

# HP EVA SSSU Commands

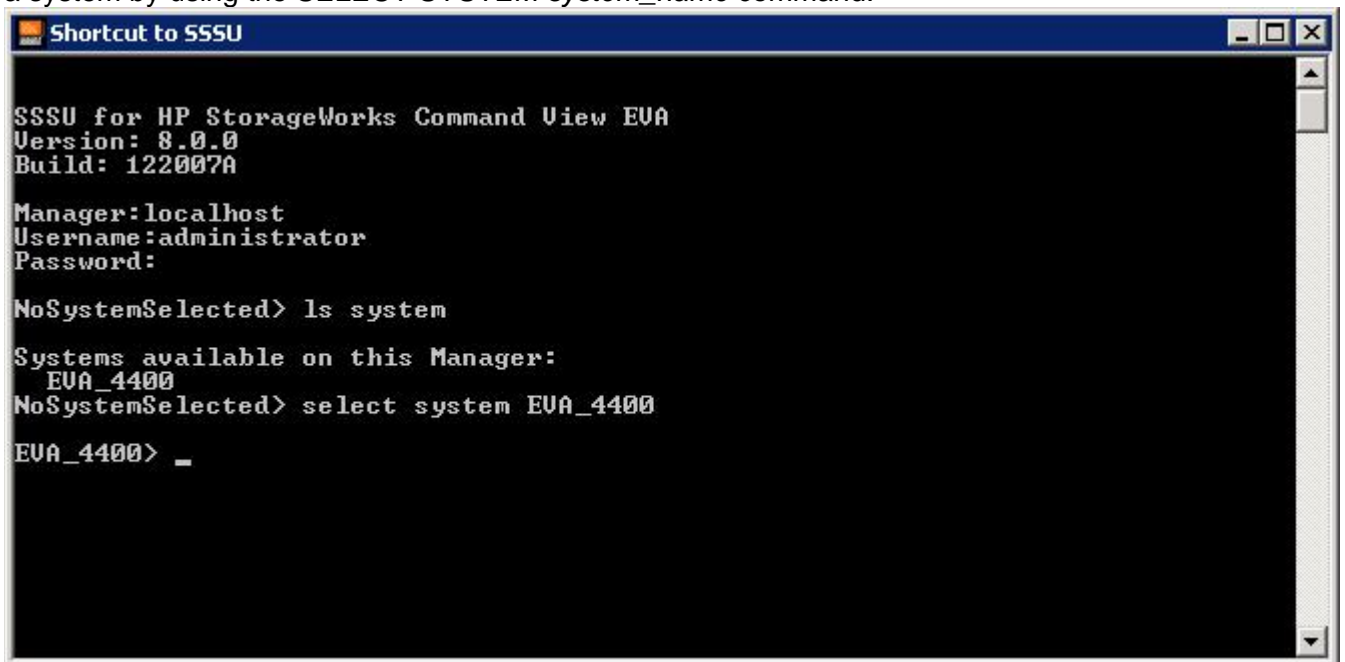
Compiled by Jeffrey Leung

## Logging into the SSSU:

When opening the SSSU program, you will be asked to enter the following information:

- Manager – Server name or IP of management server. If already logged in, use “localhost”
- Username – HP Command View EVA account
- Password – HP Command View EVA password

To search for the list of manageable arrays, use the LS SYSTEM command. Then select a system by using the SELECT SYSTEM *system\_name* command.



```
Shortcut to SSSU

SSSU for HP StorageWorks Command View EVA
Version: 8.0.0
Build: 122007A

Manager: localhost
Username: administrator
Password:

NoSystemSelected> ls system

Systems available on this Manager:
  EVA_4400
NoSystemSelected> select system EVA_4400

EVA_4400> _
```

## Capturing the Configuration:

### **CAPTURE CONFIGURATION** *file\_name*

The CAPTURE CONFIGURATION command enables you to capture, save, and re-create an array configuration by querying the selected array and generating up to five scripts. Not all arrays require all five scripts. You can use these scripts to re-create the original configuration, and in some cases, to assist in recovery. HP recommends that you run the CAPTURE CONFIGURATION command after you initialize an array to save a copy of the configuration.

## To add a folder:

### **ADD FOLDER** *folder\_name*

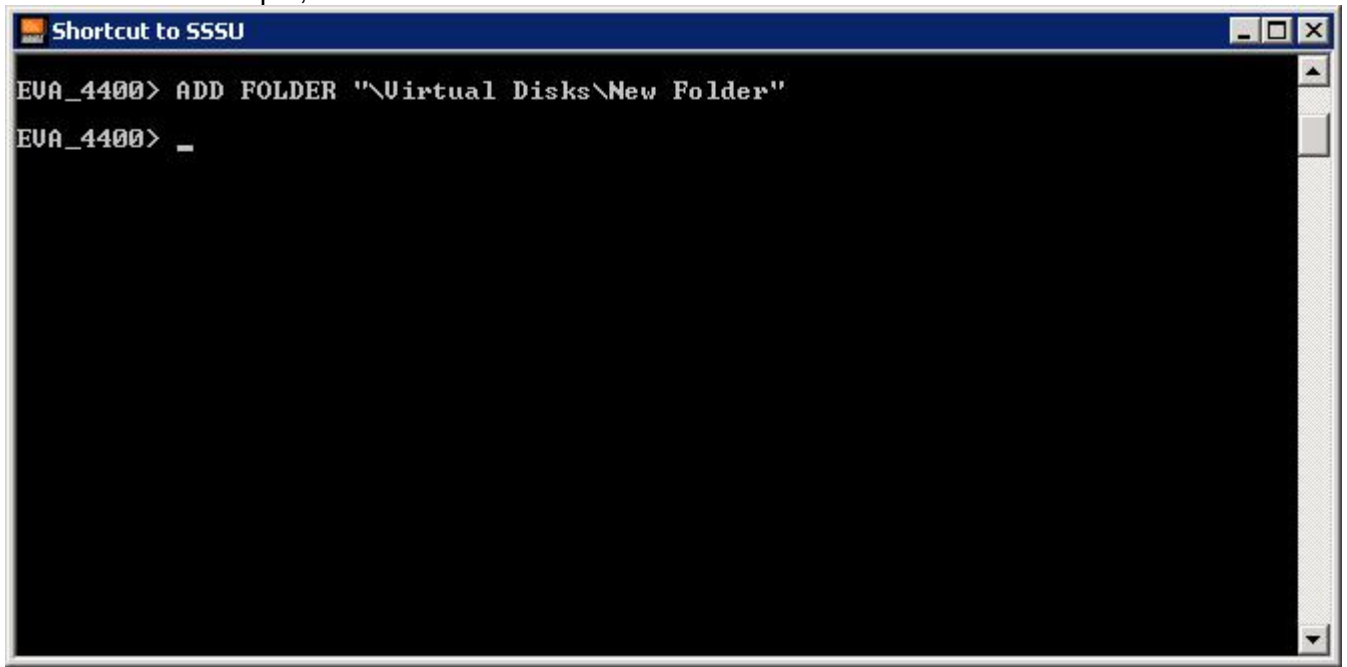
You can only create folders under the *Virtual Disks* and *Hosts* root folders. You cannot create root folders.

Options:

**COMMENT=**

Example:

In this example, the new folder is created under the Virtual Disks root folder.



```
Shortcut to S5SU
EVA_4400> ADD FOLDER "\Virtual Disks\New Folder"
EVA_4400> _
```

To add a host:

**ADD HOST** *host\_name* **WORLD\_WIDE\_NAME=** *FCA-WWN*

The ADD HOST command adds a host and its WWN to the list of hosts that can connect to virtual disks in the current array.

The ADD HOST command adds one Fibre Channel adapter only. Use the SET HOST command to add each subsequent FCA.

Options:

**COMMENT=**

**IP=**

- The network IP address, if not specified the name of the host is used as a DNS name

**OPERATIONG\_SYSTEM=**

- Operating system of the specified host
  - HPUX
  - IBMAIX

- LINUX
- OPEN\_VMS
- SOLARIS
- TRU64
- UNKNOWN
- WINDOWS
- WINDOWSLH
- CUSTOM= (You must include the equal sign after CUSTOM and the value must be 16-digit hexadecimal characters)

**WORLD\_WIDE\_NAME=**

- The WWN of the FCA

Example:

In this example, "dummyhost" is created with a WWN of 5000\_1fe1\_ff00\_0000.

```

Shortcut to S5SU
EVA_4400> ADD FOLDER "\Virtual Disks\New Folder"
EVA_4400> ADD HOST \Hosts\dummyhost WORLD_WIDE_NAME=5000_1fe1_ff00_0000
EVA_4400> _
  
```

To add a system:

**ADD SYSTEM** *system\_name*

ADD SYSTEM command initializes an array and creates a default disk group. An uninitialized array must be selected before using ADD SYSTEM.

Use the LS SYSTEM command to display a list of uninitialized arrays.

Use the SELECT SYSTEM command to reselect the array after it has been initialized.

Options:

**COMMENT=**

**CONSOLE\_LUN\_ID=**

- The LUN used for console communication after array creation. If set to zero, no console LUN is presented to the host.

**DEVICE\_COUNT=**

- The number of physical disks to use for this group. The limit is the number of available disks in the array. The default and minimum value is 8.

**DISKGROUP\_DISKTYPE=**

- Determines the types of disks to be considered for creating the disk group.
  - *Online* – only online fibre channel disks are considered for creating the default disk group.
  - *Near\_online* – only near-online fibre channel disks are considered for creating the default disk group.

**SPARE\_POLICY=**

- Determines the amount of storage space, if any, set aside for use in the event that disks fail. It is the equivalent amount of storage space spread across all disks.
  - *None* – reserves no space within a disk group to allow for data reconstruction in case of a disk failure. Can cause data loss and is not recommended
  - *Single* – reserves space within a disk group to allow for data reconstruction in case of failure of one disk drive.
  - *Double* – reserves space within a disk group to allow for data reconstruction in case of a failure of two disk drives

Example: Create the initialized array *payroll* with 12 physical disks and a spare policy of *single*:

- ADD SYSTEM payroll DEVICE\_COUNT=12 SPARE\_POLICY=single

To add a container:

**ADD CONTAINER** *container\_name*

Options:

**DISK\_GROUP=**

- Name of disk group you want to create container in.

**REDUNDANCY=**

- Vraid0
- Vraid1 (default)
- Vraid5

**SIZE=**

- Size in GB.

To add a virtual disk:

**ADD VDISK** *vdisk\_name* **SIZE=** *vdisk\_size*

Options:

**COMMENT=**

- Associates a user-defined comment with the vdisk.

**DISK\_GROUP=**

- The disk group in which you want to create the vdisk.

**MIRRORCACHE=**

- *Mirrored* - cache is mirrored between both controllers (default).
- *Notmirrored* - not mirrored.

**NOPREFERRED\_PATH**

- Allows either controller to handle I/O (default).

**NOREAD\_CACHE**

- Reads are always performed by the physical disks, not the controller's cache.

**NO\_WAIT\_FOR\_COMPLETION**

- Does not wait for the command to finish before displaying the utility command prompt or running another command or script.

**NOWRITE\_PROTECT**

- Allows writing to the vdisk from all presented LUNs and hosts (default).

**OS\_UNIT\_ID=**

- The ID presented to the host operating system. If set to zero, no ID is presented to the host. This option is used for IBM AIX (set to 0), OpenVMS (required), and Tru64 UNIX (recommended). Other host operating systems ignore this option.

**PREFERRED\_PATH=**

- *Path\_A\_Both*
- *Path\_A\_Failover*
- *Path\_B\_Both*
- *Path\_B\_Failover*

**READ\_CACHE**

- Reads are performed by the controller's cache

**REDUNDANCY=**

- *Vraid0*
- *Vraid1* (default)
- *Vraid5*

**SIZE=**

- Size in GB.

**WAIT\_FOR\_COMPLETION**

- Waits for the command to finish before displaying the utility command prompt or running another command or script. For vdisks larger than 1 TB, using this option can result in a long waiting period.

**WORLD\_WIDE\_LUN\_NAME=**

- World wide LUN name of the vdisk.

**WRITECACHE=**

- *Writethrough* – operation completes when the data is written to the disk.
- *Writeback* – operation completes when the data is written to cache (default).

**WRITE\_PROECT**

- Does not allow writing to the virtual disk from all presented LUNs and hosts.

Example:

In the example, "examplevdisk1" is created under the new folder created earlier. The virtual disk is 1GB in size with RAID5 redundancy. The WAIT FOR COMPLETION

option is added at the end to finish creating the virtual disk before moving on when running a script.



```
EUA_4400> ADD VDISK "\Virtual Disks\New Folder\examplevdisk1" DISK_GROUP="\Disk Groups\Default Disk Group" SIZE=1 REDUNDANCY=vraid5 WRITECACHE=writeback MIRRORCACHE=mirrored READ_CACHE NOWRITE_PROTECT OS_UNIT_ID=0 PREFERRED_PATH=PATH_A_BOTH WAIT_FOR_COMPLETION
EUA_4400> _
```

To create a vdisk copy:

**ADD COPY** *copy\_name* **VDISK=** *vdisk\_name*

Options:

**CONTAINER=**

- Name of container to be used for copy, must already exist.

**DISK\_GROUP=**

- Name of disk group to create copy in, must already exist.

**NOWAIT\_FOR\_COMPLETION**

- Does not wait for command to finish before running another command or script.

**OS\_UNIT\_ID=**

**REDUNDANCY=**

- *Vraid0*
- *Vraid1* (default)
- *Vraid5*

**VDISK=**

- Name of vdisk to be copied.

**WAIT\_FOR\_COMPLETION**

- Waits for command to finish before running another command or script.

**WORLD\_WIDE\_LUN\_NAME=**

- The world wide LUN name of the vdisk.

Example:

Create a copy of *payroll* named *wednesday\_nite*:

- **ADD COPY** *wednesday\_nite* **VDISK="**\Virtual Disks\payroll"

Create a copy of *daily\_biz* named *save\_reports* within the specified disk group:

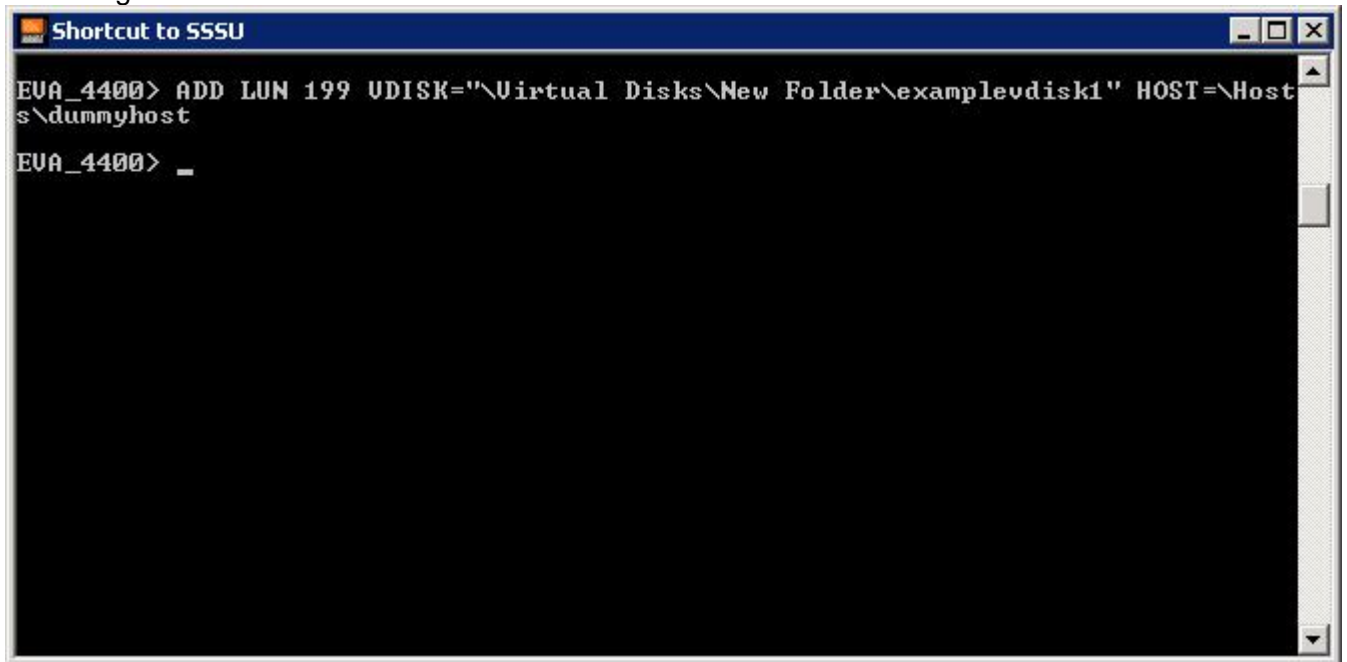
- ADD COPY *save\_reports* VDISK="*\Virtual Disks\daily\_biz*" DISK\_GROUP="*\Disk Groups\small\_disks*"

### To add a LUN:

**ADD LUN** *LUN\_number* **HOST=** *host\_name* **VDISK=** *vdisk\_name*

Example:

In this example, "examplevdisk1" is presented to "dummyhost" created earlier and assigned LUN # 199.



```
Shortcut to SSSU
EVA_4400> ADD LUN 199 VDISK="\Virtual Disks\New Folder\examplevdisk1" HOST=\Hosts\dummyhost
EVA_4400> _
```

### To add a disk group:

**ADD DISK\_GROUP** *group\_name*

Options:

**COMMENT=**

**DEVICE\_COUNT=**

- The number of physical disks to use for this group. Default minimum value of 8, maximum is number of available disks in the array.

**DISKGROUP\_DISKTYPE=**

- Determines the types of disks to be considered for creating the disk group. Default value is online.
- *Online* – only fibre channel disks are considered for creating the default disk group.
- *Near-online* – only near-online fibre channel disks are considered for creating the default disk group

**OCCUPANCY\_ALARM=**

- The point when a defined percentage of space is used. When the point is reached, an event is sent to the host or management server. Do not use % sign after the number, default value is 95.

**SPARE\_POLICY=**

- The amount of storage space set aside for use incase disks fail.
  - *None* – reserves no space
  - *Single* – reserves space for one disk drive failure (default)
  - *Double* – reserves space for two disk drive failures

Example:

Create a new disk group, *human\_resources*. It has 12 physical disks with one disk set aside as a spare, and sends an event to the array when 75% capacity is reached.

- ADD DISK\_GROUP "\Disk Groups\human\_resources" DEVICE\_COUNT=12 SPARE\_POLICY=single OCCUPANCY\_ALARM=75

To add a data replication group:

**ADD DR\_GROUP** *dr\_group\_name* **VDISK=** *vdisk\_name* **DESTINATION\_SYSTEM=** *detination\_array\_name*

Options:

**ACCESSMODE=**

- Access rights for a connected hosts. Default is disable, which is recommended setting. In the user interface, the disable setting displays as none.
  - presentonly
  - readonly
  - disable

**COMMENT=**

**DESINATION\_DISK\_GROUP=**

- The disk group in which the virtual disk on the destination array is created.

**DESTINATION\_SYSTEM=**

- The destination array on which the virtual disk is created.

**DESTINATION\_VDISK\_NAME=**

- The name of the virtual disk created on the destination array.

**LINK\_DOWN\_AUTOSUSPEND=**

- When enabled, DR group replication is automatically suspended if the link between the arrays goes down. Replication remains suspended even if the link is active again.
  - enable
  - disable

**LOG\_DESTINATION\_DISK\_GROUP=**

- The disk group for the DR log disk on the destination array.

**LOG\_SOURCE\_DISK\_GROUP=**

- The disk group for the DR log on the source array.

**MAX\_LOG\_SIZE=**

- The maximum size of the DR log disk. Value must be between 136 MB and 2097511 MB and entered in blocks of 512 bytes (278528 through 42949672965). If left blank or set to 0, the controller software calculates the optimum log size for the available space.

**TARGETREDUNDANCY=**

- Redundancy level of the virtual disk being created on the destination array.

**VDISK=**

- The name of the source virtual disk being added to the DR group.

**WRITEMODE=**

- The I/O interaction between the destination and the source.
  - synchronus (default)
  - asynchronus

Example:

The following example creates a DR group named *Transactions* that contains the source virtual disk *\Virtual Disks\Hawaii*. This DR group will connect to the destination array *remote\_scell*, on which the destination virtual *disk \Virtual Disks\Hawaii* (same as the source by default) is created and added to the destination DR group.

- ADD DR\_GROUP Transactions DESTINATION\_SYSTEM=remote\_scell  
VDISK="Virtual Disks\Hawaii"

**To add an iSCSI controller:****ADD ISCSI\_CONTROLLER**

Options:

**IP=**

- IP address of an iSCSI controller or enter *auto* for automatic discovery

**To add an iSCSI host:**

**ADD ISCSI\_HOST** *iscsi\_host\_name* **ISCSO\_IPHOST=** *iscsi\_IP\_host\_name*

Options:

**COMMENT=****OPERATING\_SYSTEM=**

- HPUX
- LINUX (if using Mac OS X, select this)
- OPEN\_VMS
- OTHER
- SOLARIS
- VMWARE
- WINDOWS

Example:

Add the iSCSI host named *development* with the iSCSI IP host named *iqn.1991-05.com.microsoft:aittest5.americas.mycompany.net*.

- ADD ISCSI\_HOST \Hosts\development ISCSI\_IPHOST=iqn.1991-05.com.microsoft:aittest5.americas.mycompany.net

**To add iSCSI LUN:**

**ADD ISCSI\_LUN VDISK=** *vdisk\_name* **ISCSI\_HOST=** *iscsi\_host\_name*

Example:

Present the payroll virtual disk to the iSCSI host development:

- **ADD ISCSI\_LUN VDISK=**"\Virtual Disks\payroll" **ISCSI\_HOST=**development

### To add a mirror clone:

**ADD MIRRORCLONE** *mirrorclone\_name* **VDISK=** *vdisk\_name* **CONTAINER=** *container\_name*

**ADD MIRRORCLONE** command creates a copy of a source virtual disk. The mirror clone can remain synchronized with the virtual disk or you can fracture the link to create a point-in-time copy.

Example:

Create the mirrorclone *test2* from the virtual disk *payroll*:

- **ADD MIRRORCLONE** test2 **VDISK=**"\Virtual Disks\payroll"  
**CONTAINER=**container1

### To add a multi snap:

**ADD MULTISNAP** *snapname* **VDISK=** *source\_vdisk\_name* **CONTAINER=** *container\_name* **SNAPSHOT|SNAPCLONE** *snapname* **VDISK=** *source\_vdisk\_name* **CONTAINER=** *container\_name* **SNAPSHOT|SNAPCLONE** *snapname* **VDISK=** *source\_vdisk\_name* **CONTAINER=** *container\_name* **SNAPSHOT|SNAPCLONE** *snapname* ...

Example:

Create a snapshot of the virtual disk *payroll* and snapclone of the virtual disk *hrd* and *finance*:

- **ADD MULTISNAP** tonightsnap **VDISK=**"\Virtual Disks\payroll"  
**CONTAINER=**container1 **SNAPSHOT** hrdkp **VDISK=**"\Virtual Disks\hrd"  
**CONTAINER=**container2 **SNAPCLONE** financebcp **VDISK=**"\Virtual Disks\finance"  
**CONTAINER=**container3 **SNAPCLONE**

### To add a snapshot:

**ADD SNAPSHOT** *snapshot\_name* **VDISK=** *source\_vdisk\_name*

**ADD SNAPSHOT** creates a dependent, point-in-time copy of a virtual disk. It is dependent because data is not copied to the snapshot until it is overwritten on the source.

- To delete snapshots, use the **DELETE VDISK** command

Options:

**ALLOCATION\_POLICY=**

- Indicates how the space for the snapshot is to be allocated.

- *Demand* – array allocates only enough space to store the metadata and pointers to the source data. As the source is overwritten, the array allocates more space and copies the original data to the snapshot.
- *Fully* – the array allocates space equal to the capacity of the source virtual disk, plus space for metadata and pointers to the source data. As the source is overwritten, the array copies the original data to the snapshot.

**CONTAINER=**

**OS\_UNIT\_ID=**

**REDUNDANCY=**

- If not specified, the default is the same as the source virtual disk

**VDISK=**

**WORLD\_WIDE\_LUN\_NAME=**

Example:

Create the snapshot *payroll\_backup* from the virtual disk *payroll* that uses capacity only as needed:

- ADD SNAPSHOT payroll\_backup VDISK="\\Virtual Disks\payroll"  
ALLOCATION\_POLICY=demand

Create the snapshot *wed\_night\_biz* from the virtual disk *daily\_biz* while reserving all capacity required to create the snapshot:

- ADD SNAPSHOT wed\_nite\_biz VDISK=daily\_biz ALLOCATION\_POLICY=fully