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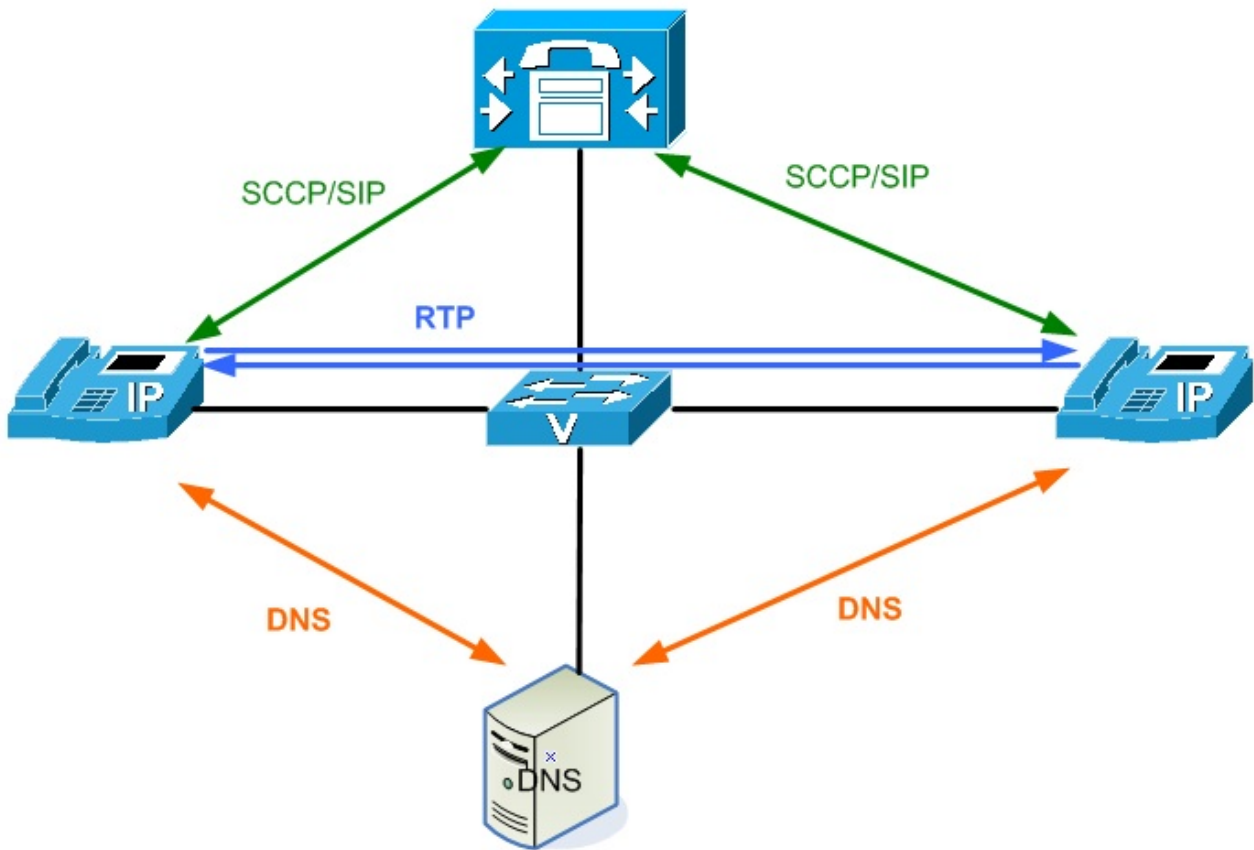
But network environment in voice VLAN can be clean from DNS PDU as you can see on picture that demonstrate network with eliminated DNS.

CUCM network with eliminated
DNS reliance for voice devices

SCCP/SIP   SCCP/SIP

RTP

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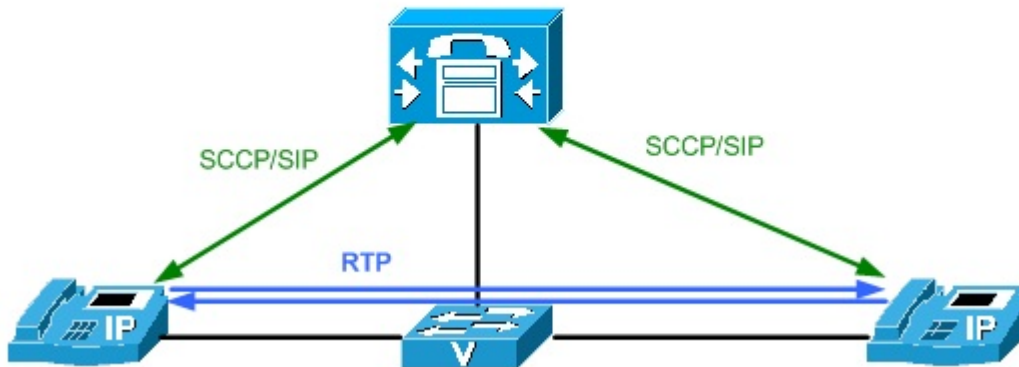
Now you can ask: **What is the way how to eliminate reliance of CUCM on DNS?**

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)).
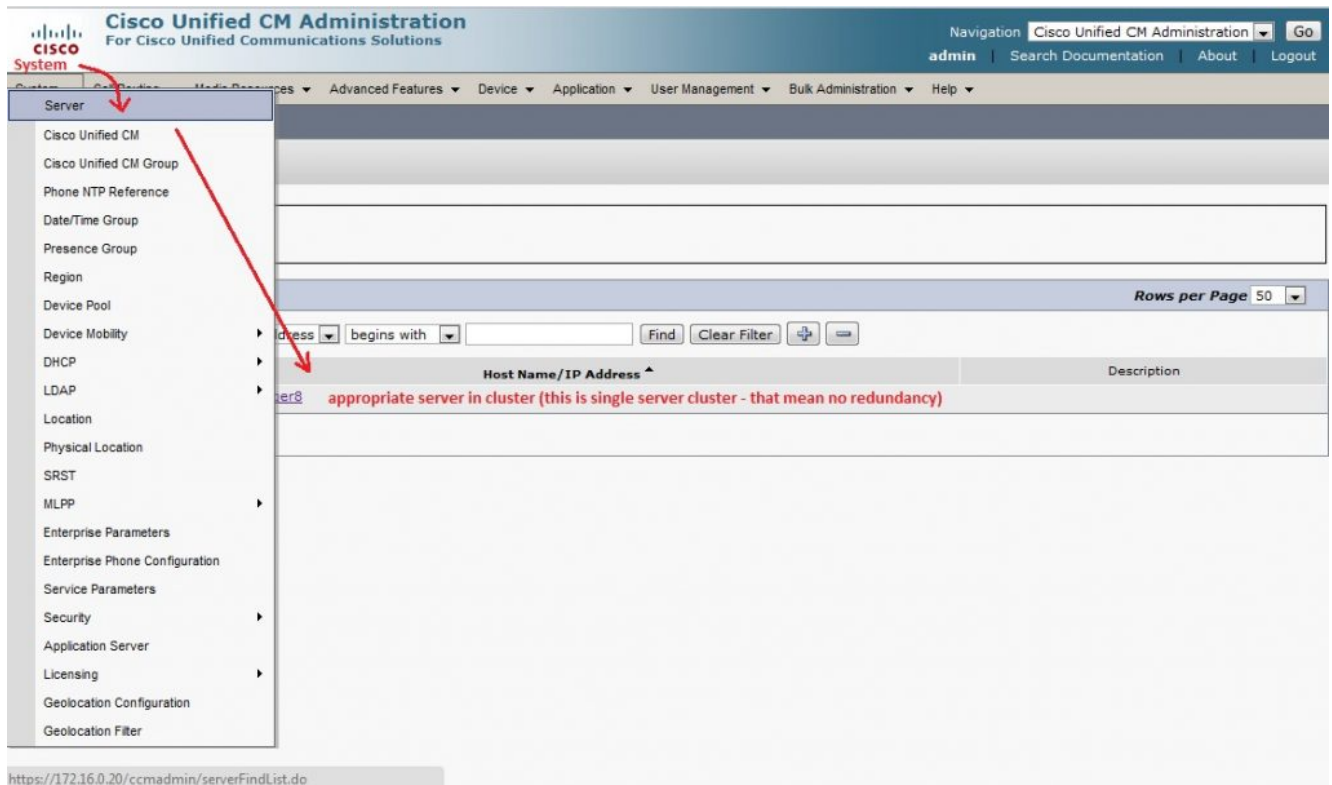
From list our cluster servers (in my case it is stand alone CUCM server) select appropriate server and open it that lead to next window.
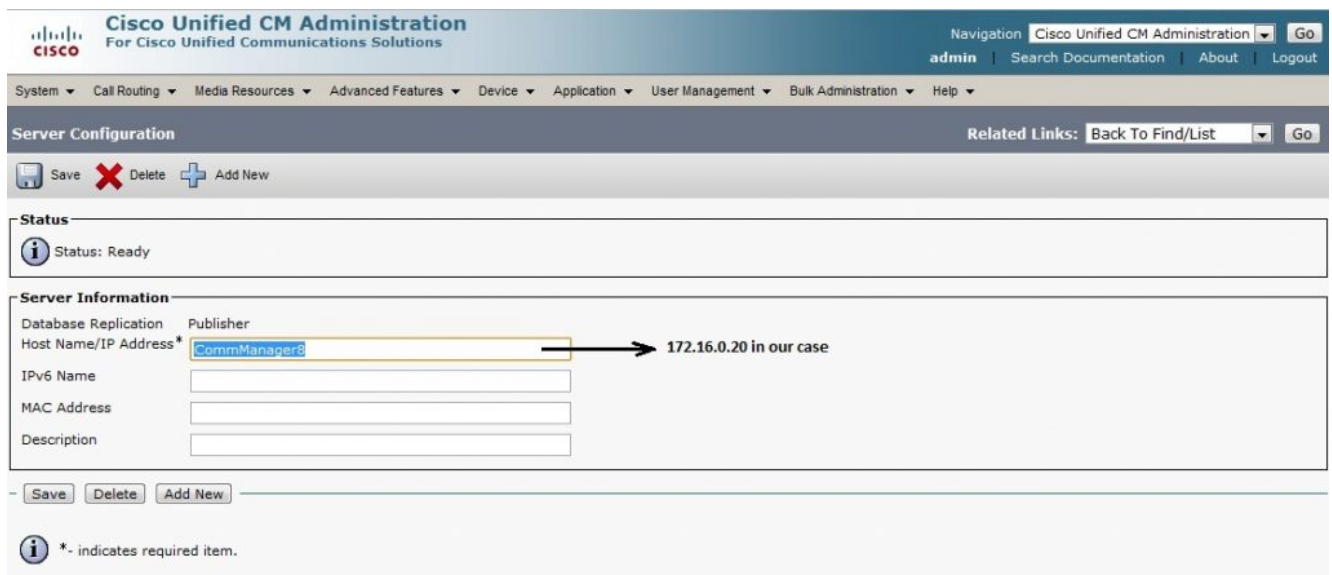
But in CUCM database is another reliance on DNS system. Phone service URLs use name of server against appropriate IP. We must change it this way. Go to System -> Enterprise parameters and scroll down to Phone URL parameters and Secure phone URL parameters. Change appropriate DNS names to appropriate IP address (in our training environment it will be 172.16.0.20).

Cisco Unified CM Adm
For Cisco Unified Communicatic

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

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

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.