

CHARON-AXP/AS400 Freeware for Windows x64 Installation & User's Guide

*Virtual AlphaServer 400 Freeware
for Windows x64*

Version 4.6 Build 15901

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1. Host system requirements

At least dual core PC running Microsoft Windows x64 software.

It is recommended to keep HyperThreading switched off at BIOS level, if any.

At least 1GB of host RAM.

At least 10GB of spare disk space for storing CHARON-AXP/AS400 Freeware for Windows x64 software and user configurations.

The following operating systems are supported:












- Microsoft Windows XP x64,
- Microsoft Windows Server 2003 x64, and 2003 R2 x64,
- Microsoft Windows Server 2008 R2 x64,
- Microsoft Windows 7 x64.

Make sure your system is brought up to the levels of the latest Service Pack and security patches.

Installation and use of the CHARON-AXP/AS400 Freeware for Windows x64 is only possible from local "Administrator" account.

2. Installing CHARON-AXP/AS400 Freeware for Windows x64

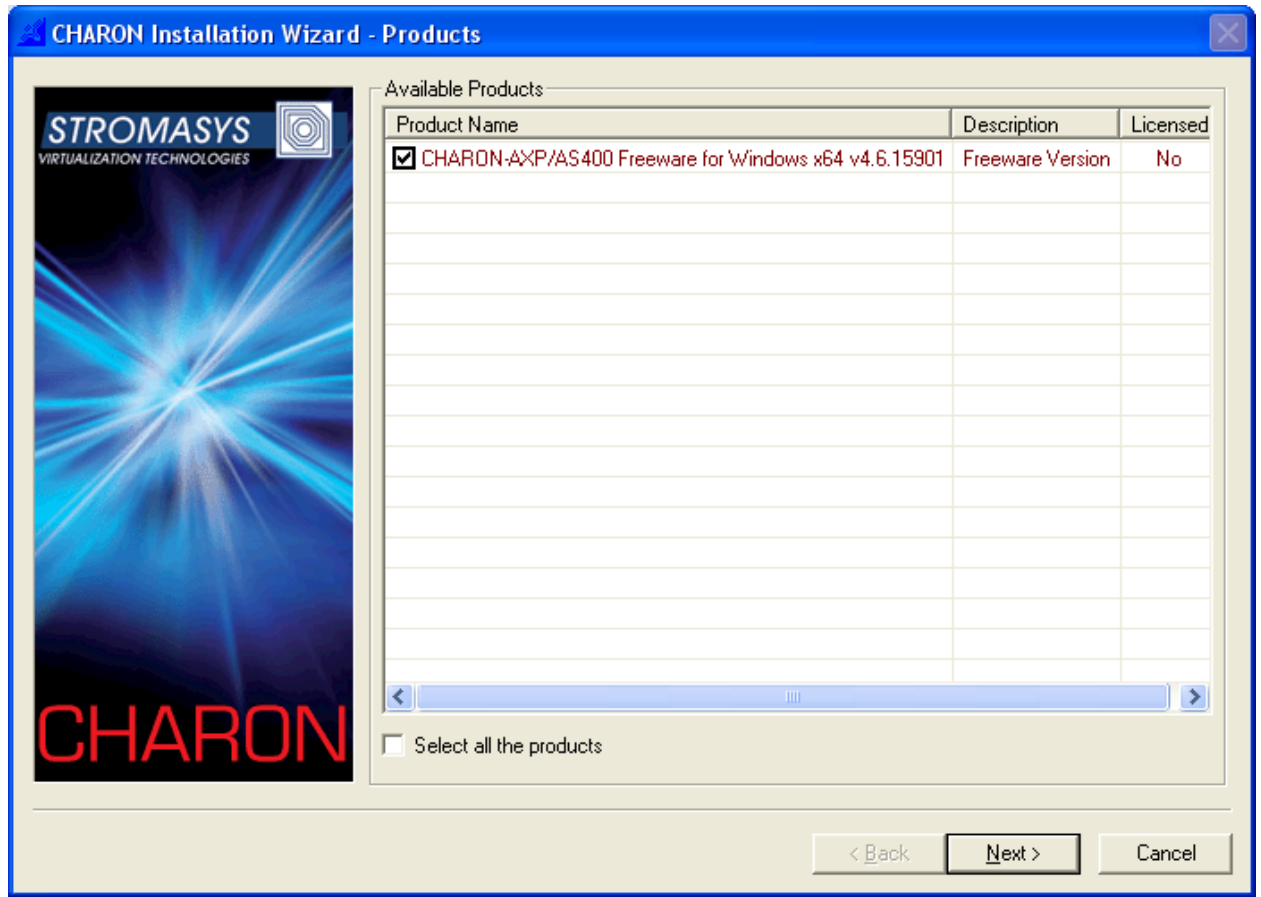
Open folder containing CHARON-AXP/AS400 Freeware for Windows x64 distribution and activate CHARON Installation Wizard (InstallShell.exe)¹.

	dotnet_3.5	2 KB	DEF File	7/27/2009 3:43 PM
	dotnet_3.5_W7	2 KB	DEF File	3/4/2010 6:33 PM
	Drivers_5.0.15800_A64	2 KB	DEF File	1/14/2014 2:21 PM
	Drivers_6.0.15800_A64_W7	2 KB	DEF File	1/14/2014 2:20 PM
	idle_vms_pkg_3.0	1 KB	DEF File	12/19/2011 10:44 AM
	InstallShell	1,728 KB	Application	7/3/2013 12:44 PM
	InstallShellCHS.dll	724 KB	Application Extension	7/3/2013 12:44 PM
	ISHardlock.dll	568 KB	Application Extension	7/3/2013 12:44 PM
	ISHasp.dll	776 KB	Application Extension	7/3/2013 12:44 PM
	Media_definition	7 KB	DEF File	1/14/2014 2:34 PM
	Utilities_1.0.15901_A64	3 KB	DEF File	1/14/2014 2:17 PM

The dialogue “Products” appears.

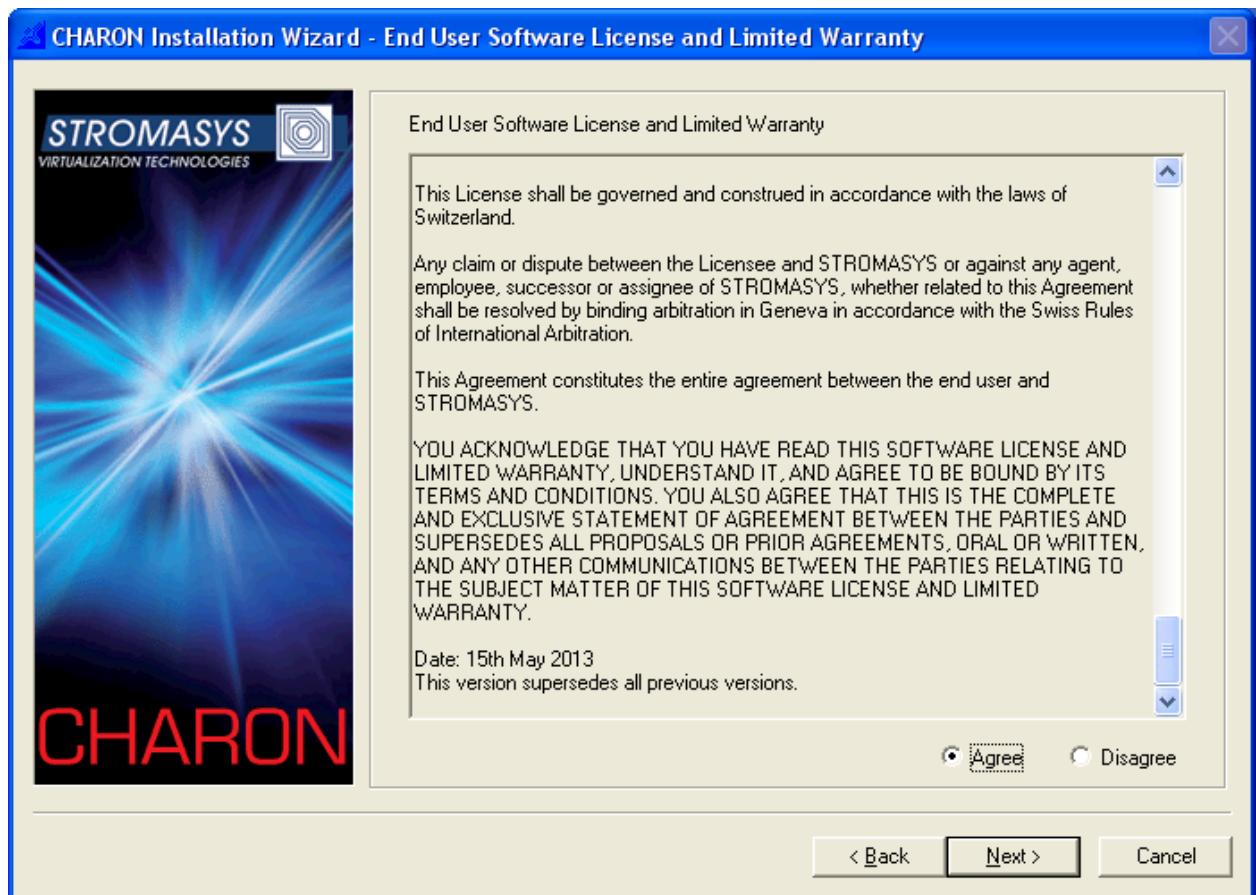
¹ Depending on version of host operating system and its settings you may be asked to confirm the operation.

Select desired product for installation by checking appropriate checkbox and click “Next”.

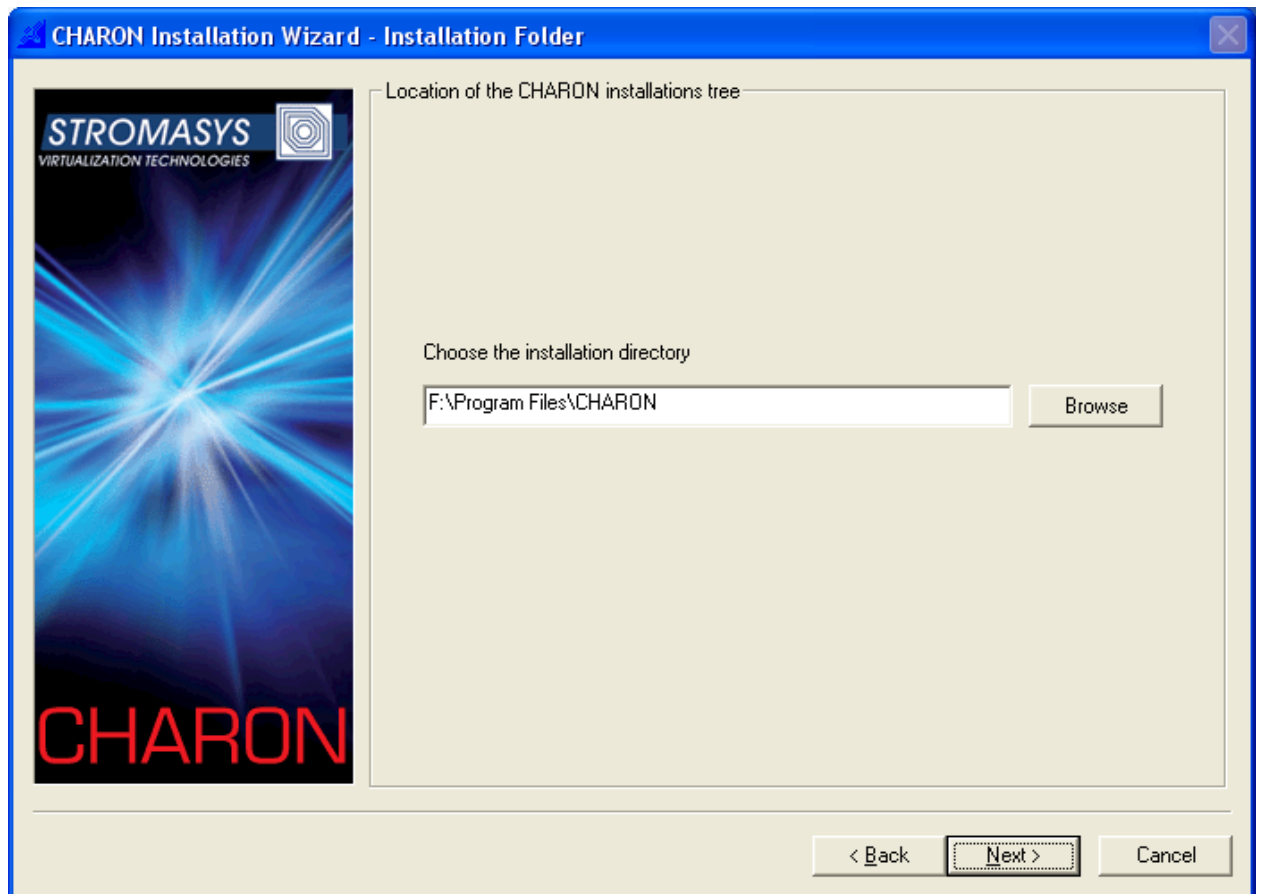


The dialogue “Installation Folder” will appear.

Read the End User Software License and Limited Warranty agreement and choose the 'Agree' radio button to continue with installation. Then click the "Next" button.

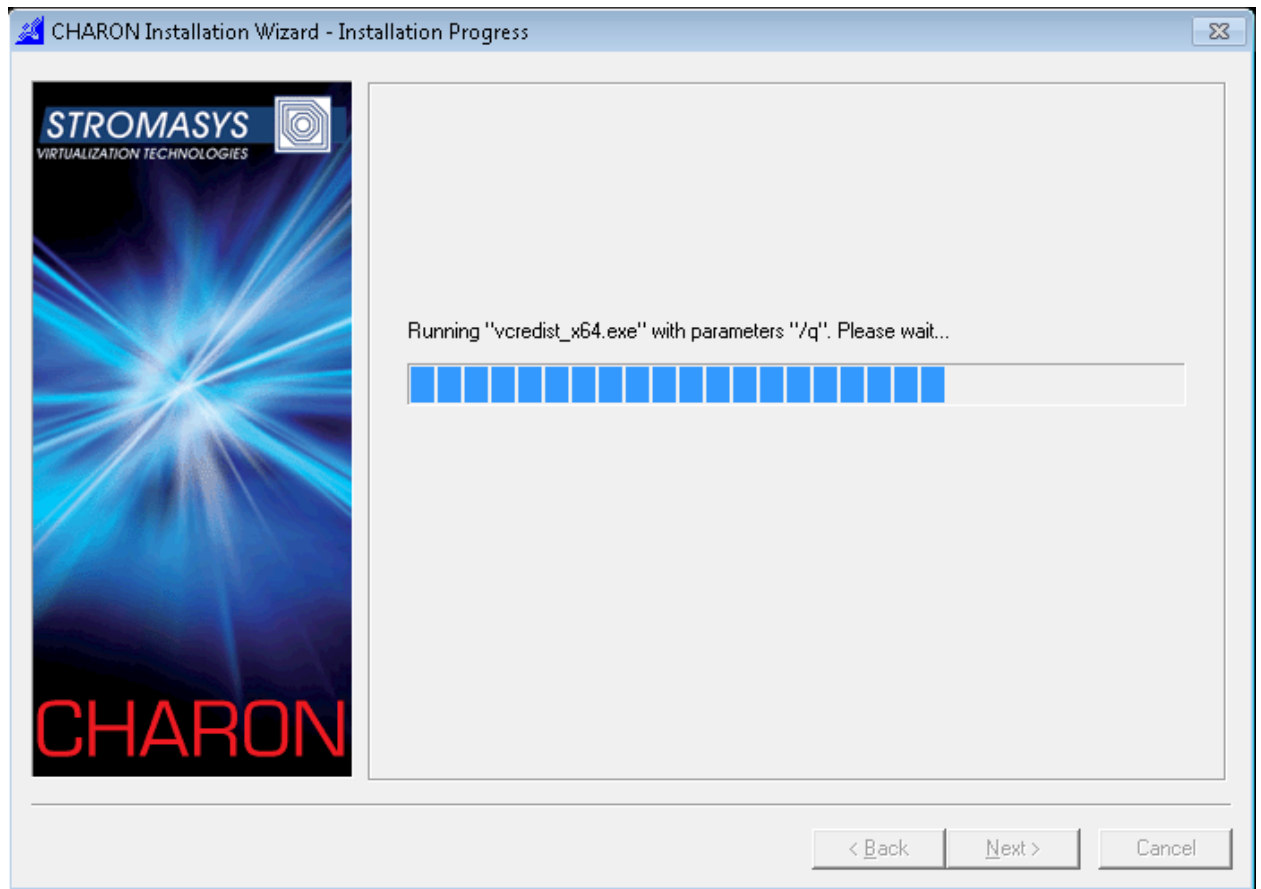


Choose destination folder for the CHARON-AXP/AS400 Freeware for Windows x64 to install to using the "Browse" button or by manually typing destination folder name or accept the default destination folder "C:\Program Files\CHARON" and click "Next".



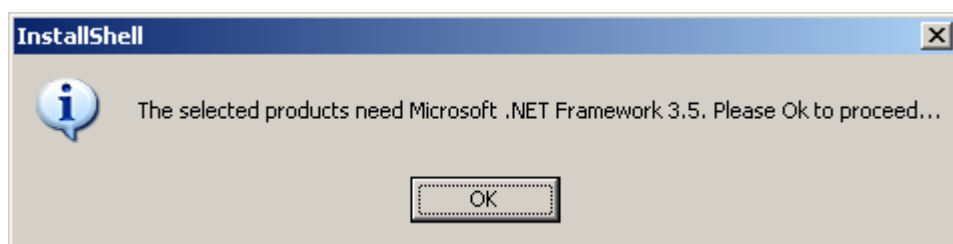
Installation will begin, which is indicated by "Installation Progress" window.

During installation progress its progressing is displayed in "Installation Progress" window. At this stage CHARON Installation Wizard installs all necessary pre-requisites.



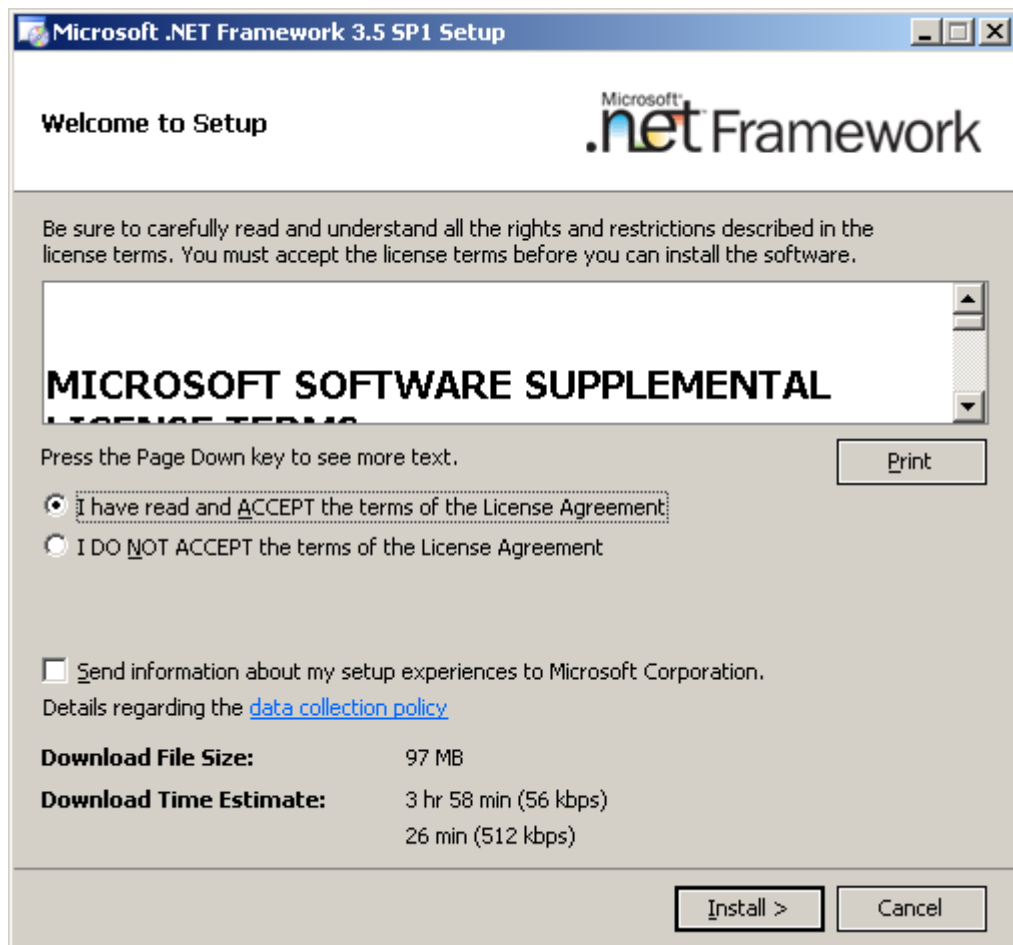
As soon as pre-requisites are installed the "Components" dialogue appears.

If your host operating system does not have Microsoft .NET Framework 3.5 Service Pack 1 which is required for CHARON-AXP/AS400 Freeware for Windows x64 the CHARON Installation Wizard installs it.



Press "OK", CHARON Installation Wizard starts installing Microsoft .NET Framework 3.5.

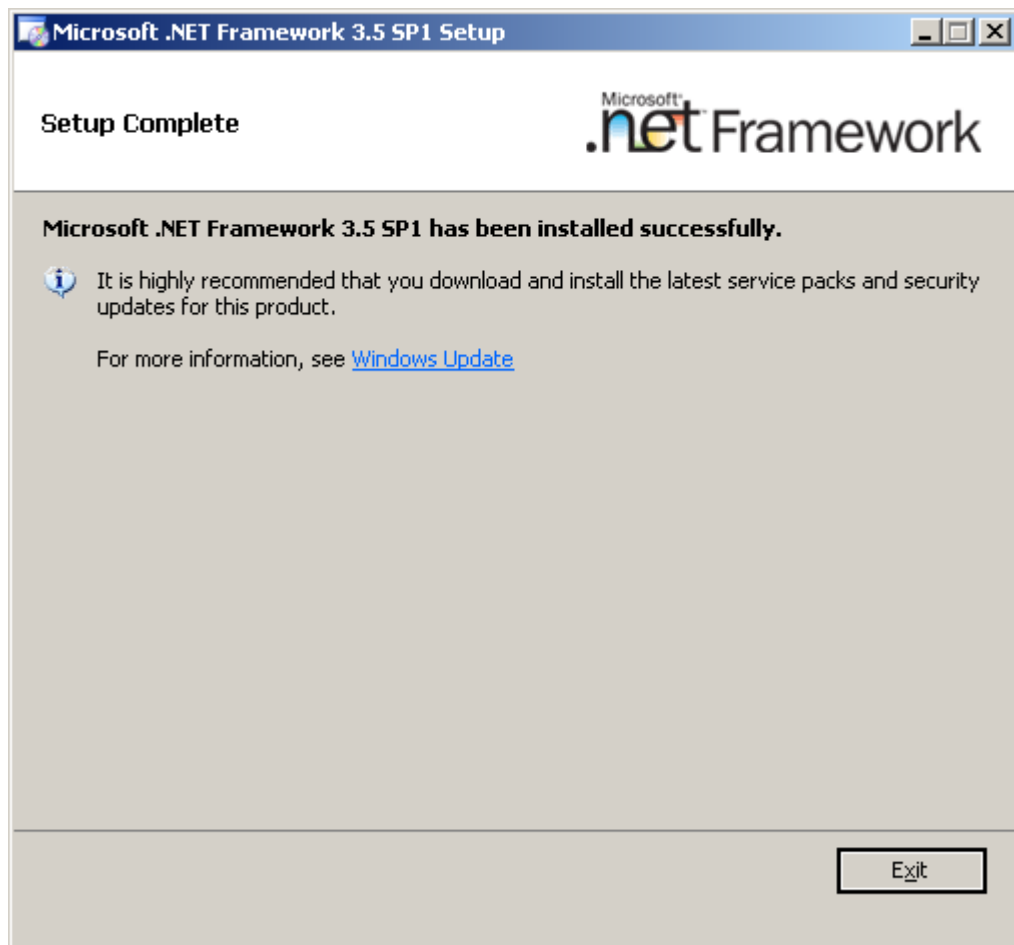
The Microsoft .NET Framework 3.5 Service Pack 1 is licensed product and therefore requires you to read and accept the license agreement.



Press "Install", installation of the pre-requisite begins².

² The complete installation package for Microsoft .NET Framework 3.5 is stored locally. No data will be downloaded from outside.

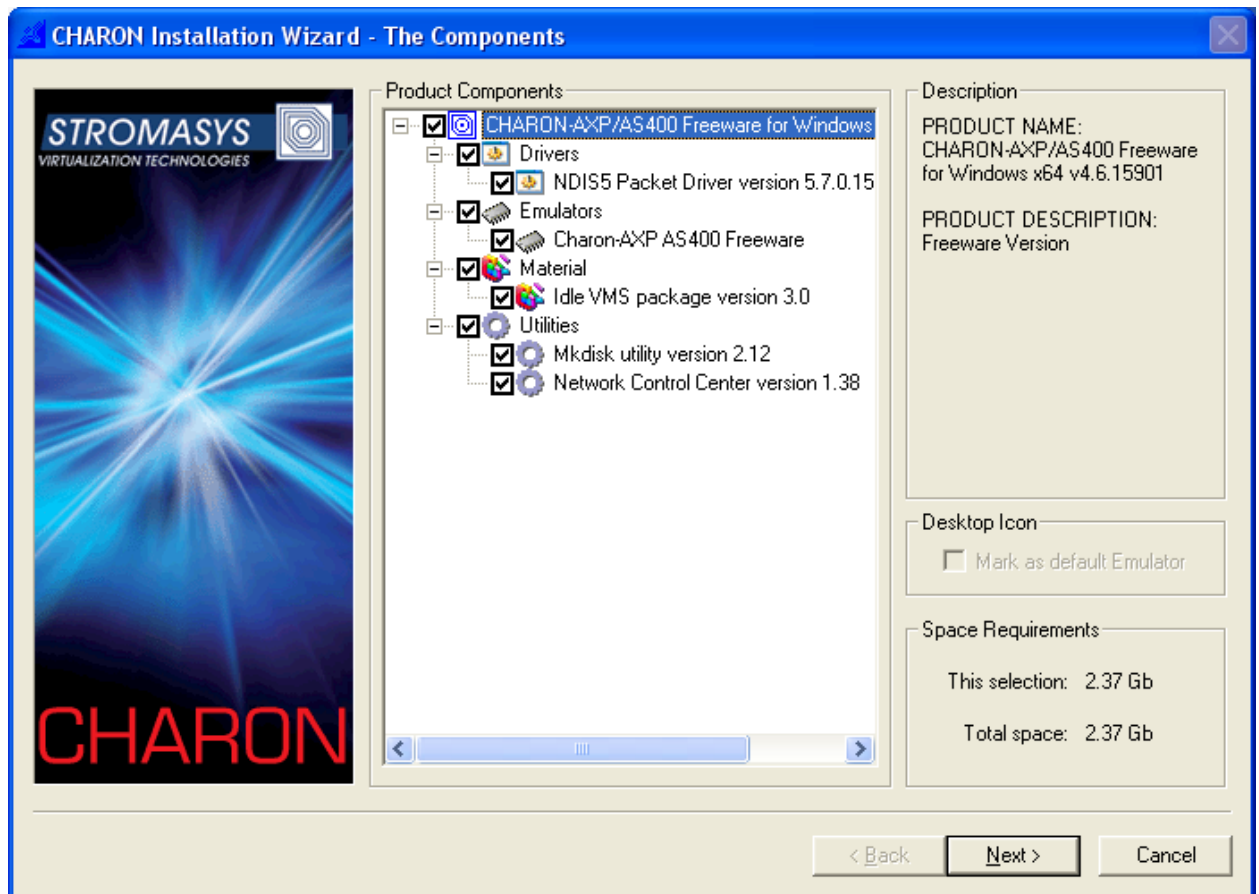
The Microsoft .NET Framework 3.5 Service Pack 1 installation progress is displayed. As soon as installation completes an informational dialogue appears.



Press "Exit" to close the dialogue window and to continue installing CHARON-AX/AS400 Freeware for Windows x64 pre-requisites.

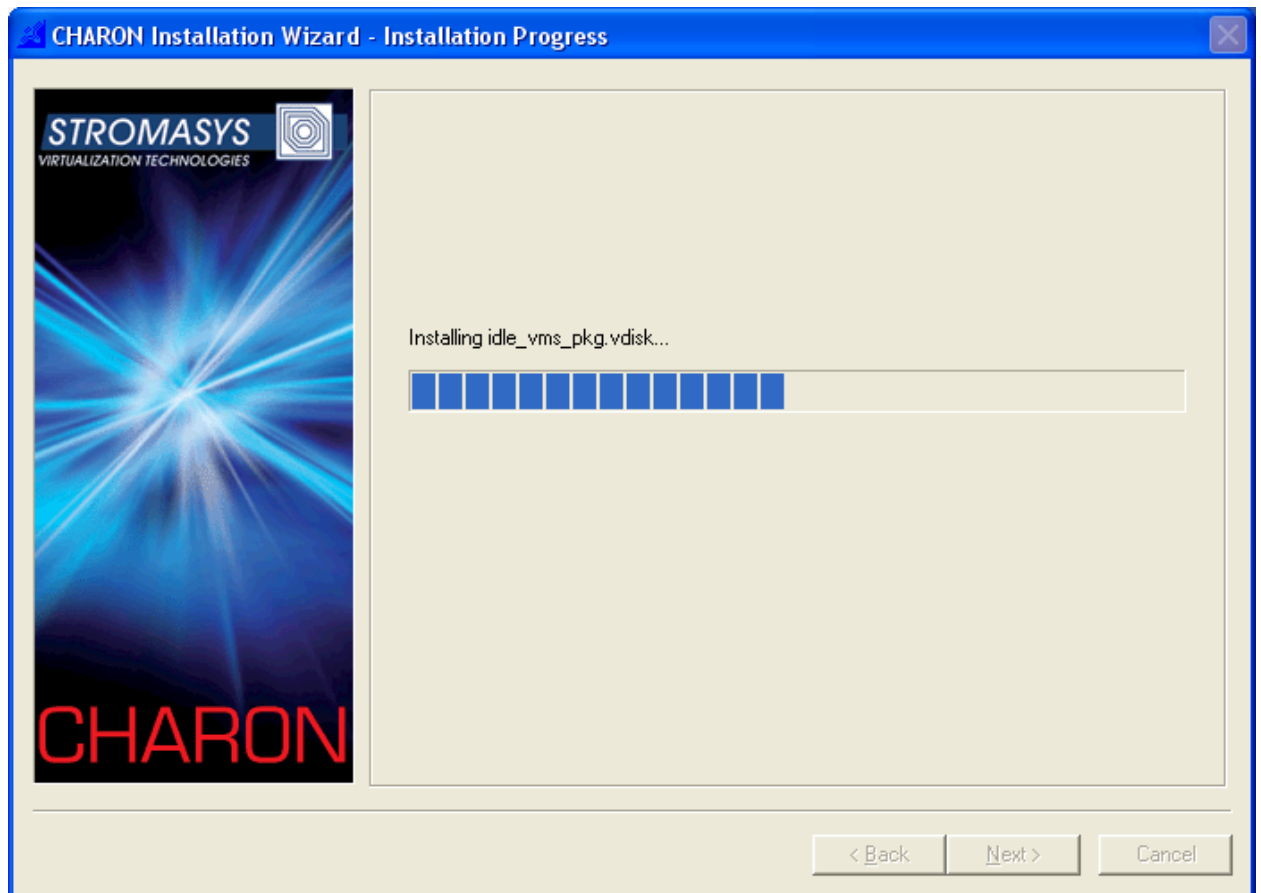
As soon as pre-requisites are installed the "Components" dialogue appears.

The “Components” dialogue allows for manipulating set of components to be installed. For CHARON-AXP/AS400 Freeware for Windows x64 any manipulations are not recommended at this stage. So accept default selection and click “Next”.



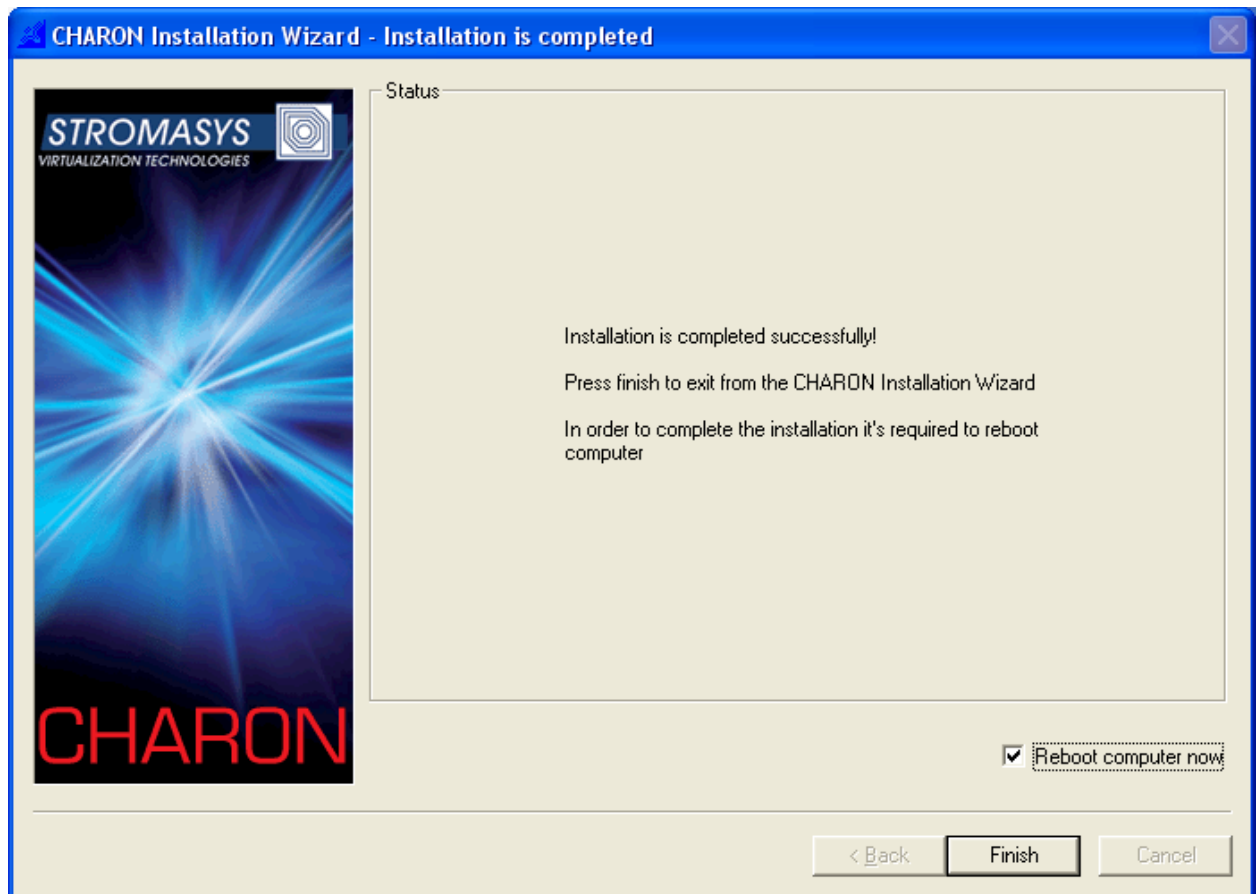
The “Installation Progress” window re-appears to proceed with installation process.

At this stage CHARON Installation Wizards installs selected components. During installation the progress is displayed in "Installation Progress" window.



As soon as installation is complete "Installation is completed" dialogue appears.

The "Installation is completed" dialogue informs about successful completion of the installation process, CHARON-AXP/AS400 Freeware for Windows x64 software is now installed. In order to make the system ready for use, please reboot your computer.

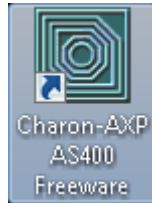


Disabling not needed services is not required at this stage. Just reboot and login as "Administrator".

3. Using CHARON-AXP/AS400 Freeware for Windows x64 for the first time

There is a shortcut created on the Administrator's desktop to start CHARON-AXP/AS400 Freeware for Windows x64 quickly.

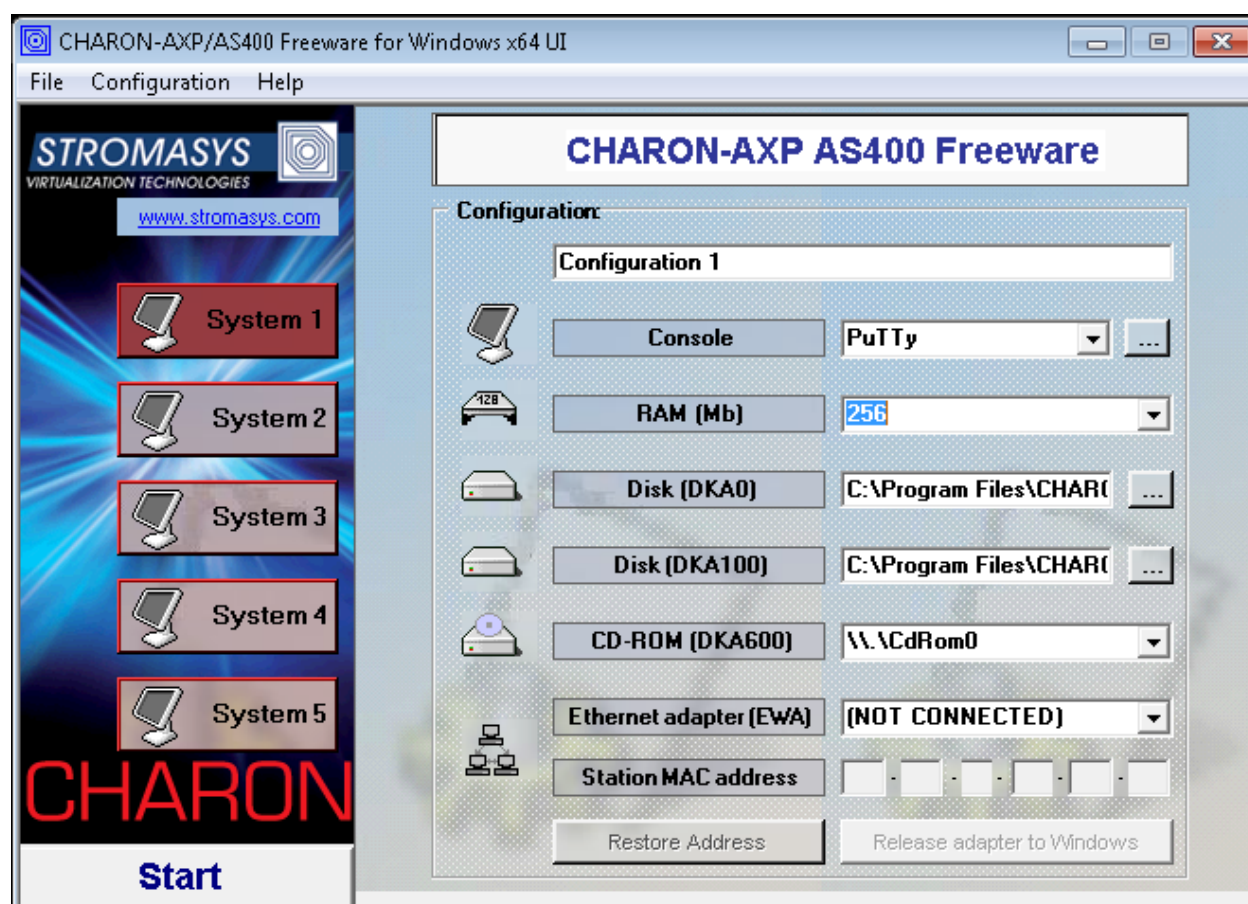
Double click the shortcut to start software.



The CHARON-AXP/AS400 Freeware for Windows x64 GUI shell appears.

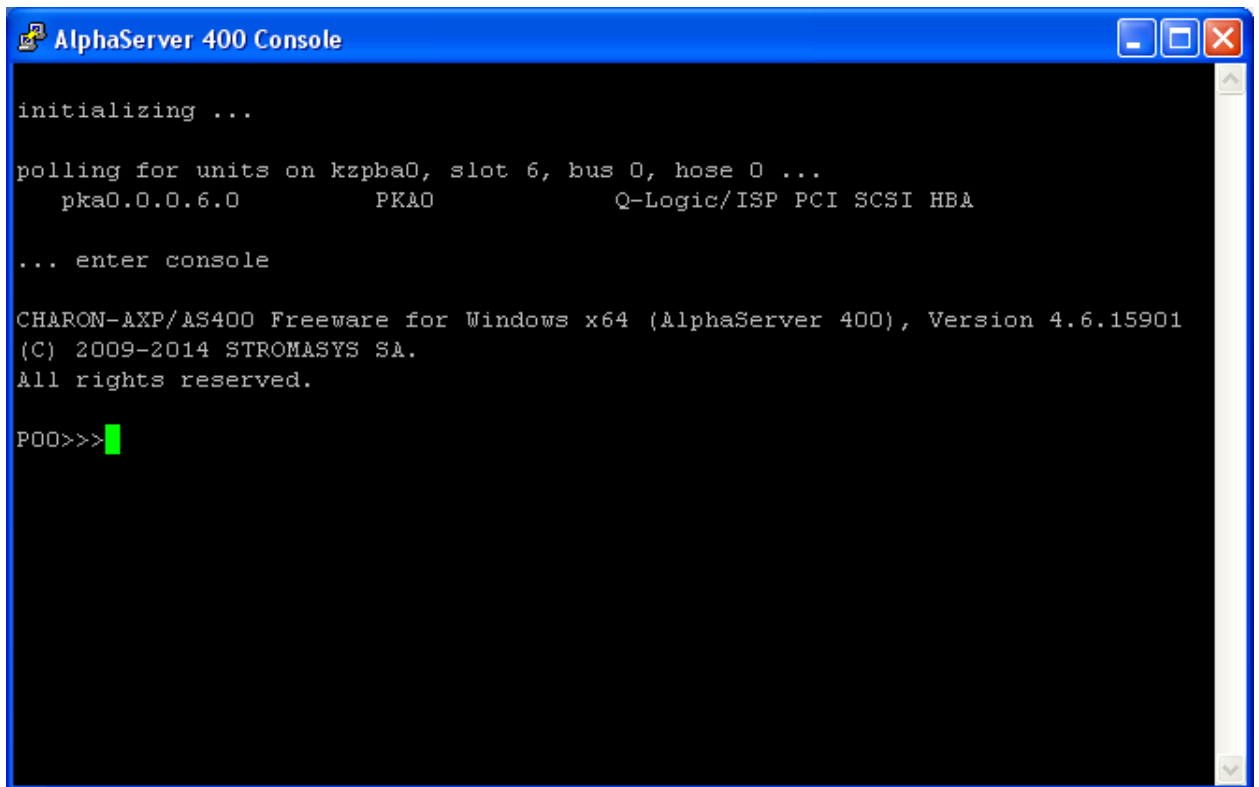
During installation the CHARON-AXP/AS400 Freeware for Windows x64 creates initial, simple configuration, so that you can start using the software right from the beginning. This configuration includes virtual AlphaServer 400 with 256 MB of RAM, two disks. One of the disks is bootable.

Click "Start".



"AlphaServer 400 Console" window appears.

The "AlphaServer 400 Console" is virtual terminal working as serial console of virtual AlphaServer 400. At this stage CHARON-AXP/AS400 Freeware for Windows x64 runs CHARON-AXP SRM Console.



```

AlphaServer 400 Console

initializing ...

polling for units on kzpba0, slot 6, bus 0, hose 0 ...
  pka0.0.0.6.0      PKA0      Q-Logic/ISP PCI SCSI HBA

... enter console

CHARON-AXP/AS400 Freeware for Windows x64 (AlphaServer 400), Version 4.6.15901
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All rights reserved.

P00>>>
  
```

The following commands are available at "P00>>>" prompt:

- show devices (can be abbreviated to "sho dev");
- boot (can be abbreviated to "b");
- other commands as described in CHARON-AXP/4100/DS/ES/GS SRM Console User's Manual.

In order to proceed at "P00>>>" prompt type "b dka0" and press [Return].

The virtual AlphaServer 400 starts booting OpenVMS Alpha Operating System, Version 8.3 which is preinstalled³ on DKA0 disk drive.

```

P00>>>b dka0[Return]
  (boot dka0.0.0.6.0)
  jumping to bootstrap code
  
```

```

      OpenVMS (TM) Alpha Operating System, Version V8.3
      © Copyright 1976-2006 Hewlett-Packard Development Company, L.P.
  
```

```
%DECnet-I-LOADED, network base image loaded, version = 05.13.00
```

```
%DECnet-W-NOOPEN, could not open SYS$SYSROOT:[SYSEXE]NET$CONFIG.DAT
```

³ The preinstalled OpenVMS operating system has no license PAKs, so you will have to register your own PAKs or, if don't have any, obtain OpenVMS Hobbyist's license from www.openvmshobbyist.com.

Enter current time and date when requested to do so and press [Return].

Please enter date and time (DD-MMM-YYYY HH:MM) 21-DEC-2013 15:02[Return]

%STDRV-I-STARTUP, OpenVMS startup begun at 21-DEC-2013 15:02:13.52

...

The OpenVMS system is now executing the site-specific startup commands.

...

SYSTEM job terminated at 21-DEC-2013 15:02:46.00

Accounting information:

Buffered I/O count:	3891	Peak working set size:	7664
Direct I/O count:	1677	Peak virtual size:	186800
Page faults:	4378	Mounted volumes:	0
Charged CPU time:	0 00:00:09.45	Elapsed time:	0 00:00:32.70

The operating system has finished booting. Press [Return], type user name "SYSTEM", and press [Return] once again to login⁴.

[Return]

Welcome to OpenVMS (TM) Alpha Operating System, Version V8.3

Username: system[Return]

%LICENSE-I-NOLICENSE, no license is active for this software product

%LOGIN-S-LOGOPRCON, login allowed from OPA0:

Welcome to OpenVMS (TM) Alpha Operating System, Version V8.3

Last interactive login on Monday, 21-DEC-2013 15:23:00.98

```

*****
*
*              CHARON-AXP Freeware
*          -----
*
*              WARNING!
*
*  This OpenVMS does not contain any licence PAKs. Please visit
*  www.openvmshobbyist.com for getting hobbyist OpenVMS licence.
*
*****

```

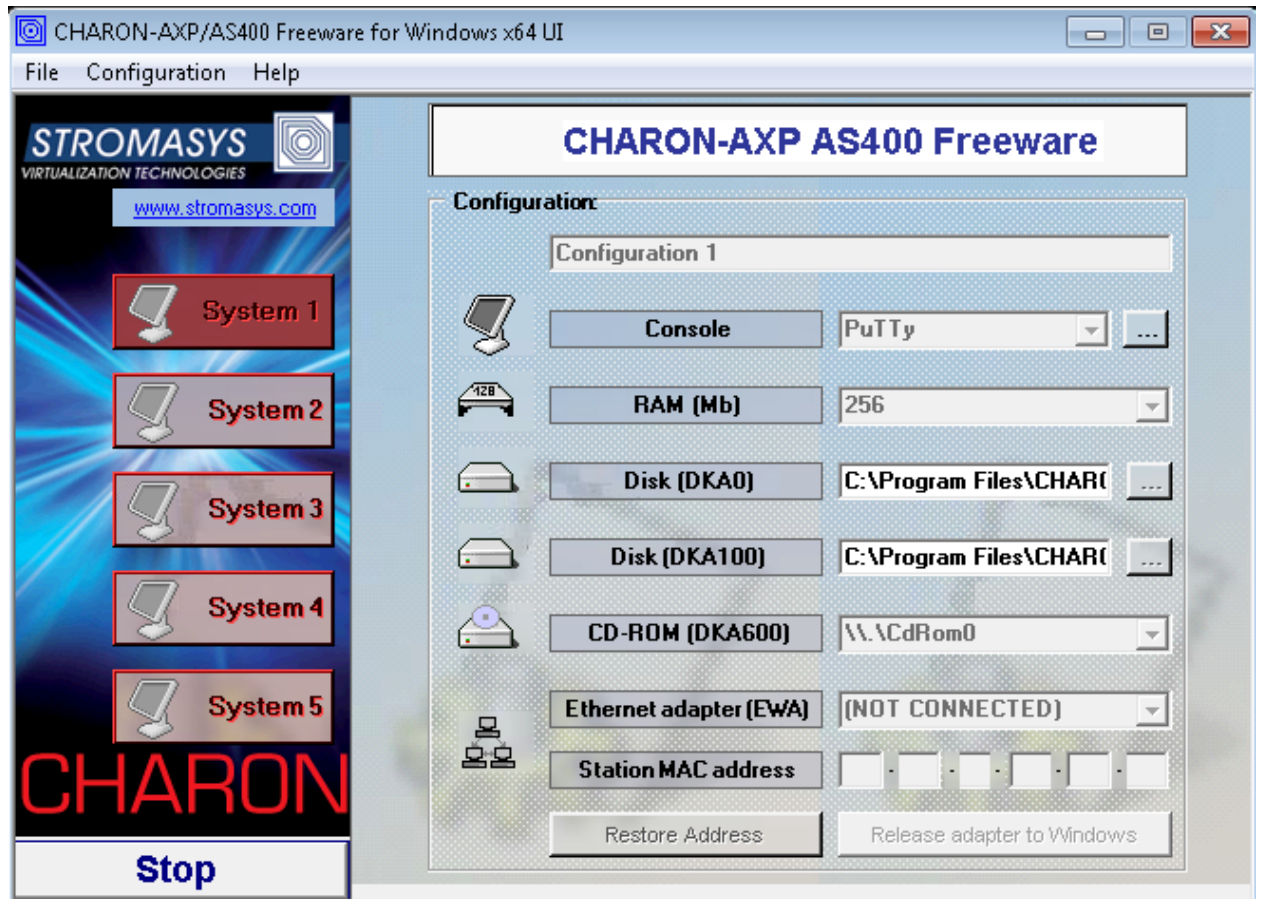
\$_

The OpenVMS Alpha Operating System, Version 8.3 is now ready for use.

⁴ The "SYSTEM" account of the preinstalled OpenVMS operating system has no password.

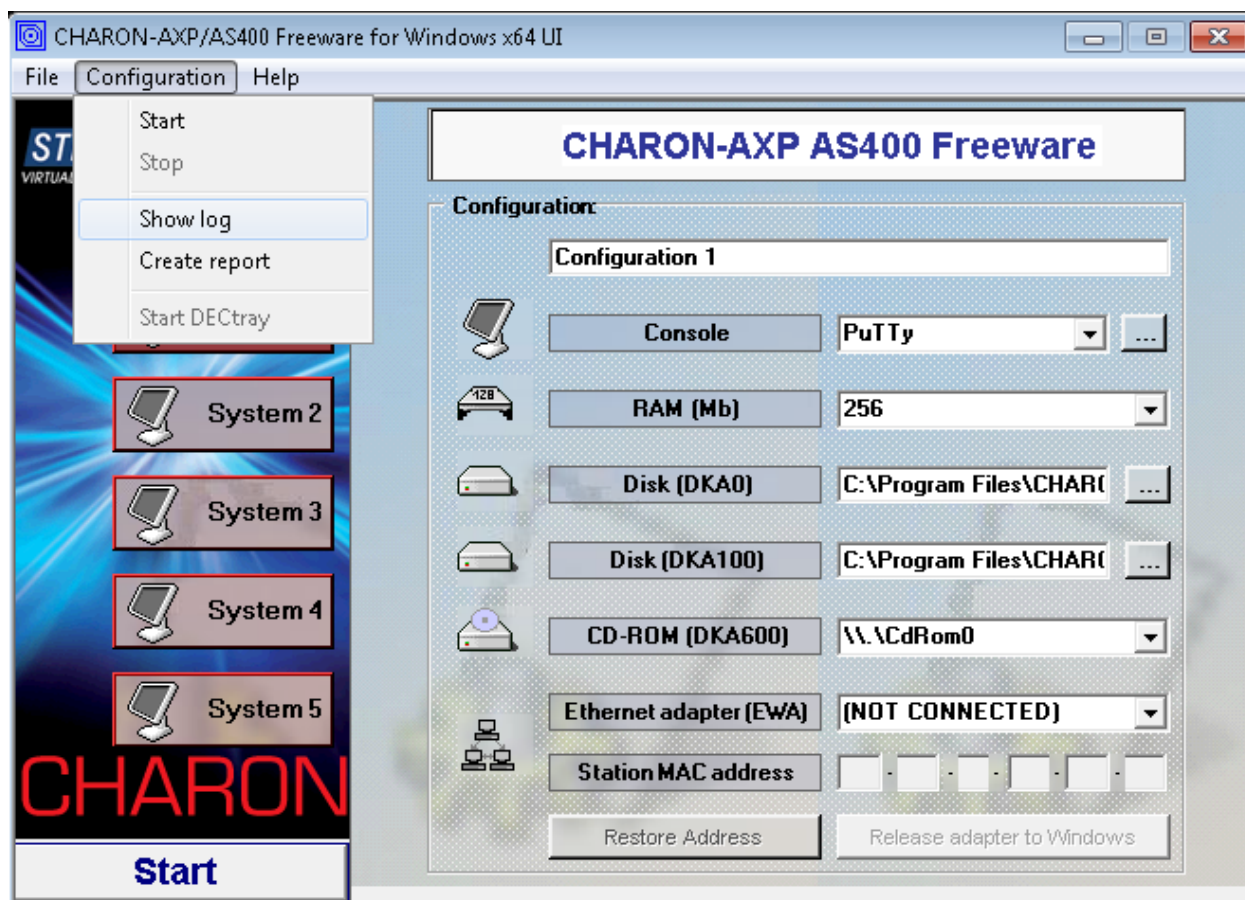
When you finish your work shutdown OpenVMS as usual : type "SHUTDOWN" at "\$" prompt and wait for shutdown process to complete. As soon as OpenVMS terminates it brings virtual AlphaServer 400 into CHARON-AXP SRM Console at "P00>>>" prompt.

Switch to "CHARON-AXP/AS400 for Windows x64 ..." window of the GUI shell, and click "Stop".



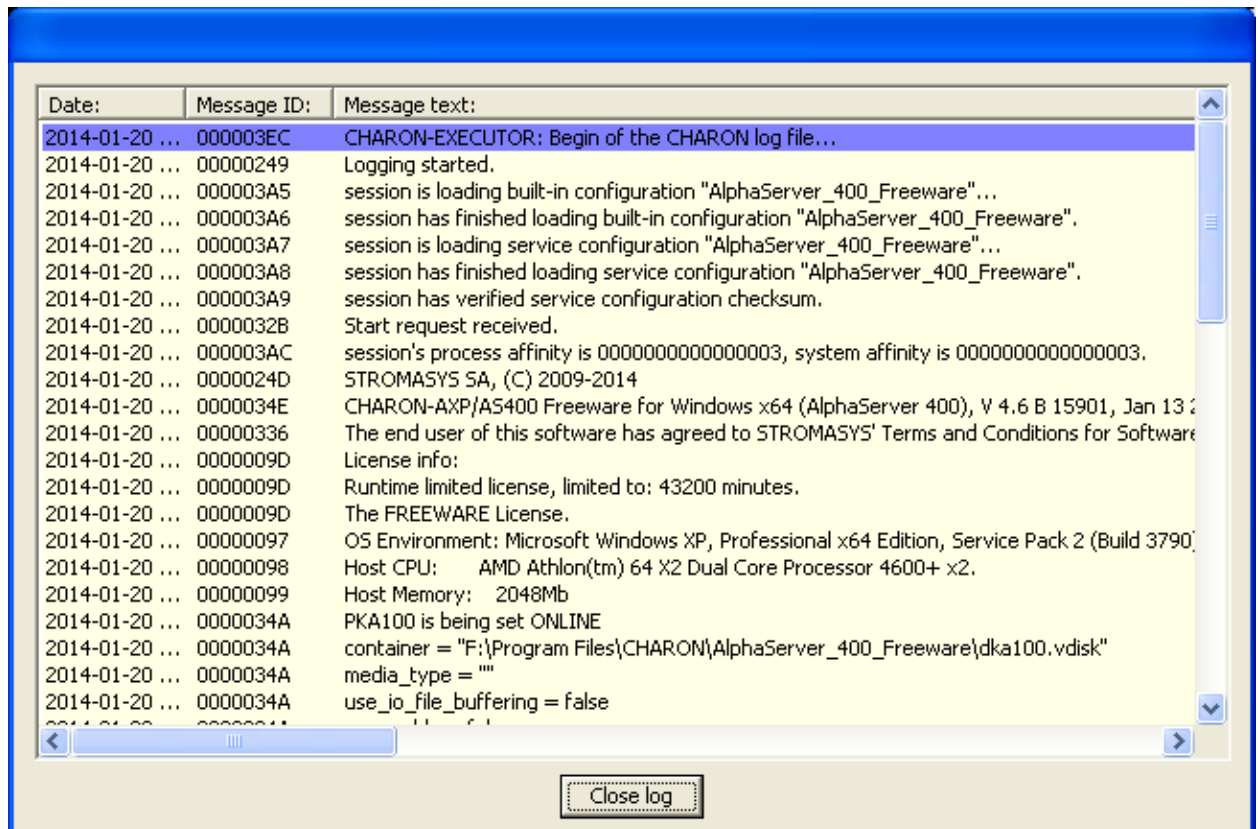
The "AlphaServer 400 Console" window disappears. This means that virtual AlphaServer 400 has been "powered off".

In order to view LOG of virtual Alphaserver 400, switch to "CHARON-AXP/AS400 for Windows x64 ..." window of the GUI shell, click "Configuration" menu, click "Show log" item.



The LOG window appears.

The LOG window may be useful in diagnosing problems. Events which might need user's attention are drawn with red background. The window below has only one such line, saying that EEPROM's container file⁵ was not found and virtual AlphaServer 400 has created it with default content.



Click "Close log" close the window and to return to "CHARON-AXP/AS400 for Windows x64 ..." window of the GUI shell.

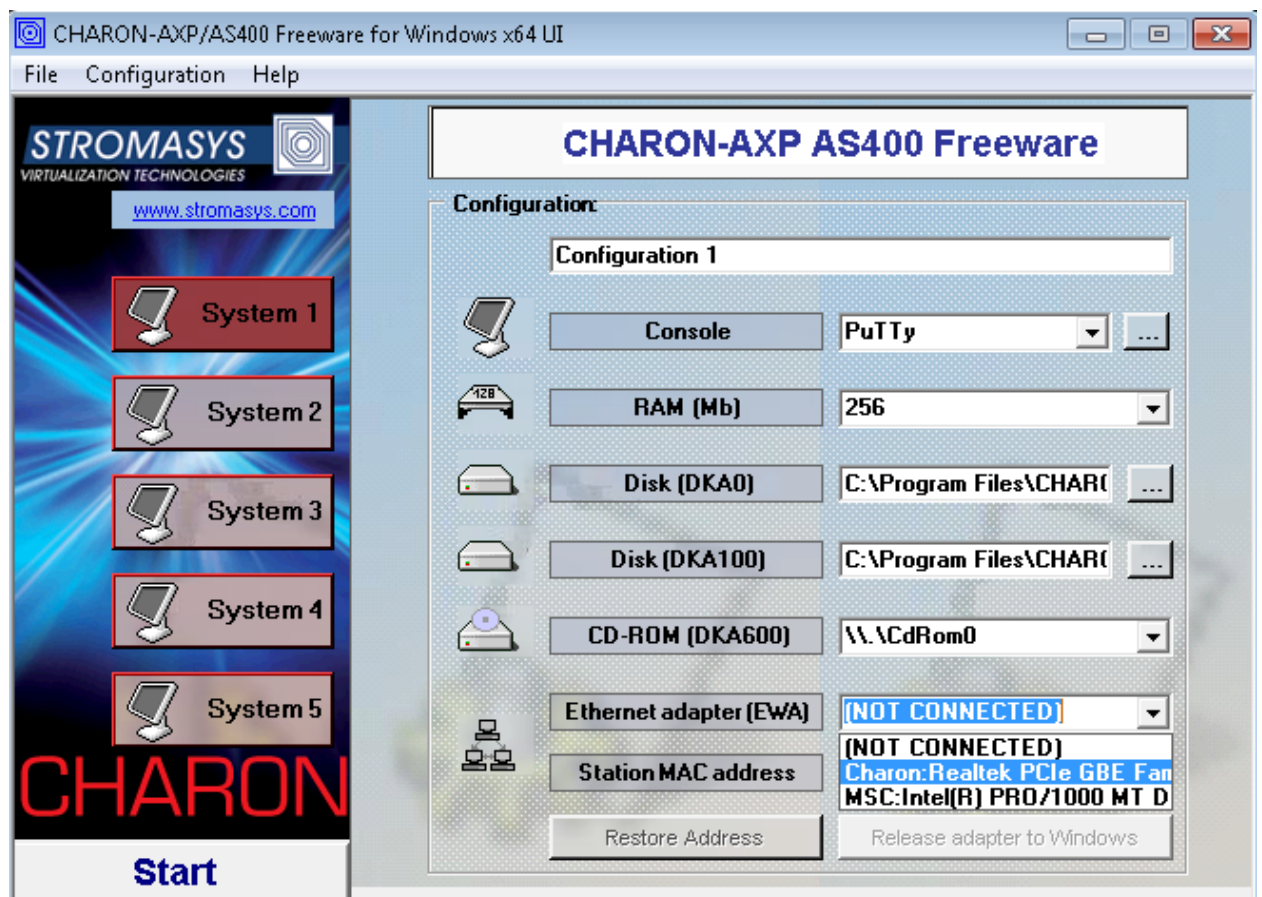
⁵ The EEPROM's container file preserves non-volatile environment of CHARON-AXP SRM Console and some other information necessary for virtual AlphaServer 400 to operate normally. If that file is not available or corrupted or not readable, the virtual AlphaServer 400 re-creates it from template stored internally.

4. Using network

The CHARON-AXP/AS400 Freeware for Windows x64 allows virtual AlphaServer 400 for communicating to other nodes or to Internet over LAN. For that purpose virtual AlphaServer 400 has built-in virtual DE435 PCI Ethernet adapter (appears as EWA to OpenVMS).

The CHARON-AXP/AS400 Freeware for Windows x64 optionally connects that EWA adapter to one of the host's network interfaces⁶. In order to establish such a connection, click on "Ethernet adapter (EWA)" drop down box.

The drop down list appears containing the list of available network interfaces. Choose one which is normally not needed for the host operating system to communicate to the LAN, and click on its name in the list (on the picture below "Realtek PCIe GBE Family Controller" has been selected to connect EWA to, in fact, another one called "Intel(R) PRO/1000 MT Desktop Adapter" has been servicing LAN connections to the host OS).

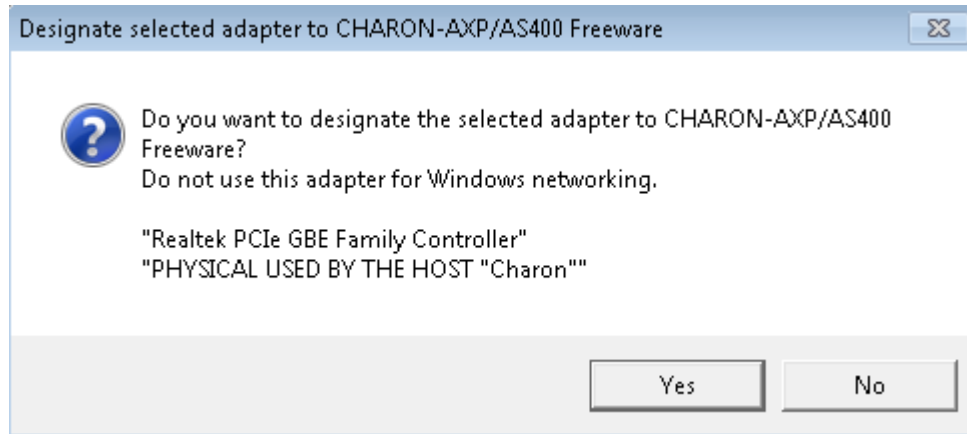


Confirmation dialogue appears.

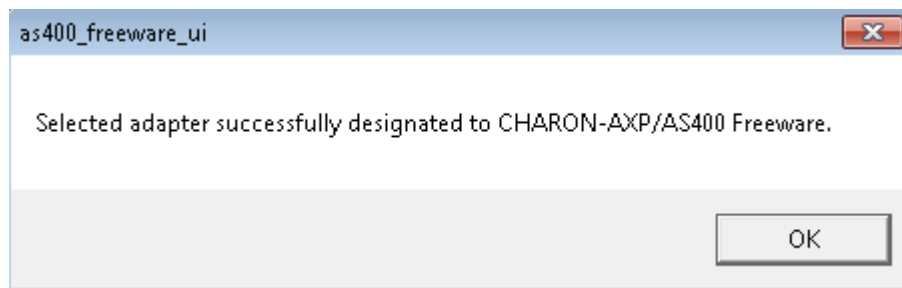
⁶ Once connected to EWA, the network interface is dedicated to CHARON-AXP/AS400 Freeware for Windows x64, and may not be used by the host operating system. This means that if you need both the host and the virtual AlphaServer 400 be connected to the LAN simultaneously, the host must have at least two network interfaces (NICs): one is for host operating system, another – for virtual AlphaServer 400.

When network interface is to be released and returned to host operating system, click "Release adapter to Windows" button on the "CHARON-AXP/AS400 Freeware for Windows x64 ..." window.

To confirm selection click "Yes".



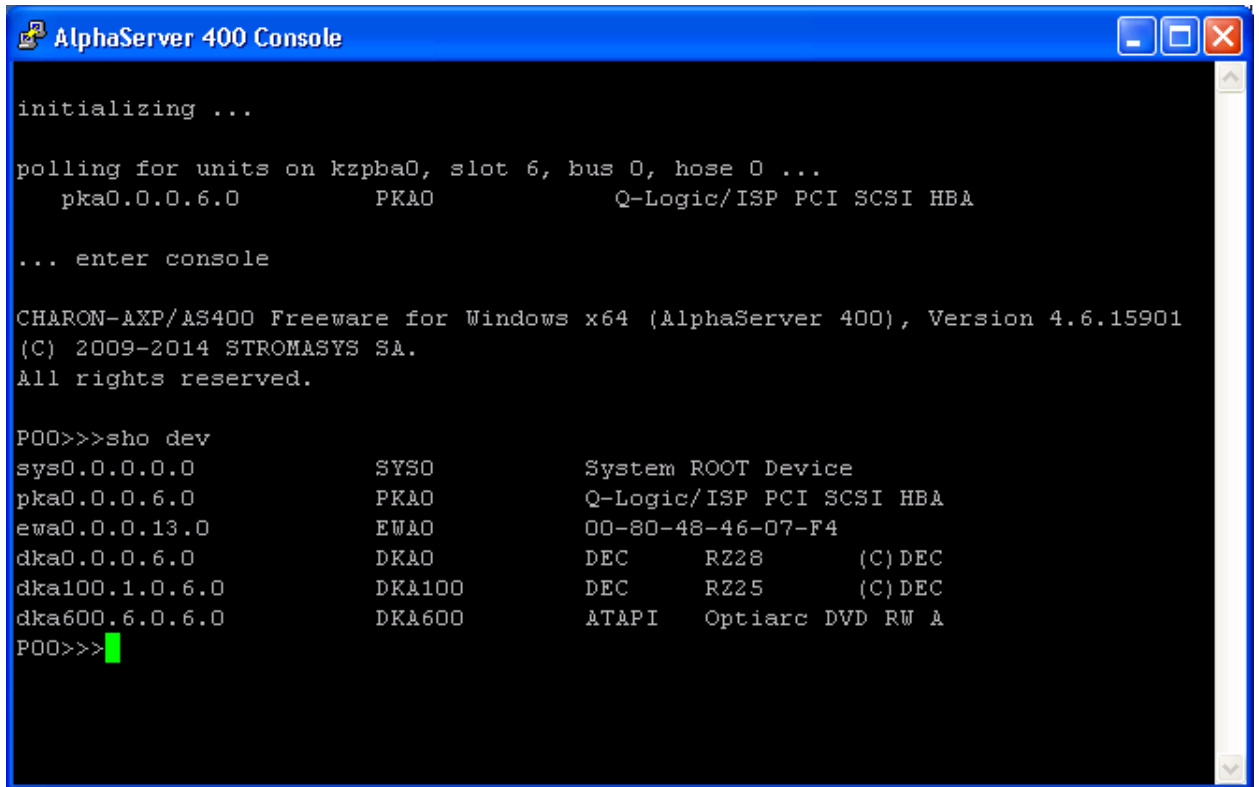
As soon as reconfiguration completes, completion status dialogue appears.



Click "OK" to close the dialogue and to return to "CHARON-AXP/AS400 for Windows x64 ..." window of the GUI shell.

Click "Start" to start virtual AlphaServer 400 as described earlier. The "AlphaServer 400 Console" window appears.

At "P00>>>" prompt type "sho dev" and press [Return].



```

AlphaServer 400 Console

initializing ...

polling for units on kzpha0, slot 6, bus 0, hose 0 ...
  pka0.0.0.6.0      PKA0      Q-Logic/ISP PCI SCSI HBA

... enter console

CHARON-AXP/AS400 Freeware for Windows x64 (AlphaServer 400), Version 4.6.15901
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All rights reserved.

P00>>>sho dev
sys0.0.0.0.0      SYS0      System ROOT Device
pka0.0.0.6.0      PKA0      Q-Logic/ISP PCI SCSI HBA
ewa0.0.0.13.0     EWA0      00-80-48-46-07-F4
dka0.0.0.6.0      DKA0      DEC      RZ28      (C)DEC
dka100.1.0.6.0    DKA100    DEC      RZ25      (C)DEC
dka600.6.0.6.0    DKA600    ATAPI    Optiarc DVD RW A
P00>>>
  
```

List of devices of virtual AlphaServer 400 appears. Note the line of EWA0. In right-most column it contains MAC address of the selected host's network interface.

At "P00>>>" prompt type "b dka0" and press [Return]. OpenVMS operating system starts booting as described earlier. Wait for the booting process to complete, login as "SYSTEM". At "\$" prompt type "sho dev" and press [Return].

\$ **sho dev**[Return]

Device Name	Device Status	Error Count	Volume Label	Free Blocks	Trans Count	Mnt Cnt
CHARON\$DKA0:	Mounted	0	ALPHASYS	1886976	321	1
CHARON\$DKA100:	Online	0				
CHARON\$DKA600:	Online wrtlck	0				

Device Name	Device Status	Error Count
OPA0:	Online	0
OPA2:	Online	0
OPA3:	Online	0
FTA0:	Offline	0
TTA0:	Online	0

Device Name	Device Status	Error Count
PKA0:	Online	0
MPA0:	Online	0
EWA0:	Online	0
SMA0:	Online	0
WSA0:	Offline	0

\$ _

In the above example EWA0 device is ONLINE to OpenVMS operating system, but networking is not started. In order to start networking in OpenVMS operating system two things to be done:

- Obtain and register license PAKs for OpenVMS and selected network (DECnet Phase IV, DECnet Phase V, or HP TCP/IP Services for OpenVMS, or whatever network stack you plan to use);
- Configure networking software in OpenVMS operating system as described in corresponding manual.

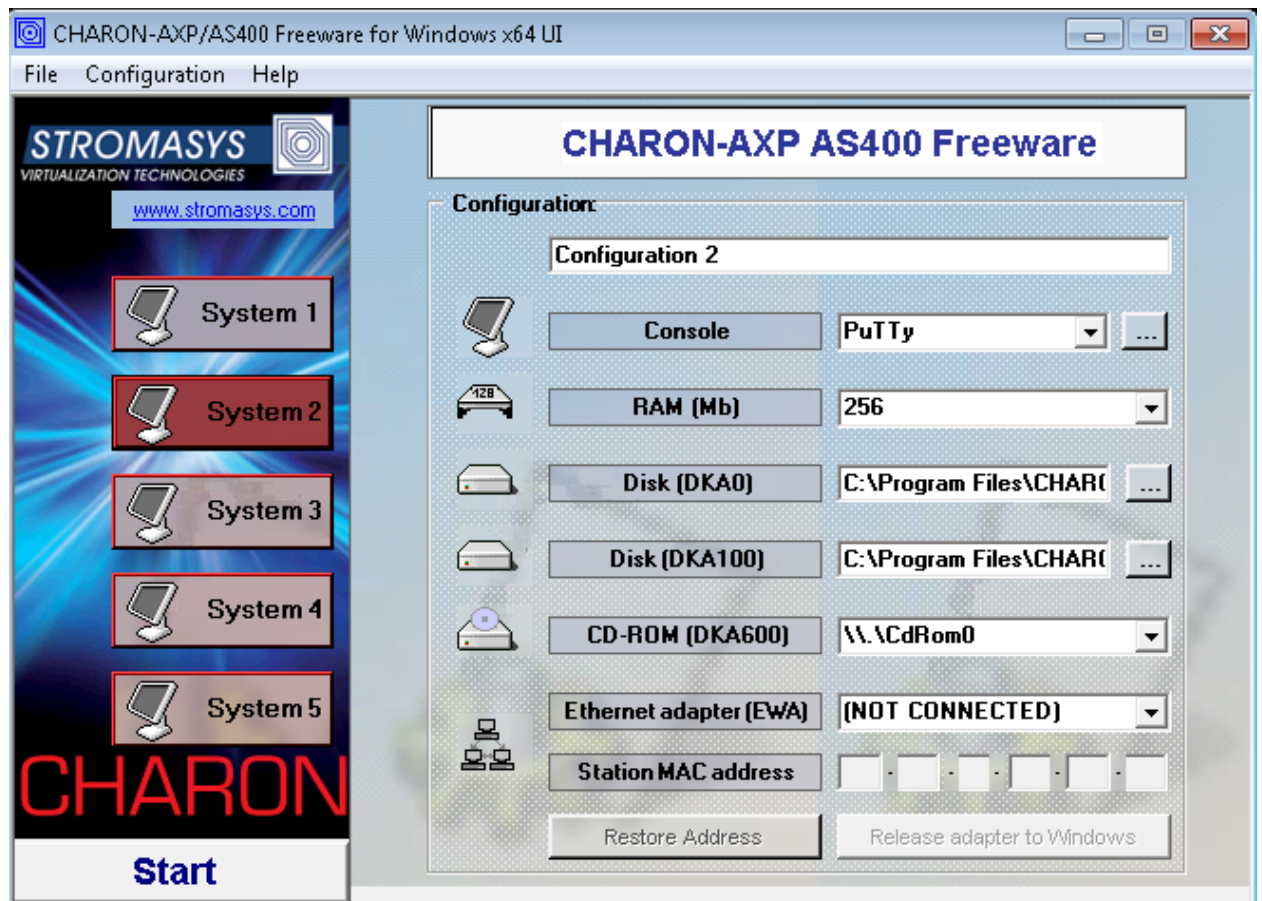
Both questions are outside of the scope of this document.

5. Using multiple configurations

The CHARON-AXP/AS400 Freeware for Windows x64 software allows for up-to 5 different configurations which can be selected using buttons on the left-most panel of the GUI shell (above “CHARON” picture).

Note that all 5 configurations are identical upon installation, but you may change each configuration and the changes will be preserved.

Press button “System 2” to select second configuration.



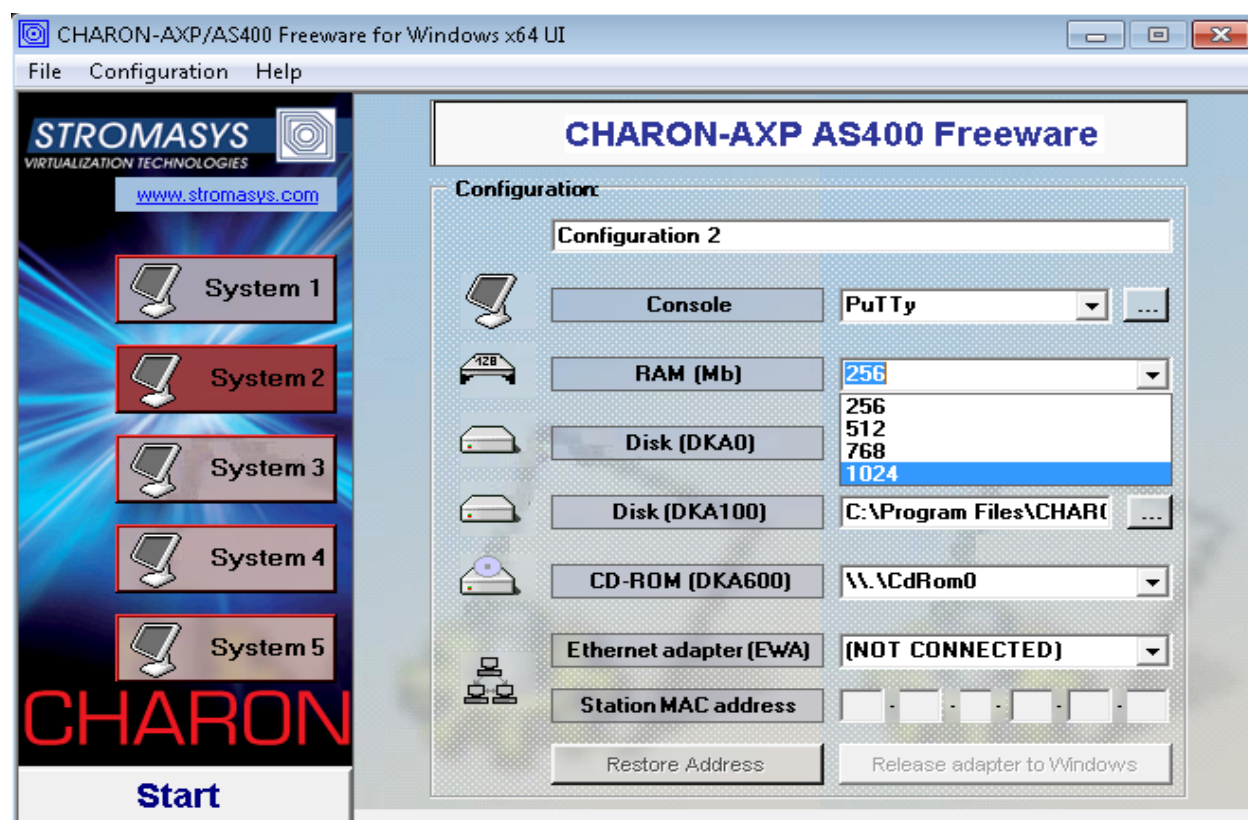
Only one configuration is active at a time, and only one virtual AlphaServer 400 can be started at a time.

Apart from host's Network Interface which is discussed earlier, the following parameters may be changed for particular configuration:

- RAM size (default 256MB, supported values 512MB, 768MB, and 1024MB)
- Host's CD/DVD-ROM drive (default is "\\.\CdRom0", in most cases it is the only choice, as most hosts have only one CD/DVD-ROM drive, some have none of them)
- Location of DKA0 disk image (default is "dka0.vdisk", another disk image can be selected using "... button)
- Location of DKA100 disk image (default is "dka100.vdisk", another disk image can be selected using "... button)

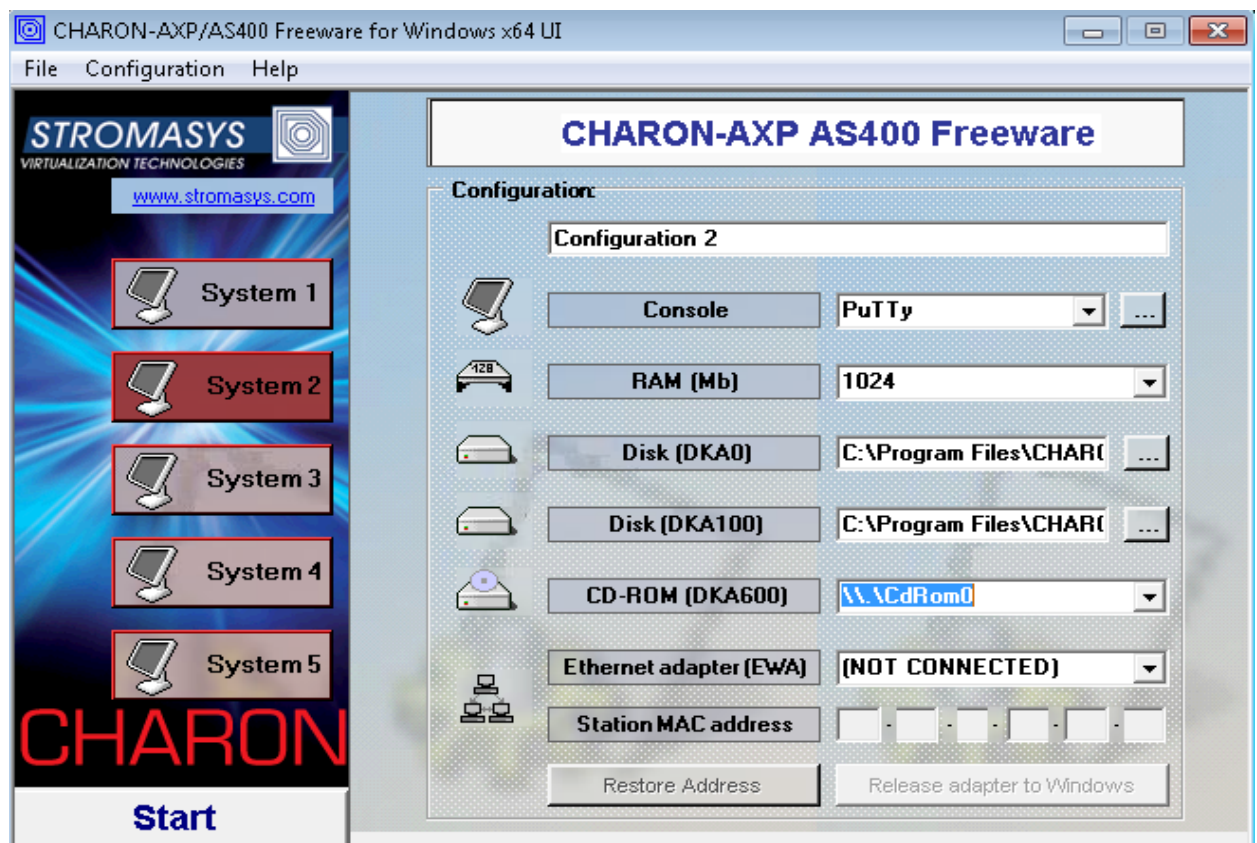
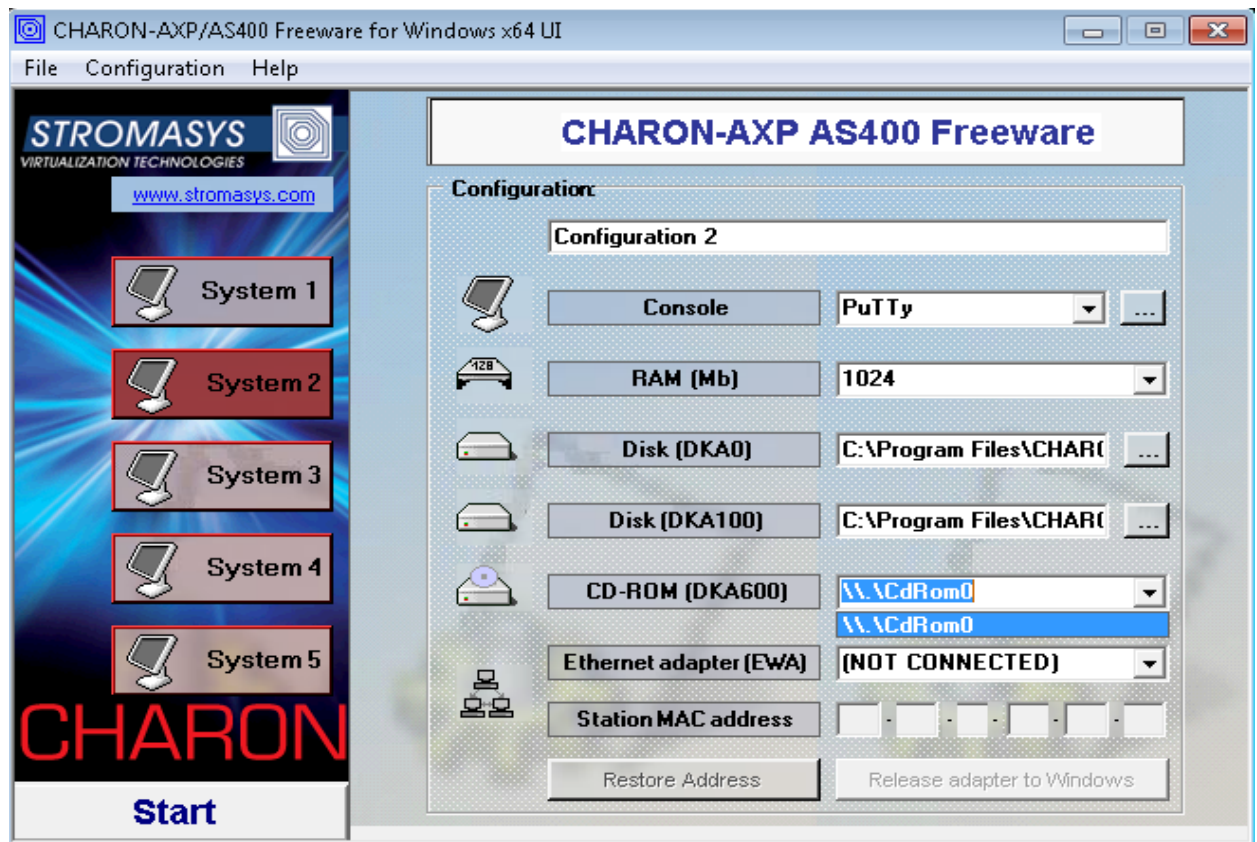
6. Selecting RAM size

To change RAM size, click on the drop-down list button and choose desired value.



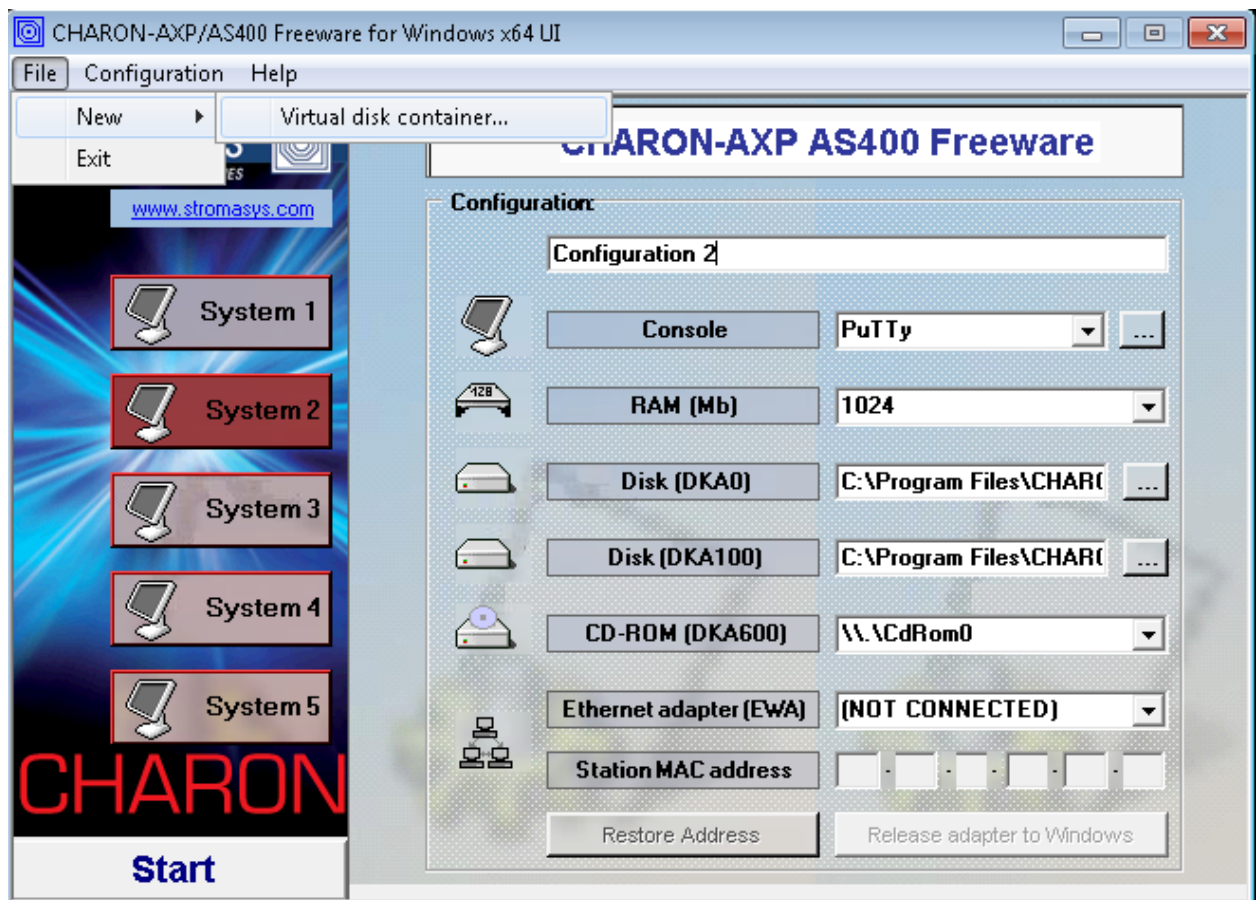
7. Selecting host's CD/DVD-ROM drive

To select host's CD/DVD-ROM drive, click on the drop-down list button and choose desired value.



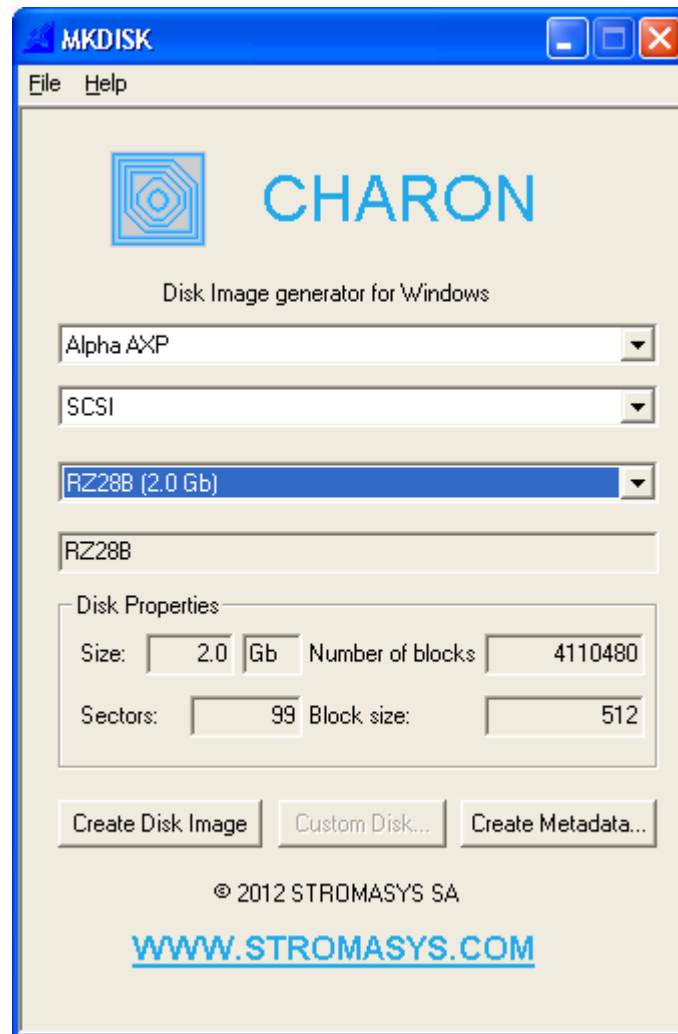
8. Creating virtual disk containers

In the "CHARON-AXP/AS400 for Windows x64 ..." window open "File" menu, select "New", then click on "Virtual disk container ..."



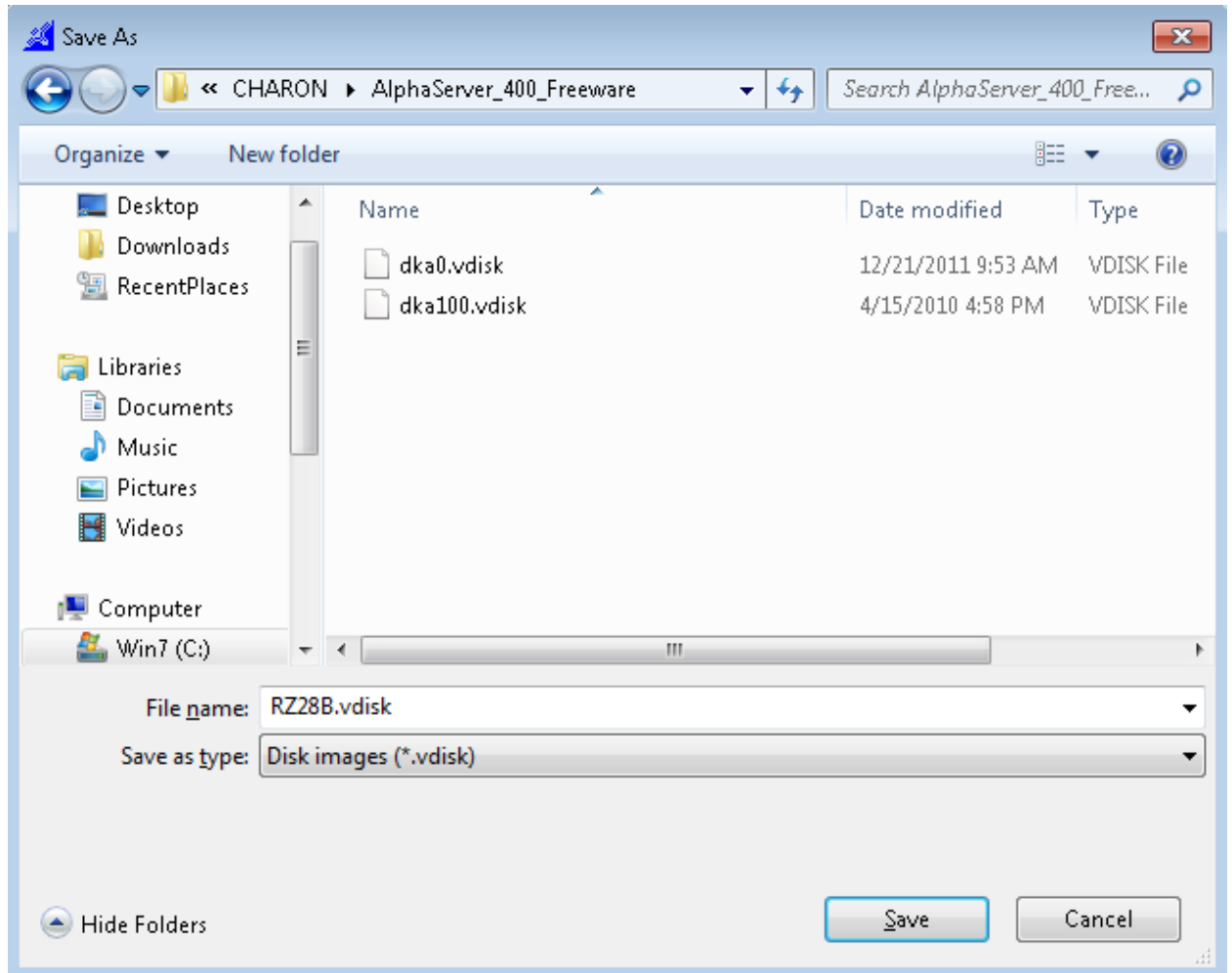
This activates utility for creating virtual disk containers.

Select system "Alpha AXP" and controller type "SCSI", then select desired disk type. Then press "Create Disk Image".

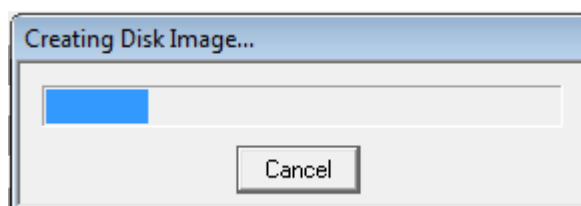


A "Save As" dialogue appears asking for disk container name and location on the host's local drive.

Select desired folder and file name⁷. Then click "Save".



A progress window appears displaying the progress of creating disk container. This may take few minutes depending on selected disk container size (disk type).



The progress window disappears as soon as disk container is created.

You may create another disk container if needed; otherwise close the "MKDISK" window.

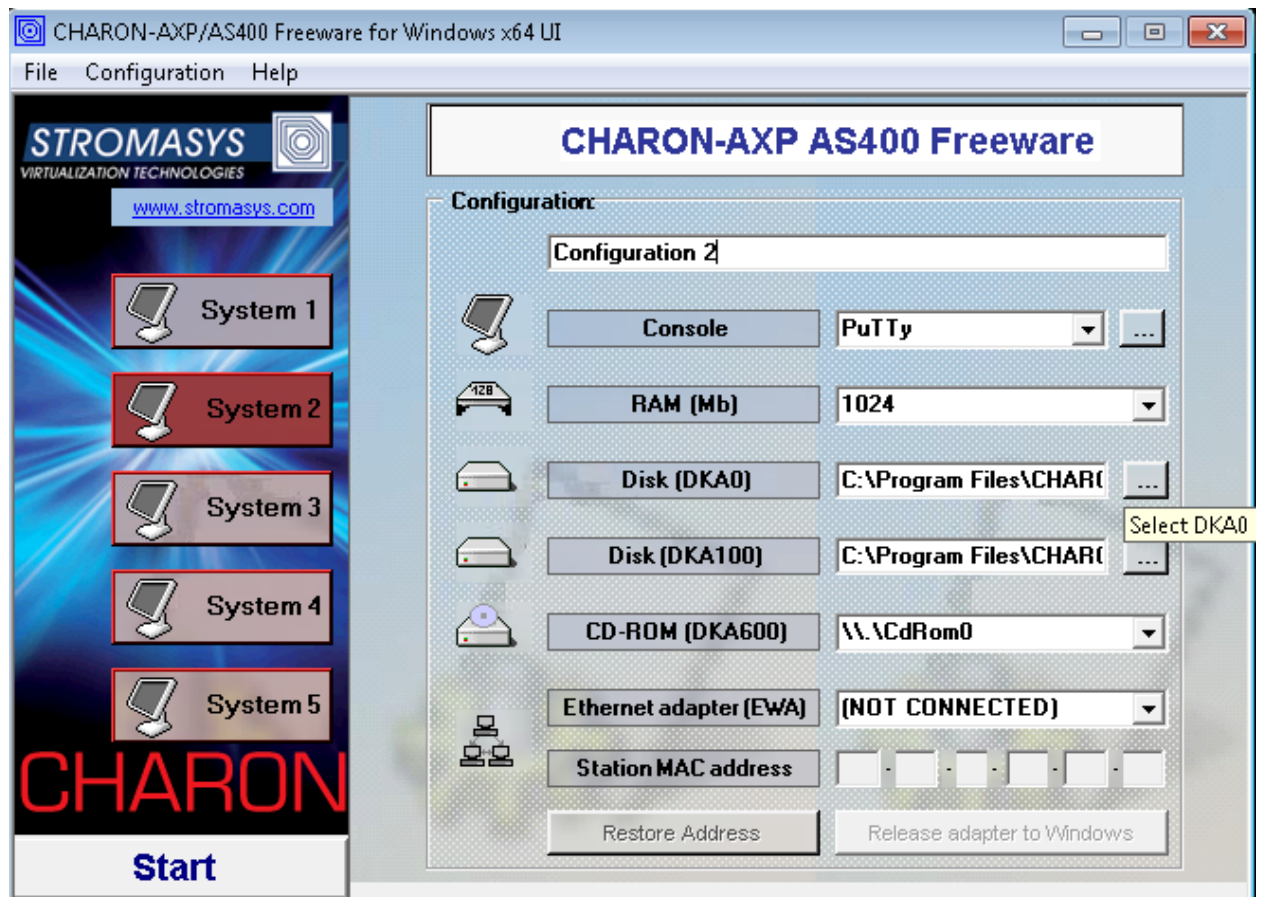
⁷ The disk container must have .VDISK extension.

9. Selecting virtual disks containers

Each configuration has two virtual disks available to virtual AlphaServer 400 as DKA0 and DKA100. Initially they are connected to DKA0.VDISK⁸ and DKA100.VDISK containers respectively.

Virtual disks can be connected to virtual disk containers other than default.

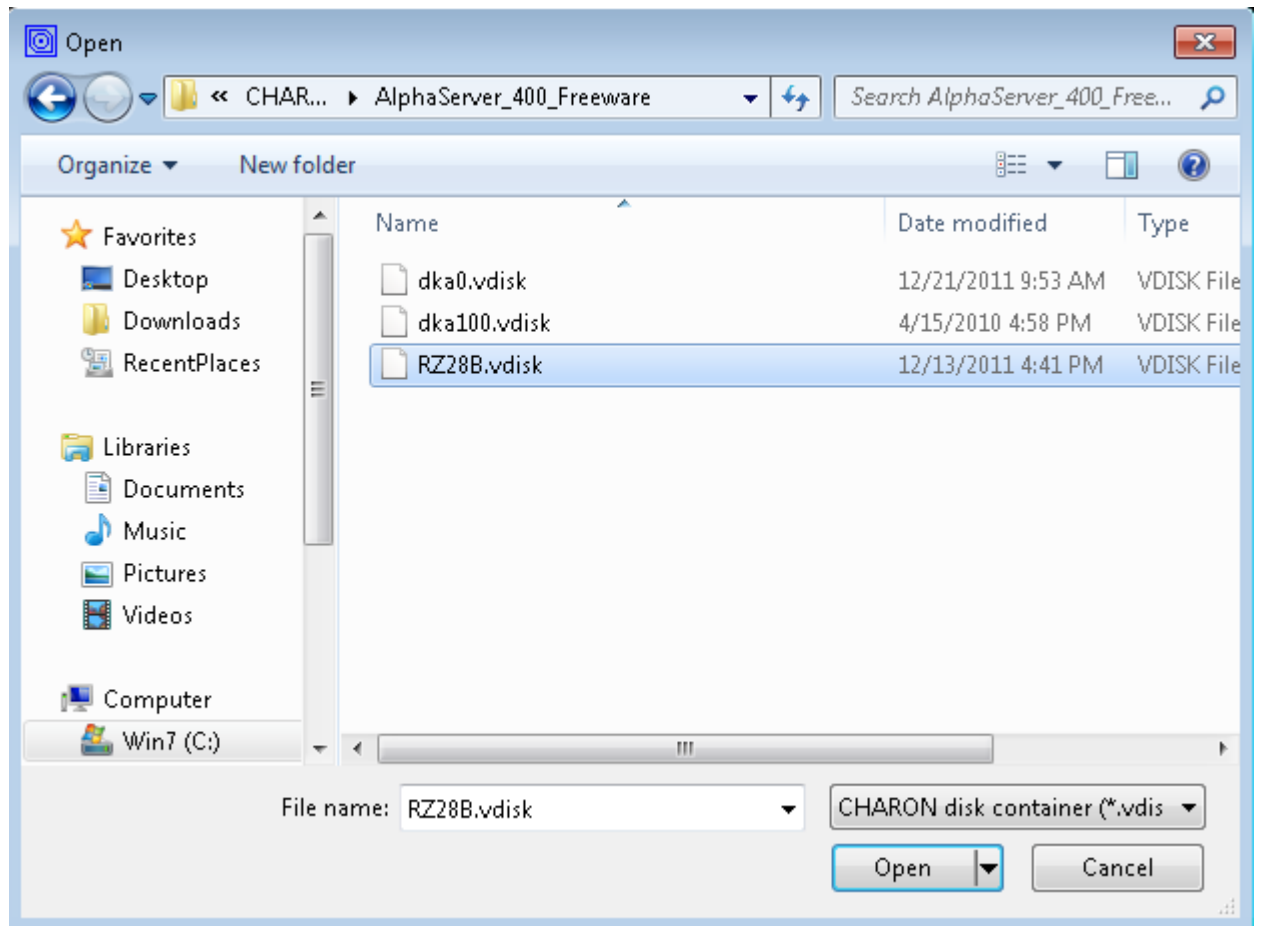
In the “CHARON-AXP/AS400 Freeware for Windows x64 ...” window click the “...” button corresponding to the virtual disk.



An “Open” dialogue appears asking for virtual disk container.

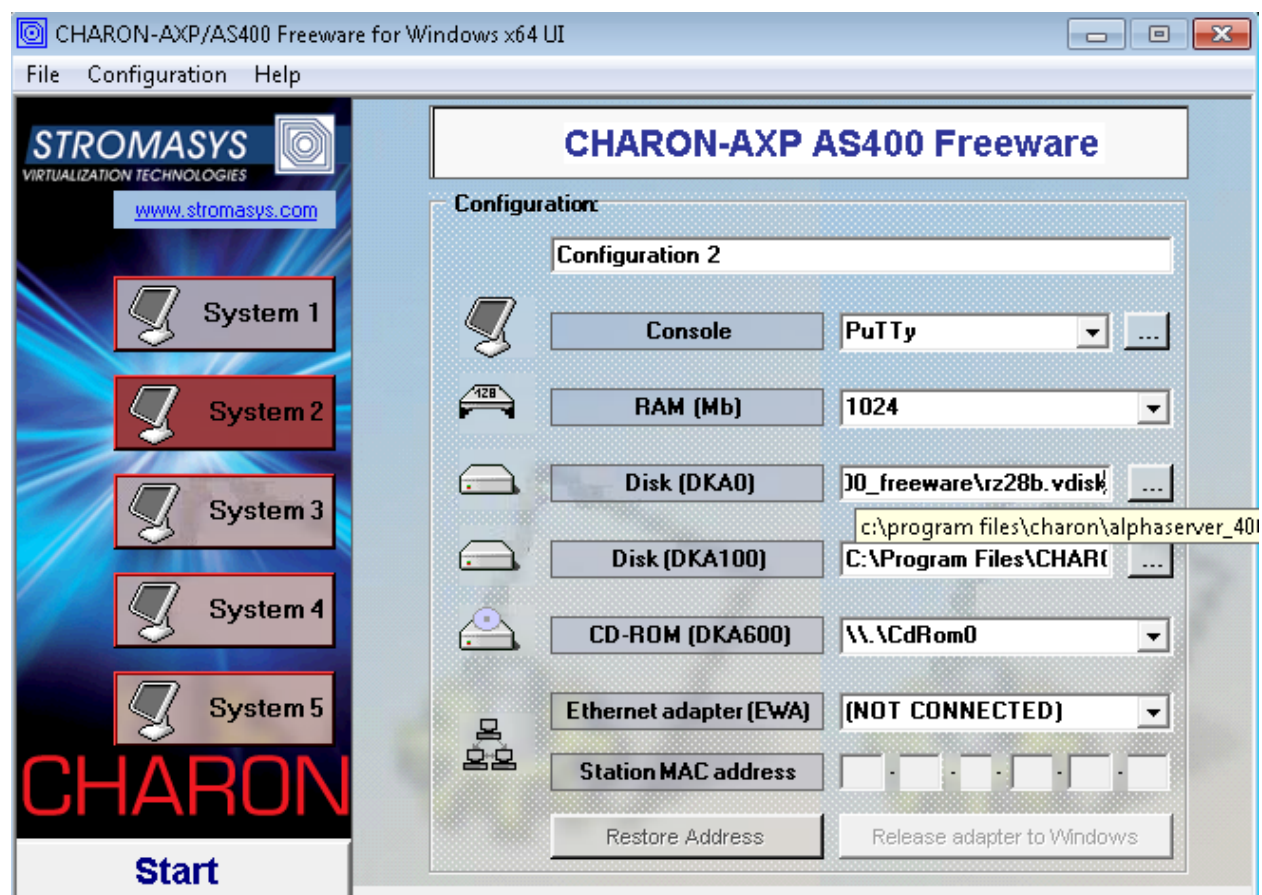
⁸ The DKA0.VDISK container contains pre-installed OpenVMS Alpha Operating System, Version 8.3.

Select desired virtual disk container and click “Open”.



The “Open” dialogue disappears. Selected virtual disk container is connected to virtual disk (DKA0 in the example).

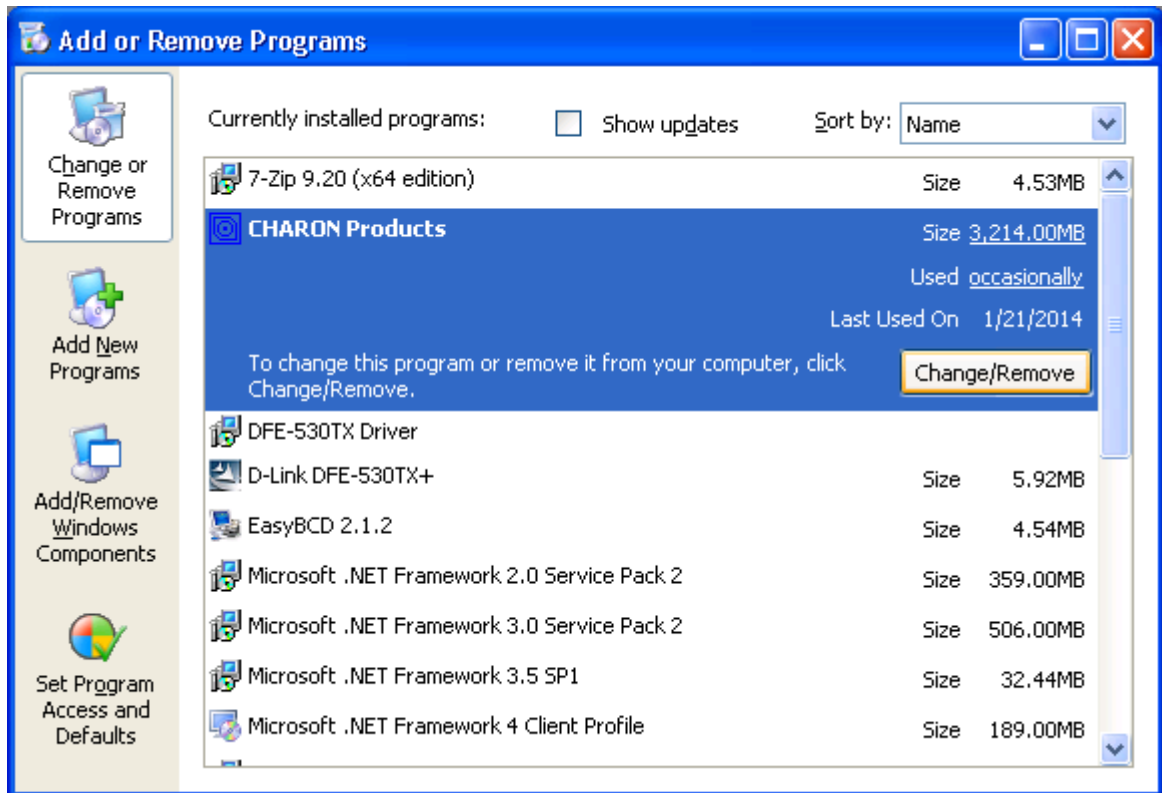
The selected value of virtual disk container is preserved.



Start virtual AlphaServer 400 with “System 2” configuration by clicking “Start” button, just as explained earlier.

10. Uninstalling the CHARON-AXP/AS400 Freeware for Windows x64

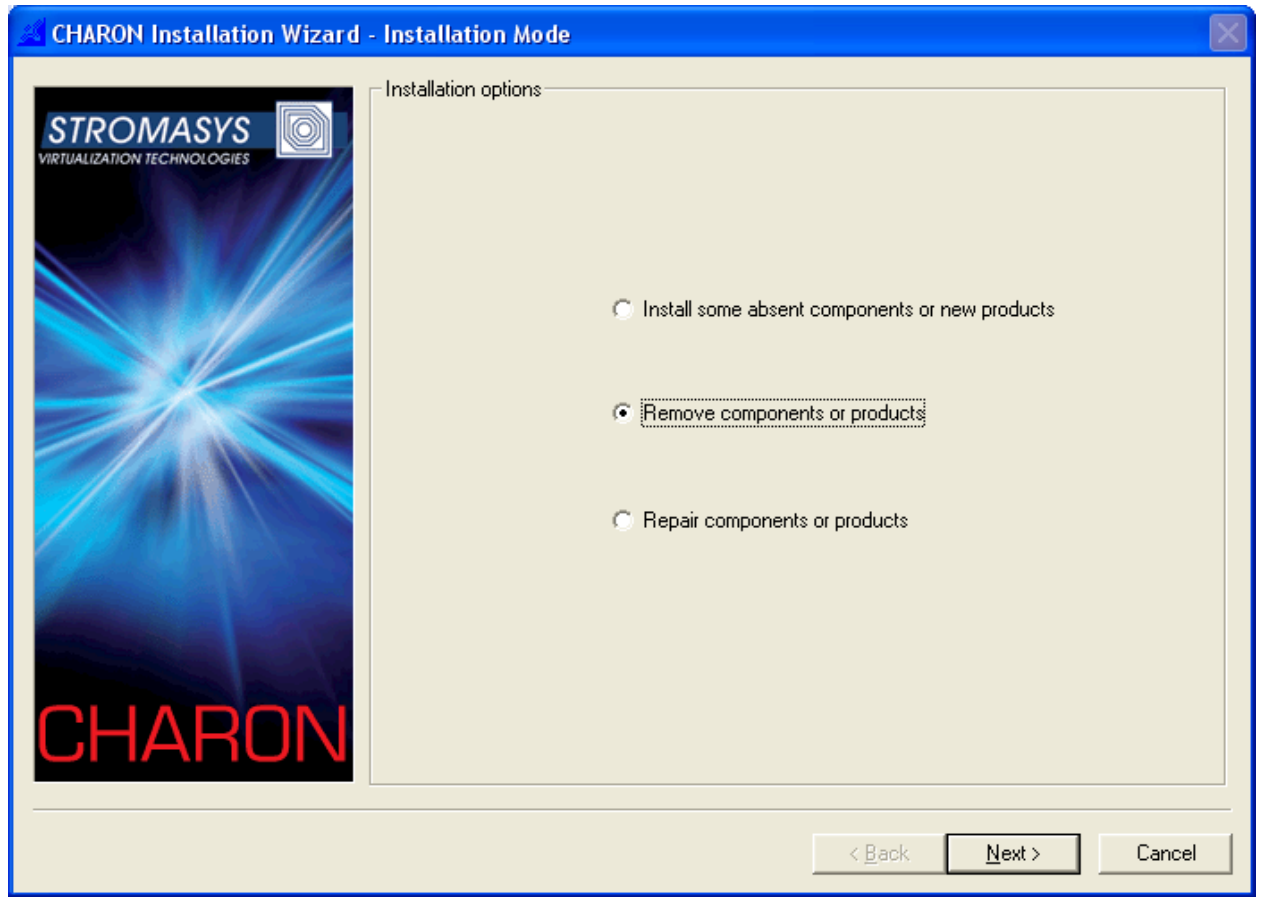
Make sure that virtual AlphaServer 400 is “powered off”, close the “CHARON-AXP/AS400 for Windows x64 ...” window, open “Control Panel”, select “Add or Remove Programs” application⁹, select “CHARON Products” and click “Change/Remove”.



CHARON Installation Wizard appears asking for desired actions.

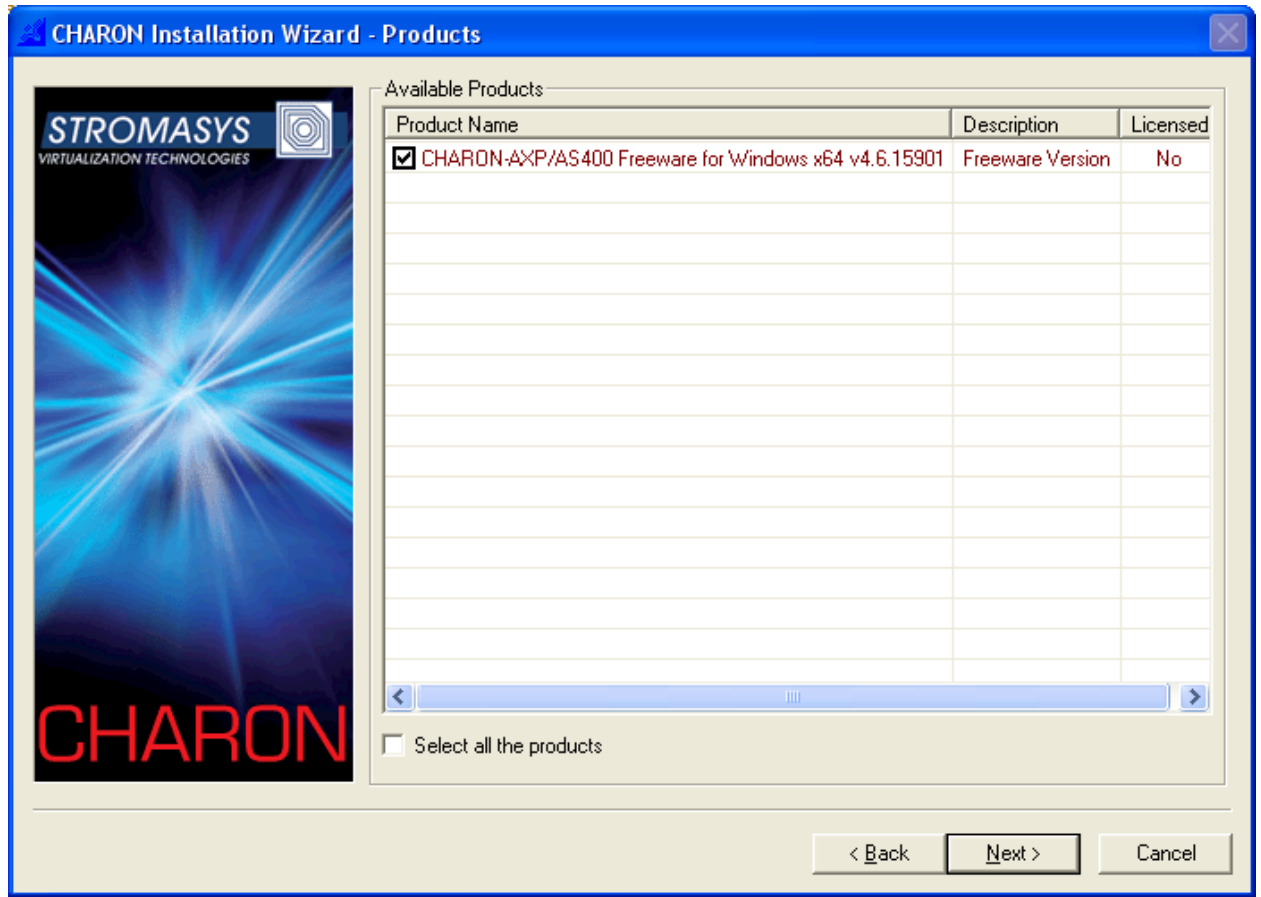
⁹ Depending on version of host operating system name of the application might be “Programs and Features.”

Select "Remove components or products", and press "Next".



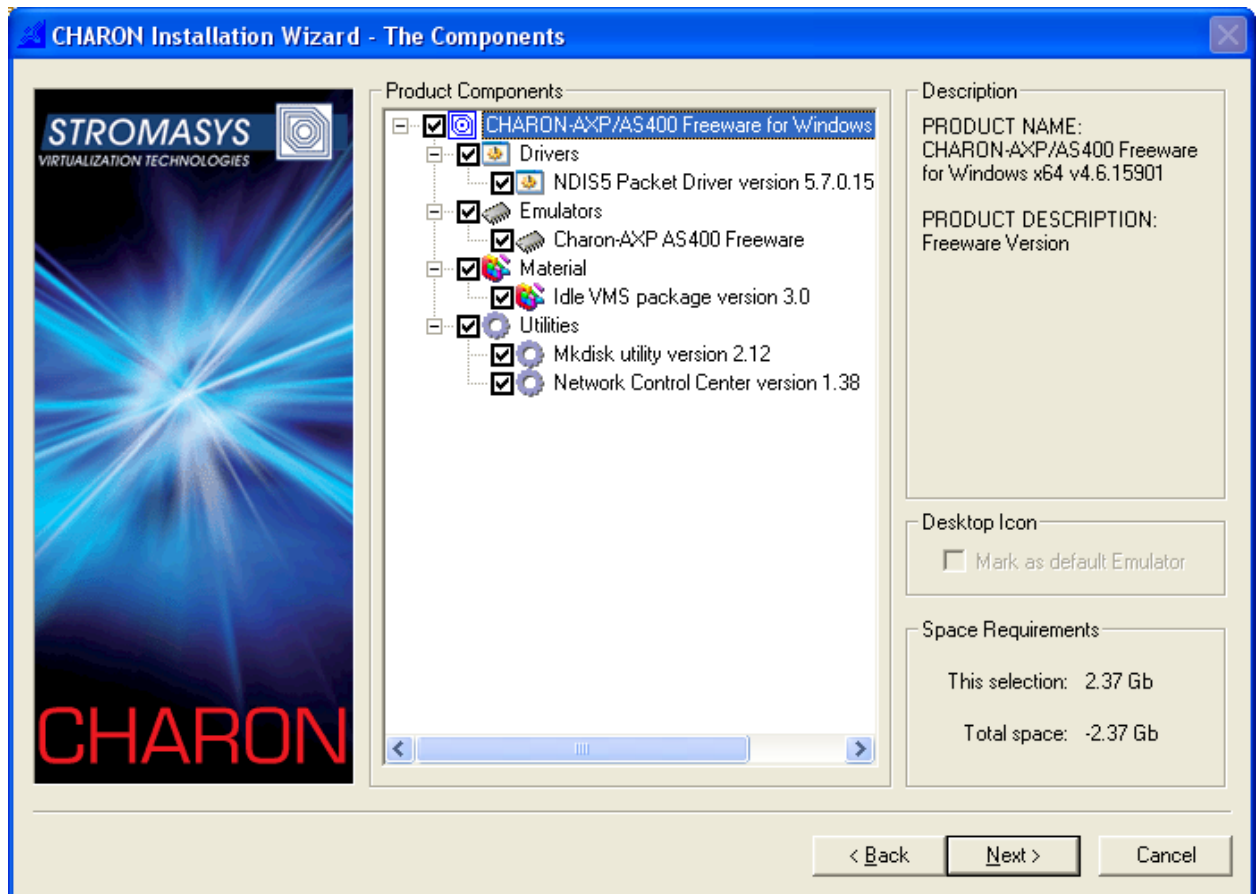
Product selection dialogue appears.

Select desired product for uninstallation by checking appropriate checkbox and click “Next”.



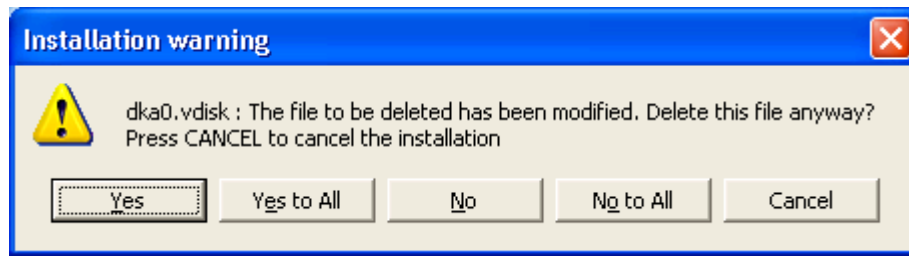
The dialogue “Components” appears.

The "Components" dialogue allows for manipulating set of components to be installed or uninstalled. For CHARON-AXP/AS400 Freeware for Windows x64 any manipulations are not recommended at this stage. So accept default selection and click "Next".



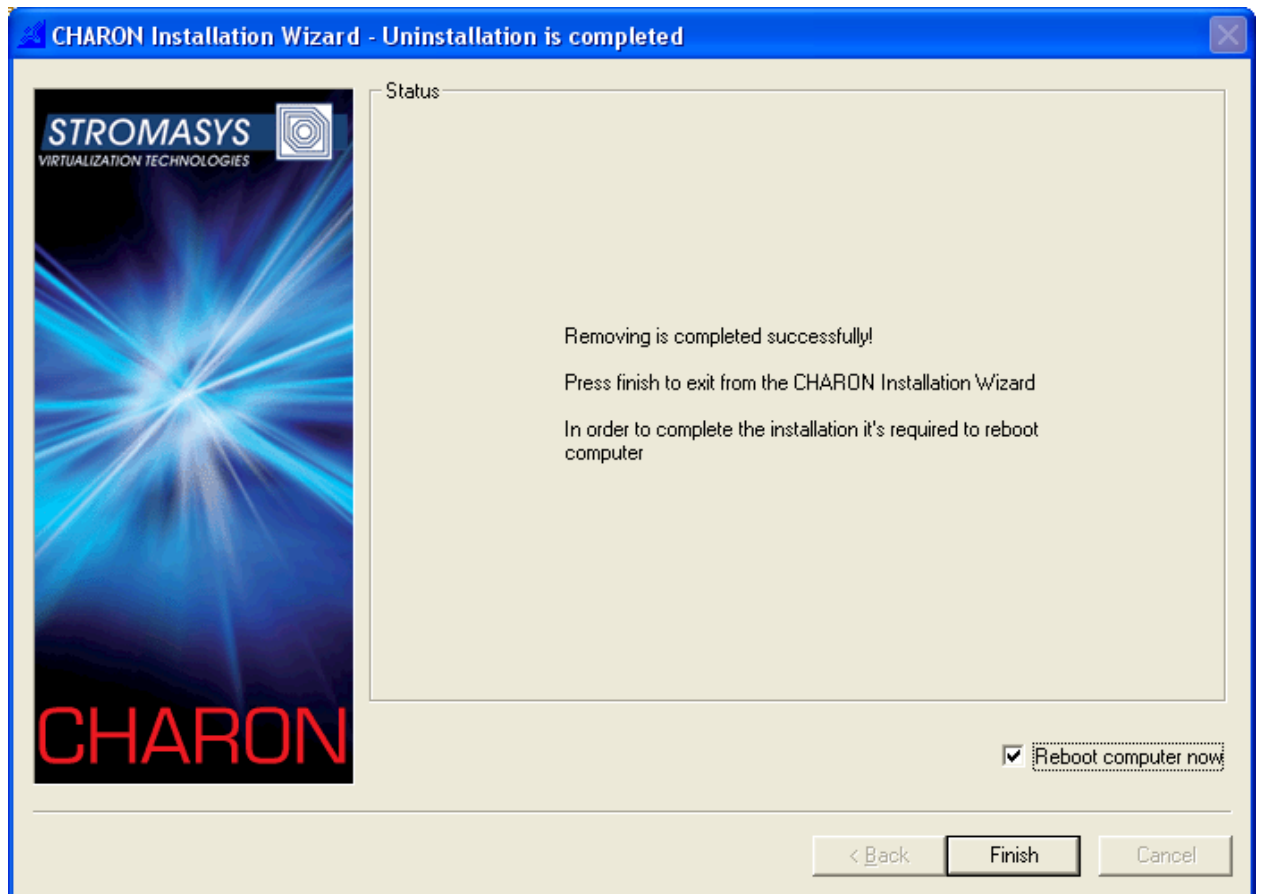
The uninstallation process begins.

Virtual ALphaServer 400 may change files originally installed by CHARON-AXP/AS400 Freeware for Windows x64. The CHARON Installation Wizard detects that and asks for confirmation before deleting modified files from the host's disk drive. You may accept default and click "Yes" or "Yes to All".



The uninstallation process continues. Upon completion of the uninstallation process "Uninstallation is completed" status dialogue appears.

The "Uninstallation is completed" dialogue informs about successful completion of the uninstallation process, CHARON-AXP/AS400 Freeware for Windows x64 software is now removed from your computer. In order to make the system ready for use, please reboot your computer.



Thank you for using CHARON-AXP/AS400 Freeware for Windows x64 software.