ZOXO GLOBAL LEADER IN BROADCAST QUALITY LIVE VIDEO OVER IP

Zixi Installation Guide

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* See back for additional licensing information

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Introduction

This Installation Guide includes installation procedures for the following Zixi products on Linux and Windows environments:

- Zixi Feeder
- Zixi Broadcaster
- Zixi Receiver

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You can also install Zixi products in a Docker container. For an explanation of how to build and use Docker containers to deploy Zixi products, see **How to Use ZIXI BROADCASTERS/FEEDERS/RECEIVERS IN DOCKER CONTAINERS**.

Network Settings

The following ports must be opened on your Firewall(s) for inbound and outbound traffic as described below:

Port	Туре	Direction	Description	
2088	UDP	Outbound	Feeder push to Broadcaster, Zixi protocol	
7088	UDP	Outbound	Feeder push to Broadcaster, Zixi protocol with DTLS	
80/443	ТСР	Outbound	Outbound + return - Zixi License server - license.zixi.com - 52.72.218.41 - 34.195.97.223	
1935	ТСР	Inbound	Encoder push to Feeder, RTMP protocol	
4200	ТСР	Inbound	Web management UI, HTTP protocol	
53	DNS	Outbound	Outbound + return - communication to license server, Broadcaster host name resolution	

Zixi Feeder Network Settings

Zixi Broadcaster Network Settings

Port	Туре	Direction	Description
2088	UDP	Inbound	Feeder push to Broadcaster, Zixi protocol

Port	Туре	Direction	Description	
7088	UDP	Inbound	Feeder push to Broadcaster, Zixi protocol with DTLS	
2077	UDP	Inbound	Receiver pull from Broadcaster, Zixi protocol	
7077	UDP	Inbound	Receiver pull from Broadcaster, Zixi protocol with DTLS	
1935	ТСР	Inbound	Encoder push to Broadcaster, RTMP protocol	
1935	ТСР	Outbound	Broadcaster push to CDN or RTMP server, RTMP protocol	
7777	ТСР	Inbound	HTML5 video player or CDN pull from Broadcaster, HTTP streaming protocol - HLS or DASH	
4444	ТСР	Inbound	Web management UI, HTTP protocol	
80/443	ТСР	Outbound	Outbound + return - Zixi License server - license.zixi.com - 52.72.218.41 - 34.195.97.223	
53	DNS	Outbound	Outbound + return - communication to license server, Broadcaster/Feeder/Receiver host name resolution	

Zixi Receiver Network Settings

Port	Туре	Direction	Description	
2077	UDP	Outbound	Receiver pull from Broadcaster, Zixi protocol	
7077	UDP	Outbound	Receiver pull from Broadcaster, Zixi protocol with DTLS	
4300	ТСР	Inbound	Web management UI, HTTP protocol	
80/443	ТСР	Outbound	Outbound + return - Zixi License server - license.zixi.com - 52.72.218.41 - 34.195.97.223	
53	DNS	Outbound	Outbound + return - communication to license server, Broadcaster host name resolution	

ZEN Master Network Settings

The following network settings are required to connect the various Zixi products to ZEN Master.

Zixi Feeder – ZEN Master	Network Settings
--------------------------	------------------

Туре	Port	Direction	Description
ТСР	80/443	Outbound + Return	
SSH	22	Outbound + Return	ZEN Master to <customer>.io.zixi.com</customer>
UDP	2077 / 2088	Outbound + Return	Stream authentication to <customer>.io.zixi.com</customer>
UDP	7077 / 7088	Outbound + Return	DTLS communication to customer.io.zixi.com

Zixi Broadcaster – ZEN Master Network Settings

Туре	Port	Direction	Description
ТСР	80/443	Outbound + Return	ZEN Master Authentication Servers: - 18.210.103.157 - 23.20.44.73 - 34.200.88.233 - 34.238.1.65 - 35.170.111.151 - 52.4.9.203 Or <customer>.zen.zixi.com</customer>
SSH	22	Outbound + Return	ZEN Master to <customer>.io.zixi.com Or <customer>.zen.zixi.com</customer></customer>
UDP	2077 / 2088	Outbound + Return	Stream authentication to <customer>.io.zixi.com Or <customer>.zen.zixi.com</customer></customer>
UDP	7077 / 7088	Outbound + Return	DTLS communication to customer.io.zixi.com Or <customer>.zen.zixi.com</customer>

Туре	Port	Direction	Description
ТСР	80/443	Outbound + Return	
SSH	22	Outbound + Return	ZEN Master to <customer>.io.zixi.com</customer>
UDP	2077 / 2088	Outbound + Return	Stream authentication to <customer>.io.zixi.com</customer>
UDP	7077 / 7088	Outbound + Return	DTLS communication to customer.io.zixi.com

Zixi Receiver – ZEN Master Network Settings

Installing Zixi Products

All Zixi Products (Feeder, Broadcaster and Receiver) can be installed and run on either Linux or Windows environments. The following sections describe the system requirements and installation procedures for each type of OS.

For instructions on how to install CentOS 7.x, see - Installing CentOS 7

Installing Zixi Products on Linux

For instructions on how to install CentOS 7.x, see - Installing CentOS 7



➡ To install Zixi products on a Linux environment:

- 1. Check that you have credentials to login to the Zixi Customer Portal. If you don't have them, please contact Zixi Support at support@zixi.com.
- Check that your system meets the system requirements, see System Requirements -LINUX.
- 3. Download and extract the installation file(s) using the procedures described in **DOWNLOADING AND EXTRACTING THE INSTALLATION FILE.**
- 4. Activate the license through the web-based management UI using the procedures described in ACTIVATING THE LICENSE.

System Requirements - Linux

Hardware

- CPU: Intel i3 dual core CPU or above
- RAM: 2 GB RAM (minimum)
- Networking: 2 x 1GB network card

Operating System

- Zixi Broadcaster 64-bit CentOS 7.x or an equivalent Linux distribution with glibc 2.14+
- Zixi Feeder and Receiver Linux CentOS 6/7, must be a 64-bit distribution
- Linux Ubuntu 12 or later, 64-bit
- Linux Debian 7 or later, 64-bit
- Non-GUI server distribution recommended due to conflicts with NetworkManager GUI application.

Network Management

- Feeder GUI: TCP 4200
- Broadcaster GUI: TCP 4444

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- Receiver GUI: TCP 4300
- SSH Remote Tunnel: If enabled, the device reaches out on port 22 to the remote access server.

Downloading and Extracting the Installation File - Linux

All Zixi software covered by your license agreement is available for download on your Zixi Customer Portal. You can either download the files directly to your local machine or you can use a CLI command or API call to install it on a remote server. The procedures for downloading and extracting all Zixi products (Feeder, Broadcaster and Receiver) are identical.

Make sure you are logged in as a Root user. If you are not logged in as a Root user, use the "su" command.

➡ To download and extract the relevant file:

- 1. Access the Zixi Customer Portal at <u>https://portal.zixi.com</u>.
- 2. Log in using your Username and Password.
- 3. In the Main Navigation, click **Software**.
- 4. At the top of the Software screen, click on the button of the product that you would like to install.

Z/X/ CUSTON	IER PORTAL	
Dashboard	Software	
Software		
Documentation	Zixi Broadcaster Zixi Feeder Zixi Zixi Feeder for OBS Studio Zixi Feed	Receiver Zixi VLC Plugin Zixi Video Accelerator Proxy OBS Studio with Zixi Integration
License Keys		
Lo My Settings		Zixi Broadcaster ∓
Need Help?	V. 14.0.40901	Added Friday, October 9, 2020
đ Zixi	Release Notes (File) Linux (64-bit) Windows (64-bit)	
	V. 14.0.40554	Added Wednesday, September 2, 2020
	 B Release Notes (File) 	
	V. 14.0.40530	Added Monday, August 31, 2020
	 B Release Notes (File) ∆ Linux (64-bit) ■ Windows (64-bit) 	

The available software versions for the selected product (which are available for your account) are displayed.

5. Click on the box of the version that you would like to install. The download options for the selected version are displayed.



- 6. Create a Zixi folder by typing the following commands in the Linux console:
 - # mkdir /zixi
 - # cd /zixi
- 7. Download the file as follows:
 - If you would like to install the product on your local machine (laptop/desktop), click on the *Linux* **Download** button and navigate to the location where you would like to save the file.
 - If you would like to install the product on a remote server, click on the *Linux* **CLI** button. The complete "wget" CLI command and "curl" API call are shown, containing all of the required information about the installation file for the selected product version.



i. Copy the desired command and submit it via the CLI or API as desired.

The "wget" and "curl" commands expire after 10 minutes, at which time they need to be refreshed.

- 8. Extract the installation file by typing the following command:
 - # tar xvf <zixi_product>-<version_number>.tar.gz
 - # cd <zixi_product>
- 9. Run the installation script file by typing the following command: #./installMe.sh
- 10. Run prerequisites script file by typing the following command:
 #./prerequisites.sh

Following the completion of the installation, proceed to ACTIVATING THE LICENSE.

Installing Zixi Products on Windows

- **•** To install Zixi products on a Windows environment:
 - 1. Check that you have credentials to sign in to your account on the Zixi Customer Portal. If you don't have them, please contact *Zixi Support* at support@zixi.com.
 - 2. Check that your system meets the system requirements, see **System Requirements** WINDOWS.
 - 3. Download and extract the installation file(s) using the procedures described in DOWNLOADING AND RUNNING THE INSTALLATION.
 - 4. Activate the license through the web-based management UI using the procedures described in **ACTIVATING THE LICENSE**.

System Requirements - Windows

Hardware

- Recommended processor: Intel[®] Core[™] i3 dual-core or quad-core
- Memory requirements: 2GB (minimum)
- Network interface cards: Minimum of two gigabit Ethernet adapters are required

Operating System

- Windows[®] Server 2012/2016/2019, 32-bit or 64-bit
- Windows 8/10, 32-bit or 64-bit

Windows releases are supported per the Microsoft support schedule. Server OS is preferred for 24/7. Desktop OS, if used, should be configured to disable auto updates and prefer background service priority.

Network Management

- Feeder GUI: TCP 4200
- Broadcaster GUI: TCP 4444
- Receiver GUI: TCP 4300

• SSH Remote Tunnel: If enabled, the device reaches out on port 22 to the remote access server.

Network Streaming

• See Network Settings

Downloading and Running the Installation

All Zixi software covered by your license agreement is available for download on your Zixi Customer Portal. You can either download the ZIP file directly to your local machine or you can use a CLI command or API call to install it on a remote server. The procedures for downloading and extracting all Zixi products (Feeder, Broadcaster and Receiver) are identical.

➡ To download and run the installation:

- 1. Access the Zixi Customer Portal at <u>https://portal.zixi.com</u>.
- 2. Log in using your Username and Password.
- 3. In the Main Navigation, click **Software**.
- 4. At the top of the Software screen, click on the button of the product that you would like to install.

Z/X/ CUSTON	IER PORTAL		🛓 Eli Pielet 🛛 🕞 Logo
Dashboard	Software		🖽 Table View) 📿 Refrest
E Software			
Documentation	Zixi Broadcaster Zixi Feeder Zixi Recei	ver) Zixi VLC Plugin) Zixi Video Accelerator Proxy OBS Studio with Zixi Integration)	
🔥 Partners	Zixi Feeder for OBS Studio Zixi Feeder for	Wirecast (Zixi Feeder/Receiver for MediaConnect	
🔎 License Keys			
Lo My Settings		Zixi Broadcaster 🔫	
Need Help?	V. 14.0.40901	Added Friday, October 9, 2020	
 Zixi 	 Release Notes (File) Linux (64-bit) Windows (64-bit) 		
	V. 14.0.40554	Added Wednesday, September 2, 2020	
	 B Release Notes (File) 		
	V. 14.0.40530	Added Monday, August 31, 2020	
	 Release Notes (File) ∆ Linux (64-bit) ₩ Windows (64-bit) 		

The available software versions for the selected product (which are available for your account) are displayed.

5. Click on the box of the version that you would like to install. The download options for the selected version are displayed.



- 6. Download the file as follows:
 - If you would like to install the product on your local machine (laptop/desktop), click on the *Windows* **Download** button and navigate to the location where you would like to save the file.
 - If you would like to install the product on a remote server, click on the *Windows* **CLI** button. The complete "wget" CLI command and "curl" API call are shown, containing all of the required information about the installation file for the selected product version.

Software / Zixi Feeder - 13.1.40511	
(B Download (253 kB)) Release Notes File: Platform V13.1.40511 Release Notes Feeder.pdf	
Docker: zixi_feeder-13.1.40511.docker.tar.gz	
(Download (8 MB) Linux (64-bit): zixi_feeder-linux64-13.1.40511.tar.gz	
Download (6 MB) Windows (64-bit): zixi_feeder-win64-13.1.40511.zip	
Expires in 10 minutes (Oct 19, 2020, 1:19:16 PM) Expires in 10 minutes (Oct 19, 2020, 1:19:16 PM) Every of thtps://customer-portal-files-prod.s3.us-east-2.amazonaws.com/zixi_feeder-linux64-13.1.40511.tar.gz?X-Amz-Alg Credential=AKIAWXTQSVVGW4WS7HMX%2F20201019%2Fus-east-2%2Fs3%2Faws4_request&X-Amz-Date=20201019T10C Signature=7f177f05ac4a8add8acbbf594158607578516731580b64395feaa98d67317c5d&X-Amz-SignedHeaders=host* -0	jorithm=AWS4-HMAC-SHA256&X-Amz- 916Z&X-Amz-Expires=600&X-Amz- "zixi_feeder-linux64-13.1.40511.tar.gz"
Intropy of the second secon	orithm=AWS4-HMAC-SHA256&X-Amz- 916Z&X-Amz-Expires=600&X-Amz- utput "zixi_feeder-linux64-13.1.40511.tar.gz"
© Close	

i. Copy the desired command and submit it via the CLI or API as desired.

The "wget" and "curl" commands expire after 10 minutes, at which time they need to be refreshed.

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7. Double-click on the Zixi Broadcaster installation file.

The License Agreement window appears.

License Agreement					\sim
Please review the license terms before installin	ng Zixi Broadcast	er.			Z
Press Page Down to see the rest of the agree	ment.				
ŻiXi LLC. Software License Agreement					^
BY CLICKING THE "I AGREE" BUTTON, YOU (I THE TERMS AND CONDITIONS OF THIS ZIXI I "AGREEMENT"). PLEASE READ THIS AGREEME AGREE" BUTTON BELOW. IF YOU DO NOT AG AGREEMENT, PLEASE DO NOT CLICK THE "I A AGREE" BUTTON AND YOU WILL NOT BE ABLE SOFTWARE PRODUCTS.	THE "LICENSEE") SOFTWARE LICE ENT CAREFULLY REE TO ALL OF ' AGREE" BUTTON, E TO INSTALL AN	AGREE TO NSE AGRE BEFORE O THE TERM BUT CLIO ID USE TH	D BE BO EMENT LICKIN S OF TH K THE " E ZIXI	UND BY (THE G THE [®] I IIS I DO NOT	r •
If you accept the terms of the agreement, clic agreement to install Zixi Broadcaster.	k I Agree to con	tinue. You	must a	ccept the	
ii LLC,					
		I Agre	e	Can	cel
e Installation Location wind	ow appea	rs.			
Zixi Broadcaster Setup			-		×
Zixi Broadcaster Setup Choose Install Location Choose the folder in which to install Zixi Broad	caster.		_		×
Zixi Broadcaster Setup Choose Install Location Choose the folder in which to install Zixi Broad Setup will install Zixi Broadcaster in the followir Browse and select another folder. Click Next t	caster. ng folder. To inst o continue.	all in a difi	ferent f	ölder, dia	× Z
Zixi Broadcaster Setup Choose Install Location Choose the folder in which to install Zixi Broad Setup will install Zixi Broadcaster in the followir Browse and select another folder. Click Next t Destination Folder C: Program Files Zixi Broadcaster	caster. ng folder. To inst o continue.	all in a dif	ferent f	iolder, clia	× Z *
Zixi Broadcaster Setup Choose Install Location Choose the folder in which to install Zixi Broad Setup will install Zixi Broadcaster in the followin Browse and select another folder. Click Next t Destination Folder C:\Program Files\Zixi\Broadcaster Space required: 60.9MB Space available: 97.6GB	caster. ng folder. To inst o continue.	all in a dif	ferent f	iolder, clia	× Z *

9. Select the folder in which the Broadcaster files will be installed. The default location is in the Zixi folder which is in the Program Files folder.

8.

10. Click Next.

The Broadcaster ID window a	ppears.			
Z Zixi Broadcaster Setup		_		\times
Zixi Broadcaster Configuration Please take a moment to go over the default	configuration for Z	ixi Broadcaster.		Z
Zixi Broadcaster network ID:				
ELI-PC				
Zixi LLC,				
	< Back	Install	Cano	:el

- 11. Enter a name for the **Broadcaster ID**. The default name is the local host.
- 12. Click Install.

The installation progress window appears.

	• •			
Z Zixi Broadcaster Setup		_		\times
Installation Complete				-
Setup was completed successfully.				2
Completed				
Show details				
Zixi LLC,				
	< Back	Close	Cano	tel

13. When the installation is complete, click **Close**.

The Broadcaster Login page opens in your browser.

Following the completion of the installation, proceed to ACTIVATING THE LICENSE.

Activating the License

Activation of the licenses is performed in the relevant web-based management UI. For all Zixi products (Feeder, Broadcaster and Receiver), the installation can be done online using a *License Key* or offline using a *License File*.

To activate Zixi license online, ensure connection to URL: license.zixi.com via TCP port 80. If you cannot open this connection, you can activate your license through a "License File". To obtain a license file, please contact *Zixi Support* at support@zixi.com.

Zixi Feeder

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When logging in to a Zixi Feeder for the first time, you must activate the Zixi license.

Logging in to Zixi Feeder

- ➡ To log in to Zixi Feeder:
 - In your web browser, navigate to <u>http://localhost:4200</u>. A user authentication window opens.
 - 2. In the User Name field, enter 'admin'.
 - 3. In the Password field, enter '1234'.
 - 4. Click **OK**.

The Feeder UI opens on the Status page.

Online Activation (License Key)

The following procedure requires connectivity to the Internet. If you are not able to connect, you can activate the Feeder using the procedure described in **OFFLINE ACTIVATION (LICENSE FILE)**.

➡ To Activate the License online using a License Key:

- 1. In the **Status** page of the Zixi Feeder UI, click **Options** in the menu bar.
 - The drop-down menu is displayed.

		LOGOUT
	→ Options	් Restart
1 Activate License		
A Reload Licenses		
🕞 Load License		

2. Click Activate License.

The Activate License window appears.

Key:	
Key:	
<u> </u>	

- 3. In the **Key** field, enter your Activation Key.
- 4. Click Activate.

The Zixi Feeder is enabled.

Offline Activation (License File)

If you want to activate your license without an internet connection, you can upload a *License File*. To obtain a License File, please contact *Zixi Support* at support@zixi.com.



1. In the **Status** page of the Zixi Feeder UI, click **Options** in the menu bar. The drop-down menu is displayed.

		LOGOUT
	✓ Options	ල් Restart
1 Activate License		
a1	i	
🕞 Load License		

2. Click Load License.

The directory of the local drive opens.

3. Navigate to the License File and click **Open**.

A prompt window instructs you to Reload the license to activate the license.

4. Click again on **Options** and select **Reload Licenses** from the dropdown menu. The Zixi Feeder is enabled.

Zixi Broadcaster

When logging in to a Zixi Broadcaster for the first time, you must activate the Zixi license.

Logging in to Zixi Broadcaster

➡ To log in to Zixi Broadcaster:

- In your web browser, navigate to http://localhost:4444. A user authentication window opens.
- 2. In the User Name field, enter 'admin'.
- 3. In the **Password** field, enter '1234'.
- 4. Click **OK**. The Broadcaster UI opens on the **Status** page.

Online Activation (License Key)

The following procedure requires connectivity to the Internet. If you are not able to connect, you can activate the Broadcaster using the procedure described in **OFFLINE ACTIVATION (LICENSE FILE)**.

➡ To Activate the License online using a License Key:

1. In the **Status** page of the Zixi Broadcaster UI, click **Options** in the menu bar. The drop-down menu is displayed.



2. Click Activate License.

The Activate License window appears.

Key:	Activate License		×
	Key:		
	,		_

3. In the **Key** field, enter your Activation Key.

4. Click Activate.

The Zixi Broadcaster is enabled.

Offline Activation (License File)

If you want to activate your license without an internet connection, you can upload a License File. To obtain a license file, please contact *Zixi Support* at support@zixi.com.

➡ To Load the License File:

1. In the **Status** page of the Zixi Broadcaster UI, click **Options** in the menu bar. The drop-down menu is displayed.

		LOGOUT
ন Network Test	▼ Options	ථ Restart
1 Activate License		
© Reload Licenses		
🕞 Load License		

2. Click Load License.

The directory of the local drive opens.

- Navigate to the License File and click **Open**.
 A prompt window instructs you to Reload the license to activate the license.
- 4. Click again on **Options** and select **Reload Licenses** from the dropdown menu. The Zixi Broadcaster is enabled.

Zixi Receiver

When logging in to a Zixi Receiver for the first time, you must activate the Zixi license.

Logging in to Zixi Receiver

- ➡ To log in to Zixi Receiver:
 - In your web browser, navigate to <u>http://localhost:4300</u>. A user authentication window opens.
 - 2. In the User Name field, enter 'admin'.
 - 3. In the **Password** field, enter '**1234**'.
 - 4. Click **OK**. The Receiver UI opens on the **Status** page.

Online Activation (License Key)

The following procedure requires connectivity to the Internet. If you are not able to connect, you can activate the Receiver using the procedure described in **OFFLINE ACTIVATION (LICENSE FILE)**.

➡ To Activate the License online using a License Key:

1. In the **Status** page of the Zixi Receiver UI, click **Options** in the menu bar. The drop-down options menu is displayed.



2. Click Activate License.

The Activate License window appears.

Activate Licen	se x
Key:	
-	

3. In the **Key** field, enter your Activation Key.

4. Click Activate.

The Zixi Receiver is enabled.

Offline Activation (License File)

If you want to activate your license without an internet connection, you can upload a license file. To obtain a license file, please contact *Zixi Support* at support@zixi.com.

- ➡ To Load the License File:
 - 1. In the **Status** page of the Zixi Receiver UI, click **Options** in the menu bar. The drop-down options menu is displayed.



2. Click Load License.

The directory of the local drive opens.

- Navigate to the License File and click **Open**.
 A prompt window instructs you to Reload the license to activate the license.
- 4. Click again on **Options** and select **Reload Licenses** from the dropdown menu. The Zixi Receiver is enabled.

Installing CentOS 7

The following instructions are designed to help you install CentOS 7.x. After installing the operating system, follow the instructions in the **Installing Zixi Products on Linux** section to complete the installation.

➡ To install CentOS 7 on your computer:

- Download the "CentOS-7x86_64-Minimal-1908.iso" file from the following link: <u>http://mirrors.seas.harvard.edu/centos/7.7.1908/isos/x86_64/</u> A list of additional mirrors can be found at <u>http://isoredirect.centos.org/centos/7/isos/x86_64/</u>
- 2. Copy the downloaded file to a FAT 32 formatted USB thumb drive of good quality with at least 8 GB of space.
- 3. To create a bootable USB drive, download **Rufus** to your computer from the following link <u>https://rufus.akeo.ie/</u>
- 4. Right-click on the **Rufus** icon and choose **Run as Administrator**. The following screen is displayed:

2	Rutus 2.1	8.1213	×
Device			¥*
ZXL19_SO	(I:) [9GB]		*
Partition Sch	eine and target system	n type	
MBR partitio	on scheme for BIOS or	UER	~
file system			
FAT32 (Defa	ան		¥
Cluster size			
4096 bytes	(Default)		~
New volume	label		
CentOS 7 x	16 64		
Format Opt	ions 💟		
Check d	evice for bad blocks	1 Pass	v
Quick fo	rmat		
Create a	a bootable disk using	ISO image	v 🕓
Create (otencied label and icc		Û
	REA	DY	
About	Log	Start	Close
sing image	CentOS-7-x86 64-	Minimal-170	8.i #

- 5. In the **Device** field, select the name of your USB thumb drive.
- 6. In the **Create bootable disk using** field, select the format of the downloaded image (e.g. ISO image).
- 7. Click on the disk icon to browse to the CentOS 7 ISO to install.

8. Click Start.

B

The process will take a couple minutes and the lower window will display "READY!" when done.

- 9. Remove the USB and install it on the machine you will be installing CentOS on.
- 10. Boot your computer by restarting it and then waiting for that first screen to be displayed.
- 11. Press the boot option key as instructed on the first screen (e.g. often, it'll say something like "Press F12 to Choose Boot Device").
- 12. Wait a moment to continue booting until see a menu pop up with a list of choices on it. Highlight your USB drive and press **Enter**.
- 13. Exit out of your BIOS, while saving your changes. Usually, this option is under "Exit" on the main menu, or available via a keyboard shortcut listed (e.g. F4) somewhere on your screen.

Your computer should reboot. If you're prompted to "**Press any key to boot from CD/DVD**" do so. Your computer should boot into the USB drive instead of your normal operating system.

Make sure ALL network adapters are connected and ON in order for the Linux installation protocol to be able to SEE them. Otherwise, they will not be set to start up on boot.

14. On the following CentOS 7 prompt screen, select Install CentOS 7 and then press Enter.



- To setup CentOS 7:
 - 1. On the CentOS welcome screen, select the desired language and click **Continue**.



2. On the main screen, click **Date & Time** and then set the time zone, date, and time and then click **Done** (located in the upper left corner).



 On the main screen, click Keyboard and then click the big "+" button in the lower left corner and find your keyboards language (you can search), click Add to add it and then click Done (located in the upper left corner). When finished, click Done (located in the upper left corner). 4. On the main screen, click Language Support and select the language of your choice, (default is English) and then click Done (located in the upper left corner).

INGUAGE SUPPORT		CENTOS 7 INSTALLATIO
Sele	t additional langu	age support to be installed:
Deutsch	Ge/man	C English (United States)
EANDARD	CARDIN	English (Linited Kingdom)
English	Engüsti	English (India)
Español	. Spacesn	English (Australia)
Eesti	Estonian	English (Canada)
Euskara	Basque	 English (Denmark)
فارسن	Persian	English (Ireland)
Suomi	Finnish	English (New Zealand)
Français	Franch	English (Negeria)
Galego	Galician	 Endah (Phisomes)
સુપરાતી	Gujarati	English (Singapore)
עברייז	Heterev	 English (South Africa)
Tan here to watch."		a

- 5. On the main screen, click **Installation Source** and select the installation USB as the installation source. When finished, click **Done** (located in the upper left corner).
- 6. On the main screen, click **Software Selection** and select Minimal Installation (you may select another type of installation, but this is the minimal default requirement for installing Zixi. When finished, click **Done** (located in the upper left corner).



7. On the main screen, click **Installation Destination** and select the device on which you would like to install. Make sure that the hard drive you want to install the system on has

the check mark on it by clicking it (if it goes away when you click it, then click it again).

INSTALLATION DESTINATION	CENTOS 7 INSTALLATION
Device Selection	
Select the device(s) you'd like to install to. They "Begin Installation" button.	will be left untouched until you click on the manimenu's
Local Standard Disks	
16 38 GB VMeare Virtual dae ada / 959 23 85 free	
Specialized & Network Diake	disks laft an excited here self, not be tauched
Add a disk.,	
Other Storage Options	Baks left associated here will out be trailed
Participanies ()	ore partitioning
Fell disk summary and boardinades	1 data setected; 10.38 GR capacity; 869,23 kB free

8. Under the Partitioning section, select the **Automatic Partitioning** option (this guide will not cover manually partitioning your hard drive). When finished, click **Done** (located in the upper left corner).

If your hard drive is empty, the main installation screen will be displayed.

9. If your hard drive contains partitions, it will ask you to reclaim the space on it in a popup like shown below.

INSTALLATION OPTIONS	
Your current CentOS and ware selection requires 2. 918.46 MB for software and 1.63 GB for swap spa following amounts of free space:	55 GB of available space, including ce. The disks you've selected have the
969.23 kB Free space available for use.	
O B Free space unavailable but reclaimable	from existing partitions.
You don't have enough space available to install Cent partitions via our guided reclam space tool, or you ca the custom partitioning interface.	tOS. You can shrink or remove existing in adjust your partitions on your own in
Cancel & add more cheka	Reclaim space

10. Click **Reclaim Space**.

Divis	(Name)	Filesystem	Reclaimable Space	Action
* 16 38 GB VMware Virtual disk	ada			Preserve
- cestas	asia2	lemps	Not oranavabla.	Preserve
- afu	udel	xfri	Not inscention	Preserve

- 11. Click **Delete All** and then click **Reclaim Space**.
- 12. On the main screen, click **Network & Hostname**. Ensure you have at least one network listed on your left. If you have multiple network adapters, select the network adapter you want to use. You can use multiple network adapters by configuring network bonding, load balancing and failover schemes (see the Zixi documentation for more details).



- 13. For each selected network adapter, toggle the ON/OFF switch to the right to turn it on. ALL network adapters need to be connected and ON in order for the Linux installation protocol to be able to SEE them. Otherwise, they will not be set to start up on boot.
- 14. To configure the network adapter, select it and click **Configure**.

4432	Correctationers: en
802,5x Security DOB (Pv4 Settings (Pv5 Settings)	Ganana/ Etherner ()
Management and a second s	0.000
· ENTREMATINGCONS	Oever HAC address
A REAL PROPERTY AND A REAL	Cloned MAC address
automatic - + lytes	MILL.

15. Click the **IPV4 Settings** tab and then click **Add**. Fill in the **IP address** you want to have (make sure it's not already in use), the **netmask** and the **gateway**. When done, click **Save**.



If you want to receive the IP address through DHCP on you server, you can skip this step.

- 16. In the **Hostname** field, enter the name of the server (default localhost.localdomain). When finished\, click **Done** (located in the upper left corner).
- 17. On the main screen, click **Begin Installation**. The installation will begin.

18. While it's installing, you have to set the root password. Click the **Root Password** button in the middle of the screen.



19. Type in the password you want the root user to have in both password fields.

PASSWORD	CENTOS 7 INSTALLATION
The rest account is used for administering the s	system. Teller a paraword for the cost one.
Foot Password	
	Brepty
Epden	

- 20. Click Done.
- 21. When the progress bar is at 100%, click Finish Configuration.

22. When the process ends, remove the USB thumb drive and click **Reboot**. After a minute or two the following screen is displayed:

CentOS Linux 7 (Core) Kernel 3.10.0-123.e17.x86_64 on an x86_64 localhost login: _

- 23. Type the "root" user here and press Enter.
- 24. Type the password and press Enter.



R

To update the operating system:

1. Run the following commands as a "Root" user:

```
# yum update -y
   # yum install -y yum-utils net-tools wget ntp network-scripts
telnet
```

- 2. After the default CentOS7 installation, NetworkManager service will be running. As networking configuration can be handled by the network-scripts package, it is advised that NetworkManager be disabled and removed. Run the following commands to disable NetworkManager:
 - # systemctl stop NetworkManager
 - # systemctl disable NetworkManager
 - # yum remove -y NetworkManager

On CentOS8, the network-scripts package is deprecated so NetworkManager must be kept.