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WHITE PAPER

Convergence and the Contact Center

Going Beyond Infrastructure Advantages to Business Benefits

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EXECUTIVE SUMMARY

As voice and data converge on the IP network, companies will go from two networks—one for data traffic and one designed exclusively for voice—to a single, ubiquitous network. The copper-based voice network, where locations were silos and every device type was addressed differently, will give way to the IP network, where voice and data travel together over the same connections, and every device is IP address-based.

Convergence will yield significant advantages for companies that maintain and operate large, mission-critical contact centers. The most obvious and the most frequently cited benefit is the cost savings that will result from the simplification of the IT infrastructure.

But convergence means more than simpler infrastructure. Much more. Contact center applications—the applications that route, queue, switch, and blend the various kinds of traffic moving over all of the IP-based contact channels—will be the brains of the converged network. These are the applications that will enable business managers to apply the power of the converged network to business goals. Convergence, in turn, will make these applications even more capable of supporting business strategies, and the contact center will be dramatically changed.

Aspect is fully aware of the benefits the converged network offers. But we haven't forgotten that our current customers, many of whom have run their businesses on Aspect® solutions for years, have a significant investment in their existing applications. So we've developed a product road map that allows both Aspect and its customers to migrate smoothly to solutions that exploit the full potential of the converged network.

Convergence and the Contact Center

Going Beyond Infrastructure Advantages to Business Benefits

Convergence and the IT infrastructure

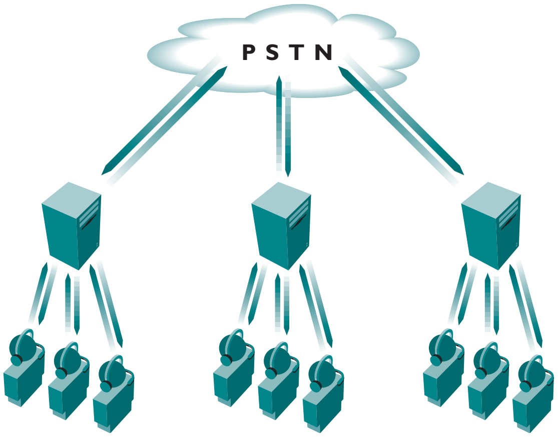
At one level, convergence has to do strictly with the IT infrastructure. Convergence in the most literal sense means the consolidation of voice and data traffic onto managed IP networks. Currently, voice and data travel over two distinct networks: the analog voice network and the digital Internet Protocol network.

The copper-based analog voice network

For the most part, voice traffic today travels on networks maintained by companies like AT&T and Deutsche Telekom. These networks depend on copper wires strung from one point to another, with devices like telephones, PBXs, and ACDs at either end.

This point-to-point voice network has several limitations.

- Only telephony devices will connect to it.
- Concurrency, or the number of things that can be done at once over the network, is determined by the number of trunks, making expansion costly.
- There's no common numbering scheme for the network, making addressing complex.
- Businesses that operate in more than one region need not one, but several of these networks—a telephone system in San Francisco and another in Atlanta and another in Washington, D.C., for example.

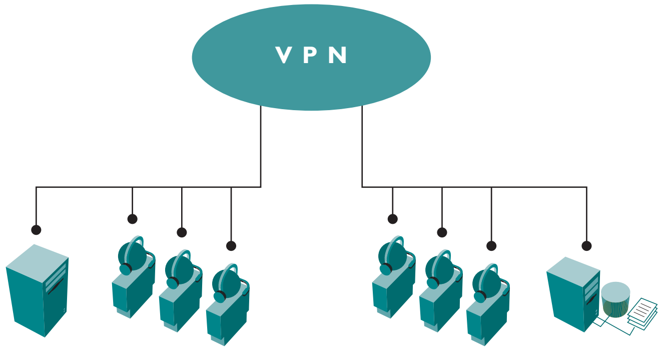


On the copper-based network, locations are silos, and resources have little mobility.

The digital IP network

The IP-based data network has overcome the limitations of the point-to-point copper network.

- More devices connect to it—PCs, laptops, PDAs, IP telephones, and, with computer-telephony integration (CTI), PBXs or ACDs.
- Concurrency is much more easily achieved, because it's determined by bandwidth, or the amount of data the network can carry, rather than the number of physical wires.
- It has a consistent numbering scheme—IP addresses—so there's never any question about how one device addresses another.
- As a single, ubiquitous network, the IP network can serve an entire multi-regional corporation.



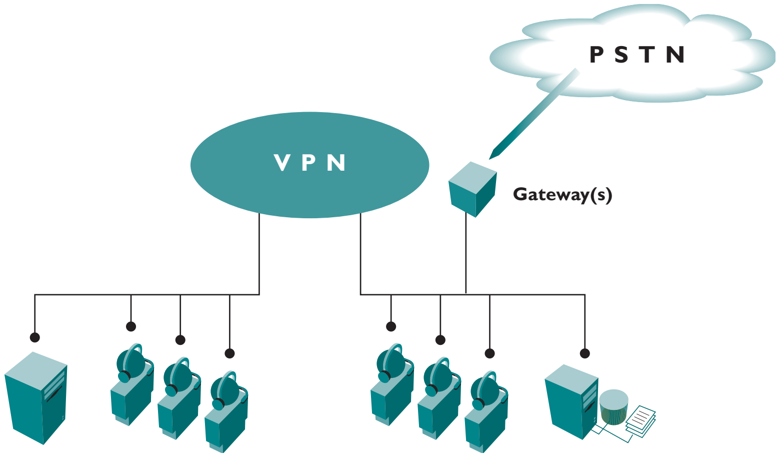
On an IP-based virtual private network (VPN), locations are all part of one network, and resources can move easily from one location to another.

Because the IP network is more flexible, it will inevitably replace the point-to-point network. In the converged world, telephone calls and e-mail and data from Web sites will all come in over this single connection. All devices will be connected to the same network, and things will be very mobile on that network, because users can unplug devices in one location, plug them in somewhere else, and continue their work.

First, a hybrid network

As compelling as these advantages are, convergence won't happen all at once. Corporations and contact centers will go to IP first, but the rest of the world, the public world, is going to be copper-based for some time. But in order to gain the advantages of convergence now, corporations are already using IP gateways to turn voice into data before it arrives at their ACDs.

Callers using copper-based telephones neither know nor care that their voice is being digitized and is traveling on IP networks inside the company. And soon, ACDs will give way to software-based call-routing systems with gateway software built in. Companies will be able to roll a contact center solution in the door, clip the trunks in, and from that point on, route everything over IP, with no traditional trunk cabinets or switching cards.



Using IP gateways, companies can gain the advantages of the IP network even though their customers still use the PSTN network.

Managing voice quality on the IP network

The quality of the voice traffic that will travel over the converged network is an important issue that companies will solve by giving voice traffic priority over other data traffic. While prioritization is not possible on the Internet, outside the company IP gateway, the virtual private networks managed by companies are managed networks where priority can be effectively controlled.

Capacity versus horsepower

The convergence of voice and data on the IP network is also going to radically change the way businesses think about scalability. To increase capacity in the copper-based world, companies had to install more trunks. In the IP world, they'll add capacity by increasing processing power and memory. And since processing power and memory double about every 18 months, with prices staying the same, it is going to become much more cost-effective to expand systems.

Convergence and business goals

The convergence of voice and data onto the IP network promises to greatly simplify infrastructure management and reduce costs for businesses. And the IP gateways that convert voice to data so that it can travel over managed IP networks will be significant enabling components in the converged network.

They won't, however, be the most important components. The brains of the converged network—the components that will take the advantages beyond cost savings to improved customer satisfaction and increased revenue—will be the applications that route, queue, switch, and blend the various kinds of traffic moving over all of the IP-based contact channels.

Managers and executives who must plan for the transition from traditional PSTN-based contact centers to IP contact centers that take advantage of the converged infrastructure need to know that the critical technology decisions won't center around networking devices such as gateways and routers, which will quickly become industry-standard commodities.

The critical decisions will involve contact center platforms and applications, and the important technology partners for companies seeking competitive advantage in the converged world will be contact center vendors with the vision and experience to combine the business advantages of traditional contact center applications with the technology advantages of the converged network.

But this combination of infrastructure and applications won't be a simple matter of doing the same things that PSTN contact centers did over a different network. The converged network will be a vastly improved network, and contact center applications—if they're engineered to take advantage of it—will be much more capable than ever before. Contact center applications will link the converged network directly to business goals, and convergence will, in turn, profoundly change the way contact centers function.

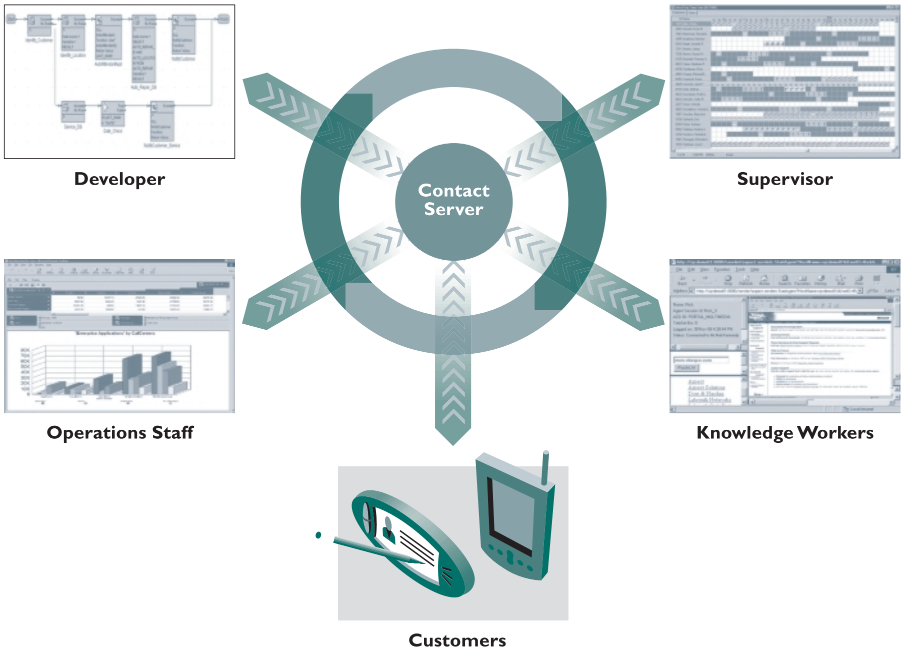
Dramatically transforming the contact center

In a time when competition is global and customers are increasingly demanding, the contact center has come to play a critical part in business strategy, playing a key role in promoting customer loyalty and increasing revenue. And as it has increased in importance, it has also increased in complexity. Many corporate contact centers today consist of multiple networked sites, where agents with a range of skills field customer contacts coming in over multiple contact channels.

Like a natural ecosystem, these complex contact centers are made up of intricately interrelated groups.

- Developers create and deploy the applications that make the contact center support business goals.
- The operations staff makes sure the system is running reliably.
- Supervisors manage the workforce.
- Customer service representatives and other knowledge workers field customer contacts and solve customer problems.
- The customers themselves use the contact center’s services, contribute information by interacting with contact center staff and resources, and provide the ultimate measure of its effectiveness by granting or withholding their loyalty.

Each of these groups sees the contact center from a different point of view and interacts with contact center systems in a different way. And convergence is going to dramatically change the way they view and interact with the contact center.



Convergence will dramatically change the way everyone views and interacts with the contact center.

For developers, a converged view of applications

To developers in the pre-convergence world, the contact center ecosystem is really quite complex. They have to deal with two networks, one copper-based and one IP-based. They have different systems, such as the IVR, the ACD, the e-mail response management system, and the company's Web servers. They have different applications running over different communication channels, and all this diversity means they have to know multiple programming languages, work with multiple user interfaces, and deal with multiple protocols.

In the converged world, developers will lead a simpler life. One development toolkit. One user interface. One central, converged view of applications, no matter what device the applications run on or what contact channel they involve. And with developers thinking about the entire solution rather than separate applications, it becomes possible for them to test and debug the solution end to end.

They're going to be much more effective too. They're going to develop applications and get them in production more quickly, and they're going to start thinking in terms of the caller's overall experience with the company, not about the ACD and the IVR. They'll be able to focus development on making that experience satisfying for the customer and on meeting the goals of the business.

For operations staff, a single administrative interface

The operations staff, charged with keeping mission-critical systems running around the clock, will find it much easier to monitor and administer resources. They'll have a single administrative interface and a single set of system logs and alerts. They'll be able to configure the system automatically and dynamically, bringing new systems online more quickly and easily. And operations managers won't have to educate staff on multiple systems or duplicate information and roll it out on one system after another.

For supervisors, end-to-end reporting and easily developed business rules

Supervisors, who are concerned primarily with staff and contact center performance, will have all systems and agent groups together in one network, rather than having e-mail and ACD and IVR in silos. This will make it possible to generate end-to-end reports that cover every step in a transaction and every transaction in a single customer relationship.

Supervisors will also be able to relieve developers of some of their tasks, as graphical development environments enable them to use drag-and-drop operations to create and modify business rules—rules that in the converged world can include any function and any contact channel. Supervisors will also be able to extend the quality monitoring they do today with voice traffic to communications like e-mail and Web chat.

For knowledge workers, mobility and a unified desktop

In the converged world, businesses will no longer be limited to routing incoming contacts to a group of agents in a room where copper wires terminate. With universal addressing and complete freedom of mobility, everyone in the company has the potential to be a service representative. Contact centers will still be staffed with sales or service or support specialists, but contacts can be routed to knowledge workers outside the contact center as well, when the situation calls for it. If the customer is important enough or the issue urgent enough, the contact can be routed to a senior engineer, a vice president, or the chief technology officer—and because of the mobility the converged network offers, the contact will get through, even if these high-level knowledge workers move from place to place on the network.

Traditional CSRs will have the same mobility, and supervisors will be able to move them from one building to another, or they'll be able to work at home. Their value to the company will be measured by skills and profiles, because in the converged world, it's going to be much easier to route contacts based on skills rather than location.

Like developers, knowledge workers will see a convergence of applications rather than a convergence of networks. CSRs will have a single user interface for all the applications they handle—e-mail, VoIP, and Web collaboration and chat. They'll be able to sit at the same desktop and adjust their schedules too, because workforce management applications will run on the same converged network.

For customers, a much better experience

Last but not least, there are the customers. They're not interested in the underlying technology or the fact that applications are running on a converged network. What customers want is a great experience in dealing with your company, and they don't really care how you make it possible. The converged network, the converged platform, and converged applications are going to make the customer experience much better.

How? Customers are going to be connected to the best resource much more quickly. They're going to be able to move from self-service to live service smoothly. Behind the scenes, the system may be transferring the contact across that ubiquitous IP network to a resource on another continent, but the customer isn't going to know it. All the customer needs to know is that the service is satisfactory and the experience of dealing with the company is positive.

The Aspect Uniphi Suite—bringing world-class applications to the converged world

Aspect recognizes the immense potential that the converged network has for transforming the contact center and the importance of refined, proven contact center applications to the converged network. With Aspect® Uniphi Connect, we've given businesses a way to gain the advantages of remote agents without the PSTN costs by connecting agents to the main contact center via IP networks. And in our Uniphi Suite, we've brought the functionality of our refined, proven PSTN solutions forward to the converged world, preserving Aspect strengths while giving our customers all the advantages of the converged infrastructure.

Whether your business is ready to adopt a total VoIP solution now or needs to take a more incremental approach to convergence, Aspect can help you plan for the future and start to make it happen. We offer consulting services that can help your business assess your current and future needs and develop a plan for a cost-effective migration to a converged network. And we offer a complete contact center solution ideally architected for a seamless migration to a pure-IP contact center.

ASPECT

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