

Pluribus VCF™ Insight Analytics 1.5 for Dell

Network Performance Monitoring and Analytics - Affordable Everywhere

Get Business Intelligence from your Networking Infrastructure

Would you like to deploy network visibility and analytics, but you think it is a luxury you cannot afford? Would you like to extract more business value from your existing network, without any forklift upgrade?

Pluribus VCF Insight Analytics eliminates the economic and operational barrier associated with traditional monitoring infrastructure (based on packet brokers and expensive tools), and brings network monitoring and analytics to broader Enterprise networking from Campus to Datacenter.

Pluribus VCF Insight Analytics is fully interoperable with third party networks, thus allowing customers to extend the life of their current investment by increasing the relevance of their existing network to their business.

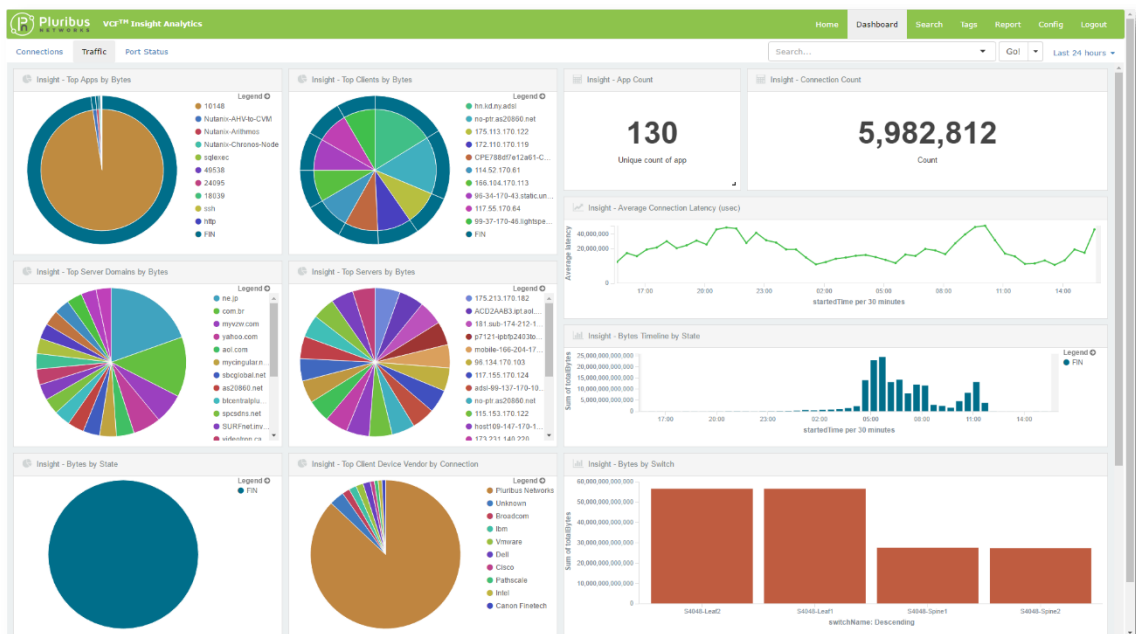
VCF Insight analytics is the most affordable, easiest-to-use, network analytics solution to empower Netops to extract more value from their current assets.

With VCF Insight Analytics empowers Network administrators with:

- A single pane of glass to drastically reduce the time troubleshoot application problems on the network
- A tool to enhance the security posture of the fabric with extensive forensic analysis and flow auditing capabilities
- A unique window into existing networks to gain unprecedented visibility into applications and end-points for monitoring and for capacity planning purposes

VCF Insight Analytics

Pluribus Networks has developed VCF™ Insight Analytics for Dell as a monitoring solution intended to replace the most common deployment of packet brokers and analysis tools. It provides an inexpensive means to monitor and track the performance of business application flows of information, and can be used with or without existing Pluribus Networks based switching fabrics.



Dashboard – click any aspect to filter and drill-down, intuitively.

VCF Insight Analytics (VCF-IA) is a network application built on top of the Open Netvisor Linux flow telemetry capabilities and open API and residing on an external x86 server (or cluster of servers).

The VCF-IA application relies upon an advanced search engine technology to store, aggregate, filter, correlate and visualize vast amounts of data in real-time and with a powerful “time machine” functionality.

Modules for VCF Insight Analytics

VCF-IA offers four modules through the graphical user interface:

Dashboard

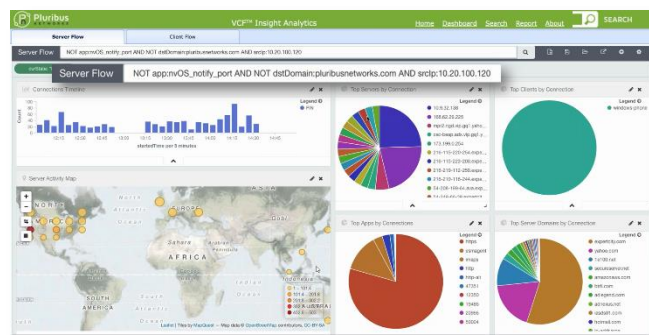
An easy-to-use, drillable dashboard to visualize key application flow metrics, with extensive filtering, trending and correlation capabilities.

Dashboard Features

- Live streaming of network flow data
- Selectable rolling window view from 15 minutes to 30 days
- “Quick Search” window with autocompletion to rapidly filter the entire dashboard for a specific flow, IP, hostname or VLAN traffic.
- Top Applications by total number of connections/transferred bytes with connection breakdown by TCP state (SYN, EST, FIN, RST)
- Top Clients by total number of connections/transferred bytes with connection breakdown by TCP state (SYN, EST, FIN, RST)
- Top Servers by total number of connections/transferred bytes
- Top server destination domains by total number of connections/transferred bytes
- Connection breakdown by TCP state (SYN, EST, FIN, RST)
- Top Clients by device vendor
- Total application count and flow count
- Connection and total bytes histogram by (TCP state) with selectable time window
- Top switches by total connections and total bytes transferred
- Average connection latency (proxy measurement based on SYN/SYN-ACK timestamping) with selectable time window
- Table with detailed flow information
- Intuitive dashboard filtering based on “clickable” live charted data
- Dedicated analytics dashboard for monitoring the Pluribus VCF distributed fabric OS
- Switch port traffic statistics with unicast, multicast, broadcast breakdown. Ingress and egress.
- Switch port statistics for errored frames, congestion drops and discarded frames. Ingress and egress.
- Top switch ports by client and server number of connections

Search

Powerful search engine UI and simple query syntax designed to isolate and filter specific flows among millions - in a fraction of a second.



Search – enter command line instructions for rapid filtering.

Search Features

- Powerful query syntax to filter flow metadata information based on: field-based exact matches, regular expressions, ranges, boolean operators
- Selected views from the Dashboard module
- IP Geolocation for Client and Servers with flow aggregation by City
- Aggregated flow stats: duration, latency, total bytes per connection
- Extensive time machine with absolute or relative year-month-day-hour-minute-second granularity
- Detailed flow table comprising over 30 metadata fields associated with each flow.

Report

A standardized view reporting high-level flow statistics over the past 7 days.



Report Features

- Daily total connections
- Transferred bytes
- Daily average duration
- Daily unique client devices
- Daily unique apps
- Daily average latency
- Hourly connection activity
- Weekly top domains
- Weekly top clients
- Weekly top servers
- Weekly top apps

Tags

With Tags customers can tag their assets (IP addresses, VLANs, MAC addresses, switch ports) with any arbitrary number of metadata/context tags and then be able to aggregate and filter flows based on these programmable tags.

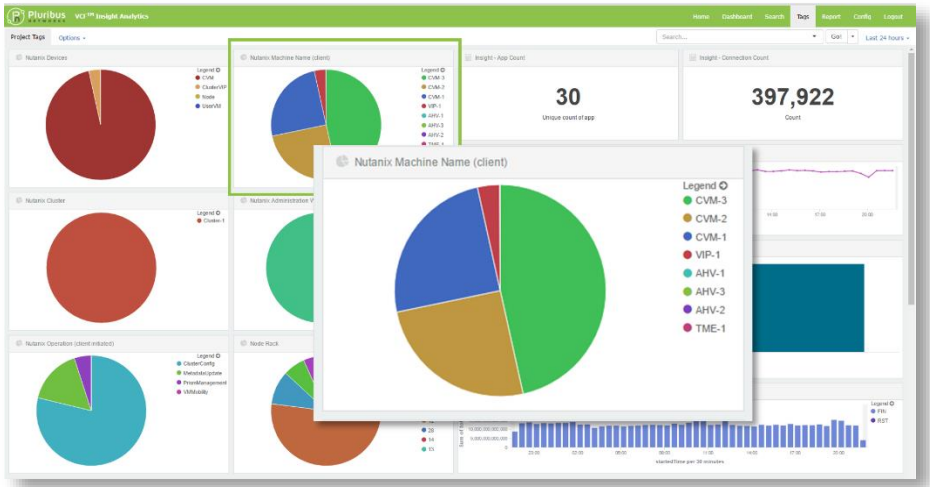
For example customers can look the flows in their network by wonert, by project name, by type of platform, by application, by corporate initiative etc. etc.

The Tags dashboard offers a customizable set of widget for customers to build their own dashboard based on the context tags they program on the flows.

(Please refer to the user documentation to learn more about Tags.)

Tags Features

- Define as many as 100 programmable tags for your flows and network assets
- Customize your dashboard to aggregate flows based on tags and any other flow metadata
- Automate the upload of the tagging profile file (CSV or XML file) via REST API
- Option for manual upload of tagging profile file via UI

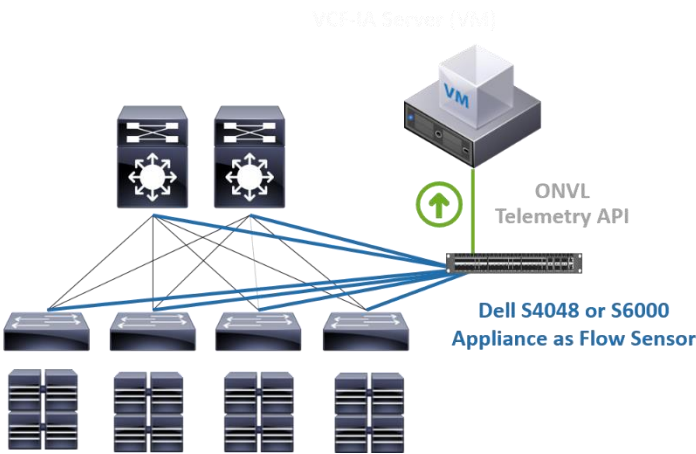


VCF Insight Analytics Deployments

There are two supported deployment models:

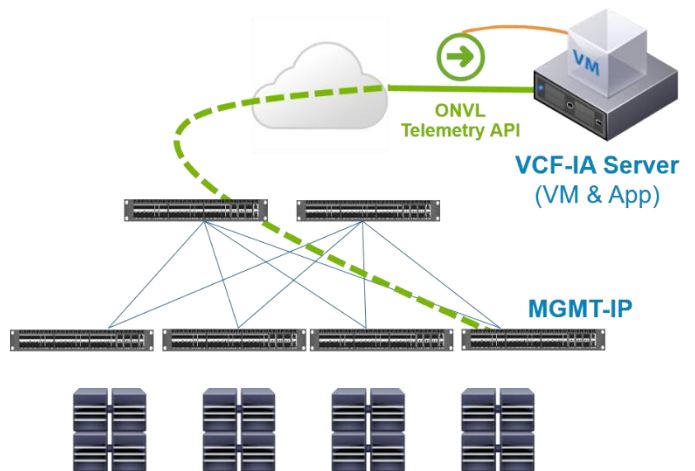
With third party networks (campus, data center or branch)

Network traffic needs to be mirrored from the existing network to a Dell S4048 or S6000 appliance (or cluster of appliances) as a mirror Flow Sensor. The Dell appliance(s) act as flow collectors extracting flow telemetry data that in turn are streamed and recorded inside the VCF-IA search engine.



With Pluribus VCF fabric

In this case, the production fabric is powered by Dell switches running Pluribus Open Netvisor Linux. Each switch also operates as a Flow Broker (sensor) and it extracts flow metadata that in turn are exported and recorded inside the VCF-IA search engine running on an external (cluster) of servers. The x86 server running VCF-IA does not have to be directly connected to the fabric. There are no taps, no mirror ports, no packet brokers and no external tools in this architecture.



Product Requirements and Information

The VCF-IA analytics application is delivered and deployed as a VMware ESXi virtual machine compatible with vSphere 5.5 or later. The minimum virtual machine configuration is:

- 64GB of RAM
- 400 GB SSD
- 16 server class virtual CPUs

There are two instances of VCF-IA VMs:

- 100M flows/30 days days of historical records (whichever comes first)
- 10M flows/7 days days of historical records (whichever comes first)

Product	Part Number	Description
10M Flows for Pluribus/Dell VCF Fabric	VCFIA-SSC-1YR-10M	1 Year Subscription VCF Insight Analytics 10M flow incl. Standard Support
	VCFIA-SSC-3YR-10M	3 Years Subscription VCF Insight Analytics 10M flow incl. Standard Support
	VCFIA-SSC-5YR-10M	5 Years Subscription VCF Insight Analytics 10M flow incl. Standard Support
10M Flows for Third Party Networks – 10G	S4K-VCFIA-10M-SSC-1YR	1 Year Subscription VCF Insight Analytics 10M flows + ONVL-10G-SSC-1YR-PLEX (bring your own server)
	S4K-VCFIA-10M-SSC-3YR	3 Year Subscription VCF Insight Analytics 10M flows + ONVL-10G-SSC-3YR-PLEX (bring your own server)
	S4K-VCFIA-10M-SSC-5YR	5 Year Subscription VCF Insight Analytics 10M flows + ONVL-10G-SSC-5YR-PLEX (bring your own server)
10M Flows for Third Party Networks – 40G	S6K-VCFIA-10M-SSC-1YR	1 Year Subscription VCF Insight Analytics 10M flows + ONVL-40G-SSC-1YR-PLEX (bring your own server)
	S6K-VCFIA-10M-SSC-3YR	3 Year Subscription VCF Insight Analytics 10M flows + ONVL-40G-SSC-3YR-PLEX (bring your own server)
	S6K-VCFIA-10M-SSC-5YR	5 Year Subscription VCF Insight Analytics 10M flows + ONVL-40G-SSC-5YR-PLEX (bring your own server)

About Pluribus Networks

Pluribus Networks provides data center solutions that allow your business to run unconstrained. Our software-defined, open networking, fabric-based solutions transform existing network infrastructures into flexible and strategic assets fully aligned with today's digital business needs. Our Virtualization-Centric Fabric (VCF™) architecture provides unprecedented insight, agility and security to customers seeking to simplify operations, run more cost effectively and bring new applications online faster.

Learn more at www.pluribusnetworks.com/dell and @pluribusnet.

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