

zTelligence® Technology Platform Overview

Security, availability, scalability. We worry about it so you don't have to.

zTelligence is the premier online solution for capturing and reporting survey data. It is a web-based application that makes it easy to manage respondent panels, build sophisticated surveys, deploy to targeted audiences, monitor data collection, analyze data and report results.

zTelligence Security

The infrastructure for the zTelligence platform is state-of-the-art and delivers:

- > Comprehensive physical security, network security, data integrity, user authentication and access controls that protect your survey data from unauthorized access, loss, or corruption
- > Reliability through system redundancy and sophisticated reliability and availability features, ensuring that zTelligence is up and running at all times
- > Scalability to accommodate explosive growth in your market research activities

The zTelligence application, underlying servers, network and datacenter infrastructure are ready to support your marketing research activities reliably—today and tomorrow. This paper gives you the details. We've done the hard work of application hosting for you, so you can get back to worrying about your products, your customers, and your business.

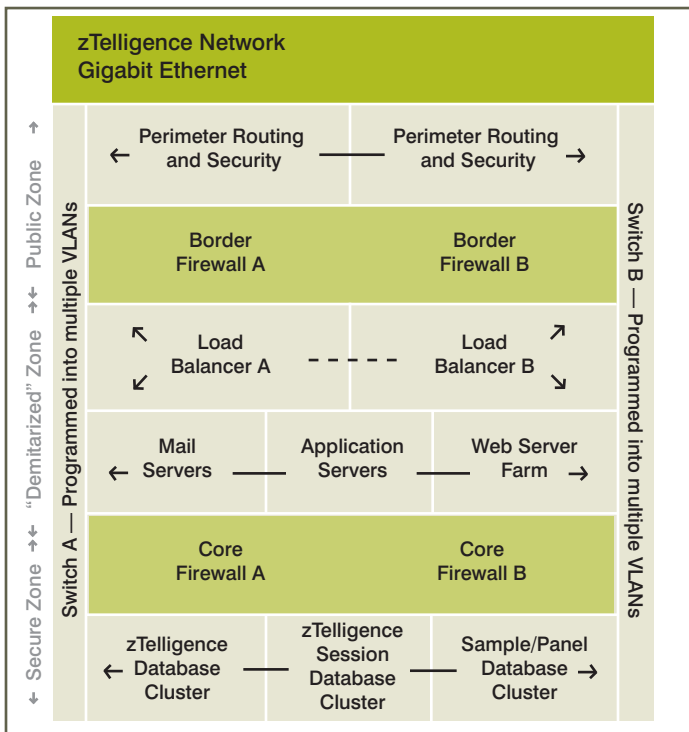


Figure 1 The zTelligence application is hosted on highly secure, extremely reliable, and massively scalable infrastructure.

zTelligence Security

Security

Protecting your survey data is our top priority. It's a job that requires a comprehensive approach to security—from the physical security of the servers and storage systems that host your data to the access controls and authentication mechanisms that safeguard the integrity and privacy of your data. Here's a summary of the security measures in force for zTelligence.


Physical Security

All zTelligence surveys are hosted at MarketTools' co-located, seismically safe datacenter in San Francisco, California. Physical security mechanisms at this facility include:

- > Outer perimeter walls that are bullet-proof and explosive resistant
- > Card access at all entry points
- > Five secured doors between the main datacenter entry and the MarketTools co-location environment
- > Full closed-circuit TV monitoring
- > 24x7 security and network operations center (NOC) staff
- > Remotely sealable "man-traps"

Data Privacy

zTelligence data is stored on our secured, redundant database servers, which are protected by two distinct and independent layers of "stateful" firewalls. Our firewalls are equipped with deep inspection functionality as well as intrusion protection technology that detects and thwarts hacking and exploit attempts.

zTelligence offers an additional level of security that extends all the way to the survey respondents' computers. Through MarketTools' use of Secure Socket Layer (SSL) Public Key Infrastructure (PKI) certificates, your survey takers can be directed to take a 128-bit encrypted survey from virtually all standard browsers—without any change in the way the survey is taken. The only indications of the encryption are in the URL, which displays "https://" and a small lock icon () in the corner of the browser window.

Data Protection

The physical storage medium for all zTelligence data is a multi-terabyte, high-speed, fibre channel SAN manufactured by EMC. Hourly "snapshots" are created and stored to ensure the ability of quick restoration in the unlikely event of data loss or corruption. Additionally, all zTelligence data is stored offsite at a backup datacenter facility. Data is transmitted to the backup facility securely on an hourly schedule to ensure minimal impact to customer data in the unlikely loss of the primary facility.

Policy Management

Additional security measures include policy management mechanisms such as:

- > Internal policies and procedures for patches, updates and bug fixes
- > Limited administrative rights to all critical systems
- > Password change policies
- > A firewall between corporate users and production systems/data
- > Configuration management and peer review of all production changes

Availability and Reliability

MarketTools has standardized on extremely reliable components to maximize system- and application-level uptime. With high Mean Time Between Failure (MTBF) and internal redundancy, the infrastructure as a whole can sustain multiple losses of components before the zTelligence application itself is impacted.

Network

MarketTools has designed the zTelligence network with absolutely no single points of failure. All communication devices—including routers, switches, load balancers and firewalls—are designed and tested to automatically fail over to a redundant partner in the event of a failure or predicted failure. Multiple Internet Service Providers (ISPs) provide highspeed Internet connectivity to the zTelligence application, ensuring provider redundancy. In addition, sophisticated load balancing technology helps increase network performance by finding the fastest path to the client or survey respondent.

Web/Application Servers

Each zTelligence Web and Application Server is built in a highly redundant and resilient configuration that includes:

- > Hot-swappable redundant hard disks configured using RAID 1, RAID 5 and/or RAID I/O
- > Redundant gigabit Network Interface Cards (NICs)
- > Redundant power supplies
- > Dynamic Random Access Memory (DRAM) with parity

Web servers are configured in a load-balanced farm. The redundant load balancers perform frequent health checks for web server availability and monitor performance, allowing the system to intelligently send traffic to the fastest performing available web server.

Database

All zTelligence database servers have been configured as clustered pairs of highly redundant servers with all the redundancy of our zTelligence servers, and each has redundant fibre channel connections to the EMC Storage Area Network (SAN).

Supporting Systems

All other servers involved in synchronous activity (e.g. mail servers, application servers, and internal domain name servers) have been designed with redundancy to support the loss of any single system.

DNS

External domain name server (DNS) resolution is provided by VeriSign®, which has a strong domestic and international presence and has committed to a 100% uptime service level agreement for DNS resolution. All external DNS queries are transacted by VeriSign's secure and redundant load-balanced infrastructure, ensuring consistent and reliable name resolution to all clients and survey respondents.

Physical Plant

The MarketTools co-located datacenter in San Francisco, California features several mechanisms that help prevent system and application downtime caused by environmental factors, including:

- > State-of-the-art power systems, including 10 independent redundant 2.1 megawatt generators, guarding against downtime due to power outages
- > 60,000 gallons of fuel stored onsite to provide 72 hours of uninterrupted power at full load
- > Redundant HVAC systems
- > A state-of-the-art seismic base isolation system that reduces the Probable Maximum Loss (PML) to only 2.5% of building assets
- > The structure is designed to withstand “a once-in-a-thousand-year earthquake” per the 1997 Uniform Building Code

Proactive Monitoring

> MarketTools performs extensive monitoring—of both servers and the underlying communications infrastructure—using industry-standard software and tools. All failures trigger alarms that alert our trained 24x7 Network Operations Center (NOC) staff to potential issues. This allows us to address any situation that could impact the uptime or performance of zTelligence before it becomes an issue.

Scalability

MarketTools' network and datacenter systems have been designed from the onset to be highly scalable.

Through the implementation of the following design factors, we are prepared to increase capacity beyond current projections.

- > Partnership with leading Internet Service Providers (ISP) who provide bandwidth on demand through their high-capacity private and public networks
- > Multiple peering arrangements with well known ISPs, delivering an infrastructure that can support virtually unlimited redundant ISP feeds
- > Modular Cisco enterprise switches that can support up to 720 Gbps bus bandwidth
- > An EMC terabit SAN currently operating at less than 33% capacity
- > An expandable security architecture that allows additional 5.5 Gbps core firewalls to be added
- > A modular approach to server deployment, allowing additional server processing and site capacity to be added incrementally without downtime or reduction of performance
- > Employment of redundant F5 load balancers to allow a virtually unlimited expansion of web and application servers
- > An application architecture designed to support a horizontal expansion of the server farm with no noticeable application overhead due to growth

Summary

At MarketTools, we know that the sophisticated functionality of our zTelligence application is only useful to you if the underlying infrastructure is secure, reliable, and scalable. We have made every effort—and invested significant resources—to continually develop our ability to protect the integrity and privacy of your survey data. With MarketTools, you can conduct your marketing research with full confidence that our infrastructure is secure, reliable, and ready to meet your growing needs.