



# TC-V150

**VDI Cloud Computing Terminal** 

# Installation and Setup Guide

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XTENDLAN VDI solution is achieved by running desktop virtualization software vPoint together with Virtualization software like VirtualBox. It does not require any third party VDI software or GPU hardware configuration, but only needs XTENDLAN-VDI protocol, which is part of XTENDLAN VDI solution. Now users can experience perfect, smoothest desktop virtualization with the help of XTENDLAN TC-V150, a cloud terminal with only 5W power consumption.

#### 1 Configuration requirements on Host PC (or Server) hardware

The configuration of hardware of Host PC (Server), which is going to host virtual machines designated for XTENDLAN VDI solution, needs to support 64bit operating systems and VT (Virtualization Technology). The size of RAM is decided by the numbers of virtual machines to be created on the Host PC (Server). For a 10 virtual machines host, If 512Mb to 1024Mb memory is going to be assigned for each virtual machine, an amount of 8Gb to 12Gb RAM in total shall be installed on the Host PC (Server). SSD (Solid State Drive) is recommended for faster storage if the number of virtual machines to be created is above 5. SSD will house both the 64bit operation system and virtual machines for higher performance.

#### 2 The installation of vPoint 1.0.0.2 version

Before installing vPoint, 64bit operation system (like 64bit version of Windows 7 or Windows 2008R2) shall have been already installed on the Host PC (Server).

Go to the location where vPoint Installation Package resides, double click it. See Picture 1:



In the popping up "User Account Control", choose "Yes". See Picture 2:

count Control	
o you want nknown puł	to allow the following program from an plisher to make changes to this computer?
ogram name: ublisher: le origin:	vPoint Installation Package.exe <b>Unknown</b> Hard drive on this computer
v details	Yes No
	Change when these notifications appea
	count Control o you want nknown pul ogram name: ublisher: le origin: v details

Click "Next", Picture 3:



3

Choose Destination Location. We can user the default. Picture 4:

unose pestingriou rocariou	- Contraction of the Contraction
Select folder where setup will install files.	
Setup will install vPoint in the following folder.	
To install to this folder, click Next. To install to a differe another folder.	nt folder, click Browse and select
Destination Folder	
Destination Folder C:\Program Files (x86)\vPoint	Browse
Destination Folder C:\Program Files (x86)\vPoint	Browse
Destination Folder C:\Program Files (x86)\vPoint JIShield	Browse Back Next > Cance

When "Oracle VM VirtualBox 4.0.12 Setup" pops up, click "Next" to continue. Picture 5:

la	Welcome to the Oracle VM VirtualBox 4.0.12 Setup Wizard
	The Setup Wizard will install Oracle VM VirtualBox 4.0.12 on your computer. Click Next to continue or Cancel to exit the Setup Wizard.

Please NOTE: vPoint supports only VirtualBox 4.0.12, please do not use other lower version, or upgrade it

to higher version.

Settings of Virtual Box installation: just use default settings. Click "Next" to continue. Picture 6:

Select the way you	want features to be inst	alled.	
Click on the icons in	the tree below to chang	e the way features will be in	stalled.
	JalBox Application VirtualBox USB Suppo	Oracle VM VirtualBo application.	x 4.0.12
	VirtualBox Networking     VirtualBox Brie     VirtualBox Hos     VirtualBox Python Su	3 Jgec st-O ppor subfeatures selecte subfeatures require	es 120MB on has 3 of 3 ed. The e 788KB on yo
Location: C:\Pr	ogram Files\Orade\Virtua	alBox\	Brows

Also using defaults. Click "Next". Picture 7:

Custom Setup			
Select the way you want features t	o be installed.		
Please choose from the options belo	ow:		
Create a shortcut on the deskto	P		
🔽 Create a shortcut in the Quick L	aunch Bar		
		Neuta	Cancel

Click "Install", the installation of VirtualBox will start. Picture 8:



8

Installing.... Picture 9:

Oracle VM VirtualBox 4.0	.12 Setup	
Oracle VM VirtualBox 4.0	1.12	
Please wait while the Set take several minutes.	up Wizard installs Oracle VM Virtu	ualBox 4.0.12. This may
Status: Registering typ	e libraries	
Version 4.0.12	< Back	Next> Cancel

9

Uncheck "Start Oracle VM VirtualBox 4.0.12 after installation", then click "Finish".



10

Wait till vPoint installation completes, then click "Finish" to restart the computer. Picture 11:

vPoint Version(1.0.0.2)	
2	Complete Install
	The InstallShield Wizard has successfully installed vPoint. Before you can use the program, you must restart your computer.
	Yes, I want to restart my computer now.
	O No, I will restart my computer later.
	Remove any disks from their drives, and then click Finish to complete setup.
	< Back Finish Cancel

After system reboot, you can see "vPoint Management Center" and "VirtualBox" shortcuts on desktop. See Picture 12:



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Attention: vPoint Currently only support this version (4.0.12) of virtualbox

packed in vPoint Installation Package. Do not upgrade it to any higher version!

#### FIREWALL Settings:

To prevent Windows Firewall blocking the data transmitting between the host and TC-V150 terminals, we need to make some settings in the firewall.

Go to "Control Panel", then "All Control Panel Items", "Windows Firewall". Choose "Allow a program or feature through Windows Firewall":



Click "Change settings", then "Allow another program"

## Allow programs to communicate through Windows Firewall

To add, change, or remove allowed programs and ports, click Change settings.

llowed programs and features:			
Name	Home/Work (Private)	Public	*
Core Networking			
Distributed Transaction Coordinator			H
File and Printer Sharing			1
🗆 HomeGroup			
□ iSCSI Service			
🗹 Net Point		$\checkmark$	
Netlogon Service			
🗹 netpoint			
Netpoint Universal Console			
Network Discovery			
Performance Logs and Alerts			
🗹 Remote Assistance			*
	Details	Remov	ε

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The program is VHOME.EXE in two locations:

🖉 🗢 📕 « Progra	m Files 🕨 Oracle 🕨 VirtualBox 🕨	▼   47	索 VirtualBox	
L织 ▼ 📓 打开	新建文件夹		90	- 🗆 (
🟫 收藏实		修改日期	类型 (天)ほうしい	大小
🖡 下載 📑	vboxwebsrv.exe	2011/7/15 17:32	应用程序	10,324 K
📃 桌面	VHOME.exe	2012/5/30 21:06	应用程序	97 K
🗓 最近访问的位置	😰 VirtualBox.chm	2011/7/15 18:08	编译的 HTML 帮	3,774 K
	🜍 VirtualBox.exe	2011/7/15 17:32	应用程序	7,958 K
2库	VMMGC.gc	2011/7/15 17:30	GC 文件	332 K
🖬 x0.4而	4			1

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C:\Program Files\Oracle\VirtualBox\VHOME.exe

940 🖌 句今到左山,	• 共直 • 新建立件本		82	• EI /
		修改日期	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	
	(%) Excelement of the	2011/7/14 12:45	· · · · · · · · · · · · · · · · · · ·	0 51 0 V
- 6雨	VBoxSharedClipboard.dll	2012/5/3 16:02	应用程序扩展	0 K
<ul> <li>第四</li> <li></li></ul>	VHOME.exe	2012/5/30 21:06	应用程序	97 K
產				
🖬 如城市 🔭				

C:\Program Files (x86)\vPoint\VirtualBox\VHOME.exe

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#### 3 Hot to create virtual machines

Now let's move on to next step: creating virtual machines. The operation system of virtual machines could be Windows, Linux, Mac, or actually any system supported by VirtualBox. You can choose the right one as you need. You can create multiple copies of same system on the Host PC (Server), say 5 copies of Windows XP intended for 5 users. Or you can also create virtual machines of different operation systems on the Host PC (server), say 1 copy of Windows XP, 1 Windows 7, 1 Ubuntu, etc.

Click the VirtualBox shortcut on desktop to open it. Then click "New" to start the guide. Picture 17:



Name the virtual machine, and choose the right operation system. Picture 18:

😼 Create New Virtual Machine	? 🐱
VM Name an Enter a name for the you plan to install on The name of the virtu will be used by all Virtu Name	Id OS Type new virtual machine and select the type of the guest operating system to the virtual machine. ual machine usually indicates its software and hardware configuration. It tualBox components to identify your virtual machine.
OS Type Operating System: Version:	Microsoft Windows
	< <u>B</u> ack <u>N</u> ext > <u>Cancel</u>

Set the size of virtual machine RAM. Picture 19:

🔰 Create New Virtual M	achine		?
	Memory		
	Select the amount of base memo machine.	ry (RAM) in megabytes to be allocated to the vi	rtual
	The recommended base memory	size is <b>512</b> MB.	
	Base Memory Size		
	Alexa NJ	n	Contraction of the second
	ted to not red to not red to		854 MB
7	4 MB	2048 MB	

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Create hard disk for the virtual machine. When creating system drive, "Boot Hard Disk" option needs to be checked. Choose "Create new hard disk", and then click "next". Picture 20:

🧃 Create New Virtual Ma	achine
	Virtual Hard Disk
	Select a virtual hard disk to be used as the boot hard disk of the virtual machine. You can either create a new hard disk or select an existing one from the drop-down list or by pressing corresponding button (to invoke file-open window).
	If you need a more complicated hard disk setup, you can also skip this step and attach hard disks later using the VM Settings dialog.
	The recommended size of the boot hard disk is <b>20.00 GB</b> .
	Goot Hard Disk     Create new hard disk
	<u>Use existing hard disk</u>
	Empty 👻
	The second se
	Back Next > Cancel

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Click "Next" to continue. Picture 21:

🗿 Create New Virtual Disk	? .
	Welcome to the Create New Virtual Disk Wizard! This wizard will help you to create a new virtual hard disk for your virtual machine. Use the Next button to go to the next page of the wizard and the Back button to return to the previous page. You can also press Cancel if you want to cancel the execution of this wizard.
	< Back Next > Cancel

#### Choose Storage Type. Picture 22:

🧊 Create New Virtual Disk	
	<ul> <li>Hard Disk Storage Type</li> <li>Select the type of virtual hard disk you want to create.</li> <li>A dynamically expanding storage initially occupies a very small amount of space on your physical hard disk. It will grow dynamically (up to the size specified) as the Guest OS claims disk space.</li> <li>A fixed-size storage does not grow. It is stored in a file of approximately the same size as the size of the virtual hard disk. The creation of a fixed-size storage may take a long time depending on the storage size and the write performance of your harddisk.</li> <li>Storage Type</li> <li>Dynamically expanding storage</li> <li>Fixed-size storage</li> </ul>
	<back next=""> Cancel</back>

Set the size of hard disk. 5G or above is recommended. Picture 23:

🗿 Create New Virtual Disk		? <b>×</b>
	Virtual Disk Location and Size Press the Select button to select the location of a file to store the hard disk of file name in the entry field. Location	lata or type a
	windows 7 Select the size of the virtual hard disk in megabytes. This size will be reported OS as the maximum size of this hard disk. Size	to the Guest
	4.00 MB 2.00 TB	20.00 GB
	< Back Next >	Cancel

23

Check the Summary. Click "Finish". Picture 24:

谢 Create New Virtual Disk		?
	Summary	
	Type: Dynamically expanding storage Location: C: \Users \huiyuan \VirtualBox VMs \windows 7\windows 7.vdi Size: 20.00 GB (21474836480 B)	
	If the above settings are correct, press the <b>Finish</b> button. Once you press it, disk will be created.	a new hard
	< Back Finish	Cancel

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Now, we can see a virtual machine in the list. Picture 25:

A 43 4		
New Settings Start Discard		Contraction Contra
windows 7	📃 General	Preview
Powered Off	Name: windows 7 OS Type: Windows 7	
	System	
	Base Memory: 854 MB Boot Order: Floppy, CD/DVD-ROM, Hard Disk	windows 7
	Display Video Memory: 16 MB Remote Desktop Server: Disabled	
	(2) Storage	
	IDE Controller IDE Secondary Master (CD/DVD): Empi SATA Controller SATA Port 0: wind	ty ows 7.vdi (Normal, 20.00 GB)
	Audio	
	Host Driver: Windows DirectSound	

) 🧔	3 ( .ngs S	P Start Discard			🚱 Details 💿 Snapshots	
T vine	lovs 7		🔲 General		📃 Preview	
<b>6</b> © 1	ewe 🚱	Settings	Ctrl+S	b.		
	8	Remove	Ctrl+R	1		
		Start Discard Pause Refresh Show Log Show in Explorer Create Shortcut on	Ctrl+J Ctrl+P Ctrl+L Desktop	MB VD-ROM, Hard Disk /AMD-V, Nested ng 28 MB Server: Disabled		E V
			IDE 控制器 IDE Seconda SATA 控制器 SATA Port	ury Master (CD/DVD): 1 0:	VBoxGuestAdditions.iso (38.87 MB) windows 7.vdi (Normal, 20.00 GB)	
			🖗 Audio			
			Disabled			
			🗗 Network			

Now, we need to change settings of the virtual machine. Click "Settings", picture 26:

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Click "Storage" on the left, then click "CD drive" in the "Storage Tree". In the "Attributes", choose a system ISO image for installing the operation system. Picture 27:

🧾 General	Storage	
<ul> <li>System</li> <li>Display</li> <li>Storage</li> <li>Audio</li> <li>Network</li> <li>Serial Ports</li> <li>USB</li> <li>Shared Folders</li> </ul>	Storage Tree	Attributes CD/DVD Drive: IDE Secondary Master  CD/DVD Drive: IDE Secondary Master Information Type: Choose a virtual CD/DVD dist Host Drive 'D:' Windows7x64-EN.iso Location: Attached To: Remove disk from virtual driv
	Select a settings category from the list on item to get more information.	the left-hand side and move the mouse over a settings

General	Storage	
<ul> <li>System</li> <li>Display</li> <li>Storage</li> <li>Audio</li> <li>Network</li> <li>Serial Ports</li> <li>USB</li> <li>Shared Folders</li> </ul>	Storage Tree	Attributes CD/DVD Drive: IDE Secondary Master Information Type: Image Size: 3.00 GB Location: C:\ISO\windows7x64-EN.iso Attached To:
		OK Cancel Help

Click "OK". You can see the ISO image is successfully loaded into to the CD drive. Picture 28:

Next step, choose "Audio", uncheck "Enable Audio". We will install TC-V150 its own audio device, so no need to enable audio device here. See picture 29:

General General	Audio
<ul> <li>System</li> <li>Display</li> <li>Storage</li> <li>Audio</li> <li>Network</li> <li>Serial Ports</li> <li>USB</li> <li>Shared Folders</li> </ul>	Enable Audio Host Audio Driver: Windows DirectSound - Audio Controller: Intel HD Audio
	Select a settings category from the list on the left-hand side and move the mouse over a settings item to get more information.

Surtam	Network
<ul> <li>System</li> <li>Display</li> <li>Storage</li> <li>Audio</li> <li>Network</li> <li>Serial Ports</li> <li>USB</li> <li>Shared Folders</li> </ul>	Adapter 1 Adapter 2 Adapter 3 Adapter 4 Enable Network Adapter Attached to: Bridged Adapter Name: Nat Name: Nat Bridged Adapter Internal Network Host-only Bridged Adapter
	Select a settings category from the list on the left-hand side and move the mouse over a settings item to get more information.

Then go to "Network", choose "Bridged Adapter" for the virtual machine. Picture 30:

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And also in the "USB" option, uncheck "Enable USB Controller". Finally, click "OK" to finish. See picture 31:

🧕 General	USB	
<ul> <li>System</li> <li>Display</li> <li>Storage</li> <li>Audio</li> <li>Network</li> <li>Serial Ports</li> <li>USB</li> <li>Shared Folders</li> </ul>	Enable USB Controller  Enable USB 2.0 (EHCI) Controller  US8 Device Filters	
	Select a settings category from the list on the left-hand side and move the mouse over a set item to get more information.	tings

Now, we can start the virtual machine and begin the installation of operation system. The installation process is just the same as you were installing it on physical PC (Server).

### Install Guest Additions:

Guest Additions need to be installed to the virtual machine to function higher performance. Start the virtual machine we have just finished installing operation system. See picture 32:



Click "Devices", then choose "Install Guest Additions". See picture 33:



33

Click "Run VBoxWindowsAdditions.exe" in the popup window. See picture 34:



Click "Next". Picture 35:

🥸 Oracle VM VirtualBox Guest /	Additions 4.0.12 Setup
Produce virtualBox	Welcome to the Oracle VM VirtualBox Guest Additions 4.0.12 Setup Wizard This wizard will guide you through the installation of Oracle VM VirtualBox Guest Additions 4.0.12. It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer. Click Next to continue.
	Next > Cancel

#### Do not check "Direct3D Support". Picture 36

💱 Oracle VII VirtualBox 🤇	Guest Additions 4.0.12 Setup	
Choose Components Choose which features of Orac install.	cle VM VirtualBox Guest Additions 4.0.12 you wa	int to 💐
Check the components you wa install. Click Install to start the	nt to install and uncheck the components you d installation.	on't want to
Select components to install:	VirtualBox Guest Addition: Direct3D Support (Experir See its des	ur mouse iponent to cription.
Space required: 126.0KB	T	
VirtualBox Windows Additions 4.0	12	Cancel

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Choose an install location. Default is OK. Picture 37:

🧐 Oracle VM VirtualBox Guest Additions 4.0.12 Setup
Choose Install Location Choose the folder in which to install Oracle VM VirtualBox Guest Additions 4.0.12.
Setup will install Oracle VM VirtualBox Guest Additions 4.0.12 in the following folder. To install in a different folder, click Browse and select another folder. Click Next to continue.
Destination Folder
C:\Program Files\Orade\VirtualBox Guest Additions
Space required: 301.0KB Space available: 6.9GB
VirtualBox Windows Additions 4,0,12

When the installation complete, click "Finish" to reboot the virtual machine. Picture 38:



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Now, we will install TC-V150 Audio Device to the virtual machine.

Start the virtual machine and log into the system. Open "vPointGuestInstallationPackage" and then double click "install" to run the installation (you can get "vPointGuestInstallationPackage" from XtendLan CD or download from our website. Here is the

Link <u>ftp://ftp.asm.cz/XtendLan/TC-V150/Software</u>). See picture 39& 40:



Name	Date modified	Туре	Size
🔊 install	5/17/2012 5:38 PM	Shortcut	1 KB
🚳 muinshlp.dll	1/20/2010 6:00 AM	Application extens	44 KB
📰 npaudio	1/29/2012 9:15 PM	Setup Information	6 KB
rminst_only_one_device	4/11/2010 8:04 AM	Application	23 KB
VP_AUDIO.sys	2/29/2012 9:08 PM	System file	22 KB



TC-V150 Audio is installing. Picture 41:

<b>愛</b> 回收站 。	cound_install
Adobe Reader X	
<b>会</b> 我的文档	Installing virtual auido device0% completed

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Click "Continue Anyway" when the following pops up. See picture 42:

Har dwa	re Installation
	The software you are installing for this hardware: vPoint Virtual Audio (WDM)
	has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.) Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
-	Continue Anyway STOP Installation

When the installation is finished, you can see a vPoint audio device in Device Manger. Now reboot the virtual machine.

More often, we will be using more than 1 copy of same Operation System, say windows 2003, on the Host PC (server). One quick way to have multiple copies of Windows 2003 is to clone it. When you have finished installing Windows 2003 and necessary configuration, we can move on to clone it.

Click "start" > "All Programs" > "Accessories", then right click "Command Prompt", choose "Run as Administrator". See picture 43:



Run "CD C:\Program Files\Oracle\VirtualBox", Picture 44:



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Run "VBoxManage clonehd" to do the clone work. Here is the format: VBoxManage clonedhd "path and name of source file" "name and destination of target file". We assume the virtual disk file of Windows 2003 is in

this location: "C:\VBOXmachines\hu\hu.vdi", and "hu.vdi" is the file name. Destination is "C:\VBOXmachines\marco\marco.vdi". Here is the full command: VBoxManage clonehd "C:\VBOXmachines\hu.vdi" "C:\VBOXmachines\marco\marco.vdi". See Picture 44:



Note: if you have chosen to use default when installing VirtualBox, you can find the virtual disk files of virtual machines at this location: C:\Documents and Settings\Administrator\VirtualBox VMs\.

When the clone is done, we need go back to "Oracle VM VirtualBox Manager". Click "New", type name "marco" (or nay name you want) for this machine, and then choose "windows 2003". See picture 45:

	ual Machine
VM Name and	OS Type
Enter a name for the i	new virtual machine and select the type of the guest operating system you plan to
The name of the virtu	al machine usually indicates its software and hardware configuration. It will be use
by all VirtualBox comp	onents to identify your virtual machine.
Name	
marco	
OS Type	
OS Type Operating System:	Microsoft Windows 👻 🌅
OS Type Operating System: Version:	Microsoft Windows  Windows 2003

Choose "Use existing hard disk", open the archive and find the location of the virtual disk we have just cloned. Then click "OK" to save. Virtual machine with name "marco" will appear in the list. See picture 46 and 47:

Virt	ual Hard Disk
Selec new ł invok	t a virtual hard disk to be used as the boot hard disk of the virtual machine. You can either create a hard disk or select an existing one from the drop-down list or by pressing corresponding button (to e file-open window).
If you using	u need a more complicated hard disk setup, you can also skip this step and attach hard disks later the VM Settings dialog.
The r	ecommended size of the boot hard disk is 20.00 GB.
1	Boot Hard Disk
	Create new hard disk
0	
0	Use existing hard disk

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Now we have finished the clone of virtual machine.

#### 4 The Setting Up of Accounts

vPoint Management Center is the User Account management console for TC-V150. We can use it to set up user accounts and assign virtual machines to the users.

Double click the shortcut of "vPoint Management Center" on desktop to open the management console. See picture 48:

■ flosts □ Local Host hu marco ⊕ User Accounts	File Edit Help		
	<ul> <li>□ Local Host</li> <li>hu marco</li> <li>⊕ User Accounts</li> </ul>	No detail view	

"Hosts" shows a list of Host PCs (Servers). "Local Host", which is in the list, is the Host PC we have been operating. Here we can see 2 virtual machines shown in the list with names "hu" and "marco".

"User Accounts" lists all the user accounts. There are two types of user account: one is Administrator, the other is normal user who will be using TC-V150 terminal to log onto virtual machines. The first step is to set up an Administrator type account, who will have the right of accessing all the virtual machines created on the Host PC (Server). Right click on "Administrators", choose "new". Now you can see there is account name "unnamed" in the list. Click it, and then do the rename operation and code setting up in the right. Here we change the name to "XtendLan". When password is set, click "Apply" to take effect. See picture 49& 50.



F26 (1.1)		
Edit Help Noits Local Kost marco Viser Accounts Administrators unaned Users	User Name sunds Password Confirm Password Bachine(s) denzed to be accessed	Date Created : 18/05/2012 15:50:04 Date Modified : 18/05/2012 15:50:04
		Apply Cane

Now we will create two User accounts: "hu" and "marco", and assign the two virtual machines to them. You can see "hu" is assigned to user hu, and "marco" is assigned to user marco. The steps are the same as the way we just created "XtendLan". Picture 51 and 52:

Edit Help		
Lon Help Nosts User Accounts Administrators sunde Users unamed	User Name hu Password Confirm Password Machine(s) denied to be accessed : Machine(s) denied to be accessed :	Date Created : 18/05/2012 15:51:43 Date Modified : 18/05/2012 15:51:43 Machine(s) allowed to be accessed : hn

Edit Help		
Edit Help	User Name marco Password Confirm Password Machine(s) denied to be accessed : hu	Date Created : 18/05/2012 15:52:31 Date Wodified : 18/05/2012 15:52:58 Machine(s) allowed to be accessed : marco
		Apply Cane

As shown in picture, "Machines denied to be accessed" lists the virtual machines the user has not right to access. We need to choose one virtual machine from the list and use ">>" to move it to "Machines allowed to be accessed". Click "Apply" to take effect. When this is done, the chosen virtual machine is assigned to this user. The above picture shows "marco" is assigned to user marco. Of cause, you can assign more than 1 virtual machines to one user.

#### 5 Setting Up of TC-V150 Terminal

Please make sure that you have connected monitor, keyboard, mouse, and Ethernet cable to TC-V150 Terminal before you power on TC-V150. "Server List" will show up when TC-V150 is powered on and initialized. See picture 53:

Log In <u>B</u> efresh			<u>S</u> etup
Log In Refresh Status: Find 1 server(s) in LAN.	Local IP: 192.168.1.71	5N:4105232	<u>S</u> etup

Server with name "XtendLan-PC" as shown in the list is the Host PC (Server) on which we have installed TC-V150Server. Choose it and click "Log In".

Enter "User Name" and "Password" and then press "Confirm". See picture 54:

	Qt	Auth	entication		?	×	UG)
- Server	Login Server User Name: Password:	XtendLan  ●●●●●				]	
		<u>C</u> onfirm		C <u>a</u> ncel			

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The coming up new window show all the virtual machines which have been assign to user "XtendLan". Picture 55:

1	marco		Windows	2002		Dowered	0#
l	Indico	2003	WIII00442	2005	 •	Fowered	OII
	onnect				 		Log Qut

55

Choose one virtual machine from the list and then click "Connect". You will now be connected to this virtual machine. If its original status is "Power Off", a "Connect" click will automatically start the virtual machine.

Picture below shows the "Setup" page of TC-V150. You can press "Setup" button as shown in Picture 53 to come to this page.

Setup	? ×
Local IP:  Use Dynamic IP Address Use Static IP Address:  IP Address: Subnet Mask: Gateway:	Monitor Settings: Screen Resolution: 1440x900 V Set Language: Language Selection: English English Chinese(PRC)
Server IP: Search Servers in Lan Server IP / Name IP / Name: Log On User Name: Password:	Local Terminal Setup Protection: Enable Password Protection Password: Comfirm: Firmware Version Kernel Version: DA01KN20120517 Program Version: Update Firmware
<u>S</u> ave	Cancel

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Here users can set up the way TC-V150 getting its IP address, screen resolution, language, Server IP, etc.

#### 6 How to uninstall vPoint 1.0.0.2

There are two ways to uninstall vPoint. One is to run vPoint Installation Package and when the following window pops up, choose "Remove" to uninstall vPoint. The other way is to go to "Control Panel", and then "Programs". From the program list, find "vPoint" and click on it.

When it starts, choose "Remove", then click "Next". Picture 57:

vPoint Versio	un (1.0.0.2)	-×
Welcome Modify, repa	air, or remove the program.	A-A
Welcome to installation. (	the Diana Setup Maintenance program. This program lets you Click one of the options below.	modify the current
Modify		
13	Select new program features to add or select currently installe remove.	ad features to
⊘ Repair	Reinstall all program features installed by the previous setup.	
Remove	Remove all installed features.	
nstalio meio	< Back Next >	Cancel
	57	

#### Click "OK" to confirm uninstall.

Point Version (1.0.0.2)	×
Welcome Modify, repair, or remove the program	n. 🔰 🕹
Welcome to the Diana Setup Mainte installation. Click one of the options I	enance program. This program lets you modify the current below.
Confirm Uninstall	
Do you want to completely remo	OK Cancel
Remove     Remove all installed fe	eatures,

Uninstalling process will begin. VirtualBox will also be removed. Click "Next" to continue. Picture 59:



59

#### Choose "Remove"

Modify, Repair or F Select the operatio	temove installation n you wish to perform.
<b>P</b>	<b>Regair</b> Repairs errors in the most recent installation state - fixes missing or corrupt files, shortcuts and registry entries.
	<b><u>Remove</u></b> Removes Oracle VM VirtualBox 4.0.12 from your computer.
Version 4.0.12	< <u>B</u> ack   <u>N</u> ext >   <u>C</u> ancel

Choose "Yes". Picture 61:

•

Select the operatio	t <b>emove install</b> n you wish to pe	rform.		
Drack	e VM VirtualB	lox 4.0.12 Setup		×
	Are you sure 4.0.12 installa Y	you want to cancel Or ation? 'es <u>No</u>	racle VM VirtualBo	)X
and the second states of the		4 De ale	1 41-1-5	C

61

Uninstall of VirtualBox is ongoing

	Setup Contraction Contraction
Removing Oracle VM Virtu	alBox 4.0.12
Please wait while the Setu take several minutes.	p Wizard installs Oracle VM VirtualBox 4.0.12. This may
Status:	

When uninstall of VirtualBox finishes, a pop up will show asking if you want to restart the machine. Please click "No" as vPoint uninstall does not finish yet. Picture 63:



63

Continue with the un-installation of TC-V150Server. When it finishes, click "OK" to restart computer. Picture 64:



#### Appendix 1: Add more virtual hard drives to virtual machine

In production environment, we may need more storage space (more often hard drives) to store user data. In the previous steps, we have set up one virtual hard drive for the virtual machine, which has been used by the operation system (drive C). So, adding more storage space means we need to add at least one more virtual hard drive to this virtual machine so that we can have storage space for user data. To store user data in a different virtual hard drive instead of drive C is also a safety measure to protect the user data from damages as caused by system failure or a snapshot restoring operation.

Click on the virtual machine for which you going to add virtual hard drive, then "Settings", "storage", "IDE controller", See picture 65:

🧾 General	Storage	
<ul><li>System</li><li>Display</li></ul>	Storage Tree 2	Attributes
<ul> <li>Storage</li> <li>Audio</li> <li>Network</li> <li>Serial Ports</li> <li>USB</li> <li>Shared Folders</li> </ul>	winxp.vdi	Type:
	Add CD/DV	/D Device
	Select a settings categor Add Hard I	Disk 4

65

Choose "Create new disk", Picture 66:



Follow the Wizard to complete the process. Picture 67:



When it is done, you can see a new hard drive is attached to the IDE Controller. Picture 68:



After all these have been done, we still need to log onto the virtual machine to activate the newly added virtual hard drive. Here are the steps:

Start the virtual machine with newly added virtual hard drive. Click "Start", "All Programs", "Administrative tools", then "Computer management". See picture 69:



In the popup window, choose "Disk Management". A new window called "Initialize and Convert Disk Wizard" will pop up. Follow the Wizard to complete the process.



When it is done, a new disk "Disk 1" will appear in the drive list. The status is "Unallocated".

🚇 Computer Management					
E File Action View Window He					
		v.		-	
Computer Management (Local)	Volume	Layout	Туре	File System	Status
🖃 🌇 System Tools	🖃 (C:)	Partition	Basic	NTES	Healthy (
<ul> <li>Event Viewer</li> <li>Shared Folders</li> <li>Coal Users and Groups</li> <li>Performance Logs and Alert:</li> <li>Device Manager</li> <li>Storage</li> <li>Removable Storage</li> <li>Disk Defragmenter</li> </ul>	VBOXADDITIONS_4. (D:)	Partition	Basic	CDFS	Healthy
⊕ Services and Applications	C:) Basic 9.99 GB Online Conline	8 NTF5 7 (System)			
	Dasic 10.00 GB Online Unalloc	5B ated			
< >>	📕 Unallocated 📕 Primary p	artition			

71

Right click this new drive, and then choose "New partition". Follow the Wizard to complete the process.

Basic 9,99 GB Online	(C:) 9.99 GB NTFS Healthy (System)			
Disk 1 Basic 10.00 GB Online	10.00 GB Unallocated	New Partition		
Unallocated 📕 Primary partition		Properties		
		Help		

7	2
1	2
•	_

When it is done, "Disk 1" will be activated and formatted. You can see a "New Volume (E:)" is available now.

📙 Computer Management						
📕 File Action View Window H	elp				-	9×
	5					
Computer Management (Local)  Computer Management (Local)  System Tools  Computer Viewer  Shared Folders  Cocal Users and Groups  Performance Logs and Alert:  Device Manager  Storage  Reformance Logs and Alert:  Performance Logs and Alert: Perfor	Volume (C:) New Volume (E:) VBOXADDITIONS_4. (D:)	Layout Partition Partition Partition	Type Basic Basic Basic	File System NTFS NTFS CDFS	Status Healthy (System) Healthy Healthy	Capa 9.99 10.0( 39 MI
<ul> <li>■ Keinovable Scorage</li> <li>■ Disk Defragmenter</li> <li>■ Disk Management</li> <li>■ Services and Applications</li> </ul>	Conline	B NTFS y (System)				
<	Disk 1 Basic 10.00 GB Online Primary partition	olume (E: GB NTFS Y	)			

#### Appendix II Add "Shared Folders" to the virtual machine

In production environment, we may need to have a storage space where all users (virtual machines) can access files which are shared among all the users (or group of users). In the VDI solution, we can achieve this by creating a "shared folder" in the host PC (Server) hard drive and then share it among the users (or group of users).

In the settings page of virtual machine, click on "Shared Folders", then click on the Add symbol. Picture 74:

System     Folders List       Display     Name       Storage     Name       Audio       Network       Serial Ports       USB	Nount Access
Storage     Name     Path     Auto-I       Audio     Machine Folders     Machine Folders       Network     Serial Ports     VSB	Mount Access
Audio     Machine Folders     Network     Serial Ports     USB	G
Network Serial Ports USB	(d) (d)
Serial Ports USB	
9 USB	
Shared Folders	
select a settings category from the list on the left-hand side and move the mos item to get more information.	se over a settings
	-1092

74

Choose the location:

	8 <b>X</b>
<not selected=""></not>	(F
<not selected=""></not>	
🐼 Other 🔿	
Read-only	
🖳 Auto-mount	
······	
OK.	Cancel
	<not selected=""> <not selected=""> Other Read-only Auto-mount</not></not>



Choose "Auto-mount". Then click "OK" to finish.



We can see in the "Folders List", the folder we've just chosen is shown. See picture 78:



Start the virtual machine, we can see "SharedFolder on 'vboxsrv' (F:)" as Network Drives. Picture 79:



#### Appendix III Take Snapshots and restore Snapshots of Virtual Machines:

Operation Systems like Windows may suffer from various kinds of problems like system failure or virus affection. VirtualBox has a backup function called "Snapshot". We can take a snapshot when we have installed all the programs and have done all the configurations.

Since VirtualBox will take snapshot for the whole machines (including all hard drives), we need remove all the Virtual Drive except Drive C (system drive) before taking snapshot—we do not want the other drives with user data to be affected by the snapshot.

Go to the Settings of virtual machines, click on "Storage", remove all the drives except the system drive "winxp.vdi". See picture 80 & 81:





Then go back to VirtualBox Manager, choose the virtual machines that we are going to take snapshot of. Click on the "Camera" button:



The popup window shows Snapshot Name and you can also input some words as Snapshot Description. Click "OK" to finish. Now you can see "Snapshot 1" in the list. Picture 83 & 84:

🗿 Take Snapshot of Virtual Machine 🔤 🖓	
Snapshot Name	
Snapshot Description	
83	
New Settings Start Discard	
Ubuntu Aborted	0 5 6 9
wbuntu_1 Aborted	Snapshot 1 (5 second) Current State
winxp (Snapshot 1)	
84	

After the Snapshot is done, we need to add back the removed virtual drive.

Just like the way we add Drive D (data drive) to the virtual machines, we need to go to the "Settings", and then" Storage". Here we need to click "Choose existing disk". Picture 85:



Go to the folder, and add the virtual drive we have removed earlier:



Now you can see the virtual drive is back:

General	Storage
System Display	Storage Tree
Storage Audio	winxp.vdi
Network Serial Ports	
USB Shared Folders	

When the virtual machines suffer a system failure or corruption, we can restore the snapshot. Remember, a newly restored virtual machine is of settings without data drive (often drive D). So we need add back the data drive. Just follow the steps above to accomplish this.

Appendix IV Use "vPoint Control" to stop the running of vPoint or to restart the running of vPoint

vPoint will start running automatically when the host is powered on and will take control of all the virtual machines which have been created and configured by VirtualBox manager. At this time, if we want to edit the settings of a certain virtual machine in VirtualBox Manager, we need to have VirtualBox Manager take back the control of virtual machines. We can user "vPoint Control" function to achieve this.

You can find vPoint Control in "vPoint Management Center" in "All Programs".



88

Click on "Stop vPoint":

🚴 vPoint Control	×
Stop vPoint	
89	

A warning pops up.

/aming !			
All Virtual Machines will be sh	iut down if you j	proceed with th	nis operation.
	0	ОК	Cancel

Make sure that it is OK to stop all virtual machines, and then click "OK" to confirm! A few seconds later, VirtualBox Manager will take back the control of all virtual machines.

When we have finished change settings of virtual machines, click on "Run vPoint" to start vPoint.

A vPoint Control	×
Run vPoint	l,
91	