Empowering communication.

digium
The Asterisk Company

Asterisk® versus® Switchvox®

Commercial Switchvox Unified Communications Solution or Asterisk open-source platform – How do you decide which is right for you?

Digium is the creator and primary sponsor of the Asterisk project. As a free open-source platform, Asterisk transforms a standard computer into a powerful communications and collaboration server.

Switchvox, another product from Digium, is a turn-key Unified Communications solution (or IP PBX), built upon Asterisk, that includes powerful telephony features at a fraction of the price of competitive products on the market. Switchvox is available as a traditional on-premises appliance or hosted as Switchvox Cloud.

Asterisk is the platform that enables developers to initiate, maintain and manipulate calls between phones and other telephony devices.

Asterisk is built by and for communication systems developers. The open source project began in 1999 when Mark Spencer released the original Asterisk source code and began accepting submissions from a growing community of users. The resulting product is an engine that handles all of the low-level details of initiating, maintaining and manipulating real-time media streams (calls) between endpoints (phones). Since the initial release it's been tested and refined by a community of more than 65,000 developers and integrators in 170 countries around the world.

Asterisk is to telephony what the Apache server is to web applications: essentially the exquisitely complex plumbing on which other applications are built. Just as a web server does very little without web applications, a telephony server does nothing without telephony applications. Web applications can be as simple as a single static HTML page or as complex as Facebook or Google. Likewise, telephony applications can be very simple scripts or hugely complex suites of application software.

Low-level engines like Asterisk and Apache are extremely powerful precisely because they have no fixed function or specific purpose set by their creators. The functions to which they are ultimately applied are determined not by the creators (the developers of the Asterisk and Apache development teams) but by application developers.

Application developers take engine-level components like Asterisk and Apache and build on top of them. These developers craft purpose-built solutions that implement a specific set of functions. Asterisk application developers write programs that make Asterisk behave as a PBX, a VOIP Gateway, a dialer, or virtually any other type of telecom apparatus.

Some Asterisk applications are simple and use little more than the core Asterisk engine, a few configuration files and some scripts written in Asterisk's Dialplan language. More advanced Asterisk applications connect Asterisk with databases, web services and other external resources. Finally, there are application suites that interconnect Asterisk with many other applications in

Switchvox is a Unified Communications solution built with ease-of-use in mind. Managing a telephony platform has never been this easy – with a simple point-and-click interface anyone can manage.

a complex web of interactions. These complex aggregate solutions do far more than could be done by Asterisk alone. Digium's Switchvox phone system is a perfect example of this class of application.

Where Asterisk is an engine, Switchvox is a complete vehicle. The Switchvox development team has created a powerful Unified Communications solution that anyone with a minimum of experience can manage. Where Asterisk is built for telecom developers, Switchvox is built for those that need a powerful, cost effective phone system.

The Case For Switchvox

Digium's line of Switchvox solutions include both on-premises and cloud/hosted IP PBX systems. Switchvox is managed through an easy to use graphical user interface (GUI) rather than raw configuration files and custom scripts. Switchvox includes all standard phone system features plus Unified Communications features like advanced voice messaging, instant messaging, desktop fax, call control, multi-party conferencing and advanced IVR – features that would cost thousands to bolt onto a traditional phone system.

With raw Asterisk, the process of configuring phones is entirely manual. Each phone must be independently set up by the system administrator. Switchvox automatically detects and configures phones, making it easy to deploy and manage handsets.

Of course, it's entirely possible to create a powerful PBX system using raw Asterisk. The major drawbacks to running Asterisk as a PBX are the deployment time and maintainability. Building an IP PBX out of raw Asterisk requires some fairly advanced technical skills, including a good working knowledge of IP networking, Linux/Unix system administration skills, traditional telephony experience and script programming know-how. Even those who are fully versed in all four of these disciplines will need to overcome a learning curve to create a working

Asterisk is "some assembly required". Switchvox is ready to run.

Switchvox even detects Digium interface cards, making your PSTN connectivity configuration a breeze. And if you'd like to use other VoIP or SIP trunks with Switchvox, the simple interface will have you set up and communicating with your provider in no time. With Switchvox, you get a powerful and complete solution, with an easy to understand interface.

So how do you decide if Switchvox or Asterisk is right for you or your business?

For those that aren't developers, telecom gurus, or technical geeks who want a powerful, easy to install, maintain and use, cost-effective solution, Switchvox is for you.

system. Once the system is up and running you will need someone on staff (or at least on call) who knows how the system works and how to handle any moves, adds or changes.

Where Asterisk is built for telecom developers, Switchvox is built for those that need a powerful, cost-effective phone system.

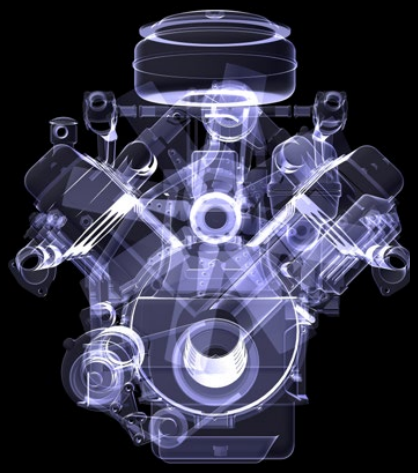
Looking to be even more hands-off and leave the maintenance and configuration up to the experts? For you, Digium offers Switchvox Cloud.

With Switchvox Cloud you can leave all the management, updates and maintenance to us. We host Switchvox for you in our data center and you use all the great UC features that Switchvox delivers.

Switchvox (with all the bells and whistles you can imagine) typically starts around $4,000 or less. And with Switchvox Cloud, the cost to get started is even lower. With a low per-month cost, you can take advantage of an operating expense cost model for your phone system as opposed to a capital expenses model.

If you're still tempted to use Asterisk, that's fine but first do this: Divide $1600 by what you think an hour of your time is worth. Let's use $50 per hour as an example. $1,600 / $50 = 32 hours. If you can learn enough Asterisk to build your own solution in 32 hours or less, go for it.

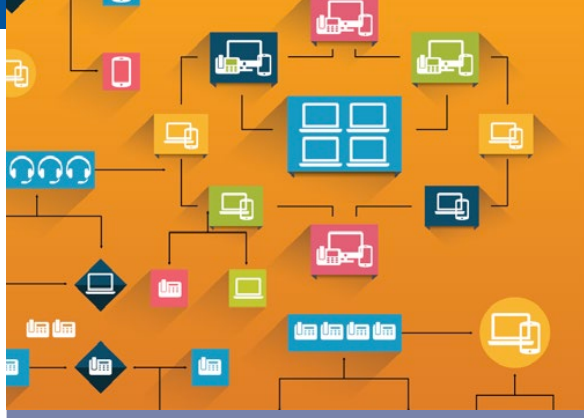
If not, take a good look at Switchvox.



Asterisk is a powerful, flexible engine with enormous potential.

The Case For Asterisk

Let's go back to the engine/vehicle metaphor. Asterisk is an engine. It's powerful. It's flexible. It has enormous potential. What it requires is a skilled engineer (or even a skilled shade-tree mechanic) who can take the engine and build it into a vehicle. If you are creating a product or a custom solution that requires integrated voice communications, Asterisk is exactly what you need.



If you are creating a product or a custom solution that requires integrated voice communications, Asterisk is exactly what you need.

Let's look at a product scenario first. If you want to build a conferencing server that connects to both VoIP and PSTN networks, Asterisk is a great starting point. Asterisk has the features that make multi-party conferencing really, really easy. It also includes native support for every major VoIP and PSTN protocol in use today. To build a conferencing server out of Asterisk you need to pick out your platform hardware (computer), create an administration interface (probably a web application running on Apache) and possibly an end-user interface. You'll probably want to integrate with calendaring systems like Exchange, iCal, Google Calendar, etc. You probably want to tie in email and possibly IM notifications and reminders. Given a skilled development team you likely have a working product in a few months.

Compare that with building from scratch and you can see the power of Asterisk. You didn't have to write (or license) a SIP stack. You didn't have to write your own DTMF detection algorithm. In fact, the actual "tele-

If you're in need of a great phone system at a great price, check out Switchvox.

phony programming" probably came down to a few dozen lines of Dialplan script and a bit of SQL to query the database. You shaved years off your development and testing path, added value through your snappy web interface and built it all on a free engine.

Asterisk fits very comfortably into the toolboxes of telephony integrators and data VARs. If you've ever done custom integration work you know how difficult it can be to make systems from different vendors (or different generations) play nicely. In enterprise scenarios where modern data applications share space in the server room with legacy switching gear, Asterisk can be indispensable. It acts as a kind of "telephony glue" that ties VoIP to TDM and digital to analog. It also bolts onto legacy systems as a perfect low-cost adjunct. Your customer has an Octel voice messaging system that's on its last legs? No problem. Replace it with an Asterisk-based system. Your biggest client needs a dialer that can call an entire city in an hour? Sure. Asterisk can do that.

If you're already familiar with networks, telephony and scripting, the Asterisk learning curve is fairly easy to overcome. drastically easier than building your own voice engine from scratch using a raw C language API from some proprietary vendor.

Asterisk is also a terrific way to learn about telephony and communications. Students, hobbyists and artists have used Asterisk to build some extraordinarily creative applications while at the same time learning about telecommunications. Some of the most successful developers in the Asterisk ecosystem started out experimenting with the code while in college or even high school.

Asterisk has enormous potential.

Read *Asterisk: The Future of Telephony* by Smith, Madsen and Van Meggelen. Take a look at the samples and recipes on **asterisk.org**. Take the Asterisk Fast-Start or Asterisk Advanced class for a bit of hands-on training. You'll find that building solid solutions with Asterisk is

Conclusion

If you're technically inclined and want to build a communication product or solution, then Asterisk is for you. If you're in need of a great phone system at a great price, check out Switchvox.

digium®
The Asterisk Company

Digium®. Empowering communication.

Digium is the creator, primary developer and sponsor of the Asterisk project; the world's most widely used open source communications software. Asterisk turns an ordinary computer into a feature-rich communications server. A community of more than 80,000 developers and users worldwide uses Asterisk to create VoIP communication solutions in more than 170 countries. Since 1999, Digium has empowered developers to create innovative communications solutions based on open standards and open source software, providing an alternative to proprietary phone systems.

Learn more at digium.com/switchvox

Want more information on Switchvox?
Take a virtual tour of this powerful Unified Communications platform:
www.digium.com/switchvox

Contact us – we're here to help.
Talk with a Switchvox specialist:
1 877 344 4861
1 256 428 6271