# 1. Prerequisites

- a) A Mac with OS X connected to a **portable socket** on the CERN general public network.
- b) Parallels Desktop software installed from the <u>Mac Self-Service</u>
- 2. Creating a Virtual Machine (VM) in Parallels with the correct settings
- a) After starting Parallels, go in "File Menu" and select "New".



"Install Windows or another OS..." and click "Continue".

b) Select "Continue without a source" and click "Continue".

•••		Installation Assistant		
			· · ·	
	DVD	Image File	USB Drive	
	You have selected No operating system will b	to create a bla e installed. You can insta Find Automatically	Ink virtual machine.	
? 🔽 Contir	nue without a source		Go Back	Continue

c) Select the operating system: **Windows 10**.

Please select your operatir	ng system:	
Windows 10		0
	Cancel	ЭK

d) Choose which will be the use of the new Virtual Machine.

00	Installation Assis	tant
	I will primarily use	Windows for
	Productivity Text editors, spreadsheets, acco	punting, email, web browsing, etc.
	Software development IDE, databases, emulators, etc.	
	Software testing For testing software in an isolate	ed environment.
	Design CAD software and graphics edit	ing programs
	Games only Full-screen 3D games with high	demand for resources
?		Go Back Continue

e) Give a name to your Virtual Machine; you <u>will need it later</u> for registration at <u>http://network.cern.ch</u>.

Then select the check box "**Customize settings before installation**". Consider selecting the checkbox "**Share with other users of this Mac**" to avoid storing the VM in your Documents folder. Click "**Continue**".

• • •	Installation Assistant		
N	ame and Location		
Name:	YourMachineName		
Save to:	Users/Shared/Parallels +		
	17.18 GB of disk space will be used		
<	Customize settings before installation		
?		Go Back	Create

f) In the Hardware Tab > Network 1, select "**Ethernet**" and <u>save your MAC address</u> for future reference - you will need it for registration at <u>http://network.cern.ch</u>.

	"YourMachineName" Configuration
General Options Hardware	Q Search     Backup
CPU & Memory	Source: Ethernet
Graphics	Network Conditioner
Mouse & Keyboard	Profile: Custom
Shared Printers	Inbound Outbound Bandwidth: unlimited Bandwidth: unlimited Packet Loss: 0% Packet Loss: 0%
Network	Delay: 0 ms Delay: 0 ms
Sound & Camera	Configure
USB & Bluetooth	Advanced Settings
Hard Disk	Type: Intel(R) Gigabit CT (825741)
CD/DVD	Open Network Preferences
Boot Order + -	Restore Defaults
Click the lock to prevent fu	urther changes.

g) In the Hardware Tab > Boot order, set the Network as first choice and open Advanced Settings to define the following Boot flags: vm.bios.efi=0

	"YourMachineName"	Configuration
General Options Hardware Security	Backup	Q Search
CPU & Memory Graphics Mouse & Keyboard	Boot ord	✓       ●       Network         ✓       Hard Disk       ●         ✓       ●       CD/DVD       ↓         ✓       ●       External device
Shared Printers	External boot device:	Not selected 🗘
Sound & Camera	~	<ul> <li>Advanced Settings</li> <li>Boot flags: vm.bios.efi=0</li> </ul>
Hard Disk		
CD/DVD		
Boot Order + -		Restore Defaults
Click the lock to prevent	further changes.	3

h) In the Hardware Tab > Hard Disk 1, reconfigure the disk to be "IDE" rather than "SATA".

• • •	"YourMachineName" Configuration	
General Options Hardware Securi	ty Backup	
General Options Hardware Securit         Image: CPU & Memory         Image: Graphics         Graphics         Mouse & Keyboard         Image: Shared Printers         Image: Shared Printers         Image: Sound & Camera         Image: USB & Bluetooth         Image: Hard Disk         Image: CD/DVD	ty Backup Source: YourMachineName-0.hdd Disk capacity: 256 GB Advanced Settings Properties Location: IDE 0:0 0	
Boot Order + -		
Click the lock to prevent	further changes.	?

i) When you have completed these steps, the first part of your Virtual Machine configuration is done. You can proceed to register it in the **Network DB** before you boot it for the first time.

### 3. Register the machine in the Network DB

a) Go to <u>http://network.cern.ch</u> and click on "Register Device". Continue with the correct Hostname (less than 15 characters) and OS. Please associate the MAC address from point 2f above with Ethernet adapter (necessary for PXE) - check the example below. Avoid reusing any existing entry previously registered in the Network DB.

# Device

You can register a new network device and configure it.

Information						
Name	YourMachineName		Generic type	COMPUTER	~	
Location			Device type	VIRTUAL MACHINE		Model
Rack			Operating System	WINDOWS DESKT	OP 🗸	Version
Ownership	O Personal device		Description			
	CERN device		Tag			
Serial Number						
Inventory Number			Properties	✓ DHCP	DNS & Fi	rewall openings 🗸 IPv4 🗸 IPv6
Last changed						
Network Interface	Cards				People	
Address	Туре	Bound to interface			Manager 🚱	
00-1C-42-B2-E8-C0	ETHERNET		~	Û	e-group	
				_	Responsible	
	WIRELES 🗸		~	Add	Responsible	
					Start typing an	d then choose one available option from
					the dropdown	menu.
					Main user	
					MainUser	
					start typing an the dropdown	o chen choose one available option from menu.

After completing all the necessary entries click "Save".

A few minutes after this web form is submitted, you can boot your machine on the network to install Windows in Parallels Desktop as if it was physical hardware.

#### 4. Install Windows using PXE boot

a) When you boot your VM for the first time, it will try to boot using PXE. This is exactly what is needed to install NICE Windows. When the PXE routine starts, press "**F12**" to boot from the network installation server.

If the network installation server does not respond, please make sure that:

- i. You are using Ethernet (Bridged), not Shared Network or wireless - you should see "Ethernet (Bridged)" under Devices > Network 1.
- ii. You are connected to a portable socket your IP address should be 128.141.x.x.



Save

- You have correctly registered your Parallels MAC address in your network registration. iii.
- Note also that after the virtual hard disk is formatted, your VM will try to boot from the hard disk. If the OS is not installed at that time, you may need to adjust the boot order on the Hardware tab of your VM configuration in Parallels, so that it boots from the network. This is not necessary if



the OS is installed immediately after the system partition is created.

b) Select "Install a Windows 64-bit Operating System" from the network installation menu.



c) Click on **Disk0** and then on "Create System Partition". For Partition Space, use ALL and then click **OK** to format it.

📸 NICE Disk Manager	×
Disk Information	Control
DISK 0 - 127 GB - OK	Clean Complete Disk Delete partition
	Create System Partition Format partition
	Enter Partition Size in GBytes
	ALL OK N
System interface: BIOS	Refresh Close
-,	

d) Save the admin password in case you need it later and click "Install".

Mainboard Type:	Parallels Software International Inc. Parallels Virtual Platform None
CERN Standard Model:	Parallels Desktop
Computer Name (without .cern.ch):	asmyrnak-test1
Operating System:	Windows 10 Enterprise RTM X64 (With Standard NICE Apps)
History Version:	Current Version
Initial Local Administrator Password -> will be automatically reset after :	(important for non standard PCs): Fima-rexi
Installation Type	centrally managed Install standard NICE PC with default applications. S (eq NICEFC). C Specific applications and settings will not be

In case the creation of computer account fails at this stage, please contact the Service Desk.

e) The standard network installation of NICE Windows will now start. It will take about an hour to complete - please make sure that you <u>stay connected</u> to the network until it completes. After the basic installation, CMF will proceed to install standard applications. At the end, you should see the standard Windows login prompt.

If at the end of the installation you can see the desktop rather than the logon prompt, please execute step 5b before continuing.

## 5. Log on and final configuration steps

 a) When the logon screen is shown, you might need to send "Ctrl+Alt+Del" before you can log on. You can do this by clicking on Devices > Keyboard > Ctrl+Alt+Del from Parallels Desktop application menu. Log on using your CERN credentials.



b) Install the Parallels Tools to able to share data between your Mac and your Windows VM.



You might get a message like this:



In that case (and only if Parallels Tools installation does not start automatically) navigate to "**This PC**" > **CD/DVD** drive. Double click on "**Autorun.exe**" and the installation will start.

c) To install applications, please use the **CMF** icon from the Windows Taskbar tray area to Add/Remove CMF Packages. Note that if you use Share Network (see below), you may need to specify the correct hostname and later use the CMF "**Refresh**" function.



d) If you frequently change between wireless and Ethernet networks on your Mac, you may find it easier to use Shared Network, as it automatically reconnects when you pass from Ethernet to wireless.

