# WCS in Amazon EC2

WCS server can be deployed inAmazon Elastic Compute Cloud (EC2) by the following ways:

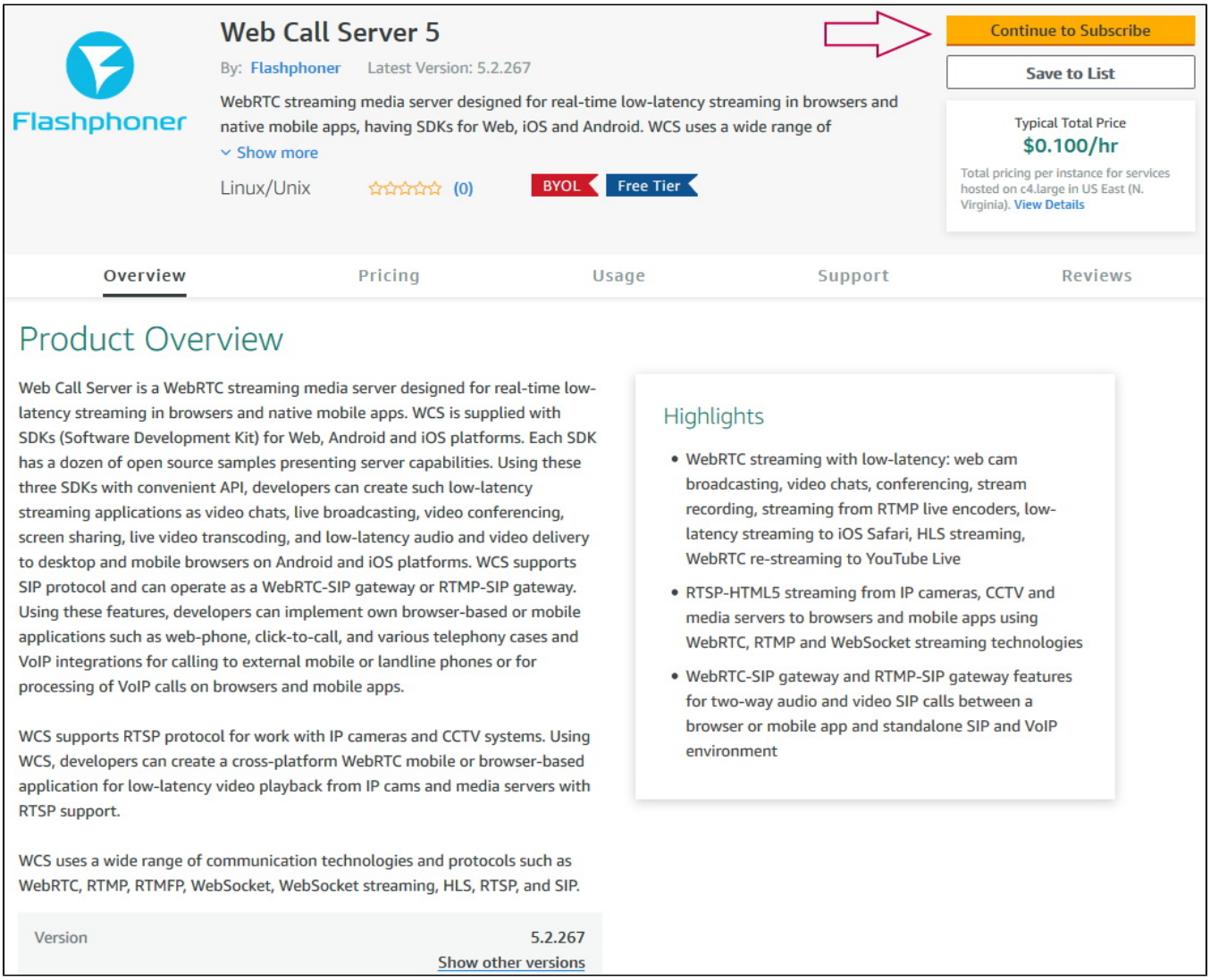


## Setting up Linux virtual machine and installing WCS from the scratch

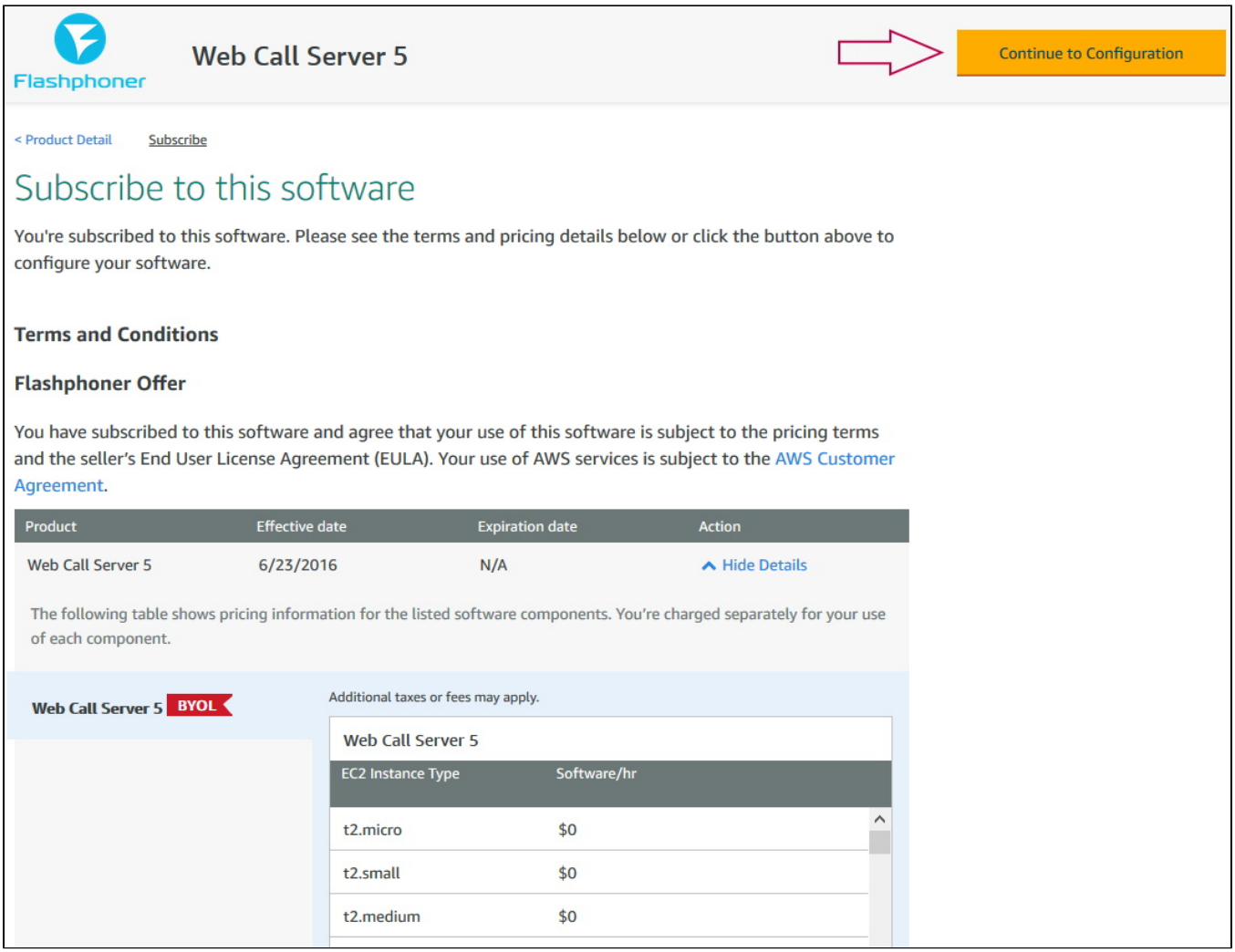
This way is useful if you need fine OS tuning, additional modules installation and so on. Launch a Linux virtual machine bythis AWS manual, set it up on your need, then install WCS by quick or detailed installation manual.

## WCS automatic deployment from Amazon AWS Marketplace

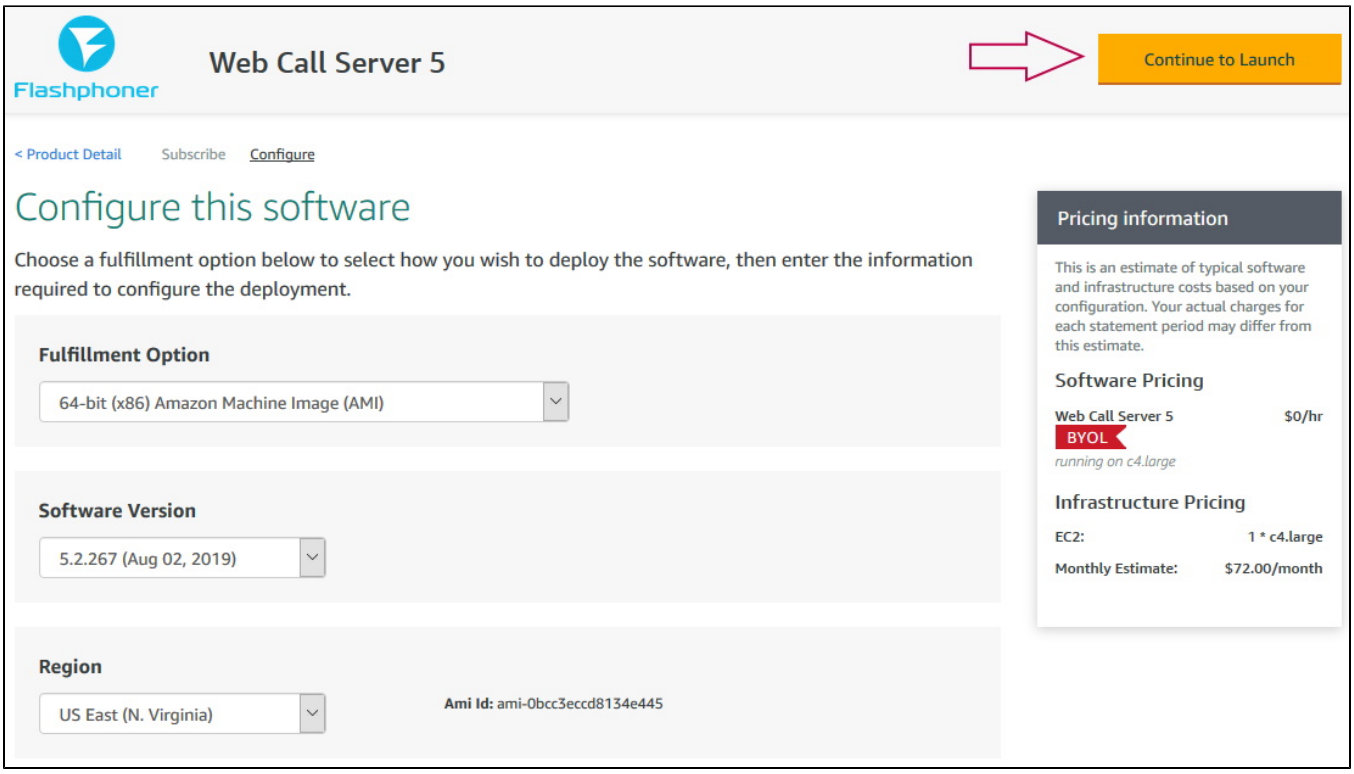
1. OpenWeb Call Server pageon Amazon AWS Marketplace and click 'Continue to Subscribe':



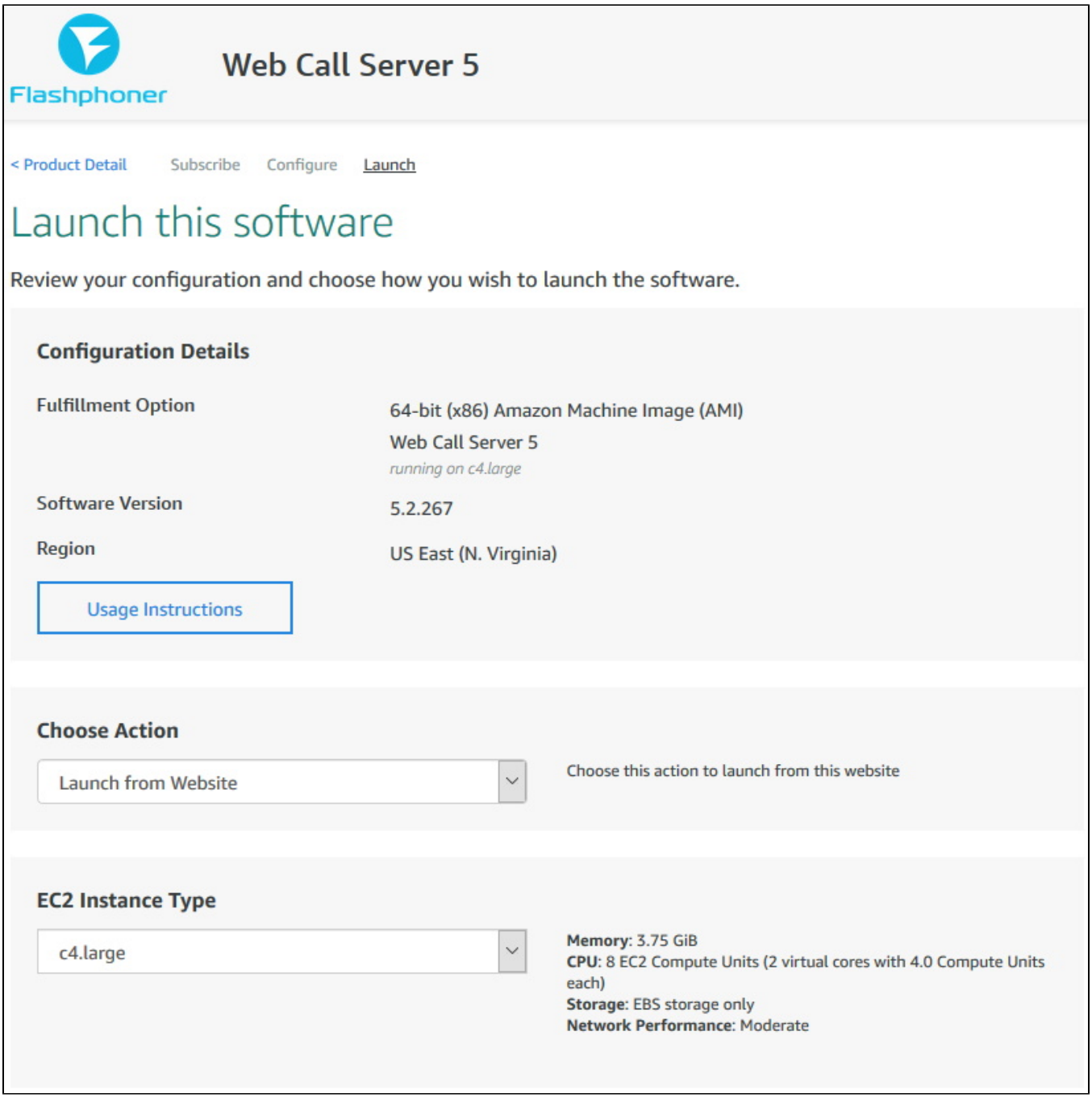

2. Product description page with hourly pricing depending on selected instance will be shown. Click 'Continue to Configuration':



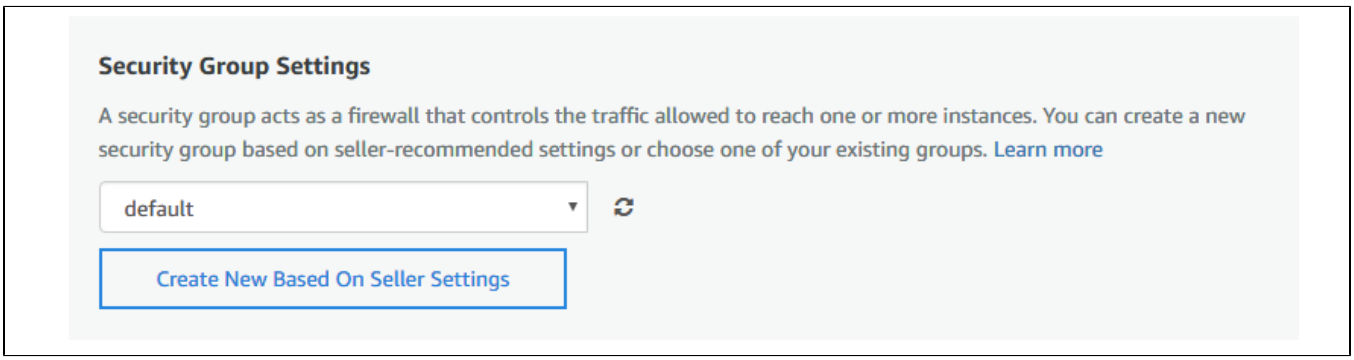

3. Server configuration page will be shown. Select region and click 'Continue to Launch':



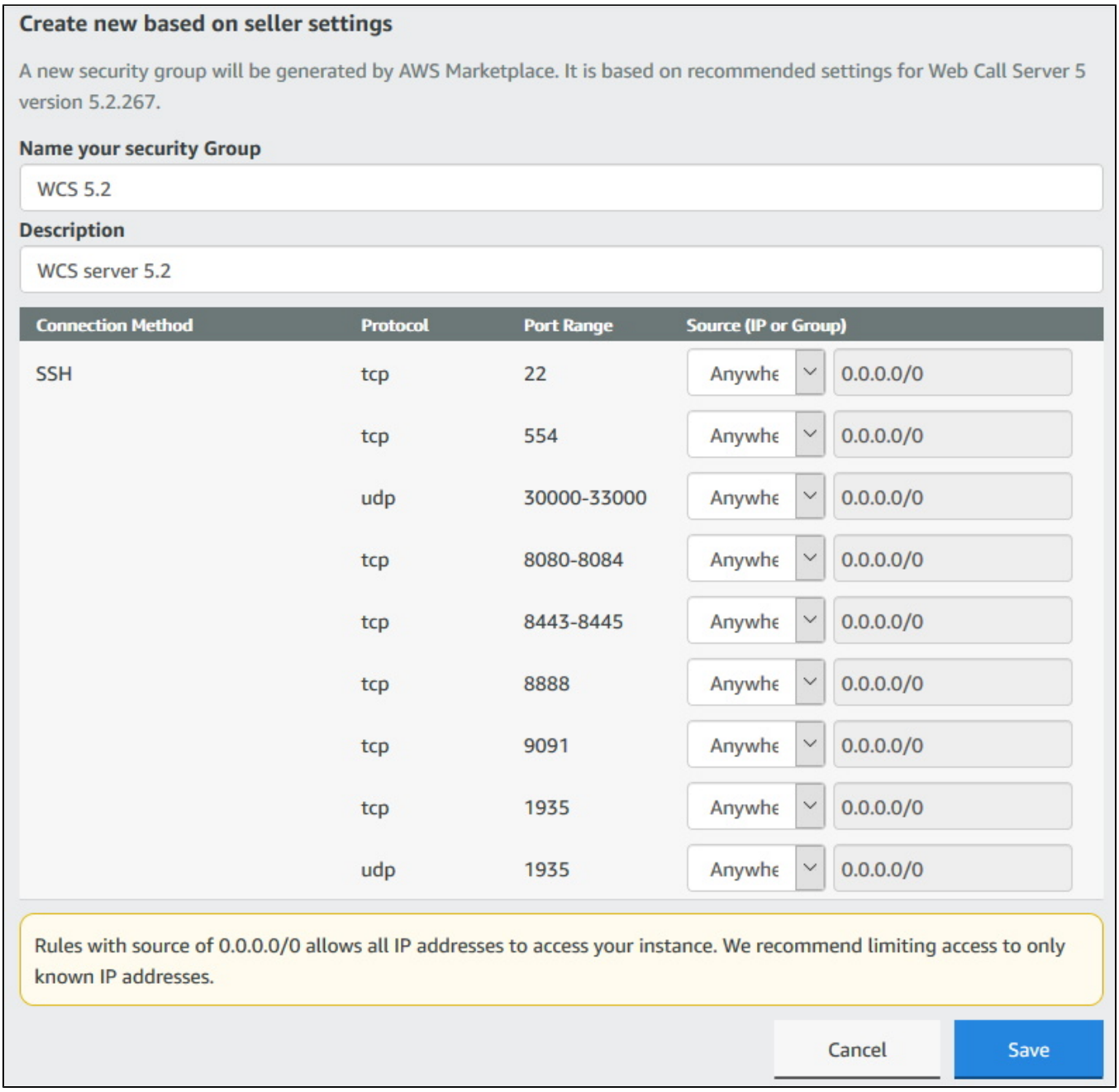

4. Instance launch page will be shown. Select the instance type.



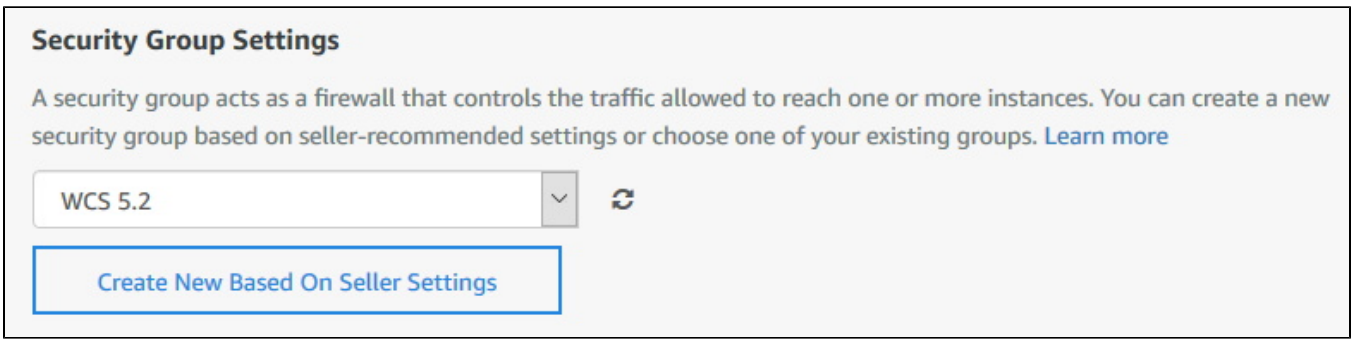

5. Then scroll page down to Security Group Settings and click 'Create New Based On Seller Settings':



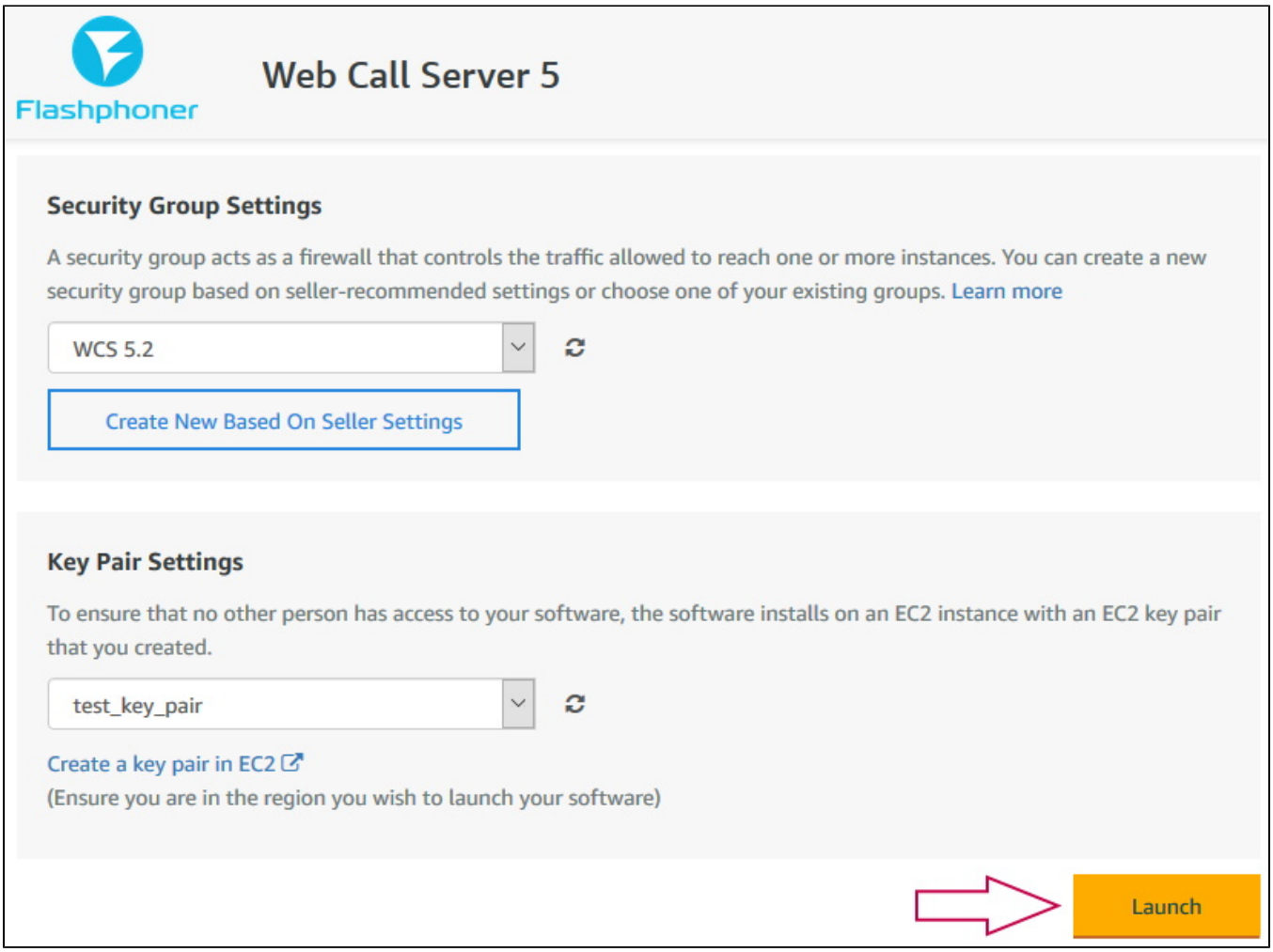

6. Security Group creation page will be shown. Set the group name, description and click Save.



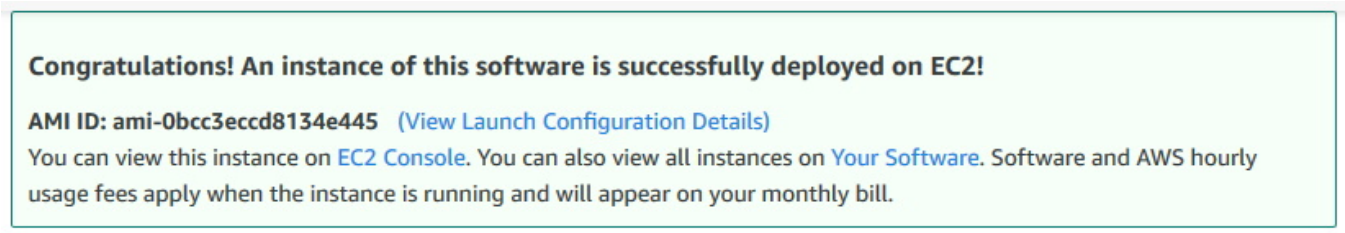

7. Select the new group in the drop-down list:



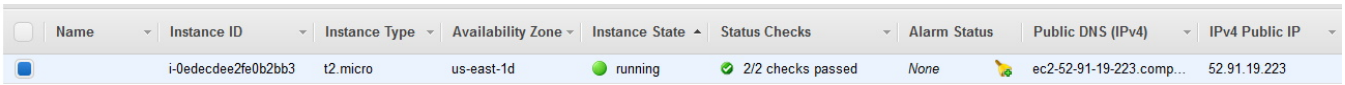

8. Click Launch:



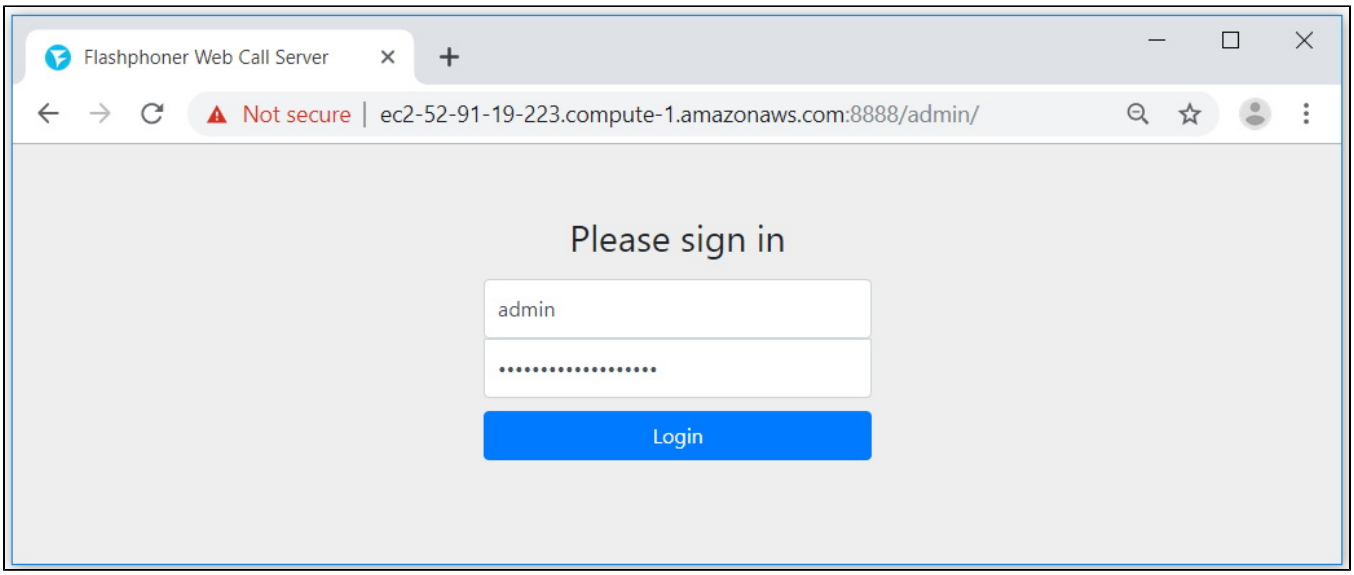

9. A message will be displayed about instance deployment. It takes about a minute.




10. Click on 'EC2 Console' link. Find the launched virtual machine in the 'Instances' section. See the 'Public DNS' column for the host name.




11. Open WCS server web interfacehttps://host.amazonaws.com:8888 in your browser and accept security exception. Use the Instance ID of the launched virtualmachine as the administrator password:

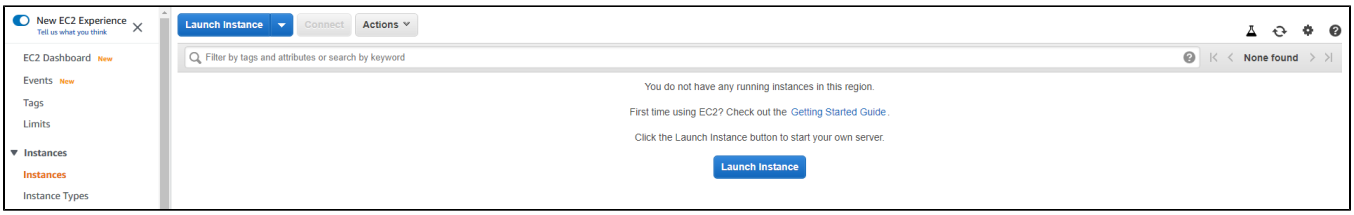



12. Check WebRTC streaming from web camera and playing the stream using Two-way Streaming web example:

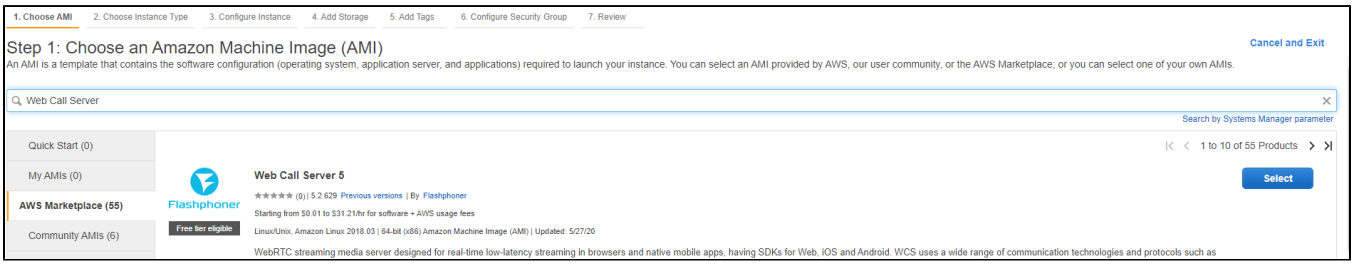

# WCS deployment from AWS Marketplace image with custom settings

AWS Marketplace image contains only basic WCS settings. To customize the server, it is necessary to connect to the instance via SSH and restart WCS. However, to get ready to launch server "out of the box", it is possible to set up user script to reconfigure the server during the first start. This can be useful, for example, to deploy autoscaling group.

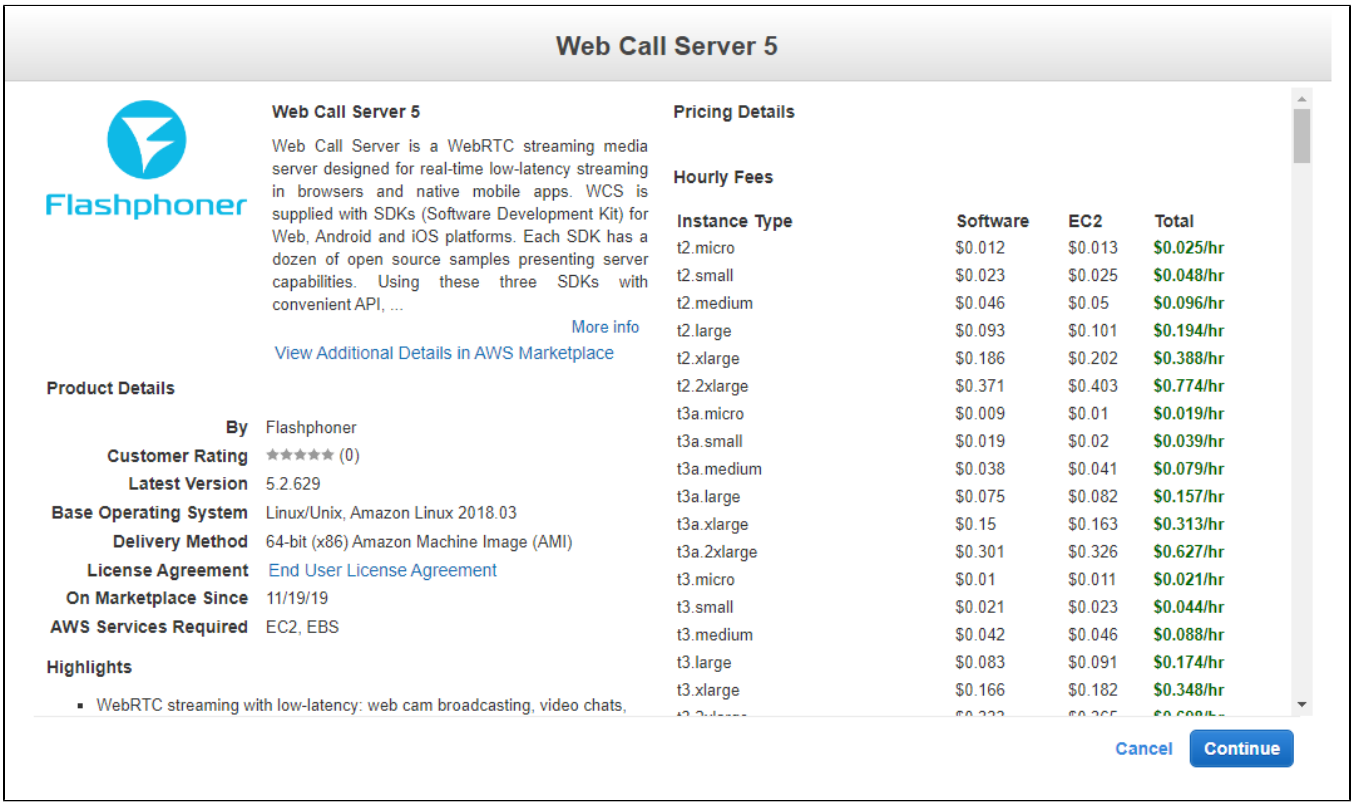
1. In EC2 Console go to "Instances - Instances" section and click "Launch instance"



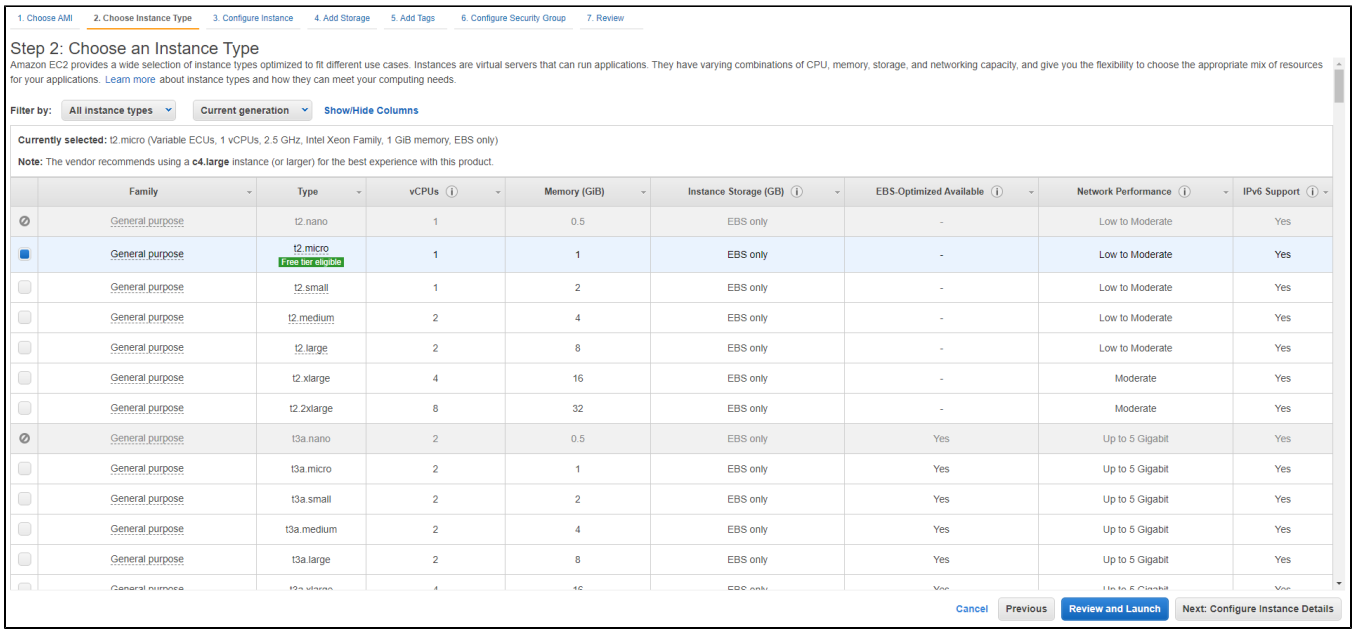

2. Choose Marketplace AMI "Web Call Server" using search string



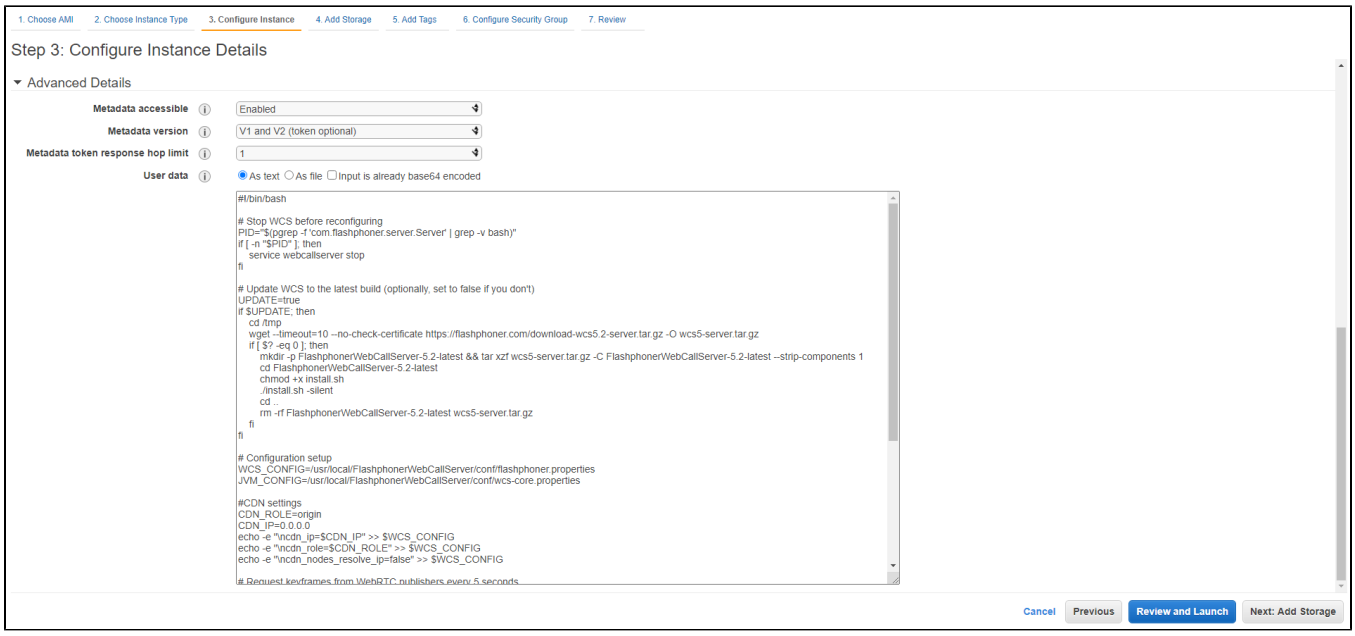

3. Review AMI information




4. Choose instance type




5.Scroll down "Configure Instance Details" page until the end and insert custom update and setup script to "User data" text box

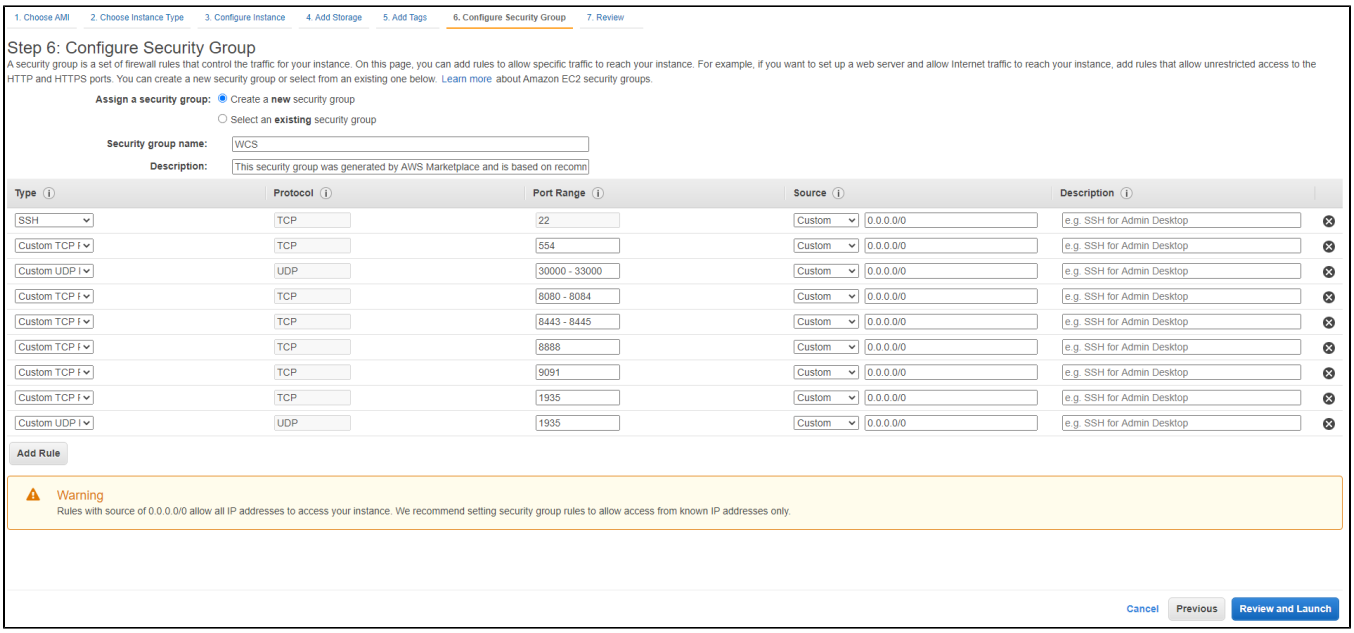



The setup script example to update WCS to latest build and to configure Origin server for WebRTC and RTMP streams publishing

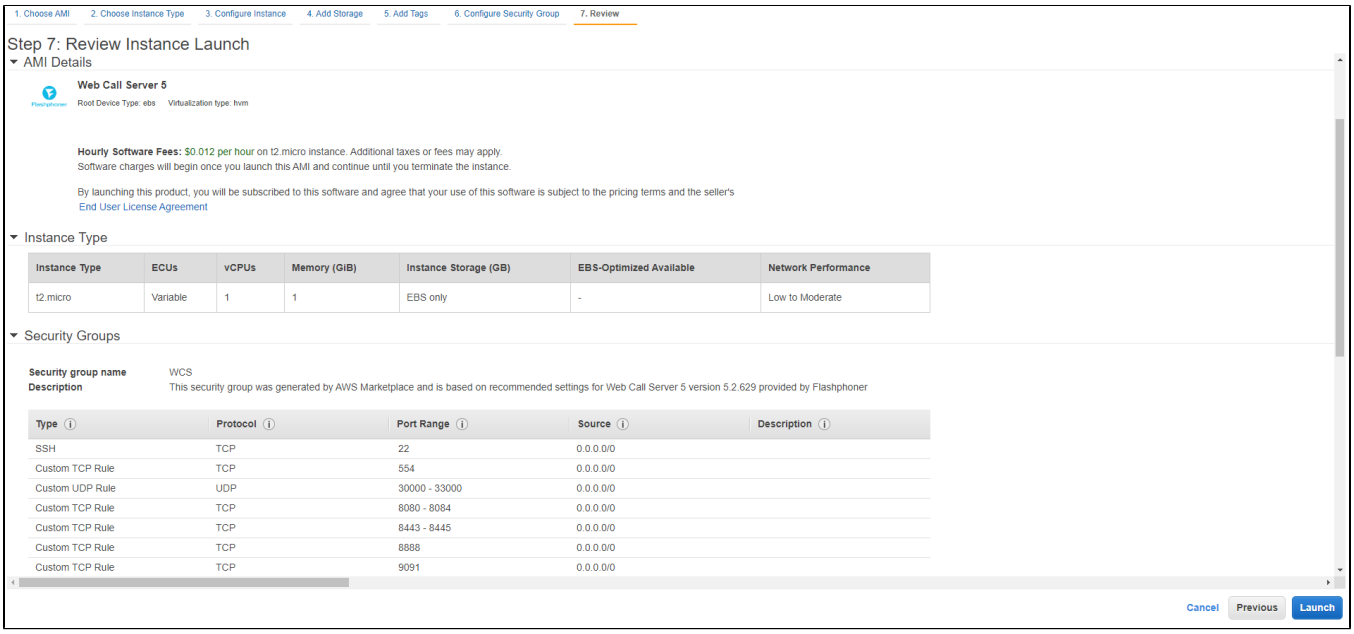
Origin setup script

```
#!/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
```

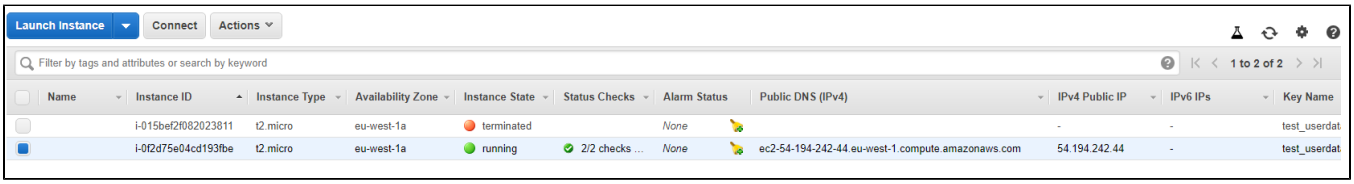
6. Configure security group. By default, the security group will be created from AMI settings. Add the necessary ports



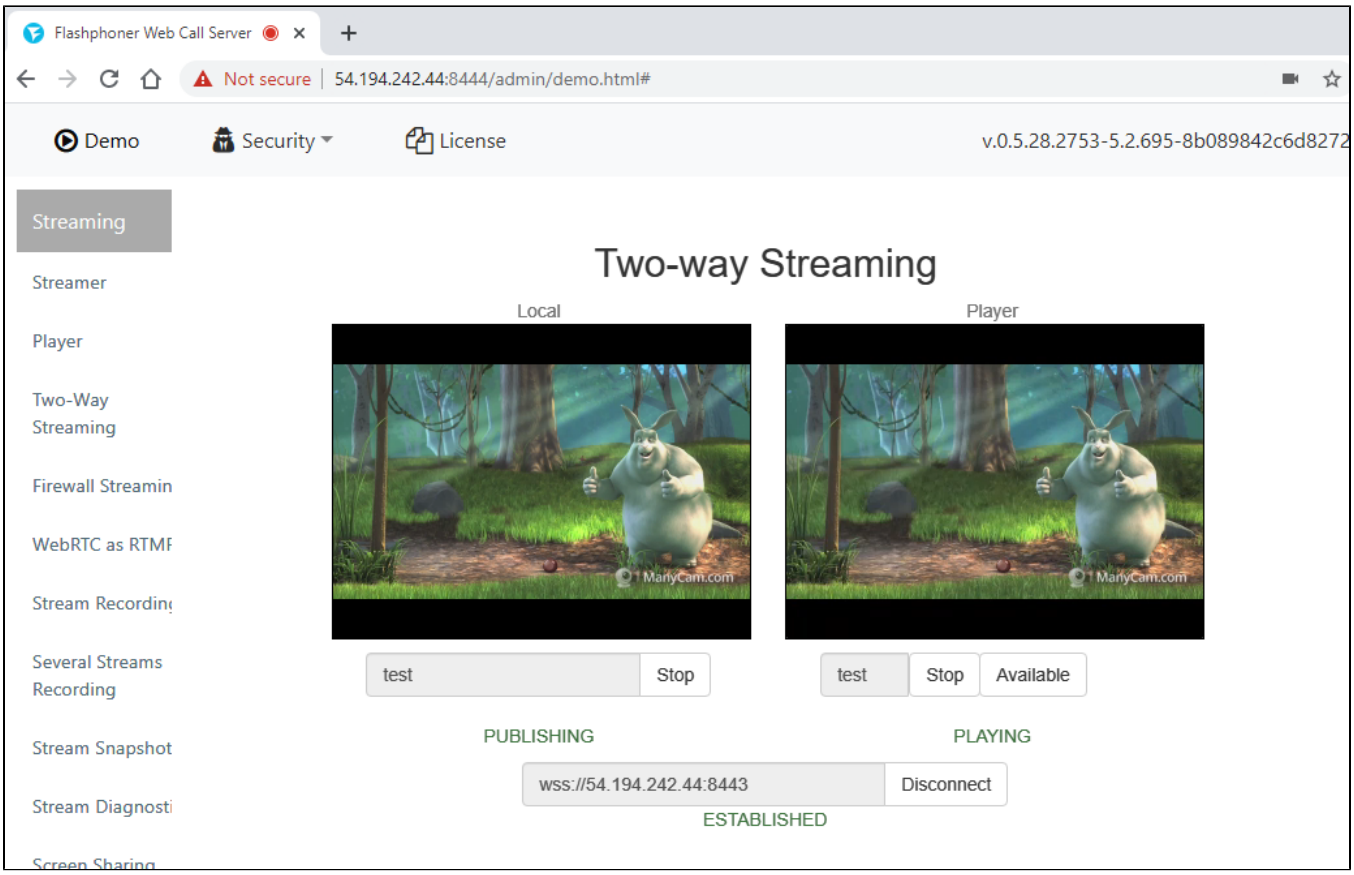

7. Click "Review and Launch". If all the parameters are correct, click "Launch"




Server instance will be launched




8. Open WCS web interface, publish test stream in Two Way Streaming example and play it




# Known issues

1. After migration to Amazon Linux 2 AMI as basic image, systemd is used for services management

Symptoms: the command

```
sudo service webcallserver start
```

returns

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

the command

```
sudo service webcallserver check_update
```

does not work

Solution:

a) use systemctl to start, stop, restart WCS

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

b) use webcallserver script to check updates

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