

Avaya IP Office Standard Mode Release 8.0 KSU Remote Extension Programing for SIP Phones with No VPN Telquest Tech Support

There are some external conditions which need to be met for this to work.

The KSU MUST have a Static IP Address on the LAN.

The KSU MUST have access to a Static Public IP Address. (usually via a Router)

Ports 5060 UDP, and 49152 through 53246 UDP (can be made smaller) need to be opened to the KSU.

This concerns “Hard SIP Phones” and Softphones in a computer not iPhones:

The Remote Location for the SIP phone may need to have some changes made in the router that it is connected to unless it is a Softphone application running on a Iphone.

Turn off SPI (Stateful Packet Inspection)

Turn off any SIP/H323 Helpers, Fixups, Transformations or ALG's. (Application Layer Gateways)

Since there a multitude of routers, making the above changes may not allow the SIP phone to work due to the router itself. I used a Netgear FVS318 and it works OK.

The first thing to do at the KSU is to set the Router up and test the type of Firewall it is connected to.

This is done by programing the KSU to use the STUN feature and then evaluating the STUN results.

This Help Sheet is not intended to teach you how to program the IP Office.

It assumes that you have enough experience and are familiar with the concepts of the system.

Create a new IP Route.

The IP Route is the IP Address of the Router that the KSU is connected to.

**1. Right Click here
Then select New...**

2. Set like this...

3. Set like this...

4. Your Network Router here...

5. Set like this...

New Ctrl+N
Cut Ctrl+X

Set a DNS Address

Standard R9-0

System LAN1 LAN2 DNS Voicemail Telephony Directory Services Syst

DNS Server IP Address 8 . 8 . 8 . 8 Set DNS Address

Backup DNS Server IP Address 8 . 8 . 4 . 4 Set DNS Address

Give the KSU a Static IP Address on the LAN

IP Offices Standard R9-0

1. Click here...

2. Click here...

3. Click here...

4. Enter the IP Address

5. Enter the Subnet Mask

6. Click here...

This is NOT the Router

IP Address 192 . 168 . 111 . 90

IP Mask 255 . 255 . 255 . 0

Primary Trans. IP Address

RIP Mode None

Enable NAT

Number Of DHCP IP Addresses 200

DHCP Mode Server Client Dialin Disabled

Advanced

Turn on SIP Registrar, then go to Page 2a....

System LAN1 LAN2 DNS Voicemail Telephony Directory Services System Events SMTP SMDR Twinning VCM

LAN Settings VoIP Network Topology SIP Registrar

8. Check this...

These are the ports used to receive audio from the remote phone. The range can be reduced to 49152 to 49252...

H.323 Gatekeeper Enable

SIP Trunks Enable

SIP Registrar Enable

H.323 Auto-create Extn

H.323 Auto-create User

H.323 Remote Extn Enable

RTP Port Number Range

Port Range (Minimum) 49152

Port Range (Maximum) 53246

Turn on STUN

We are still in the System area.

Standard R9-0

System | LAN1 | LAN2 | DNS | Voicemail | Telephony | Directory Services | System Events | SMTP | SMDR | Twinning | VCM | CCR | Codecs

LAN Settings | VoIP | Network Topology

Network Topology Discovery

STUN Server Address: STUN Port:

Firewall/NAT Type: **See note...**

Binding Refresh Time (seconds): **11. Enter this...**

Public IP Address: **See note...**

Public Port:

UDP: **12. Enter this...**

TCP: **13. Check this...**

TLS:

☒ Run STUN on startup

Run STUN Cancel

Save Configuration

IP Office Settings: Standard R9-0

Configuration Reboot Mode:

☐ Merge

☒ Immediate **Do not change this...**

☐ When Free

☐ Timed

Reboot Time:

Call Barring:

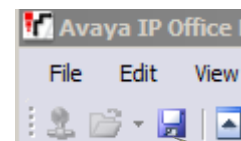
☐ Incoming Calls

☐ Outgoing Calls

OK Cancel Help

14. Click here...

OK Cancel Help



16. Click here...

15. Click here...

Note: The KSU will reboot.
When it comes back on the Firewall and Public IP Address fields should be filled in by the STUN Server action.

Avaya official statement says:

If STUN reports the **Firewall/NAT Type** as one of the following, the network must be reconfigured if possible since these types are not supported for remote SIP extensions:

Static Port Block

Symmetric NAT

Open Internet

Of course, the above statement has been reported to be 100% incorrect and that those listed above do work.

So, without accurate info, you will need to see what happens.

As seen on Page 3, my Firewall indicates Full Cone Nat and it works OK.

You can click on the Help Button on the bottom of the screen of your Manager program to get a more detailed description of the types of Firewalls detected by STUN.

Based on what Avaya says, if your Firewall/NAT Type is Static Port Block, Symmetric NAT or Open Internet the remote SIP phone will not work and you will need to either replace the router or reconfigure it in some way to allow it to work.

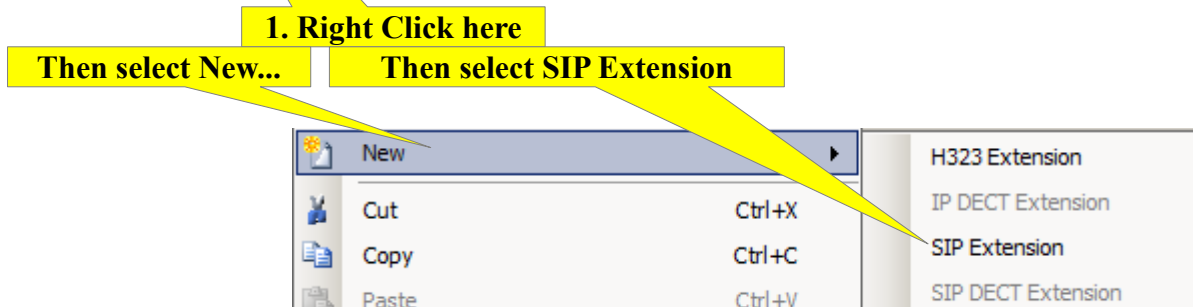
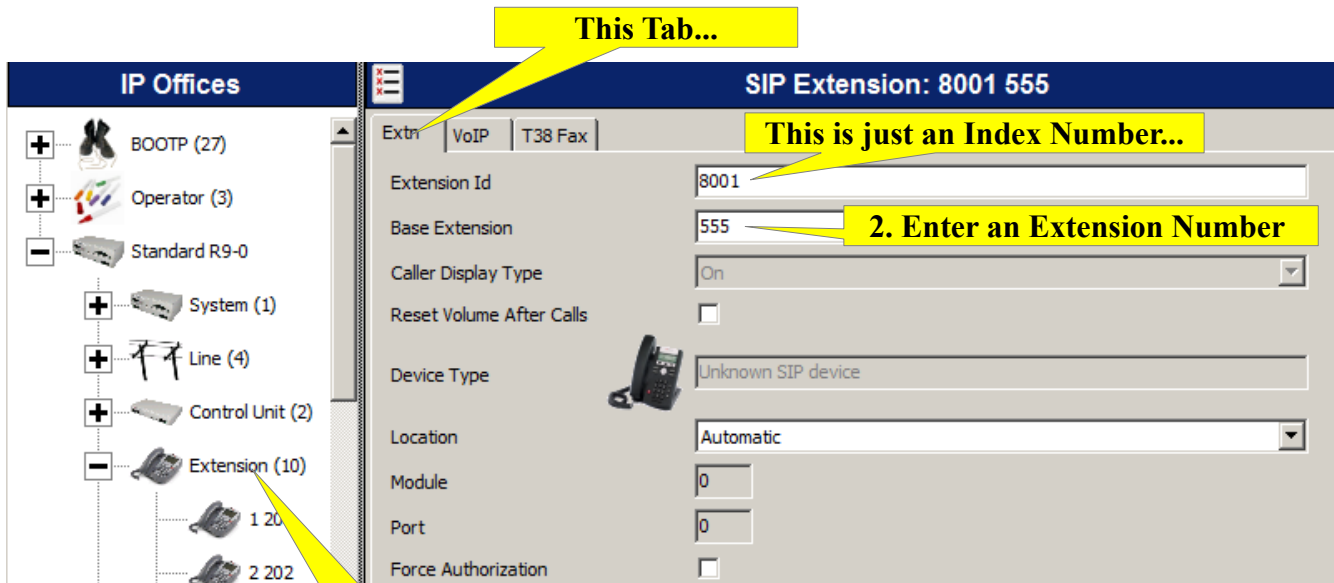
You can continue with the IP Office programming but don't expect the SIP phone to work.

If the Firewall/NAT Type comes up with something else, I would reason that the remote SIP phone should work.

I was only able to test with my router, so I cannot say what will happen if your Firewall/NAT Type results are different than mine. (Full Cone Nat).

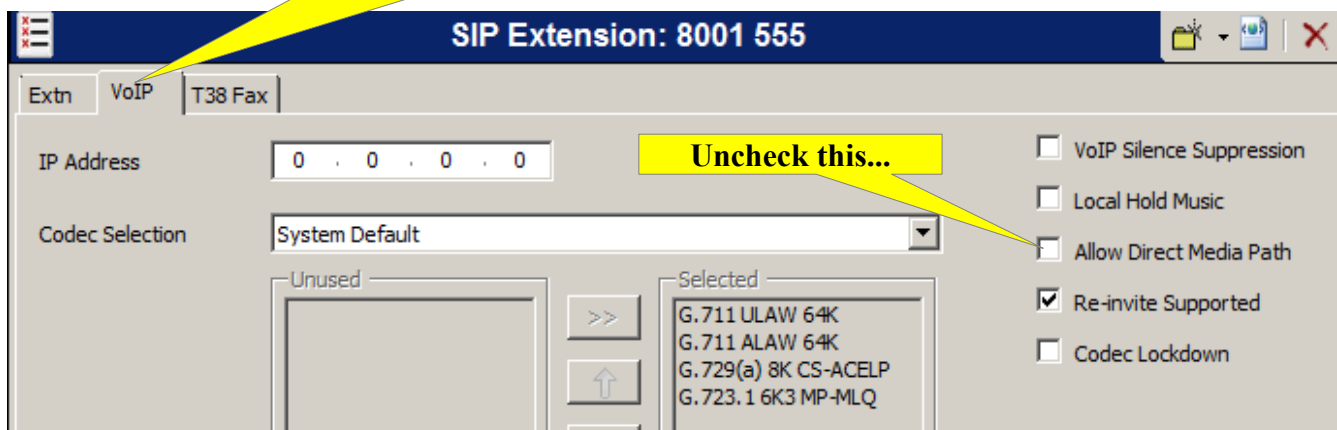
I am using a Netgear FVS318 Router and I was able to get my Iphone working as an extension off of the IP Office 8.1 KSU while I was connected to the ATT 4G Network.

Create a New Extension Number for the Remote Phone



Do not assign an IP Address or change anything other than what is shown.....

Same screen...now this Tab...



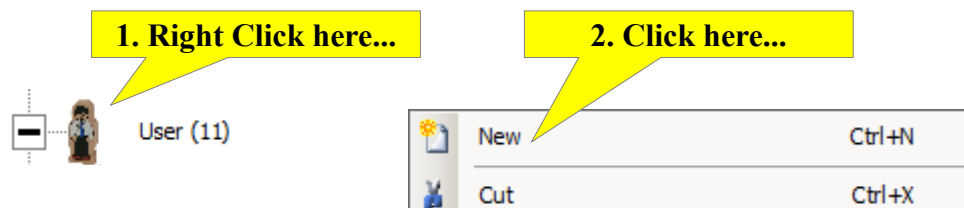
The screenshot shows the IOffice_1* configuration window. At the top, there are tabs for CCR, Codecs, System, LAN1, LAN2, DNS, Voicemail, Telephone, Directory Services, System Events, SMTP, and SMD. Below these are sub-tabs for LAN Settings, VoIP, Network Topology, and SIP Registrar. The SIP Registrar tab is selected. The form contains the following fields and callouts:

- Domain Name:** A text box with the placeholder "Enter a URL or Public IP Address". A yellow callout "1. Click here..." points to this field.
- Layer 4 Protocol:** A dropdown menu currently set to "UDP Only". A yellow callout "2. Click here..." points to the dropdown arrow, and another yellow callout "Set like this..." points to the "UDP Only" text.
- TCP Port:** A numeric input field set to 5060.
- UDP Port:** A numeric input field set to 5060.
- Challenge Expiry Time (secs):** A numeric input field set to 10.
- Auto-create Extn/User:** An unchecked checkbox. A yellow callout "Uncheck this..." points to the checkbox.

The Domain Name can be either a URL, mysip.com or an IP Address 24.234.56.178

Note:

If you use a IP Address, it should be the Public IP Address of the router that is connected to the KSU.

Create a New User for the Remote Phone

3. Click here...

Jim Smith: 444*

Group Membership | Announcements | Personal Directory

User | Voicemail | DND | Short Codes | Source Numbers | Telephony | Forwarding | Dial In | Voice Recording | B

Name: Jim Smith **4. Give it a Name...**

Password: This is not the SIP Password area. See Page 6.

Confirm Password: This is not the SIP Password area. See Page 6.

Account Status: Enabled

Full Name:

Extension: 555 **5. Same Extension as Page 4**

Email Address:

Locale:

Priority: 5

System Phone Rights: None

Profile: Basic User

6. Check this...

- ☐ Receptionist
- ☐ Enable Softphone
- ☐ Enable one-X Portal Services
- ☐ Enable one-X TeleCommuter
- ☒ Enable Remote Worker

Assign a Password for the SIP Phone.

**This will be the SIP Password... Make sure it is complex or you may get hacked....
You can have up to 15 digits and only digits, no alphabetical.**

The screenshot shows the 'Call Settings' tab for user 'Jim Smith: 444'. The 'Login Code' field is highlighted with a yellow callout box that says '1. Click here...'. Another yellow callout box points to the 'Login Code' field with the text '2. Click here...'. A third yellow callout box points to the 'Login Code' field with the text '3. Enter a 4 Digit Password.. Do not use 3333, 4444, 5555 etc...'. A fourth yellow callout box points to the 'Login Code' field with the text 'This is the Password used by the Remote Phone to log on to the KSU...'. The 'Login Code' field currently contains '****'. Other fields include 'Login Idle Period (secs)', 'Monitor Group', 'Coverage Group', and 'Status on No-Answer'.

Note:

When configuring a SIP Phone (hard or soft) the “Login Code” can have different names.

Terms like these are used:

Password

SIP Password

Authentication Password

User Password

Secret

and many more that I am not aware of.

It will be up to you to determine what the SIP Phone provider is asking for.

Here are some thoughts and observations.

There are 4 free Remote Worker Licenses in the KSU allowing up to 4 SIP phones. They are not listed in the License area of the Manager program tool, but they work. You will however need a “3rd Party IP Endpoints” license for each SIP Phone.

It is better to set up the SIP phone on the same LAN as the KSU initially. That is, plug it into the same physical network that the KSU is connected to. Or, if it is an Iphone, connect by WIFI to the same LAN if possible. This is the best way to test it initially.

When testing on site:

Be sure to enter the LAN IP Address of the KSU into the phone, not the KSU's Public IP Address. This takes out all the networking issues/troubles that may exist. If it works OK, then it means that all your KSU programing looks OK.

When testing off site:

Next, you can set up the Iphone on the 4G Network and try it from there. Be sure to enter the Public IP Address of the KSU into the phone, not the KSU's LAN IP Address. If it works...Great. If not... then it is most likely a networking trouble at either the KSU location or the 4G Provider may be blocking SIP.

Will this work with my Android type cell phone?

I have not set up or tested this with an Android type cell phone. You can download a softphone and try to set it up to see what happens. Technically, it should work since the KSU does not care what type of SIP Phone is connected.

What Softphone should I use in my Iphone?

I suggest using either the 3cx or Zoiper softphones. They are both free and can be downloaded to your cell phone.

Will it work with a softphone in my laptop computer?

Technically it should.

Remember, routers and service providers may block the softphone from working correctly.

I have used my Iphone with 3cx on the ATT 4G Network in one location and it worked great. However, when I went to a different location, on the ATT 4G Network it did not work.

Telquest does not provide any Tech Support on setting up your cell phone with any softphone. You will need to contact the provider of the softphone for technical assistance.