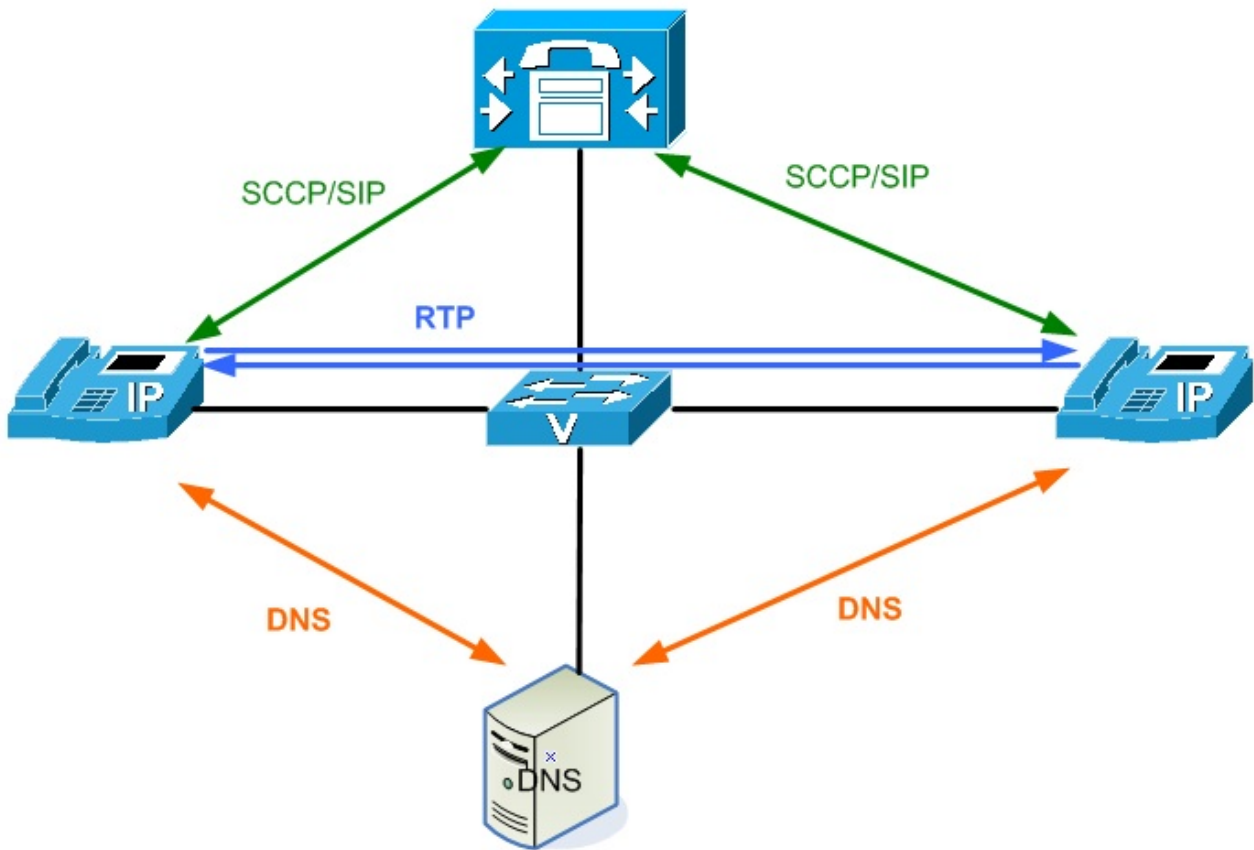


13. Elimination reliance of CUCM on DNS service

*DNS name resolution is needed in voice network if DNS is in use. DNS lookup process must occur before any signaling occur. As result we can expect delay or in worst failure of DNS system on network environment lead to failure in voice placing. Conclusion is **DNS is not recommended for use in voice network.***

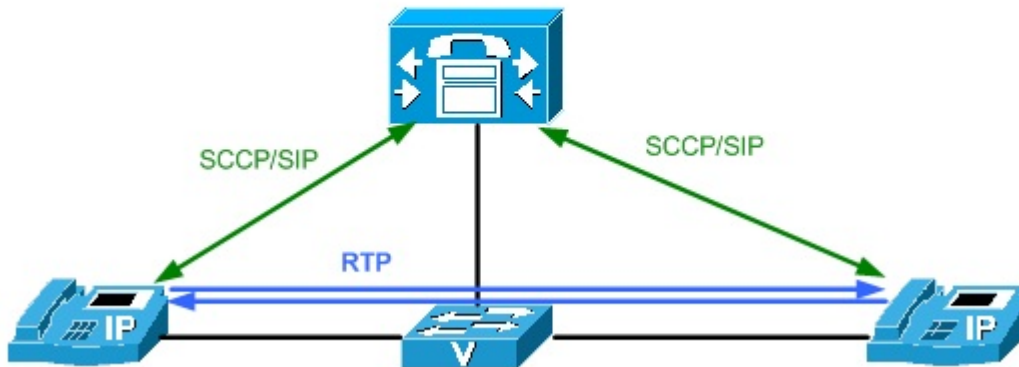
Closer look on protocular data flow in network with DNS is on next picture. For drawing topology diagram you can obtain appropriate stencil for Ms Visio from cisco page <http://www.cisco.com/web/about/ac50/ac47/2.html>.

CUCM network with DNS for voice devices



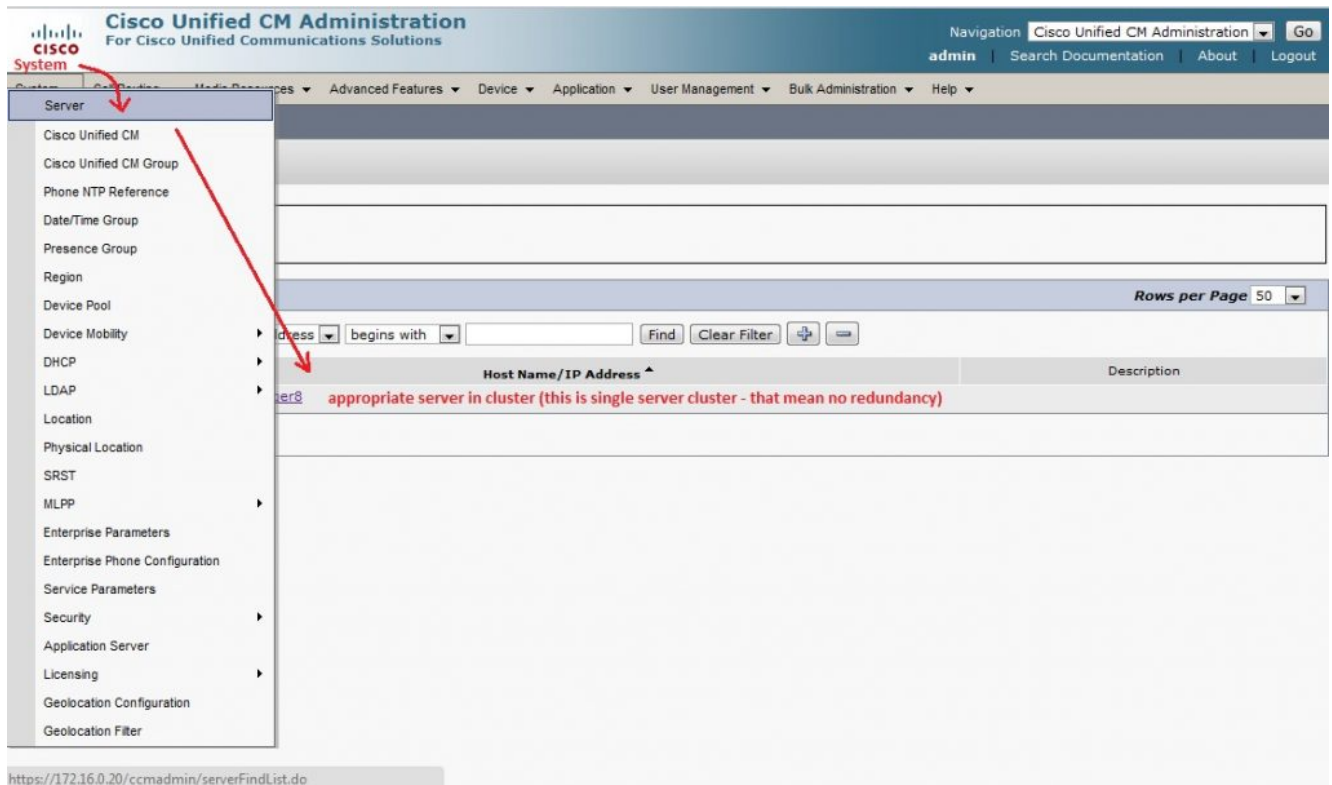
But network environment in voice VLAN can be clean from DNS PDU as you can see on picture that demonstrate network with eliminated DNS.

CUCM network with eliminated
DNS reliance for voice devices

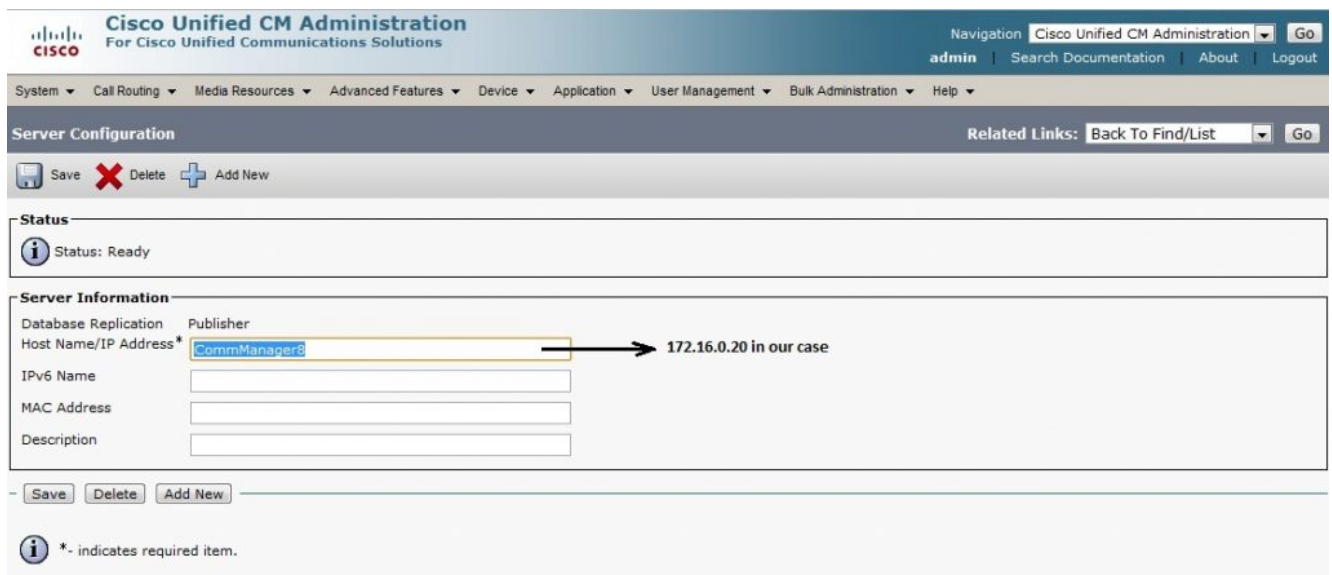


Now you can ask: **What is the way how to eliminate reliance of CUCM on DNS?**

Default installation of CUCM (as it show next picture) list hostname of CUCM server (Publisher or subscribers) in database field but not real IP address. To change these value we must select appropriate CUCM server from system administration menu and replace name with IP address (System -> Server (then appropriate server)).



From list our cluster servers (in my case it is stand alone CUCM server) select appropriate server and open it that lead to next window.



But in CUCM database is another reliance on DNS system. Phone service URLs use name of server against appropriate IP. We must change it this way. Go to System -> Enterprise parameters and scroll down to Phone URL parameters and Secure phone URL parameters. Change appropriate DNS names to appropriate IP address (in our training environment it will be 172.16.0.20).



System	Call Routing	Media Resources	Ad
Server			
Cisco Unified CM			
Cisco Unified CM Group			
Phone NTP Reference			
Date/Time Group			
Presence Group			
Region			
Device Pool			
Device Mobility			
DHCP			
LDAP			
Location			
Physical Location			
SRST			
MLPP			
Enterprise Parameters			
Enterprise Phone Configuration			
Service Parameters			
Security			
Application Server			
Licensing			
Geolocation Configuration			
Geolocation Filter			

Cisco Unified CM Administration
For Cisco Unified Communications Solutions

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System ▾ Call Routing ▾ Media Resources ▾ Advanced Features ▾ Device ▾ Application ▾ User Management ▾ Bulk Administration ▾ Help ▾

Enterprise Parameters Configuration

Save Set to Default Reset Apply Config

Prepare Cluster for Rollback
[Prepare Cluster for Rollback to pre 8.0 *](#) False False

Phone URL Parameters

URL Authentication	http://CommManager8:8080/ccmciip/authenticate.jsp	
URL Directories	http://CommManager8:8080/ccmciip/xmldirectory.jsp	
URL Idle		
URL Idle Time	0	0
URL Information	http://CommManager8:8080/ccmciip/GetTelecasterHelpTe	
URL Messages		
IP Phone Proxy Address		
URL Services	http://CommManager8:8080/ccmciip/getservicesmenu.jsp	

Secured Phone URL Parameters

Secured Authentication URL	https://CommManager8:8443/ccmciip/authenticate.jsp	
Secured Directory URL	https://CommManager8:8443/ccmciip/xmldirectory.jsp	
Secured Idle URL		
Secured Information URL	https://CommManager8:8443/ccmciip/GetTelecasterHelpT	
Secured Messages URL		
Secured Services URL	https://CommManager8:8443/ccmciip/getservicesmenu.js	

In this two block of config change host name of CUCM to its IP address.

Phone URL Parameters

:8080 remember use port

URL Authentication	http://172.16.0.20/ccmciip/authenticate.jsp
URL Directories	http://CommManager8:8080/ccmciip/xmldirectory.jsp
URL Idle	
URL Idle Time	0
URL Information	http://CommManager8:8080/ccmciip/GetTelecasterHelpTe
URL Messages	
IP Phone Proxy Address	
URL Services	http://CommManager8:8080/ccmciip/getservicesmenu.jsp

and so on

Now is our voice network much more independent from DNS failure. But keep in mind that there is also reason to stay on DNS based network model for voice segment. That is when you expect change in network addressing plan, names are more stable as IP address.