



MISER ENCRYPTED DISK

EFFECTIVE:
12/01/10

REVISION:
A

Building a MISER Source Encrypted Disk

Overview

These instructions detail how to build an encrypted and compressed MISER and customer source disk container. This is used by HSQ to protect both MISER and the customer's source code.

- 1) Unzip the MISER Source Encrypted Disk Kit.
- 2) Install the required software and any updates on every node of the MISER system.
- 3) Build the MISER source disk container file.
- 4) Add the MISER and site source to the disk container file.
- 5) Delete the original source files.
- 6) Encrypt and compress the MISER source disk container file.
- 7) Install the commands to retrieve and save the MISER source.
- 8) Add setup of LD v9.5 Logical Disk Driver for MISER.
- 9) Use commands to access and save the MISER and customer source files.

Details

Both the MISER and site source files are stored inside an encrypted source disk container file. This file can be uncompressed, decrypted, connected, and mounted by HSQ personnel when access to the source files is required.

The LD logical disk driver software product is used to present an LD device based on a disk container file. The disk container file will be stored inside an encrypted, compressed ZIP file when not mounted for use by HSQ personal.

NOTE: Throughout this tutorial, the customer ALC (Alameda) is used as an example.

1. MISER Source Encrypted Disk Kit

The file "*miser_source_encrypted_disk_kit.zip*" contains all the files necessary to build an Encrypted MISER Source disk. Login to the *SYSTEM* user account and unzip this file as shown below.

```
ALCVS1$ dir .zip

Directory SYS$SYSDEVICE:[USERS.SYSTEM]

MISER_SOURCE_ENCRYPTED_DISK_KIT.ZIP;1

Total of 1 file.
ALCVS1$ TOOLS
ALCVS1$ cre/dir [.MSED_KIT]
ALCVS1$ set def [.msed_kit]
ALCVS1$ unzip [-]MISER_SOURCE_ENCRYPTED_DISK_KIT.ZIP
Archive:  SYS$SYSDEVICE:[USERS.SYSTEM]MISER_SOURCE_ENCRYPTED_DISK_KIT.ZIP;1
creating:  [.COMMAND]
```

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```
inflating: [.COMMAND]PREPARE_SETUP.COM
inflating: [.COMMAND]SAVE_SETUP.COM
inflating: [.COMMAND]SYSTARTUP_VMS.COM
creating: [.PCSI]
inflating: [.PCSI]HP-VMS-LD-V0905--1.PCSI
creating: [.ZIP]
inflating: [.ZIP]UNZIP.AXP_EXE
inflating: [.ZIP]UNZIP.IA64_EXE
inflating: [.ZIP]UNZIPSFX.AXP_EXE
inflating: [.ZIP]UNZIPSFX.IA64_EXE
inflating: [.ZIP]UNZIPSFX_CLI.AXP_EXE
inflating: [.ZIP]UNZIPSFX_CLI.IA64_EXE
inflating: [.ZIP]UNZIP_CLI.AXP_EXE
inflating: [.ZIP]UNZIP_CLI.IA64_EXE
inflating: [.ZIP]UPDATE.COM
inflating: [.ZIP]ZIP.AXP_EXE
inflating: [.ZIP]ZIP.IA64_EXE
inflating: [.ZIP]ZIPCLOAK.AXP_EXE
inflating: [.ZIP]ZIPCLOAK.IA64_EXE
inflating: [.ZIP]ZIPNOTE.AXP_EXE
inflating: [.ZIP]ZIPNOTE.IA64_EXE
inflating: [.ZIP]ZIPSPLIT.AXP_EXE
inflating: [.ZIP]ZIPSPLIT.IA64_EXE
inflating: [.ZIP]ZIP_CLI.AXP_EXE
inflating: [.ZIP]ZIP_CLI.IA64_EXE
ALCVS1$ dir /since=today .dir
```

```
Directory SYS$SYSDEVICE:[USERS.SYSTEM]
```

```
COMMAND.DIR;1 PCSI.DIR;1 ZIP.DIR;1
```

```
Total of 3 files.
```

```
ALCVS1$
```

2. Required Software Installation and Updates

The following software must be installed on each node of the MISER system.

HP-VMS-LD-V0905—1.PCSI, LD V9.5 for OpenVMS AXP and IA64

Below is a sample of the install procedure for this product.

```
ALCVS1$ prod install ld
```

```
Performing product kit validation of signed kits ...
```

```
%PCSI-I-CANNOTVAL, cannot validate _DQA0:[USERS.][SYSTEM]HP-VMS-LD-V0905--1.PCSI;1
-PCSI-I-NOTSIGNED, product kit is not signed and therefore has no manifest file
```

```
The following product has been selected:
```

```
HP VMS LD V9.5 Layered Product
```

```
Do you want to continue? [YES]
```

```
Configuration phase starting ...
```

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You will be asked to choose options, if any, for each selected product and for any products that may be installed to satisfy software dependency requirements.

Configuring HP VMS LD V9.5: Logical disk driver V9.5 for OpenVMS.

Copyright 2010 digiater.nl, Jur van der Burg

LD was produced by digiater.nl

Do you want the defaults for all options? [YES]

Do you want to review the options? [NO]

Execution phase starting ...

The following product will be installed to destination:

HP VMS LD V9.5 DISK\$AXPVMSSYS:[VMS\$COMMON.]

Portion done: 0%...10%...20%...30%...50%...60%...80%...90%...100%

The following product has been installed:

HP VMS LD V9.5 Layered Product

HP VMS LD V9.5: Logical disk driver V9.5 for OpenVMS.

Please add "@SYS\$STARTUP:LD\$STARTUP" to your system's startup procedures.

Please add "@SYS\$STARTUP:LM\$STARTUP" to your system's startup procedures.

ALCVS1\$ ld ver

%LD-I-VERSION, LD version V9.5, module X-10 built on Jul 23 2010 15:41:47

-LD-I-DRIVERVERSION, Driver version: X-9 21-AUG-2009 17:31:12.91

-LD-I-SYSINFO1, Node: ALCVS1, Hardware: AlphaServer DS10 466 MHz, VMS version: V8.3

-LD-I-SYSINFO2, Memory size: 1024 MBytes, Boot time: 23-NOV-2010 11:40:50.00

ALCVS1\$

The following MISER software tools are updated for each node of the MISER system.

VMS ZIP V3.0 for AXP and IA64

VMS UNZIP V6.0 for AXP and IA64

2.1. Updating the ZIP Program

To update the existing zip and unzip programs, use the UPDATE.COM procedure located in the zip subdirectory as shown below. This procedure will update both the AXP and IA64 version of the programs in the architecture specific directories.

ALCVS1\$ sh def

 SYS\$SYSDEVICE:[USERS.SYSTEM.MSED_KIT]

ALCVS1\$ set def [.zip]

ALCVS1\$ @update

%COPY-S-COPIED, SYS\$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]UNZIP.AXP_EXE;1 copied to
 _DQA0:[MISER.TOOLS.ALPHA]UNZIP.EXE;3 (378 blocks)

%COPY-S-COPIED, SYS\$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]UNZIP.SFX.AXP_EXE;1 copied to
 _DQA0:[MISER.TOOLS.ALPHA]UNZIP.SFX.EXE;3 (205 blocks)

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```
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]UNZIPSFX_CLI.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS.ALPHA]UNZIPSFX_CLI.EXE;3 (236 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]UNZIP_CLI.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS.ALPHA]UNZIP_CLI.EXE;3 (414 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIP.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS.ALPHA]ZIP.EXE;3 (453 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIPCLOAK.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS.ALPHA]ZIPCLOAK.EXE;3 (190 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIPNOTE.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS.ALPHA]ZIPNOTE.EXE;3 (176 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIPSPLIT.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS.ALPHA]ZIPSPLIT.EXE;3 (181 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIP_CLI.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS.ALPHA]ZIP_CLI.EXE;3 (513 blocks)
%COPY-S-NEWFILES, 9 files created
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]UNZIP.IA64_EXE;1 copied to
_DQA0:[MISER.TOOLS.IA64]UNZIP.EXE;3 (766 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]UNZIPSFX.IA64_EXE;1 copied to
_DQA0:[MISER.TOOLS.IA64]UNZIPSFX.EXE;3 (429 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]UNZIPSFX_CLI.IA64_EXE;1 copied to
_DQA0:[MISER.TOOLS.IA64]UNZIPSFX_CLI.EXE;3 (482 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]UNZIP_CLI.IA64_EXE;1 copied to
_DQA0:[MISER.TOOLS.IA64]UNZIP_CLI.EXE;3 (827 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIP.IA64_EXE;1 copied to
_DQA0:[MISER.TOOLS.IA64]ZIP.EXE;3 (921 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIPCLOAK.IA64_EXE;1 copied to
_DQA0:[MISER.TOOLS.IA64]ZIPCLOAK.EXE;3 (407 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIPNOTE.IA64_EXE;1 copied to
_DQA0:[MISER.TOOLS.IA64]ZIPNOTE.EXE;3 (375 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIPSPLIT.IA64_EXE;1 copied to
_DQA0:[MISER.TOOLS.IA64]ZIPSPLIT.EXE;3 (386 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIP_CLI.IA64_EXE;1 copied to
_DQA0:[MISER.TOOLS.IA64]ZIP_CLI.EXE;3 (1032 blocks)
%COPY-S-NEWFILES, 9 files created
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]UNZIP.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS]UNZIP.EXE;3 (378 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]UNZIPSFX.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS]UNZIPSFX.EXE;3 (205 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]UNZIPSFX_CLI.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS]UNZIPSFX_CLI.EXE;3 (236 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]UNZIP_CLI.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS]UNZIP_CLI.EXE;3 (414 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIP.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS]ZIP.EXE;3 (453 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIPCLOAK.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS]ZIPCLOAK.EXE;2 (190 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIPNOTE.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS]ZIPNOTE.EXE;2 (176 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIPSPLIT.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS]ZIPSPLIT.EXE;2 (181 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.ZIP]ZIP_CLI.AXP_EXE;1 copied to
_DQA0:[MISER.TOOLS]ZIP_CLI.EXE;2 (513 blocks)
%COPY-S-NEWFILES, 9 files created
ALCVS1$
```

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3. Building the MISER Source Disk Container File

After all of the LD and ZIP software is installed and/or updated, you will be able to create an empty disk container file, mount a logical disk, and fill that logical disk with source code from MISER and/or the customer's site tree. To create an empty disk container file, do the following:

```
ALCVS1$ ld create /cont /log /size=1048576 site$data:sr.dat
%LD-W-HIGHWATER, Highwater marking is enabled on device, be patient
%LD-I-CREATED, File _DQA0:[ALC.][DATA]SR.DAT;1 created
ALCVS1$ ld connect /log /symbol /lock site$data:sr.dat lda1:
%LD-I-CONNECTED, Connected ALCVS1$LDA1: to ALCVS1$DQA0:[ALC.DATA]SR.DAT;1
ALCVS1$ init /nohigh /system lda1: MSRSRC
ALCVS1$ mount LDA1: MSRSRC
%MOUNT-I-MOUNTED, MSRSRC mounted on _ALCVS1$LDA1:
ALCVS1$
```

4. Add the MISER and Site Source to the Disk Container File

Once the logical disk container file is created, you must add the MISER and/or customer's site source files to the container file. This is done using the following commands:

```
ALCVS1$ cre/dir lda1:[miser.source]
ALCVS1$ backup/log sr:[miser.source...]*.*.* /excl=(*.obj,*.olb,*.exe) lda1:[miser.source...]
%BACKUP-S-CREDIR, created directory LDA1:[MISER.SOURCE.ACCESS]
%BACKUP-S-CREDIR, created directory LDA1:[MISER.SOURCE.ACCESS.LOG]
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.ACCESS.LOG]DESCRIP.MMS;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.ACCESS.LOG]LOG.FOR;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.ACCESS.LOG]VERSION.OPT;1
%BACKUP-S-CREDIR, created directory LDA1:[MISER.SOURCE.ACCESS.PAL]
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.ACCESS.PAL]CONTROL.BDF;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.ACCESS.PAL]DESCRIP.MMS;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.ACCESS.PAL]PAL.DTA;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.ACCESS.PAL]PAL.FOR;1
...
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.WATCH_DOG.W_DOG]SET_UIC.FOR;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.WATCH_DOG.W_DOG]SET_VALUE.FOR;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.WATCH_DOG.W_DOG]STATE.DEF;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.WATCH_DOG.W_DOG]STOP_MISER.FOR;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.WATCH_DOG.W_DOG]SYS.OPT;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.WATCH_DOG.W_DOG]TQIMSG.MSG;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.WATCH_DOG.W_DOG]VERSION.OPT;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.WATCH_DOG.W_DOG]W_DOG.DEF;1
%BACKUP-S-CREATED, created LDA1:[MISER.SOURCE.WATCH_DOG.W_DOG]W_DOG.FOR;1
ALCVS1$
```

4.1. Move the Customer's Source File to the Logical Disk

To move the customer site source file to the logical disk container file, use the following commands:

```
ALCVS1$ cre/dir lda1:[alc.source]
ALCVS1$ backup/log sr:[alc.source...]*.*.* /excl=(*.obj,*.olb,*.exe) lda1:[alc.source...]
%BACKUP-S-CREDIR, created directory LDA1:[ALC.SOURCE.FIELD]
%BACKUP-S-CREDIR, created directory LDA1:[ALC.SOURCE.FIELD.SIXDEB]
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.FIELD.SIXDEB]CONTROL.BDF;1
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.FIELD.SIXDEB]DESCRIP.MMS;1
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.FIELD.SIXDEB]INITSEC.FOR;1
```

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```
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.FIELD.SIXDEB]OPTIONS.OPT;4
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.FIELD.SIXDEB]SIXDEB.FOR;2
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.FIELD.SIXDEB]SPCDEB.DEF;4
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.FIELD.SIXDEB]VERSION.OPT;1
...
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.RELATED.SIXAIB]QXREC.C_TEST;1
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.RELATED.SIXAIB]RDVN.FOR;3
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.RELATED.SIXAIB]SIXAIB.DEF;6
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.RELATED.SIXAIB]SIXAIB.FOR;49
%BACKUP-S-CREDIR, created directory LDA1:[ALC.SOURCE.RELATED.SIXAOB]
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.RELATED.SIXAOB]CONTROL.BDF;2
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.RELATED.SIXAOB]DESCRIP.MMS;5
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.RELATED.SIXAOB]QXREC_AO.C;13
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.RELATED.SIXAOB]RDVN.FOR;2
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.RELATED.SIXAOB]SET_POINT_VALUE.FOR;2
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.RELATED.SIXAOB]SIXAOB.DEF_OLD;1
%BACKUP-S-CREATED, created LDA1:[ALC.SOURCE.RELATED.SIXAOB]SIXAOB.FOR;35
ALCVS1$
```

5. Delete the Original Source Files

Assuming the MISER and customer's site source files have been successfully copied from their existing positions into the logical disk container file, the original source files can be deleted from the disk.

5.1. Dismount the Logical Disk

To protect the new logical disk, you must dismount and disconnect the logical disk container file using the following commands:

```
ALCVS1$ dism lda1:
ALCVS1$ ld disconnect /all /log
%LD-I-DISCONNECTED, Disconnected ALCVSB$LDA1: from ALCVSB$DQA0:[ALC.DATA]SR.DAT;1
ALCVS1$
```

5.2. Delete the Old MISER Source File

To delete the old MISER source file, leaving only the object and object library files, use the following commands:

```
ALCVS1$ del/log sr:[miser.source...]*.**/excl=(*.obj,*.olb,*.exe,*.dir)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.ALARM.ACK]VERSION.OPT;1 deleted (80 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.ALARM.ACK]XPROMPT.FOR;1 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.ALARM.ALARM]ALARM.DEF;2 deleted (16 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.ALARM.ALARM]ALARM.FOR;2 deleted (32 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.ALARM.ALARM]ALARM_LINE_CONF.DOC;2 deleted (16 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.ALARM.ALARM]ALDFILL.FOR;2 deleted (32 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.ALARM.ALARM]ALDSUB.FOR;2 deleted (32 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.ALARM.ALARM]ALD_FMT.DOC;2 deleted (16 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.ALARM.ALARM]ALD_FORMAT.DEF;2 deleted (16 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.ALARM.ALARM]ALD_SEND.FOR;2 deleted (32 blocks)
...
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.WATCH_DOG.W_DOG]SET_UIC.FOR;1 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.WATCH_DOG.W_DOG]SET_VALUE.FOR;1 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.WATCH_DOG.W_DOG]STATE.DEF;1 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.WATCH_DOG.W_DOG]STOP_MISER.FOR;1 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.WATCH_DOG.W_DOG]SYS.OPT;1 deleted (144 blocks)
```

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```
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.WATCH_DOG.W_DOG]TQIMSG.MSG;1 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.WATCH_DOG.W_DOG]VERSION.OPT;1 deleted (80 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.WATCH_DOG.W_DOG]W_DOG.DEF;1 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[MISER.SOURCE.WATCH_DOG.W_DOG]W_DOG.FOR;1 deleted (144 blocks)
%DELETE-I-TOTAL, 3795 files deleted (379616 blocks)
ALCVS1$
```

5.3. Delete the Old Customer Source File

To delete the old customer source file, leaving only the object and object library files, use the following commands:

```
ALCVS1$ del/log sr:[alc.source...]*.**/excl=(*.obj,*.olb,*.exe,*.dir)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.FIELD.SIXDEB]CONTROL.BDF;1 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.FIELD.SIXDEB]DESCRIP.MMS;1 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.FIELD.SIXDEB]INITSEC.FOR;1 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.FIELD.SIXDEB]OPTIONS.OPT;4 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.FIELD.SIXDEB]SIXDEB.FOR;2 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.FIELD.SIXDEB]SPCDEB.DEF;4 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.FIELD.SIXDEB]VERSION.OPT;1 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.FIELD.SIXMON]ASCTIM.FOR;1 deleted (144 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.FIELD.SIXMON]DELETE_LINE_DISPLAY.FOR;11 deleted (144
blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.FIELD.SIXMON]DELETE_UNIT_DISPLAY.FOR;9 deleted (144
blocks)
...
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.RELATED.SIXAIB]RDVN.FOR;3 deleted (16 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.RELATED.SIXAIB]SIXAIB.DEF;6 deleted (16 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.RELATED.SIXAIB]SIXAIB.FOR;49 deleted (48 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.RELATED.SIXAOB]CONTROL.BDF;2 deleted (16 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.RELATED.SIXAOB]DESCRIP.MMS;5 deleted (16 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.RELATED.SIXAOB]QXREC_AO.C;13 deleted (16 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.RELATED.SIXAOB]RDVN.FOR;2 deleted (16 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.RELATED.SIXAOB]SET_POINT_VALUE.FOR;2 deleted (16 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.RELATED.SIXAOB]SIXAOB.DEF_OLD;1 deleted (16 blocks)
%DELETE-I-FILDEL, _DQA0:[ALC.SOURCE.RELATED.SIXAOB]SIXAOB.FOR;35 deleted (48 blocks)
%DELETE-I-TOTAL, 77 files deleted (9136 blocks)
ALCVS1$
```

6. Encrypt and Compress the MISER Source Disk Container File

With the logical disk container file previously dismounted and disconnected from the LD device, access the logical disk container file located in the SITE\$DATA directory that is named SR.DAT. When encrypted and compressed, the SR.DAT file is deleted and the zip file SRZ.DAT replaces it. To do this, use the following command:

NOTE: A password is needed to encrypt the logical disk container files and must be entered twice correctly.

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MISER ENCRYPTED DISK

```
ALCVS1$ TOOLS
ALCVS1$ dir sr*.dat

Directory $SITE:[DATA]

SR.DAT;1          61210/61216    NOVEMBER 30, 2010 04:06 PM

Total of 1 file, 61210/61216 blocks.

ALCVS1$ SET DEFAULT SITE$DATA:
ALCVS1$ ZIP "-mV9eD" SITE$DATA:SRZ.DAT SR.DAT
Enter password:
Verify password:
adding: sr.dat (deflated 94%)
```

```
ALCVS1$ dir sr*.dat

Directory $SITE:[DATA]

SRZ.DAT;1          61210/61216    NOVEMBER 30, 2010 04:06 PM

Total of 1 file, 61210/61216 blocks.

ALCVS1$
```

At this point you have a MISER source logical disk container that can be copied to any MISER node or downloaded to HSQ for software development.

7. Install Commands to Retrieve and Save MISER Source

There are 3 command files to add to the MISER (MISER\$COM) command directory. They are:

```
ALCVS1 $ dir

Directory SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.COMMAND]

PREPARE_SETUP.COM;1          3/144    NOVEMBER 23, 2010 11:37 AM
SAVE_SETUP.COM;1             2/144    NOVEMBER 22, 2010 04:48 PM
SYSTARTUP_VMS.COM;1         39/144   NOVEMBER 19, 2010 11:03 AM

Total of 3 files, 44/432 blocks.
```

```
ALCVS1$
```

7.1. Copy Files to the Directory

Copy the above files to the MISER\$COM directory, using the following command:

```
ALCVS1$ copy/log *.* miser$com:
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.COMMAND]PREPARE_SETUP.COM;1 copied to
  $MISER:[COMMAND]PREPARE_SETUP.COM;1 (3 blocks)
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.COMMAND]SAVE_SETUP.COM;1 copied to
  $MISER:[COMMAND]SAVE_SETUP.COM;1 (2 blocks)
```

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MISER ENCRYPTED DISK

```
%COPY-S-COPIED, SYS$SYSDEVICE:[USERS.SYSTEM.MSED_KIT.COMMAND]SYSTARTUP_VMS.COM;1 copied to
  $MISER:[COMMAND]SYSTARTUP_VMS.COM;15 (39 blocks)
%COPY-S-NEWFILES, 3 files created
ALCVS1$
```

You must also edit the `MISER$COM:MISER_COMMANDS.COM` file to add two commands to MISER. Near the end of this file, add the following:

```
$ PSRC:==@MNET$COM:PREPARE_SSETUP.COM
$ SSRC:==@MNET$COM:SAVE_SSETUP.COM
```

After your next login, these two commands will be available for the user to access the MISER and customer's site source code.

8. Add Setup of LD v9.5 Logical Disk Driver for MISER

After reboot of the system, the drivers for the logical disk must be reloaded in order to access the MISER source in the logical disk container file. These commands must be added to the system's existing `SYSTARTUP_VMS.COM` command file located in the `SYS$MANAGER` directory. In most cases, the current file located in the `SYS$MANAGER` directory is a copy of the old default version of the file. It can be replaced with the new file that contains the proper commands to load the LD driver. This is done by copying the template file from the `MISER$COM` directory, as shown below.

```
ALCVS1$ copy/log miser$com:systartup_vms.com sys$manager:
%COPY-S-COPIED, $MISER:[COMMAND]SYSTARTUP_VMS.COM;15 copied to
  SYS$SYSROOT:[SYSMGR]SYSTARTUP_VMS.COM;15 (39 blocks)
ALCVS1$
```

If the customer's `SYSTARTUP_VMS.COM` file has been altered from the standard, the following DCL will need to be added near the end of the customer's `SYSTARTUP_VMS.COM` file, as shown below:

```
$!
$! Make sure LD is happy and running
$!
$   ld_startup := sys$startup:ld$startup.com
$   if F$SEARCH(ld_startup) .nes. ""
$   then
$     @'ld_startup
$   endif
$!
$   lm_startup := sys$startup:lm$startup.com
$   if F$SEARCH(lm_startup) .nes. ""
$   then
$     @'lm_startup
$   endif
$!
```

You must reboot the system in order to work with MISER and the customer's source files from the encrypted and compressed logical disk container.

9. Commands to Access and Save MISER and Customer Source Files

The MISER and SITE source files are logically connected to the "SR" and "IN" path logical names. These logical names are changed from their traditional values to "LDA1" when these source files are decrypted and uncompressed for use.

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MISER ENCRYPTED DISK

The commands to setup access to and encrypt and compress the MISER and customer source files, are described below.

9.1. Prepare Source

```
PSRC:==@MNET$COM:PREPARE_SETUP.COM)
```

This command will extract and setup the source disk container file. It also updates the SR and IN logical names to point to the device, LDA1. All other logical builds are not changed. So, when a program in SR: [miser.source.junk] is built, the object modules show up on the customers disk (i.e., ou: [miser.source.junk]), while the source is located on LDA1 (sr: [miser.source.junk]). All other resulting files created as part of a build go to their normal locations.

The MISER Tree source ZIP file is located in SITE\$DATA and is named SRZ.DAT. The password to this source file is misernet (all lowercase). A file, SITE\$DATA:SR.DAT, is created when it is unzipped. This container file is mounted as device LDA1.

9.2. Save Source

```
SSRC:==@MNET$COM:SAVE_SETUP.COM
```

This command creates or updates the source disk container zip file (SITE\$DATA:SRZ.DAT). The zip program is used to update the zip file. The disk container is dismounted, disconnected, and then zipped into the zip file, a password is necessary. Please provide misernet as the password. When complete, the source is protected.

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