Securing Applications at the Speed of Business

Cisco Application-First Security Solution

Applications are the heart of today’s digital businesses

Whether servicing employees, partners or customers, applications drive business growth, create new revenue streams and increase customer value. Thus, applications and application development have become a significant focal point for modern businesses. Developers today are rapidly adopting technologies such as cloud, containers and serverless computing as they transform software development practices to embrace DevOps models for streamlining operations and increasing process efficiencies.

As a result, application development velocity is skyrocketing as organizations look to differentiate their offerings and deliver tailored experiences to their employees, partners and customers. At the same time, where applications are developed, deployed and run is increasingly outside the confines of traditional corporate controls. What’s more, modern applications are composed of a variety of external services and APIs, they change frequently and are accessed by a variety of devices across a variety of locations. With traditional security approaches still heavily relying on manual processes and fixed points in the network, it’s not surprising that securing applications is a top challenge every organization faces today.

To get a handle on securing modern applications requires a shift in focus to the applications themselves and delivering security controls that align to the anywhere and always changing nature of applications at the speed and agility the business demands. Cisco recognizes these trends and is expanding its role to deliver a solution to help security and application teams move faster, safely.
Putting Applications Front and Center with Cisco Application-First Security

The Cisco® Application-First Security solution offers a set of four innovative SaaS-based technologies that delivers unified access, visibility, segmentation and threat protection for application workloads that keeps up with the speed of your business: Tetration, Stealthwatch Cloud, Duo Beyond and AppDynamics (see sidebar). The solution takes a “zero-trust security approach” that is integrated and adaptable to the unique needs and inherent complexities of modern applications without impacting development agility or speed.

Based on these powerful tools, Cisco enables development and security teams to stay focused on what matters most to their business.

The Cisco Application-First Security solution focuses on protecting applications, no matter where they run, what they’re comprised of or who accesses them. Modern applications and their workloads utilize a host of compute environments – from virtual machines, containers, serverless and more – along with variety of third-party integrations, services and callouts. They are also accessed by a user community that is increasingly mobile and utilizes a diverse set of devices. Securing your constantly evolving applications everywhere is critical to the success of your organization.

Addressing Application Challenges through Intelligent Security

Cisco’s application security solution uses automation and machine learning to quickly and easily identify what applications are running in any environment, what they are doing and who is accessing them. The solution performs these functions at the scale and speed of your business, allowing you to achieve greater application workload: visibility, compliance, and threat protection.
Visibility

Most organizations have limited (if any at all) visibility into applications, workloads and processes that span from corporate networks to public cloud environments. With the number of applications being delivered, their constantly changing nature and the use of third-party services, the challenge of gaining visibility into applications has become increasingly difficult. Solving this challenge at the scale and speed of business requires a solution that is closely aligned to the applications and their workloads.

The Cisco Application-First Security approach gives you far greater insight into workloads and application behavior. It helps identify who users are, where they are connecting from, what hosts and application resources they are accessing and creates appropriate use policies leveraging this rich context. Cisco’s Application-First Security solution quickly discovers vulnerabilities and zero-day threats with security analytics that analyze network flows for malicious or deviations in baseline behavior activity while continuously monitoring the network and providing real-time anomaly detection and incident response forensics.

Compliance

Without visibility into application dependencies, processes and behaviors, it is impossible to determine whether a given application meets with internal compliance and regulatory mandates at any point in time, let alone when that application changes throughout its lifecycle. And while organizations struggle to audit existing workloads, the challenge is compounded by the sheer velocity of change and innovation developers are tasked with maintaining.

Cisco’s Application-First Security solution provides multilayer segmentation to consolidate policies and automate enforcement on the host and within the application process. This ensures workload security beyond macro- to now deliver intelligent micro-, or application segmentation. It provides compute-method agnostic protection, meaning that no matter what kind of workload – virtualized, bare metal, or containerized – multi-layer segmentation can be easily applied to reduce the attack surface.

Application segmentation plays an important role in audit and compliance scenarios. For industry requirements such as the Payment Card Industry Data Security Standard (PCI DSS) and regulations like the General Data Protection Regulation (GDPR), application segmentation reduces the number of systems that require controls, as well as the scope of an audit. What’s more, Cisco’s Application-First Security solution can also ensure application visibility to quickly identify potential performance issues before they impact business transactions.

Reduce Risk

Applications are under constant threat of attack as attackers shift their focus to targeting the crown-jewels to siphon off valuable data or disrupt business operations. The threat protection capabilities of Cisco’s Application-First Security solution utilize AI, ML, behavioral modeling, vulnerability detection and other mechanisms to quickly identify, block and respond to attacks associated with applications and application workloads.

The solution utilizes advanced algorithms to generate granular segmentation policies for each application. It provides the ability to merge business policy requirements with policies that are generated based on application behavior. The solution also provides consistent policy enforcement across a multi-cloud environment, and enforces policy right on the workload itself, supporting virtualized, bare-metal, and container-based environments in unison. Behavior analysis is determined by baselining processes that are running and identifying any deviations in behavior from those baselines while algorithms match the behavior deviations to malware execution patterns, enabling faster detection. This approach ensures that policies and threat detection move along with the workload regardless of where the application runs.

The solution detects, blocks, and dynamically responds as threats arise to prevent breaches from impacting the business. Backed by Cisco Talos™, the industry-leading threat intelligence team, it can also detect the latest and most advanced forms of malware, including zero-day threats.
Why Cisco?

Cisco application and workload security solutions are built to work at the speed, scale and availability of your business. Our security methodology is based on innovation and integration, bringing intelligent and adaptable security controls closer to the application without impacting development velocity or application availability. Cisco enables developer and security teams to secure applications everywhere, offering continuous security as applications change and evolve. Ultimately Cisco recognizes your applications are unique and have different dependencies, and has designed security that adapts to your applications. Cisco Application-First Security ensure digital businesses can meet compliance with higher productivity while reducing spend on internal processes.

By relying on Cisco to secure applications and workloads, your organization is positioned to meet today’s demands as well as future needs. With Cisco Application-First Security, Cisco enables development teams to focus on what matters most to the business while making the more secure way the easy way.