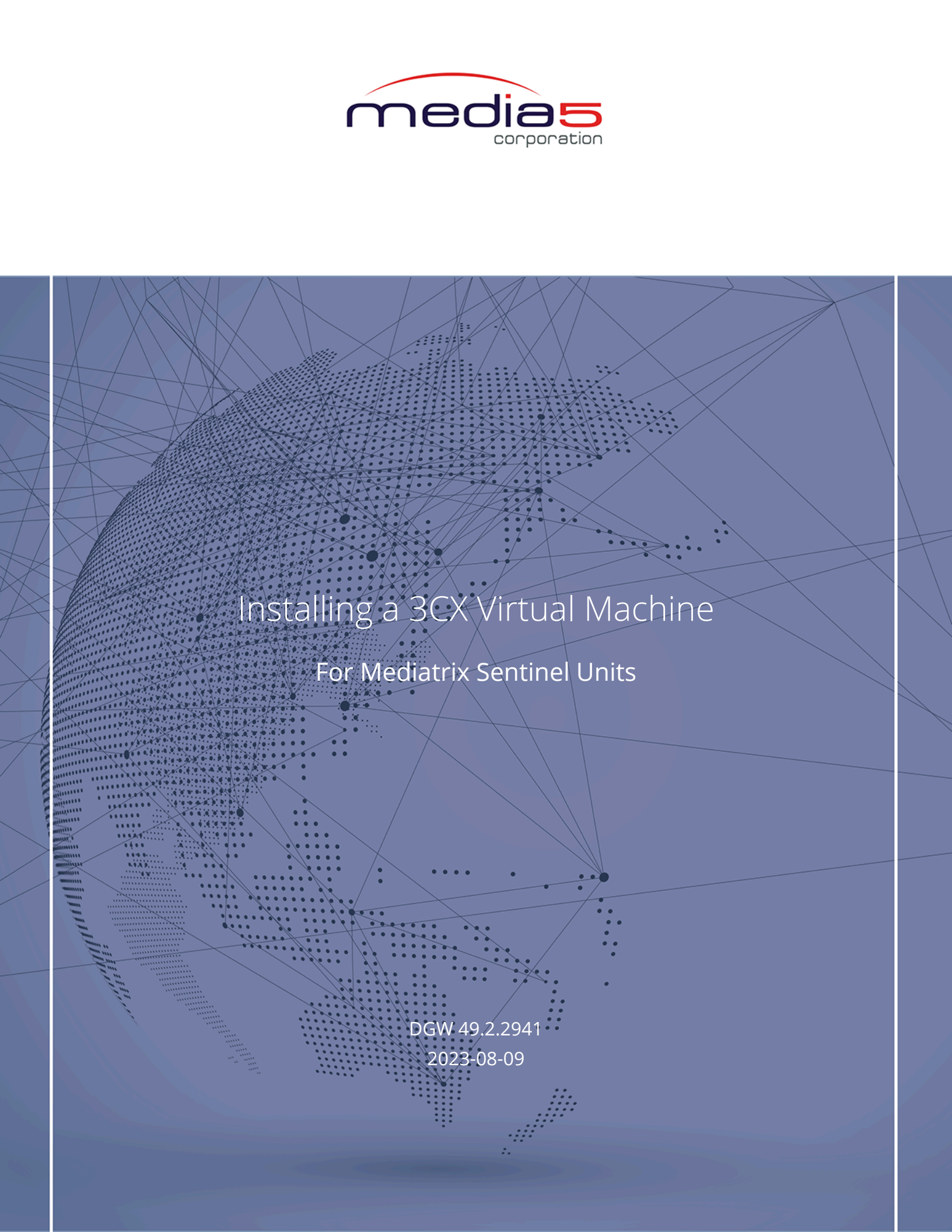


The background of the page is a dark blue gradient with a complex, abstract graphic. It consists of a dense network of thin, light blue lines connecting various points, creating a web-like or molecular structure. A large, curved, dotted shape, resembling a stylized globe or a data cloud, is positioned on the left side, partially overlapping the network lines.

Installing a 3CX Virtual Machine For Mediatrix Sentinel Units

DGW 49.2.2941
2023-08-09

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Virtual Machine (VM) Installation

Important information before start

Before proceeding with the 3cx installation on the VM, please make sure you have uploaded the iso image or you have a bootable USB with the image, and that you have followed one of this documentations. This technical bulletin assumes that you have succesfully completed one of the following procedures published on the [Media5 Documentation Portal](#).

- [Technical Bulletin - Installing a Virtual Machine Using an ISO Image](#)
- [Technical Bulletin - Installing a Virtual Machine Using a USB External Device](#)

The technical bulletin has been created using a Sentinel400 with 2GB RAM and 15GB SDD on version Dgw 44.0.1535. The 3CX version is 16, Debian based. The iso used is: *debian-amd64-netinst-3cx.iso*.

Installing the 3cx PBX on the Virtual Machine

Steps

- 1) When the **VM** is first created, it is in the **Stopped** state.

Virtual Machines

Virtual Machine Status											
Vm Name	Iso Name	MAC Address	Vnc Id	Usb	Network Adapter	Ram (Mb)	Storage (Gb)	Image Format	Nb Cores	State	
3CX		12:55:df:0a:9e:93	0	None	e1000	1500	10	raw	1	Stopped	

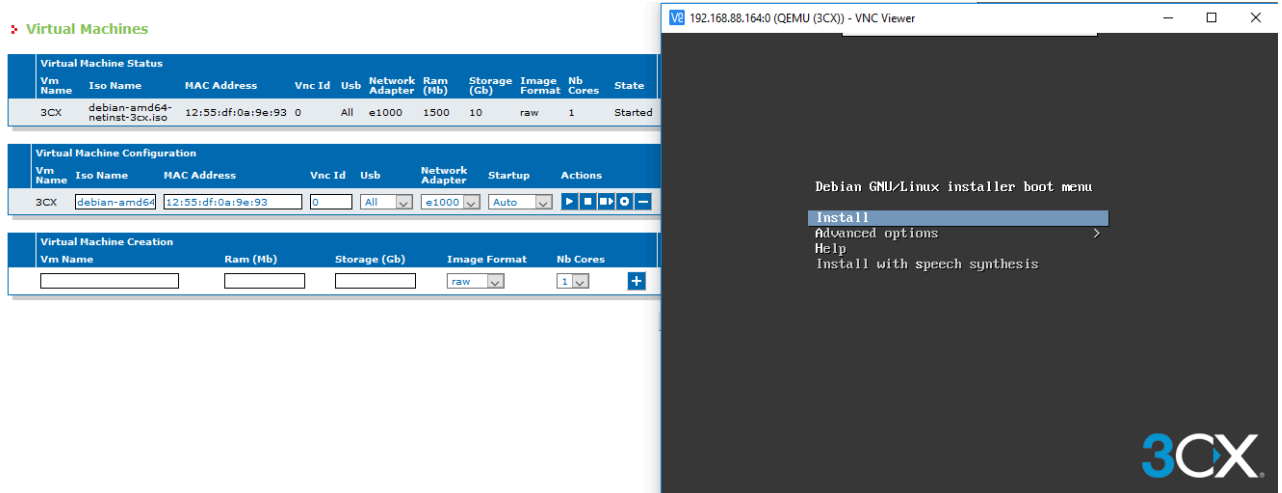
Virtual Machine Configuration									
Vm Name	Iso Name	MAC Address	Vnc Id	Usb	Network Adapter	Startup	Actions		
3CX	netinst-3cx.iso	12:55:df:0a:9e:93	0	All	e1000	Auto	▶ ■ ■ ⏸ ⏻		

Virtual Machine Creation					
Vm Name	Ram (Mb)	Storage (Gb)	Image Format	Nb Cores	
			raw	1	+

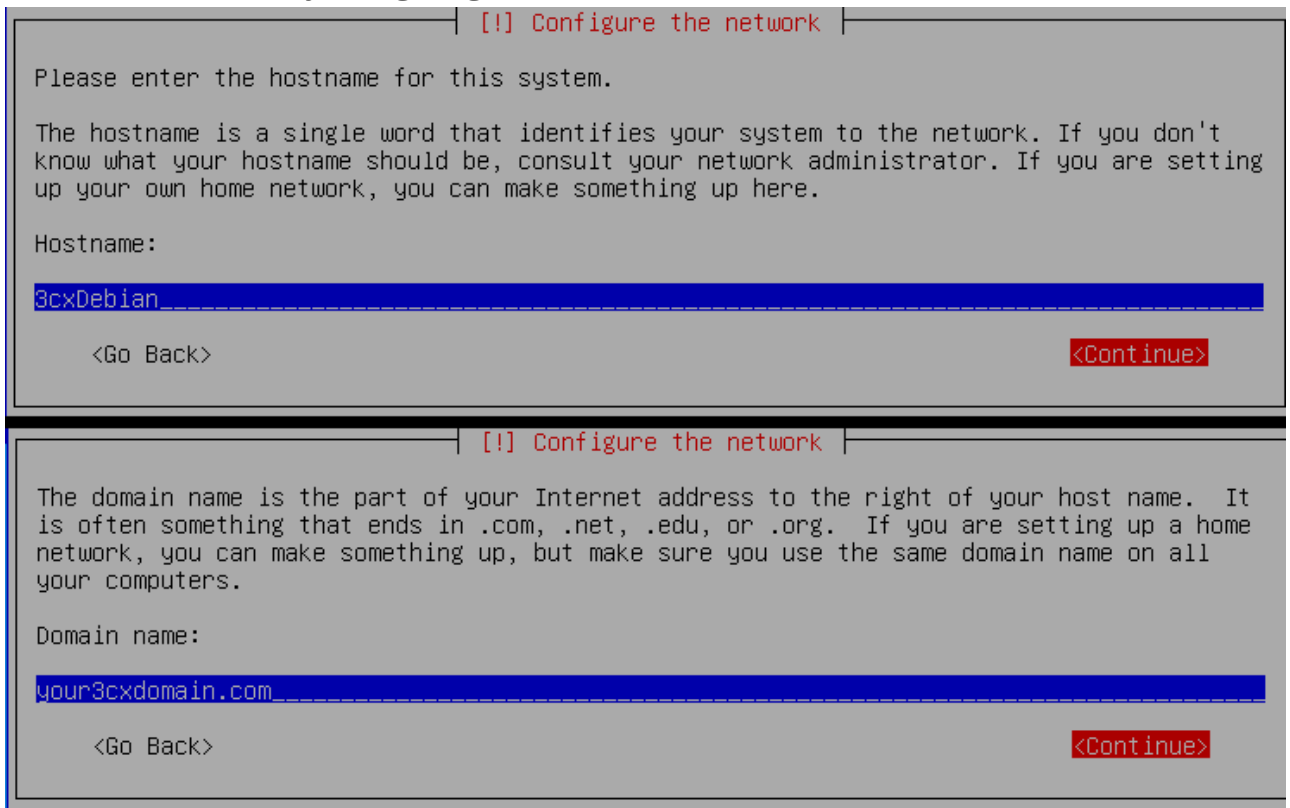
Apply Cancel

- Set the VNC ID accordingly (you can leave it to **0**)
- Set USB to **All**
- Set **Startup** to **Auto** if you want to start up the VM as soon as the Sentinel is started.
- Click **Play** to start the VM.

- 2) Connect using the VNC client to the IP address of the network port with virtual switch enabled.



- The VNC Port number is 5900+VNC_ID, in our example, VNC_ID is 0. Depending on the VNC client, you will have to use 5090 or 0.
 - Supported VNC Clients are: VNC for Chrome, UltraVNC, TightVNC, VNC Viewer.
- 3) Start the installation by configuring the 3cx network (hostname and domain name)



4) Set the language, location, clock settings, users, and passwords.

[[1]] Select a language

Choose the language to be used for the installation process. The selected language will also be the default language for the installed system.

Language:

C	- No localization
Albanian	- Shqip
Arabic	- العربية
Asturian	- Asturianu
Basque	- Euskara
Belarusian	- Беларуская
Bosnian	- Bosanski
Bulgarian	- Български
Catalan	- Català
Chinese (Simplified)	- 中文(简体)
Chinese (Traditional)	- 中文(繁體)
Croatian	- Hrvatski
Czech	- Čeština
Danish	- Dansk
Dutch	- Nederlands
English	- English
Esperanto	- Esperanto
Estonian	- Eesti
Finnish	- Suomi
French	- Français
Galician	- Galego
German	- Deutsch
Greek	- Ελληνικά

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[[1]] Select your location

The selected location will be used to set your time zone and also for example to help select the system locale. Normally this should be the country where you live.

This is a shortlist of locations based on the language you selected. Choose "other" if your location is not listed.

Country, territory or area:

Antigua and Barbuda
Australia
Botswana
Canada
Hong Kong
India
Ireland
Israel
New Zealand
Nigeria
Philippines
Singapore
South Africa
United Kingdom
United States
Zambia
Zimbabwe
other

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[[1]] Set up users and passwords

You need to set a password for 'root', the system administrative account. A malicious or unqualified user with root access can have disastrous results, so you should take care to choose a root password that is not easy to guess. It should not be a word found in dictionaries, or a word that could be easily associated with you.

A good password will contain a mixture of letters, numbers and punctuation and should be changed at regular intervals.

The root user should not have an empty password. If you leave this empty, the root account will be disabled and the system's initial user account will be given the power to become root using the "sudo" command.

Note that you will not be able to see the password as you type it.

Root password:

☐ Show Password in Clear

<Go Back> <Continue>

[[1]] Configure the clock

If the desired time zone is not listed, then please go back to the step "Choose language" and select a country that uses the desired time zone (the country where you live or are located).

Select your time zone:

Eastern
Central
Mountain
Pacific
Alaska
Hawaii
Arizona
East Indiana
Samoa

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5) Configure the disk partitioning and confirm the changes to start the installation.

[[1]] Partition disks

Selected for partitioning:

SCSI1 (0,0,0) (sda) - ATA QEMU HARDDISK: 10.7 GB

The disk can be partitioned using one of several different schemes. If you are unsure, choose the first one.

Partitioning scheme:

All files in one partition (recommended for new users)
Separate /home partition
Separate /home, /var, and /tmp partitions

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[[1]] Partition disks

The installer can guide you through partitioning a disk (using different standard schemes) or, if you prefer, you can do it manually. With guided partitioning you will still have a chance later to review and customise the results.

If you choose guided partitioning for an entire disk, you will next be asked which disk should be used.

Partitioning method:

Guided - use the largest continuous free space
Guided - use entire disk
Guided - use entire disk and set up LVM
Guided - use entire disk and set up encrypted LVM
Manual

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[[1]] Partition disks

This is an overview of your currently configured partitions and mount points. Select a partition to modify its settings (file system, mount point, etc.), a free space to create partitions, or a device to initialize its partition table.

Guided partitioning

Configure software RAID

Configure the Logical Volume Manager

Configure encrypted volumes

Configure iSCSI volumes

SCSI1 (0,0,0) (sda) - 10.7 GB ATA QEMU HARDDISK

#1	primary	9.2 GB	f	ext4	/
#5	logical	1.6 GB	f	swap	swap

SCSI3 (0,0,0) (sdb) - 2.0 GB USB DISK 2.0

#2	primary	9.2 MB		fat16	
	pri/log	2.0 GB			FREE SPACE

Undo changes to partitions

Finish partitioning and write changes to disk

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- 6) Once the installation is completed, in this case it took more than 30 minutes, please be patient, you will be prompt with the question how you would like to configure the PBX. Select option 1 and you should be given the 3CX IP.

```
Created symlink /etc/systemd/system/3CXPhoneSystem01.service → /lib/systemd/system/3CXPhoneSystem01.service.
Created symlink /etc/systemd/system/multi-user.target.wants/3CXPhoneSystem01.service → /lib/systemd/system/3CXPhoneSystem01.service.
Created symlink /etc/systemd/system/3CXIVR01.service → /lib/systemd/system/3CXIVR01.service.
Created symlink /etc/systemd/system/multi-user.target.wants/3CXIVR01.service → /lib/systemd/system/3CXIVR01.service.
Created symlink /etc/systemd/system/3CXQueueManager01.service → /lib/systemd/system/3CXQueueManager01.service.
Created symlink /etc/systemd/system/multi-user.target.wants/3CXQueueManager01.service → /lib/systemd/system/3CXQueueManager01.service.
Created symlink /etc/systemd/system/3CXCallFlow01.service → /lib/systemd/system/3CXCallFlow01.service.
Created symlink /etc/systemd/system/multi-user.target.wants/3CXCallFlow01.service → /lib/systemd/system/3CXCallFlow01.service.
Created symlink /etc/systemd/system/3CXSystemService01.service → /lib/systemd/system/3CXSystemService01.service.
Created symlink /etc/systemd/system/multi-user.target.wants/3CXSystemService01.service → /lib/systemd/system/3CXSystemService01.service.
Created symlink /etc/systemd/system/3CXTunnel01.service → /lib/systemd/system/3CXTunnel01.service.
Created symlink /etc/systemd/system/multi-user.target.wants/3CXTunnel01.service → /lib/systemd/system/3CXTunnel01.service.
Created symlink /etc/systemd/system/3CXAudioProvider01.service → /lib/systemd/system/3CXAudioProvider01.service.
Created symlink /etc/systemd/system/multi-user.target.wants/3CXAudioProvider01.service → /lib/systemd/system/3CXAudioProvider01.service.
Created symlink /etc/systemd/system/3CXHotelModule01.service → /lib/systemd/system/3CXHotelModule01.service.
Created symlink /etc/systemd/system/multi-user.target.wants/3CXHotelModule01.service → /lib/systemd/system/3CXHotelModule01.service.

  3CX

Welcome to the 3CX Configuration Tool
Help https://www.3cx.com/docs/manual/

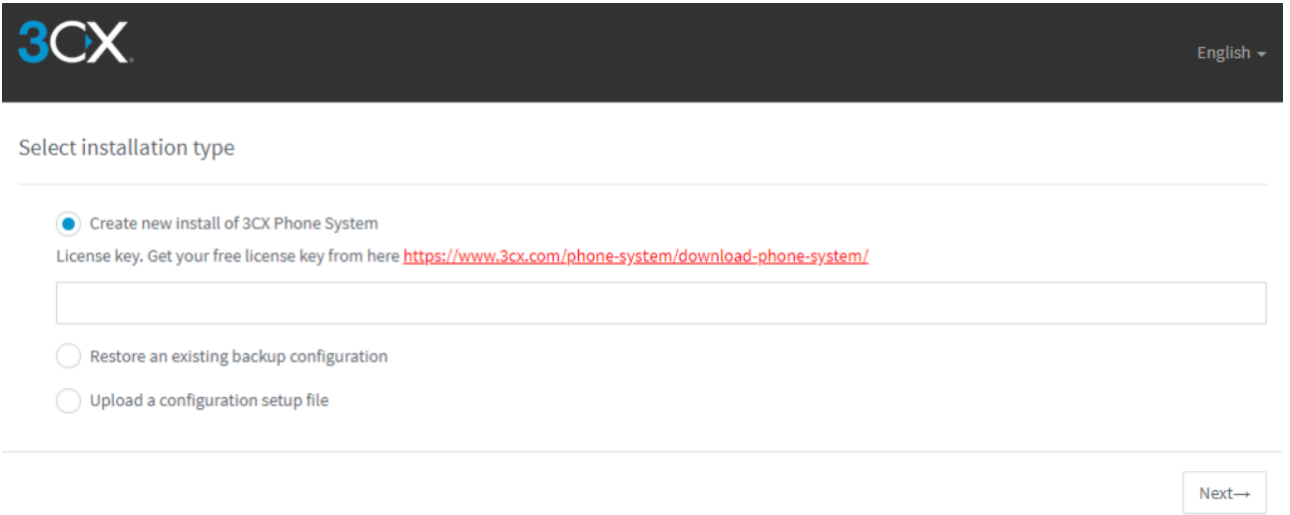
Press ESC to go back.

Select how to run the tool:
(1) Using a Web Browser
(2) From Command Line
Enter option: 1

Starting PbxWebConfigTool...
Launch this url from a browser on another machine:
http://192.168.88.68:5015?v=2
TIP: If this is a cloud machine and the link shows a local IP address then you need to replace the local ip with your public IP Address.
```

Note: By default, port 5015 is used for HTTP, 5001 is used for HTTPS

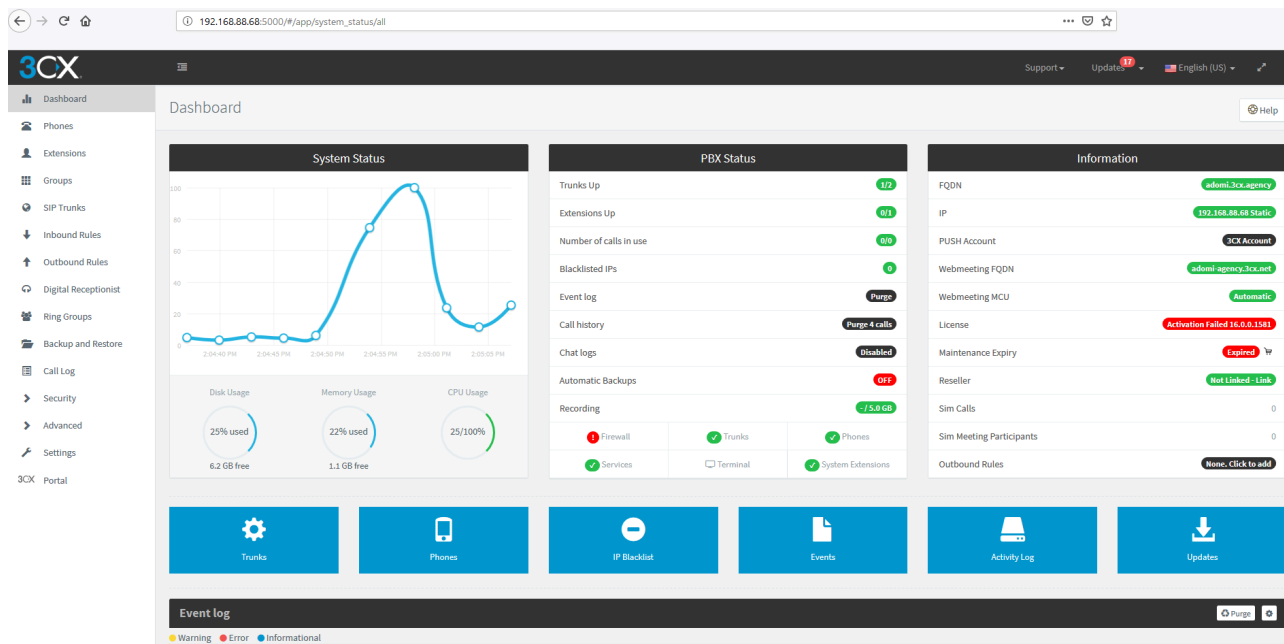
- 7) Once logged into the web interface, you will have to select the installation type



The screenshot shows the 3CX web interface. At the top, there is a dark header with the 3CX logo on the left and a language dropdown menu set to 'English' on the right. Below the header, the main content area is titled 'Select installation type'. There are three radio button options: 'Create new install of 3CX Phone System' (which is selected), 'Restore an existing backup configuration', and 'Upload a configuration setup file'. Below the first option, there is a text input field for a license key, with a link to 'https://www.3cx.com/phone-system/download-phone-system/' above it. At the bottom right of the form, there is a 'Next→' button.

- Create new install of the 3cx system
 - Restore an existing backup configuration
 - Upload a configuration setup file
- 8) Follow the on-screen instructions for the initial setup and the 3CX Web interface will appear.

Result



Other 3CX online resources

Now that the installation is completed, please refer to the following 3CX templates and guides published on the [Media5 Documentation Portal](#):

- [Configuration Notes -Using an FXS Mediatix GW with a 3CX PBX](#)
- [Configuration Notes - Using a PSTN Mediatix GW FXO,PRI,BRI with a 3CX PBX](#)
- [Configuration Notes - 3CX Integration Templates](#)

Online Help

If you are not familiar with the meaning of the fields and buttons, click **Show Help**, located at the upper right corner of the Web page. When activated, the fields and buttons that offer online help will change to green and if you hover over them, the description will be displayed.

DGW Documentation

Mediatrix devices are supplied with an exhaustive set of documentation.

Mediatrix user documentation is available on the [Media5 Documentation Portal](#).

Several types of documents were created to clearly present the information you are looking for. Our documentation includes:

- **Release notes:** Generated at each GA release, this document includes the known and solved issues of the software. It also outlines the changes and the new features the release includes.
- **Configuration notes:** These documents are created to facilitate the configuration of a specific use case. They address a configuration aspect we consider that most users will need to perform. However, in some cases, a configuration note is created after receiving a question from a customer. They provide standard step-by-step procedures detailing the values of the parameters to use. They provide a means of validation and present some conceptual information. The configuration notes are specifically created to guide the user through an aspect of the configuration.
- **Technical bulletins:** These documents are created to facilitate the configuration of a specific technical action, such as performing a firmware upgrade.
- **Hardware installation guide:** They provide the detailed procedure on how to safely and adequately install the unit. It provides information on card installation, cable connections, and how to access for the first time the Management interface.
- **User guide:** The user guide explains how to customise to your needs the configuration of the unit. Although this document is task oriented, it provides conceptual information to help the user understand the purpose and impact of each task. The User Guide will provide information such as where and how TR-069 can be configured in the Management Interface, how to set firewalls, or how to use the CLI to configure parameters that are not available in the Management Interface.
- **Reference guide:** This exhaustive document has been created for advanced users. It includes a description of all the parameters used by all the services of the Mediatrix units. You will find, for example, scripts to configure a specific parameter, notification messages sent by a service, or an action description used to create Rulesets. This document includes reference information such as a dictionary, and it does not include any step-by-step procedures.

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