

## Managing cloud applications with AppDynamics

### What is cloud computing?

Cloud computing is a model for enabling convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction. There are three cloud service delivery models: Infrastructure as a Service (IaaS), Platform as a Service (PaaS) and Software as a Service (SaaS).

Cloud computing is all about abstraction with a goal of bringing technology to the masses. IaaS provides abstraction of underlying hardware, PaaS offers abstraction of underlying hardware & software platforms and SaaS offers complete abstraction of underlying hardware, software, and application to its users.

### Application management challenges in the cloud

Public, private, and hybrid cloud are increasingly becoming mainstream and more applications are transitioning to these complex environments. This means IT has to effectively balance and manage applications running on-premises and in the cloud. Today, tolerance for application downtime is decreasing, the cost of service slowdowns and interruptions is increasing, and the resources dedicated to manage the entire complex, heterogeneous environment are flat at best, if not shrinking. The operational complexity of running applications in diverse and distributed environments makes it difficult for IT to have complete control over the applications and deliver exceptional end-user experience.

### AppDynamics support for applications in the cloud

AppDynamics provides complete visibility into applications and business transactions deployed in public, private, and hybrid cloud environments, delivered via IaaS, PaaS or SaaS models.

Following are the top use cases where customers are using AppDynamics to manage applications deployed in cloud.

**Monitoring applications deployed in cloud.** AppDynamics allows enterprises to manage hybrid cloud applications by providing:

- A single interface for end-to-end transaction tracing across distributed architectures, on-premises, cloud, and hybrid
- Superior anomaly detection, set against automatic dynamic baselines and SLAs, tailored for environment characteristics
- Average response time and call volume metrics for third-party SaaS applications.

*“Our private infrastructure is rather static, which is radically different from Amazon Web Services. Our success in our first steps with AWS are because we bridged those two together with AppDynamics.”*

*John Martin, Senior Director of Production Engineering, Edmunds.com*



### KEY FEATURES

- Auto-discover and visualize the dependencies between application components deployed on-premises and in the cloud
- Correlate cloud infrastructure metrics with metrics from the applications running on the cloud
- Dynamically baseline application metrics and alert on deviation from the baseline performance
- Customize health rules, policies, and actions around the metrics
- Use runbook automation to help resolve application performance issues
- Auto-scale cloud applications

**Monitoring native cloud applications.** AppDynamics provides visibility into:

- Native cloud applications, for example, AWS technologies including EC2, RDS, SQS, S3, and DynamoDB
- Core cloud infrastructure monitoring via extensions, for example, AWS infrastructure monitoring through our [CloudWatch monitoring extension](#), which allows baselining of infrastructure metrics and enables time-based comparisons of CPU, memory, I/O, and other infrastructure utilization

**Migrating applications from on-premises to cloud.** AppDynamics provides critical planning insights by automatically:

- Discovering all the business transactions in your application environment
- Mapping and visualizing how business transactions are executed through distributed architecture components
- Baselining the key performance indicators to facilitate comparison pre- and post-move

*"The ability to trace a transaction visually and intuitively through the interface was a major benefit AppDynamics delivered. This visibility was especially valuable when Nasdaq was migrating a platform from its internal infrastructure to the AWS Cloud. We used AppDynamics extensively to understand how our system was functioning on AWS, a completely new platform for us."*

Heather Abbott, Senior Vice President of Corporate Solutions Technology, Nasdaq

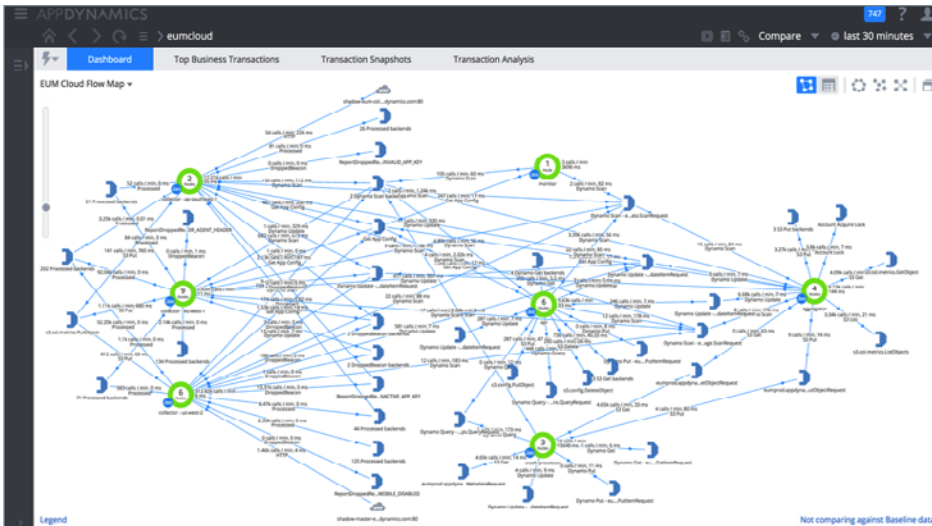


Figure: Flow map of applications deployed in AWS cloud

**Auto-scaling cloud applications.** AppDynamics supports auto-scaling of cloud applications by:

- Setting up workflows, health rules, and policies for auto-scaling based on a combination of application metrics and infrastructure metrics.
- Enabling elastic scaling driven by application performance, preventing over-provisioning of infrastructure that then is underutilized.

### Supported platforms

- [Amazon Web Service](#)
- [OpenShift by Red Hat](#)
- [Windows Azure](#)
- [HP Cloud Services](#)
- [Pivotal](#)
- [Citrix](#)
- [Cloud Foundry Foundation](#)
- [OpenStack](#)
- [Rackspace](#)
- [IBM](#)

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