

**T**he marketplace for small-business IP-based PBX solutions is exploding. I see new companies entering the field and new offerings from existing companies every other week, so it's no surprise that one of the market leaders in telephony, Avaya (www.avaya.com), has joined the race. To its extensive offerings for enterprise and mid-size businesses, Avaya has added a solution for businesses with 20 or fewer employees: Avaya one-X Quick Edition.

This IP PBX works without a central switch and houses all its intelligence inside the telephone sitting on your desk. Based completely on

SIP, the one-X makes use of peer-to-peer technology. Yet all the telephony features users expect from an IP PBX are readily available, including voice mail, e-mail notification for voice mail, conferencing, an auto-attendant, and much more. Don't forget, however, that although one-X is based on the widely known and implemented SIP protocol you do need to stick to one-X phones, since it takes more than plain old SIP to provide all the functionality of a full-blown PBX.

#### Getting Started

I was truly impressed with system setup, which I was able to complete in a matter of minutes. All you do is plug your phone into

#### COMPANY

Avaya  
<http://www.avaya.com>

#### BOTTOM LINE

Avaya one-X Quick Edition is a good solution for small businesses that want to set up a reliable, easy-to-use IP PBX for 20 or fewer users. Coming from a reputable and longtime player in the telephony market, this offering should also be attractive for branch offices in enterprise-class companies.

#### PROS

Easy to set up and self-configuring. Zero maintenance. Redundancy for voice mail between phones.

#### CONS

Some limitations in voice mail recording time. Auto-attendant somewhat limited.



your LAN, preferably using a PoE switch to power the phone directly. If you don't have a PoE-capable switch you can get PoE power injectors from Avaya. Once you have power, the phone receives an IP address from your network's DHCP server, and you can begin configuration. If you don't have a DHCP server, the phones configure themselves with IP addresses from the 169.254.x.x (Zeroconf) network address space.

The phone asks (via its LCD display) for a site name—your business. Each subsequent phone installed asks if you want to create a new site or if you want to join an existing site. It's very cool

that the system is smart enough to scan your network in search of an existing installation.

Next, you change the default password and assign a username for each phone. If this is your first installation it's most likely your own name, so that should be easy to answer. Hit save and you're done! Only the slightly higher-end 3Com NBX V3000 phone can match this ease of setup. The comparable D-Link SMB PBX system DVX 1000 has more features but is also harder to set up and configure.

Once your configuration is saved, the unit automatically assigns an extension for each phone. These are easy to change, if users want or require specific extensions. Once you've established your telephone network, you should designate a specific phone as the operator extension—the extension to which the auto-attendant will direct outside calls from your PSTN gateway when the caller on an incoming call presses zero, or if the caller doesn't respond to prompts in the auto-attendant menu. The first-configured phone (usually extension 200) assumes this role by default, but this is easily changed.

The auto-attendant on one-X is simple and offers callers few choices. The caller can dial the extension of her party or spell the name of the person using the keys on the dial pad. A caller who doesn't react to these choices or presses 0 is redirected to the operator extension, which, if all is well, is answered by a receptionist or administrative assistant and not the janitor. The some-

what limited auto-attendant can handle two different greetings, which can be configured to play at different times of day: one for business hours and one for when your business is closed, for example.

### Putting It to the Test

I was curious to see how the system handled voice mail backup since it doesn't store messages in any traditional way that can be accessed by backup software. Through my testing, I discovered that one-X has a unique and effective way of dealing with this issue. When you disconnect an extension from the network, the other phones on the network will take responsibility for voice mail on the missing extension. Once you reconnect the phone, it receives the voice mail messages left while it was off-line.

There are, however, certain limitations. For example, the voice mail capacity on one-X is limited to 20 minutes, which may be insufficient for some. In addition, the auto-attendant doesn't offer as much flexibility in creating custom menus as some may want. These are restrictions that you usually don't have to deal with on switch- or server-based solutions. In addition, there's no real backup for your voice mail and directory data. This may not be an issue in a small-business environment, especially since there's redundancy among the phones.

Admins access advanced features through a simple Web-based interface from a computer on the same subnet as the phones and G10 PSTN



gateway. Here administrators can configure the system so that individual users receive SMTP mail notification for incoming voice mail or create call groups of phones that all ring at the same time. This is useful for small call centers or customer-service departments. Paging zones can also be set up using the Web-based interface so that announcements can be passed to all phones in a defined paging zone.

Keep in mind that if you want to connect the Avaya one-X Quick Edition system to a PSTN, you need to also get Avaya's G10 PSTN gateway (\$375), which provides access to four POTS lines or FXO (foreign exchange office) lines. The G10 gateway also supports MOH (music on hold) by providing a port where you can connect a CD player or other audio source.

The bottom line: If you have 20 or fewer employees (or are in a branch office of a larger organization) and are looking for lightning-fast setup and zero maintenance in your telephony solution, Avaya one-X Quick Edition should be at the top of your list.

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