INTRODUCTION

Today’s fast pace economy is changing how businesses respond to customer behavior and internalize an on-demand culture. DevOps methodologies are being adopted in order to meet new market opportunities, as well as competitive and regulatory requirements. Enabling a continuous integration and continuous deployment (CI/CD) pipeline for developers requires a collaborative focus on security between InfoSec and DevOps teams.

Trend Micro Cloud One™, powered by XGen™, is a security services platform for cloud builders, automates security within your DevOps processes and delivers multiple security controls to ensure you meet compliance requirements from the first build.

Trend Micro Cloud One offers protection for runtime physical, virtual, cloud, container, and serverless environments, as well as scanning of container images during development phases.

Trend Micro Cloud One combines the capabilities of multiple security tools, reducing the number of point solutions you need and providing a single dashboard that enables discovery and visibility into leading environments like AWS, Google Cloud™, Microsoft® Azure®, and VMware®. As well, it lowers the cost and complexity of securing workloads across multiple environments, including purchase options aligned to the way you want to buy, automated deployment, extensive application programming interface (API) integration, and security capabilities that can virtually shield applications from the latest advanced threats like ransomware and network-based vulnerabilities.

Why Trend Micro for DevOps?

• Frictionless security that integrates with your DevOps tools, pipeline, and environments
• Reduce disruption of development schedules and workflows with protection for images, containers, and your host
• Bake security into your development processes via APIs to improve development cycles and reduce human touch points and errors
• Maximize threat detection at both the software build pipeline and runtime with global threat intelligence from the Trend Micro™ Smart Protection Network™
• Help meet risk and compliance requirements with security implemented earlier in the CI/CD pipeline

Build secure. Ship fast. Run anywhere.
TREND MICRO CLOUD ONE

Trend Micro Cloud One provides the freedom developers need to deploy applications rapidly, with the visibility and control that IT Security needs to protect the developers’ intellectual property and business platforms and environments. With an increased threat landscape and multiple development vectors available to exploit, organizations must become vigilant in providing appropriate security processes regardless of the environment.

FULL LIFE CYCLE CONTAINER SECURITY


PREVENT EXPLOITS PRIOR TO RUNTIME

Container Image Security delivers robust protection for container images with automated build-time and registry scanning for malware, vulnerabilities, secrets, and policy compliance. Ensure threats are detected before applications are deployed and filter out false positives by correlating patch layers with packages that are vulnerable in the same image. By addressing security issues early in the pipeline, you ensure minimal resolution cost and impact to your delivery timelines.

CONTINUOUS SECURITY

When scanning, Container Image Security unpacks each layer of the image and performs detailed scans on the content. Benefit from fully automated, continuous scanning, triggered by new common vulnerabilities and exposures (CVEs) and take advantage of ad-hoc scanning—enabling targeted inspection of specific vulnerabilities within specified images. By scanning both at the image build stage as well as continuously scanning within your registries, Container Image Security ensures your images are protected from threats now and in the future. The Container Image Security console provides detailed scan results, target configuration, and user and view management.

EXPEDITED DEPLOYMENTS WITH IMAGE ASSERTION

Development engineers have the ability to push images to production automatically. Allow images that meet security requirements to be deployed to production. Take advantage of automation features to minimize any need to manually oversee Container Image Security and to configure authorized users and groups accordingly, for role-based access.

COMPLIANCE-READY PROTECTION

Container Image Security ensures compliance and governance requirements are met from the first build, without impacting productivity or the CI/CD pipeline. Scan images for compliance with customizable policies and use Container Image Security’s log history to make audit reporting simple.

SECURE CONTAINERS AT RUNTIME

Trend Micro Cloud One provides advanced protection for runtime container workloads, with intrusion prevention systems (IPSs), application control, machine learning, and more. Container Image Security provides security not only for deployed containers, but also for the host operating system and monitors for container platform (Docker®) and orchestration (Kubernetes®) level attacks—even securing the applications residing inside the containers. This ensures comprehensive protection across each layer of the application stack.
BUILD SECURE. SHIP FAST. RUN ANYWHERE.

IT and DevOps are adopting cloud-native technologies at a pace that makes sense to their goals and objectives, however, their chosen tools must be able to cross multiple platforms and environments. IT Security and DevOps teams see the value in working together to mitigate security obstacles, while maximizing protection from threats that can infiltrate the perimeter or bypass the clutter of individual point security tools to harm the CI/CD pipeline. Visibility is key in managing and mitigating threats and vulnerabilities across multiple teams and security requirements. DevOps must be cyber-resilient and design security into their processes.

Trend Micro Cloud One leads the market in server workload security, with proven deployments in thousands of customers—protecting millions of physical, virtual, containers, and cloud servers.

AUTOMATED, HIGH-PERFORMANCE SECURITY

Designed with strong API integration for leading cloud vendors, Trend Micro Cloud One allows for easy automation and integration of security at scale. Use Trend Micro’s RESTful APIs to automate deployment, policy management, health checks, compliance reporting, and more. Visit the Trend Micro Automation Center for example-driven automation guides, software development kits (SDKs), use cases, and direct engagement from the Trend Micro team.

UNIFIED SECURITY

Trend Micro Cloud One provides consistent, market-leading security for modern IT infrastructures running workloads across virtual data centers, multiple public and private clouds, and containers. As a unified and integrated platform, Trend Micro Cloud One provides seamless, consistent security for all environments from a single agent. This allows enterprises to:

- Consolidate security providers, and benefit from reduced toolset management and support
- Simplify the procurement process with flexible marketplace purchasing options
- Assure DevOps adoption of security controls, with integration directly in their CI/CD pipeline

WORLD-CLASS THREAT INTELLIGENCE

Trend Micro Cloud One benefits from Trend Micro’s world-class threat research, delivered by the Trend Micro™ Smart Protection Network™, for better:

- Anti-malware
- Vulnerability protection
- Zero-day machine learning protection

SUPPORT AND EMPOWER INCIDENT RESPONSE TEAMS

As attacks increase in sophistication and breaches become costlier, enterprises may find themselves needing advanced detection and response capabilities for their server and workload environments. Trend Micro Cloud One supports incident response teams with powerful capabilities for detection, response, and investigation. Additionally, when resources or time to investigate, remediate, and hunt for threats is limited, Trend Micro offers a comprehensive managed detection and response (MDR) service that provides many of these functions as a managed service.

BUILT ON STRATEGIC PARTNERSHIPS

Trend Micro Cloud One is built for the hybrid cloud, benefiting from strong integration into leading customer environments (AWS, Azure, Google Cloud, VMware, and more). Trend Micro’s strong, strategic partnerships with these environments enable seamless and complementary integration of security, ensuring security needs are met without any disruption to DevOps processes.

Why Choose Trend Micro for Containers?

- Security for your software build pipeline, to ensure application integrity during development phases with continuous image scanning
- Container protection against the latest malware, ransomware, and vulnerabilities with application control, machine learning, and IPS which allows you to inspect both east-west and north-south traffic between containers and platform layers like Kubernetes
- Automated cloud-native security optimized for your hybrid cloud, CI/CD pipeline, legacy application migrations, and compliance needs without impacting productivity

“Having a security partner like Trend Micro, that keeps up with modern technologies and advanced threats in real time, gives me confidence that my workloads can be protected at any time, even as architectures shift.”

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BUILD SECURE

Increased security and compliance requirements are causing unplanned work, which means DevOps teams are not being efficient.

Development and operations teams need security as code that will help to reduce disruption, but still satisfy security and compliance teams. Trend Micro Cloud One has smart security controls that ensure you meet security and compliance requirements from the first build.

Trend Micro Cloud One delivers coverage for container images, as well as runtime workload protection—delivering greater uptime for your applications.

SHIP FAST

While securing business environments is critical, DevOps teams are missing production targets because security is hard to implement and isn’t automated. With Trend Micro Cloud One, security is connected through automation and integration in your CI/CD pipeline with the tools that you already use today.

Automate manual processes with security that integrates into your DevOps toolchain using RESTful APIs.

- Orchestration tools: Chef, Puppet®, Ansible, AWS OpsWorks, SaltStack®, Kubernetes
- Continuous delivery: GitHub®, Jenkins®
- IT service management: ServiceNow®, Jira®, Slack®

RUN ANYWHERE

Security tools are often incompatible or simply not optimized for the cloud or your deployment processes. This means that security ends up causing high overhead, due to multiple environments requiring unique tools—hindering your ability to streamline operations.

You need adaptable security tools that fit anywhere you build, from data center to any cloud. Trend Micro Cloud One is optimized for the place that best suits your application, ensuring that you can run your applications anywhere.

Trend Micro Cloud One is an optimized security solution with API integrations to seamlessly build across leading cloud (AWS, Azure, Google Cloud), virtualization (VMware), container (Docker, Kubernetes), and data center environments.

“[Trend Micro] offers amazing extensibility to manage all policies and controls in our hybrid cloud environment with minimal resources.”

Todd Williams
Manager, Security Operations
MEDHOST
SECURING DEVOPS FOR IMPROVED OUTCOMES

Developers can build code into the CI/CD pipeline, automating security into the development process through the integration of tools such as Jenkins. This allows for the removal of manual interaction, and allows applications to be deployed more often, while improving time-to-market.

Updating traditional applications

Updating traditional applications to run in modern infrastructures, like containers, requires consistent, automated security policies for optimal protection.

Developers are frequently improving software applications to reflect evolving customer needs. Container Image Security introduces security earlier in the CI/CD pipeline to address security concerns such as malware, vulnerabilities, and secrets prior to test processes and runtime deployment—eliminating deployment threats and building customer trust. Trend Micro Cloud One's vulnerability assessment prevents problems by blocking network intrusions at the container level and vulnerability exploitation that can occur between containers and their host.

Transitioning to a hybrid cloud

Migrating some of your existing applications to the cloud allows developers to take advantage of cloud services and hybrid or multi-cloud environments. Trend Micro Cloud One provides frictionless security out of the box that won't slow down development and gives IT Security the visibility and confidence of knowing that container images and the host are protected. Trend Micro Cloud One is designed for hybrid cloud environments, with proven layered security techniques for protection of workloads and container deployments. Trend Micro Cloud One provides a single solution for build pipeline scanning of Kubernetes, containers, and hosts across the cloud and collaborative container development environments.

CI/CD

Development lifecycles are changing, and developers are required to meet business objectives by developing and releasing at a faster rate than ever. Many organizations are adopting agile development and a CI/CD model, where automation is the key to success. Trend Micro Cloud One is designed to help developers deliver applications to market faster, while being secure and reducing runtime complications. By integrating security into the CI/CD pipeline you can bridge the gap between security and DevOps and ensure that your organization is secure—without slowing down development.

Automated security and image scanning help to reduce human touch points and errors, improve runtime success, and enable agile deployments of applications. Trend Micro Cloud One’s rich set of APIs allow developers to build security directly into their CI/CD pipeline. In addition, for container workloads, Container Image Security implements security earlier in the CI/CD workflow processes, where image vulnerabilities are less likely to impact production and business reputation and can be identified, tracked, and mitigated automatically without relying on manual interaction. With automated build pipeline and runtime protection, Trend Micro Cloud One ensures the security of your organization throughout the development life cycle.

Help with compliance requirements

Trend Micro Cloud One helps meet governance and compliance requirements with effective security for cloud environments and container deployments. Organizations have the freedom to use multiple cloud platforms while keeping in touch with on-premises environments. It is important that security is applied with consistency across an organization for better governance and compliance. The nature of cloud environments means different security approaches are required. Having multiple point security tools is time consuming and costly, and hybrid cloud environments require a hybrid cloud focused solution to scale and mitigate threats.

Trend Micro Cloud One meets compliance requirements with appropriate techniques, such as vulnerability assessment and malware prevention, while having full visibility and control of workloads across all environments—enabling automated protection based on the server (operating systems, application) and where it is (physical, virtual, cloud). This removes security gaps and eases compliance risks for IT Security and DevOps.

To learn more about Trend Micro Cloud One for DevOps visit

www.trendmicro.com/devops