A SMARTER IT INFRASTRUCTURE
FOR MANUFACTURING

Solutions for Manufacturing

ZeroOutages

The manufacturing sector is broad and contains many different types of companies; however the organizations within this sector all have common information technology and communications requirements. As the need for Internet based communications grow so does the need to ensure real-time and responsive connectivity for facilities within this sector. The ZXG platform is designed to provide fast and reliable connectivity to the Internet.

The ZXG platforms are designed as a long-term investment in a companies information infrastructure. As such, these appliances have a long life span (with a MTBF of over nine years) and build-in high availability features which ensure 24/7 uptime, even in the event of a significant power or hardware failure.

With its modular design, the ZXG platform can easily be upgraded as future needs dictate new innovations in the functionality of the platform.
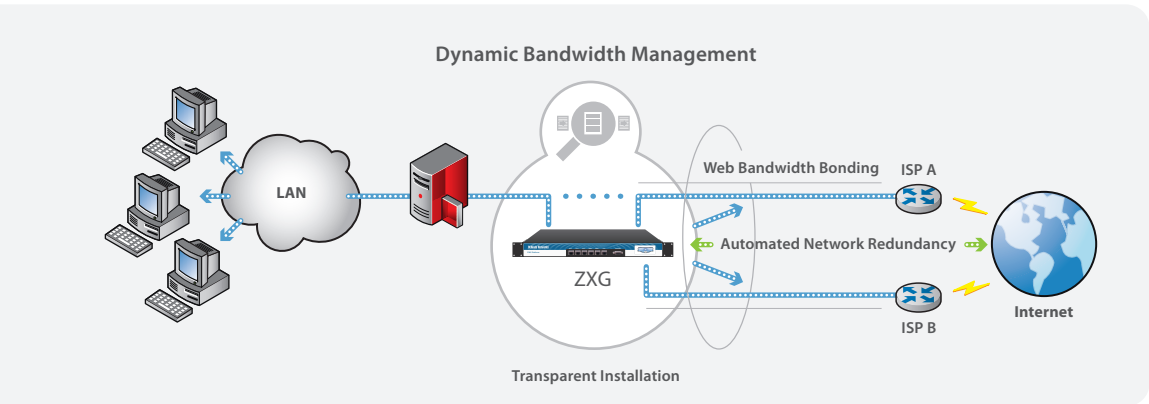
ZeroOutages' offers firmware upgrades, advanced hardware replacement and extended warranty service to maximize your return on investment.

DELIVERING FAST AND RELIABLE ACCESS TO OPERATIONS DATA

The typical manufacturing facility today requires fast Internet access for downloading and uploading constant streams of mission critical application data, from online robotics system monitoring to making sure inventory information is up to date in order to enable inventory on demand. Many manufacturing organizations also require access to online servers and the ability to balance server traffic across multiple resources.

The manufacturing industry has several typical requirements for data connectivity including:

• **INTERNET BONDING & REDUNDANCY**: The ZXG appliance ensures application delivery through multi-path network routing and real-time usage monitoring to improve throughput and provide automated ISP redundancy. In the event of a network outage, the ZXG appliance automatically re-routes traffic in real time to provide 99.999% uptime.

• **SERVER LOAD BALANCING**: Many of our manufacturer customers have various data server requirements, from providing real-time plant operations data to end-users around the country and around the world. The ZXG platform is able to ensure distributed application delivery using its server load balancing capabilities and ActiveDNS technology. No other solution has the ZXG unique abilities with regards to both link and server load balancing for improved application delivery.

• **DYNAMIC BANDWIDTH MANAGEMENT**: As the access to real-time communications has become critical for manufacturers the ZXG appliance has developed a solution which prioritizes applications and ensures that critical services take precedence over email, and web access, for example.

• **VPN VIRTUALIZATION**: One of the core capabilities of the ZXG appliance is its ability to provide improved connectivity between remote sites along with automated failover redundancy in the event of a network outage. The ZXG solutions work extremely well in conjunction with WAN Optimization appliances like Riverbed and SilverPeak.

Dynamic Bandwidth Management

LAN

Web Bandwidth Bonding

ISP A

Automated Network Redundancy

ZXG

Internet

ISP B

Transparent Installation

The common theme for each of these end-users is the requirement of quick and available network connectivity, specifically to the Internet and cloud-based services. Internet access has become a core requirement for everyone which requires an infrastructure which is capable of providing fast and reliable connectivity.

This diagram demonstrates the typical installation and placement of the ZXG platform within a multitenant networks. Installation is seamless and transparent and compatible with existing network infrastructure.
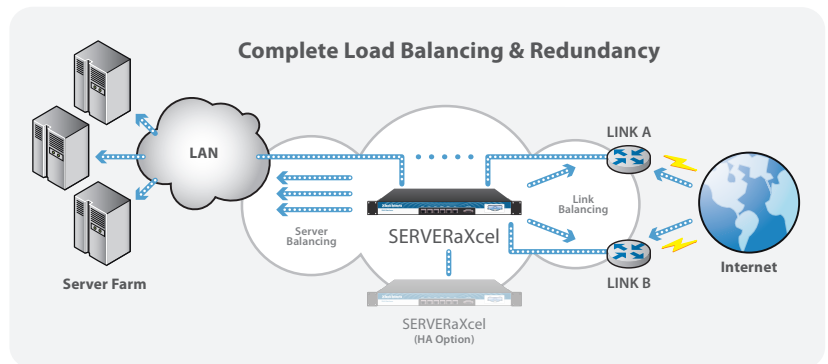
ACCELERATING INTERNET CONNECTIVITY

The ZXG platform is unique in its ability to bond and accelerate multiple Internet connections. This capability provides our manufacturing customers with the ability to combine two or more inexpensive broadband Internet connections to provide faster, more reliable, Internet connectivity to their customers. The ZXG platform is also scalable, so as the needs of a particular facility increase, simply connect additional broadband connections.

The bonding and acceleration capability is unique in that you can take a 3Mbps DSL connection and combine it with a 5Mbps cable connection in order to obtain 8Mbps download through for your end-users. No other solution on the market has the ability to combine broadband links in this manner.

ENSURING 24/7 ACCESS TO CRITICAL SERVER RESOURCES

The ZXG platform enables manufacturing companies to achieve full Internet redundancy through the use of two or more Internet connections. If one connection fails, the ZXG platform will automatically re-route all traffic across the remaining active connections. Once the failed connection becomes available traffic will automatically be added back in to the available paths for routing traffic.

Server Load Balancing: The ZXG also incorporates mission critical server balancing functionality which improves access to appliances which are spread across multiple resources. With the ability to balance traffic across multiple servers and multiple networks via its ActiveDNS technology, the ZXG platform is unique in the industry.
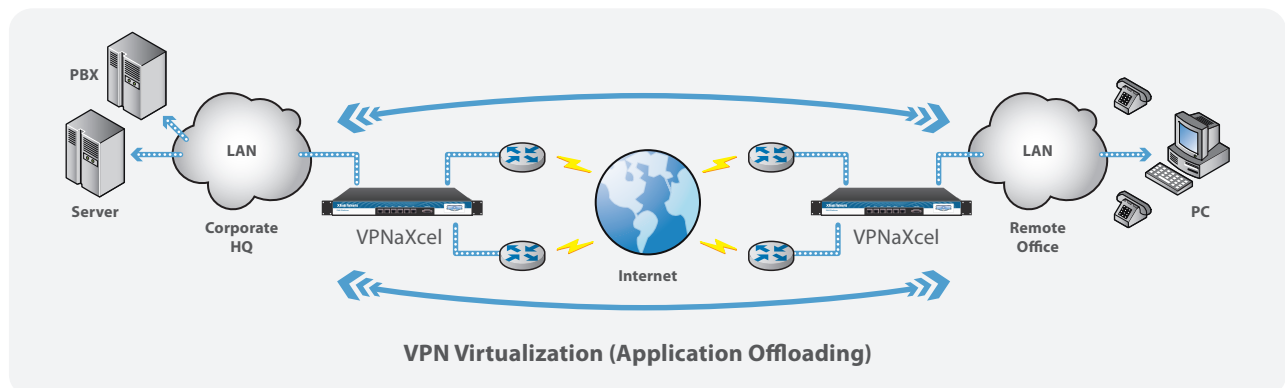

Complete Load Balancing & Redundancy

IMPROVE REMOTE OFFICE & DATA CENTER CONNECTIVITY

Many of our manufacturer customers require fast and reliable access between various remote offices and/or data centers. The ZXG is able to enhance network connectivity through the use of multiple VPN connections which can be bonded together to provide additional network bandwidth. Further the ZXG appliance can automatically failover from one single or group of tunnels to another, thus ensuring 24/7 uptime in the event of a network outage between sites.

LOWER OPERATING COSTS

The ZXG platform the total cost of Internet connectivity by enabling energy companies to offload some data services to inexpensive broadband connections instead of high cost T1, DS3 and MetroEthernet connections. Along with the additional redundancy provided by bonding multiple broadband connections, the ZXG appliance significantly improves performance for end-users while at the same time lowers monthly Internet access charges by leveraging several low cost broadband links. Each ZXG appliance is scalable which means that it can easily expand as the end-users needs grow.
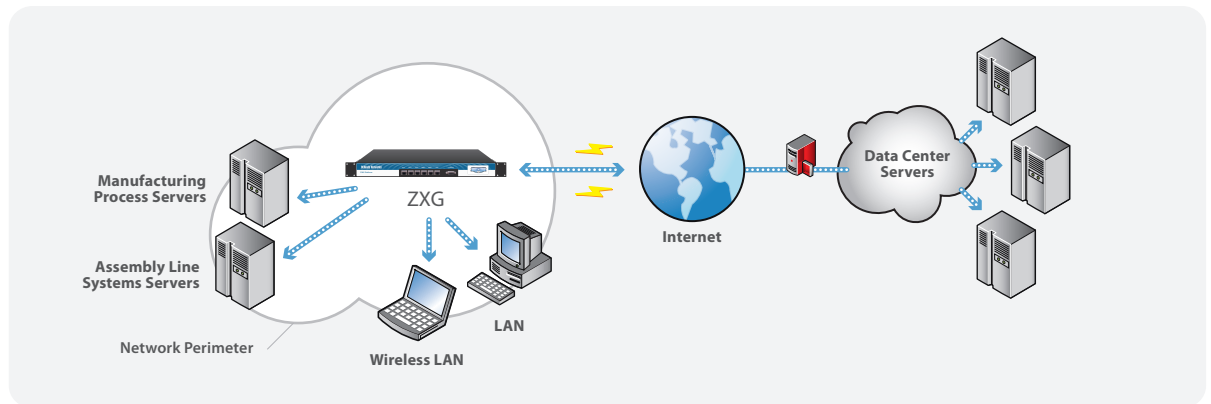

VPN Virtualization (Application Offloading)

ZEROOUTAGES HAS WORKED WITHIN MANUFACTUERS FOR A NUMBER OF YEARS NOW TO DEVELOP INTEGRATED SOLUTIONS TO OPTIMIZE THE END-USER EXPEREIENCE AND ROI WHILE MAINTAINING STANDARDS.

ADMINISTRATION ACCESS

The ZXG appliance incorporates a complete network security gateway which can create a firewall between the administrative network and the rest of network. The ZXG also incorporates DMZ connectivity options and support for VLAN networking.

WIFI ACCESS

The ZXG appliance works with all forms of wifi equipment and because we do not incorporate wifi within the ZXG platform directly, we never have conflicts with other external wifi solutions. The ZXG appliance is 100% compatible with and can accelerate and management traffic from all wifi solution vendors.

MANUFACTURING SYSTEMS

Every manufacturer has specific processes in place which have primarily been moved over to online infrastructures in order to improve efficiently and coordination. One of the key elements required in order to obtain these efficiencies is to be able to communicate updates from these processes throughout the organization. The ZXG appliance, through its various bandwidth management features ensures that everyone in the organization can access the data they need, when they need it.

ASSEMBLY LINE SYSTEMS

Most assembly line systems are self-contained, i.e. they run without external intervention, however almost all of these systems require constant monitoring, as any potential work stopped can generate significant costs. The ZXG appliance assists in maintaining 24/7 network uptime to ensure that in the event of an assembly line issue, quick action can be taken to mitigate any potential problem and eliminate additional downtime. The ZXG solutions work to ensure network uptime and continuous production 365 days a year.

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