

EXTENDA'S GUIDE TO MOVING YOUR PHONE SYSTEM

Moving into a new office is a task that is about as enjoyable as planning a funeral, and attended in the same enthusiasm. Time and again, we see our dear customers leave the detail of moving their telephone and data networks, and their associated telephone service and internet access, to the last minute, with disastrous results. This guide is designed to help you get through this chore without too many surprises.

Step #1: Budgeting for Cabling

Your new location has great parking, ample natural light, a conference room and oak paneled doors. Does it have appropriate cabling?

Your telephones and computers will need a cable run from the jack in the wall to a single room your phone system will call home. You may consider a wireless network as an alternative.

The following steps should help you assess your cabling situation.

- 1 Invite us over to look at the suite before you sign. We don't charge to check out the cabling and get you an estimate.
- 2-1 If there is no cabling, you need to decide whether to go with Cat 5E or Cat6 cabling. Cat5E is cheaper but has a lower top speed; Cat6 is used commonly for gigabit networks and is more expensive in terms of material and installation.
 - 1-2-1 Do I have gigabit switches? Just as you wouldn't put a turbocharger on a minivan, if your network switches are 10/100 *and you are keeping them*, then Cat5E will be perfectly fine.
 - 1-2-2 Do my employees access big files (10MB+)? If no, stick with Cat5E
 - 1-2-3 How many employees do I have? As a rule of thumb, if you have more than 20 employees on the computer at once, you might consider using Cat6.
- 2-2 Let's say that there is cabling, but each desk has only 1 Cat3 and 1 Cat5 or 6 cable. You can either go with digital telephones that can use the Cat3 cable, or you can install IP telephones with a 2nd data port, so that your IP phone and computer can share a data cable. Be sure that the phones have gigabit ports if you want gigabit speeds, because a given network connection is only as fast as the slowest part.
- 3 Where are you putting all your gear? Make sure that the room you put your servers and phone equipment in is large enough to fit everything. We recommend a 4-post rack over wall mounting so that your equipment has a fighting chance in an earthquake.

- 4 Is the data/phone room a good home? Equipment, like vampires, prefers to live in cool environments with low humidity, little dust and no direct sunlight. You also will want plenty of electrical outlets of the right type for your equipment.
- 5 If you are moving and have IP telephones, you have to think about power for your phones. If you are using power over Ethernet switches, are the cables wired properly for sending power? If you are using local transformers for the telephones, are there enough power outlets for all the devices at each desk?
- 6 Do you want cordless telephones? Keep in mind a typical inexpensive cordless telephone is only going to have a range of 100 or so feet from the base station, and that extending cordless telephones over a wider area will require cabling for the antennae.
- 7 Do you want a wireless network? Depending on the type of wireless network you put in and the size of the space, you may want to consider installing repeater antennae, and these need to be cabled back to the data room.
 - 7-1 The most common wireless network for cordless IP phones is 802.11b, if you are looking to implement a cordless VoIP solution. This is going to be pretty slow for data otherwise, with a maximum bandwidth of 11mbs, about 10% of the speed of an average office network running 100mbs.
 - 7-2 Most companies are using the 802.11g standard for wireless data. This gives you a 54mbs top speed, about half of a standard wired network at 100mbs, and a longer range than 802.11a. 802.11b and g devices can share the same antennae but the network will run at the slower 802.11b speed.
 - 7-3 Companies installing new wireless networks are looking at implementing 802.11n. These networks can run at 100mbs and support b/g without interfering with the speed of the connected n-devices.
- 8 Do you need paging? Besides the paging speakers and an amplifier, you need cabling from the speakers back to the amplifier, and from the amplifier to the telephone system.
- 9 Do you want a door phone, gate phone or other access control device? Typically, a door phone is going to be paired with a relay so that you can open a door or gate from your telephone, so you want to be sure to see if there is an existing cable and a working relay installed by an electrician. Extending a cable out to a gate at the edge of your property is best done via a conduit installed under your parking lot before you pave.



Step #2: Plan to Move Your Services

In a world where your car can give you directions and you can order music for your cell phone, it is hard to believe that you have to wait for anything. Alas, with telephone and internet service, you do need to wait, unless you are prepared to pay expedite fees that can be upwards of \$1,000 per circuit. The following services need the following amount of lead time to insure that your circuits and numbers arrive on time and in good condition. These are admittedly conservative and vary by location and provider, but better safe than sorry.

DS-3s – 3-4 months if they need to bring fiber to your building, 8 weeks otherwise

Metro Ethernet– 3-4 months if they need to bring fiber to your building, 8 weeks otherwise

PRI, Integrated Access T1, Voice T1s, MPLS – 8 weeks

Data T1s, Cable, Fiber – 4 weeks (if available)

Wireless T1s – 2 weeks (if available)

Traditional Telephone Lines, DSL – 2 weeks

SIP Trunks – Typically not an issue, as these will follow your IP addresses (which are pointed to your new DSL, cable, data T1)

For DS3, Metro Ethernet, T1, PRI, MPLS, all you need to do is to tell your carrier the date you are moving and provide the new address.

One potential pitfall is if you are moving to between AT&T and Verizon territory. You are not allowed to keep your local telephone company, and will likely lose your number – you will need to consider getting SIP trunks or a PRI and getting “out of rate center DIDs” so you can take the number(s) with you, or “Remote Call Forward” your old number to your new number, which means getting a Verizon and an AT&T bill each month.

DSL uses telephone line wiring, so similarly you can not move your DSL in the case above; you need to cancel the existing service and order a new one when you order your lines.

Similarly, if you are in an area not serviced by Time Warner cable, you will not be able to take your cable internet with you. This happens frequently when moving to office buildings that are not wired for cable but are within Time Warner territory.

Sometimes your existing carrier does not have any physical infrastructure in your new location. Check on the fees associated with your service ahead of time. If your service is going to be quite a bit more money, you want to start shopping if you are out of contract to get your monthly bills lower.

Step #3: Cable Planning

Before this step can start, you need to make sure you have made a list of all of the devices that will need a cable or network connection:

- Telephones, including courtesy phones, break rooms, and conference rooms
- Computers, for users, manufacturing, time cards,
- Fax machines, fax servers
- Printers, all-in-one devices
- Scanners,
- Wireless access points,
- Door phones, access control telephones.
- Credit card terminals,
- Paging equipment,
- Servers, storage devices, switches, routers, firewalls,
- Postage machines,
- Alarms,
- Security cameras
- Televisions

We typically recommend performing the cabling once the walls are up but before the painting starts, since we often need to cut holes in the dry wall for the phone and data jacks and don't want to get anything on your brand new paint.

Three special cases for cabling to consider:

- 1 - Cubicles: Most cubicles are cabled by sending the cables through a hollow tube from the ceiling called a power pole to the desk or a built-in cable pathway. We will need a power pole and the cubicles to be present to cable, obviously, which will impact the scheduling.
- 2 – Lofts We think an open ceiling for that loft-like look is chic and modern, too. Just know that cabling is more expensive when we don't have ceiling tiles to hide behind. It takes longer to dress the cables and requires either conduits or raceway to hold the cables to get them to locations in the middle of the room.
- 3 – Homes We recommend wireless for homes. You don't want to tear open your nice walls.

Step #4: Moving your Phone and Data Equipment

This part is, believe it or not, the easiest step. You just call us, and we uninstall, move, and reinstall and test the equipment.

Our process for moving a phone system and data network is simple.

- 1 Backup everything – we backup your data to our local computer and to our FTP site
- 2 Perform an inventory
- 3 Collect any supporting documentation together
- 4 Power down the equipment
- 5 Unplug and box all of the equipment
- 6 Transport the equipment
- 7 Take another inventory
- 8 Reinstall the equipment
- 9 Test the equipment
- 10 Backup everything

Obviously step 8 is not as simple as plugging in a router and walking away. Usually this involves a fair bit of programming based on whether your employees have moved around, your new carriers and numbers, your new IP addresses if any, and other things that are very likely have changed in your new space.

Step #5: Don't Panic

The cynics will note that we left out the steps for dealing with events such as when devices default upon losing power and forget all their programming, when your new carrier doesn't port your numbers on time, or when your data connection is not working. Rest assured that we can deal with whatever is thrown at us.

With any event using a variety of vendors and services, from weddings to building a car, something will often not go as planned. Murphy's Law sometimes strikes an unwitting customer that has done everything right. So we remind you that the first rule in a crisis is don't panic. We have been doing moves since 1970, and there is yet to be a problem we have been unable to overcome. We will do whatever it takes to get your company up and moving.