

WCS-сервер в Amazon EC2

WCS-сервер может быть развернут в Amazon Elastic Compute Cloud (EC2) тремя способами:

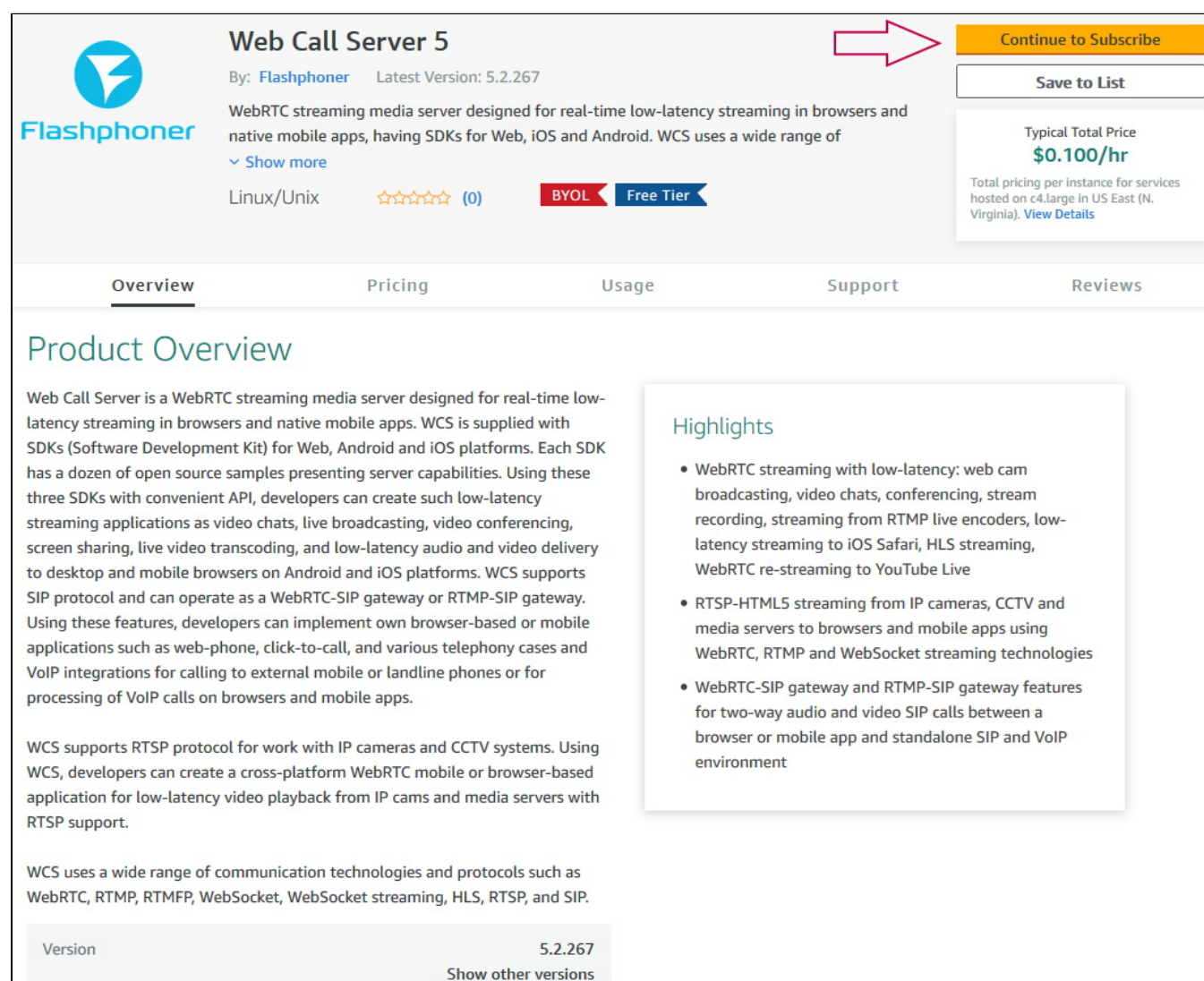
- [Настройка виртуальной машины и установка WCS с нуля](#)
- [Развертывание готового образа WCS из Amazon AWS Marketplace](#)
- [Развертывание WCS из образа на AWS Marketplace с дополнительной настройкой](#)
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Настройка виртуальной машины и установка WCS с нуля

Этим способом можно воспользоваться, если Вам необходима более тонкая настройка операционной системы, установка дополнительных компонентов и т.п. Запустите виртуальную машину Linux по [инструкции от AWS](#), настройте ее по необходимости, затем установите WCS по [краткой](#) или [подробной инструкции](#).

Развертывание готового образа WCS из Amazon AWS Marketplace

1. Откройте [страницу Web Call Server](#) на Amazon AWS Marketplace, нажмите Continue to Subscribe:



Web Call Server 5
By: [Flashphoner](#) Latest Version: 5.2.267

WebRTC streaming media server designed for real-time low-latency streaming in browsers and native mobile apps, having SDKs for Web, iOS and Android. WCS uses a wide range of

[Show more](#)

Linux/Unix ★★★★★ (0) BYOL Free Tier

[Continue to Subscribe](#)

[Save to List](#)

Typical Total Price
\$0.100/hr
Total pricing per instance for services hosted on c4.large in US East (N. Virginia). [View Details](#)

[Overview](#) [Pricing](#) [Usage](#) [Support](#) [Reviews](#)

Product Overview

Web Call Server is a WebRTC streaming media server designed for real-time low-latency streaming in browsers and native mobile apps. WCS is supplied with SDKs (Software Development Kit) for Web, Android and iOS platforms. Each SDK has a dozen of open source samples presenting server capabilities. Using these three SDKs with convenient API, developers can create such low-latency streaming applications as video chats, live broadcasting, video conferencing, screen sharing, live video transcoding, and low-latency audio and video delivery to desktop and mobile browsers on Android and iOS platforms. WCS supports SIP protocol and can operate as a WebRTC-SIP gateway or RTMP-SIP gateway. Using these features, developers can implement own browser-based or mobile applications such as web-phone, click-to-call, and various telephony cases and VoIP integrations for calling to external mobile or landline phones or for processing of VoIP calls on browsers and mobile apps.

WCS supports RTSP protocol for work with IP cameras and CCTV systems. Using WCS, developers can create a cross-platform WebRTC mobile or browser-based application for low-latency video playback from IP cams and media servers with RTSP support.

WCS uses a wide range of communication technologies and protocols such as WebRTC, RTMP, RTMFP, WebSocket, WebSocket streaming, HLS, RTSP, and SIP.

Version: 5.2.267 [Show other versions](#)

Highlights

- WebRTC streaming with low-latency: web cam broadcasting, video chats, conferencing, stream recording, streaming from RTMP live encoders, low-latency streaming to iOS Safari, HLS streaming, WebRTC re-streaming to YouTube Live
- RTSP-HTML5 streaming from IP cameras, CCTV and media servers to browsers and mobile apps using WebRTC, RTMP and WebSocket streaming technologies
- WebRTC-SIP gateway and RTMP-SIP gateway features for two-way audio and video SIP calls between a browser or mobile app and standalone SIP and VoIP environment

2. Откроется страница с описанием продукта и почасовой стоимостью в зависимости от выбранной конфигурации сервера. Нажмите Continue to Configuration:

**Web Call Server 5**



[< Product Detail](#) [Subscribe](#)

Web Call Server 5 **BYOL**

Additional taxes or fees may apply.

Web Call Server 5	
EC2 Instance Type	Software/hr
t2.micro	\$0
t2.small	\$0
t2.medium	\$0

3. Откроется страница конфигурации сервера. Выберите регион размещения сервера и нажмите Continue to Launch:

**Web Call Server 5**



[< Product Detail](#) [Subscribe](#) [Configure](#)

Configure this software

Choose a fulfillment option below to select how you wish to deploy the software, then enter the information required to configure the deployment.

Fulfillment Option

64-bit (x86) Amazon Machine Image (AMI) 

Software Version

5.2.267 (Aug 02, 2019) 

Region

US East (N. Virginia) 

Ami Id: ami-0bcc3eccd8134e445

Pricing information

This is an estimate of typical software and infrastructure costs based on your configuration. Your actual charges for each statement period may differ from this estimate.

Software Pricing

Web Call Server 5

BYOL

running on c4.large

\$0/hr

Infrastructure Pricing

EC2:

1 * c4.large

Monthly Estimate: \$72.00/month

4. Откроется страница запуска сервера. Выберите тип виртуальной машины, который будет использован для создания экземпляра сервера.



Web Call Server 5

[< Product Detail](#) [Subscribe](#) [Configure](#) [Launch](#)

Launch this software

Review your configuration and choose how you wish to launch the software.

Configuration Details

Fulfillment Option	64-bit (x86) Amazon Machine Image (AMI) Web Call Server 5 <i>running on c4.large</i>
Software Version	5.2.267
Region	US East (N. Virginia)

[Usage Instructions](#)

Choose Action

Launch from Website

Choose this action to launch from this website

EC2 Instance Type

c4.large

Memory: 3.75 GiB
CPU: 8 EC2 Compute Units (2 virtual cores with 4.0 Compute Units each)
Storage: EBS storage only
Network Performance: Moderate

5. Прокрутите страницу до настройки Security Group Settings, нажмите Create New Based On Seller Settings:

Security Group Settings

A security group acts as a firewall that controls the traffic allowed to reach one or more instances. You can create a new security group based on seller-recommended settings or choose one of your existing groups. [Learn more](#)

default



[Create New Based On Seller Settings](#)

6. Отобразится страница создания Security Group. Укажите имя группы, описание и нажмите Save.

Create new based on seller settings

A new security group will be generated by AWS Marketplace. It is based on recommended settings for Web Call Server 5 version 5.2.267.

Name your security Group

Description

Connection Method	Protocol	Port Range	Source (IP or Group)	
SSH	tcp	22	Anywhere 	0.0.0.0/0
	tcp	554	Anywhere 	0.0.0.0/0
	udp	30000-33000	Anywhere 	0.0.0.0/0
	tcp	8080-8084	Anywhere 	0.0.0.0/0
	tcp	8443-8445	Anywhere 	0.0.0.0/0
	tcp	8888	Anywhere 	0.0.0.0/0
	tcp	9091	Anywhere 	0.0.0.0/0
	tcp	1935	Anywhere 	0.0.0.0/0
	udp	1935	Anywhere 	0.0.0.0/0

Rules with source of 0.0.0.0/0 allows all IP addresses to access your instance. We recommend limiting access to only known IP addresses.

7. Выберите новую группу в выпадающем списке:

Security Group Settings

A security group acts as a firewall that controls the traffic allowed to reach one or more instances. You can create a new security group based on seller-recommended settings or choose one of your existing groups. [Learn more](#)



8. Нажмите Launch:



Web Call Server 5

Security Group Settings

A security group acts as a firewall that controls the traffic allowed to reach one or more instances. You can create a new security group based on seller-recommended settings or choose one of your existing groups. [Learn more](#)

WCS 5.2



Create New Based On Seller Settings

Key Pair Settings

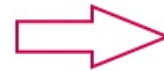
To ensure that no other person has access to your software, the software installs on an EC2 instance with an EC2 key pair that you created.

test_key_pair



[Create a key pair in EC2](#)

(Ensure you are in the region you wish to launch your software)



Launch

9. Отобразится сообщение об успешном запуске:

Congratulations! An instance of this software is successfully deployed on EC2!

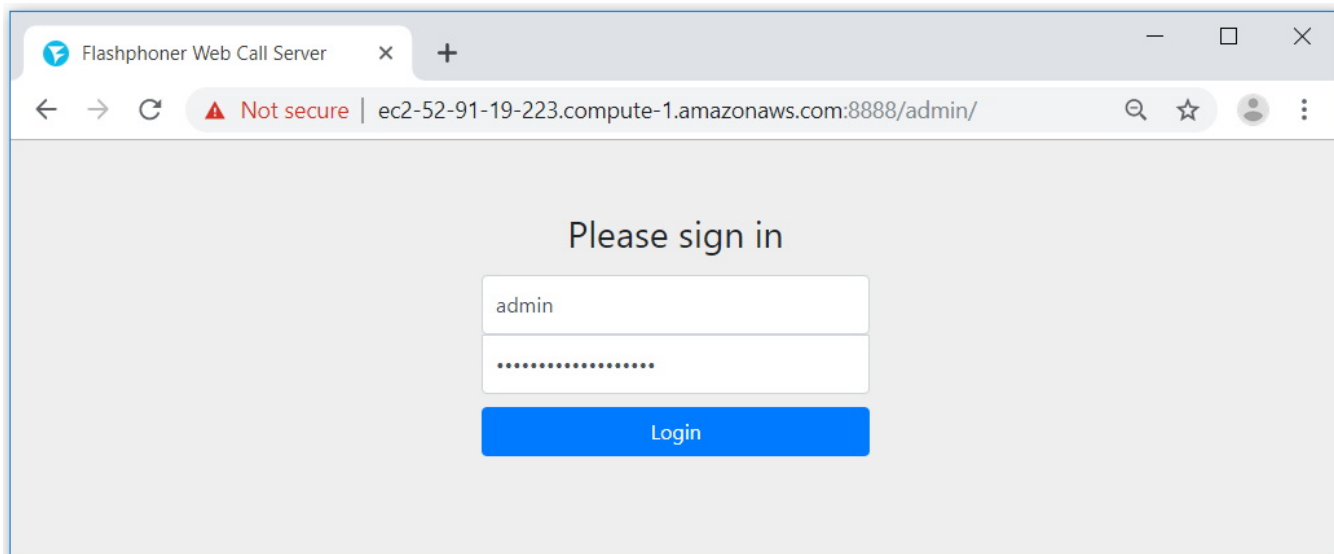
AMI ID: ami-0bcc3eccd8134e445 [\(View Launch Configuration Details\)](#)

You can view this instance on [EC2 Console](#). You can also view all instances on [Your Software](#). Software and AWS hourly usage fees apply when the instance is running and will appear on your monthly bill.

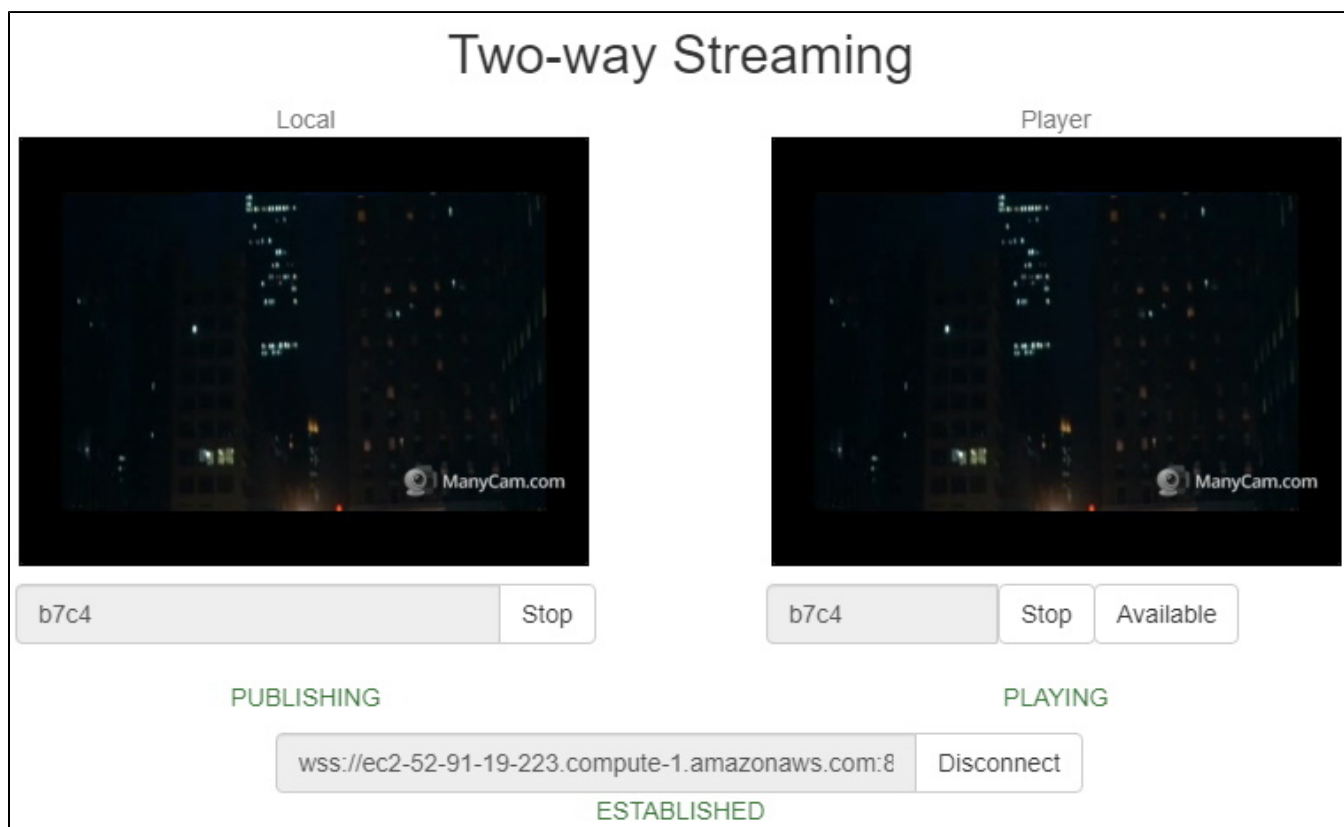
10. Нажмите на ссылку EC2 Console. В разделе Instances найдите запущенную виртуальную машину:

☐	Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP
☒		i-0edecdee2fe0b2bb3	t2.micro	us-east-1d	running	2/2 checks passed	None	ec2-52-91-19-223.comp...	52.91.19.223

11. Откройте в браузере адрес веб-интерфейса запущенного WCS-сервера <https://host.amazonaws.com:8888>, примите исключение безопасности. В качестве пароля администратора используйте Instance ID запущенной виртуальной машины:



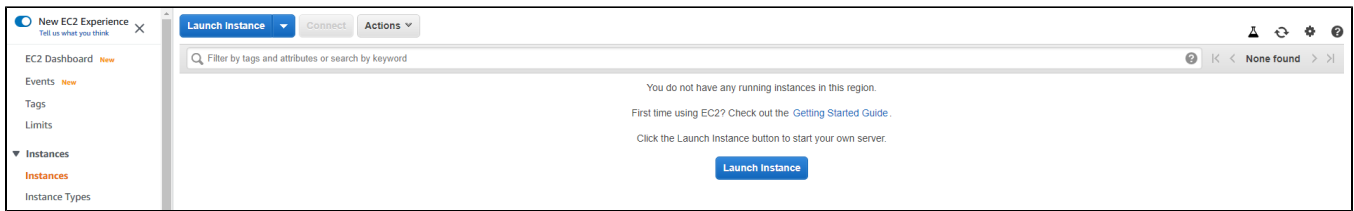
12. Проверьте публикацию и воспроизведение WebRTC-потока с веб-камеры на примере Two Way Streaming:



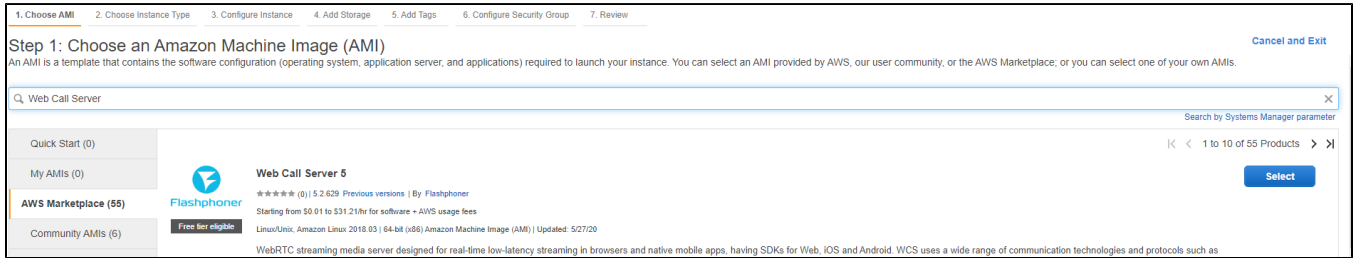
Развертывание WCS из образа на AWS Marketplace с дополнительной настройкой

Готовый образ WCS на AWS Marketplace содержит лишь базовые настройки. Для изменения настроек необходимо зайти по SSH в созданный экземпляр сервера и перезапустить WCS. Для получения готового к работе экземпляра "из коробки" можно указать пользовательский скрипт для изменения настроек при первом запуске сервера. Эта возможность полезна, например, при развертывании [группы масштабирования](#).

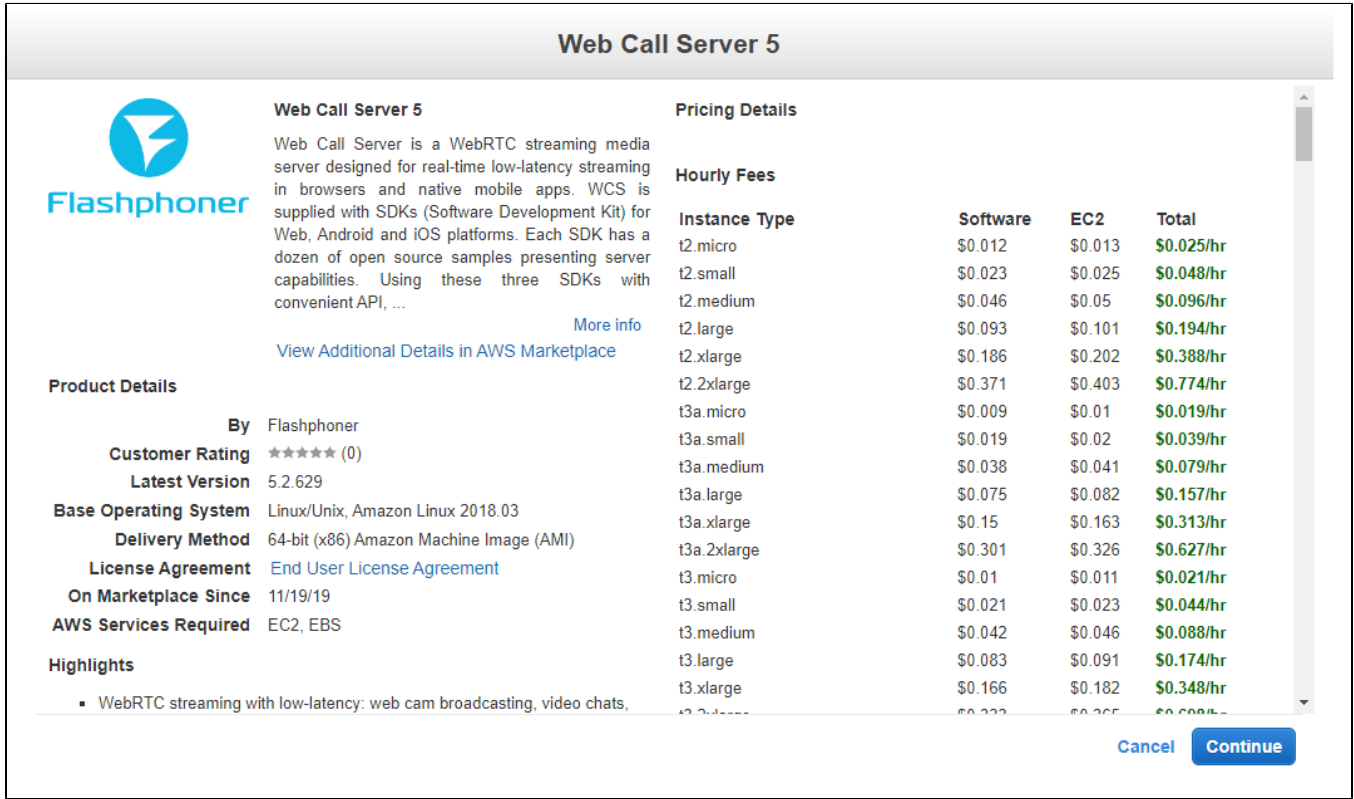
1. В EC2 Console перейдите в раздел "Instances - Instances" и нажмите "Launch instance"



2. Выберите образ, указав при поиске "Web Call Server"



3. Просмотрите информацию об образе



4. Выберите тип VM

1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review

Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation [Show/Hide Columns](#)

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

Note: The vendor recommends using a **c4.large** instance (or larger) for the best experience with this product.

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GiB)	EBS-Optimized Available	Network Performance	IPv6 Support
	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
	General purpose	t3a.nano	2	0.5	EBS only	Yes	Up to 5 Gigabit	Yes
	General purpose	t3a.micro	2	1	EBS only	Yes	Up to 5 Gigabit	Yes
	General purpose	t3a.small	2	2	EBS only	Yes	Up to 5 Gigabit	Yes
	General purpose	t3a.medium	2	4	EBS only	Yes	Up to 5 Gigabit	Yes
	General purpose	t3a.large	2	8	EBS only	Yes	Up to 5 Gigabit	Yes
	General purpose	t3a.xlarge	4	16	EBS only	Yes	Up to 5 Gigabit	Yes
	General purpose	t3a.2xlarge	8	32	EBS only	Yes	Up to 5 Gigabit	Yes

Cancel
Previous
Review and Launch
Next: Configure Instance Details

5.Прокрутите вниз до конца страницы "Configure Instance Details" и вставьте в поле "User data" скрипт обновления и настройки WCS

1. Choose AMI
2. Choose Instance Type
3. Configure Instance
4. Add Storage
5. Add Tags
6. Configure Security Group
7. Review

Step 3: Configure Instance Details

Advanced Details

Metadata accessible ☒ Enabled

Metadata version

Metadata token response hop limit

User data ☒ As text ☐ As file ☐ Input is already base64 encoded

```
#!/bin/bash

# Stop WCS before reconfiguring
PID=$(pgrep -f 'com.flashphoner.server.Server' | grep -v bash)
if [ -n "$PID" ]; then
    service webcallserver stop
fi

# Update WCS to the latest build (optionally, set to false if you don't)
UPDATE=true
if $UPDATE; then
    cd /tmp
    wget --timeout=10 --no-check-certificate https://flashphoner.com/download-wcs5-2-server.tar.gz -O wcs5-server.tar.gz
    if [ $? -eq 0 ]; then
        mkdir -p FlashphonerWebCallServer-5.2-latest && tar xzf wcs5-server.tar.gz -C FlashphonerWebCallServer-5.2-latest --strip-components 1
        cd FlashphonerWebCallServer-5.2-latest
        chmod +x install.sh
        ./install.sh -silent
        cd ..
        rm -rf FlashphonerWebCallServer-5.2-latest wcs5-server.tar.gz
    fi
fi

# Configuration setup
WCS_CONFIG=/usr/local/FlashphonerWebCallServer/conf/flashphoner.properties
JVM_CONFIG=/usr/local/FlashphonerWebCallServer/conf/wcs-core.properties

#CDN settings
CDN_ROLE=origin
CDN_IP=0.0.0.0
echo -e "ncdn_ip=$CDN_IP" >> $WCS_CONFIG
echo -e "ncdn_role=$CDN_ROLE" >> $WCS_CONFIG
echo -e "ncdn_nodes_resolve_ip=false" >> $WCS_CONFIG

# Renewel keyframes from WebRTC publishers every 5 seconds
```

Cancel
Previous
Review and Launch
Next: Add Storage

Пример скрипта, который обновляет WCS до последней сборки и настраивает Origin сервердля публикации WebRTC и RTMP потоков

Origin setup script

```
#!/bin/bash

# Stop WCS before reconfiguring
PID="$(pgrep -f 'com.flashphoner.server.Server' | grep -v bash)"
if [ -n "$PID" ]; then
    service webcallserver stop
fi

# Update WCS to the latest build (optionally, set to false if you don't)
UPDATE=true
if $UPDATE; then
    cd /tmp
    wget --timeout=10 --no-check-certificate https://flashphoner.com/download-wcs5.2-server.tar.gz -O wcs5-
server.tar.gz
    if [ $? -eq 0 ]; then
        mkdir -p FlashphonerWebCallServer-5.2-latest && tar xzf wcs5-server.tar.gz -C FlashphonerWebCallServer-
5.2-latest --strip-components 1
        cd FlashphonerWebCallServer-5.2-latest
        chmod +x install.sh
        ./install.sh -silent
        cd ..
        rm -rf FlashphonerWebCallServer-5.2-latest wcs5-server.tar.gz
    fi
fi

# Configuration setup
WCS_CONFIG=/usr/local/FlashphonerWebCallServer/conf/flashphoner.properties
JVM_CONFIG=/usr/local/FlashphonerWebCallServer/conf/wcs-core.properties

#CDN settings
CDN_ROLE=origin
CDN_IP=0.0.0.0
echo -e "\ncdn_enabled=true" >> $WCS_CONFIG
echo -e "\ncdn_ip=$CDN_IP" >> $WCS_CONFIG
echo -e "\ncdn_role=$CDN_ROLE" >> $WCS_CONFIG
echo -e "\ncdn_nodes_resolve_ip=false" >> $WCS_CONFIG

# Request keyframes from WebRTC publishers every 5 seconds
echo -e "\nperiodic_fir_request=true" >> $WCS_CONFIG

# Disable RTMP keepalives to publish from OBS
echo -e "\nkeep_alive.enabled=websocket,rtmfp" >> $WCS_CONFIG

# Configure heap settings
HEAP_SIZE=512m
sed -i -e "s/^\(-Xmx\).*$/\1$HEAP_SIZE/" $JVM_CONFIG

# Start WCS after reconfiguring
PID="$(pgrep -f 'com.flashphoner.server.Server' | grep -v bash)"
if [ -n "$PID" ]; then
    service webcallserver restart
else
    service webcallserver start
fi

# Disable internal firewall, ports are allowed/blocked on security group level
iptables -F
```

6. Настройте группу безопасности. По умолчанию, группа будет создана из настроек образа. При необходимости, добавьте порты.

1. Choose AMI2. Choose Instance Type3. Configure Instance4. Add Storage5. Add Tags6. Configure Security Group7. Review

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow Internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☒ Create a new security group
☐ Select an existing security group

Security group name:

Description:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
Custom TCP Rule	TCP	554	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
Custom UDP Rule	UDP	30000 - 33000	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
Custom TCP Rule	TCP	8080 - 8084	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
Custom TCP Rule	TCP	8443 - 8445	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
Custom TCP Rule	TCP	8888	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
Custom TCP Rule	TCP	9091	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
Custom TCP Rule	TCP	1935	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop
Custom UDP Rule	UDP	1935	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

Add Rule

Warning

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel

Previous

Review and Launch

7. Нажмите "Review and Launch". Если в параметрах нет ошибок, нажмите "Launch"

1. Choose AMI2. Choose Instance Type3. Configure Instance4. Add Storage5. Add Tags6. Configure Security Group7. Review

Step 7: Review Instance Launch

Web Call Server 5

Root Device Type: ebsVirtualization type: hvm

Hourly Software Fees: \$0.012 per hour on t2.micro instance. Additional taxes or fees may apply. Software charges will begin once you launch this AMI and continue until you terminate the instance.

By launching this product, you will be subscribed to this software and agree that your use of this software is subject to the pricing terms and the seller's End User License Agreement

Instance Type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GiB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

Security Groups

Security group name: WCS

Description: This security group was generated by AWS Marketplace and is based on recommended settings for Web Call Server 5 version 5.2.629 provided by Flashphoner

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	0.0.0.0/0	
Custom TCP Rule	TCP	554	0.0.0.0/0	
Custom UDP Rule	UDP	30000 - 33000	0.0.0.0/0	
Custom TCP Rule	TCP	8080 - 8084	0.0.0.0/0	
Custom TCP Rule	TCP	8443 - 8445	0.0.0.0/0	
Custom TCP Rule	TCP	8888	0.0.0.0/0	
Custom TCP Rule	TCP	9091	0.0.0.0/0	

Cancel

Previous

Launch

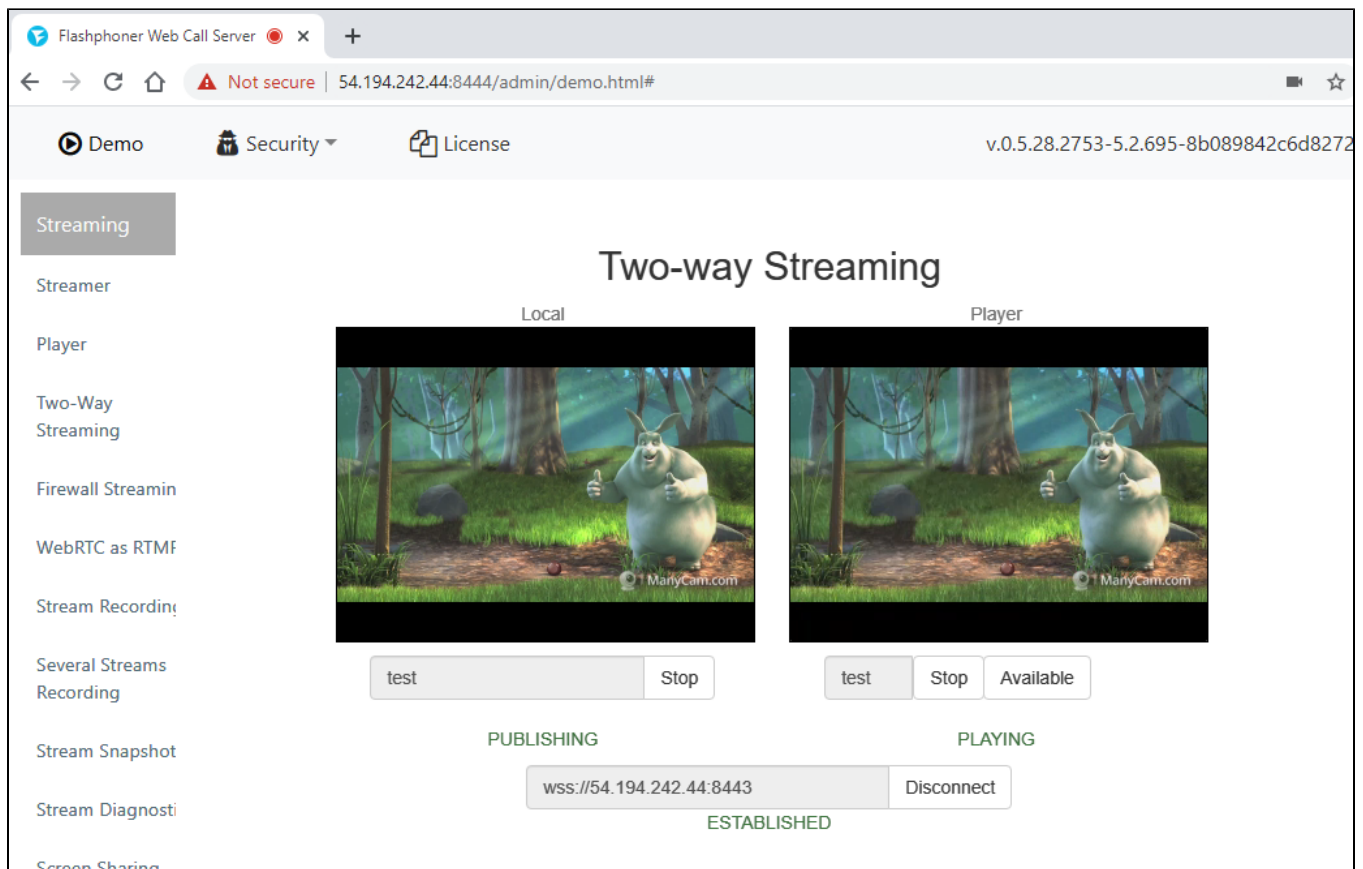
Будет запущен экземпляр сервера.

Launch InstanceConnectActions

Filter by tags and attributes or search by keyword

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name
	i-015bef2f082023811	t2.micro	eu-west-1a	terminated	2/2 checks ...	None				test_userdat
	i-0f2d75e04cd193fbc	t2.micro	eu-west-1a	running	2/2 checks ...	None	ec2-54-194-242-44.eu-west-1.compute.amazonaws.com	54.194.242.44		test_userdat

8. Откройте веб интерфейс сервера, опубликуйте поток в примере Two Way Streaming и проиграйте его



Известные проблемы

1. При переходе к Amazon Linux 2 AMI в качестве базового образа, для управления сервисами используется systemd

Симптомы: команда

```
sudo service webcallserver start
```

возвращает

```
Redirecting to /bin/systemctl start webcallserver.service
```

команда

```
sudo service webcallserver check_update
```

не работает

Решение:

а) для запуска, остановки, перезапуска использовать systemctl

```
sudo systemctl start webcallserver
sudo systemctl stop webcallserver
sudo systemctl restart webcallserver
```

б) для проверки обновлений использовать скрипт webcallserver

```
cd /usr/local/FlashphonerWebCallServer/bin  
sudo ./webcallserver check_update  
sudo ./webcallserver update
```