Complete stack hardware redundancy and synchronous data replication. Combined with intelligent software to autonomously manage fault detection and correction.

THE ANVIL!
INTELLIGENT AVAILABILITY PLATFORM

System Specifications

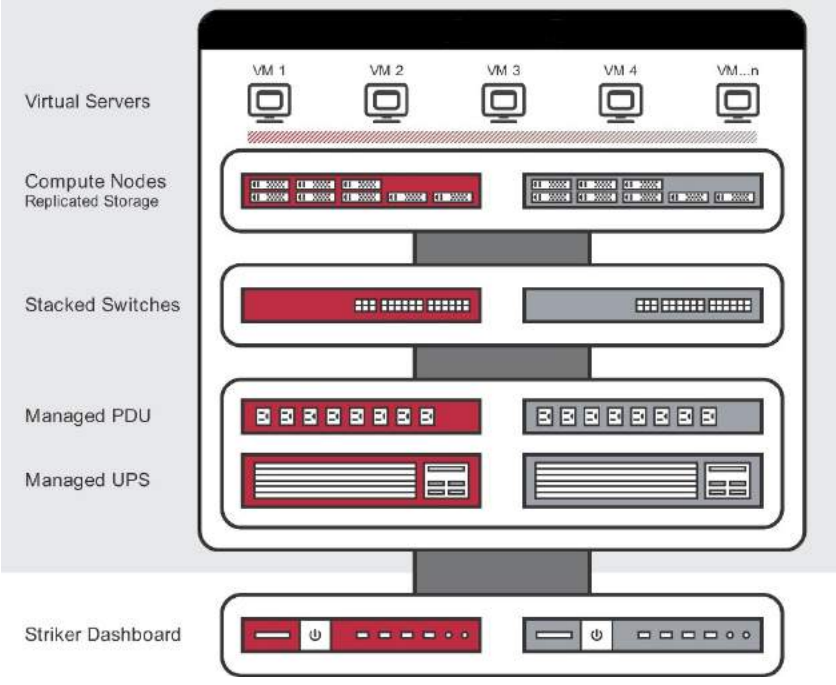
PLANNING REDUNDANCY

The Anvil employs several mechanisms to ensure high availability, including hardware redundancy.

Redundant hardware refers to the hardware serving up your application and it also extends to the infrastructure around it. The Anvil contains duplicate system components, creating complete redundancy so that there is no single point-of-failure.

To provide full stack redundancy, there are minimum system requirements for the Anvil build. These are not performance requirements, but instead, minimum features and capabilities. We are continually validating hardware brands and models to confirm integration with the Anvil stack.

SYSTEM ARCHITECTURE



ALTEEVE

ANVIL FOUNDATION PACK

The Anvil foundation pack (consisting of redundant power and networking) is the bedrock upon which the Anvil node pairs sit. The foundation pack devices, switches, PDUs and UPSes can support multiple Anvil platforms.

Ethernet Switches

We recommend 2 stacked "hitless failover" Ethernet network switches that can support VLANs, minimum of 24-ports per switch.

UPS

Two network-connected UPSes are required in order for the Anvil intelligent software (ScanCore) to monitor incoming power states (from power utility), estimated run time remaining during power outage, charge percentage during recovery and to alert on distorted input power. This allows the system to detect more than just "lost power events". It can detect failing transformers and regulators, over and under voltage events, etc.

PDU

Two network switched PDUs are used to provide a backup fencing mechanism (i.e. removing a node from the cluster) in the event that a node stops responding.

STRIKER DASHBOARD/MINI PC

The two Striker Dashboards host the web-based user interface (to create/manage/access VMs plus monitor foundation pack hardware) and the intelligent software (ScanCore) database. Requirements are: > 8GB RAM, 120GB SSD (to help with the random database access), Intel Core i5 or equivalent and 2 Ethernet connections (one to Internet Facing Network and one to Back Channel Network). Each Striker Dashboard can support multiple node pairs.

SERVER NODES

Two fault-tolerant servers meeting the following specifications:

- CPUs supporting virtualization extensions (VT-d/VT-x)
- Redundant power supplies
- IPMI or vendor-specific out-of-band management (CiRMC, iDrac, etc.)
- 6 network interfaces, Gigabit or faster
- 4GB RAM and 50GB of storage for the host OS plus sufficient RAM and storage for the VMs

Hardware considerations should also include expected data throughput, network demands and data access speeds. Beyond these requirements, the rest is up to the end user and will be based on their performance requirements, budget and desire for as much fault-tolerance as possible.