Star2Star® COMMUNICATIONS

SIP Trunking VS. A Complete UC Solution:
What You Need To Know

Introduction

The ongoing explosion of technological advancement has provided businesses with more communications options than ever before. The sheer number of choices makes it possible for every company to find a solution that best suits their specific needs. Star2Star Communications provides two of the most revolutionary communications solutions available on the market: the StarSystem and StarSIP AlwaysUp.

The StarSystem is a complete, end-to-end communications solution that combines best-in-class hardware with a suite of high-reliability cloud-based services, including voice, messaging, video, and fax. Intended to transform the way businesses of all sizes communicate, the StarSystem uses a unique Blended Architecture that includes both on-premise equipment and cloud-based components. The StarSystem allows users to slash their communications costs and add advanced unified communications (UC) features without sacrificing reliability or quality.

StarSIP AlwaysUp is a SIP trunking solution designed to bring the advanced UC services and mobility of the StarSystem to customers who do not intend to replace their existing private branch exchange (PBX). StarSIP AlwaysUp connects an office phone system to the Constellation Network, allowing businesses with a traditional PBX to harness the power of the cloud. StarSIP AlwaysUp replaces public-switched telephone network (PSTN) lines or other SIP trunks with ultra-reliable virtual lines from Star2Star. StarSIP AlwaysUp can also provide primary rate interface, or PRI, lines instead of, or in addition to, SIP.

While the StarSystem and StarSIP AlwaysUp offer many of the same features and benefits, there are some key differences between the two. This paper will delve into those differences with the intention of helping businesses decide whether the StarSystem or StarSIP AlwaysUp is the right choice for them.

System Architecture Overview

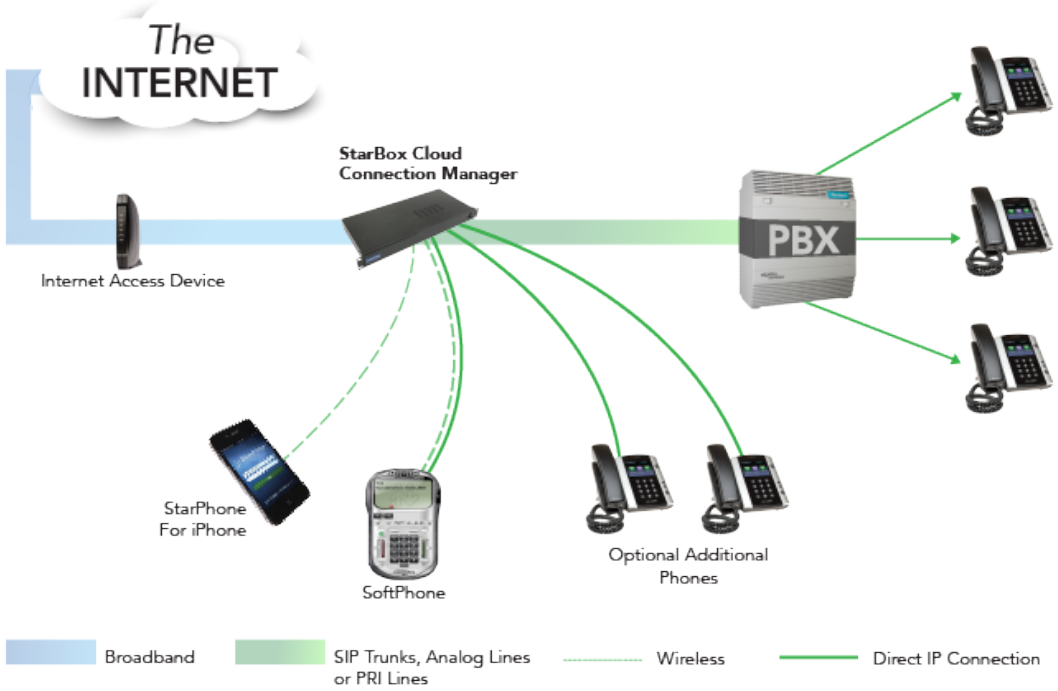
In a traditional PBX system, PSTN lines enter the building and connect to the PBX, which then routes incoming calls to their desired extension. StarSIP AlwaysUp replaces these copper-wire connections with virtual call pathways. Bandwidth carrying the StarSIP AlwaysUp virtual call pathways enters the building and connects to the StarBox Cloud Connection Manager. The StarBox Cloud Connection Manager then connects the virtual call pathways to the PBX through the use of Session Initiation Protocol, or SIP. The PBX connects to the office's phones and routes calls to their desired destination. There is no direct interaction between the phones and the StarBox Cloud Connection Manager in a StarSIP AlwaysUp system. Services like StarVideo and StarChat are provided directly from the cloud.

The StarSystem functions somewhat differently. Bandwidth carrying virtual call pathways enters the building and connects to the StarBox Cloud Connection Manager. The StarBox Cloud Connection Manager then routes the calls to their desired extension using Internet bandwidth. The StarBox Cloud Connection Manager interacts directly with phones in the StarSystem. As is the case with a StarSIP AlwaysUp system, UC services are provided directly from the cloud.

Star2Star designed both the StarSystem and StarSIP AlwaysUp with a unique Blended Architecture. Blended Architecture combines on-premise components with cloud-based services to overcome the reliability concerns that plague many VoIP providers, while still drastically reducing cost and expanding communications options. Blended Architecture grants users access to all of the benefits of moving to the cloud without making them suffer the potential drawbacks.

Copyright 2014, Star2Star Communications, LLC

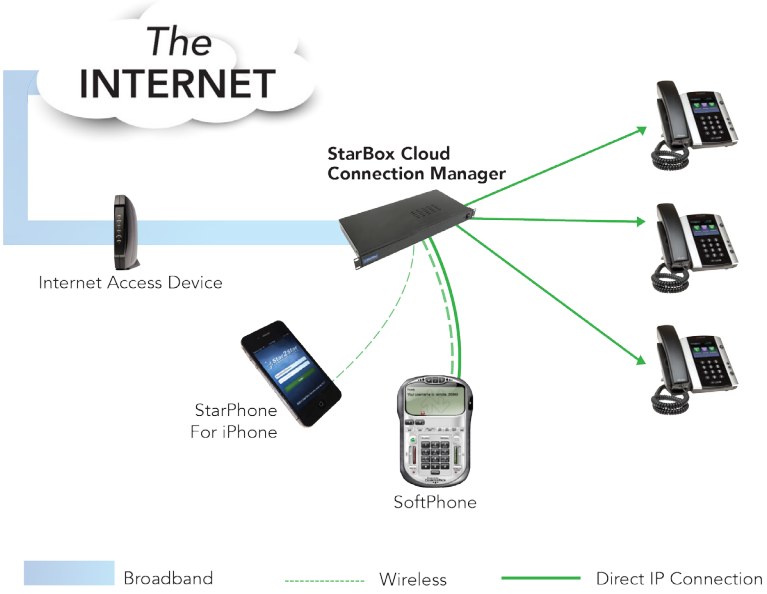
Star2Star COMMUNICATIONS | StarSIP AlwaysUp



StarSIP AlwaysUp brings SIP trunks, Analog lines, PRI lines, and POTS lines to a traditional PBX system.

Star2Star COMMUNICATIONS | StarSystem

The StarSystem does not need a traditional PBX.



Copyright 2014, Star2Star Communications, LLC

The Intended Customer

The StarSystem was designed to meet the communications needs of businesses of all sizes and industries. The most Scalable Cloud Communications solution available on the market today, the StarSystem is equally well suited for businesses with 5 employees or 5,000. Many StarSystem users made the switch directly from PSTN service, but a growing number are changing from a failed voice over Internet protocol, or VoIP, installation. The StarSystem is an ideal fit for any business looking to reduce their communications costs, improve their communications quality, or simply make the switch to UC.

StarSIP AlwaysUp is tailored for companies that want to take advantage of the many benefits of the StarSystem but are unwilling or unable to replace their existing PBX for financial or familiarity reasons. StarSIP AlwaysUp can also serve as a gateway into the world of UC and VoIP for businesses that want to experiment with the technology but aren't yet willing to fully commit.

Reliability

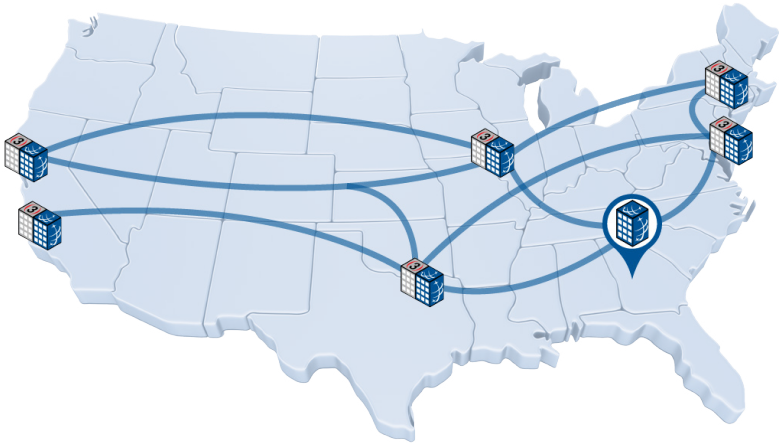
Both StarSIP AlwaysUp and the StarSystem are ultra-reliable Scalable Cloud Communications Solutions that businesses can depend on. Star2Star has seen years of continuous uptime and always guarantees 99.999% uptime reliability on both systems. StarWatch continually monitors every Star2Star solution, whether a StarSystem or StarSIP AlwaysUp, and proactively alerts users and partners if a problem develops.

StarMaintenance covers every Star2Star solution and includes free next-day parts replacement on all Star2Star components. In the case of a StarSystem, this typically includes all phones (unless the customer retained their existing phones), as well as all StarBox Cloud Connection Managers and switches. In the case of StarSIP AlwaysUp, neither the user's PBX nor any pre-existing phones are covered because Star2Star did not provide them, but Star2Star will ensure that they are still able to get calls.

Spotlight on:

The Constellation Network And StarPath

The Constellation Network is the primary cloud-based component of both the StarSystem and StarSIP AlwaysUp. Two primary data centers and six additional points of presence located at major Internet hubs compose the backbone of the Constellation Network, which connects to every single StarBox Cloud Connection Manager. Most of Star2Star's cloud-based services operate in the Constellation Network, including auto attendants, StarConferencing, remote extensions, voicemail, StarCenter, StarVideo, StarScope 2, and StarChat.



User StarBox Cloud Connection Managers and the Constellation Network work in concert to ensure reliability and quality. One of the most important ways is through StarPath. The Constellation constantly monitors Internet traffic throughout the United States and produces a priority list of Internet pathways based primarily on latency. This list is updated every thirty minutes to keep up with rapidly changing conditions. Each StarBox Cloud Connection Manager will route outgoing calls along the highest priority pathway, unless it is non-functional for any reason. In that circumstance, the call will be routed along the second highest priority path, and so on. By routing along the path with the least latency, StarPath makes sure all calls arrive with the highest quality.

Copyright 2014, Star2Star Communications, LLC

Disaster Recovery

Star2Star provides an extensive suite of disaster recovery protections known collectively as StarRecovery. These protections were created to ensure that a business never loses the ability to communicate with customers and suppliers, even if their offices are no longer accessible. Users can access voicemail from email anywhere. Star2Star will even automatically route calls to other offices and/or employee cell phone numbers.

For the most part, StarRecovery functions identically on the StarSystem and StarSIP AlwaysUp. The primary difference is the available call routing options. Users that have a direct inward dial, or DID, assigned to them will be able to fully access automatic call routing. Users who have a PBX extension without a DID will not.

Unified Communications Functionality

Perhaps the biggest benefit of Star2Star is the company's ability to provide a full suite of advanced unified communications (UC) features. Some of these features function identically on both StarSIP AlwaysUp and the StarSystem, but not all. StarSIP AlwaysUp typically provides a narrower range of features than the StarSystem, but what features are available depend on whether or not the user has a DID or not and what service options the user has chosen.

Star2Star gives users numerous communications options in addition to voice. StarVideo allows up to 12 users to participate in a videoconference and share documents. StarChat provides quick and easy instant messaging. StarFax Personal enables users to send and receive faxes using a computer. StarFax Classic makes it possible to connect a traditional fax machine to a Star2Star Solution.

Star2Star also provides UC services that improve business operations and customer relations. Cloud-based auto attendants can be used to answer calls and route them to the desired destination. StarCenter transforms an inbound call center with dozens of advanced features for call center agents and managers alike. StarContact is CRM integration that reduces call time and customer frustration.

Mobility is increasingly important to modern business, and Star2Star makes it easier to work remotely and manage remote workers than ever before. The Star2Star SoftPhone turns a computer in a fully functioning Star2Star extension. StarPhone for iPhone turns a cell phone into a softphone with full-presence management. Both the Star2Star SoftPhone and the StarPhone for iPhone can operate using any sufficient bandwidth, including public Wi-Fi hotpots, letting users conserve valuable cell phone minutes

Phones

A desk telephone is the most important and commonly used communications tool for many employees. It is therefore unsurprising that phone selection is an extremely important factor when deciding between communications systems.

A wide variety of Cisco, Polycom, and Yealink phones are available for use with the StarSystem. All of these phones function seamlessly with the many advanced features of the StarSystem. Although different phones have different capabilities, many enable such important features as Call Park, call recording to flash drives, and an internal company directory. All of these features work with the StarSystem.

Most StarSIP AlwaysUp users already have IP phones installed with their PBX. These phones will continue to function once StarSIP AlwaysUp is installed, but they may lack the advanced capabilities of the phones provided by Star2Star. If the user wishes, Star2Star can upgrade their phones, as all phones available for the StarSystem also function with StarSIP AlwaysUp. These phones should have full functionality as they maintain a connection to the StarBox Cloud Connection Manager in addition to the PBX.

Find Me/Follow Me

One of the features that functions differently on the StarSystem and StarSIP AlwaysUp is Find Me/Follow Me call routing. On the StarSystem, users have the option of setting up Find Me/Follow Me to automatically route calls from their office phone to their cell phone. Users can set the number of times the office phone will ring before a call is routed to their

Copyright 2014, Star2Star Communications, LLC

cell phone, or even set them to ring at the exact same time. Find Me/Follow Me is a valuable tool for mobile workers, who never have to miss a call when using it.

Find Me/Follow Me may or may not work the same way for users of StarSIP AlwaysUp, depending on the way their system is configured. Users who have a DID assigned to them are able to use Find Me/Follow Me in the same manner as users of a StarSystem. Users who use a PBX extension that is not a DID are unable to use Find Me/Follow Me. This is because Star2Star has no direct contact with, or influence over, a PBX extension, and therefore cannot reach it with Find Me/Follow Me.

StarScope 2 Presence Monitoring

StarScope 2 is an advanced presence monitoring and communications management tool. It is a part of the framework from which most other Star2Star features and services are accessed. StarScope 2 includes the activities application that provides users with access to their communications history, including recorded calls, faxes, and old text messages.

On the StarSystem, users and managers alike can view the status of other users to see whether they are connected or not and what communications tool they are using if they are connected. This makes it easy for an entire company to stay connected with in-office and remote workers.

As is the case with Find Me/Follow Me call routing, StarScope 2's operation is impacted by the configuration of a StarSIP AlwaysUp system. StarScope 2 can locate and display the status of StarSIP AlwaysUp users who have a StarSystem extension. However, StarScope 2 cannot do the same for users who only have a PBX extension, due to the lack of direct contact between StarSIP AlwaysUp and the PBX extensions.

Transitioning From StarSIP AlwaysUp To The StarSystem

Luckily, companies debating between StarSIP AlwaysUp and the StarSystem do not have to make a final choice immediately. Businesses that are unsure of jumping fully into Scalable Cloud Communications, or that just don't believe the move is financially feasible in the immediate future, can start with StarSIP AlwaysUp and then make the transition to a StarSystem later.

Transitioning from StarSIP AlwaysUp could not be easier. All that a StarSIP AlwaysUp user needs to do is to contact Star2Star and let the company know how many and what type of phones they need. Star2Star will then send the phones and any necessary switches and complete the change.

The ease of the transition makes StarSIP AlwaysUp an excellent insurance policy for traditional PBX users. PBXs are complicated equipment that frequently fail as they age. As more and more users are abandoning traditional PBXs, fewer parts are being manufactured and fewer technicians continue to service them. As a result, the cost of traditional PBX repair and maintenance is skyrocketing. Traditional PBX users also must be aware that it is widely believed that many providers are planning on abandoning the PSTN, which will leave many areas without PSTN service altogether and drive up the cost where PSTN service is still available. StarSIP AlwaysUp users can avoid these issues by painlessly switching over to a StarSystem if the need arises they are faced with costly PBX repairs or changes to PSTN service.

Conclusion

StarSIP AlwaysUp and the StarSystem are both ultra-reliable communications solutions that revolutionize business operations through near limitless scalability, the power of

Spotlight on:

Spotlight On The End Of The PSTN

Although the PSTN served its purpose for many decades, it is incredibly expensive to maintain. Millions of miles of copper wire require untold thousands of man-hours every year to stay operational. The increasing desirability of VoIP and UC communications have also lured away millions of PSTN customers to solutions that are considerably less expensive for the companies that provide them. The combination of higher operating costs and a declining customer base make continuing PSTN increasingly less feasible for many companies.

Even AT&T, who built most of the PSTN and dominated the industry for years, is willing to throw in the towel. AT&T recently petitioned the FCC to allow the complete abandonment of the PSTN in some areas and its replacement with VoIP services. It is now generally accepted in the industry that the complete phase out of the PSTN is just around the corner, although no timetable has been set. Although the transition to VoIP and UC promises massive long-term cost savings and significant improvements in how America communicates, it will likely prove painful in the short term for businesses that are unprepared to make the switch.

Copyright 2014, Star2Star Communications, LLC

the cloud, and advanced UC functionality. Both options improve the communications of businesses that use them while dramatically reducing cost. Both are excellent choices if matched to the right company.

StarSIP AlwaysUp and the StarSystem are both ideally suited to companies that:

- Want to improve the quality and reliability of their communications
- Are looking for a way to slash their communications costs
- Desire UC functionality such as video, messaging, and fax

StarSIP AlwaysUp is ideal for companies that:

- Already have a traditional PBX
- Do not want to replace their traditional PBX due to familiarity
- Cannot replace their traditional PBX due to financial considerations
- Want to protect themselves from the possibility of a failed PBX or changes to PSTN service
- Are, or may be considering, switching to a StarSystem sometime in the future

The StarSystem is ideal for companies that:

- Do not have a traditional PBX
- Have a failed traditional PBX they are looking to replace
- Want to transition fully into the world of Scalable Cloud Communications

If you would like to learn more about what StarSIP AlwaysUp and/or the StarSystem can do for your business including which option is the right choice for you, please visit www.star2star.com.

About Star2Star

About Star2Star: Founded in 2006 in Sarasota, Florida, Star2Star Communications delivers the World's Most Complete and Scalable Cloud Communications Solution. Star2Star unifies customers' voice, video, fax, instant messaging and presence management into a single, easy-to-use system. Star2Star's award-winning, patent-pending Constellation™ technology overcomes the reliability and quality limitations of other communications technologies.

In the past three years, Star2Star was named to the Forbes Most Promising Companies list, the Deloitte Technology Fast 500 twice, and the Inc. 500|5000 three times. Star2Star also recently received Inc. Magazine's Hire Power Award honoring the top private business job creators in the country.

Star2Star Communications solutions are sold through a diversified network of partners that include distributors, master agents, managed service providers and certified installing resellers. Available across North America, Star2Star systems are installed in hundreds of thousands of businesses, including large national chains with multi-location communications footprints.

Star2Star® COMMUNICATIONS
600 Tallevast Rd. Sarasota, Florida 34243
941-234-0001 | www.star2star.com

Rev. 1.0 • Copyright 2014, Star2Star Communications, LLC. • Star2Star is a registered trademark, and StarBox, StarGuard, StarVideo, StarContact, Blended Architecture, and Constellation are trademarks of Star2Star Communications, LLC