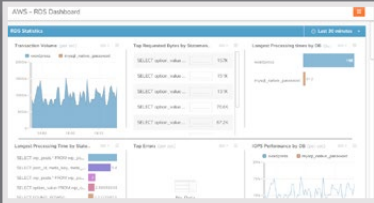# ExtraHop for AWS

ACCELERATE CLOUD ADOPTION WITH VISIBILITY SPANNING ON-PREMISES AND AWS ENVIRONMENTS

ExtraHop delivers unparalleled real-time IT operations visibility to help enterprises make the most of AWS. With wire data analytics spanning their on-premises and AWS environments, IT teams can identify workloads for migration to AWS and then optimize their performance, availability, and security.

"When we come into the office, one of the first things we do now is turn on the displays with the ExtraHop dashboards. We are always watching them to see user experience, activity levels, and application behavior in AWS."

—Brad Blake
Director of IT, Conga

SOLUTION HIGHLIGHTS

- **Pinpoint the origin of cloud latency—whether in the Internet, load balancing, web servers with auto-scaling, database cache, or database**

- **Make informed decisions about provisioning RDS and ELB.**

- **Identify workloads to migrate to AWS and then optimize their performance in the cloud**

- **Understand differences between AWS regions and Availability Zones**

- **Detect potential data leakage by monitoring user access to S3 buckets and files**

GO BEYOND RESOURCE UTILIZATION WITH WIRE DATA

ExtraHop analyzes the communications passing across AWS services to provide more meaningful metrics than just the resource utilization (CPU, memory, disk I/O, bandwidth) shown by traditional cloud monitoring tools. Wire data analytics enables IT teams to monitor workloads across EC2, RDS, S3, ELB, and other AWS services, including:

- **EC2** – Track overall network and EC2 performance in real time, and then drill down to transaction metrics for individual instances, such as HTTP status codes and error messages. Shut down underutilized instances that may have been forgotten.

- **RDS** – Monitor RDS queries, including methods, errors, and SQL statements for all database types supported by RDS: MySQL, Oracle, and Microsoft SQL Server. Get the visibility you need to make provisioning decisions for RDS.

- **S3** – See every bucket and file request to S3, including which users are making those requests and how much data is passed to each user.

- **Regions and Availability Zones** – Understand how workloads are performing in different regions and availability zones, including transaction latency. View the geographic location of users and their associated service levels with geomaps for each AWS region.

- **ELB and Auto-Scaling** – Gain real-time visibility into ELB and Auto-Scaling activity and set up Auto-Scaling policies to automatically add capacity based on transaction-level events.

	Amazon EC2	Amazon RDS	Amazon S3	Elastic Load Balancing
CloudWatch	CPU	CPU	Object count	Latency
	Disk I/O	Disk I/O	Bucket size	Requests
	Disk read/writes	DB connections		HTTP status codes
	Status check failed	Disk latency		Healthy host count
	Bandwidth	Free disk and memory		Unhealthy host count
		Network throughput		Surge queue length
		Disk queue depth		Spillover count
		Replica lag		Request count
		Swap usage		
ExtraHop	HTTP status codes	Methods	Bucket/file access	Server processing
	Errors	Errors	Users and location	Network transfer
	URIs/IPs	SQL statements	Methods	HTTP status codes
	Users and location	Users	Status codes	L4 TCP analysis
	API calls	DB processing	Server processing	Auto-Scale visibility
	HTTP payload data	Network transfer	Network RTT	Health check analysis
	Server processing	L4 TCP analysis	Trend-based alerts	Load analysis
	Network transfer	Trend-based alerts	**and more …**	Trend-based alerts
	L4 TCP analysis	**and more …**		**and more …**
	and more …			

ABOUT EXTRAHOP NETWORKS

ExtraHop is the global leader in real-time wire data analytics. The ExtraHop platform analyzes all L2-L7 communications, including full bidirectional transactional payloads. This innovative approach provides the correlated, cross-tier visibility essential for application performance, availability, and security in today's complex and dynamic IT environments.

HOW EXTRAHOP WORKS IN AWS

ExtraHop offers several AMIs for AWS that perform stream analysis on forwarded traffic, extracting built-in and custom metrics, and also detailed transaction records for multidimensional analysis. A central manager provides you with a single view across nodes in various regions, Availability Zones, and even on-premises locations.

ExtraHop reveals the geographic origin of user traffic service levels for each AWS region, enabling IT teams to select the best region from which to run workloads.

MANAGE WORKLOADS IN AWS WITH CONFIDENCE

ExtraHop helps to accelerate cloud adoption by providing previously unavailable insights into AWS workloads. By analyzing wire data in their datacenters and AWS deployments, you can know whether your AWS investments are paying off and how to optimize your return-on-investment.

Identify the best candidates for migration	ExtraHop makes it possible to monitor all database and web transactions and identify the most-requested SQL queries and web resources along with their response times.
Maintain visibility during migrations and change	With real-time wire data analytics, you never lose visibility. ExtraHop automatically discovers new AWS instances and workloads as they are spun up, making it an excellent monitoring solution during migrations and for fast-changing test and development environments.
Measure before-and-after performance	ExtraHop continuously builds performance baselines for on-premises and AWS workloads so you can provide performance-based SLAs to stakeholders. Better still, you can prove that AWS deployments perform as well or better than on-premises deployments.
Optimize AWS workloads	Once your workloads are up and running in AWS, ExtraHop can help you understand where to scale up or down and make other architectural decisions—something that AWS does not do for you. For example, ExtraHop can reveal which instances are underutilized, which workloads should be moved to a different region, which queries should be stored in Elasticache, or which EC2 URIs should be offloaded to CloudFront.