

Procedure for Ordering VoIP Phones

Bulk quantities of VoIP phones can be ordered through CHES. This guide outlines the procedure. The main steps are

- Determine whether your facility is ready for VoIP phones
- Determine what phones to buy
- Determine what else to buy
- Use the CHES process to acquire VoIP phones

This guide assumes that your installation already has an operating and accredited VoIP system and you need to acquire additional VoIP phones. This process could also be used to acquire VoIP phones for a VoIP system that is being implemented. If neither of these situations applies to you, please contact your local Network Operating Center (NEC).

Points of contact and a process flow chart are given at the end of this document. For acquisition support or technical support, feel free to obtain guidance from one of the points of contact.

1. Determine whether your facility is ready for VoIP phones

1.1. Does a VoIP telephone switch or a VoIP-enabled telephone switch serve your facility?

VoIP phones work in conjunction with a VoIP system. Before you can install VoIP phones, you must have a VoIP system that serves the facilities where the VoIP phones will be located. Questions to ask the local NEC are:

- Does an accredited VoIP system serve your facility or is one in the process of being implemented?
- Does the equipment have sufficient capacity to handle the VoIP phones you plan to add? (This is a question about the equipment itself; software licenses will be discussed later.)
- In terms of network connectivity, will your new VoIP phones be able to communicate with the VoIP system?

1.2. Will wiring to the users' desktops support VoIP phones?

VoIP phones require both electrical power and a connection to the local data network (Ethernet). A typical configuration is to plug the VoIP phone into a standard data wall jack using an RJ45 connector. The wall jack provides the data signal and usually provides electrical power as well. If the user has a PC as well as a VoIP phone, the data cable from the PC can be plugged into a jack on the phone. The VoIP phone is then connected to the wall jack. In this way, the PC and the VoIP phone share a single wall jack. This is called shared access. Questions to ask the local NEC or facilities manager are:

- Is an RJ45 wall jack available for each new VoIP phone?
- Do suitable copper cables connect the user's wall jack to the local Ethernet switch (preferably CAT 5 or CAT 6)?
- Does the local Ethernet switch provide Power over Ethernet (PoE) that can be used by the IP Phone? If not, can a PoE capability be added, or will the phone have to use a local power supply?

1.3. Does the local area network comply with the requirements of UCR 2013 Errata-1?

Section 7.1 of UCR 2013 Errata-1 gives requirements for local area networks (LANs) that support VoIP in the Army. You can find this document at <http://www.disa.mil/Network-Services/UCCO/~media/Files/DISA/Services/UCCO/UCR2013-Errata-1/UCR-2013-CombinedFinal.pdf>. A commercial grade, best effort LAN is not suitable for Army VoIP since Army VoIP is considered an assured service command and control system. The

LAN requirements are quite extensive, and they include consideration of capacity (bandwidth), reliability/ availability, backup power, and IA (security). Highlights of the requirements are given in the table below, which was taken from UCR 2013 Errata-1:

Table 7.1-1. Summary of LAN Requirements by End User Mission Category

REQUIREMENT ITEM	SUBSCRIBER MISSION CATEGORY			
	F/FO	I/P	R	NON-MISSION CRITICAL
ASLAN High	R	P	P	P
ASLAN Medium	NP	P	P	P
Non-ASLAN	NP	NP	N	P
Redundancy (including diversity)	R	R	NR	NR
Battery Backup	8 hours	2 hours	NR	NR
Single Point of Failure User > 96 Allowed	No	No	Yes	Yes
Availability	99.999	99.997	99.9	99.8
LEGEND				
ASLAN: Assured Services LAN	LAN: Local Area Network	p: Probability of Blocking		
F/FO: FLASH/FLASH OVERRIDE	MLPP: Multilevel Precedence and Preemption			
I/P: IMMEDIATE/PRIORITY	NP: Not Permitted	P: Permitted		
GOS: Grade of Service	NR: Not Required	R: Required		

LANs must be tailored to the user's mission. If a user can initiate a flash or flash override call, then the portions of the LAN that affect the user must have 99.999% availability and 8 hours backup power. Likewise, if a user can initiate immediate or priority calls, the LAN must have 99.997% availability and 2 hours backup power. Other users require LANs with 99.9% availability and backup power that supports health, safety, and security concerns. Of course, the VoIP phones themselves must also have backup power. Questions to ask the local NEC or facilities manager are:

- For connectivity to the new VoIP phones, does the LAN comply with UCR 2013 Errata-1?
- Will any VoIP users be able to initiate flash, flash override, immediate, or priority calls? If so, will their VoIP phones and their LAN have the required availability and backup power?
- For users who can't initiate flash, flash override, immediate, or priority calls, will adequate backup power be provided to avoid concerns about health, safety, and security?
- Can the LAN support separate voice and data Virtual LANs (VLANs) as required by the Voice and Video over IP Security Technical Implementation Guide (STIG)?

2. Determine what phones to buy

2.1. Identify VoIP System Vendor and Version Number

Approved VoIP systems are identified on the Unified Capabilities Approved Products List (UC APL), which can be found at <https://aplists.disa.mil/processAPList.action>. Only approved VoIP systems can be used in the Army, and only specific VoIP phones are approved for each system. Before you can select phones, you need to know how to identify your VoIP system. The question to ask the local NEC is:

- Among the VoIP systems on the UC APL, which system will serve your new VoIP phones? The easiest way to learn this is to use the UC APL to find all the approved VoIP systems from a particular vendor and then to find your VoIP system in the list.

2.2. Use UC APL to identify approved phones

Only specific phones are approved for use with specific VoIP systems. The UC APL will identify those phones. Note that while several vendors' VoIP phones may be approved to work with your site's VoIP system, not all call features may work in a multi-vendor environment.

- Use the UC APL to find your specific VoIP system, and then read the approval letter to find the approved VoIP phones. The approved VoIP phones are typically in the section titled "Tested System Configurations." You will need to know both the model number and approved software load for each VoIP phone.
- Check the approval letter to see if shared access is permitted (see Section 1.2); in some cases, shared access is not approved.

2.3. Identify types and quantities of phones needed

Most VoIP systems will have several approved VoIP phones. They offer different features and have different prices.

- Determine which telephone features will be required for your users, and determine the required quantity for each type of VoIP phone.

3. Determine what else to buy

In addition to the physical VoIP telephone instrument, you will also need software licenses and you may decide to purchase maintenance agreements, installation, and/or training.

3.1. Determine which types and quantities of software licenses are needed

Software licenses are required before you can use a VoIP phone. Each vendor has its own way of handling this. Some vendors sell the software license along with the VoIP phone. Other vendors associate the software license with the VoIP system. In either case, there must be at least one software license for each phone.

Your NEC or facilities manager may already have some VoIP software licenses that are available to be used. This could be the case if licenses are associated with the VoIP system and not all of the existing licenses have been used.

Alternatively, you may be planning to discard conventional phones and replace them with VoIP phones. Many vendors will allow you to convert or exchange the licenses from the old conventional phones and change them into VoIP licenses. This conversion can be done at no cost.

Finally, your NEC or facilities manager may have some unused conventional phone licenses that could be converted to VoIP licenses. This conversion can also be done at no cost.

Actions to take:

- Talk to your VoIP phone vendor to learn the current policy for VoIP phone licenses.
- Ask your NEC or facilities manager how many unused VoIP licenses are available for your use.

- Ask your NEC or facilities manager how many unused conventional phone licenses are available that could be converted to VoIP and used for your phones.
- Determine how many conventional phone licenses can be converted to VoIP when you decommission existing conventional phones.
- Determine how many new VoIP phone software licenses you need.
- Be aware that separate licenses are often needed for voicemail and other features. Discuss this with the NEC and the vendor.

3.2. Determine what maintenance agreements are needed

Maintenance agreements are available for VoIP phones. Many vendors offer two different types – maintenance support and software upgrade protection. Maintenance support typically includes software patches and support if a VoIP phone malfunctions. Upgrade protection entitles you to free upgrades if a new version of the VoIP phone software is released.

- Talk to your VoIP phone vendor to learn what maintenance agreements are available.
- Determine which types of agreements you want.

3.3. Decide whether you want services like installation or training

You may need extra services like installation or training.

- If you need training, make sure to include that in your requirements package to learn what is available. Potentially, training could be provided by either the VoIP phone vendor or by a company that holds an ITES-2H contract. In any case, you need to know the content of the training and whether it suits your needs.
- Determine if you need installation services.
- Determine whether you need any other services.

3.4. Assemble the requirements

Based on the information gathered above, prepare your requirements, making sure you provide an adequate description of each item. The CHES web site provides guidance on the format for this information: https://chess.army.mil/Content/files/RFQ_Tutorial.pdf

- VoIP phones (model number and software version)
- Software licenses (VoIP phones, voicemail, etc.)
- Maintenance agreements
- Installation
- Training
- Other

For acquisition support or technical support, feel free to obtain guidance from one of the points of contact listed toward the end of this document.

4. Use the CHES process to acquire VoIP phones

4.1. Contact your local contracting office

- Contact your local contracting office for information about acquisition and ordering requirements. (**Note:** in some cases a name brand justification may be needed.)

4.2. Process a Request for Quote (RFQ)

- Use the RFQ process on the CHERS website to post your requirement. There is an RFQ tutorial for this on the CHERS website. It is recommended that your Ordering Contracting Officer post the RFQ.
- The vendors have up to five (5) business days to respond to your RFQ and provide quotes on your requirement.

4.3. Place your order

- The Ordering Contracting Officer, in conjunction with the requiring activity, develops the evaluation criteria that form the basis for making an award (i.e. whether the award will be based on low price, technically acceptable, or best value). The Contracting Officer will then make a determination of which vendor will receive an award and will write a delivery order against the existing ITES-2H contract.

4.4. Receive Equipment

- Equipment arrives based on delivery instructions agreed upon between the Contracting Officer and the vendor.

4.5. Install, test, and activate equipment

- Use your own resources or any other for which you might have contracted. Installing the phones includes registering them with the VoIP system and configuring the VoIP system to accept them. The local NEC will need to support these efforts.

Points of Contact

Acquisition:

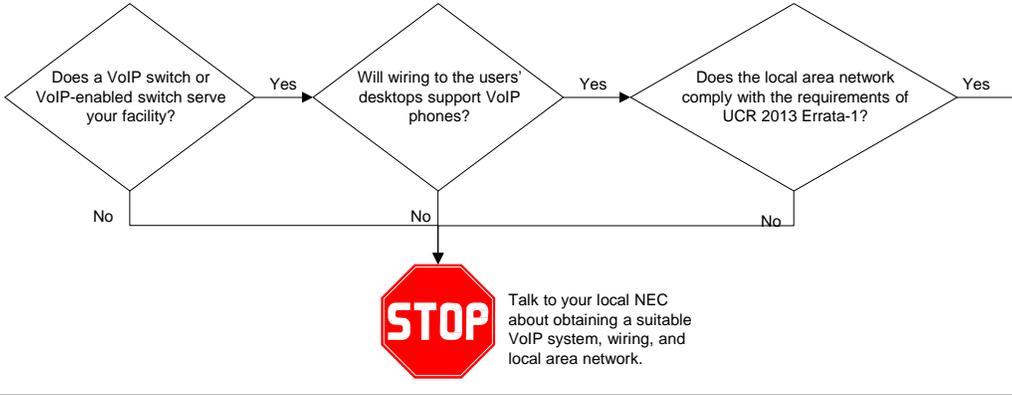
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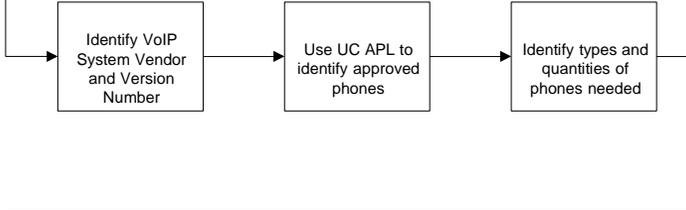
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Acquiring VoIP Phones

Determine whether your facility is ready for VoIP Phones

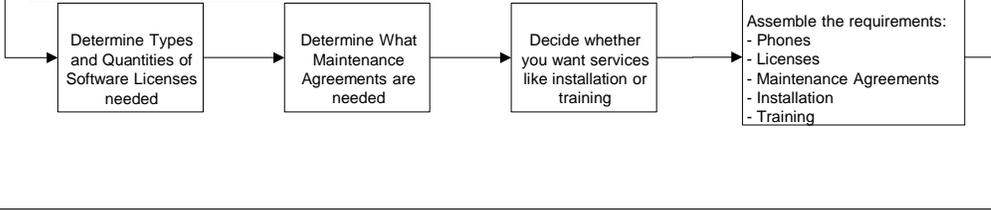


Determine what phones to buy



For acquisition support or technical support, feel free to obtain guidance from one of the points of contact listed on the preceding page of this document.

Determine what else to buy



Use the CHES Process to Acquire VoIP Phones



<https://ches.army.mil>