Cisco Tetration Analytics for Partners

Benefits

- Extensible platform that offers behavior based application insight to support critical data center operational use cases

- Provides pervasive visibility using rich telemetry collected across physical and virtual infrastructure

- Enables migration to a secure zero-trust model using whitelist policy

- Capability to process millions of flows per second to provide actionable insights in minutes

- Search tens of billions of flow records in less than a second for real-time forensics and analysis

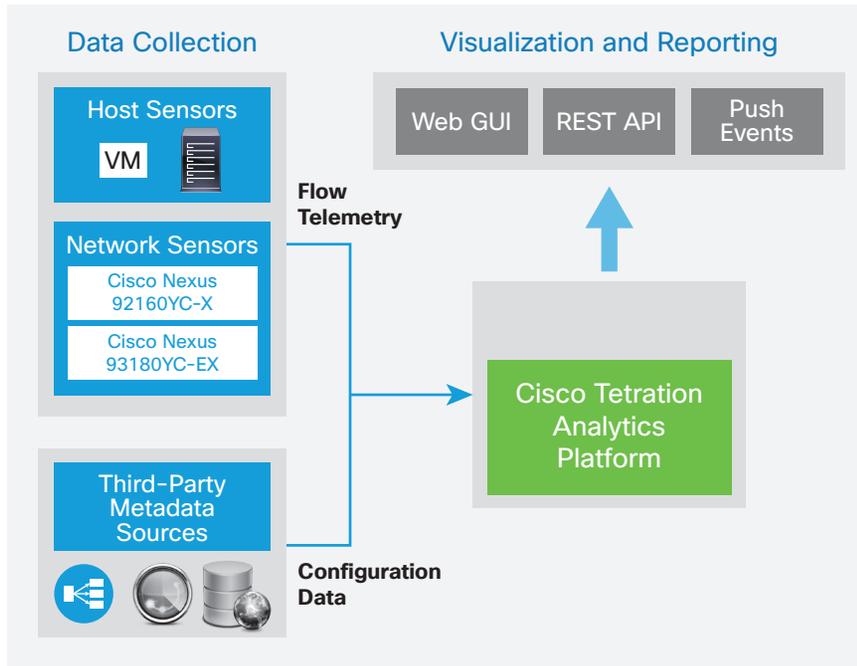## Behavior Based Application Insight and Zero-trust Policy

Data centers today are increasingly becoming more complex. With data center traffic predominantly being east-west and combined with rapid application deployment and application mobility has exacerbated the challenges for data center operations. Network operations don't have full visibility into the traffic, IT operations don't know the exact application communication pattern or the policies to be implemented between different application tiers. These operations teams need this information for number of following reasons:

- To migrate applications from existing traditional infrastructure to programmable infrastructure

- To maintain up-to-date infrastructure for disaster recovery

- To build and deploy a consistent, accurate, and secure whitelist policy model

- To monitor applications for network policy compliance and identify any deviations

- And more..

The new Cisco Tetration Analytics™ platform (Figure 1) addresses these requirements using unsupervised machine learning, behavior-analysis and algorithmic approaches to provide pervasive visibility, accurately identify applications running in the data center and their dependencies and the underlying policies between different application tiers. Cisco Tetration Analytics platform is designed to extensibility and support additional data center operational use cases as this platform evolves.

Figure 1. Cisco Tetration Analytics Platform Architecture

"Cisco's Tetration Analytics Platform has provided us unprecedented visibility into our network and applications and is enabling us to migrate from a legacy blacklist policy model to a significantly more secure whitelist policy model driven by ACI."

— Healthcare Customer

By using both hardware and software sensors deployed across the data center infrastructure it can support both brown field and green field deployments. Cisco Tetration Telemetry provides comprehensive information that includes details about inter-packet variations within a flow and context information (example: process details).

The Cisco Tetration Analytics platform is powered by big data technologies and can process this comprehensive telemetry information received from sensors near real time (Up to one million unique telemetry events per second). This platform is designed for long term data retention, and it can search tens of billions of telemetry records from its data lake and return actionable insights in less than a second. For deployment it offers a turn-key option that eliminates the need for any in-house big data expertise.

Make Informed Operational Decisions Using Behavior Analysis

The Cisco Tetration Analytics platform provides a turn-key solution using unsupervised machine learning and behavior based algorithmic approach:

- **Tetration Application Insight:** This platform can discover different applications in the data center and communication between application components using machine learning. It can also automatically identify and group application component clusters (example: database clusters) using communication patterns and process information. Using real-time Tetration telemetry, it can map the different application tiers (for example, web, application, and database) and generate accurate application dependency map.

- **Application Behavior-based Policy Recommendations:** By observing flow data for an extended period of time, the platform can generate the policies (for example, drop, accept, and redirect) between the various tiers of any application. It can then export the discovered policies in a machine readable format to other applications.

- **Policy Impact Analysis:** The platform supports a "try before you apply" mode to simulate whitelist policies and analyze their impact before you apply policies in production networks.

- **Compliance and Auditability:** The platform monitors application components for network policy compliance. It can detect any compliance violations in minutes using behavior analysis techniques and trigger a violation notification.

- **Search Engine for Visibility, Troubleshooting, and Forensics Across the Data Center:** The platform collects and stores comprehensive flow data. You can then query this data for visibility and forensics purposes across the entire data center and use this data to troubleshoot network and application problems.

The Cisco Tetration Analytics platform is unlike any other in the industry. It offers a ready-to-use platform with advanced management capabilities to enable quick deployment with few configuration requirements. Its machine learning capabilities drastically reduces human inputs required to understand the communication patterns. Its self-monitoring and self-diagnostics capabilities eliminate the need for big data expertise to operate the cluster.

Cisco Tetration Analytics: Value to Partners

Always-on, real-time, pervasive network analytics provides high-value operational and compliance visibility. For partners with application consulting practices, Cisco Tetration Analytics readily provides actionable application insights for existing application upgrades as well as new deployment projects. The combined customer engagement in application consulting services and related infrastructure resale opportunities deepens a partner's relationship in existing and new accounts. This solution will help partners:

- Show immediate solution value in an application consulting engagement
- Uncover resale opportunities for Cisco Nexus® 9000 Series Switches, Cisco Unified Computing System™ (Cisco UCS®), and other infrastructure
- Capture application migration services for migration to Cisco® Application Centric Infrastructure (Cisco ACI™)

Put Cisco Expertise to Work to Accelerate Success

Cisco provides professional and support services to help organizations get the most value from the Cisco Tetration Analytics platform. Cisco Services experts help integrate the platform into your production data center environment, define use cases relevant to your business objectives, tune machine learning, and validate policies and compliance to improve application and operation performance. Cisco Solution Support for Cisco Tetration Analytics provides hardware, software, and solution-level support. One annual contract covers all support needs. With Cisco Tetration Analytics Services expertise, you experience faster time to value, comprehensive adoption in your environment, optimized policies and application performance, and solutionwide support.

Next Steps

For more information about the Cisco Tetration Analytics platform, please visit http://www.cisco.com/go/tetration.

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