

# WCS in WSL 2

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Windows SubSystem for Linux (WSL) is a Linux environment in Windows 10. WSL 2 is a full-fledged Hyper-V virtual machine and supports a number of main Linux distros. This allows to deploy WCS on Windows PC to test

## WSL installation

In latest Windows releases, use the following command with Administrator privileges

```
wsl --install
```

This will require system reboot. By default, Ubuntu 20.04 will be installed. Use the following command to see all available distros

```
wsl --list --online
```

Choose the distro as follows:

```
wsl --install -d Ubuntu-18.04
```

Read [Microsoft official documentation](#) for details.

It is recommended to update installed packages after successful installation:

```
sudo apt-get update  
sudo apt-get upgrade -y
```

## WCS deployment

### JDK installation

Any of [JDK versions supported](#) may be installed from repositories or manually depending on JDK packages availability in distro used. For example, JDK 8 is available in repositories for Ubuntu 18.04:

```
sudo apt-get install -y openjdk-8-jdk
```

and JDK 14 should be installed manually

```
# Download JDK package
sudo rm -rf jdk*
curl -s https://download.java.net/java/GA/jdk14.0.1/664493ef4a6946b186ff29eb326336a2/7/GPL/openjdk-14.0.1_linux-
x64_bin.tar.gz | tar -zx
[ ! -d jdk-14.0.1/bin ] && exit 1

# Prepare installation folder
sudo mkdir -p /usr/java
[ -d /usr/java/jdk-14.0.1 ] && sudo rm -rf /usr/java/jdk-14.0.1

# Move JDK files to installation folder
sudo mv -f jdk-14.0.1 /usr/java
[ ! -d /usr/java/jdk-14.0.1/bin ] && exit 1

# Make /usr/java/default symlink to installation folder for convenience
sudo rm -f /usr/java/default
sudo ln -sf /usr/java/jdk-14.0.1 /usr/java/default

# Make the necessary symlinks
sudo update-alternatives --install "/usr/bin/java" "java" "/usr/java/jdk-14.0.1/bin/java" 1
sudo update-alternatives --install "/usr/bin/jstack" "jstack" "/usr/java/jdk-14.0.1/bin/jstack" 1
sudo update-alternatives --install "/usr/bin/jcmd" "jcmd" "/usr/java/jdk-14.0.1/bin/jcmd" 1
sudo update-alternatives --install "/usr/bin/jmap" "jmap" "/usr/java/jdk-14.0.1/bin/jmap" 1
sudo update-alternatives --set "java" "/usr/java/jdk-14.0.1/bin/java"
sudo update-alternatives --set "jstack" "/usr/java/jdk-14.0.1/bin/jstack"
sudo update-alternatives --set "jcmd" "/usr/java/jdk-14.0.1/bin/jcmd"
sudo update-alternatives --set "jmap" "/usr/java/jdk-14.0.1/bin/jmap"
```

## WCS installation

Use the following command to install latest WCS build:

```
wget https://flashphoner.com/download-wcs5.2-server.tar.gz -O- | tar -zx
cd FlashphonerWebCallServer-*
sudo ./install.sh
```

Activate WCS license (you can get a trial [here](#))

```
cd /usr/local/FlashphonerWebCallServer/bin
sudo ./activation.sh
```

## WCS launching

systemd is not shipped with Ubuntu for WSL 2. So WCS can be launched as follows

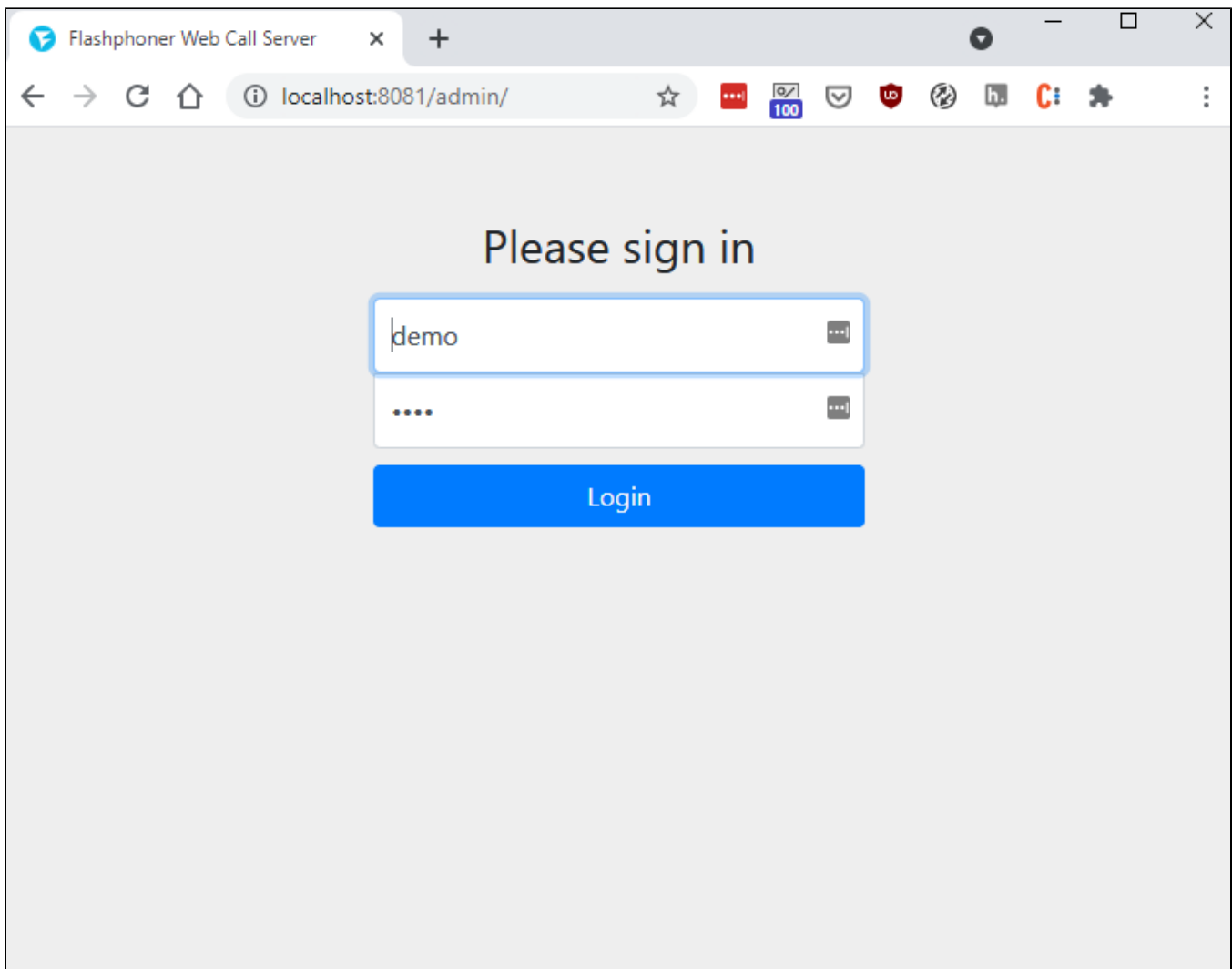
```
cd /usr/local/FlashphonerWebCallServer/bin
sudo ./webcallserver set-permissions
sudo ./webcallserver start
```

Check if WCS is successfully started with command

```
sudo ./webcallserver status
```

## Testing

1. Open WCS web interface in local browser by the link <http://localhost:8081/admin/> and enter user name demo, password demo



2. Choose Two Way Streaming example in left menu

Flashphoner Web Call Server

localhost:8081/admin/demo.html#

Demo

Security

License

v.2.0.198-5.2.1037-a678a7846a8ceaec10c5d460e

Streaming

Streamer

Player

Two-Way Streaming

Firewall Stream

WebRTC as RTM

Stream Recordi

Several Stream: Recording

Stream Server Snapshot

Stream Local Snapshot

Stream Diagno:

Screen Sharing

Embed Player

## Two-way Streaming

Local

Player

cad2

Publish

cad2

Play

Available

{"count": 23}

Send payload as object

ws://localhost:8080

Connect

3. Publish and play a stream in the example

Flashphoner Web Call Server

localhost:8081/admin/demo.html#

Demo Security License v.2.0.198-5.2.1037-a678a7846a8ceaec10c5d460e

Streaming

Streamer

Player

Two-Way Streaming

Firewall Stream

WebRTC as RTM

Stream Recordi

Several Stream: Recording

Stream Server Snapshot

Stream Local Snapshot


Stream Diagno:

Screen Sharing

Embed Player

## Two-way Streaming

Local



cad2 Stop

PUBLISHING


```
{"count": 23}
```

Send payload as object

ws://localhost:8080 Disconnect

ESTABLISHED

Player



cad2 Stop Available

PLAYING

## Known issues

1. Only one WSL instance can run simultaneously
2. WSL instance IP address is changing on every PC reboot

Symptoms: when WCS is started after PC reboot, stream cannot be published with the following error

```
No free ports available
```

Solution: after PC reboot, start WCS with IP addresses configuration

```
cd /usr/local/FlashphonerWebCallServer/bin
sudo ./webcallserver set-ip
sudo ./webcallserver start
```