Enterprise Production Services

Procedure Guide

INFORMATION SERVICES

# Server Archive and Retrieval Procedures

## Infrastructure Implementation

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# Server Archive and Retrieval

## Overview

This document covers the steps to archive servers, both physical and/or virtual, and retrieve them to active service. Steps include the scenarios to archive and retrieval servers with procedures and best practices. The archiving and retrieval of servers will provide several benefits to both the Client and the Support organization. Reduction in the on-going costs to the client for the servers are not needed while reducing the overhead in facilities space, power, and maintenance. Servers can be retrieved back into service for testing, break fix, or further product development initiatives.

Snapshot images are created in the archive process which creates compressed images of the servers which are moved to a storage server and eventually tape storage. A server using 20GB of disk space can be archived and compressed 3GB with these procedures giving a 6:1 space ratio.

## Requirements

Many of these steps require domain and server level privileges and should be performed by an authorized technician who is providing and performing the setup and configuration. Setup requires access and configuration of several servers. Technicians from the Infrastructure Implementation Services or Test Center facilities teams are authorized to perform the Archive and Retrieval process.

### Determining the scenarios

There are several scenarios for consideration and preparation. This information must be determined prior to any action.

1. Archive of Physical Server
2. Archive of Virtual Server
3. Retrieval from Archive to Physical Server
4. Retrieval from Archive to Virtual Server

## Archive Physical Server

Archiving of a **Physical** server involves converting the physical server into a virtual one and then moving the virtual server image files to an archive location in an “Off-Line” state. The Microsoft Virtual Server product is the medium used for archiving.

1. Remote into a target server
2. On a target server, map a Z: drive to \\ohclevsh4399\archive. Use your CORPTEST account to log in
3. Open Windows Explorer. Navigate to z:\archive. Create a folder that matches last seven characters of server name (i.e. if server you are archiving in OHCLEAPP4001, then folder name is APP4001)
4. Inside the folder, create text document named foldername.txt (i.e. app4001.txt)
5. Inside that document record the following:
    a. Server Serial Number & Server Model & Server OS that you archive
    b. Number & Speed of Processors
    c. Amount of RAM
    d. Slot numbers and model of any PCI cards, especially array controllers and NICs
    e. Total size of each drive
    f. SAN drives and sizes, if any
6. If you have any SAN drives do the following:
    a. Right Click on "My Computer" and click "Manage"
    b. Expand "Services and Applications" and click "Services"
    c. Stop the following services:
        a. PatrolAgent
        b. MSSQLSERVER (if present)
        c. SQL Server Agent (if present)
        d.
7. From a target server click on the "Start" and select ""Run". Type ntbackup and click "OK"
8. If prompted for "Removable Storage Not Running" message, click "OK"
9. If you see a screen "Welcome to the Backup or Restore Wizard" click on "Advanced Mode" link in the center of the page
10. Click on "Backup Tab"
11. Check any of the SAN drives (usually drives starting with letter R and above) and also check "System State")
12. For "Backup media or file name" type Z:\Archive\foldernameyoucreated\servername.bkf
13. Click "Start Backup"
14. Click "Start Backup" again.
15. After backup completes, click "Report"
16. Review the report. Make sure no files are listed with a warning. If files are listed, that means there is a program that is using some files on R: drive. Go back to services and stop any unusual services that are running. Then, repeat steps 7-16 until no errors reported.
17. The Archive Host will be used as the host/target server for the P2V. (OHCLEVSH4399 is the current archive server.)

18. Reset the local "OneVoice" password on Source Physical Server to the build standard.

19. The Source Physical Server will be shut down as part of the P2V procedures and removed. Label the Physical server with the P2V label and process the decommission procedures.

20. Perform a Physical to Virtual (P2V) move of the Source Server following the P2V documentation instructions.
    (Use the **"HP SMP Instructions P2V and V2P.doc"**)

21. Place the "Server Decommission" labels on physical server.

22. Continue on to the "Archive Virtual Server" procedures to complete the archive.

## Archive Virtual Server

Archiving of a **Virtual** server involves shutting down the Virtual server and then moving the virtual server image files to an archive location in an "Off-Line" state.

Note: The Archive Host can accommodate up to 3 simultaneous archive compressions at one time.

It is recommended that if you are using Remote Desktop to access the Source and Archive Servers, that you use the "Console" switch. (i.e. "mstsc.exe /console" from the run dialog box). This ensures that if you close your connection you can re-connect to the same connection without interruption of the archives that have been started.

1. Request to perform an Archive or Retrieval must be entered, approved, and resources are assigned and action is taken.

2. Reset the local "OneVoice" password on Source Virtual Server to the build standard.

3. Document the Source server name, IP address and current Host.

    a. Guest Server Name:

    b. Current Guest IP Address:

    c. Current Hosted:

4. Shut down the Virtual Server. When prompted, enter "Archive" in the shutdown comments dialog box.

5. Un-register and remove the Virtual Server Guest from its Current Host via the Virtual Server IIS Admin website.
    (i.e. http://virtualservertest.tstctr.ntl-city.net:1024)

6. From the Archive Host Server (OHCLEVSH4399), map a drive to Volume (SH1VOL$ or R$) share to the virtual server host containing the virtual server. Skip this step if the Guest is running on the Archive Host which you can just move to the R:\VSFILES\LUN01 folder)

7. Navigate to drive location and select the directory name of the Virtual Server that is being Archived (i.e. r:\vsfiles\lun01) folder.

8. Right click on a folder of your virtual servers name and choose **"7-Zip>>Add to archive"**

9. 7-Zip is a file archiver program used with high compression ratio installed on the archive server. It is available via right clicking folders and files.

10. Set the following settings:

    a. Set **"7z"** as archive format.

    b. Change the compression level to **"Ultra".**

    c. Check the **"Create SFX archive"** checkbox.

    d. Change the archive location field named **"Archive:"** to the Archive Hosts local SAN drive location of **"R:\Archive*ServerName.exe*"** where ServerName.exe is the name of the server being archived (i.e. "R:\archive\OHCLEIIS4349.exe"). This will compress the Virtual Server Image files to the Archive Host.
    This compression will take approximately 4-5 hours for a standard Virtual Server.

11. **Optional:** You can use the Task Manager to set the Program **"7zG.exe"** to "High" from "Normal" tasking. This can increase the compression programs performance.

12. Delete the folder on the Source Host containing Virtual Guest Server files (.vhd, .vmc, etc.) that you have just compressed. Removing all traces of the Source Virtual Server, its files and folders.

13. Log off all servers

14. Complete the Request Record

## Retrieval from Archive to Physical Server

Retrieving to a **Virtual** server to a **Physical** server involves uncompressing the archived server images on the Archive Host, registering and restoring the image as a Virtual server in an "On-Line" state, then performing a Virtual to Physical **(V2P)** move to the target hardware, and completing the configuration.

1. Request to perform an Archive or Retrieval must be entered, approved, and resources are assigned and action is taken.

2. Log in into OHCLEVSH4399

3. Open Windows Explorer.

4. Navigate to R:\Archive and click on servername.exe For "Extract To" specify R:\vsfiles\lun01

5. Open archive website, http://virtualserverarchive.tstctr.ntl-city.net:1024/.

6. Register virtual guest.

7. Turn on virtual machine.

8. Using VMRC, log into virtual guest. Set IP to an address in VLAN 255 and enter correct DNS & WINS settings. Move server to appropriate domain & OU. Run updater.

9. Follow V2P procedure and move the guest to physical server

10. Move physical server to appropriate VLAN

11. Unregister the virtual guest. On OHCLEVSH4399 delete R:\archive\servername.exe file

## Retrieval from Archive to Virtual Server

Retrieving to a **Virtual** server involves uncompressing the archived server images to the destination host, and completing the registration and configuration to restore the server to an "On-Line" state.

It is recommended that if you are using Remote Desktop to access the Source and Archive Servers, that you use the "Console" switch. (i.e. "mstsc.exe /console" from the run dialog box). This ensures that if you close your connection you can re-connect to the same connection without interruption of the archives that have been started.

1. Request to perform an Archive or Retrieval must be entered, approved, and resources are assigned and action is taken.

2. You will need to know the name of the server you are retrieving, the host that it will run from and the new IP address that will be configured and assigned to the guest.

    a. Retrieval Server name:

    b. New assigned IP Address:

    a. Destination Host server:

3. Logon to the Archive Host server to retrieve and move the compressed archived server image. (OHCLEVSH4399 is the current Archive Host)

4. From the Archive Host Server (OHCLEVSH4399), map a drive to Volume (SH1VOL$ or R$) share to the virtual server host that the virtual server will be restored to and run from.
(i.e. \\targetvirtualserver\sh1vol$)

5. On the Archive server, locate the compressed image of the server you wish to restore in the **R:\Archive** and run the self-extracting archive of the *servername.exe*.
   (i.e. "R:\archive\OHCLEIIS4349.exe")

6. When prompted with the **"Extract To"** dialog, specify the location of the mapped drive and navigate to ***Drive:*\vsfiles\lun01** and click OK.
   This will create the directory and expand the images to the target host.

7. From you workstation open http://virtualservertest.tstctr.ntl-city.net:1024/ and connect to the host server where you restored/uncompressed the virtual.

8. Proceed to register the virtual guest and set configuration following the Virtual Server Build documentation procedures. Note: The service account information may need to be reconfigured or reapplied depending on the length of time the Guest has been "Off-line".

9. Start the virtual machine through the admin website.

10. Console logon to the guest either using VMRC utility or through the admin website's page. This must be done because the IP address of the guest will need to be changed to a valid IP.

11. Set appropriate IP settings & DNS. Move server to appropriate domain & OU. Run updater

12. Delete the Archive compressed self-extracting file. (i.e. On OHCLEVSH4399, r:\archive*servername.exe* file.)

## Help / Problems

If more help is needed or problems are encountered, contact the Virtual Server Gatekeeper.