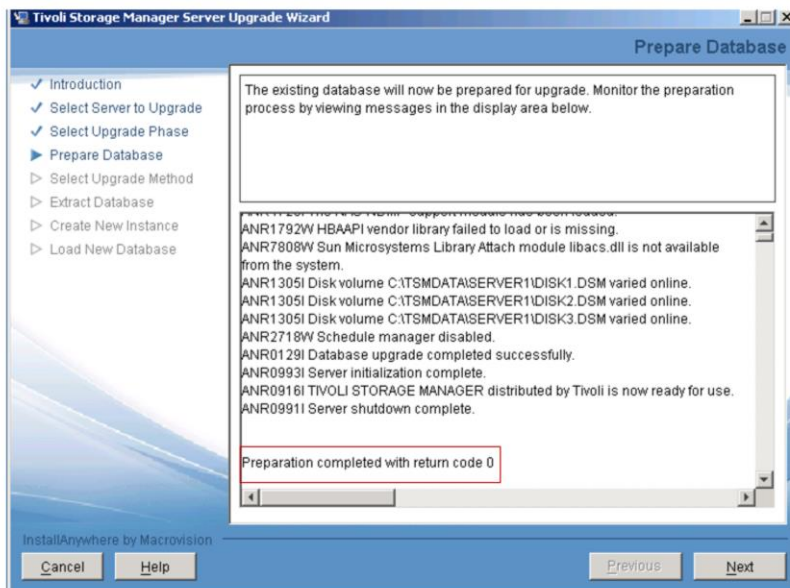
## Verify server selection



On the Verify Server Selection page of the Prepare Database step, verify the directory path of your version 5 database and log volumes.

Click **Next** to start preparing the database.

## Prepare database



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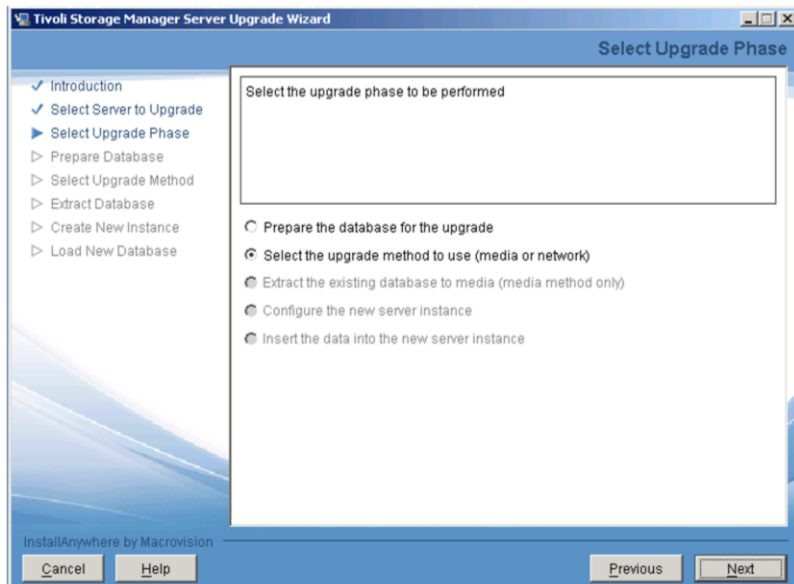
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On the Prepare Database page, you see the progress of the preparation. The amount of time for this step depends on the size of your database.

When it completes successfully with a return code **0**, click **Next** to continue. If you get an error, read the error message, correct the problem, and begin again. The *Continue the upgrade for an existing server database* option on the Select Upgrade page will be available to select.

## Select upgrade phase

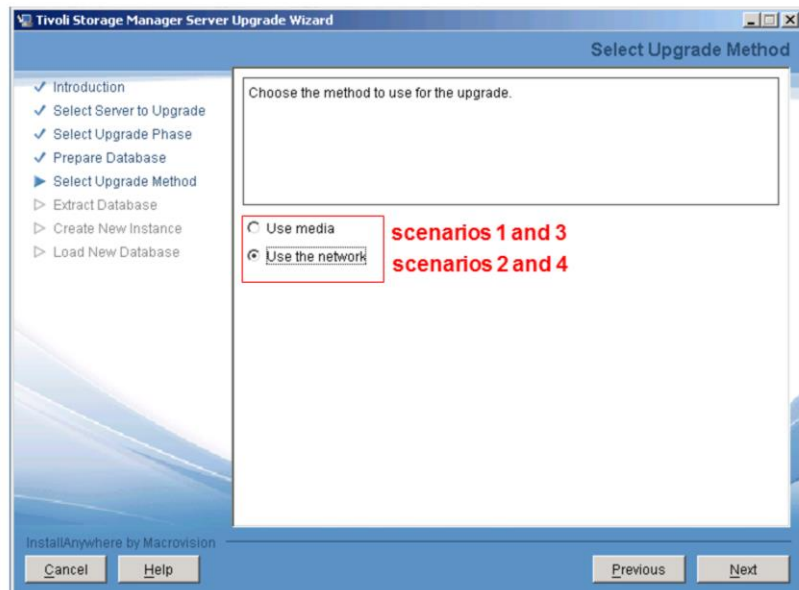


After the database is prepared, you must identify the method to use. On the Select Upgrade Phase page, the **Select the upgrade method to use (media or network)** is selected.

Click **Next** to continue.



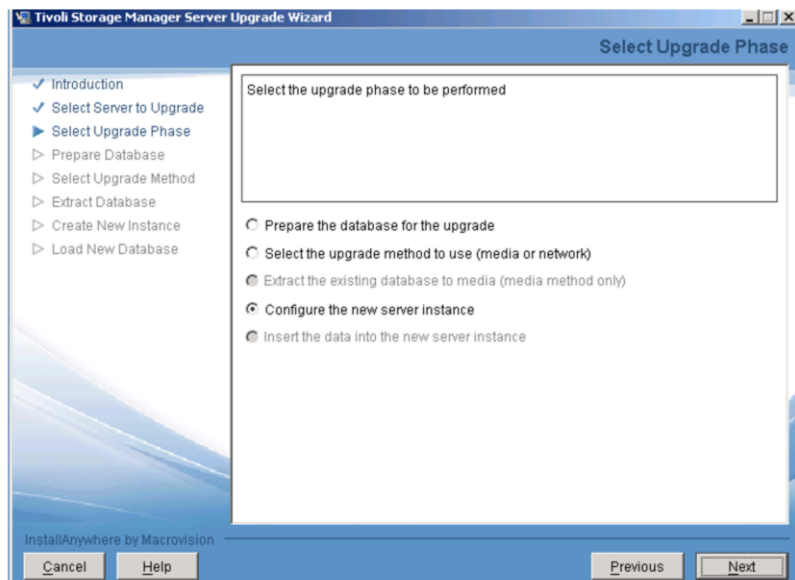
## Select upgrade method



On the Select Upgrade Method page, for the Select Upgrade Method step, you select one of the options: Use media or Use the network. In this example for scenario 2, **Use the network**, is selected.

Click **Next** to continue.

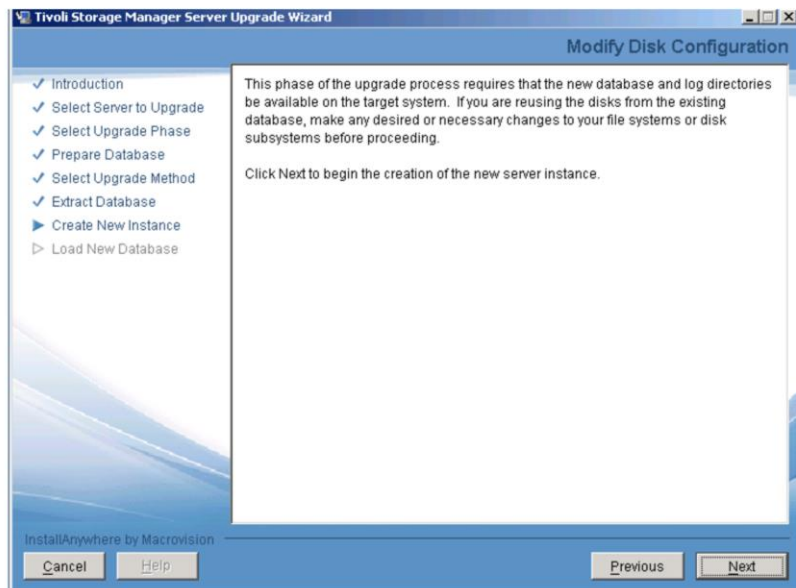
## Select upgrade phase



If you use scenarios 1 or 3, the option for Extract the existing database to media is the next step.

In this example for scenario 2, the **Configure the new server instance** option is selected. Click **Next** to continue.

## Modify disk configuration



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On the Modify Disk Configuration page, click **Next** to begin the steps to create a new instance.

## Instance User ID

The screenshot shows the 'Instance User ID' step of the Tivoli Storage Manager Server Upgrade Wizard. The window title is 'Tivoli Storage Manager Server Upgrade Wizard' and the current step is 'Instance User ID'. On the left, a navigation pane lists the following steps: Introduction, Select Server to Upgrade, Select Upgrade Phase, Prepare Database, Select Upgrade Method, Extract Database, Create New Instance (highlighted), and Load New Database. The main area contains a text box with the instruction: 'Specify the instance name of the new instance. Also, specify the user ID and password under which the database manager for this instance will run.' Below this are three input fields: 'Instance:' with the value 'Server1', 'User ID:' with the value 'administrator', and 'Password:' with masked characters '\*\*\*\*\*'. A note below the fields states: 'Note: When you click Next, the wizard will attempt to establish a connection to the local machine. Ensure that File and Print Sharing is enabled and that your firewall allows connections to port 445.' At the bottom, there are buttons for 'Cancel', 'Help', 'Previous', and 'Next'. The footer of the wizard window includes 'InstallAnywhere by Macrovision'.

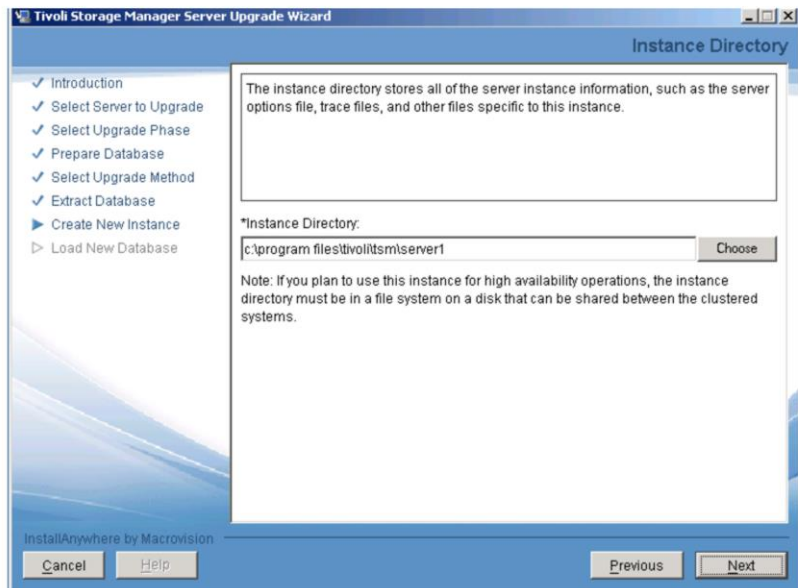
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On the Instance User ID page, enter the system administrator or root ID and password. Click **Next** to continue.

## Instance directory



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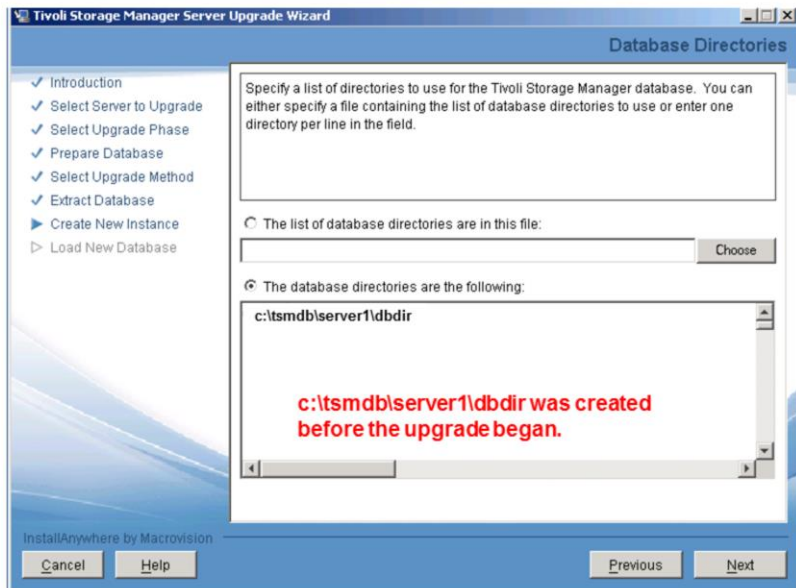
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On the Instance Directory page for the Create New Instance step, verify the server instance directory.

Click **Next** to continue.

## Database directories



On the Database Directories page, select the option, **The database directories are the following** and enter the directories for your version 6.2 database.

Click **Next** to continue.

## Recovery log directories

The screenshot shows the 'Recovery Log Directories' step in the Tivoli Storage Manager Server Upgrade Wizard. The left sidebar lists the progress of the wizard, with 'Create New Instance' selected. The main area contains a text box for specifying directories and several input fields with 'Choose' buttons. A red message at the bottom states: 'The log directories were created before the upgrade began.' The 'Active log size (GB)' is set to 2, with a note that the default is 16 GB. The directories are: Active log directory: D:\tsmdb\server1\active\_log; Primary archive log directory: E:\tsmdb\server1\archive\_log; Active log mirror directory: C:\tsmdb\server1\active\_log\_mirror; Secondary archive log directory: C:\tsmdb\server1\archive\_log\_failover. At the bottom are 'Cancel', 'Help', 'Previous', and 'Next' buttons.

Specify the directories for the database recovery logs.

\*Active log size (GB):  default is 16 GB

\*Active log directory:  
 Choose

\*Primary archive log directory:  
 Choose

Active log mirror directory:  
 Choose

Secondary archive log directory:  
 Choose

**The log directories were created before the upgrade began.**

Cancel Help Previous Next

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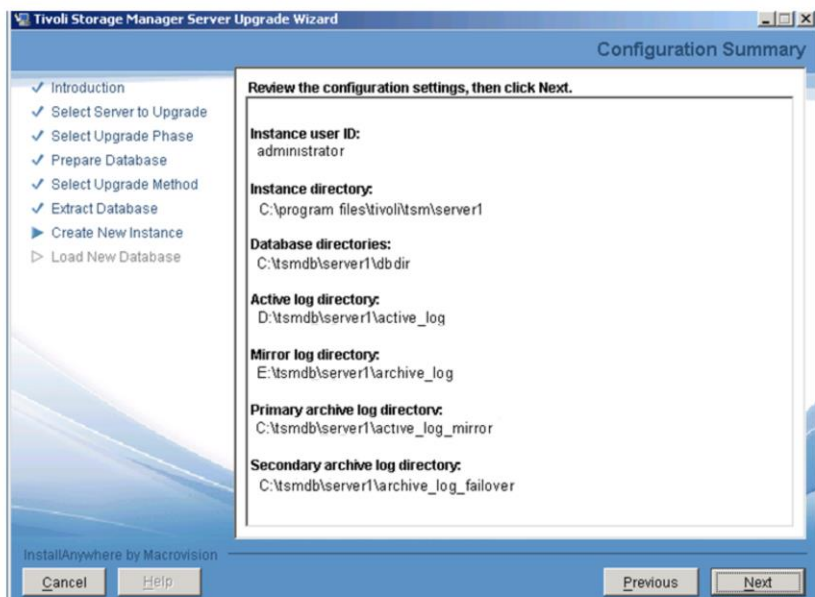
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On the Recovery Log Directories page, select the size for the version 6.2 active log and browse to the recovery log directories. Two required logs are **active** and **archive**, and two optional logs are **active mirror** and **archive failover**. The default size for the active log is 16 GB. The maximum size is 128 GB.

Click **Next** to continue.

## Configuration summary



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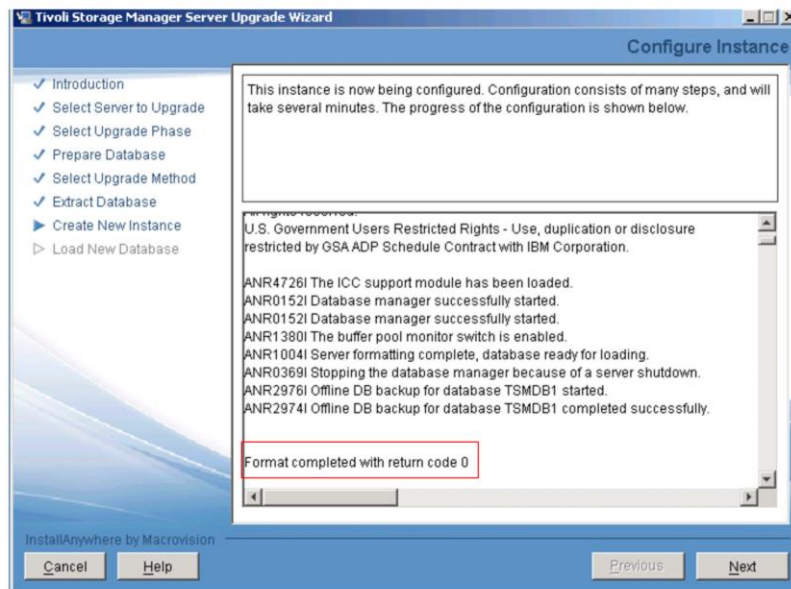
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On the Configuration Summary page, you can see your selections for the Create New Instance step. Review these choices. Click **Previous** to make any corrections.

Click **Next** to continue.



## Configure instance



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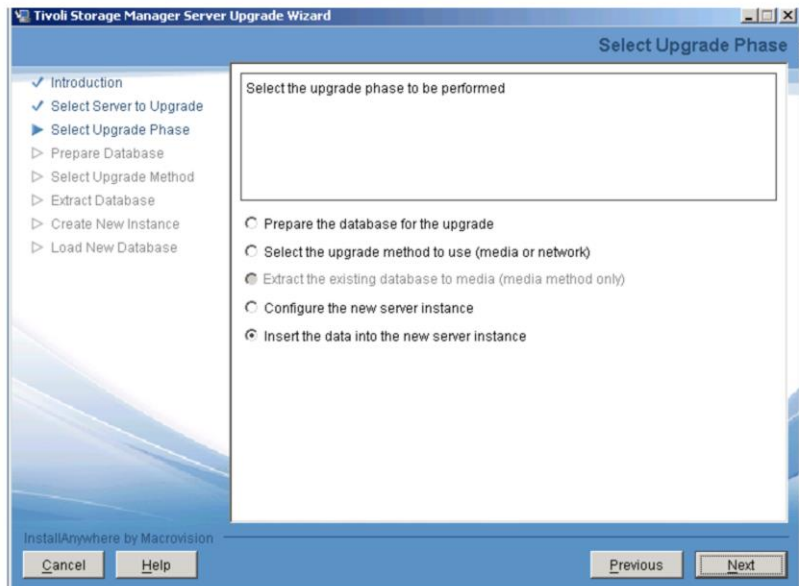
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On the Configuration Instance page, the progress of the Create New Instance step is displayed. Return code 0 is a successful completion code. If you get an error, read the error message, correct the problem, and begin again. The Continue the upgrade for an existing server database option on the Select Upgrade page will be available to select.

Click **Next** to continue.

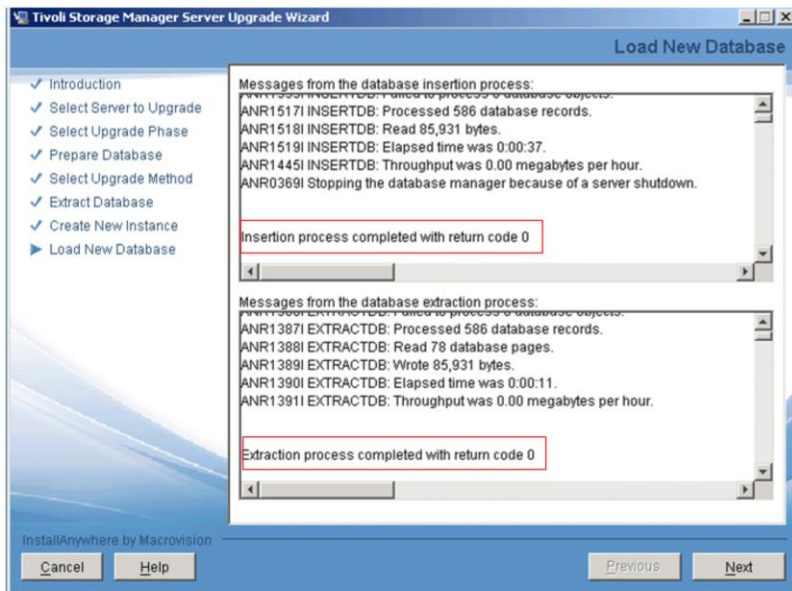
## Select upgrade phase



After the new instance is created, the Select Upgrade Phase page is displayed. The final step, **Insert the data into the new server instance**, is selected.

Click **Next** to continue.

## Load new database



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On the Load New Database page for the final step, you see two progress windows. One window is for the database insertion process, and one window is for the database extraction process. These two processes occur simultaneously. The amount of time required for these steps depends on the size of your database.

When this step is completed successfully with a return code **0**, click **Next** to continue. On the final page, you click Done when the upgrade has completed successfully.

If you get an error, read the error message, correct the problem, and begin again. The *Continue the upgrade for an existing server database option* on the Select Upgrade page will be available to select.

## After the upgrade

- Verify access to the storage pools on the disk
- Start the server instance after the upgrade
- Register the licenses
- Back up the database after upgrading the server
- Verify the upgraded server
- Update the automation

After the upgrade process is complete, you must perform some important steps.

First, verify that you can access the storage pool. Next, start the V6.2 server instance and register the server license. Now that you know that the upgrade was successful, back up your new database.

After you are connected to your backup-archive clients, perform a backup of client data to verify that the upgraded server is performing correctly.

Finally, update your scripts, macros, and automated schedules with the new server information.

## Summary

You should now be able to:

- Access the upgrade utilities package
- Use the upgrade wizard
- Move the V5 database to a V6.2 server

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