

Meeting Overview

- Installation overview
 - Descriptions of Package contents
 - Configuration of custom variables
- Scripts overview
 - Menu's and expected output
 - Executing the commands
- Secure processing to conform to Citi's Audit requirements
- Best Practices and Troubleshooting
- Questions and Answers

Description of files in package

Package includes 5 files each with a specific function:

hdvmutil.pm

- Supports command functionality required by the subsequent scripts.

hdvmops.pl

- Generates a CLI file using information provided by a user via a menu interface.

hdvmgencli.pl

- Generates a CLI file using information passed from a CSV input file.

hdvmruncli.pl

- Runs CLI operations which are passed as an input parameter file.

Custom HDvM Script Documentation.doc

- Provides installation, configuration, and execution information.

Configure custom variables

Edit hdvmutil.pm file and update custom variables

```
our $PROCESSING_DIR="/customer/citi";
```

```
our $HDVM_CLI_DIR = '/opt';
```

```
our $HDVM_CLI_CMD = 'HiCommandCLI';
```

```
our $HDVM_SERVER_URL = 'http://192.168.50.174:2001/service';
```

see pages 5-6 of “Custom HDVM Script Documentation” for more detail.

Command File Creation

Two methods for file creation

- Pulling in a CSV file
- Manual interaction

hdvmgencli.pl script

```
# perl hdvmgencli.pl
```

```
Enter User ID[system]:  
Enter your password:  
Please Pick an Item
```

1. Add Devices
2. Delete Devices
3. Add Host Storage Domains
4. Delete Host Storage Domains
5. Add WWNs
6. Delete WWNs
7. Add LUSE
8. Delete LUSE

```
(Press "q" to quit)
```

hdvmgencli.pl script cont.

Please choose an array

1. HDS9980V@172.16.45.1
2. USP@172.16.100.1

(Press "q" to quit)

PLEASE ENTER A CHOICE: 1

Enter Input File Name(CSV Format only): adddevices.csv

Enter Ticket/CR Number: 234-456-789

Enter output File Name : testfile-adddevs

hdvmops.pl script

```
# perl hdvmops.pl
```

Enter User ID[system]:

Enter your password:

Enter Ticket/CR Number:

Enter output File Name:

hdvmops.pl script cont.

Please Pick an Item

1. Add Devices
2. Delete Devices
3. Add Host Storage Domains
4. Delete Host Storage Domains
5. Add WWNs
6. Delete WWNs
7. Add LUSE
8. Delete LUSE

(Press "q" to quit)

hdvmops.pl script cont.

Please choose an array

1. HDS9980V@172.16.45.1
2. USP@172.16.100.1

(Press "q" to quit)

PLEASE ENTER A CHOICE: 1

hdvmops.pl script cont.

- Depending on task to be performed prompts will follow
 - Example:
 - port
 - domain
 - lun
- When complete
 - Input additional information
 - Exit and the cli file will be generated

hdvmruncli.pl script

Runs command files found in the “cli” directory that were created by the hdvmops.pl script.

```
# perl hdvmruncli.pl
```

Enter User ID[system]:

Enter your password:

Enter Input Command File(.cli or .pbcli): server1-addlun-123-456-789.cli

Secure processing

- User is authenticated by the Device Manager server when the program starts.
- Password is not ever written to disk or file, but is held in program cache.
- Whenever the program is prompted for a password by Device Manager, the Expect module sends it.
- If USE_PBRUN variable is “enabled”, the “pbrun” command is a prefix to each sent command.
 - Variable is located in hdvmutil.pm

Recommendations

Best Practice when executing script

- Standardize on output file naming convention
 - IE: ServerName-Activity-Date-Changecontrol#
 - Log files are a good audit trail, but must have traceable names.
- The “CLI” directory has files that are useful for connection troubleshooting in the event of a failure.

Questions?

Q & A