

cPacket cCloud Series

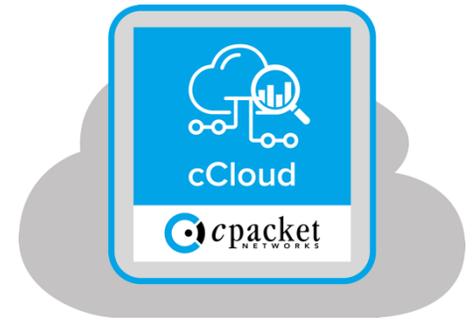
Cloud-Native Traffic Brokering, Capture, Analysis, and Analytics

cCloud enables you to:

- Access raw network traffic frames/packets for the first-time ever in the cloud
- Perform wire-speed deep packet inspection on every packet to facilitate searches for specific hosts, threats, or network compliance deviations
- Achieve complete visibility in hybrid-IT through the same real-time intelligence in the cloud that has been available on-premises
- Have the flexibility of a pay-as-you-consume model with no strings attached, with full service and support
- Achieve operational efficiency through scale-as-you-grow cloud flexibility to trigger visibility instances where and how your production workloads migrate or grow
- Simplify network management by using consistent NetOps, SecOps and CloudOps workflows across on-premises and cloud environments

cCloud Solution

cPacket cCloud is a series of public/private cloud-native instances to provide visibility-as-a-service (VaaS) for application-aware network performance and security assurance for cloud workloads. Fully integrated with Amazon (AWS) Virtual Private Cloud (VPC) traffic-mirroring, the cCloud visibility service chain includes a flexible set of virtual instances based on the same cPacket cVu-V, cStor-V, and cClear-V series of products that enable real-time network performance/security monitoring, forensics analysis, and single-pane-of-glass analytics across branch offices and data centers.



Industries such as financial services, healthcare, retail, manufacturing, education, utilities, transportation, government, defense, and service providers are implementing digital and cloud-first strategies and need network data monitoring for application/user performance management and security investigation. However, moving workloads into the cloud without solid visibility raises the business risk. Now, for the first-time ever, the cPacket cCloud VaaS solution provides access to network packet-level data just like its on-premises visibility solutions have for many years.

The cCloud cVu-V is a cloud-native traffic monitoring and brokering solution. It integrates network performance monitoring (NPM) with network packet brokering (NPB) to enable organizations to cost-effectively, quickly, and reliably feed internal traffic to performance and security tools, in the cloud, while monitoring traffic related issues on the fly, enabling visibility you can trust.

The cCloud cStor-V is a cloud-native instance for traffic capture, playback and analysis that enables application/user and network performance monitoring, security, and deep data visibility. It achieves this through its flexible architecture, optimal performance for lossless packet level capture and storage. This includes real-time data analysis as well as feeding third party analytics and security applications.

The cCloud cClear-V is a cloud-native single-pane-of-glass analytics and visualization service across on-premises, virtual, and cloud environments. It provides high-level visibility of every critical link while allowing progressive drill-down to complete a packet-level view of the network traffic data. cClear-V combines detailed performance/security monitoring, proactive alerts, and the ability to search according to any combination of header fields and patterns in the payload content, in real time, allowing you to quickly identify issues.

The cPacket cCloud VaaS solution combines a number of key technical features, building upon cPacket's industry-leading monitoring pedigree, to maximize performance analysis-based metrics. cCloud helps organizations deliver on a wide range of network performance, application, and user visibility, monitoring, and compliance requirements via a powerful combination of benefits, including but not limited to the following.

Pay-as-you-Consume Flexibility

The cCloud cloud-native solution offers the same capabilities and features as its on-premises counterpart with added flexibility of pay-as-you-consume and scale-as-you-grow using the cloud consumption-based billing model. You can create cCloud VaaS instances on-demand on an hourly, weekly, or monthly basis and use any of the three visibility services under cCloud (cVu-V, cStor-V, cClear-V) or a combination of them. This provides control of your IT spending by moving CapEx expenses to OpEx.

Consistent NetOps/SecOps Workflows

cPacket's cCloud solution enables access to rich packet data by integrating with Amazon's VPC traffic-mirroring feature. Traffic mirroring duplicates the traffic from Amazon Elastic Compute Cloud (Amazon EC2) instances within an Amazon VPC and forwards it to performance and security monitoring tools via cCloud. cPacket cCloud allows deep inspection, threat investigation, performance, and capacity planning. With cCloud, customers can natively replicate and monitor network traffic to their tools within their Amazon VPC, and further cut the complexity and cost of using forwarding agents or container-based sensors. The result is simplicity, elasticity, and cost savings.

End-to-End Coverage

cCloud virtual instances are made available in flexible combinations of performance, features, and consumption options to enable scale-as-you-grow. The solution extends complete coverage from branch offices to data centers to the cloud with a single point of command and control. The result is an easy to manage, cost-optimized solution that makes the best use of resources and provides both breadth and depth of network data visibility to drive analytics and improve application performance, user performance, network performance, and security. Complete visibility across north-south and east-west traffic paths for branch, data center, and cloud enables a hybrid IT environment for business-ready operations.

Open Architecture

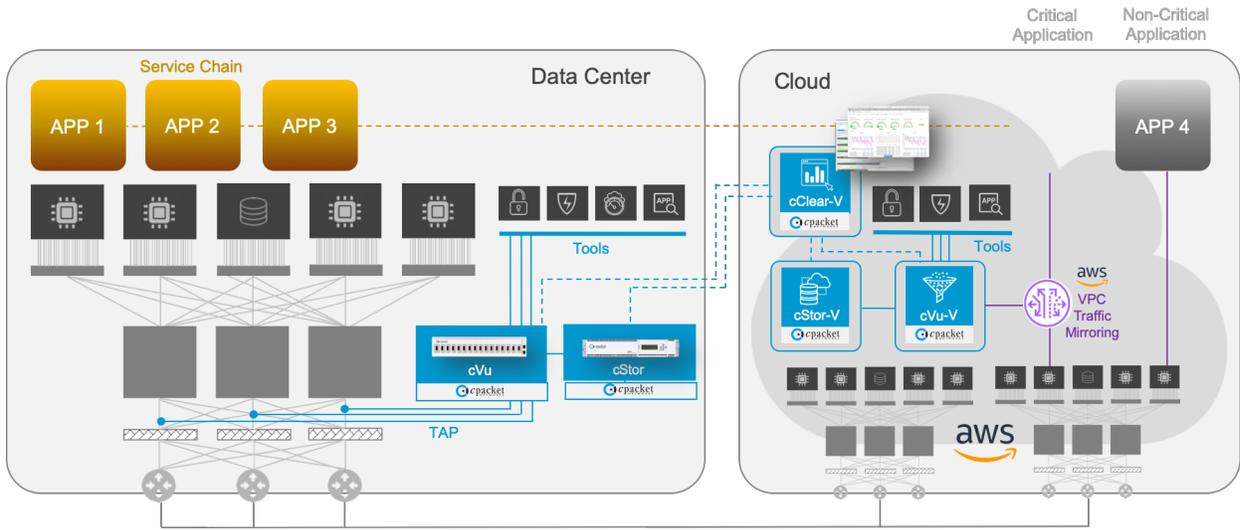
cCloud solution's open architecture is designed to be integrated with other tools. With an open architecture, cCloud can easily interface with third party analytics and security applications. Additionally, other applications can run alongside cCloud, leveraging existing infrastructure and maximizing flexibility. This is particularly useful to augment virtual security tools such as firewalls, IPS, IDS, DDoS, and SIEM to capture and retain packet data associated with important security events for investigation.

Deployment and Use Case

cPacket cCloud comprises of a software-only solution that can be deployed in a private cloud using BYOL (Bring Your Own License) CapEx/OpEx licensing model or in a public cloud using an OpEx consumption model. cCloud has a multi-cloud support roadmap and is fully deployable in AWS integrating with Amazon VPC traffic-mirroring which provides the access to network packet data. cCloud cVu-V's instance can take the single traffic feed from AWS and create multiple copies of it, process it for operations such as filtering, slicing, deduplication, and time-stamping and feed customized outputs to the right destinations in the right format. This provides a central traffic processing and consolidation point within a VPC and greatly simplifies monitoring.

Additionally, cCloud cStor-V's packet capture instance can be deployed to take one or more of the feeds from the cVu-V and record them for real-time and deferred analysis or for evidence purposes. cStor-V instances can be deployed elastically

as needed for capturing the traffic for performance, security, and capacity planning reasons. Finally, the cCloud cClear-V analytics engine provides centralized single-pane-of-glass analytics through customizable dashboards.



Reference design for complete hybrid visibility across on-premises and cloud

cPacket’s visibility tools provide proactive metrics such as application visibility, TCP response-time, round-trip time, retransmits, one-way latency, and micro-burst analysis. With cPacket cCloud, network/security/application/cloud teams (NetOps/SecOps/DevOps/CloudOps) can securely deploy and monitor functionality and performance to assure service levels they need. Additionally, the same workflows can be implemented across on-premises and the cloud to greatly simplify operations.

Tiers and Options

For scale-as-you-grow, cPacket cCloud instances are available in multi-tier as shown below, along with optimal positioning/deployment recommendation (which may vary depending on the requirements). The sizing is based upon the maximum performance, throughput, and virtual storage capacity supported which maps to specific cloud IaaS instances underneath and billing. To learn more, visit www.cpacket.com

	cCloud				
	cClear-V	cVu-V 1	cVu-V 10	cStor-V 1	cStor-V 10
Basic deployment	Analytics	Traffic Brokering		Traffic Capture	
Advanced deployment	Analytics		Traffic Brokering		Traffic Capture

cPacket cCloud positioning guidance

Technical Specifications

Key Features:

	cCloud		
	cClear-V	cVu-V	cStor-V
Single-Pane-of-Glass Dashboards	Yes		
Fully Integrated Workflows	Yes		
Millisecond Analytics	Yes		
Global Search	Yes		
Data Correlation and Baselining	Yes		
Open API	Yes		
Traffic Aggregation/Replication		Yes	
Packet Slicing/Truncation		Yes	
VXLAN/MPLS/VNTag Stripping		Yes	
VLAN Tag with Inner VLAN Filtering		Yes	
Filtering		Yes	
Packet Deduplication		Yes	
MAC-in-MAC DC Decapsulation		Yes	
Timestamping		Yes	
Role-Based Administration		Yes	
Software Upgrade/Restore		Yes	
GUI, Serial Console and CLI		Yes	
SNMPv2c and MIB		Yes	
TACACS+/RADIUS Authentication		Yes	
cClear Management/Dashboards		Yes	
Time Stamping			Yes*
Packet Indexing			Yes
Fast/Expedited Querying			Yes
Flow Information			Yes
Latency/Jitter Analysis			Yes
Real-Time Analysis			Yes
Multicast Video Analysis			Yes
Financial Protocol Analysis			Yes
Multiple Capture Merge			Yes
cVu-V Integration			Yes
cClear-V Integration			Yes

* With cPacket cVu-V integration

Performance and Capacity:

	cCloud				
	cClear-V	cVu-V 1	cVu-V 10	cStor-V 1	cStor-V 10
Tools Connectivity	N/A	10*	25*	N/A	N/A
Captures per Instance	N/A	N/A	N/A	1*	1*
Monitoring/Capture Rate	N/A	< 1 Gbps*	< 10 Gbps*	< 1 Gbps*	< 10 Gbps*
Default Cloud Storage	N/A	N/A	N/A	1 TB	10 TB
Maximum Cloud Storage	N/A	N/A	N/A	1 TB	10 TB

* Projections only. Final specs available by General Availability (GA) and subject to change

Operating Conditions:

Supported on any AWS nitro-enabled instances with Amazon VPC Traffic-Mirroring. Tested instances include:

	cCloud				
	cClear-V	cVu-V 1	cVu-V 10	cStor-V 1	cStor-V 10
General Purpose	m5.xlarge	m5.xlarge	m5.2xlarge	m5.xlarge	m5.2xlarge
vCPU	4	4	8	4	8
Memory	16 GB	16 GB	32 GB	16 GB	32 GB
Bandwidth	< 10 Gbps	< 10 Gbps	< 10 Gbps	< 10 Gbps	< 10 Gbps

* Projections only. Final specs available by General Availability (GA) and subject to change

Ordering Information

Refer to AWS Market Place (when generally available) for usage and costs estimates which might be different from the estimate. They will be reflected on monthly AWS billing reports.

Service Instance	Description
cCloud cClear-V Series	Single pane-of-glass orchestration and management across end-to-end hybrid visibility environment, on-premises, and cloud
cCloud cVu-V 1 Series	Single cVu-V instance supporting 10 virtual tools/destinations at up to 1Gbps monitoring rate
cCloud cVu-V 10 Series	Single cVu-V instance supporting 25 virtual tools/destinations at up to 10Gbps monitoring rate
cCloud cStor-V 1 Series	Single cStor-V instance supporting up to 1Gbps capture-to-storage rate and up to 1TB cloud storage space
cCloud cStor-V 10 Series	Single cStor-V instance supporting up to 10Gbps capture-to-storage rate and up to 10TB cloud storage space

About cPacket Networks

cPacket Networks delivers visibility you can trust through network monitoring and packet brokering solutions to solve today's biggest network challenges. Our cutting-edge technology enables network and security teams to proactively identify issues in real-time before negatively impacting end-users. Only cPacket inspects all the packets delivering the right data to the right tools at the right time and provides detailed network analytics dashboards. Whether you need greater network visibility for security tools or performance monitoring tools, our solutions are designed to overcome scalability issues and reduce troubleshooting time. The result: increased security, reduced complexity, with lower costs, and a faster ROI.

Based in Silicon Valley, CA, cPacket enables organizations around the world to keep their business running. Leading enterprises, service providers, healthcare organizations, and governments rely on cPacket solutions for improved agility, higher performance, and greater efficiency. Learn more at www.cpacket.com, the cPacket [blog](#), or follow us on [Twitter](#), [LinkedIn](#), and [Facebook](#).

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