Cisco Prime Analytics

Achieve real-time insight into network and business data and drive actionable events with a high performance, scalable, real-time streaming analytics platform.

Network managers today are looking to maximize the value of the massive amounts of information available within their network traffic. Until recently they haven't been able to do so; however, innovations in big data analytics driven by Internet and social media companies have created new opportunities when applied to network data. These innovations help address challenges such as handling the variety of data on the network that is increasing with every new application your end users and subscribers use: audio, video, click streams, log files, apps, and more. The variety of data types, in multiple formats, from many distributed source systems poses problems for data management and consistency/integrity. Correlation and analytics across distributed source systems and formats require high performance processing because:

- Data is created at faster speeds. Network data is inherently realtime.
- Network data is also big data. Petabytes of data traverse the network every hour/day. Organizations need to make sure they are capturing what they need. The sheer volume, variety, and velocity present significant movement, storage, and processing challenges.

The big data movement is of extreme value to multiple organizations within a service provider or enterprise: marketing and sales for revenue-generating use cases; network management for root-cause analysis and fault prediction; security for fraud detection; and more. And the value of the data increases when it can be used proactively, in realtime, to drive actionable events for modern business processes (for example, policy management).

Cisco Prime™ Analytics provides the framework to facilitate such use cases.

Cisco Prime Analytics Overview

Cisco Prime Analytics is a scalable, real-time analytics platform that allows for adaptation to customer environments and use cases. The Cisco Prime Analytics platform is able to collect network data easily from a variety of sources. These include the Cisco Prime OSS and network management solutions, third-party element management systems (EMSs), network management systems (NMSs) and domain managers, NetFlow, and also deep packet inspection (DPI) and probe types of technology from Cisco and others. Cisco Prime Analytics also can bring in data from other non-network sources, including social media feeds, point-of-sale (POS) type of information, service desk information, mobile device location, subscription data, and more.

Features and Benefits

Cisco Prime Analytics provides the following features:

- High-performance, real-time analytics with high scalability and low latency.
- Streaming query processing provides for continuous monitoring of live data, real-time analysis and action, and efficient use of compute resources. This compares against traditional business intelligence processes of store first, query later with long latency query processing, and no real-time analysis/action - and that are compute-intensive.
- Best in class collection with network-ready adapters and interfaces to multivendor data sources. Cisco Prime Analytics includes prebuilt adapters in support of data sources for NetFlow and Cisco IOS® Software syslog as well as a framework to easily create other adapters.
- Customizable live, real-time dashboards that allow you to look at the data your way and identify trends.
- Reliability with high availability, failover, online backup and restore.
- With a variety of deployment architectures, Cisco Prime Analytics can be distributed and tiered to deliver horizontal scale and localized data processing.

Figure 1. Cisco Prime Analytics: Enabling Closed Loop Use Cases

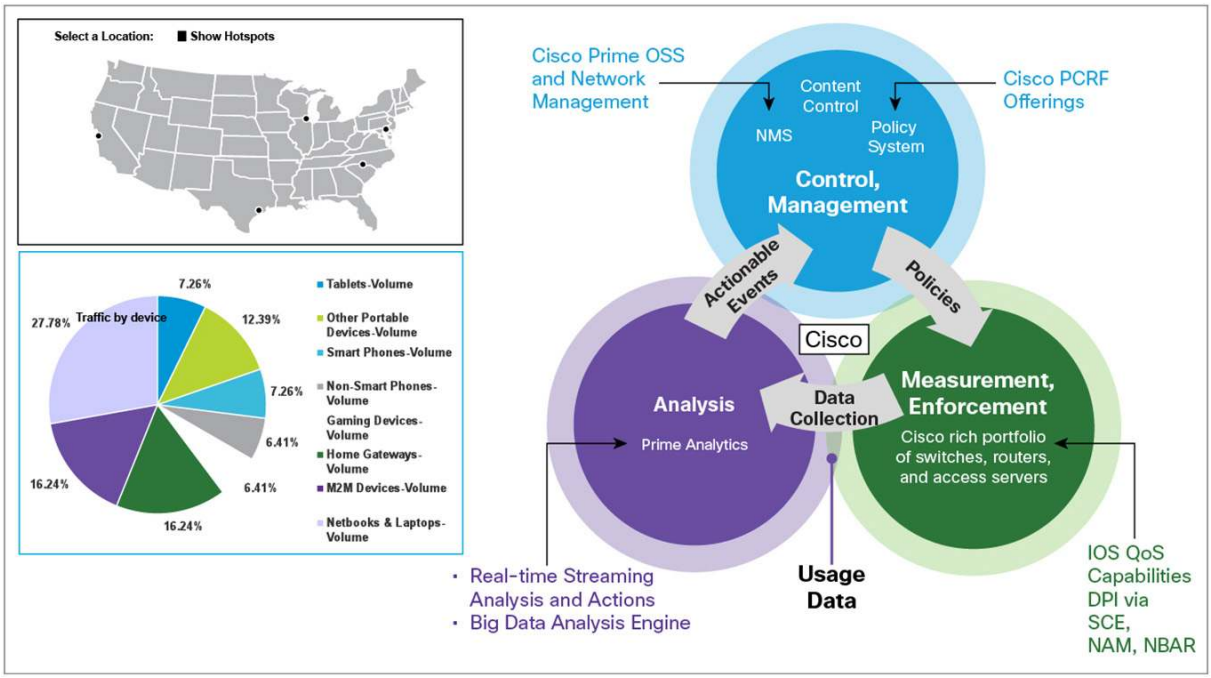

Table 1 lists additional detailed features and benefits of Cisco Prime Analytics.

Table 1. Cisco Prime Analytics Detailed Features and Benefits Summary

Feature	Benefits
Big Data Support	
Support for high volume of data	Cisco Prime Analytics accepts terabytes of daily traffic and can be integrated with modern data archives to support full big data environments.
Support for high variety of data	Cisco Prime Analytics accepts structured and unstructured data, batch data, static data, and data in motion to support full big data environments.
Support for high and variable velocity of data	Cisco Prime Analytics accepts real-time, changing network data to support full big data environments.
Support to automatically handle late arriving data	In any real-time or stream processing system, the process to handle late arriving data and out of order data can be problematic. Cisco Prime Analytics provides a seamless capability to automatically update results for both late arriving and out of order data.
Data Collection	
Steaming data collector library	Cisco Prime Analytics facilitates collection of data: • Across as wide variety of types of networks, including IP next-generation networks (NGNs), mobile, video. • From a variety of network devices/elements: routers, switches, data center servers, and more. • From a wide variety of data types available from the network, including user location, user device IP address, authentication, authorization, and accounting (AAA) information, and more. Cisco has developed a large library of collectors to bring multivendor data into the system, including NetFlow, syslog, and Extensible Messaging and Presence Protocol (XMPP) data.
Streaming data collector framework	The Cisco Prime Analytics framework allows for easy development of an unlimited variety of collectors, using a configuration file or an XML file or writing simple Java code. This variety accommodates a multitude of network-centered use cases.
Integration with existing systems and databases	Cisco Prime Analytics supports systems integration with existing business data systems, for example, customer relationship management (CRM), marketing, inventory, financial system, video content libraries, and more. This supports use case and application development that combines real-time and historical data.
Data Processing	
Standards-based data engine that manages raw data and aggregates	The data engine enables continuous analysis of streaming data, including queries that combine those streams with other streaming data or with historical/staged data. Based on industry-standard ANSI SQL technology and best practices, data is continuously processed. These queries allow and provide for the identification of meaningful events within those streams, including detection of complex patterns, event correlation, and abstraction.
High performance data processing	Prime Analytics provides high speed data processing that enables the timely utilization of big data.
Exporting Data	
Data storage	While some Cisco Prime Analytics real-time streaming processing use cases do not require data storage, many do. In those cases, the raw data, the processed data, and the query results can be stored locally or in an external database (RDBMS, Hadoop, and more) for long-term storage and later data processing.
Actionable, real-time events	With most real-time uses cases, the point of doing things in realtime is often to take action now. When the continuous query engine identifies predefined patterns, an event can be generated and forwarded to another system for action. These events can be user-defined XML. Examples of systems that may consume actionable events generated by the Cisco Prime Analytics engine include: • A policy server (PCRF) to impact quality of service (QoS), gating, throttling • A network management system for fault management escalations • A location based mobile ad insertion
Dashboards	
Live, real-time dashboards	Create graphical representations of the data using multiple available formats such as pie charts, bar charts, histograms, geography, and more, that combine different kinds of related data from multiple sources. Dynamically updating dashboards enhance the situation awareness of decision makers, allowing people to make better decisions and react immediately to changing conditions.
Historical dashboards	Dashboards may be created using historical data for deeper problem and trend analysis.
Customization	Customization allows s you to look at the data your way to meet your business needs.
Reporting	

Feature	Benefits
Report builder	Self-service report creation allows for easy selection of data, the ability to sort, filter, and group data, and generation of reports from a web browser. Prepackaged sample reports are provided. This augments the graphical dash boarding capabilities of the product for cases where tabular data is preferred.
Online analytic processing (OLAP) reports	Support for OLAP reports provides advanced reporting, including customizable drilldowns and parameters to slice and dice the data.
Reporting administration: • Export • Publishing flexibility	Cisco Prime Analytics reporting options provide flexibility to meet users' unique business needs. This includes export to various standard formats including PDF, CSV, and XLS to satisfy the requirements of various users, departments, and applications. Reports also can be published by email or on a local server to provide a variety of options and security levels.
Customizable reports: • Drag-and-drop report creation • Ad hoc	Drag-and-drop report creation helps enable nontechnical business users to create reports easily. With ad hoc reporting, power users can dynamically select data sources for report generation.
Reliability	
High availability and failover for all components	Cisco Prime Analytics is integrated with Red Hat Cluster Suite, providing high reliability.
Online backup and restore	Cisco Prime Analytics provides for the ability to do backup and restore without system interruption.
Security Controls	
Secure Sockets Layer (SSL)/Transport Layer Security (TLS) protocol support	Cisco Prime Analytics provides SSL/TLS database connections for secure authentication and data transmission.
Integration and Customization/Application Building	
Open APIs and standard tools for customers and third parties to develop custom applications	Cisco Prime Analytics is an open, standards-based data management and data processing platform. Developers can use standard tools and APIs like SQL, XML, Java, and more to develop use cases, applications, and system integrations.
Cisco® or partner services for use case development	No two service providers or enterprises have identical analytics needs: • Markets are different • Data sources are different • Customers are different • Networks are different Joint analysis (with Cisco or our analytics partners) is required to understand data sources, markets, and needs, and quantitative analysis is needed to determine models.

Licensing

Cisco Prime Analytics is a licensed software product that runs on Cisco UCS® hardware with Linux OS. Cisco provides software, licenses, and customization/integration services. The software is licensed per application instance, with additional optional licenses available for integration APIs (NetFlow, syslog, and more).

For distributed environments, Cisco Prime Analytics may be deployed as regional collectors, each providing summary data to a central system. The regional collectors do not support dashboards or outbound event interfaces. A Cisco Prime Analytics deployment must have at least one central system.

Ordering Information

For complete ordering support, including pricing, contact your Cisco representative. Table 2 lists product numbers.

Table 2. Cisco Prime Analytics Product Numbers

Product Number	Description
R-Anltc1-BI	Cisco Prime Analytics R1 BI Center Package
R-Anltc-1-BISW	Cisco Prime Analytics R1 BI Central System Software
R-Anltc-1-BICht	Cisco Prime Analytics R1 BI Charting
R-Anltc-1-BIGR	Cisco Prime Analytics R1 BI Center Geo redundancy Package
R-Anltc-1-BISWGR	Cisco Prime Analytics R1 BI Central System Software Geo redundancy
R-Anltc-1-BIChtGR	Cisco Prime Analytics R1 BI Charting Geo redundancy
L-Anltc-1-NB-XML	Cisco Prime Analytics R1 Northbound - XML
R-Anltc-1-RegSW	Cisco Prime Analytics R1 Regional Collector Software
L-Anltc-1-Ad-Nflo	Cisco Prime Analytics R1 Collector Adapter - NetFlow
L-Anltc-1-Ad-Log	Cisco Prime Analytics R1 Collector Adapter - Syslog
R-Anltc-1-Custom	Cisco Prime Analytics R1 SW Customization Services

System Requirements

Table 3 lists the hardware requirements for each server where you will install Cisco Prime Analytics, and Table 4 lists the operating environment requirements.

Table 3. Hardware Requirements for Cisco Prime Analytics 1.0

Component	Requirements
Core	Minimum: 8 Core Intel/AMD 64-bit (x86_64) Production: 16 Core Intel/AMD 64-bit (x86_64)
Physical memory	Minimum: 8 GB Production: 16 GB
Shared memory	16 MB per core

Table 4. Operating Environment Requirements for Cisco Prime Analytics 1.0

Environment	Requirement
Operating system	Red Hat Enterprise Linux (RHEL) 6.2
Web browser	• Internet Explorer 9 • Firefox Extended Support Release 17.x
Java	Java 1.6

Cisco Prime Analytics also supports clustering using Red Hat Enterprise Linux Clustering.

To place an order, visit the Cisco Ordering Homepage.

Service and Support

Using the Cisco lifecycle services approach, Cisco and its partners provide a broad portfolio of end-to-end services and support that can help increase your network's business value and return on investment. This approach defines the minimum set of activities needed, by technology and by network complexity, to help you successfully deploy and operate Cisco technologies and optimize their performance throughout the lifecycle of your network.

For More Information

For more information about the Cisco Prime Analytics, visit http://www.cisco.com/go/primeanalytics or contact your Cisco account team or channel partner.

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