

Avaya IP Office Standard Mode Release 9.0 KSU Remote Extension Programing for 96xx Type 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 1719 UDP, 1800 TCP, 49152 through 53246 UDP (can be made smaller) need to be opened to the KSU.

Port 80 needs to be open too, but just until the phone boots up. Then it can be closed.

>>> You will need an Avaya IP Endpoint License for each 96xx IP Phone. <<<

The Remote Location for the 96xx phone may need to have some changes made in the router that it is connected to.

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 96xx 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 it 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 basic experience and are familiar with the concepts of the system.

Note: It has been reported that you **cannot** use more than 1 IP phone at the same remote location.

IP Offices

0.0.0.0

IP Route

IP Address 2. Set like this... 0 . 0 . 0 . 0

IP Mask 3. Set like this... 0 . 0 . 0 . 0

Gateway IP Address 4. Your Network Router here... 192 . 168 . 111 . 1

Destination 5. Set like this... LAN1

Metric 0

☐ Proxy ARP

Create a new IP Route

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

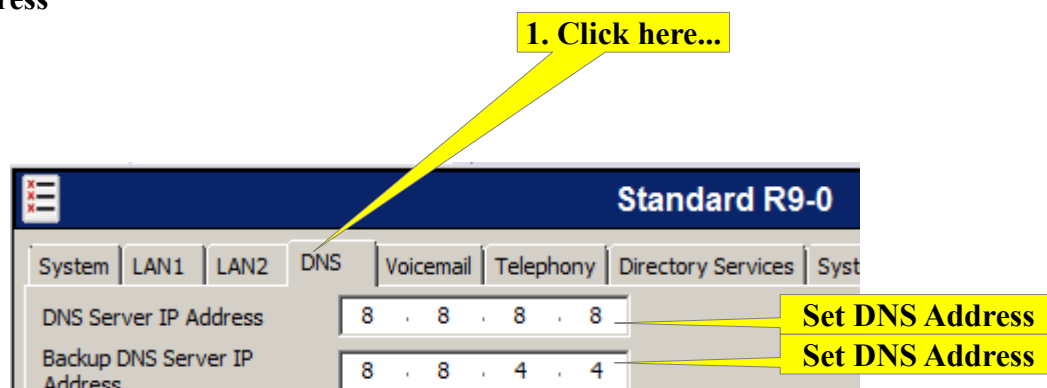
1. Right Click here

1a. Then select New...

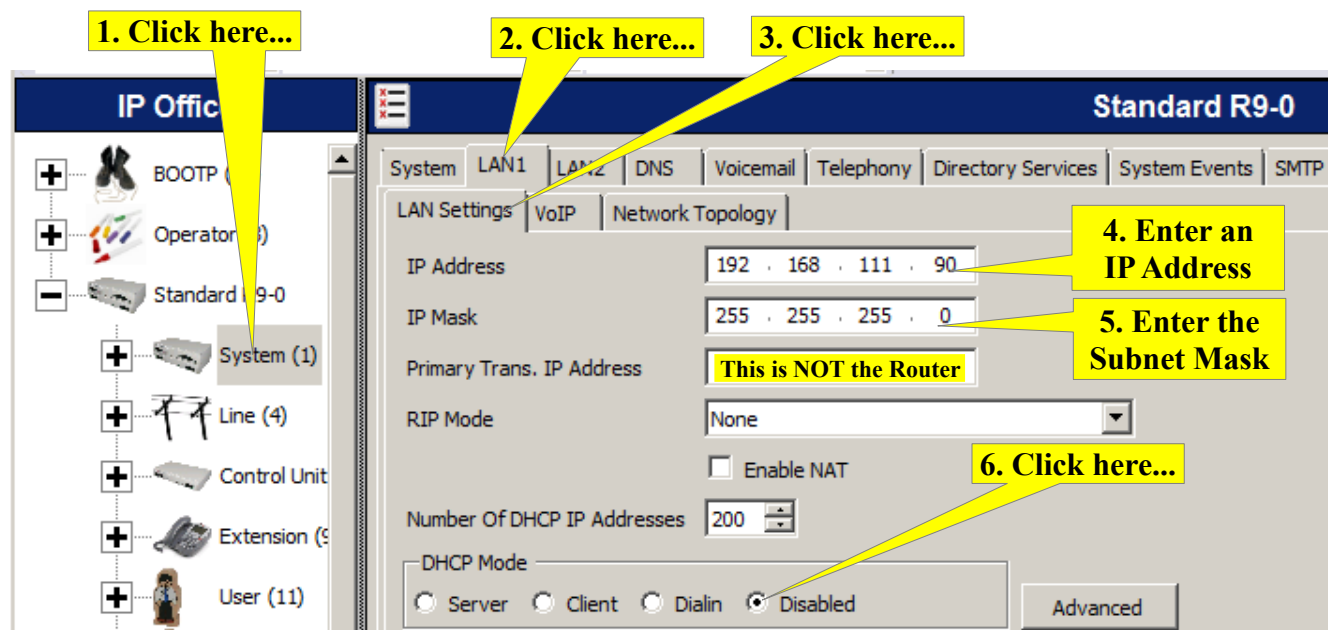
New Ctrl+N

Cut Ctrl+X

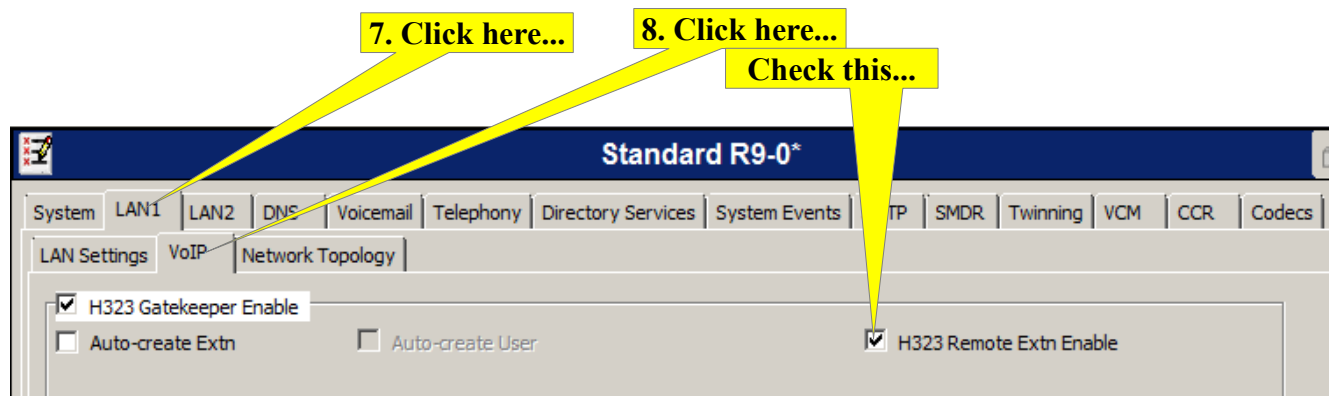
Set a DNS Address



Give the KSU a Static IP Address on the LAN



Turn on H323 Gatekeeper



Turn on STUN

9. Click here...

10. Enter this...

See note...

11. Enter this...

See note...

12. Enter this...

13. Check this...

14. Click here...

Do not change this...

15. Click here...

16. 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 H.323 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 96xx 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 96xx phone to work.

If the Firewall/NAT Type comes up with something else, I would reason that the remote 96xx 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. (Mine was Full Cone Nat).

I am using a Netgear FVS318 Router.

Create a New Extension Number for the Remote Phone

This is just an Index Number...

1. Right Click here

2. Enter an Extension Number

3. Enter a Log On Password

Then select New...

Then select H323 Extension

New
Cut Ctrl+X
Copy Ctrl+C
Paste Ctrl+V
H323 Extension
IP DECT Extension
SIP Extension
SIP DECT Extension

Note:

The Log On Password is what you enter via the keypad when the phone first comes on and prompts you.

It is not the Login Code used by the phone to Register to the KSU. (Step 3, Page 7)

To make things easy and less confusing , just use the same 4 Digit Password here and on Page 7.

We are still on the same screen here...

4. Click here...

H323 Extension: 8001 555*

Extn VoIP

IP Address 0 . 0 . 0 . 0 **Do Not change this...**

MAC Address 00 00 00 00 00 00

Codec Selection System Default

Unused Selected

G.711 ULAW 64K
G.711 ALAW 64K
G.729(a) 8K CS-ACELP
G.723.1 6K3 MP-MLQ

5. Uncheck this...

VoIP Silence Suppression

Enable Faststart for non-Avaya IP phones

☒ Out Of Band DTMF

Local Tones

☐ Allow Direct Media Path

Reserve License None

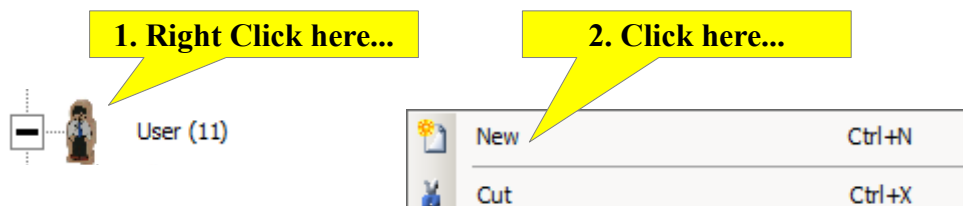
TDM->IP Gain Default

IP->TDM Gain Default

Supplementary Services H450

Create a New User for the Remote Phone

Note: Step 5... Is not required, but put a password in anyway to stop the alarm notice...
This password is used by user applications such as SoftConsole and TAPI.



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

Password: *****

Confirm Password: *****

Account Status: Enabled

Full Name:

Extension: 555

Email Address:

Locale:

Priority: 5

System Phone Rights: None

Profile: Basic User

☐ Receptionist

☐ Enable Softphone

☐ Enable one-X Portal Services

☐ Enable one-X TeleCommuter

☒ Enable Remote Worker

4. Give it a Name...

5. Enter an 8 Digit Password

This Password is not used By the Remote Phone...

6. Same Extension as Page 4

7. Check this...

Assign a Login Password for the Remote Phone

This will be the Password entered on the keypad of the Remote Phone when first logging on.

1. Click here... (points to the 'Login Code' field)

2. Click here... (points to the 'Login Code' field)

3. Enter a 4 Digit Password.. Do not use 3333, 4444, 5555 etc... (points to the 'Login Code' field)

This is the Password used to Log on to the Remote Phone... (points to the 'Login Code' field)

Jim Smith: 444

Menu Programming | Mobility | Group Membership | Announcements

User | Voicemail | DND | Short Codes | Source Numbers | Telephony | Forwarding

Call Settings | Supervisor Settings | Multi-line Options | Call Log | TUI

Login Code: ****

Login Idle Period (secs):

Monitor Group: <None>

Coverage Group: <None>

Status on No-Answer: Logged On (No change)

Special Programing for the NoUser

3. Click here... (points to the 'Source Number' field)

2. Click here... (points to the 'Source Number' field)

4. Click here... (points to the 'Add...' button)

5. Add this, all CAPS... REMOTE_H323=1800 (points to the 'Source Number' field)

6. Click here... (points to the 'OK' button)

1. Click here... (points to the 'NoUser' entry in the 'User' list)

IP Offices

BOOTP (27)

Operator (3)

Standard R9-0

System (1)

Line (4)

Control Unit

Extension (5)

User (11)

Group (1)

Short Code

Service (0)

RAS (1)

Incoming Call

User

Name | Extension

RemoteManager

NoUser

Extn201 | 201

Extn202 | 202

Extn203 | 203

Extn204 | 204

Extn205 | 205

Extn206 | 206

Extn207 | 207

Extn208 | 208

Jim Smith | 444

NoUser

Voice Recording | Button Programming | Menu Programming | Mobility | Group Membership

Announcements | Personal Directory

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

Source Number

Add...

Remove

Edit...

Source Number

REMOTE_H323=1800

OK

Here are some thoughts and observations.

There are 4 free Remote Worker Licenses in the KSU allowing up to 4 Remote 96xx phones.
They are not listed in the License area of the Manager program tool.
You will however need an Avaya IP Endpoint License for each 96xx IP Phone.

It is better to set up the 96xx type phone on the same LAN as the KSU first.
That is, plug it into the same physical network that the KSU is connected to.
This is the best way to test it initially.
Be sure to enter the LAN IP Address of the KSU into the phone, not the KSU's Public IP Address.
It also allows the 96xx phone to download all the Language Files from Port 80.
It takes out all the networking issues/troubles that may exist.
If it works OK, then it means that all your KSU programing looks OK.
Next, you can set it up at the Remote Location 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 Remote Location.

You do not need to use the Avaya 46xxsettings.txt file to make the phone work.
It is only required if you want to use the built in VPN ability of the phone.
That function is not covered in this Help Sheet.

Port 80 is only used once when the 96xx phone boots up for the very first time.
If you are setting the 96xx phone up at the KSU location (as I suggested) then you will not need to open Port 80 in the router at the KSU location.
If you are setting the 96xx phone up at the Remote Location, then you do need to open Port 80 to the KSU, but you can close it once the phone is working.

When programing the 96xx phone
"Phone" = LAN IP Address of the 96xx phone
"Call Server" = IP Address of the KSU (LAN Address if local, Public Address if Remote)
"Router" = IP Address of the Router that the 96xx phone is connected to physically
"Mask" = Sub Net Mask of the Router that the 96xx phone is connected to physically
"HTTP Server" = IP Address of the KSU (LAN Address if local, Public Address if Remote)
"HTTPS Server" = Leave it blank or 0.0.0.0
"802.1Q" = Set to Off
No other settings need to be changed.

I have observed that the phone will take a long time to load and configure itself.

Starting and stopping and re-booting several times before becoming operational.

After that, it starts up quicker.

Avaya says that the Remote Phone needs to be a 96xx type.
I have tested here and have had reports that a 1608 or 1616 phone works too.
Since it is not official from Avaya, you can try it to see if it works for you.