



# How To Monitor AWS in a Hybrid Cloud Environment

A Progress | Ipswitch eGuide

# Introduction

Your IT infrastructure is ready to make the big move—from on-premises to the public cloud. Or perhaps you're already in the cloud, but it's time for a change to a new platform provider.

You are not alone in your interest in the cloud. As [reported in Forbes](#), Gartner's latest annual report on the public-cloud computing infrastructure market shows that cloud adoption is not slowing down at all. The worldwide infrastructure as a service (IaaS) market grew more than 31% in 2018—reaching \$32.4 billion, up 31% from \$24.7 billion in 2017.

So your next step is to decide which cloud platform provider is best for your IT environment. For many, the choice comes down to the two market leaders—Amazon Web Services (AWS) and Microsoft Azure. [According to Gartner](#), Amazon Web Services owns nearly half of the world's public-cloud infrastructure market (47.8%) followed by Microsoft Azure at a distant second, with 15.5%.

Some people like to go with the market leader while others think the company in second place is apt to work harder for your business.

In any case, regardless of if you choose to go with AWS or Azure, you will eventually run into the issue of monitoring your infrastructure in the cloud.

If you are choosing to go the Azure route, we suggest you take a look at our recent eBook, [Four Reasons to Use a Network Monitoring Tool Instead of Azure Monitor](#).

If you are going with AWS or are undecided, then please read on.

This eBook will cover why AWS is the leader as a cloud service provider, and why you would want to choose AWS over other cloud service providers. We will also teach why you will need to decide on a network monitoring tool to help monitor your infrastructure in the cloud.

## More Experience and Heavy Investors in Cloud Technology

AWS provides the most experience in delivering public cloud services, entering the market first after initially launching in 2002 and then relaunching in 2006. Microsoft announced Azure in 2008 and then formally launched the service in 2010.

AWS continuously invests heavily in its data centers. [According to UpGuard](#), AWS server capacity is about six times larger than the next 12 competitors combined. [AWS also has more availability zones](#)—42 with eight on the way, compared to 34 (and four more on the way) for Azure.

All this computing power offered by AWS assures you of always being able to leverage the latest technologies. AWS data centers are also placed strategically around the globe with a strong presence in North America. This makes it possible to direct end-users and customers from anywhere in the world to a data center that's relatively close—thus reducing latency more consistently.

[As reported in eWeek](#), Gartner has described AWS as “the most mature, enterprise-ready (cloud services) provider, with the deepest capabilities for governing a large number of users and resources.” The vast and growing array of AWS services—up to 165 this year—spans compute, storage, networking, database, analytics, application services, deployment, management, mobile, developer tools, and tools for the Internet of Things. Anything you do in your own data center can be done on AWS, and the technology never grows old.

## Advantages for Developers and Storage

With more data centers than Azure, AWS services are particularly beneficial for geographically-dispersed software teams, enabling them to spin up development servers instantly and collaborate more efficiently. AWS services also provide developers with functionality through APIs that can be used in their applications—providing the building blocks for scalable, reliable and secure applications. This makes it easier for developers to focus on application features.

Storage—for primary, backup and archiving purposes—is another particularly strong area for AWS. Led by S3 (Simple Storage Service) object storage, AWS features the most advanced, mature and longest-running public cloud storage service (in production since 2006). AWS also offers temporary storage, which can be assigned when an instance is started, then destroyed when it is terminated.

As for the cost of AWS vs. Azure, that's always an issue that quickly surfaces to the top of the discussion on which platform to use. As illustrated in this helpful [comparison from Flexera](#), it can be challenging to compare the two services from a cost perspective. However, AWS offers the most payment options and enables you to save more the more you pay upfront.

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## A Checklist to Guide Your Decision-Making

Before taking it for granted that AWS is the best cloud solution for your company, it's essential to assess your options.

As you would with any technology project, start with a scorecard of attributes to help guide you in your choice of a cloud platform. Here are the high-level considerations:

- › **Design:** Will the platform provider assist you in designing your IT infrastructure?
- › **Migration:** How easy will it be to move your infrastructure and your data to the cloud platform?
- › **Access:** Will end users find it easy and fast to access files?
- › **Collaboration:** Will the new environment facilitate collaboration among end-users who are working in various locations, perhaps around the world?
- › **Development:** Is the platform just as helpful for spinning up development servers and helping developers collaborate?
- › **Scalability:** As your computing requirements change, will the infrastructure easily scale up and down?
- › **Security:** Does the cloud provider offer a strong security posture to protect your data and digital assets?
- › **Support:** Are IT resources readily available for any performance issues that arise?
- › **Continuity:** How quickly can the cloud provider restore operations in the event of a disaster?
- › **Management:** Does the provider monitor your cloud environment for performance issues and offer basic system administration?

As you work your way through these attributes, identify which functions you might want to handle with internal resources. Across the board, you will want to clearly delineate what your cloud provider will and will not do. Security, for example, requires both parties to share the responsibility.

## Be Sure to Monitor Any Platform You Choose

No matter which cloud platform you choose, it's important to invest in a tool to help you monitor the performance of your cloud environment. Service providers may give you reports on your cloud resources, but that's only one part of the picture.

A big issue that has been coming up with IT teams lately is the ability to understand resource consumption beforehand. Cloud providers really don't want you to know this because it means less money for them down the line.

Many organizations that rely on AWS aren't doing the best job tracking their AWS resource usage and spending— they just pay the monthly bill from Amazon. Unless that bill significantly increases, they have no incentive to determine if they're really using all those resources or if they're accurately billed. Many companies pay an average of 36% more for cloud services than they need to, [according to one report from koomey.com](#). So where do you start?

Common knowledge might say to use a built-in monitoring tool, like [AWS CloudWatch](#), but with a comprehensive network monitoring solution, you give your IT team several distinct advantages over CloudWatch or similar cloud-native monitoring tools, while keeping the capability to monitor anything accessible through CloudWatch's API.

Another issue that commonly comes up when moving to the cloud is being able to see how everything connects on your network on-premises and in the cloud. Your users aren't going to know the difference if a cloud service goes down vs. an on-premises service. The IT team will always be the first to get complaints.

Since your cloud-based resources are part of your overall networking infrastructure, just like your on-premise resources, they should be managed that way. Your cloud monitoring solution should allow you to see everything (cloud and physical resources) in context so you can quickly drill-down to issues and isolate the cause of problems that span technology silos.

That includes traffic to and from your AWS cloud resources, usage, billing and much more. Seeing not only how you're using AWS resources but where that usage is coming from can give you insight into how to use those resources more efficiently and reduce your costs.

While CloudWatch is capable of monitoring on-premise resources via an agent or API, setting this capability up is a complex process—CloudWatch is able to perform basic hardware-level resource measurement, but anything else must be added via custom components and configurations. With a solution like WhatsUp Gold, you can monitor anything you can ping, be it cloud resources, or on-premise.

This is especially critical if you're operating in a multi-cloud environment, as a staggering 81 percent of public cloud users are, according to a recent [Gartner survey](#).

Even if you are simply monitoring AWS and on-prem systems, multitenancy can still cause issues with CloudWatch. If you're tracking resources across multiple AWS accounts, you'll need to log in to each different account to check your alarms. If you want to send alerts to a new team member, you'll need to create an AWS account for each team member.

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# Monitor Your Hybrid Cloud Environment

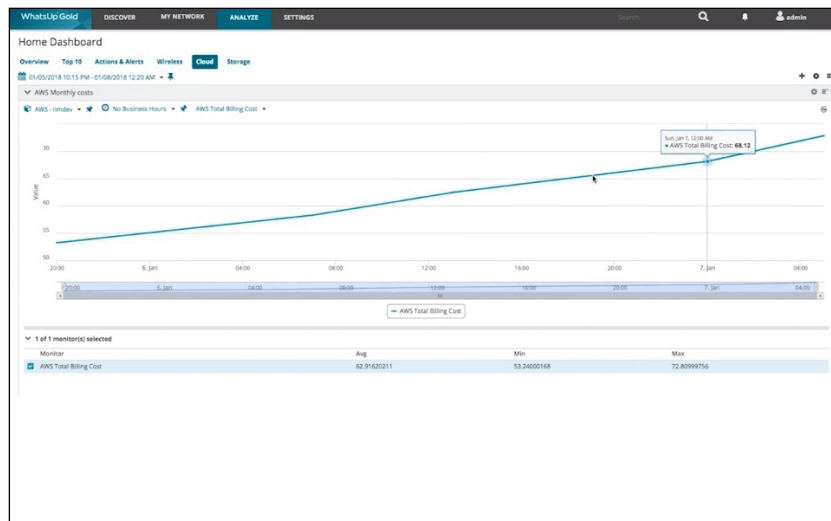
So how can businesses reign in runaway cloud costs, and impress the boss with their business acumen while they're at it? There is no need to learn different products for different insights into your networked environment. Intertwining multiple products to solve a single issue is burdensome and wasteful.

With most business networks utilizing a hybrid cloud environment, Progress' all-in-one network monitoring solution, WhatsUp Gold, has all those endpoints on-premise and in the cloud monitored. As for cloud performance monitoring, WhatsUp Gold shows AWS and Azure availability and performance.

While there's no doubt that CloudWatch is a capable product when it comes to monitoring AWS resources, it's also a product that needs a capable user. To put it simply, a non-technical user would not be able to understand CloudWatch's UI, and good luck finding dashboards that make things clearer. The default graphs and dashboards provided by Amazon are static and limited, and building new dashboards can be cumbersome, requiring the user to navigate through various screens, menus, and submenus to find the metrics that they may want to add.

When it comes to actually using the product, it only gets harder. CloudWatch requires scripting experience in order to configure performance monitoring and alerts and lacks many out-of-the-box capabilities found in full-fledged monitoring solutions. Alerts and alarms, for example, must be custom-built.

WhatsUp Gold, on the other hand, provides a unified view of your network from one actionable, unified dashboard. Even a non-technical user can understand the interconnections of your network at a glance, and could even identify issues. You can also create dashboards for individual users or technology domains to provide the information you need to streamline troubleshooting or administration, customize dashboards with reports for servers, applications, virtual, wireless, cloud and network traffic, and export or schedule report runs to share with your team or management.



Tracking AWS Costs with WhatsUp Gold

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