Visual Storage Intelligence™

Data Collection Instructions

Visual Storage Intelligence™ Instructions

1. Run Commands

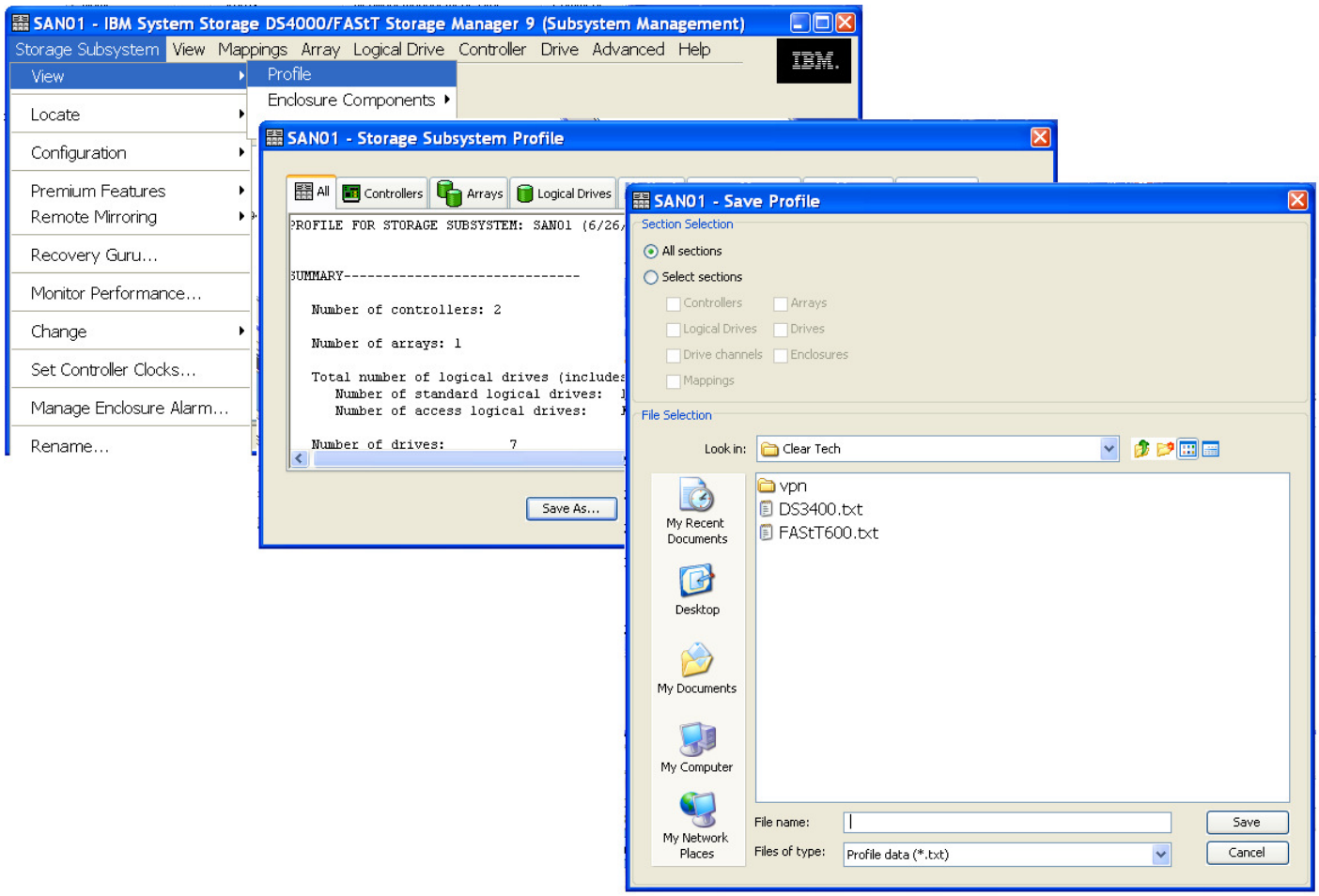
Helping your IT Department to Become more Productive And efficient truly enables you to End Endless Entitlements.

2. Save the Configuration Report that is created

3. Upload files created to our website or send to your sales contact, and call to schedule your storage analysis review through your web browser

Steps to create and save Storage Configuration to a text file:
(or use the file created from the "Collect All Support Data" process and upload)

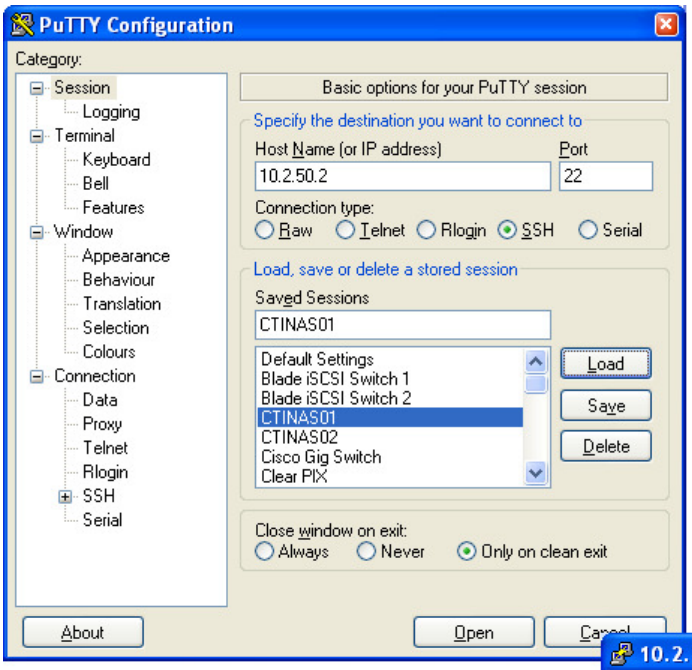
- Open IBM System Storage DS Storage Manager
  - Perform the following steps for each Storage unit.
  - Select "Storage Subsystem"
    -> View
    -> Profile
  - Ensure that the "All" tab is selected.
  - Click "Save As"
  - Type in a file name (E.G. san01_02-14-2009.txt) and click "Save"

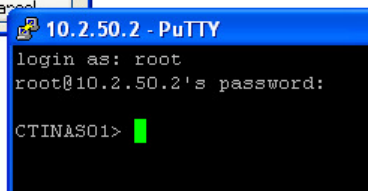


Email files created to your VSI partner and review analysis through your web browser. You can alternately use the *"Collect All Support Data"* process and upload the .ZIP file created by this process over the web.

Steps to create and save Storage Configuration to a text file:

- Using a telnet/ssh client connect to the A controller of the nSeries/NetApp
  -Enter your username & password:

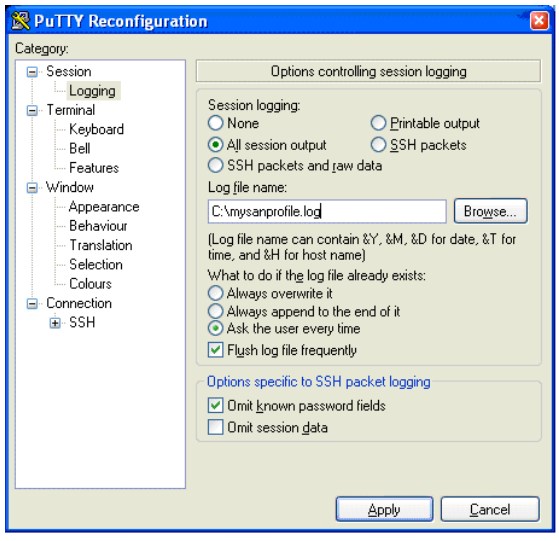




Command List (Script)

```
date
echo "Script version 2.0"
sysconfig -h
sysconfig -r
sysconfig -a
lun show
lun show all
aggr show_space
aggr status
storage show disk -p
storage show disk
environment status shelf
igroup show
vol status
lun show -m
lun show -v
disk show
df -gr
df -gs
fcp stats
cifs shares
cifs stat
exportfs
nfs stat
iscsi stats
lun stats
snapmirror status
rdfile /etc/snapmirror.conf
iscsi nodename
fcp nodename
fcp portname show
```

- Enable logging in the telnet/ssh client
- Copy commands from provided script file ensuring that you get the carriage return on the last line
- Paste these commands into the telnet/ssh client window
  - Enable session logging and enter a filename for session log to be saved into:
    - Example: SANProfileA.Log
- Once the commands have completed running press ctrl-d in telnet/ssh client window to close the connection.
  - This will save all output from the session into the file above.
- Repeat process for the B controller using a separate log file
  - Enter a different file name when running against the B Controller.
    - Example: SANProfileB.log
- Send both files to VSI website for processing (www.bluedatapartners.com)
- To Reset IO Statistics for Historical reporting run Reset Counters script after this process has completed.



Cluster Mode Instructions (Special Addition)

Add the following command as your initial command in order to run the script "as is".
run -nodename <nodename> where <nodename> is the node of the netapp cluster

Take both controller files and create a single .ZIP file with the log files from each side included in the file then upload the .ZIP file you created through the web interface.

Linux Automated Data Collection VM Instructions (for NetApp/nSeries)

Steps to automatically collect and send storage information for analysis Blue Data Partners:

- Create a Linux Virtual or Physical Machine
- Create the following directory structure
  - /vsi/bin
  - Place all script files (.sh) in the directory
    - MailVSIdata.sh
    - GetnetAppData.sh
    - ClearNetAppStats.sh
- Edit MailVSIData.sh script
  - Change Name for each ½ of Filer Names
    - Filer = Filer1
    - Filer = Filer2
  - Repeat and Copy for each NetApp Storage Array in the Enterprise within the script

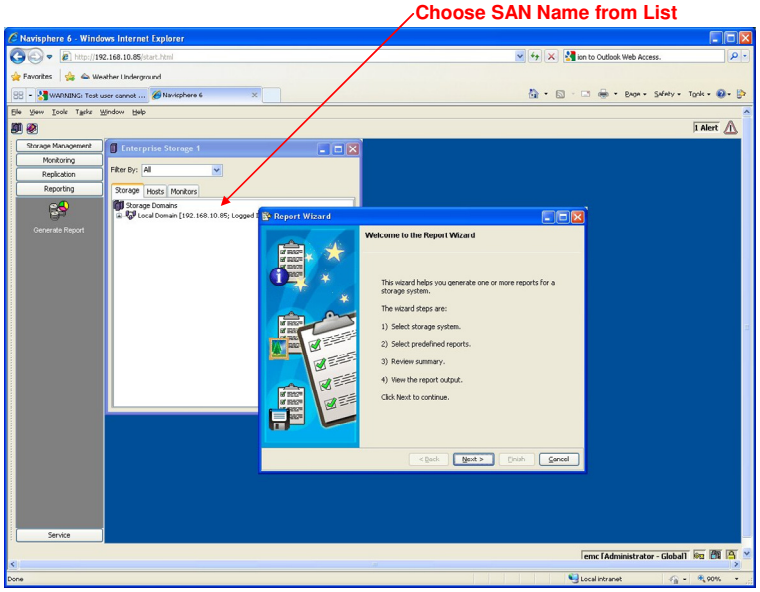
- Set a CRON job to run data collection script on periodic basis
  - In CRON Job to set job to run 1st day of every month at 12 Midnight is:
    - 0 0 1 * * /vsi/bin/MailVSIdata.sh > /dev/null 2>&1

All Scripts for the creation of this automation are available from Blue Data Partners website

Steps to create and save Storage Configuration to a XML file:

- Open Navisphere (EMC Clarion SAN Management Software)
- Choose REPORTING Option.

  This Dialog will prompt the user through generating all reports for a specific EMC Clariion SAN
- Select the desired SAN Name from the next Dialog.

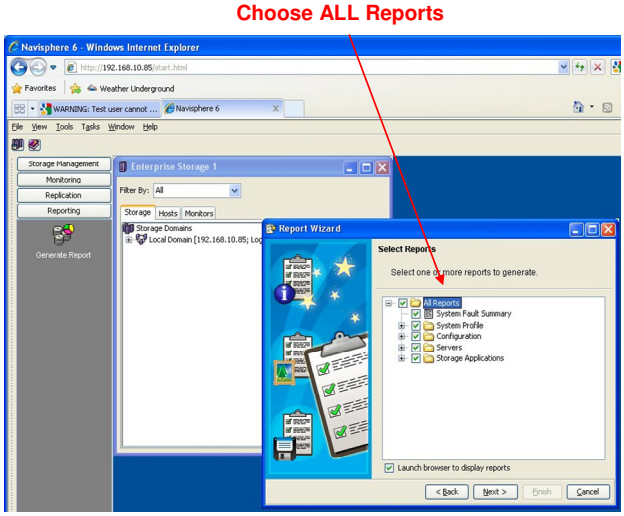


- Choose All Reports from the Select Reports Dialog Box

Click Next and Finish on the next screen to generate all the reports in XML format which are saved into your home directory

DO NOT use Save As function – as this only saves report definitions.

XML Files stored in Home Directory – locate these files and send to Your VSI partner.



Locating your Saved XML Files (Home Directory is named in your browser window)
The address where all XML Files is located in the address line of your web browser as the reports are generated and displayed.

Create a single .ZIP File with all the files created from the above steps and upload the .Zip file created to the website and review analysis through your web browser.

EMC DMX Storage Array Data Collection Instructions

Steps to create and save Storage Configuration to a XML file:

- Open a command line prompt on any system which is attached to your EMC DMX SAN
- Copy script commands from the text file and run them from your command line prompt.
  - If running from a Unix system these commands need to be run with ROOT authority.

DMX Script

```
symdev list -all -output XML > luns.xml
symdisk list -hotspares -output XML > hotspares.xml
symdisk list ALL -output XML > disks.xml
symmaskdb list database  -output XML > mappings.xml
symcfg list -sa all  -output XML > faports.xml
symcfg -v list -output XML > controller.xml
```

- Send all files created with extension .xml to Your VSI partner for processing
- Additional Files not included in EMC/DMX need to also be included to improve report readability, and they must have the following Names:
  - hostmapping - shows the WWN to Server name mapping
  - hostclusters - shows the cluster names for which hosts with common name will be matched

Host Mapping Table format:

Sample WWN/Host Mapping

Host Name	WWN
Sample Host 1	50:01:10:a0:00:86:a7:18
Sample Host 1	50:01:10:a0:00:86:a7:1a
Sample Host 2	50:01:10:a0:00:86:a7:19
Sample Host 2	50:01:10:a0:00:86:a7:1b
Sample Host 3	50:01:10:a0:00:86:ab:ba
Sample Host 4	50:01:10:a0:00:86:ab:c0
Sample Host 4	50:01:10:a0:00:86:ab:c2

Host Cluster Table Format (only needed if cluster Tiered Report Needed)

EMC VMAX Storage Array Data Collection Instructions

Steps to create and save Storage Configuration to a XML file:

- Open a command line prompt from any system attached your EMC VMAX SAN
- Run the following PERL script on executable which will run a series of VMAX CLI commands and collects the data into a series of XML files. .

vmax_datacollection.exe - script in executable format
vmax_datacollection.pl - script in PERL format

Take all XML files created and .ZIP them into a single .zip file.

Upload files created to the website and review analysis through your web browser.

The CLI commands run in the script are show below:

#symaccess -sid <SID> -type initiator list
#symaccess -sid <SID> -type initiator show <initiator> -output XML >> initiators.xml

#symaccess -sid <SID> -type storage list
#symaccess -sid <SID> -type storage show <storage group> -output XML >> storagegroups.xml

#symaccess -sid <SID> -type port list
#symaccess -sid <SID> -type port show <port group> -output XML >> ports.xml

#symaccess -sid <SID> list -v
#symaccess -sid <SID> show view <masking view> -output XML >> mappings.xml

symdev list -all -output XML > luns.xml
symdisk list -hotspares -output XML > hotspares.xml
symdisk list ALL -output XML > disks.xml
symdisk –sid <SID> list -v > disks.xml
symcfg list -sa all -output XML > faports.xml
symcfg -v list -output XML > controller.xml
symcfg -sid <SID> list -tdev -mb -output XML > tdevs.xml
symcfg list -sid <SID> -pool -thin -mb -detail -output XML> thinpools.xml
symcfg -sid <SID> list -pool -output XML > pools.xml
symcfg list -sid <SID> -datadev -output XML> datadev.xml

Steps to create and save Storage Configuration to a XML file:

- Sign on to a system where the HP SSSU Utility is loaded and can be run
- Create a script file using the example provided with these instructions. The items in the script which need to be changed are those items which match your environment: (FileName=ClearScript.txt)
  - SAN Id
  - Logon and Password

- Save the file in the same folder where SSSU.exe is stored
- From a command line prompt run the SSU Command with the using the script file created above.

  SSSU "file Clearscript.txt" > CLEAREVA_SANName_Date_config.xml

  This step will create a file called CLEAREVA_SANName_Date_config.xml

- Send the File created to Your VSI partner

HP Script File

```
SET OPTION COMMAND_DELAY=10
SET OPTION RETRIES=1
EMVERSION
SELECT system Your_System_Name

Ls Commands for Command View 4.x or later
LS CELL FULL XML
LS GROUP FULL XML
LS FOLDER FULL XML
LS VDISK FULL XML
LS HOST FULL XML
LS LUN FULL XML
LS DR_GROUP FULL XML
LS CONTROLLER FULL XML
LS DISKSHELF FULL XML
LS DISK FULL XML
EXIT
```

Certain versions of HP EVA will require the statement below to be included in the script as well:

SELECT MANAGER localhost USERNAME=administrator PASSWORD=administrator

HitachiStorage Array Data Collection Instructions

Steps to create and save Storage Configuration to a XML file:

- Sign on to a system attached to Hitachi Array with CLI Access Utility is loaded and can be run
- Create a script file using the example provided with these instructions. The items in the script which need to be changed are those items which match your environment: (FileName=ClearScript.txt)
  - SAN Id
  - Logon and Password
- Save and run the script or run the commands individually
- Send all the XML Files created to Your VSI partner

Hitachi Script File

```
HiCommandCLI GetStorageArray -o "C:\logs\GetStorgeArray_ArrayGroup.xml" subtarget=ArrayGroup -f xml.
HiCommandCLI GetStorageArray -o "C:\logs\GetStorgeArray_Component.xml" subtarget=Component -f xml
HiCommandCLI GetStorageArray -o "C:\logs\GetStorgeArray_FreeSpace.xml" subtarget=FreeSpace -f xml.
HiCommandCLI GetStorageArray -o "C:\logs\GetStorgeArray_LogicalUnit.xml" subtarget=LogicalUnit -f xml
HiCommandCLI GetStorageArray -o "C:\logs\GetStorgeArray_PDEV.xml" subtarget=PDEV -f xml.
HiCommandCLI GetStorageArray -o "C:\logs\GetStorgeArray_PortController.xml" subtarget=PortController -f xml
HiCommandCLI GetStorageArray -o "C:\logs\GetStorgeArray_LDEV.xml" subtarget=LDEV -f xml.
HiCommandCLI GetStorageArray -o "C:\logs\GetStorgeArray_Port.xml" subtarget=Port -f xml

HiCommandCLI GetStorageArray -o "C:\logs\GetStorgeArray_HostStorageDomain.xml" subtarget=HostStorageDomain -f xml.
HiCommandCLI GetStorageArray -o "C:\logs\GetStorgeArray_ReplicationInfo.xml" subtarget=ReplicationInfo -f xml
HiCommandCLI GetStorageArray -o "C:\logs\GetStorgeArray_LogicalDKC.xml" subtarget=LogicalDKC -f xml.

HiCommandCLI GetHostInfo -o "C:\logs\GetHostInfo.xml"  -f xml
HiCommandCLI GetHost -o "C:\logs\GetHost.xml"  -f xml
HiCommandCLI GetLogicalGroup -o "C:\logs\GetLogicalGroup.xml"  -f xml
```

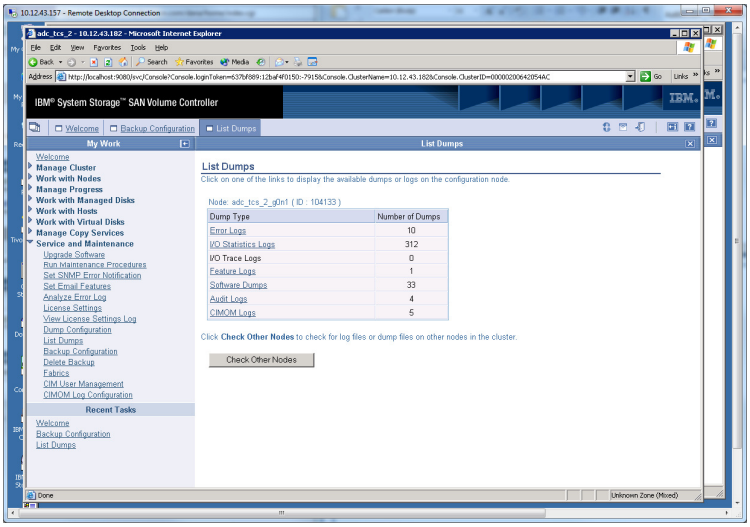
Or Run the GETCFG Command – Available from Hitachi Website

Web Link to Command and Documentation:
https://tuf.hds.com/gsc/bin/view/Main/GetConfig

IBM SVC Storage Data Collection Instructions

Steps to create and save Storage Configuration to a XML file:

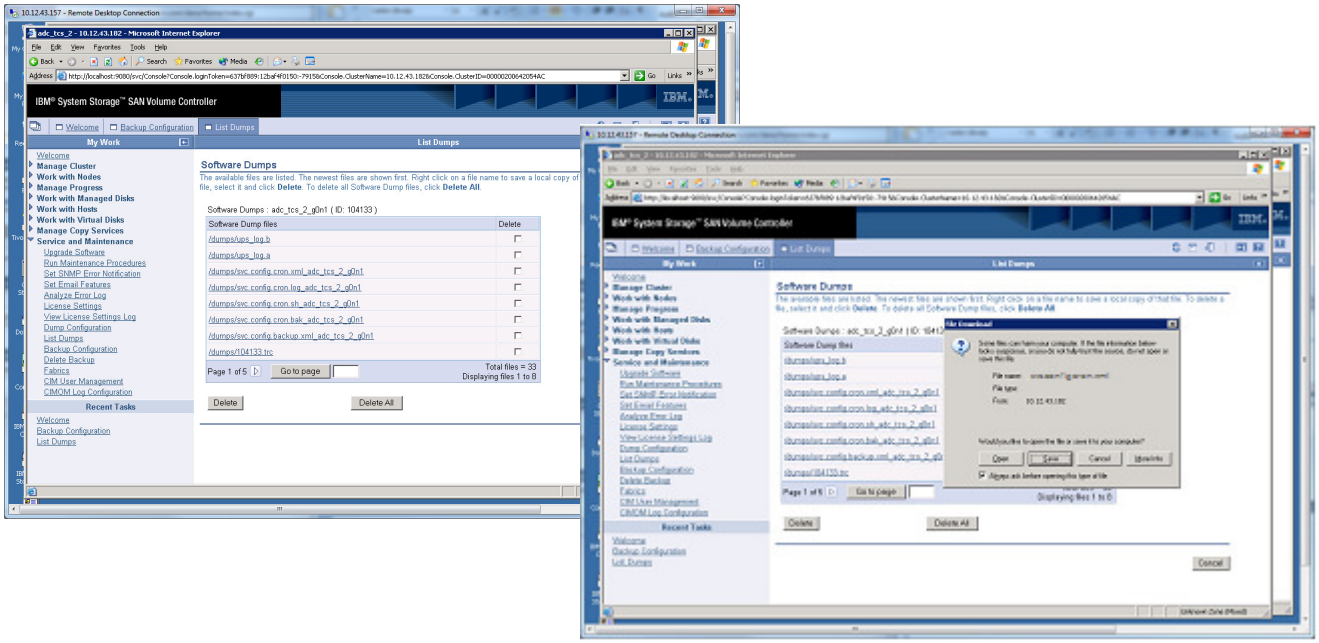
- Collecting SVC Cron File
  - From the Service and Maintenance Menu select "List Dumps"
  - Click on Software Dumps



- Look for the file
  svc.config.cron.xml_*'cluster-node-name'*
  /dumps/svc.config.cron.xml_svc_name

- Click on the filename and save to a local file.

- Send the saved file to Your VSI partner



Email files to Your VSI partner and review analysis through your web browser.

VMware Collection Instructions (VMware 4.x and higher)

Prerequisite: VMware 4.x and higher is require for Vmware PowerCLI script support

Steps to create and save VMware virtual server storage information

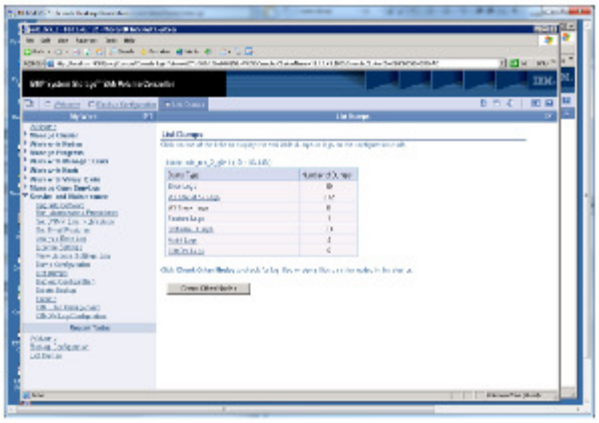
- On a PC where PowerShell (a Windows Feature) is installed and the PC has access to your virtual infrastructure environment:
  - Install VMWare PowerCLI
    - Download from the website below if needed

    http://communities.vmware.com/community/vmtn/vsphere/automationtools/powercli
  - Request VMware data collection script
  - Run Script and upload/send file generated to Blue Data Partners
    - Run Script:
      - getvmdata.ps1 [VCenter Server Name]
      - Optionally edit the file to specify:
        - VC Server Name
        - Filepath (where the output files are placed)
          - Defaults to: C:\

- Zip the 4 created files and upload them via ftp or the web to www.bluedatapartners.com

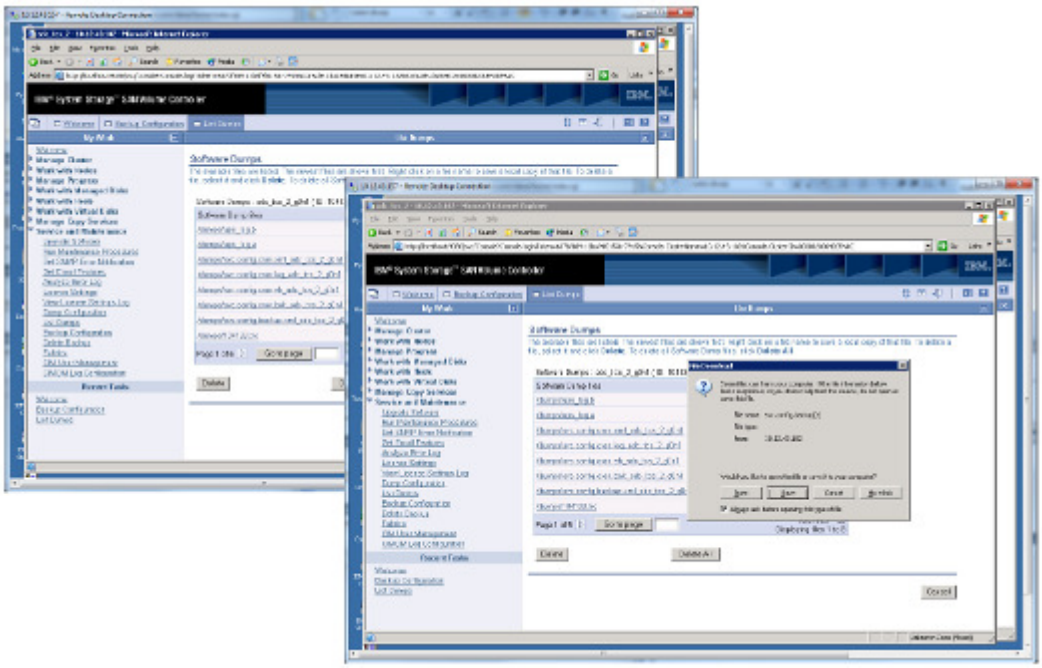
Steps to create and save Storage Configuration to a XML file:

• Create a new Backup. (Not required. SVC will create a daily backup)
  May take up to 5 minutes.
  From the Service and Maintenance Menu –
  Select Backup Configuration
  This can be performed at anytime without disruption to the cluster.
• Collecting Backup File
  - From the Service and Maintenance Menu select "List Dumps"
  - Click on Software Dumps
• Look for the file svc.config.xml_'cluster-node-name' /dumps/svc.config..xml_svc_name



• Click on the filename and save to a local file.

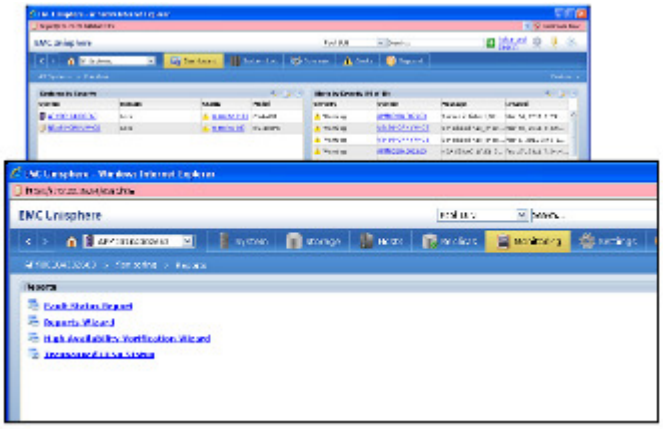
• Send the saved file to Your VSI partner



Upload files created to Your VSI partner' website and review analysis through your web browser.

Steps to create and save Storage Configuration to a XML file:

- Open Unisphere (EMC Clarion SAN Management Software)
- Go to the CLARiion part of your array (if using the Celerra)



- Choose Monitoring Option
- Choose Reports Wizard

This Dialog will prompt the user through generating all reports for a specific
EMC Clariion SAN

Choose All Reports from the Select Reports Dialog Box

Click Next and Finish on the next screen to generate all the reports in XML format which are saved into your home directory

DO NOT use Save As function – as this only saves report definitions.

XML Files stored in Home Directory – locate these files and send to Your VSI partner.

Locating your Saved XML Files (Home Directory is named in Your browser window)

The address where all XML Files is located in the address line of your web browser as the reports are generated and displayed.

Create a single .ZIP File with all the files created from the above steps and upload the .Zip file created to Your VSI partner website and review analysis through your web browser.

HP 3PAR Data Collection Instructions

Steps to create and save Storage information from a 3Par storage device:

- Open a command line prompt:
- Sign on to the storage array using Storage Adminstrators rights
- Create a directory called 3par Data and switch to this directory
  - md / 3pardata
  - cd / 3pardata

- Copy the script file into the new directory
- Rename the 3par script from txt extension to .bat extension
  - Rename 3par.grab.bat.txt 3par.grab.bat

- Prior to running the script edit the script file and make the following changes
  - set TPDPWFILE=c:\Users\username\pwfile Username and password file
  - set TPDSYSNAME=ESFWT800-1 your system name
  - set OUTPUTDIR=c:\3PARData\TPD_GRAB_DATA rename if needed

- Run the script for each array and zip files for each array into a single .zip files
  - 3par.grad.bat

HP 3PAR Script File

```
call showsys              >%OUTPUTDIR%\sys.csv
call showsys -space       >%OUTPUTDIR%\sysspace.txt
call showversion          > %OUTPUTDIR%\version.txt
call shownode             > %OUTPUTDIR%\node.csv
call shownodeenv          > %OUTPUTDIR%\nodeenv.txt
call shownode -ps         > %OUTPUTDIR%\node_ps.csv
call showcage             > %OUTPUTDIR%\cage.csv
call showpd               > %OUTPUTDIR%\pd.csv
call showpd -i            > %OUTPUTDIR%\pd_i.csv
call showpd –c            > %OUTPUTDIR%\pd_c.csv
call showpd –space        > %OUTPUTDIR%\pd_space.csv
call showld               > %OUTPUTDIR%\ld.csv
call showld –d            > %OUTPUTDIR%\ld_d.csv
call showport             > %OUTPUTDIR%\port.csv
call showport –c           > %OUTPUTDIR%\port_c.csv
call showhost             > %OUTPUTDIR%\host.csv
call showhost -d          > %OUTPUTDIR%\host_d.csv
call showcpg              > %OUTPUTDIR%\cpg.csv
call showcpg -d           > %OUTPUTDIR%\cpg_d.csv
call showvv               > %OUTPUTDIR%\vv.csv
call showvv -cpgalloc     > %OUTPUTDIR%\vv_cpgalloc.csv
call showvlun             > %OUTPUTDIR%\vlun.csv
call showvlun –a          > %OUTPUTDIR%\vlun_a.csv
```

```
call showdate             > %OUTPUTDIR%\showdate.txt
call showfirmwaredb > %OUTPUTDIR%\firmwaredb.csv
call showlicense          > %OUTPUTDIR%\license.txt
call showspare            > %OUTPUTDIR%\spare.csv
call showspace            > %OUTPUTDIR%\space.csv
call showtoc              > %OUTPUTDIR%\toc.txt
```

Upload file (3PAR_GRAB_DATA) created to Your VSI partner.