Installation Guide LANCOM R&S[®]UF Command Center





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Introduction

Thank you for purchasing a LANCOM R&S°UF Command Center. The LANCOM R&S°UF Command Center is the ideal solution for managedsecurity service providers and companies that need to centrally manage, configure and monitor large numbers of LANCOM R&S°Unified Firewalls. An intuitive dashboard enables full management and monitoring, centralized backup management and archiving as well as license monitoring of all managed LANCOM R&S°Unified Firewalls.

This Installation Guide describes the installation of the LANCOM R&S[®]UF Command Center on the VMware ESXi Server, Oracle Virtual Box and Microsoft Hyper-V Server.



02

Installation under VMware FSXi Server

The following describes the requirements and steps to successfully install the LANCOM R&S®UF Command Center on a VMware ESXi Server.

Files

The following files for the LANCOM R&S°UF Command Center are available in the LANcommunity Partner Portal:

→ ISO image file

Requirements

The following requirements must be met to successfully install the LANCOM R&S[®]UF Command Center on a VMware ESXi Server

- → The software of the LANCOM R&S[®]UF Command Center has to be available as an ISO image file
- → VMware ESXI version ESXI 6.0.0 (VM version 11) or later must be installed on a 64-bit x86-compatible server
- \rightarrow The virtual machine must meet the following minimum requirements:
 - 1 ×86 CPU (64-bit) processor
 - 2 GB RAM
 - 16 GB available hard-disk space
 - 1 network interface



03

Creating and configuring

The following steps describe how to put the LANCOM R&S[®]UF Command Center into operation on a VMware ESXi server.

Launch VMware ESXi, log in, and create a new virtual machine.

→ Select creation type – Create a new virtual machine

🔁 New virtual machine		
 New virtual machine 1 Select aname and guest OS 2 Select a sorage 3 Select storage 4 Customize settings 5 Ready to complete 	Select creation type How would you like to create a Virtual Machine? Create a new virtual machine Deploy a virtual machine from an OVF or OVA file Register an existing virtual machine	This option guides you through creating a new virtual machine. You will be able to customize processors, memory, network connections, and storage. You will need to install a guest operating system after creation.
vm ware		
		Back Next Finish Cancel



Enter a name for the virtual machine.

→ Select a name and guest (05
-----------------------------	----

New virtual machine - Command Ce	enter (ESXi 6.0 virtual machine)		
✓ 1 Select creation type	Select a name and guest OS		
2 Select a name and guest OS	Specify a unique name and OS		
4 Customize settings 5 Ready to complete	Name Command Center]	
	Virtual machine names can contain up to 80 characters	and they must be unique within each ESXi instance.	
	Identifying the guest operating system here allows the installation.	wizard to provide the appropriate defaults for the operati	ng system
	Compatibility	ESXi 6.0 virtual machine	•
	Guest OS family	Linux	•
	Guest OS version	Debian GNU/Linux 8 (64-bit)	
vm ware*			
		Back Next Finish	Cancel

In the example shown, the name chosen is "Command Center". In addition, you configure

- → Compatibility: ESXI 6.0 virtual machine
- → Guest OS family: Linux
- → Guest OS version: Debian Linux 8 (64 bit)



Select the location where the virtual machine is stored.

→ Select storage 1 New virtual machine - Command Center (ESXi 6.0 virtual machine) 1 Select creation type Select storage 2 Select a name and guest OS Select the datastore in which to store the configuration and disk files ✓ 3 Select storage 4 Customize settings The following datastores are accessible from the destination resource that you selected. Select the destination datastore for 5 Ready to complete the virtual machine configuration files and all of the virtual disks. ✓ Capacity ∨ Free ∨ Type ∨ Thin pro... ∨ Access ∨ Name 10.83 TB 2.75 TB NFS Supported Single BAREOS 5.46 TB 1.12 TB VMFS5 Supported Single DATA os 110.75 GB 109.34 GB VMFS6 Supported Single 3 items **vm**ware Back Next Finish Cancel

Adjust the settings.

😰 New virtual machine - Command Co	enter (ESXi 6.0 virtual machine)						
✓ 1 Select creation type Customize settings ✓ 2 Select a name and guest OS Configure the virtual machine hardware and virtual machine additional options ✓ 3 Select storage Configure the virtual machine hardware and virtual machine additional options ✓ 4 Customize settings Virtual Hardware Virtual Hardware VM Options							
	Add hard disk 🛤 Add network ad	lapter 🗧 Add other device	. [
	► 🔲 CPU	1 🔻 🚺					
	Memory	2048 MB V	1				
	▶ 🔜 Hard disk 1	16 GB 🔻 🛞					
	SCSI Controller 0	VMware Paravirtual					
	SATA Controller 0	0					
	▼ ■ Network Adapter 1	Testnet 🔻 🕲					
	Status	Connect at power on					
	Adapter Type	VMXNET 3					
vm ware	MAC Address	Automatic O0:00:00:00:00:00					
		Back Next Finish Car	ncel				





Now configure the following:

- → CPU: at least 1
- → Memory: at least 2048 MB
- → Hard disk 1: at least 16 GB
- → Adapter Type: VMXNET 3

Use the Browse button to select the ISO image file.

Select creation type	Customize settings	
Select a name and guest OS	Configure the virtual machine hardwa	re and virtual machine additional options
Customize settings		
Ready to complete	SCSI Controller 0	VMware Paravirtual 🔻 🛞
	SATA Controller 0	8
	Network Adapter 1	Testnet 🔻 🗸
	► Mew Network Adapter	Testnet
	▼ 🗐 CD/DVD Drive 1	Datastore ISO file
	Status	Connect at power on
	CD/DVD Media	[DATA] ISO_RSCS/LCS_RS_UF-CommandCenter.isc Browse
	Virtual Device Node	SATA controller 0 V SATA (0:0) V
Maro	▶ 🌉 Video Card	Specify custom settings



Check your configuration.

Select creation type	Ready to complete	
Select a name and guest OS	Review your settings selection before	finishing the wizard
Select storage Customize settings		
Ready to complete	Name	Command Center
	Datastore	DATA
	Guest OS name	Debian GNU/Linux 8 (64-bit)
	Compatibility	ESXi 6.0 virtual machine
	vCPUs	1
	Memory	2048 MB
	Network adapters	2
	Network adapter 1 network	Testnet
	Network adapter 1 type	VMXNET 3
	Network adapter 2 network	Testnet
	Network adapter 2 type	VMXNET 3
	IDE controller 0	IDE 0
	IDE controller 1	IDE 1
	SCSI controller 0	VMware Paravirtual
mware	SATA controller 0	New SATA controller
	Hard disk 1	

→ Ready to complete

After checking, confirm the configuration with the **Finish** button. You will then see your virtual machines.



Starting the LANCOM R&S[®]UF Command Center

Enter the name into the search box, for example "Command Center".

		esxi82 - VMware ES	Xi - Mozilla Firefox			- B X
Elle Edit View History E	Bookmarks Bools Help					
8 8 8 8 8 8	🛛 🛪 🛛 😼 🛛 🗮 Was buche ich wohin? - 🛛 🗙 🗮 High Availabilit	y-Gatep 🗙 🔀 Drivers-Gatepro	itect Dir X 🥜 eszi82 - VMware ESXi 🛛 X	+		
(←) → C @ @ ▲ https:/	//10.0.0.82/ui/#/host/wms				🛛 🏠	± in ⊡ ≡
E Company Sites E internet Sit	tes 🛅 Web sites 🏥 Private Sites 🚔 Robot 🏥 TestBench 🛁 Index o	f file:///home/ 🔒 RobotFrames	vorkAdx 🛞 Suricata User Guide 🗶 W	rebClient Improvem 🗶 hard	ware @ index of /artefacts/	/pr
vmware esxi						Help + 1 Q Search •
Te Navigator a	🔗 escili2 - Virtual Machines					
* D Hoet Manage	🔀 Create / Register VM 😴 Console): Power on 冒 Power of 🔢 San	peed 🥑 Refresh 🍈 Actors				(Q, Command Center X)
Maniter	Virtual machine .	🙁 Status 😐 Used space	~ Guest 06	e Hastname	e Hest CPU	~ Hastmemory ~
A Virtual Machines 🔤	B Command Center	O Normel 0 B	Debian GNU/Linux 8 (54-bit)	Unknown	0 MHz	0140
C Storage	Durick News.					1 8494 /
	Totortos					
	Tartet	v Initiator	 Quesed V Started 	 Replica 		 Completed •
	Create VM	nul	05/27/2019 16 23 33 05/27/2019 16 23	33 Compiletent auso	and dy	0527.2018 14.23.33

After selecting "Command Center" you see the following overview:

			esxi82 - VMwa	re ESXI - Mozilla Fir	efax			
Life Edit View Histor	ry gookmarks gools	Rep						
8 8 8 8 8	8 8 😽 😸 🍃	Was buche ich wohin? - 🖂 🗶 High Aw	silability - Gatep 🗙 😫 Drivers - Ga	teprotect De X	esxi82 • VMware ESXi	× +		
← → C @ 0 € h	ttps://10.0.0.82/u/#/host/w	ms/109					(90%) 0	2 ☆ ± in © =
Ph Company Sites Ph Intern	net Sites Pri web sites Pri F	rivate Sites PR Robot PR TestDench and	ndex of file:///home/ Q RobotTr	ameworkAdx R	Suricata User Guide	X webClient impo	overn X hardware R index of /a	rtefects/or
vmware: ESXI'								1110102 - 1 mm - 1 0 from
(Transienter 10	10 former division		·					
a fi Mari	Committee Committee							
Manage	🖉 Coracle 🔠 Monitor 1	Power on # Power of # Support @ Restart	PER CRahesh Q Adone					
Monitor		Command Denter						07 F3
* 5 What Machines	1	Compatibility	ESD 8.0 and later (Vill version 11)					OMPE
· A Command Center		chai	1					MANON MAR
Marilar		Marroy	258					109402 EE
Bon Vite_								2.67 KB
G Networking								
	O Villware Tools is not ins	tailed in this virtual machine. Wheare Tools alleves dete	ded parent information to be displayed as well a	is allowing you to perform	eperations on the quest Q6, e.g. (praceful shuddown, robi	ot, etc. You should install Vitware Tools. 👸 Act	Anna X
	-							
	General Information				* Hardware Configuration			
	+ 🔐 Networking	No network information			 a cru 	1 vGPUs		
	> 📾 Vibeare Tools	Not related		Actions 2	Memory.	2.08		
	> [] Dorage	1 066			 III Hard disk 1 	16.08		
	C Nature			/ Edit roles	Hill Notecrk adaptor 1	Testnet (Connected	1	
					INIE Notwork adaptor 2	Testnet (Connected	1	
					Video card	4.510		
					* H CO/DVD onlie 1	ISO (DATA) ISO_RS	IG5LO5_R5_UP-CommandContexiso	rig Belesi deo image
					 III Others 	Additional Hardwan		
					- Researce Consumption			
					Consumed heat CPU	O MIHZ		
					Consumed host memory	0 5/8		
					Kathra guest memory	O MB		
					* 🗄 Starage			
	🕐 Recent tasks							
	Tark		~ Initiator	~ Occord	 Started 		- Resit a	 Completed •
	Ones VM	B Connect Carer	194	0507001914333	05212019-162	0.00	Completed accessibly	89272919 19:23:55

Click **Power on** in the upper menu bar.



Choose **Console** in the upper menu bar and then **Open browser console** in the following window.



Further configuration of the LANCOM R&S[®]UF Command Center using the console is described in chapter "Final installation using the console" on page 37.



Installation in Oracle VirtualBox

Files

The following files are available for the LANCOM R&S[®]UF Command Center: \rightarrow ISO image file

Requirements

The following requirements must be met to successfully install the LANCOM R&S°UF Command Center on an Oracle VM VirtualBox Manager:

- → The software of the LANCOM R&S[®]UF Command Center has to be available as an ISO image file
- → Oracle VM VirtualBox Manager 5.0 or later must be installed on a 64-bit x86-compatible server

The virtual machine must meet the following minimum requirements:

- → 1×86 CPU (64-bit) processor
- \rightarrow 2 GB RAM
- → 16 GB available hard-disk space
- → 1 network interface



Creating and configuring

The following steps describe how to put the LANCOM R&S[®]UF Command Center into operation on the Oracle Virtual Box Manager. Start the Oracle VM Virtual Box Manager and select the **New** button from the top menu bar to create a new virtual machine.





In the **Name and operating system** window that appears, enter a name for the virtual machine.

In the example shown, the name chosen was "Command Center".

Create	Virtual Machine	×
Name Please c machine intend to through N <u>a</u> me: <u>Type</u> :	and operating system noose a descriptive name for the new virtual and select the type of operating system you install on it. The name you choose will be us out VirtualBox to identify this machine.	sed
Version:	Debian (64-bit)	1

In addition, you configure

- → Type: Linux
- → Version: Debian (64-bit)

Click on Next.



In the window **Memory size** configure the memory to allocate to the virtual machine.



Select 2048 MB as a minimum and confirm with Next.



	Create Virtual Machine	×		
	Hard disk			
_	If you wish you can add a virtual hard disk to the new machine. You can either create a new hard disk file c select one from the list or from another location usin the folder icon.	v or g		
	If you need a more complex storage set-up you can s this step and make the changes to the machine setti once the machine is created.	skip ngs		
	The recommended size of the hard disk is 8,00 GB .			
	Do not add a virtual hard disk			
	<u>Create a virtual hard disk now</u>			
	O Use an existing virtual hard disk file			
	Empty			
	< <u>B</u> ack Create Cance	əl		

In the window Hard disk, configure the virtual disk.

Select Create a virtual hard disk now and confirm with Create.



In the next step Hard disk file type you set the file type of the virtual disk.



Select VDI (Virtual Box Disk Image) and confirm with Next.



In the next window **Storage on physical hard disk** you choose the option for the virtual disk space to be dynamically adjusted as required.



Select Dynamically allocated and confirm with Next.



In the next step **File location and size**, configure the name of the virtual disk, its location, and its minimum size.

Create Virtual Hard Disk	×
File location and size	
Please type the name of the new virtual hard disk file into the bo below or click on the folder icon to select a different folder to cre the file in.	x ate
Command Center	
Select the size of the virtual hard disk in megabytes. This size is limit on the amount of file data that a virtual machine will be able store on the hard disk.	the e to
32,00	GB
4,00 MB 2,00 TB	
< <u>B</u> ack Create Cance	el

Set the size to at least 16 GB and click Create.



The main window of the Oracle VM Virtual Box Manager now contains the entry for your newly created virtual machine.

Select the virtual machine with a click and choose **Settings** from the upper menu bar.



In the **System** section, check the settings on the **Motherboard** tab and adjust them if necessary to match the following screenshot.

		UF_Command_Center - Settings	×
	General	System	
	System	Motherboard Processor Acceleration	
	Display	Base Memory:	4096 MB
\bigcirc	Storage	4 MB 31744 M	В
	Audio	Boot Order:	
₽	Network		
	Serial Ports	Network	
Ø	USB	Chipset: ICH9 🔻	
	Shared Folders	Pointing Device: USB Tablet	
	User Interface	Extended Features: 🗹 Enable I/O APIC	
		Enable <u>E</u> FI (special OSes only)	
		✓ Hardware Clock in UTC Time	
			K X Cancel



UF_Command_Center - Settings
Current Current

On the Processor tab, set a checkmark for the option Enable PAE/NX.

	General	System
	System	Motherboard Processor Acceleration
	Display	Processor(s):
\bigcirc	Storage	1 CPU 8 CPUs
	Audio	Execution Cap: 1% 100% 🗸
₽	Network	Extended Features: 🗹 Enable PA <u>E</u> /NX
	Serial Ports	
Ø	USB	
	Shared Folders	
:	User Interface	
		Gancel 🖉 🖉 🖉

Switch to the **Storage** entry in the left-hand menu and, under **Attributes**, click on the disk icon and select **Virtual optical disk file**.

		UF_Comm	and_Center	- Settings	×
📃 Genera	al Sto	orage			
📕 Systen	n <u>Stor</u>	age Devices		Attributes	
🧾 Display	y 🔄	Controller: IDE		Optical <u>D</u> rive:	IDE Secondary Master 🔹 🧕
厕 Storag	je	LCS_RS_UF-CommandCommandCommandCommandCommand	enter.iso		Live CD/DVD
Þ Audio		Controller: SATA		Information	
📄 Netwo	ork			Size:	184,00 MB
🖄 Serial I	Ports			Location:	/srv/Download/LCS_RS_UF-Com
🏈 USB				Attached to:	-
Shared	folders				
🔲 User Ir	nterface				
		<u>م</u>			
		v	ugi 🖬		≭ <u>C</u> ancel



In the Audio menu, remove the checkmark next to Enable Audio.

		UF_Comm	and_Center - Settings		×
	General	Audio			
H	System	Enable <u>A</u> udio			
	Display	Host Audio <u>D</u> river:	PulseAudio		
\mathbf{S}	Storage	Audio <u>C</u> ontroller:	ICH AC97		
Þ	Audio	Extended Features:	✓ Enable Audio Output		
₽	Network		Enable Audio Input		
	Serial Ports				
Ø	USB				
	Shared Folders				
	User Interface				
				🥔 OK 🛛 🔏 Cancel	



		UF_Comman	nd_Center - Settings	×
	General	Network		
	System	Adapter <u>1</u> Adapter <u>2</u>	Adapter <u>3</u> Adapter <u>4</u>	
	Display	✓ Enable Network Adapt	er	
\bigcirc	Storage	<u>A</u> ttached to:	Bridged Adapter 👻	
	Audio	<u>N</u> ame:	vlan1106	•
₽	Network	✓ A <u>d</u> vanced		
	Serial Ports	Adapter <u>T</u> ype:	Paravirtualized Network (virtio-net)	•
Ø	USB	Promiscuous Mode:	Deny	•
	Shared Folders	MAC Address:	0800275032B0	9
	User Interface		<u>Cable Connected</u> <u>Port Forwarding</u>	
			₩ Car	ncel

In the **Network** menu, activate **Enable Network Adapter** and configure this as follows:

- → Attached to: User-specific, e.g. Bridged Adapter
- → Name: User-specific; if you selected Bridged Adapter, select the appropriate interface here.
- → Adapter Type: Paravirtualized Network (virtio-net)
- → Promiscuous Mode: Deny
- → Cable Connected: enabled

The MAC address is determined automatically and entered here.



		UF_Command_Center - Settings	×
	General	Serial Ports	٦
	System	Port 1 Port 2 Port 3 Port 4	
	Display	Enable Serial Port	
\bigcirc	Storage	Port Number: COM1 JRQ: 4 I/O Port: 0x3F8	
	Audio	Port Mode: Disconnected -	
₽	Network	✓ Connect to existing pipe/socket	
	Serial Ports	Path/Address:	
Ø	USB		
	Shared Folders		
	User Interface		
		🖉 🖉 OK 🛛 💥 Cance	1

In the Serial Ports menu, disable all serial ports.

In the menus **USB**, **Shared Folders** and **User Interface** you can use the default settings.

Finally, click on the **OK** button to accept your modified settings.



Starting the LANCOM R&S®UF Command Center

In Oracle VM Virtual Box Manager, start the virtual machine by clicking on the green **Start** arrow.



Further configuration of the LANCOM R&S[®]UF Command Center using the console is described in chapter "Final installation using the console" on page 37.



Installation in Microsoft Hyper-V

The following describes the requirements and steps to successfully install the LANCOM R&S[®]UF Command Center on a Microsoft Hyper-V.

Files

The following files are available for the LANCOM R&S[®]UF Command Center: \rightarrow ISO image file

Requirements

The following requirements must be met to successfully install the LANCOM R&S°UF Command Center on a Microsoft Hyper-V:

- → The software of the LANCOM R&S[®]UF Command Center has to be available as an ISO image file
- → Microsoft Hyper-V Manager 10.0 or later must be installed on a 64-bit x86-compatible server

The virtual machine must meet the following minimum requirements:

- → 1×86 CPU (64-bit) processor
- \rightarrow 2 GB RAM
- → 16 GB available hard-disk space
- → 1 network interface



Creating and configuring

Start the Microsoft Hyper-V Manager. On the right-hand side of the interface, click in the **Actions** section first on **New** and then on **Virtual Machine**.

Hyper-V Manager										- a ×	
File Action View Help											
🗢 🔿 🙍 🔟 🔟 🔟											
Hyper-V Manager	Manual Marshines								Actions		
HG000119	virtue machines								HG000119		
	Feame	56496	CPO Usage	Assigned Memory	Upome	353945	Configuratio		Quick Create.		
				No vitu	al machines were for	and on this server.			New	Virtual Machine	
									🖏 Import Virtual	Herd Disk.	
									Hyper-V Settir	Floppy Disk	
									Virtual Switch M	lanager	
									Wrtual SAN Manager.		
									tdt Disk.		
									a Inspect Disk.		
									Stop Service		
	Checkpoints							۲	× Remove Server		
					No. of the second second second	- de aut			O Refresh		
					no vitua nachine	seecres.			View	•	
							🛛 Help				
									-		
	Detalle										
	C. C. C.										
					No ten select	led.					
									1		
Displays the New Virtual Machin	ie Wizard.										



The New Virtual Machine Wizard starts now. It opens the new window Before you Begin.

New Virtual Machine Wizard		×
🖲 🛛 Before You B	egin	
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	This witzard helps you create a virtual machine. You can use virtual machines in place of physical oyu can change the configuration later using Hyper-V Manager. To create a virtual machine, do one of the following: Click Finish to create a virtual machine that is configured with default values. Click Next to create a virtual machine with a custom configuration. Do not show this page again	
	< Previous Next > Finish Cancel	



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Click **Next** and, in the next window, enter a name for the virtual machine, e.g. "Command Center". Confirm with **Next**.





In the next step, select Generation 1 and confirm with Next.

🖳 New Virtual Machine Wizar	d X
Specify Generation	ration
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	 Choose the generation of this virtual machine. Generation 1 This virtual machine generation supports 32-bit and 64-bit guest operating systems and provides virtual hardware which has been available in all previous versions of Hyper-V. Generation 2 This virtual machine generation provides support for newer virtualization features, has UEFI-based firmware, and requires a supported 64-bit guest operating system. Mre a virtual machine has been created, you cannot change its generation. More about virtual machine generation support
	< Previous Next > Finish Cancel



In the **Assign Memory** window, set the **Startup Memory** to the value of at least 2048 MB and activate **Use Dynamic Memory for this virtual machine**. Confirm with **Next**.





In the step **Configure Networking**, set **Connection** to the value **Standard switch**. Confirm with **Next**.

🖳 New Virtual Machine Wizard	d	×
Configure Ne	tworking	
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	Each new virtual machine includes a network adapter. You can configure the network adapter to us virtual switch, or it can remain disconnected. Connection: Standardswitch	ea
	< Previous Next > Finish Cancel	1



Under **Connect Virtual Hard Disk** select the option **Create a virtual hard disk** with a size of at least 16 GB. Confirm with **Next**.

Connect V	rtual Hard Disk	
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Visual Med Def	A virtual machine requires storage so that you can install an operating system. You can specify the storage now or configure it later by modifying the virtual machine's properties. Create a virtual hard disk Use this option to create a VHDX dynamically expanding virtual hard disk. Name: Command Conter vhdx	ne
Installation Options Summary	Location: C:\Users\Public\Documents\Hyper-\\\Virtual Hard Disks\ Size: 32 GB (Maximum: 64 TB) Use an existing virtual hard disk Use this option to attach an existing virtual hard disk, either VHD or VHDX format.	
	Location: C:\Users\Public\Documents\Hyper-V\Virtual Hard Disks\ Browse. O Attach a virtual hard disk later Use this option to skip this step now and attach an existing virtual hard disk later.	



In the window **Installation Options**, activate the option **Install an operating system from a bootable CD/DVD-ROM** together with the option **Image file (.iso)**. Select or confirm the path to the LANCOM R&S°UF Command Center image file and confirm with **Next**.

🖳 New Virtual Machine Wiza	rd	×
🖳 Installation (Options	
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	You can install an operating system now if you have access to the setup media, or you can install it later. Install an operating system from a bootable CD/DVD-ROM Media Physical CD/DVD drive: Timage file (.iso): LILCS_RS_UF-CommandCenter.iso Browse Install an operating system from a bootable floppy disk Media Virtual floppy disk (.vfd): Browse Install an operating system from a network-based installation server	
	< Previous Next > Finish Cancel	



The wizard concludes by displaying an overview page with the newly configured parameters. Confirm with Finish.

🖳 New Virtual Machine Wiza	rd
Completing	the New Virtual Machine Wizard
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options	You have successfully completed the New Virtual Machine Wizard. You are about to create the following virtual machine. Description: Name: Command Center Generation: Generation: Memory: 4096 MB Network: StandardsNitch Hard Disk: C:\Users\Public\Documents\Hyper-V\Virtual Hard Disks\Command Center.vhdx (Vf-Operating System:
Summary	To create the virtual machine and close the wizard, dick Finish.
	< Previous Next > Finish Cancel



The virtual machine is created now.

Virtual Machines							Actions
News	Date	CTUUM	factors of Managers		Data	Continuette	HG000119
Command Cards	01	CHU Usage	76signed Menory	opune	30000	toringuisto.	Quick Create
the heating the he							New
							🖏 Import Virtual Machine
							Hyper-V Settings
							Virtual Switch Manager
							🛃 Virtual SAN Manager
							Edit Disk.
							inspect Disk.
							Stop Service
Checkpoints							Remove Server
							O Refresh
			The selec	cted virtual machine	e has no checkpoints.		View
							Pielp
							Command Center
							Connect.
							Settings
							G Start
							🛃 Checkpoint
							Br Move
Command Center							Deport.
							=1 Rename
	created:	5/22/2019 9:50.4	I AM		Ch	stered: No	Ex Delete_
	Semeration	1					🕜 Help
	lotes:	None					



Starting the LANCOM R&S®UF Command Center

In the main window of the Microsoft Hyper-V Manager, go to Actions / Command Center and select the entry Start and then Connect.

	Virtual Machines	Actions	
119	Nine State (Billions Arigan Meson Unine State Codinatio	HG000119	
	Command Center Off \$3	Quick Create	
		New	•
		🚯 Import Virtual Machine	
		Hyper-V Settings	
		Virtual Switch Manager	
		2. Virtual SAN Manager.	
		🚅 Edit Disk	
		Inspect Disk	
		Stop Service	
	Checkpoints	 Remove Server 	
	The selected utility machine has no checkmarts	O Refresh	
		View	•
		🗹 Help	
		Command Center	
		- Connect	
		E Settings	
		Start	
		B Checkpoint	
		F Move.	
	Command Center	Eport.	
		Rename	
	Created: 5/22/2019 9:50:48 AM Clustered: No	Sk Delete_	
	Configuration Version: 8.3	Help	
	Venerative.	-	

A separate console window will now appear. Continue with the installation of the LANCOM R&S[®]UF Command Center on the console, as described in the next chapter.



Final installation using the console

The following instructions for working with the console apply to all of the virtual environments described in this Installation Guide. Any deviations between the systems are highlighted in separate screenshots.

Once the console has been started, the following window appears.



Language selection

37

Select your language and confirm with Next.



License agreement

Ras Unified Firewalls Command Center 10.3.0 (1808)	
rLicense agreement German version further down ≠ Deutsche Version weiter unten	î
Rohde & Schwarz Cybersecurity End User License Agreement ("EULA") The installation and use of the R&S Unified Firewalls Command Center described below is the subject matter of this agreement, which represents a legal licensing agreement between Rohde & Schwarz Cybersecurity GmbH or its subsidiaries (collectively "R&S Cybersecurity") and an individual or entity as a contractual party (collectively "User" or "you"). By installing or using the R&S Unified Firewalls Command Center, you agree to be bound by the terms of this EULA.	
 1. Software Description (1) The R&S Unified Firewalls Command Center consist of the following two modules (collectively "R&S Unified Firewalls Command Center"): a. Server Software I (Linux operating system with basic firewall functionality) b. Server Software II (firewall specific modules developed by Rohde & Schwarz Cybersecurity) 	Ţ

INSTALLATION

[Abort] < Prev | Next >

Confirm the license agreement with **Next** and confirm the subsequent dialog with **Yes**.

R&S Unified Firewalls Command Center :	10.3.0 (1808)
_[License agreement—	
German version further down / Deutscl	ne Version weiter unten 1
Rohde & Schwarz Cybersecurity End Uso The installation and use of the R&S I described below is the subject matter	er License Agreement ("EULA") Inified Firewalls Command Center r of this agreement, which
represents a Cybersecurit Cybersecurit (collective) Firewalls Co	license agreement? arty Unified f this
EULA. [Yes]	[No]
(1) The B&S Unified Firewalls Comman	Center consist of the following
two modules (collectively "R&S Unific	ed Firewalls Command Center"):
a. Server Software I (Linux operating	y system with basic firewall
functionality)	
b. Server Software II (firewall spec	ific modules developed by Rohde &
Schwarz Cybersecurity)	Ļ



Overview of detected hardware

→ VMware ESXi:



→ Oracle VirtualBox



→ Microsoft Hyper-V



Confirm with Next.



Configuring the network interfaces

The default IP addresses are assigned to the network interfaces by pressing F12. The following display appears:

→ VMware ESXi



→ Oracle VirtualBox



→ Microsoft Hyper-V



Confirm with Next.



Input dialog for host and domain name

Configure the following:

- → Hostname: UF100
- → Domain name: lancom
- → **Password**: freely selectable

Confirm your entries with **Next**.

R&S Unified Firewalls Command Cent	er 10.3.0 (1808)
Configuration completed successfully.	
Enter the hostname and the domain name of the firewall	Hostname UF-CommandCenter
	Domain name Tancom
Choose a password	Passuord MHRHHH
	Confirm
INSTALLATION	[About] / Popu ! Next >
INSTREETTION	L HBOFC J X TIEV T HEXC 2

Starting the installation



Confirm with Next.



Confirm the formatting of the virtual hard disk



Confirm the question about formatting the virtual hard disk with Yes.

Carrying out the installation

The installation is carried out now and typically takes up to 10 minutes.





Concluding the installation

After successful installation, the following is displayed:



Confirm with Next to continue to the next screen.

Restart



Confirm the prompt for the subsequent restart with Reboot.



Concluding the LANCOM R&S°UF Command Center installation After restarting, the following is displayed:



The installation is now complete. You do not need to login to the console. Follow the information regarding the user login in the browser by means of the predefined interfaces, as shown in the screenshot.



Log in via the web interface

Start a web browser on a computer that is located in the same subnet as the LANCOM R&S[®]UF Command Center and open the web interface of the LANCOM R&S[®]UF Command Center as follows:

To access the eth0 network interface, enter:

https://192.168.0.254

or the following for network interface eth1:

https://192.168.1.254

The login window of your LANCOM R&S[®]UF Command Center is displayed. Enter the username and password as **admin**.







🔁 🖶 🖂 Command Center 🛛 🗙 + 🗸		- 0 X
← → O ⋒ ▲ Certificate error https://192.168.0.254/#/reset-pas	sword	□☆ ☆ & ピ …
Command Center		
	Change password Demonstration power Power of the power Power of the power of the set of the sets of	

You will be prompted to enter a new password.

After setting the new password you will be logged in and the web interface of your LANCOM R&S[®]UF Command Center is displayed.





Connecting the first firewall

To secure communication between the LANCOM R&S[®]Unified Firewalls and the LANCOM R&S[®]UF Command Center, the firewall establishes an SSL VPN connection to the LANCOM R&S[®]UF Command Center. This connection is secured by certificates. Consequently, it is necessary to set up the appropriate certificates and trust settings for the connection. Do this by following these steps:

- On any LANCOM R&S[®]Unified Firewall, create a CA and a VPN certificate for the LANCOM R&S[®]UF Command Center and export them as PKCS12: a) Certificate Management > Certificates > New
 - Set Type to CA for VPN/Webserver Certificates
 - Set a Private Key Password
 - Set a Common Name (CN), for example "CommandCenterCA"
 - Click on Create.

New - changes will be pre	served until you cancel this dialog or log out.		
Туре	CA for VPN/Webserver Certi *	Validity	06/04/2019 - 06/04/2020
Private Key Encryption	RSA 💌	Private Key Password	•••••
Private Key Size	2048 Bit *		Show Private Key Password
tinguished Name (DN)			
Fill from Template	v		
Common Name (CN)	CommandCenterCA	City (L)	optional
Country (C)	optional	Organization (O)	optional
State (ST)	optional	Organizational Unit (OU)	optional
ubject Alternative Name	e (SAN)	Certificate Authority Ser	rvices
Name	Туре	OCSP	0
	E-Mail 🔻	+ CRL	
		Addresses for OCSP Res	ponder/CRL Download
			+

b) Certificate Management > Certificates > New

- Set Type to VPN Certificate
- Set the Signing CA to the CA from 1a)
- · Set the CA Password to that entered in 1a)
- Set a Private Key Password
- Set a Common Name (CN), for example "CommandCenterCert"
- · Click on Create.



New - changes will be pres	erved until you cancel this dia	og or log out.			
Туре	VPN Certificate	v	Validity	06/04/2019 - 06/04/2020	
Signing CA	CommandCenterCA	×	CA Password	•••••	
				Show CA Password	
Private Key Encryption	RSA	· •	Private Key Password	•••••	
Private Key Size	2048 Bit	Ψ.		Show Private Key Password	
nguished Name (DN)					
Fill from Template		Ŧ			
Common Name (CN)	CommandCenterCert		City (L)	optional	
Country (C)	optional		Organization (O)	optional	
State (ST)	optional		Organizational Unit (OU)	optional	
bject Alternative Name	(SAN)				
Name		lype			
		E-Mail	· +		

c) Exporting the certificate "CommandCenterCert"

- Expand the list bar
- In the certificate list next to "CommandCenterCert", click on export
- Choose PKCS12
- The **Password** is the private key password from step 1b)
- Set a Transport Password
- On the LANCOM R&S[®]UF Command Center under Settings > Device Connection, select and import the p12 file as the Command Center Certificate.



 On the LANCOM R&S[®]Unified Firewall to be added, create a CA and a VPN certificate for the firewall and export the CA as PEM:

a) Certificate Management > Certificates > New

- Set Type to CA for VPN/Webserver Certificates
- Set a Private Key Password
- Set a Common Name (CN), for example "FirewallCA"
- Click on Create.

Туре	CA for VPN/Webserver Certi *	Validity	06/04/2019 - 06/04/2020
Private Key Encryption	RSA *	Private Key Password	•••••
Private Key Size	2048 Bit *		Show Private Key Password
tinguished Name (DN)			
Fill from Template	Ψ		
Common Name (CN)	FirewallCA	City (L)	optional
Country (C)	optional	Organization (O)	optional
State (ST)	optional	Organizational Unit (OU)	optional
ubject Alternative Name	(SAN)	Certificate Authority Ser	rvices
Name	Туре	OCSP	
	E-Mail v	+ CRL	
		Addresses for OCSP Res	ponder/CRL Download
			+



b) Certificate Management > Certificates > New

- Set Type to VPN Certificate
- Set the Signing CA to the CA from 3a)
- Set the CA Password to that entered in 3a)
- Set a Private Key Password
- Set a Common Name (CN), for example "FirewallA"
- Click on Create.

Туре	VPN Certificate	- W.	Validity	06/04/2019 - 06/04/2020	
Signing CA	FirewallCA	*	CA Password	•••••	
				Show CA Password	
Private Key Encryption	RSA		Private Key Password	•••••	
Private Key Size	2048 Bit			Show Private Key Password	
inguished Name (DN)					
Fill from Template					
Common Name (CN)	FirewallA		City (L)	optional	
Country (C)	optional		Organization (O)	optional	
State (ST)	optional		Organizational Unit (OU)	optional	
ubject Alternative Name	(SAN)				
Name		Туре			
		F-Mail	* +		

c) Export the Firewall CA.

- Expand the list bar
- In the certificate list next to "FirewallCA", click on export
- Choose PEM
- On the LANCOM R&S[®]UF Command Center under Settings > Device Connection, add the PEM file to the Accepted Remote CAs



- 4. On the LANCOM R&S[®]Unified Firewall under Firewall Command Center, configure the connection to the LANCOM R&S[®]UF Command Center:
 a) The IP address where the LANCOM R&S[®]Unified Firewall reaches the LANCOM R&S[®]UF Command Center:
 - If the LANCOM R&S[®]Unified Firewall and the LANCOM R&S[®]UF Command Center are on the same network, this is the IP address of the LANCOM R&S[®]UF Command Center.
 - If the LANCOM R&S[®]Unified Firewall and LANCOM R&S[®]UF Command Center are on different networks, this is the IP address of the gateway in front of the LANCOM R&S[®]UF Command Center. Also, port forwarding has to be set up on the gateway.
 - b) The port where the LANCOM R&S[®]Unified Firewall reaches the LANCOM R&S[®]UF Command Center:
 - If the LANCOM R&S[®]Unified Firewall and LANCOM R&S[®]UF Command Center are on the same network, the default port remains unchanged.
 - If the LANCOM R&S[®]Unified Firewall and LANCOM R&S[®]UF Command Center are in different networks, this is the port on the gateway that forwards to the LANCOM R&S[®]UF Command Center.
 - c) Use the new VPN certificate from step 4 as the $\ensuremath{\textit{Firewall Certificate}}$
 - d)Use the CA of the Command Center certificate from step 1 as the **Command Center CA**.
 - e) Optionally enter the GPS coordinates of the LANCOM R&S[®]Unified Firewall site so that the LANCOM R&S[®]Unified Firewall is displayed correctly on the dashboard map.



f) In the upper left corner, connect to the LANCOM R&S[®]UF Command Center.

		×
Modified version - chang	ges will be preserved until you reset or log out.	
Host	command-center.test-company.com	
Port	11940	
Command Center CA	CommandCenterCA [F3960066218611A6]	Ŧ
Firewall Certificate	FirewallA [5F7D045C3182D8B5]	Ŧ
rewall Location		
Enter the coordinates of notation, e.g. Latitude 53	the firewall location here. Use a pure decimal degree 3.555483 and Longitude 9.984625.	es
Latitude	50.824722 °	
	6.1275	
Longitude	0.1275	

- The connected LANCOM R&S[®]Unified Firewall is displayed in the LANCOM R&S[®]UF Command Center under Firewalls > Device Selection.
- 6. Set the new LANCOM R&S®Unified Firewall to Administrated.
- 7. The new LANCOM R&S[®]Unified Firewall appears in the dashboard.



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