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NCS/VTCS

NEARLINE CONTROL SOLUTION/VIRTUAL TAPE CONTROL SYSTEM

READ ME FIRST

PRODUCT TYPE
SOFTWARE

NCS/VTCS 6.1.0 Read Me First

Contents

1	INTRODUCTION.....	2
2	INSTALLATION MATERIALS.....	2
3	RELEASE NOTES.....	2
3.1	SMC 6.1.0 NOTES.....	2
3.1.1	<i>TAPEREQ.....</i>	2
3.1.2	<i>UNITATTR.....</i>	3
3.1.3	<i>Other Policy Specification Changes.....</i>	3
3.2	STORAGETEK HTTP SERVER.....	3
3.3	NCS 6.1.0 NOTES.....	3
3.3.1	<i>HSC Near Continuous Operation (NCO).....</i>	3
3.3.2	<i>HSC Now Starts Without SMC.....</i>	3
3.3.3	<i>ExLM Considerations.....</i>	4
3.4	VTCS 6.1.0 NOTES.....	4
3.4.1	<i>VSM Near Continuous Operations.....</i>	4
3.4.2	<i>Bi-directional Clustering.....</i>	4
3.4.3	<i>Multi-volume Enhancement.....</i>	4
4	INSTALLATION NOTES.....	5
4.1	6.1.0 FMIDS.....	5
4.2	INSTALLATION GUIDELINES.....	5
5	6.1.0 CO-EXISTENCE WITH PREVIOUS RELEASES.....	5
5.1	6.1.0 COMPATIBILITY PTFs.....	5
5.2	VTCS 6.1.0 MIGRATION CONSIDERATIONS.....	6

Tables & Figures

Table 1	6.1.0 SMP/E FMIDs.....	5
Table 2	Compatibility PTFs.....	6

NCS/VTCS 6.1.0 Read Me First

1 Introduction

This document provides information necessary for the installation of the release 6.1.0 product set.

Please read this important notice before installing the 6.1.0 products.

2 Installation Materials

The following installation materials are included in this package:

- A product tape containing the 6.1.0 software.
- A service tape containing PTFs for the 6.1.0 product set.

OR

- A product CD containing the 6.1.0 software.
- A service CD containing PTFs for the 6.1.0 product set.

Note: NCS and VTCS are shipped on separate tapes/CDs. VTCS customers receive two tapes or CDs: the NCS tape or CD (containing the HSC), and the VTCS tape or CD.

In addition, all customers must obtain the latest maintenance (PTFs and HOLDDATA) for the 6.1.0 product set and for any releases of StorageTek software that will co-exist with 6.1.0. Maintenance can be downloaded from the StorageTek website at <http://www.storageitek.com/crc>, or by calling StorageTek Central Software Support¹ and ordering an all-PTF tape.

3 Release Notes

For customers using SMP/E 3.1 and above, the 6.1.0 product set is available on CDs. The following information provides specific details on each 6.1.0 product.

3.1 SMC 6.1.0 Notes

The SMC consolidates HSC and MVS/CSC JES2 and JES3 operating system interface components into consistent functions and is a required NCS component.

SMC 6.1.0 communicates with the HSC and/or MVS/CSC running on the same host, or with the HSC executing on a remote host. When communicating with HSC on a remote host, the StorageTek HTTP Server must also be installed and must execute in a separate address space on the HSC host. The SMC uses the HSC and/or MVS/CSC to provide policy, drive, and volume information and to request services for mounting and dismounting volumes.

3.1.1 TAPEREQ

The SMC TAPEREQ control statement replaces the HSC and MVS/CSC TAPEREQ control statement. Furthermore, the SMC TREQDEF operator command replaces the HSC and MVS/CSC TREQDEF command and control statement. Refer to the *SMC 6.1 Configuration and Administration Guide* for more information.

¹ (800) 678-4430 for USA customers

+1-303-673-4430 for international customers

NCS/VTCS 6.1.0 Read Me First

3.1.2 UNITATTR

The SMC UNITATTR command replaces the HSC UNITDEF command and UNITATTR control statement. It is used to set the model type for nonlibrary drives, and IGNORE as the model type for drives to be excluded from allocation. Refer to the *SMC 6.1 Configuration and Administration Guide* for more information.

3.1.3 Other Policy Specification Changes

Several other policy statements have been moved from the HSC and MVS/CSC to the SMC ALLOCDEF and MOUNTDEF commands, as well as other miscellaneous policy statement changes. Refer to the *SMC 6.1 Configuration and Administration Guide*, as well as the *MVS/HSC 6.1 System Programmer's Guide* and the *MVS/HSC 6.1 Configuration Guide*, for more information.

3.2 StorageTek HTTP Server

The StorageTek HTTP Server (FMIDs SSKY500 and ASAR0700) is also distributed as part of the VSM GUI product. An additional FMID (SMX6100) contains the SMC CGI routines required to access the remote HSC for SMC processing. This component is required only if you want to run SMC using a remote HSC host.

3.3 NCS 6.1.0 Notes

3.3.1 HSC Near Continuous Operation (NCO)

A new feature available in release 6.1.0 of the HSC is Near Continuous Operation (NCO) for the SL8500 library. HSC NCO provides the ability to dynamically add or remove drives or panels 'on the fly,' without the need to recycle the HSC.

3.3.1.1 Restrictions

HSC NCO is available only for operations on the StreamLine SL8500 Library and any future StorageTek libraries. NCO is not supported on older (i.e., Powderhorn) libraries.

NCO requires an initial LIBGEN / MERGEcds when using the new SLIACS parameter FUTURLSM. Refer to the *MVS/HSC 6.1 Configuration Guide* for more information.

3.3.1.2 New HSC SMF Record

The HSC generates a Subtype 31 SMF record to document NCO CONFIG changes.

3.3.2 HSC Now Starts Without SMC

The requirement to initialize the SMC before the HSC has been removed. Refer to the *MVS/HSC 6.1 System Programmer's Guide* and the *MVS/HSC 6.1 Configuration Guide* for more information.

NCS/VTCS 6.1.0 Read Me First

3.3.3 ExLM Considerations

ExLM does not have a corresponding 6.1.0 release. However, ExLM 6.0.0 must have PTF L1L00E0 (all zeros) if NCO operations are used. This PTF causes ExLM to terminate itself gracefully if an NCO CONFIG is started while ExLM is running. This allows the user to revise the ExLM configuration file to match the new configuration. A restart of ExLM, after the CONFIG is completed, picks up the new configuration.

There is no NCO support for any ExLM release lower than 6.0.0.

3.4 VTCS 6.1.0 Notes

3.4.1 VSM Near Continuous Operations

VTCS 6.1 provides the ability to add, change, and delete the various components within the VSM configuration and have VTCS recognize the change dynamically without being recycled.

Specifically, VTCS 6.1 enables the following changes to be recognized dynamically:

- addition of a new VTSS and associated RTDs and CLINKs
- logical deletion of an existing VTSS
- modification of the back-end connection from the VTSS to either RTDs or other VTSSs (CLINKs). This includes the ability to change over a path from a RTD to a CLINK and to change the sharing of RTDs between VTSSs.
- change of the device type of a RTD when performing an upgrade
- addition of MVCs
- addition of VTVs
- support for the removal or addition of a clustered VTSS.

VSM Near Continuous Operation does not require any specific library type to be installed. It does, however, require that all hosts must be running VTCS 6.1 and that the CDS is reformatted to the latest levels.

3.4.2 Bi-directional Clustering

VTCS 6.1 enables VTV data replication to occur in both directions in a cluster configuration. Previous releases of VTCS enabled clusters to be defined in a primary/secondary relationship. This enabled data to flow only in one direction (from the primary to secondary VTSS). With VTCS 6.1, a cluster may be defined in a peer-to-peer relationship with data being replicated in both directions.

The exploitation of Bi-directional Clustering requires that all hosts must be running VTCS 6.1 and that the CDS is reformatted to the latest levels.

3.4.3 Multi-volume Enhancement

VTCS 6.1 introduces predictive VTV recalls. VTCS recognizes at data create time that it spans multiple virtual volumes. If a mount is requested for a virtual volume that VTCS recognizes as part of a multi-volume set, then VTCS 6.1 recalls the subsequent VTV. This feature is enabled automatically for any data created and referenced under VTCS 6.1 or higher.

NCS/VTCS 6.1.0 Read Me First

4 Installation Notes

4.1 6.1.0 FMIDs

The following SMP/E FMIDs are distributed with 6.1.0:

SOS6100	The base HSC 6.1.0 component.
SMC6100	The base SMC component.
SCS6100	The base MVS/CSC component.
SOC6100	The LibraryStation component.
SMZ6100	The SMC JES3 component – this is a sub-fmid of SMC6100.
SMX6100	The SMC CGI routines required to access a remote HSC.
SWS6100	The VTCS component – this is a sub fmid of SOS6100.
SWU6100	The CDRT component.

Table 1 6.1.0 SMP/E FMIDs

Select the FMIDs that are required to support your configuration.

Note that the various components are sub-FMIDs of base components. *If you are running at an SMP/E level lower than 2.5, ensure that the base fmid(s) and all PTF maintenance for the base FMID(s) is accepted before installing any sub-fmids. For certain levels of SMP/E, the restriction applies that a dependent FMID cannot be installed if the base FMID and service have not been ACCEPTED.*

Note: When installing 6.1.0 in the same SMP/E zone as that used for earlier versions, the SMP/E installation deletes the old FMIDs.

4.2 Installation Guidelines

Full instructions for installing the various components can be found in the user documentation. Please refer to the latest levels of the manuals. Please ensure that on completion of the apply/accept of the fmids that the latest HOLDDATA is received and the latest PTFs are received and applied. Follow your own internal guidelines regarding the SMP/E ACCEPT of the PTFs.

It is strongly recommended to use GROUPEXTEND on all applies.

5 6.1.0 Co-existence With Previous Releases

It is not mandatory to upgrade all hosts to 6.1.0 at the same time. The 6.1.0 products may co-exist with hosts running 5.1.0 and above.²

There are, however, a number of considerations when co-existing with down-level hosts.

5.1 6.1.0 Compatibility PTFs

Before attempting to start 6.1.0 ensure that the following compatibility PTFs are installed on the down-level releases that share the CDS.

² Other hosts that share the same CDS.

NCS/VTCS 6.1.0 Read Me First

Note: HSC 5.0 is no longer a supported release.

HSC 5.1 (FMID SOS5100)	L1H126N
VM/HSC 5.1 (SMS5100)	L1H126M
VTCS 5.1 (SWS5100)	L1H125J
HSC 6.0 (FMID SOS6000)	L1H126P
VM/HSC 6.0 (SMS6000)	L1H126O
VTCS 6.0 (SWS6000)	L1H127Z
LS 6.0 (SOC6000)	None

Table 2 Compatibility PTFs

In addition it is strongly recommended to obtain the latest service (including HOLDATA) for the down-level hosts systems.

The suggested method of implementing 6.1.0 is to:

1. Install the correct service on production hosts.
2. Install 6.1.0 on a test host(s).
3. Test and verify 6.1.0 on test host(s).
4. Schedule the rollout of 6.1.0 to production hosts.

5.2 VTCS 6.1.0 Migration Considerations

VTCS 6.1.0 can co-exist with all VTCS versions on or above VTCS 5.1.0. ***There are, however, limitations to this co-existence. To exploit either VSM Near Continuous Operations or Bi-directional Clustering, it is required that all co-operating systems³ be at the VTCS 6.1.0 level.***

Transitioning to exploit VSM Near Continuous Operations or Bi-directional Clustering requires the following considerations:

- o A decision must be taken on a time/date for which it is necessary to exploit these VSM features.
- o Prior to this time/date, it will be necessary to install VTCS 6.1.0 on all appropriate LPARs.
- o On the time/date chosen for the conversion to exploit these features, all VTCS systems accessing the CDS should be terminated.
- o On the time/date chosen for the conversion, a VTCS Config (with the CDSLEVEL (V61ABOVE) option specified) should be run using VTCS 6.1.0 libraries.

Notes:

- After the conversion has been completed, VTCS systems other than 6.1.0 will not activate against the chosen CDS.
- The above discussion is a brief outline of the conversion process. The details regarding CDS conversion in the VTCS 6.1.0 documentation should be thoroughly analyzed.

³ Systems that share the same HSC CDS.



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