OpenVMS on CHARON

系統配置文件

WIN310、WIN320、WIN330

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Revision History

Version No.	Revision. Date	Revised By	Description
0.9	2015/03/20	Steven Meng	First version.
1.0	2016/05/05	Steven Meng	加入備援機配置

Glossary & Abbreviations

Term	Description

Table of Contents

1. 文件介紹

CHARON為OpenVMS作業系統的軟體模擬器。目前在新唐執行的CHARON共三套，分別為 win310, win320, win330. CHARON執行於微軟 Windows 2012R2 作業系統。

本案並配置備援主機一台，與正式系統主機規格一致。

本文件對象為新唐系統維護人員，

2. 硬體配置

2.1 主機硬體規格與配置

本案四套 HP Gen8 ProLiant 伺服器均一規格如下。

HP DL380p Gen8 (2P12C/32G/300G*8/ 2GFBWC)
HP DL380p Gen8 8-SFF CTO Server
HP DL380p Gen8 E5-2640v2 FIO Kit
HP DL380p Gen8 E5-2640v2 Kit
HP 8GB 1Rx4 PC3-14900R-13 Kit*4
HP 300GB 6G SAS 10K 2.5in SC ENT HDD*8
HP 12.7mm SATA DVD ROM Jb Kit
HP Ethernet 1GbE 4P 331FLR FIO Adptr
HP 2GB FBWC for P-Series Smart Array
HP 2U SFF BB Gen8 Rail Kit
HP 750W CS Gold Ht Plg Pwr Supply Kit*2
HP 3y 5*8 NBD H/W Warranty
Windows 2012 R2 Std Eng

主機序號

SGH4460CR3
SGH4460CR5
SGH502Y9KC
SGH502Y9KE

機櫃編號

SGH4460CR3

2.2 CHARON USB KEY 配置

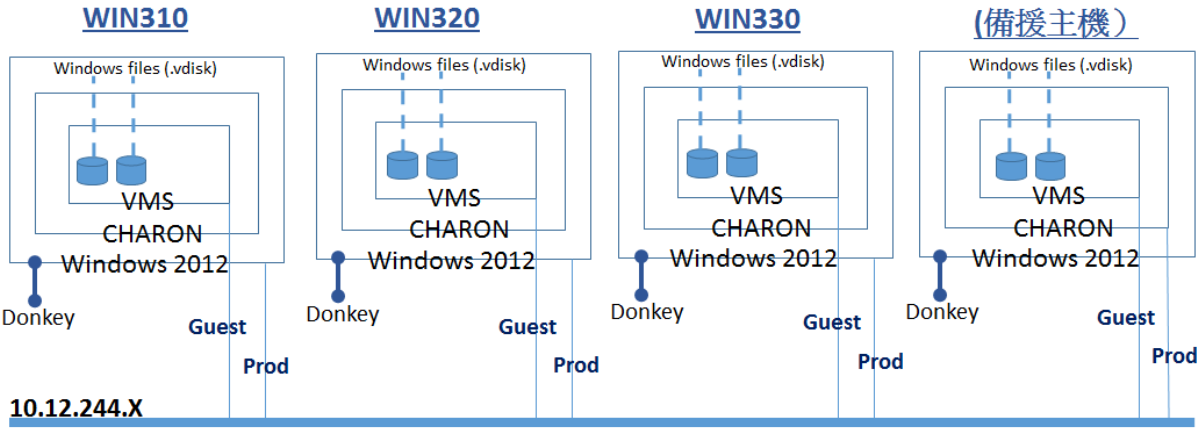
WIN310	1003056
WIN320	1004693
WIN330	1004628
(backup key)	(to be identified)

3. 安裝之軟體

- 作業系統：Windowds Server 2012 R2 Standard (64 bit)
- Charon-VAX/XM Plus for Windows: Version 4.5
  - 一個CPU
  - 128 MB RAM
  - 一個 instance

4. 系統架構

OpenVMS執行於 Charon 的架構如下。目前 WIN310/WIN320/WIN330 皆執行於實體主機，並另備一備援主機。四台主機硬體規格完全相同。當任一正式系統之主機(主機板)毀損，可在最短時間內以拔/插硬碟的方式將系統移轉至備援主機。詳見「備援主接切換程序」文件。



在 CHARON中要執行VMS，必須在主機上插有有效之 USB KEY （圖示之"Donkey"）。Donkey 分為兩種。

1) 正式 KEY:
   a. 使用於 WIN310/320/330，為永久授權，無期限。

b. 不應拔離主機。若有需要拔離主機，不得超過一小時，否則 CHARON 將關閉。

2) 備援 KEY

a. 當正式KEY毀損時使用之。

b. 自啟動 CHARON 開始往下計時。當720小時使用完畢，CHARON將無法以備援 KEY 啟動。

每一主機配有兩個網路介面，網路連結名稱（Network Connection Name）為：

1) Prod：為 Windows 伺服器對外的網路連結

2) Guest：為 OpenVMS 的網路介面

網路連結名稱不能夠隨意變動。任一正式系統（WIN310、WIN320、WIN330）欲移轉至備援主機上執行時，其網路連結名稱與備援主機之網路連接名稱必須保持一致。網路配置之細節請見第3章「網路配置」。

CHARON為一 OpenVMS 的虛擬器。每一個在 VMS 中之磁碟，都對應到一個 Windows 2012 系統的檔案（.vdisk 檔）。 透過配置，CHARON並能夠將實體的儲存裝置給VMS使用。詳見「儲存配置」章節。

5.網路配置

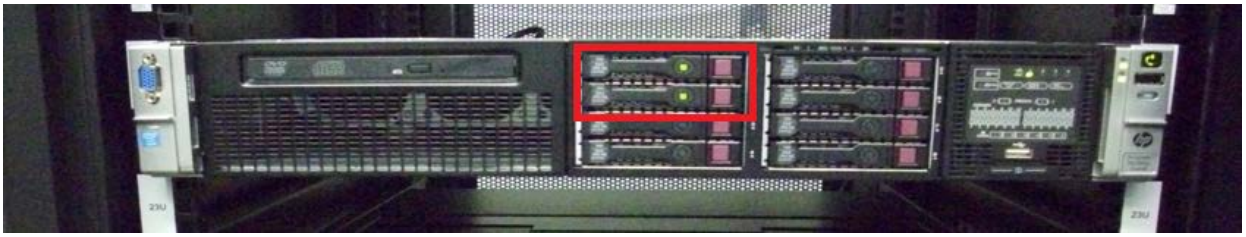
	Windows 2012 Network Connection Name	Windows 2012 IP Address	Windows 2012 IP Mask
WIN310			
	Prod	10.12.244.101	255.255.255.0
	Guest	10.12.244.105	255.255.255.0
WIN320			
	Prod	10.12.244.102	255.255.255.0
	Guest	10.12.244.106	255.255.255.0
WIN330			
	Prod	10.12.244.103	255.255.255.0
	Guest	10.12.244.107	255.255.255.0
BACKUP			
	Prod	10.12.244.104	255.255.255.0
	guest	10.12.244.108	255.255.255.0

6.儲存配置

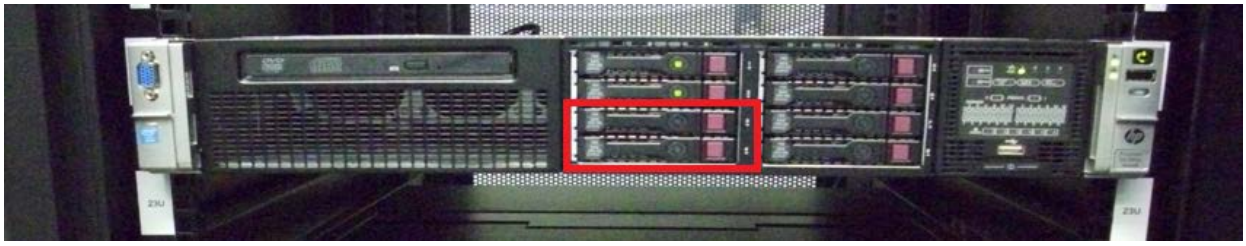
	OpenVMS Device	Windows 2012 virtual disk file	Comments
WIN310			
	SCSI_ID=0	c:\vdisk\RZ28_temp.vdisk	
	SCSI_ID=1	E:\RZ29.vdisk	OpenVMS資料備份磁碟
	SCSI_ID=2	c:\vdisk\RZ26_win310_user.vdisk	VMS User Disk
	SCSI_ID=3	c:\vdisk\RZ57_WIN310 _552h4_ucx.vdisk	VMS System Disk
	SCSI_ID=4	(CDROM0)	
WIN320			
	SCSI_ID=0	E:\RZ28_temp.vdisk	OpenVMS資料備份磁碟 DKA0
	SCSI_ID=2	c:\vdisk\RZ26_win320_user.vdisk	VMS User Disk DKA200
	SCSI_ID=3	c:\vdisk\RZ56_win320_sys.vdisk	VMS System Disk DKA300
	SCSI_ID=4	(CDROM0)	
WIN330			
	SCSI_ID=0	E:\RZ28_bck.vdisk	OpenVMS資料備份
	SCSI_ID=2	c:\vdisk\RZ56_win330_sys.vdisk	VMS System Disk DKA200
	SCSI_ID=3	c:\vdisk\RZ28_temp.vdisk	VMS User Disk DKA300
	SCSI_ID=4	(CDROM0)	

無論是正式系統或備援系統 , 均有 8 顆硬碟。目前已使用4顆 , 兩兩做硬體 mirror (RAID 10).

- 面對主機左上方（紅框所示）兩顆硬碟為OpenVMS 的 System/User Disk（注意：但WIN320系統之OpenVMS資料備份磁碟亦存於此兩顆硬碟中）



- 面對主機左下方（紅框所示）的兩顆硬碟，為 OpenVMS 的資料備份硬碟（WIN310 與 WIN330）



7. 關於OPENVMS的備份

OpenVMS在移轉至 CHARON 之前，新唐乃以手動下指令執行批此命令檔(”backup.com”)啟動資料備份作業，將資料備份進磁帶。在移轉至CHARON系統後，資料備份之作業方式不變，唯備份之資料將儲存在各主機之「OpenVMS 資料備份磁碟」（請參照第4章「儲存配置」）。新唐應將相對之 Windows 檔案（.vdisk 檔）納入 Data Protector日常備份作業，持續 OpenVMS 的資料備份。

8. 重要 CHARON 配置參數

以下為3套系統的 CHARON 配置檔案。

系統名稱	CHARON 配置檔案
Win310	C:\Program Files\x64\Charon\Utilities_1.0.15308\x64\webui\src\mkdsk_store\win310\mv3k196.cfg
WIN320	C:\Program Files\x64\Charon\Utilities_1.0.15308\x64\webui\src\mkdsk_store\win320\ mv3k196.cfg
WIN330	C:\Program Files\x64\Charon\Utilities_1.0.15308\x64\webui\src\mkdsk_store\win330\vx4k106.cfg

注意配置檔之更動必須重新更新 Windows Service 後，更動才會生效。

8.1 WIN310 CHARON 系統配置檔

```
#
# Copyright (C) 1999-2012 STROMASYS
# All rights reserved.
#
# The software contained on this media is proprietary to and embodies
# the confidential technology of STROMASYS. Posession, use, duplication,
# or dissemination of the software and media is authorized only pursuant
# to a valid written license from STROMASYS.
#
#=============================================================================
#
# Sample configuration file for MicroVAX 3100 Model 96.
#
# Specify hw_model prior to any other commands. This parameter informs the
# emulator what type of VAX it should emulate. All the other commands
# availability and possibility to use depend on this specification.
#
#-----------------------------------------------------------------------------

set session hw_model = MicroVAX_3100_Model_96

#=============================================================================
#
# Select name of the instance to differentiate it among other instances
# runnig on the same host.
#
#-----------------------------------------------------------------------------

set session configuration_name = MicroVAX_3100_Model_96

#=============================================================================
#
# Disable rotating LOG and enable single file LOG. Select either appending or
# overwriting it on every instance start. Then specify desired log file name
```

```
# and path to it.
#
#------------------------------------------------------------------------


set session log_method = append
#set session log_method = overwrite
set session log = MicroVAX_3100_Model_96.log


#========================================================================
#
# The following line tells the emulator where to preserve NVRAM content. It
# will keep the current time of the emulated VAX (when you do not run the
# emulator) and console parameters (such as default boot device).
#
#------------------------------------------------------------------------


set toy container="mv3k196.dat"


#========================================================================
#
# The following line tells the emulator where to store intermediate state
# of the Flash ROM. It will keep the rest of console parameters. It is
# recommended to keep both previous and this line uncommented for the
# emulator to be able to correctly preserve the saved state of the console.
#
#------------------------------------------------------------------------


set rom container="mv3k196.rom"


#========================================================================
#
# Disable or enable dynamic instruction translation by the cpu (ACE). The use
# of DIT may be also prohibited by the license. If not specified (i.e. when
# both lines remain commented out) the DIT is enabled as soon as the license
# allows to do so and is disabled otherwise ...
#
```

```
#-------------------------------------------------------------------------

#set cpu ace_mode=false
#set cpu ace_mode=true

#=========================================================================
#
# Specify the size of RAM (default is 16MB). Note that DIT (when enabled)
# also needs certain amount of memory which grows linearly following the size
# of memory specified here. Also remember that the dongle license might limit
# the maximum amount of memory.
#
#-------------------------------------------------------------------------

#set ram size=32
#set ram size=64
#set ram size=80
set ram size=128

#=========================================================================
#
# Now assign four built-in serial lines. Currently the emulator offers two
# possible ways of using built-in serial lines. First of them is connection
# to COM ports (via physical_serial_line). The second is to attach a third
# party terminal emulator (virtual_serial_line).
#
# Once desired way of connection is chosen and the corresponding line is
# uncommented connect it to preloaded controller QUART by chosing the QUART
# line number (in square brackets) to connect the interface to. See OPA0
# below, for example.
#
#-------------------------------------------------------------------------

#load physical_serial_line TTA0 line = "\\.\COM<N>"
#load virtual_serial_line TTA0 port = 10000
#load virtual_serial_line TTA0 port = 10000 application = "tta0.ht"
```

```
#load virtual_serial_line TTA0 port = 10000 application = "putty -load TTA0"
#set quart line[0] = TTA0

#load physical_serial_line TTA1 line = "\\.\COM<N>"
#load virtual_serial_line TTA1 port = 10001
#load virtual_serial_line TTA1 port = 10001 application = "tta1.ht"
#load virtual_serial_line TTA1 port = 10001 application = "putty -load TTA1"
#set quart line[1] = TTA1

#load physical_serial_line TTA2 line = "\\.\COM<N>"
#load virtual_serial_line TTA2 port = 10002
#load virtual_serial_line TTA2 port = 10002 application = "tta2.ht"
#load virtual_serial_line TTA2 port = 10002 application = "putty -load TTA2"
#set quart line[2] = TTA2

#============================================================================
#
# Select connection for the console serial line OPA0.
#
#----------------------------------------------------------------------------

#load physical_serial_line OPA0 line = "\\.\COM<N>"
#load virtual_serial_line OPA0 port = 10003
load virtual_serial_line OPA0 port = 10003 application = "putty -load OPA0"
set quart line[3] = OPA0

#============================================================================
#
# The MicroVAX 3100 Model 96 contains built-in PCI SCSI adapter called PKA
# within the configuration file.
#
#----------------------------------------------------------------------------
#
# Uncomment to connect the emulator's DKA0 to the disk image.
#
#----------------------------------------------------------------------------
```

```
#load virtual_scsi_disk pka_0 scsi_bus=pka scsi_id=0
#set pka_0 container="<file-name>.vdisk"
load virtual_scsi_disk pka_0 scsi_bus=pka scsi_id=0
set pka_0 container="c:\vdisk\RZ28_temp.vdisk"
load virtual_scsi_disk pka_1 scsi_bus=pka scsi_id=1
set pka_1 container="E:\RZ29.vdisk"
#load virtual_scsi_disk pka_2 scsi_bus=pka scsi_id=2
#set pka_2 container="c:\vdisk\RZ57_WIN310 _552h4_ucx.vdisk"
load virtual_scsi_disk pka_2 scsi_bus=pka scsi_id=2
set pka_2 container="c:\vdisk\RZ26_win310_user.vdisk"
load virtual_scsi_disk pka_3 scsi_bus=pka scsi_id=3
set pka_3 container="c:\vdisk\RZ57_WIN310 _552h4_ucx.vdisk"
#load virtual_scsi_disk pka_3 scsi_bus=pka scsi_id=3
#set pka_3 container="c:\vdisk\RZ26_win310_user.vdisk"




#==============================================================================
#
# Uncomment to connect the emulator's DKA100 to host's disk drive.
#
#------------------------------------------------------------------------------

#load virtual_scsi_disk pka_1 scsi_bus=pka scsi_id=1
#set pka_1 container="\\.\PhysicalDrive0"
#set pka_1 container="\\.\PhysicalDriveN"

#==============================================================================
#
# Uncomment to connect the emulator's GKA200 to an unknown SCSI device.
#
#------------------------------------------------------------------------------

#load physical_scsi_device pka_2 scsi_bus=pka scsi_id=2
```

```
#set pka_2 container="\\.\ScsiN:X:Y:Z"

#=============================================================================
#
# Uncomment to connect the emulator's DKA300 to host's CD/DVD-ROM drive.
#
#-----------------------------------------------------------------------------

#load virtual_scsi_cdrom pka_3 scsi_bus=pka scsi_id=3
#set pka_3 container="\\.\CdRom0"
#set pka_3 container="\\.\CdRomN"
load virtual_scsi_cdrom pka_4 scsi_bus=pka scsi_id=4
set pka_4 container="\\.\CdRom0"

#=============================================================================
#
# Uncomment to connect the emulator's DKA400 to .ISO file (CD/DVD-ROM image).
#
#-----------------------------------------------------------------------------

#load virtual_scsi_cdrom pka_4 scsi_bus=pka scsi_id=4
#set pka_4 container="<file-name>.iso"

#=============================================================================
#
# Uncomment to connect the emulator's MKA500 to host's SCSI tape drive.
#
#-----------------------------------------------------------------------------

#load physical_scsi_device pka_5 scsi_bus=pka scsi_id=5
#set pka_5 container="\\.\Tape0"
#set pka_5 container="\\.\TapeN"

#=============================================================================
#
# Uncomment to connect the emulator's MKA600 to .VTAPE file (tape image).
```

```
#
#------------------------------------------------------------------------

#load virtual_scsi_tape pka_6 scsi_bus=pka scsi_id=6
#set pka_6 container="<file-name>.vtape"

#========================================================================
#
# If necessary, load optional SCSI controller SCSI_B (PKB).
#
# ATTENTION! Old versions of VAX/VMS (older then 5.5-2H4) do not support
# optional SCSI controller and might fail to boot when SCSI option is loaded.
#
#------------------------------------------------------------------------

#include kzdda.cfg

#========================================================================
#
# Uncomment to connect the emulator's DKB600, DKB601 to host's floppy disk
# drives (A:, B:, if any).
#
#------------------------------------------------------------------------

#load floppy_scsi_device pkb_6 scsi_bus=pkb scsi_id=6

#========================================================================
#
# The MicroVAX 3100 Model 96 contains built-in Ethernet Controller (SGEC)
# called EZA within the configuration file.
#
#------------------------------------------------------------------------

set EZA interface = EZA0
load packet_port EZA0 interface = "(enable)"
```

```
### load packet_port EZA0 interface = "enable"


#---------------------------------------------------------------------
#
# Connect the SGEC (EZA) to host's NIC.
#
#---------------------------------------------------------------------

#set EZA0 interface = "connection:lan4"
#set EZA0 interface = "connection:guest"

set EZA0 interface = "connection:Guest"

#=====================================================================
#
# Load optional DHW42-AA (or DHW42-BA, or DHW42-CA) serial line controller
# (C-DAL).
#
# Only one instance of DHW42AA/BA/CA can be loaded.
#
#---------------------------------------------------------------------

#load DHW42AA/DHV11 TXA
#load DHW42BA/DHV11 TXA
#load DHW42CA/DHV11 TXA

#load physical_serial_line TXA0 line = "\\.\COM<N>"
#load virtual_serial_line TXA0 port=10010
#load virtual_serial_line TXA0 port=10010 application = "txa0.ht"
#set TXA line[0]=TXA0

#load physical_serial_line TXA1 line = "\\.\COM<N>"
#load virtual_serial_line TXA1 port=10011
#load virtual_serial_line TXA1 port=10011 application = "txa1.ht"
#set TXA line[1]=TXA1
```

```
#load physical_serial_line TXA2 line = "\\.\COM<N>"
#load virtual_serial_line TXA2 port=10012
#load virtual_serial_line TXA2 port=10012 application = "txa2.ht"
#set TXA line[2]=TXA2

#load physical_serial_line TXA3 line = "\\.\COM<N>"
#load virtual_serial_line TXA3 port=10013
#load virtual_serial_line TXA3 port=10013 application = "txa3.ht"
#set TXA line[3]=TXA3

#load physical_serial_line TXA4 line = "\\.\COM<N>"
#load virtual_serial_line TXA4 port=10014
#load virtual_serial_line TXA4 port=10014 application = "txa4.ht"
#set TXA line[4]=TXA4

#load physical_serial_line TXA5 line = "\\.\COM<N>"
#load virtual_serial_line TXA5 port=10015
#load virtual_serial_line TXA5 port=10015 application = "txa5.ht"
#set TXA line[5]=TXA5

#load physical_serial_line TXA6 line = "\\.\COM<N>"
#load virtual_serial_line TXA6 port=10016
#load virtual_serial_line TXA6 port=10016 application = "txa6.ht"
#set TXA line[6]=TXA6

#load physical_serial_line TXA7 line = "\\.\COM<N>"
#load virtual_serial_line TXA7 port=10017
#load virtual_serial_line TXA7 port=10017 application = "txa7.ht"
#set TXA line[7]=TXA7

# this is the end of the configuration file ##################################
```

8.2 WIN320 CHARON 系統配置檔

```
#
# Copyright (C) 1999-2012 STROMASYS
# All rights reserved.
#
# The software contained on this media is proprietary to and embodies
# the confidential technology of STROMASYS. Posession, use, duplication,
# or dissemination of the software and media is authorized only pursuant
# to a valid written license from STROMASYS.
#
#============================================================================
#
# Sample configuration file for MicroVAX 3100 Model 96.
#
# Specify hw_model prior to any other commands. This parameter informs the
# emulator what type of VAX it should emulate. All the other commands
# availability and possibility to use depend on this specification.
#
#----------------------------------------------------------------------------

set session hw_model = MicroVAX_3100_Model_96

#============================================================================
#
# Select name of the instance to differentiate it among other instances
# runnig on the same host.
#
#----------------------------------------------------------------------------

set session configuration_name = MicroVAX_3100_Model_96

#============================================================================
#
# Disable rotating LOG and enable single file LOG. Select either appending or
# overwriting it on every instance start. Then specify desired log file name
```

```
# and path to it.
#
#------------------------------------------------------------------------


set session log_method = append
#set session log_method = overwrite
set session log = MicroVAX_3100_Model_96.log


#========================================================================
#
# The following line tells the emulator where to preserve NVRAM content. It
# will keep the current time of the emulated VAX (when you do not run the
# emulator) and console parameters (such as default boot device).
#
#------------------------------------------------------------------------


set toy container="mv3k196.dat"


#========================================================================
#
# The following line tells the emulator where to store intermediate state
# of the Flash ROM. It will keep the rest of console parameters. It is
# recommended to keep both previous and this line uncommented for the
# emulator to be able to correctly preserve the saved state of the console.
#
#------------------------------------------------------------------------


set rom container="mv3k196.rom"


#========================================================================
#
# Disable or enable dynamic instruction translation by the cpu (ACE). The use
# of DIT may be also prohibited by the license. If not specified (i.e. when
# both lines remain commented out) the DIT is enabled as soon as the license
# allows to do so and is disabled otherwise ...
#
```

```
#-------------------------------------------------------------------------

#set cpu ace_mode=false
#set cpu ace_mode=true

#=========================================================================
#
# Specify the size of RAM (default is 16MB). Note that DIT (when enabled)
# also needs certain amount of memory which grows linearly following the size
# of memory specified here. Also remember that the dongle license might limit
# the maximum amount of memory.
#
#-------------------------------------------------------------------------

#set ram size=32
#set ram size=64
#set ram size=80
set ram size=128

#=========================================================================
#
# Now assign four built-in serial lines. Currently the emulator offers two
# possible ways of using built-in serial lines. First of them is connection
# to COM ports (via physical_serial_line). The second is to attach a third
# party terminal emulator (virtual_serial_line).
#
# Once desired way of connection is chosen and the corresponding line is
# uncommented connect it to preloaded controller QUART by chosing the QUART
# line number (in square brackets) to connect the interface to. See OPA0
# below, for example.
#
#-------------------------------------------------------------------------

#load physical_serial_line TTA0 line = "\\.\COM<N>"
#load virtual_serial_line TTA0 port = 10000
#load virtual_serial_line TTA0 port = 10000 application = "tta0.ht"
```

```
#load virtual_serial_line TTA0 port = 10000 application = "putty -load TTA0"
#set quart line[0] = TTA0

#load physical_serial_line TTA1 line = "\\.\COM<N>"
#load virtual_serial_line TTA1 port = 10001
#load virtual_serial_line TTA1 port = 10001 application = "tta1.ht"
#load virtual_serial_line TTA1 port = 10001 application = "putty -load TTA1"
#set quart line[1] = TTA1

#load physical_serial_line TTA2 line = "\\.\COM<N>"
#load virtual_serial_line TTA2 port = 10002
#load virtual_serial_line TTA2 port = 10002 application = "tta2.ht"
#load virtual_serial_line TTA2 port = 10002 application = "putty -load TTA2"
#set quart line[2] = TTA2

#================================================================================
#
# Select connection for the console serial line OPA0.
#
#--------------------------------------------------------------------------------

#load physical_serial_line OPA0 line = "\\.\COM<N>"
#load virtual_serial_line OPA0 port = 10003
load virtual_serial_line OPA0 port = 10003 application = "putty -load OPA0"
set quart line[3] = OPA0

#================================================================================
#
# The MicroVAX 3100 Model 96 contains built-in PCI SCSI adapter called PKA
# within the configuration file.
#
#--------------------------------------------------------------------------------
#
# Uncomment to connect the emulator's DKA0 to the disk image.
#
#--------------------------------------------------------------------------------
```

```
#load virtual_scsi_disk pka_0 scsi_bus=pka scsi_id=0
#set pka_0 container="<file-name>.vdisk"
load virtual_scsi_disk pka_0 scsi_bus=pka scsi_id=0
set pka_0 container="E:\RZ28_temp.vdisk"
load virtual_scsi_disk pka_2 scsi_bus=pka scsi_id=2
set pka_2 container="c:\vdisk\RZ26_win320_user.vdisk"
load virtual_scsi_disk pka_3 scsi_bus=pka scsi_id=3
set pka_3 container="c:\vdisk\RZ56_win320_sys.vdisk"

#==============================================================================
#
# Uncomment to connect the emulator's DKA100 to host's disk drive.
#
#------------------------------------------------------------------------------

#load virtual_scsi_disk pka_1 scsi_bus=pka scsi_id=1
#set pka_1 container="\\.\PhysicalDrive0"
#set pka_1 container="\\.\PhysicalDriveN"

#==============================================================================
#
# Uncomment to connect the emulator's GKA200 to an unknown SCSI device.
#
#------------------------------------------------------------------------------

#load physical_scsi_device pka_2 scsi_bus=pka scsi_id=2
#set pka_2 container="\\.\ScsiN:X:Y:Z"

#==============================================================================
#
# Uncomment to connect the emulator's DKA300 to host's CD/DVD-ROM drive.
#
#------------------------------------------------------------------------------

#load virtual_scsi_cdrom pka_3 scsi_bus=pka scsi_id=3
```

```
#set pka_3 container="\\.\CdRom0"
#set pka_3 container="\\.\CdRomN"
load virtual_scsi_cdrom pka_4 scsi_bus=pka scsi_id=4
set pka_4 container="\\.\CdRom0"

#==============================================================================
#
# Uncomment to connect the emulator's DKA400 to .ISO file (CD/DVD-ROM image).
#
#------------------------------------------------------------------------------

#load virtual_scsi_cdrom pka_4 scsi_bus=pka scsi_id=4
#set pka_4 container="<file-name>.iso"

#==============================================================================
#
# Uncomment to connect the emulator's MKA500 to host's SCSI tape drive.
#
#------------------------------------------------------------------------------

#load physical_scsi_device pka_5 scsi_bus=pka scsi_id=5
#set pka_5 container="\\.\Tape0"
#set pka_5 container="\\.\TapeN"

#==============================================================================
#
# Uncomment to connect the emulator's MKA600 to .VTAPE file (tape image).
#
#------------------------------------------------------------------------------

#load virtual_scsi_tape pka_6 scsi_bus=pka scsi_id=6
#set pka_6 container="<file-name>.vtape"

#==============================================================================
#
# If necessary, load optional SCSI controller SCSI_B (PKB).
```

```
#
# ATTENTION! Old versions of VAX/VMS (older then 5.5-2H4) do not support
# optional SCSI controller and might fail to boot when SCSI option is loaded.
#
#------------------------------------------------------------------------


#include kzdda.cfg


#============================================================================
#
# Uncomment to connect the emulator's DKB600, DKB601 to host's floppy disk
# drives (A:, B:, if any).
#
#------------------------------------------------------------------------


#load floppy_scsi_device pkb_6 scsi_bus=pkb scsi_id=6


#============================================================================
#
# The MicroVAX 3100 Model 96 contains built-in Ethernet Controller (SGEC)
# called EZA within the configuration file.
#
#------------------------------------------------------------------------


set EZA interface = EZA0
load packet_port EZA0 interface = "(enable)"


#------------------------------------------------------------------------
#
# Connect the SGEC (EZA) to host's NIC.
#
#------------------------------------------------------------------------


set EZA0 interface = "connection:Guest"


#============================================================================
```

```
#
# Load optional DHW42-AA (or DHW42-BA, or DHW42-CA) serial line controller
# (C-DAL).
#
# Only one instance of DHW42AA/BA/CA can be loaded.
#
#------------------------------------------------------------------------


#load DHW42AA/DHV11 TXA
#load DHW42BA/DHV11 TXA
#load DHW42CA/DHV11 TXA

#load physical_serial_line TXA0 line = "\\.\COM<N>"
#load virtual_serial_line TXA0 port=10010
#load virtual_serial_line TXA0 port=10010 application = "txa0.ht"
#set TXA line[0]=TXA0

#load physical_serial_line TXA1 line = "\\.\COM<N>"
#load virtual_serial_line TXA1 port=10011
#load virtual_serial_line TXA1 port=10011 application = "txa1.ht"
#set TXA line[1]=TXA1

#load physical_serial_line TXA2 line = "\\.\COM<N>"
#load virtual_serial_line TXA2 port=10012
#load virtual_serial_line TXA2 port=10012 application = "txa2.ht"
#set TXA line[2]=TXA2

#load physical_serial_line TXA3 line = "\\.\COM<N>"
#load virtual_serial_line TXA3 port=10013
#load virtual_serial_line TXA3 port=10013 application = "txa3.ht"
#set TXA line[3]=TXA3

#load physical_serial_line TXA4 line = "\\.\COM<N>"
#load virtual_serial_line TXA4 port=10014
#load virtual_serial_line TXA4 port=10014 application = "txa4.ht"
#set TXA line[4]=TXA4
```

```
#load physical_serial_line TXA5 line = "\\.\COM<N>"
#load virtual_serial_line TXA5 port=10015
#load virtual_serial_line TXA5 port=10015 application = "txa5.ht"
#set TXA line[5]=TXA5

#load physical_serial_line TXA6 line = "\\.\COM<N>"
#load virtual_serial_line TXA6 port=10016
#load virtual_serial_line TXA6 port=10016 application = "txa6.ht"
#set TXA line[6]=TXA6

#load physical_serial_line TXA7 line = "\\.\COM<N>"
#load virtual_serial_line TXA7 port=10017
#load virtual_serial_line TXA7 port=10017 application = "txa7.ht"
#set TXA line[7]=TXA7

# this is the end of the configuration file ##################################
```

8.3 WIN330 CHARON 系統配置檔

```
#
# Copyright (C) 1999-2012 STROMASYS
# All rights reserved.
#
# The software contained on this media is proprietary to and embodies
# the confidential technology of STROMASYS. Posession, use, duplication,
# or dissemination of the software and media is authorized only pursuant
# to a valid written license from STROMASYS.
#
#============================================================================
#
# Sample configuration file for VAX 4000 Model 106.
#
# Specify hw_model prior to any other commands. This parameter informs the
# emulator what type of VAX it should emulate. All the other commands
# availability and possibility to use depend on this specification.
#
#----------------------------------------------------------------------------

set session hw_model = VAX_4000_Model_106

#============================================================================
#
# Select name of the instance to differentiate it among other instances
# runnig on the same host.
#
#----------------------------------------------------------------------------

set session configuration_name = VAX_4000_Model_106

#============================================================================
#
# Disable rotating LOG and enable single file LOG. Select either appending or
# overwriting it on every instance start. Then specify desired log file name
```

```
# and path to it.
#
#------------------------------------------------------------------------


set session log_method = append
#set session log_method = overwrite
set session log = VAX_4000_Model_106_win330.log


#========================================================================
#
# The following line tells the emulator where to preserve NVRAM content. It
# will keep the current time of the emulated VAX (when you do not run the
# emulator) and console parameters (such as default boot device).
#
#------------------------------------------------------------------------


set toy container="vx4k106.dat"


#========================================================================
#
# The following line tells the emulator where to store intermediate state
# of the Flash ROM. It will keep the rest of console parameters. It is
# recommended to keep both previous and this line uncommented for the
# emulator to be able to correctly preserve the saved state of the console.
#
#------------------------------------------------------------------------


set rom container="vx4k106.rom"


#========================================================================
#
# Disable or enable dynamic instruction translation by the cpu (ACE). The use
# of DIT may be also prohibited by the license. If not specified (i.e. when
# both lines remain commented out) the DIT is enabled as soon as the license
# allows to do so and is disabled otherwise ...
#
```

```
#------------------------------------------------------------------------

#set cpu ace_mode=false
#set cpu ace_mode=true

#=========================================================================
#
# Specify the size of RAM (default is 16MB). Note that DIT (when enabled)
# also needs certain amount of memory which grows linearly following the size
# of memory specified here. Also remember that the dongle license might limit
# the maximum amount of memory.
#
#------------------------------------------------------------------------

#set ram size=32
#set ram size=64
#set ram size=80
set ram size=128

#=========================================================================
#
# Now assign four built-in serial lines. Currently the emulator offers two
# possible ways of using built-in serial lines. First of them is connection
# to COM ports (via physical_serial_line). The second is to attach a third
# party terminal emulator (virtual_serial_line).
#
# Once desired way of connection is chosen and the corresponding line is
# uncommented connect it to preloaded controller QUART by chosing the QUART
# line number (in square brackets) to connect the interface to. See OPA0
# below, for example.
#
#------------------------------------------------------------------------

#load physical_serial_line TTA0 line = "\\.\COM<N>"
#load virtual_serial_line TTA0 port = 10000
#load virtual_serial_line TTA0 port = 10000 application = "tta0.ht"
```

```
#load virtual_serial_line TTA0 port = 10000 application = "putty -load TTA0"
#set quart line[0] = TTA0

#load physical_serial_line TTA1 line = "\\.\COM<N>"
#load virtual_serial_line TTA1 port = 10001
#load virtual_serial_line TTA1 port = 10001 application = "tta1.ht"
#load virtual_serial_line TTA1 port = 10001 application = "putty -load TTA1"
#set quart line[1] = TTA1

#load physical_serial_line TTA2 line = "\\.\COM<N>"
#load virtual_serial_line TTA2 port = 10002
#load virtual_serial_line TTA2 port = 10002 application = "tta2.ht"
#load virtual_serial_line TTA2 port = 10002 application = "putty -load TTA2"
#set quart line[2] = TTA2

#================================================================================
#
# Select connection for the console serial line OPA0.
#
#--------------------------------------------------------------------------------

#load physical_serial_line OPA0 line = "\\.\COM<N>"
#load virtual_serial_line OPA0 port = 10003
load virtual_serial_line OPA0 port = 10003 application = "putty -load OPA0"
set quart line[3] = OPA0

#================================================================================
#
# The VAX 4000 Model 106 contains built-in PCI SCSI adapter called PKA
# within the configuration file.
#
#--------------------------------------------------------------------------------
#
# Uncomment to connect the emulator's DKA0 to the disk image.
#
#--------------------------------------------------------------------------------
```

```
#load virtual_scsi_disk pka_0 scsi_bus=pka scsi_id=0
#set pka_0 container="<file-name>.vdisk"
load virtual_scsi_disk pka_2 scsi_bus=pka scsi_id=2
set pka_2 container="c:\vdisk\RZ56_win330_sys.vdisk"
load virtual_scsi_disk pka_3 scsi_bus=pka scsi_id=3
set pka_3 container="c:\vdisk\RZ28_temp.vdisk"
load virtual_scsi_disk pka_0 scsi_bus=pka scsi_id=0
set pka_0 container="E:\RZ28_bck.vdisk"

#=============================================================================
#
# Uncomment to connect the emulator's DKA100 to host's disk drive.
#
#-----------------------------------------------------------------------------

#load virtual_scsi_disk pka_1 scsi_bus=pka scsi_id=1
#set pka_1 container="\\.\PhysicalDrive0"
#set pka_1 container="\\.\PhysicalDriveN"

#=============================================================================
#
# Uncomment to connect the emulator's GKA200 to an unknown SCSI device.
#
#-----------------------------------------------------------------------------

#load physical_scsi_device pka_2 scsi_bus=pka scsi_id=2
#set pka_2 container="\\.\ScsiN:X:Y:Z"

#=============================================================================
#
# Uncomment to connect the emulator's DKA300 to host's CD/DVD-ROM drive.
#
#-----------------------------------------------------------------------------

#load virtual_scsi_cdrom pka_3 scsi_bus=pka scsi_id=3
```

```
#set pka_3 container="\\.\CdRom0"
#set pka_3 container="\\.\CdRomN"
load virtual_scsi_cdrom pka_4 scsi_bus=pka scsi_id=4
set pka_4 container="\\.\CdRom0"
#set pka_3 container="\\.\CdRomN"



#=============================================================================
#
# Uncomment to connect the emulator's DKA400 to .ISO file (CD/DVD-ROM image).
#
#-----------------------------------------------------------------------------

#load virtual_scsi_cdrom pka_5 scsi_bus=pka scsi_id=5
#set pka_5 container="C:\VDISK\VAXVMS552.iso"

#=============================================================================
#
# Uncomment to connect the emulator's MKA500 to host's SCSI tape drive.
#
#-----------------------------------------------------------------------------

#load physical_scsi_device pka_5 scsi_bus=pka scsi_id=5
#set pka_5 container="\\.\Tape0"
#set pka_5 container="\\.\TapeN"

#=============================================================================
#
# Uncomment to connect the emulator's MKA600 to .VTAPE file (tape image).
#
#-----------------------------------------------------------------------------

#load virtual_scsi_tape pka_6 scsi_bus=pka scsi_id=6
#set pka_6 container="<file-name>.vtape"

#=============================================================================
```

```
#
# If necessary, load optional SCSI controller SCSI_B (PKB).
#
# ATTENTION! Old versions of VAX/VMS (older then 5.5-2H4) do not support
# optional SCSI controller and might fail to boot when SCSI option is loaded.
#
#------------------------------------------------------------------------------

#include kzdda.cfg

#==============================================================================
#
# Uncomment to connect the emulator's DKB600, DKB601 to host's floppy disk
# drives (A:, B:, if any).
#
#------------------------------------------------------------------------------

#load floppy_scsi_device pkb_6 scsi_bus=pkb scsi_id=6

#==============================================================================
#
# The VAX 4000 Model 106 contains built-in Ethernet Controller (SGEC) called
# EZA within the configuration file.
#
#------------------------------------------------------------------------------

set EZA interface = EZA0
load packet_port EZA0 interface = "(enable)"

#------------------------------------------------------------------------------
#
# Connect the SGEC (EZA) to host's NIC.
#
#------------------------------------------------------------------------------

set EZA0 interface = "connection:Guest"
```

```
#=============================================================================
#
# Load optional DHW42-AA (or DHW42-BA, or DHW42-CA) serial line controller
# (C-DAL).
#
# Only one instance of DHW42AA/BA/CA can be loaded.
#
#-----------------------------------------------------------------------------

#load DHW42AA/DHV11 TXA
#load DHW42BA/DHV11 TXA
#load DHW42CA/DHV11 TXA

#load physical_serial_line TXA0 line = "\\.\COM<N>"
#load virtual_serial_line TXA0 port=10010
#load virtual_serial_line TXA0 port=10010 application = "txa0.ht"
#set TXA line[0]=TXA0

#load physical_serial_line TXA1 line = "\\.\COM<N>"
#load virtual_serial_line TXA1 port=10011
#load virtual_serial_line TXA1 port=10011 application = "txa1.ht"
#set TXA line[1]=TXA1

#load physical_serial_line TXA2 line = "\\.\COM<N>"
#load virtual_serial_line TXA2 port=10012
#load virtual_serial_line TXA2 port=10012 application = "txa2.ht"
#set TXA line[2]=TXA2

#load physical_serial_line TXA3 line = "\\.\COM<N>"
#load virtual_serial_line TXA3 port=10013
#load virtual_serial_line TXA3 port=10013 application = "txa3.ht"
#set TXA line[3]=TXA3

#load physical_serial_line TXA4 line = "\\.\COM<N>"
#load virtual_serial_line TXA4 port=10014
```

```
#load virtual_serial_line TXA4 port=10014 application = "txa4.ht"
#set TXA line[4]=TXA4

#load physical_serial_line TXA5 line = "\\.\COM<N>"
#load virtual_serial_line TXA5 port=10015
#load virtual_serial_line TXA5 port=10015 application = "txa5.ht"
#set TXA line[5]=TXA5

#load physical_serial_line TXA6 line = "\\.\COM<N>"
#load virtual_serial_line TXA6 port=10016
#load virtual_serial_line TXA6 port=10016 application = "txa6.ht"
#set TXA line[6]=TXA6

#load physical_serial_line TXA7 line = "\\.\COM<N>"
#load virtual_serial_line TXA7 port=10017
#load virtual_serial_line TXA7 port=10017 application = "txa7.ht"
#set TXA line[7]=TXA7

#=============================================================================
#
# Configure optional RQDX3 storage controller (MSCP/QBUS). Handles disk
# images, disk drives, CD-ROM drives, magneto-optical drives, floppy drives.
#
#-----------------------------------------------------------------------------

#load RQDX3 DUA

#set DUA container[0]="<file-name>.vdisk"
#set DUA container[1]="\\.\PhysicalDriveN"
#set DUA container[2]="\\.\CdRomN"
#set DUA container[3]="<file-name>.iso"
#set DUA container[4]="\\.\H:"

#load RQDX3 DUB address=...
#load RQDX3 DUC address=...
```

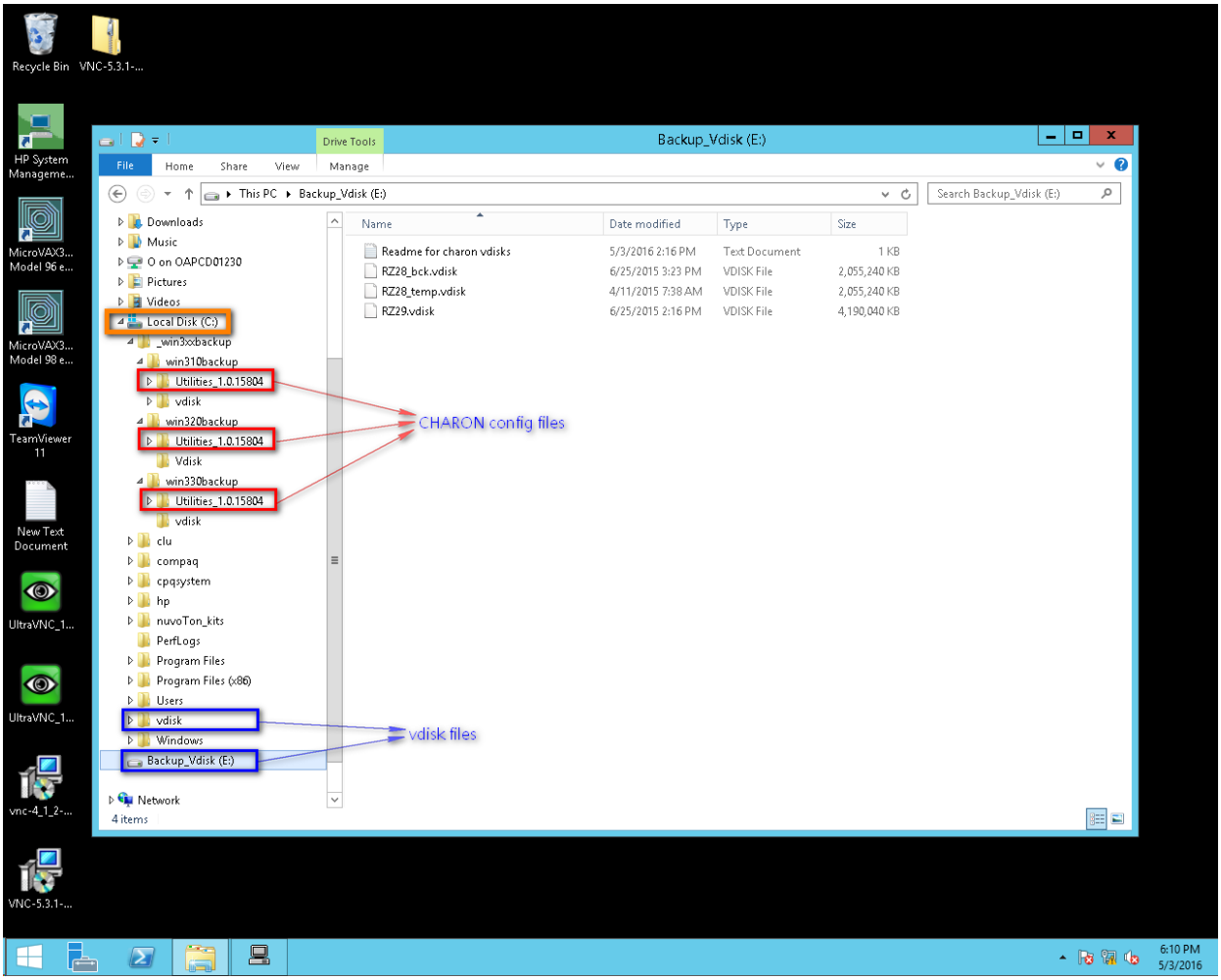
```
#==========================================================================
#
# Configure optional TQK50 tape storage controller (TMSCP/QBUS). Handles tape
# images, and physical tape drives attached to the host.
#
#--------------------------------------------------------------------------

#load TQK50 MUA

#set MUA container[0]="<file-name>.vtape"
#set MUA container[1]="\\.\TapeN"

#load TQK50 MUB address=...
#load TQK50 MUC address=...

#==========================================================================
#
# Configuring the optional DELQA Ethernet adapters (QBUS).
#
#--------------------------------------------------------------------------

#load DELQA/DEQNA XQA

#load packet_port XQA0 interface="connection:<connection-name>"
#set XQA interface=XQA0

#load DELQA XQB address=...
#load DELQA XQC address=...

#==========================================================================
#
# Configure optional DHV11 (or DHQ11, CXY08, CXA16, CXB16) serial line
# controller (QBUS). Address and vector must be set as required by operating
# system.
#
#--------------------------------------------------------------------------
```

```
#load DHV11/DHV11 TXA
#load DHQ11/DHV11 TXA
#load CXY08/DHV11 TXA
#load CXA16/DHV11 TXA
#load CXB16/DHV11 TXA

#load physical_serial_line TXA0 line = "\\.\COM<N>"
#load virtual_serial_line TXA0 port=10010
#load virtual_serial_line TXA0 port=10010 application = "txa0.ht"
#set TXA line[0]=TXA0

#load physical_serial_line TXA1 line = "\\.\COM<N>"
#load virtual_serial_line TXA1 port=10011
#load virtual_serial_line TXA1 port=10011 application = "txa1.ht"
#set TXA line[1]=TXA1

#load physical_serial_line TXA2 line = "\\.\COM<N>"
#load virtual_serial_line TXA2 port=10012
#load virtual_serial_line TXA2 port=10012 application = "txa2.ht"
#set TXA line[2]=TXA2

#load physical_serial_line TXA3 line = "\\.\COM<N>"
#load virtual_serial_line TXA3 port=10013
#load virtual_serial_line TXA3 port=10013 application = "txa3.ht"
#set TXA line[3]=TXA3

#load physical_serial_line TXA4 line = "\\.\COM<N>"
#load virtual_serial_line TXA4 port=10014
#load virtual_serial_line TXA4 port=10014 application = "txa4.ht"
#set TXA line[4]=TXA4

#load physical_serial_line TXA5 line = "\\.\COM<N>"
#load virtual_serial_line TXA5 port=10015
#load virtual_serial_line TXA5 port=10015 application = "txa5.ht"
#set TXA line[5]=TXA5
```

```
#load physical_serial_line TXA6 line = "\\.\COM<N>"
#load virtual_serial_line TXA6 port=10016
#load virtual_serial_line TXA6 port=10016 application = "txa6.ht"
#set TXA line[6]=TXA6

#load physical_serial_line TXA7 line = "\\.\COM<N>"
#load virtual_serial_line TXA7 port=10017
#load virtual_serial_line TXA7 port=10017 application = "txa7.ht"
#set TXA line[7]=TXA7

#load DHV11 TXB address=...
#load DHQ11 TXB address=...
#load CXY08 TXB address=...
#load CXA16 TXB address=...
#load CXB16 TXB address=...

# this is the end of the configuration file ##################################
```

9. 備援機配置

新唐備援主機（10.12.244.104）上已配置 WIN310、WIN320、WIN330 之作業環境及其相對之硬碟檔案。茲以以下螢幕截圖說明。



- 作業環境（Charon 配置檔）

  見下表。此部分檔案不會變更。

系統	存放於備援機之位置
Win310	C:_win3xxbackup\win310backup\Utilities_1.0.15804
Win320	C:_win3xxbackup\win320backup\Utilities_1.0.15804
Win330	C:_win3xxbackup\win330backup\Utilities_1.0.15804

- OpenVMS 磁碟檔案

  如下表。

win310/win320/win330 之vdisk 檔	對應在備援機上的位置
Win310 C:\vdisk\RZ28_temp.vdisk	備援機 C:\vdisk\RZ28_temp.vdisk
Win310 C:\vdisk\RZ26_win310_user.vdisk	備援機 C:\vdisk\RZ26_win310_user.vdisk
Win310 C:\vdisk\RZ57_win310_552h4_ucx.vdisk	備援機 C:\vdisk\RZ57_win310_552h4_ucx.vdisk
Win310 E:\RZ29.vdisk	備援機 E:\RZ29.vdisk
Win320 C:\vdisk\RZ26_win320_user.vdisk	備援機 C:\vdisk\RZ26_win320_user.vdisk
Win320 C:\vdisk\RZ56_win320_sys.vdisk	備援機 C:\vdisk\RZ56_win320_sys.vdisk
Win320 E:\RZ28_temp.vdisk	備援機 E:\RZ28_temp.vdisk
Win330 C:\vdisk\RZ56_win330_sys.vdisk	備援機 C:\vdisk\RZ56_win330_sys.vdisk
Win330 C:\vdisk\RZ28_temp.vdisk	備援機 C:\vdisk\RZ28_temp.vdisk
Win330 E:\RZ28_bck.vdisk	備援機 E:\RZ28_bck.vdisk

由於 vdisk 檔案在三套系統作業時有可能變動，故新唐應定時將三套系統之vdisk 檔案更新（複製）到備援機之對應位置，方可確保任一系統在備援機啟動時，其資料之即時程度在可接受範圍內。

~ END ~`