

Zscaler Workload Communications

Zscaler Workload Communications secures workload-to-Internet and workload-to-workload traffic for your cloud workloads and data center servers with the power of the Zscaler Zero Trust Exchange™.

The emergence of digital transformation is driving the utilization of workloads across a wide array of infrastructure options, encompassing on-premises, private cloud, and public cloud environments.

Your business runs on these workloads, so preventing cyberattacks and data loss is an imperative. However, using legacy solution architectures are inadequate because they provide inconsistent threat and data protection, increase the attack surface, amplify lateral movement, increase operational complexity and cost.

Zscaler radically simplifies hybrid workload security with Workload Communications. It secures workload-to-Internet and workload-

to-workload egress traffic across public cloud and on-premises data centers for your mission-critical workloads and servers with the power of the Zscaler Zero Trust Exchange™

Workload Communications effectively provides zero trust security that ensures consistent threat and data protection, eliminates the attack surface, stops lateral movement, decreasing complexity, and reducing operational cost.

“With Zscaler’s Workload Communications, we can easily standardize security policies for both users and applications regardless of where they are located.”

Rui Cabeço, Global Outbound Connectivity Lead, Siemens

Challenges with legacy workload and server security

Many enterprises rely on legacy security architectures to secure their cloud workloads. Most enterprises will use a combination of:

Configure native security solutions offered by public cloud service providers

Deploy third-party tools (firewall, TLS/SSL inspection, DLP, etc.) for extra layers of protection

Backhaul traffic to on-premises network security infrastructure for inspection and protection

However, several challenges arise from this architecture, including:

TLS visibility gaps. TLS inspection often comes with increased compute resources and can pose challenges such as performance degradation when enabled. Managing distributed certificates or applying exclusions to pinned workloads creates operational challenges. Additionally, it often leads to increased costs in terms of cyber security infrastructure to support scale.

Increased lateral threat movement and attack surface. Security solutions such as firewalls extend the network to workloads and servers, amplifying lateral movement risks. Additionally, each internet facing firewall increases the attack surface.

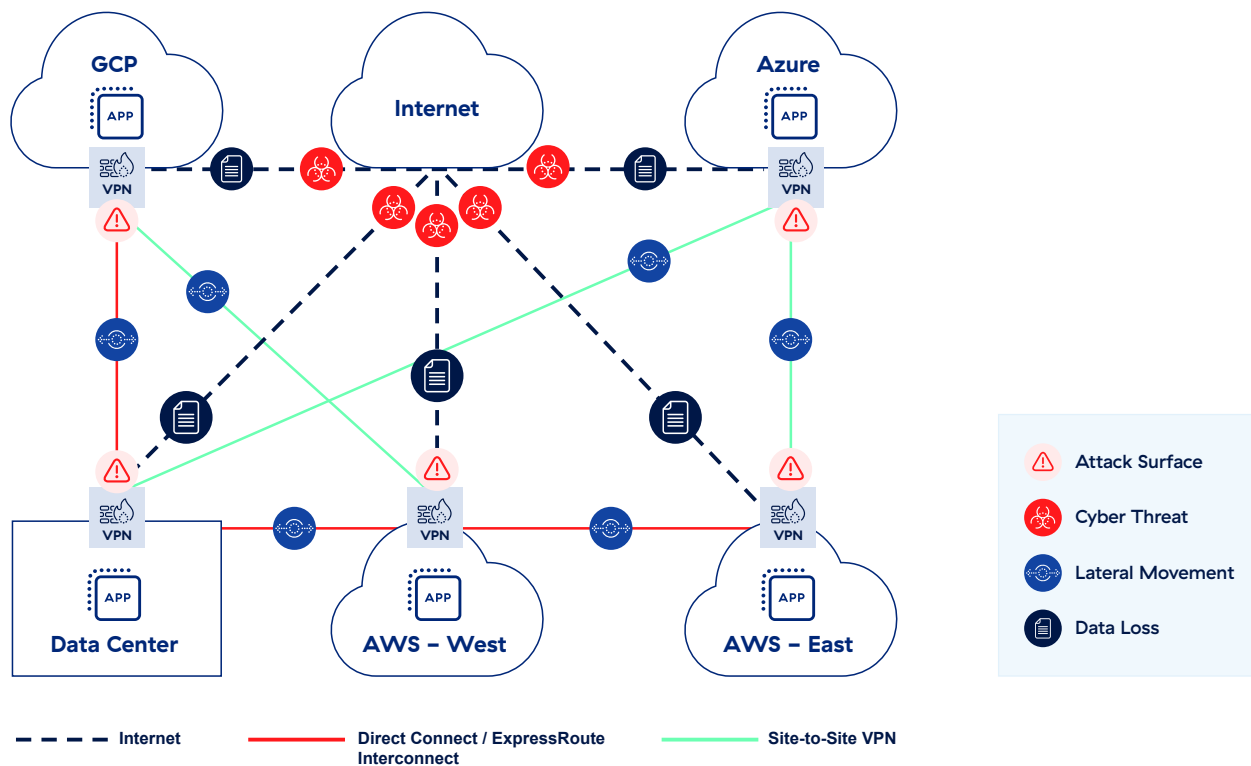
This can span the internet to different clouds and on-premises environments. Additionally, a patchwork of virtual appliances, operational tools, and nonstandard policies adds to security risks because of both known and unknown gaps in security coverage.

Increased complexity and poor performance.

Legacy network and security solutions were not built with cloud workloads in mind. Numerous point products, such as Virtual Firewalls, Proxies, NAT Gateway, must be incorporated. Additionally, some solutions may use separate VMs for each security function, resulting in sequential assembly line style inspection and thus increased latency. This creates significant operational complexities when applied across multicloud.

High costs. Use of legacy network security point products (e.g, firewalls, IPS, routers, etc.), overprovisioning of network security infrastructure to compensate for lack of scalability, and increasing use of cloud native services all contribute to increased capex and opex.

Lack of Common Logging. Legal and regulatory requirements require organizations to store logs for an extended period of time. Getting access to these logs from different cloud environments and storing them in a central SIEM infrastructure can be complex and expensive.



Workload Communications extends zero trust architecture to public clouds and on-premises data centers

Workload Communications eliminates the network attack surface by connecting workloads and servers to the internet and private applications using zero trust architecture. This dramatically simplifies connectivity by reducing your organization’s dependency on legacy solutions such as firewalls while allowing for flexible forwarding and easing policy management with the proven ZIA and ZPA policy framework.

This is all made possible by the Zscaler Zero Trust Exchange which operates at hyperscale and can handle any increase in workload or server traffic with elastic, horizontal scaling. With Workload Communications, all workload and server egress traffic is forwarded to the Zero Trust Exchange, where security policies can be

applied for full TLS/SSL inspection and access control. The egress traffic is then forwarded to its intended destination, whether it’s the internet, SaaS applications, or other workloads and servers hosted in other public clouds or data centers.

With Workload Communications, you can:

Gain Consistent, Comprehensive Threat and Data Protection

Common security policies across all environments

- Prevent zero day-attacks with cloud-scale TLS inspection and threat protection
- Stop data leaks with DNS inspection and with inline data protection
- Limit what destinations workloads and servers access with strict controls

Eliminate Lateral Movement and Attack Surface

Connect apps not networks, become undiscoverable

- Apply least-privilege access to segment workloads using IP, FQDN, VPC, VNet, or Tags
- Connect workloads using the Zero Trust Exchange eliminating network attack surface
- Supports cloud to cloud, cloud to data center, region to region

Reduce Operational Cost and Complexity

One cloud-delivered platform to secure all workloads

- Secure workloads across all major cloud service providers including AWS, Azure, and GCP using one unified platform.
- Automate security deployments through programmable interfaces using infrastructure as code (IaC) templates
- Utilize Public Cloud Service Provider integrations such as AWS gateway load balancer, AWS user-defined tags, and AWS auto scaling

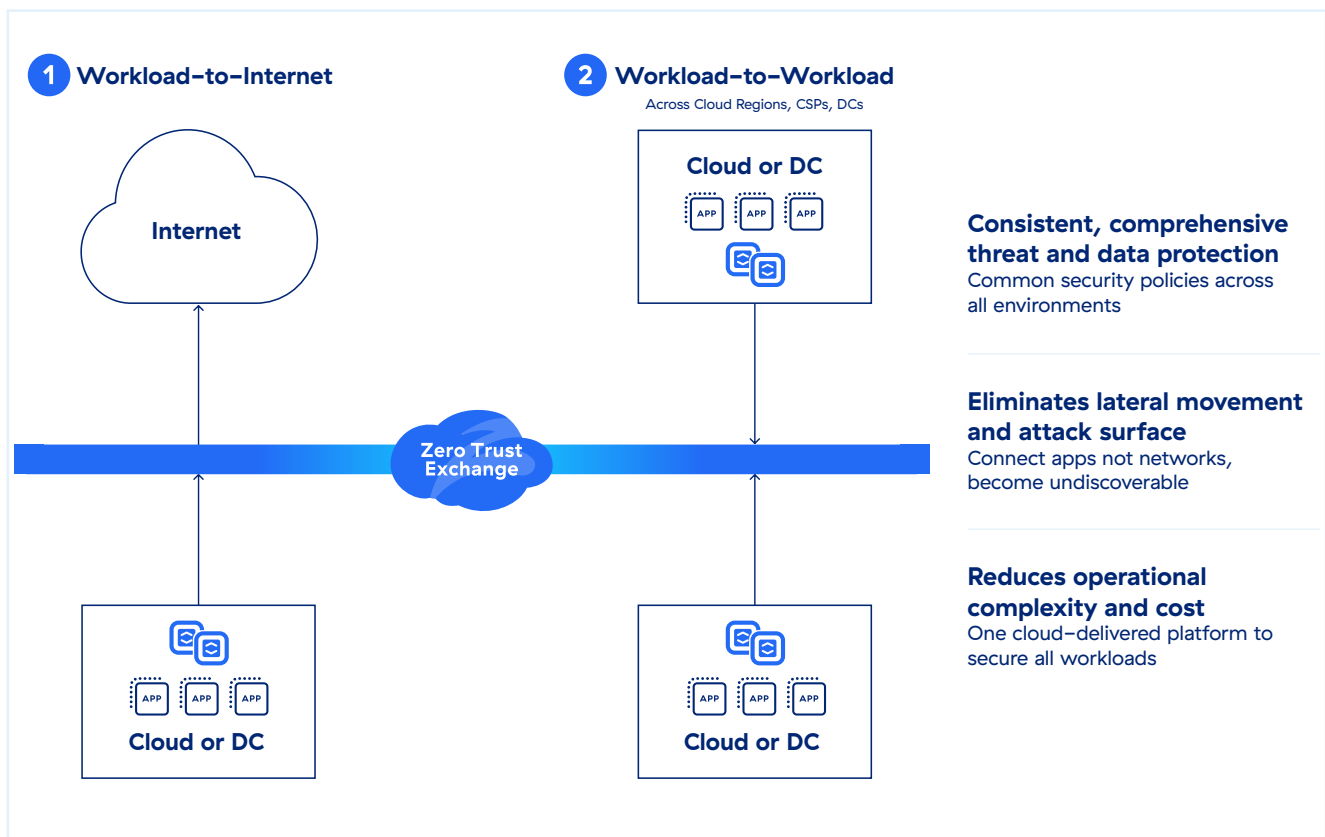


FIGURE Zscaler Zero Trust for Workloads

Workload Communications Differentiators

Workload Communications is built on the Zero Trust Exchange, which securely connects users, devices, and apps using business policies over any network and across any cloud, at scale.

Zero Trust Proxy Architecture – Purpose-built, multitenant proxy architecture that sits inline to securely connect sources and destinations while providing full visibility of egress traffic.

TLS Decryption at Cloud Scale – High-performance inspection is done by a single-scan, multi-access architecture that is built for scale.

Bi-directional Threat Inspection – AI-powered threat protection— powered by 500 trillion daily signals, 320 billion daily transactions delivers always-on, airtight ransomware protection, zero-day threat prevention, and unknown malware prevention.

In-line Data Protection – High-performance, scalable DLP inspection across all channels and locations.

Common Platform, Multi Cloud Ready – Unified platform that provides policy management, traffic monitoring, and log tracking. Applies standardized policies across AWS, Azure, Google Cloud, and on-premises data centers.

Granular App-to-app Segmentation – Enforce zero trust least privilege access for all workloads and servers with simplified business policy enforcement and management.

Workload Communications Capabilities

ZSCALER WORKLOAD COMMUNICATIONS PLATFORM	
FEATURE	DETAILS
Public Cloud and On-premises Coverage	Supports securing workloads in AWS, Microsoft Azure, Google Cloud Platform, Microsoft Azure China regions and AWS GovCloud with additional support for on-premises data center servers. FedRamp Certified <> for AWS GovCloud.
TLS/SSL inspection	Get unlimited TLS/SSL traffic inspection to identify threats and data loss hiding in encrypted traffic. Specify which web categories or apps to inspect based on privacy or regulatory requirements.
Log Streaming	Zscaler Nanolog Streaming Service consolidates logs from all workloads and servers, globally, into a central repository that is determined by customers, where administrators can view and mine transaction data by cloud workloads in real time.
Infrastructure-as-Code	Zscaler provides terraform templates and providers that automate the provisioning and deployment of security policies and cloud connector virtual machines.
Connectivity Support	Organizations can leverage IPsec, GRE, or Cloud Connectors to steer workload egress traffic to the Zero Trust Exchange. Note – IPsec and GRE will secure workload to Internet traffic. Cloud Connectors are used to secure both Internet and Workload traffic.

ZSCALER INTERNET ACCESS FOR WORKLOAD-TO-INTERNET

FEATURE	DETAILS
Workload-to-Internet communication protection	Prevent cyber threats and data loss for workload-to-internet communications. Includes SSL inspection, IPS, URL filtering, and data protection for all communications.
URL filtering	Allow, block, caution, or isolate workload access to specified web categories or destinations to stop web-based threats and ensure compliance with organizational policies.
Advanced threat protection	Stop advanced cyberattacks like malware, ransomware, supply chain attacks, and more with proprietary advanced threat protection. Set granular policies based on your organization's risk tolerance.
Malware analysis	Detect, prevent, and quarantine unknown threats hiding in malicious payloads inline with advanced AI/ML to stop patient-zero attacks.
Intrusion prevention	Get complete threat protection from botnets, advanced threats, and zero-days, along with contextual information about the workloads. Cloud and web IPS works seamlessly across firewall, sandbox and DLP.
DNS security	Identify and route suspicious command-and-control connections to Zscaler threat detection engines for full content inspection.
DNS filtering	Control and block DNS requests against known and malicious destinations.
File control	Block or allow file download/upload to applications based on workload identity or application.
Bandwidth control	Enforce bandwidth policies and prioritize business-critical applications over recreational traffic.
Dynamic, risk-based access and security policy	Automatically adapt security and access policy to workloads, servers, internet destinations, and content risk.
Correlated threat insights	Speed investigation and response times with contextualized and correlated alerts with insights into threat score, affected asset, severity, and more.
Content filtering and stateful rules	Filter by policy across 6 classes, 29 super-categories, 101 categories. Dynamic content classification for unknown URLs and Safe Search. Granular policy by IP address, groups, and hosted identities.

ZSCALER PRIVATE ACCESS FOR WORKLOAD-TO-WORKLOAD

FEATURE	DETAILS
Workload-to-workload segmentation	Secure workload-to-workload connectivity and communication across hybrid and multicloud environments.
App discovery	Automatically discover and catalog applications using specific domain names and IP subnets to get granular insight into your private application estate, as well as your potential attack surface.
AI-powered app segmentation	Apply ML-based segmentation recommendations automatically delivered to you in ZPA, making it fast and easy to identify the right application segments and build the right access policies. Powered by ML models continually trained on millions of customer signals and your unique application access patterns, ML-based segmentation can help you minimize your internal attack surface.
AppProtection	Protect private applications and infrastructure against the most prevalent attacks with high-performance, inline security inspection of the entire application payload that exposes threats. Identify and block known web security risks, such as the OWASP Top 10, and emerging zero-day vulnerabilities that can bypass traditional network security controls.

DATA PROTECTION

FEATURE	DETAILS
Inline data protection (data in motion)	For Workload-to-Internet and workload-to-workload, use forward proxy and SSL inspection capabilities to control the flow of sensitive information to risky web destinations and cloud applications in real time, stopping internal and external threats to data. Advanced inline protection is provided whether an application is sanctioned or unmanaged without requiring network device logs.
Exact Data Match (EDM)	Fingerprint and secure custom company data.
Index Document Match (IDM)	Fingerprint and secure custom documents and forms.
Optical Character Recognition (OCR)	Find and prevent data loss in images and screenshots.

(Capabilities listed are not collectively exhaustive. Specific features and capabilities may only be available with different Zscaler editions.)



About Zscaler

Zscaler (NASDAQ: ZS) accelerates digital transformation so that customers can be more agile, efficient, resilient, and secure. The Zscaler Zero Trust Exchange protects thousands of customers from cyberattacks and data loss by securely connecting users, devices, and applications in any location. Distributed across more than 150 data centers globally, the SSE-based Zero Trust Exchange is the world's largest inline cloud security platform. Learn more at zscaler.com or follow us on Twitter @zscaler.

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