



**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

In addition, the installation guide includes instructions on how to install CentOS 7.x – See [Installing CentOS 7](#)

Network Settings

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

Zixi Feeder Network Settings

Port	Type	Direction	Description
2088	UDP	Outbound	Feeder push to Broadcaster, Zixi protocol
7088	UDP	Outbound	Feeder push to Broadcaster, Zixi protocol with DTLS
1935	TCP	Inbound	Encoder push to Feeder, RTMP protocol
4200	TCP	Inbound	Web management UI, HTTP protocol

Zixi Broadcaster Network Settings

Port	Type	Direction	Description
2088	UDP	Inbound	Feeder push to Broadcaster, Zixi protocol
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	TCP	Inbound	Encoder push to Broadcaster, RTMP protocol
1935	TCP	Outbound	Broadcaster push to CDN or RTMP server, RTMP protocol

Port	Type	Direction	Description
7777	TCP	Inbound	HTML5 video player or CDN pull from Broadcaster, HTTP streaming protocol - HLS or DASH
4444	TCP	Inbound	Web management UI, HTTP protocol

Zixi Receiver Network Settings

Port	Type	Direction	Description
2077	UDP	Outbound	Receiver pull from Broadcaster, Zixi protocol
7077	UDP	Outbound	Receiver pull from Broadcaster, Zixi protocol with DTLS
4300	TCP	Inbound	Web management UI, HTTP protocol

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

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

Zixi Broadcaster – ZEN Master Network Settings

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

Zixi Receiver – ZEN Master Network Settings

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

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 a link and credentials to the Zixi download site and the license activation keys. If you don't have them, please contact *Zixi Support* at support@zixi.com.
1. Check that your system meets the system requirements, see [SYSTEM REQUIREMENTS - LINUX](#).
2. Download and extract the installation file(s) using the procedures described in [DOWNLOADING AND EXTRACTING THE INSTALLATION FILE](#).
3. 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

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

Network Streaming

- [Network Settings](#)
- [ZEN Master Network Settings](#)

Downloading and Extracting the Installation File - Linux

After receiving the email with the download link and the license activation keys, follow the instructions below. The procedures for downloading and extracting all Zixi products (Feeder, Broadcaster and Receiver) are identical. For the <zixi_product> parameter, enter the relevant product name (e.g. 'Feeder').



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 file:

1. Create a Zixi folder by typing the following commands in the Linux console:

```
# mkdir /zixi
# cd /zixi
```

2. Type the # wget command followed by the download link that you have received via email, while excluding the "http://" part of the link. For example:

```
# wget --user=<customer_Name>--ask-password
downloads.zixi.com/<customerName>/<zixi_product>-<version_number>.tar.gz
```

3. You will be requested to enter a password, type the password that you have received from Zixi support.

4. Extract the installation file by typing the following command:

```
# tar xvfz <zixi_product>-<version_number>.tar.gz
# cd <zixi_product>
```

5. Run the installation script file by typing the following command:

```
#!/installMe.sh
```

6. 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 a link and credentials to the Zixi download site and the license activation keys. 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 2008/2012/2016/2019, 32-bit or 64-bit
- Windows 7/8/10, 32-bit or 64-bit

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

- [Network Settings](#)
- [ZEN Master Network Settings](#)

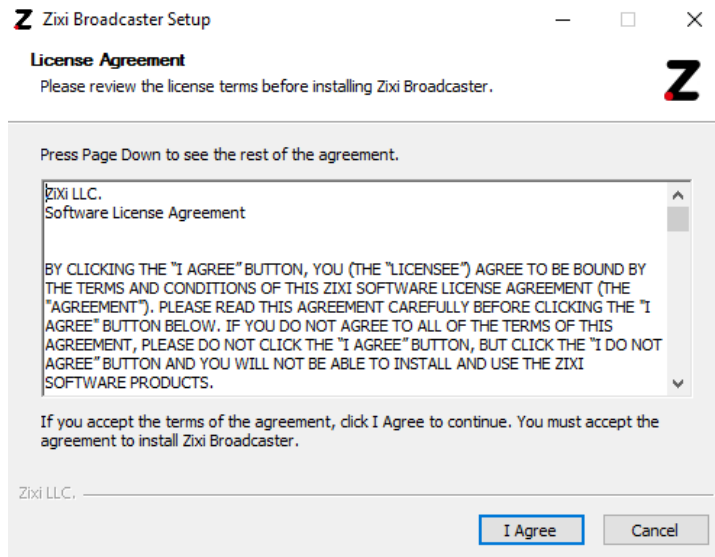
Downloading and Running the Installation

After receiving the email with the download link, follow the instructions below. The downloading and the extraction of all Zixi Products (e.g. Zixi Feeder, Zixi Broadcaster, etc.) is similar. In this procedure we will use Zixi Broadcaster as an example.

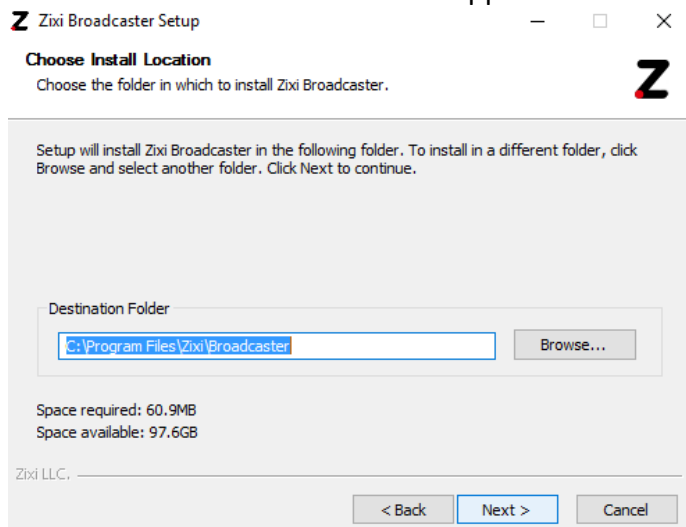
➔ To download and run the installation:

1. Download the **Zixi Broadcaster** installation file.
2. Double-click on the Zixi Broadcaster installation file.

The **License Agreement** window appears.



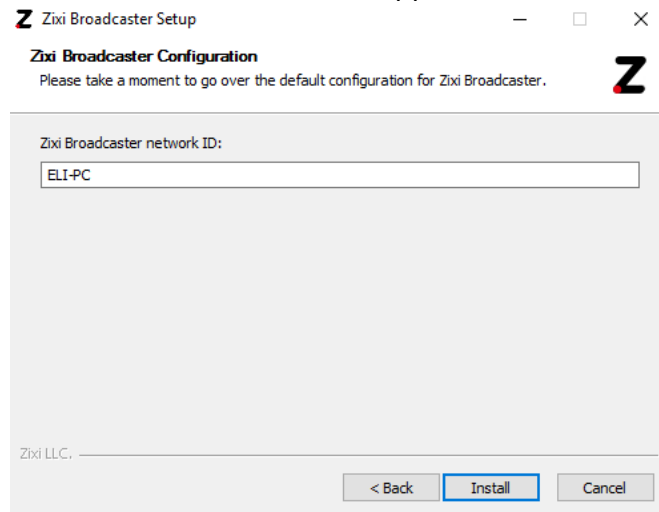
3. After reading the license agreement, click **I Agree**. The **Installation Location** window appears.



4. 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.

5. Click **Next**.

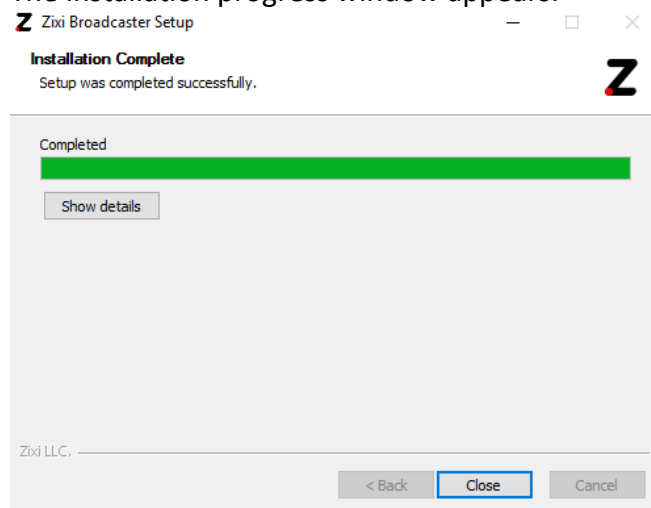
The **Broadcaster ID** window appears.



6. Enter a name for the **Broadcaster ID**. The default name is the local host.

7. Click **Install**.

The installation progress window appears.



8. 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

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:

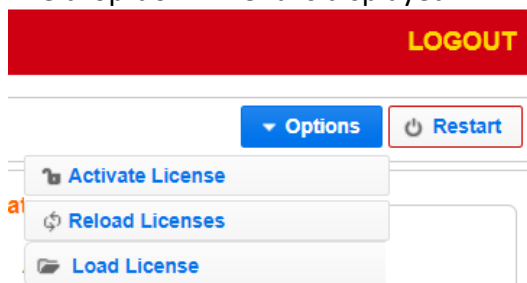
1. In your web browser, navigate to <http://localhost:4200>.
A user authentication window opens.
2. In the **User Name** field, enter '**admin**'.
3. In the **Password** field, enter '**1234**'.
4. Click **OK**.
The Feeder UI opens on the **Status** page.

Online Activation (License Key)

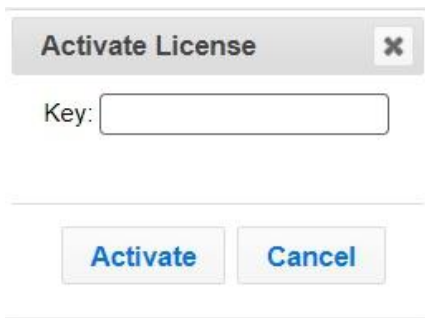
The following procedure requires connectivity to the Internet. If you are not able to connect, you can activate the Feeder using the procedure described in [OFFLINE ACTIVATION \(LICENSE FILE\)](#).

➔ 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.



2. Click **Activate License**.
The **Activate License** window appears.



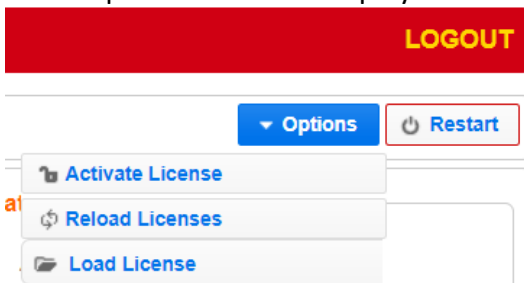
3. In the **Key** field, enter your Activation Key.
4. Click **Activate**.
The Zixi Feeder is enabled.

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.

➔ To Load the License File:

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



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:

1. In your web browser, navigate to <http://localhost:4444>.
A user authentication window opens.

Activating the License

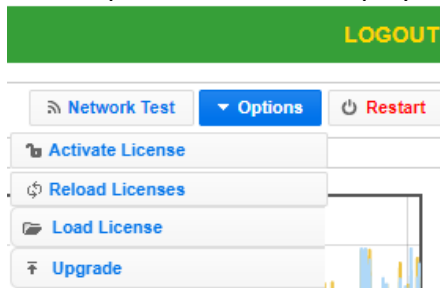
2. In the **User Name** field, enter 'admin'.
3. In the **Password** field, enter '1234'.
4. Click **OK**.
The Broadcaster UI opens on the **Status** page.

Online Activation (License Key)

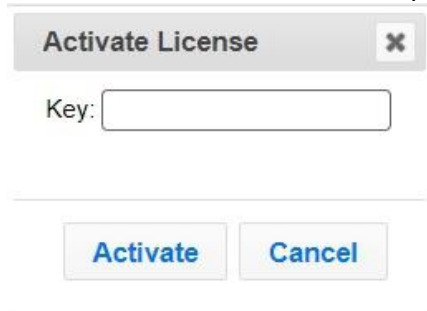
The following procedure requires connectivity to the Internet. If you are not able to connect, you can activate the Broadcaster using the procedure described in [OFFLINE ACTIVATION \(LICENSE FILE\)](#).

➔ 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.



3. In the **Key** field, enter your Activation Key.
4. Click **Activate**.
The Zixi Broadcaster is enabled.

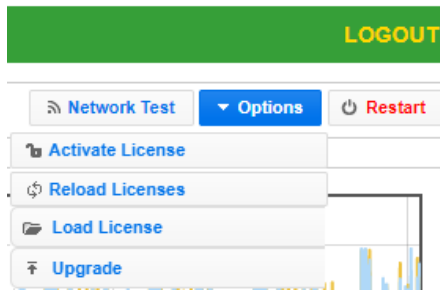
Offline Activation (License File)

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.

Activating the 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 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:

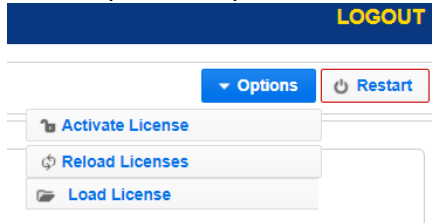
1. In your web browser, navigate to <http://localhost:4300>.
A user authentication window opens.
2. In the **User Name** field, enter 'admin'.
3. In the **Password** field, enter '1234'.
4. Click **OK**.
The Receiver UI opens on the **Status** page.

Online Activation (License Key)

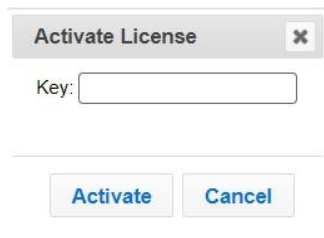
The following procedure requires connectivity to the Internet. If you are not able to connect, you can activate the Receiver using the procedure described in [OFFLINE ACTIVATION \(LICENSE FILE\)](#).

➔ 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.



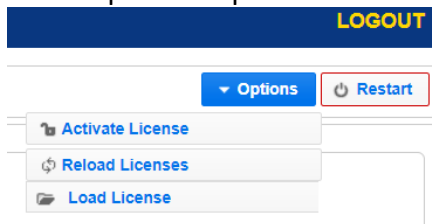
3. In the **Key** field, enter your Activation Key.
4. Click **Activate**. The Zixi Receiver is enabled.

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.
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 Receiver is enabled.

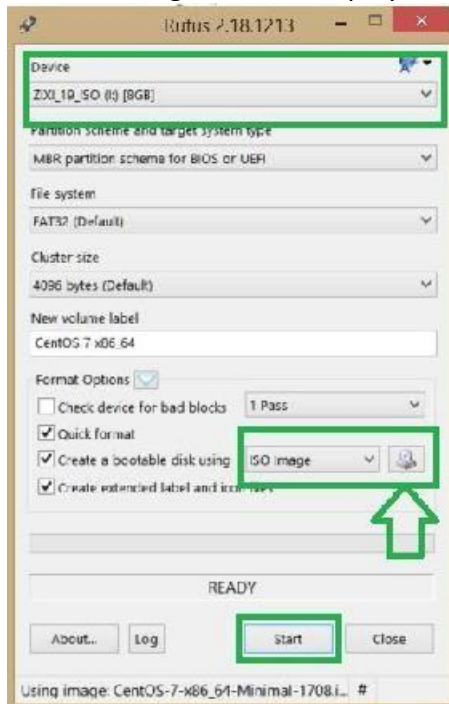
Installing CentOS 7

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:**

1. Download the “CentOS-7x86_64-Minimal-1908.iso” file from the following link:
http://mirrors.seas.harvard.edu/centos/7.7.1908/isos/x86_64/
A list of additional mirrors can be found at
http://isoredirect.centos.org/centos/7/isos/x86_64/
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 - <https://rufus.akeo.ie/>
4. Right-click on the **Rufus** icon and choose **Run as Administrator**.

The following screen is displayed:



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**.

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

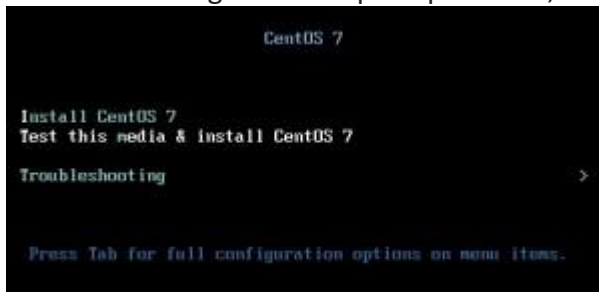
Installing CentOS 7

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).

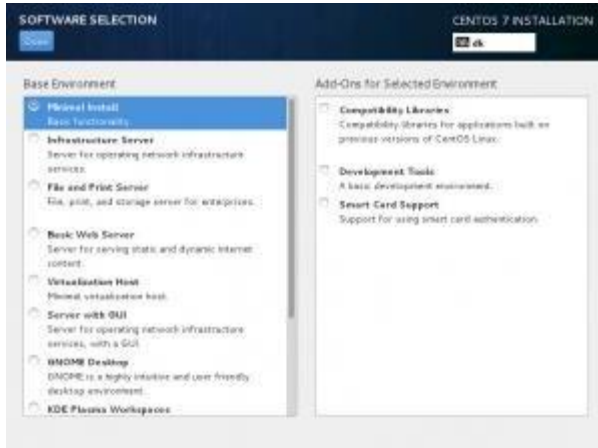


3. On the main screen, click **Keyboard** and then click the big “+” button in the lower left corner and find your keyboard's language (you can search), click **Add** to add it and then click **Done** (located in the upper left corner). When finished, click **Done** (located in the upper left corner).
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).



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 server type of installation, but this is the minimal default requirement for installing Zixi). When finished, click **Done** (located in the upper left corner).

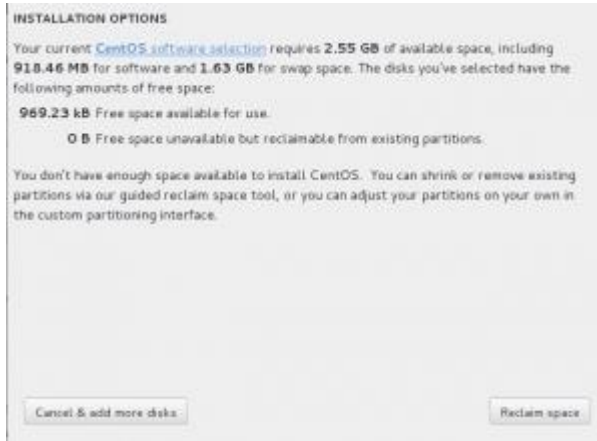


7. On the main screen, click **Installation Destination** and select the device on which you would like to install. Make sure that the hard drive you want to install the system on has the check mark on it by clicking it (if it goes away when you click it, then click it again).

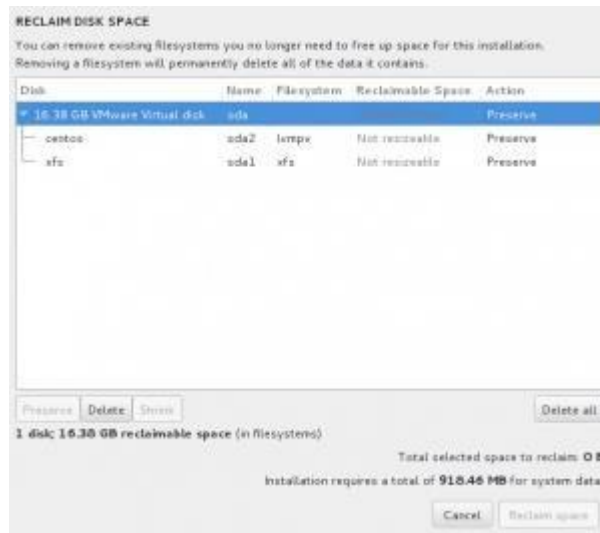


8. Under the **Partitioning** section, select the **automatic partitioning** option (this guide will not cover manually partitioning your hard drive). When finished, click **Done** (located in the upper left corner).
If your hard drive is empty, the main installation screen will be displayed.

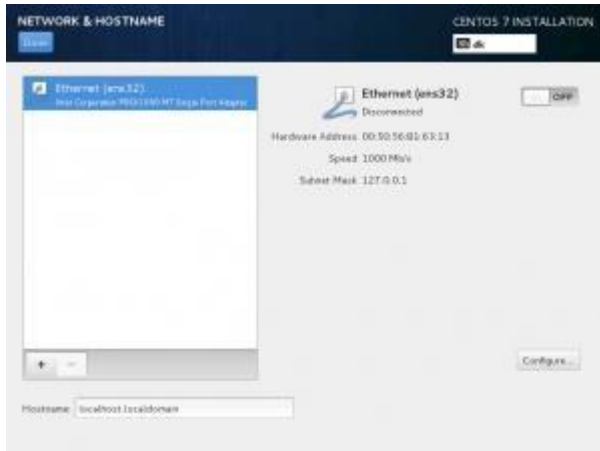
9. If your hard drive contains partitions, it will ask you to reclaim the space on it in a popup like shown below.



10. Click **Reclaim Space**.
The following screen is displayed.



11. Click **Delete All** and then click **Reclaim Space**.
12. On the main screen, click **Network & Hostname** ensure you have at least one network adapter listed on the 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).

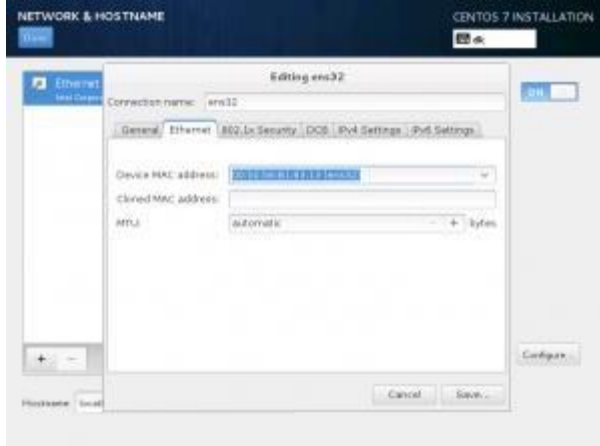


13. For each selected network adapter, toggle the **ON/OFF** switch to the right to turn it on. ALL network adapters need to be connected and ON in order for the Linux installation protocol to be able to SEE them. Otherwise, they will not be set to start up on boot.
14. To configure the network adapter,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



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

The following screen is displayed:



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



Select a strong password for the root user and save it in a secure location.

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:



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

➔ 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:



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

```
# systemctl stop NetworkManager  
# systemctl disable NetworkManager  
# yum remove -y NetworkManager
```

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