

SOLUTION BRIEF

ZoneRanger™

ZoneRanger enables network operations teams to fully extend their management applications to networks that are traditionally hampered by security restrictions. 100% of management traffic of any protocol type can be captured safely offering network operations complete visibility to managed networks.

The Challenge

Does your business face any of the below challenges?

- Network operations have limited network visibility across firewall boundaries due to security restrictions
- Heightened security risk due to quantity of open firewall ports
- Increasing overhead costs due to frequent firewall rule changes
- Stretched time to delivery of new projects due to firewall related change management
- Managing networks with overlapping private IP addresses
- Managed Service Provider with complex multitenancy requirements
- Application replication and monitoring critical infrastructure where airgaps in the network are prohibitive.
- Proliferation of application-specific probes and agents

Tavve Solution

ZoneRanger™ is a patented network security appliance that acts as a proxy firewall to allow unsecure management traffic (SNMP, ICMP, HTTP, etc) to be inspected and validated, before being passed through a firewall boundary via an encrypted 256-bit TLS tunnel, after which ZoneRanger filters, replicates, and forwards the data to an unlimited number of defined destinations. ZoneRanger extends the reach of your management applications across firewall-protected networks using transparent proxy to intercept and relay management traffic to, and from, the target devices.



ZoneRanger aggregates all management traffic (UDP and TCP) before it reaches the firewall, thereby limiting the need for open management protocols and ports, which dramatically reduces the firewall attack surface. By all but eliminating the need for open management ports, organizations now have much fewer firewall rules to manage and maintain. Tavve’s ZoneRanger will:

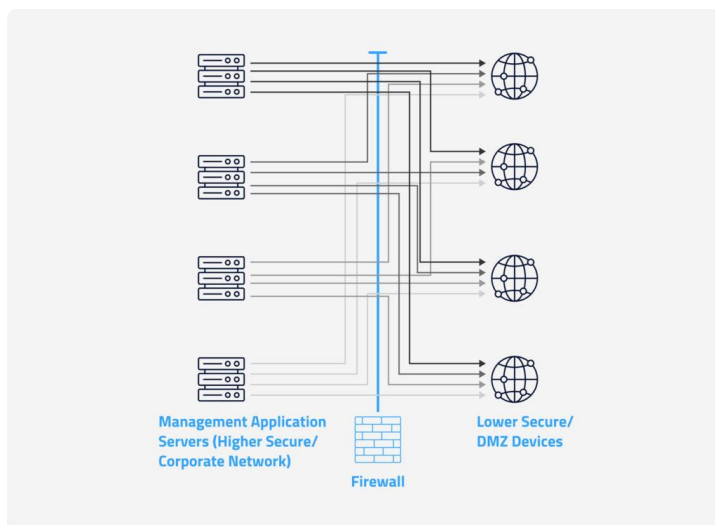
- ✧ Increase the speed of new deployments
- ✧ Lower cost of administration by reducing the need for rule change management
- ✧ Minimize the risk of human error when writing firewalls rules.

Finally, with the significant reduction in change management efforts, and accelerating project deliveries, the result is improving your organizations time to market.

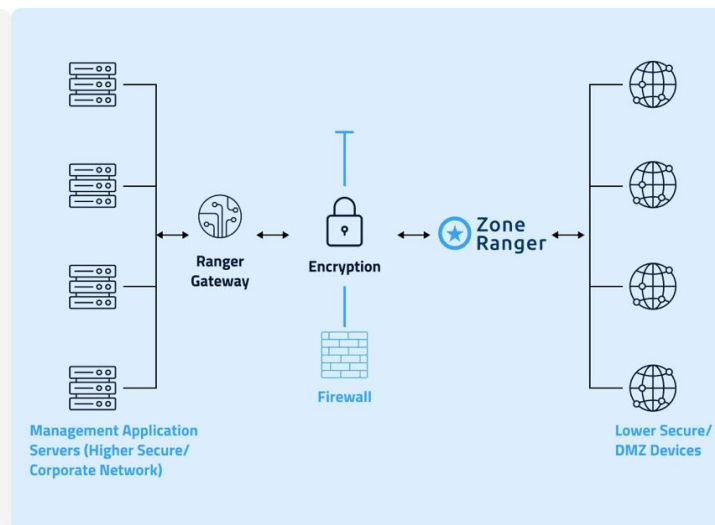
Tavve Advantage

There is no product on the market like ZoneRanger. The combination of transparent firewall proxy, deep packet inspection, TLS encryption and packet brokering for all your management traffic is what makes ZoneRanger so unique. Its stability and reliability have been proven by some of the largest, most security sensitive enterprises that depend on ZoneRanger’s distinct functionality to provide the visibility and assurance for effective network and security operations. ZoneRanger’s longevity is even more tenable by listening to our customers, and their requirement driven developments, which translate into increased operating effectiveness.

Without ZoneRanger



With ZoneRanger



ZoneRanger's Key Features

Application Firewall Proxy

Network Management coverage through ZoneRanger firewall proxy to reach any device, anywhere.

Automated Network Address Translation

Supports application-level Network Address Translation to resolve duplicate or overlapping IP networks.

TLS Encryption

Once all management traffic is aggregated by ZoneRanger, where it is inspected and validated, it passes that traffic through the firewall via an encrypted 256-bit TLS tunnel, after which the RangerGateway filters, replicates, and forwards the data to an unlimited number of defined destinations.

SNMPv3 Translation

ZoneRanger can be configured to translate SNMPv1 or SNMPv2c requests to SNMPv3 requests.

Flexible Data Forwarding

The ZoneRanger™ offers Flexible Data Forwarding (FDF), empowering enterprises forward and replicate mission-critical management data to ensure all OSS applications receive the data they need. PacketRanger's™ unique FDF allows for:

- Unlimited upstream data sources.
- Unlimited endpoint devices.
- Easy to define “exclude” rules for filtering out noise.

Covered Data Types

FTP, HTTPS, ICMP, NetFlow, NTP, Radius, SCP, sFlow, SFTP, SNMP, SSH, SysLog, TACACS+, TFTP



Statistical Analysis

ZoneRanger's™ Statistical Analysis brings a unique view to management traffic by visualizing aggregated traffic by its type, and the data received, processed, forwarded, and discarded, with the capability to drill down into the contributing traffic patterns by source and destination device, port, and protocol.

- Quickly identify the most talkative devices on the network.
- Visually detect trap storms and app misconfigurations.

How ZoneRanger Can Help

Pragmatic Security

ZoneRanger utilizes Federal Information Processing Standards (FIPS) 140-2 validated cryptography to protect sensitive customer information. Deep Packet Inspection (DPI) offers enhanced security. Air gap networks can be monitored with ZoneRanger in combination with Data Diodes from a remote location. By aggregating log and telemetry data to a central location, ZoneRanger narrows firewall attack surface by minimizing the number of open ports on the firewall.

Network Flexibility

Confidently deploy management applications into traditional DMZ – hybrid trust – zero trust networks. Provide full transparency to management applications and end-devices for operations without violating security requirements. Accelerate new network device onboarding. Statistical analysis provides in-depth insight on telemetry and log data flow allowing for better decision making, swifter.

Cost Efficiency

Realize substantial savings via minimization of firewall rule change management activities, automated network address translation, significant reduction of network administration effort, and avoidance of vendor lock in scenarios.

ZoneRanger Feature Enablement

- 1 Better Security Posture**
 Remove the risk of human error from firewall rule-based traffic validation. Creates a “Safe Sandbox” for operations teams to do what they need without impacting firewall governance
- 2 Improved Observability**
 Statistical Analysis enables better/faster network management troubleshooting (e.g. visualizing growing trap storms, etc).
- 3 Simplify Network Architecture**
 Decrease the proliferation of management applications and application-specific probes and agents
- 4 Avoid Vendor Lock-In**
 As management applications receive management traffic via ZoneRanger, network devices do not have to be reconfigured when changing/replacing management applications
- 5 Reduce Management Application Costs**
 Avoid storing massive amounts of data in applications such as Splunk instead of alternative lower cost locations.
- 6 Reduce Network Administration Costs**
 All management traffic is sent to ZoneRanger resulting in simplified network device configuration / Reduced Change Management effort with devices are removed – changed – added.

Virtual Machine Recommended Resources:

Product	Packet Input Rate	Operating System	CPU	RAM	Storage
ZoneRanger 6.0	600 pps 1200 pps 2500 pps 5000 pps	Hardened Linux	4	8GB	128GB

The PacketRanger VM was built with VMware virtual hardware version 9. Please see <https://kb.vmware.com/s/article/1003746> for a table detailing the list of VMware products and their virtual hardware version the support hardware version 9. The PacketRanger VM is supported by any VMware product that supports virtual hardware version 9 or higher.

Hardware requirements:

- Keyboard and monitor or laptop with terminal emulation
- Cat 5e or higher Ethernet cable
- The PacketRanger NICs only support the following speeds: 1GB and 10GB. The ZoneRanger must be connected to a switchport that supports one of these speeds.

“We are using ZoneRangers to bridge the gap between network operations needs and security requirements. With ZoneRanger we ease the pain of dealing with the technical logistics of getting other datacenters and subsidiaries’ networks monitored”

Senior Engineer – Top 10 USA Bank

For more information about Tavve ZoneRanger

- visit <https://tavve.com/zone-ranger>
- email us at sales@tavve.com

