

ITProToday™ IT Acronyms: A Cheat Sheet for IT Pros

Term	Short for ...	Meaning
AIOps	Artificial Intelligence for IT Operations	AIOps is an approach to IT operations that emphasizes the use of artificial intelligence and machine learning to automate as many processes as possible. You can debate the extent to which AIOps is a mere buzzword that doesn't refer to any specific type of technology, but application performance monitoring and observability vendors have glommed onto the term in recent years, promising that their products will leverage AI to help automate complex operations.
APM	Application Performance Monitoring or Application Performance Management	APM is the discipline of monitoring and managing software applications to ensure that they meet performance and availability requirements. Typically, APM involves collecting various metrics — such as application response time and error rates — on a continuous or near-continuous basis in order to identify issues that could negatively impact the end-user experience.
AWS	Amazon Web Services	AWS is the public cloud computing platform owned by Amazon. It has long been the most popular public cloud by market share, although its main competitors — Microsoft Azure and Google Cloud Platform — have been catching up in recent years by stealing business away from AWS.
BI	Business Intelligence	BI is the use of data analytics technologies to provide actionable insights about business operations. BI is a generic term; you can implement BI using a variety of different tools and processes, but the core idea is enabling the systematic analysis of business-related data to reveal insights that non-technical users can understand.
BPM	Business Process Management	BPM is a systematic approach to optimizing the processes that drive a business. Although the term implies that the goal is simply to manage business processes, BPM really focuses on improving business processes wherever possible. Gaining holistic visibility into which processes a business relies on is also a core goal of BPM.
BPO	Business Process Outsourcing	BPO is the use of third-party vendors to perform business processes. In the IT industry, managed service providers (MSPs) are one example of BPO vendors. Businesses that outsource functions such as call center operations, customer service relations, or accounting to external providers are also using BPO. For IT practitioners, BPO can reduce the scope and complexity of IT systems that companies need to maintain in-house, but it may also introduce security and privacy risks because it requires sharing some business data with external organizations.
CMS	Content Management System	A CMS is a platform designed to streamline the process of creating and managing digital content, such as websites. For example, WordPress has become a popular CMS because it makes it easy for users without special technical skills to create, modify, and manage web pages and blog posts.
CSP	Cloud Solutions Provider or Cloud Service Provider	A CSP is a vendor or platform that provides cloud computing services of some kind. Major public cloud providers like AWS and Microsoft Azure are the most obvious examples, but any business that delivers cloud infrastructure or PaaS solutions falls within the category of CSP.
CRM	Customer Relationship Management	CRM is the discipline of managing customer relationships. CRM can be done manually, but most medium-size and larger businesses rely on CRM platforms, such as Salesforce and HubSpot, to help automate and scale their CRM operations — which means IT teams are commonly expected to implement and manage CRM solutions for their organizations.
DX	Digital Transformation	DX is a generic term that refers to increased use of digital solutions within an organization. By now, most businesses have already migrated to digital technologies to power most of their operations, so DX is almost a misnomer — digital transformation has already occurred in most respects at the majority of companies. Still, DX remains an IT buzzword because IT teams often face pressure to double-down on digitalization initiatives. For example, they might be told that they should migrate on-premises workloads to the public cloud to take advantage of more scalable and flexible digital technologies than those that they can maintain in a private data center.
DaaS	Desktop as a Service or Database as a Service	DaaS can stand for two distinct, nonrelated terms. One is desktop as a service, which is a type of desktop infrastructure that relies on virtual machines running in the cloud to provide desktop environments to end users. The other, database as a service, is a cloud-based service for hosting desktops. Both types of technologies eliminate the need for IT teams to set up and maintain their own host infrastructure, although they deliver different types of solutions.
DevOps	Developer Operations	DevOps is a portmanteau that emphasizes the integration between software development operations and IT operations. The goal of DevOps is to achieve closer collaboration between developers and IT engineers in order to ensure they work toward common goals, rather than creating problems for each other.
EC2	Elastic Compute Service	EC2 is the virtual machine (VM) hosting service in the AWS cloud. It provides access to hundreds of VM instance types that are available under a range of pricing options (which means it's important to choose the right instance type and pricing plan for your needs). Most EC2 instances are hosted on physical servers shared with other EC2 customers, but it's possible to purchase dedicated EC2 instances if you want a server all to yourself.
GraphQL	Graph Query Language	GraphQL is a data query language that can be used for formatting API requests. It's a modern API query format designed to ensure efficient requests, while also simplifying the API implementation process for developers.
IaaS	Infrastructure as a Service	IaaS is a type of cloud computing service in which access to infrastructure, such as virtual machines, is delivered on-demand over the internet. IaaS is one of the bread-and-butter categories of cloud computing solutions available today. Popular examples of IaaS solutions include Amazon EC2, Azure Virtual Machines, and Google Cloud Compute Engine.
K8s	Kubernetes	K8s is short for Kubernetes, an open source container orchestration system that has become the de facto solution for deploying containerized applications.
NoSQL	Not SQL	NoSQL is a style of database that doesn't rely on a rigid, tabular structure to store data. Instead, NoSQL databases use storage models that are simpler and/or more flexible, such as key-value stores. Somewhat confusingly, NoSQL is a style of data storage architecture (actually, it's family that includes several distinct architectures that share common characteristics), whereas SQL is a type of query language — so you can't really make apples-to-apples comparisons between NoSQL and SQL. However, in the sense that SQL refers to a general style of database designed for SQL-based queries, SQL is the opposite of NoSQL.
O11y	Observability	O11y is shorthand for observability, a process that focuses on understanding the internal state of a system based on external outputs. It's debatable whether observability in IT is actually different from monitoring, but the term has become an important buzzword in recent years — and you can argue that observability goes beyond monitoring because it focuses on holistic visibility into complex systems, whereas monitoring is more about collecting basic metrics, which on their own are not enough for understanding the state of a system as a whole.
PaaS	Platform as a Service	PaaS is a type of cloud computing service that provides access to both software development and deployment tools and cloud-based infrastructure for hosting applications. The goal of PaaS is to provide businesses with a one-stop shopping solution for creating, deploying, and operating software. Although you don't have to use a PaaS to run software in the cloud, PaaS services — such as Google App Engine and AWS Elastic Beanstalk — make the process simpler. The tradeoff is that PaaS solutions typically offer fewer options and choices than you'd get if you separated software development tooling from software hosting.
RCA	Root Cause Analysis	RCA is the process of determining the original cause of a problem within an application or infrastructure. RCA is particularly important when managing complex systems, such as microservices-based applications, in which surface-level problems may not reveal the underlying cause of an issue. For example, in a microservices app, the microservice responsible for responding to user requests may slow down not because of an issue with that microservice, but instead because a back-end microservice is not serving data to the user-facing microservice quickly enough. RCA helps teams identify the source of the problem so they can remediate it effectively. To perform RCA, engineers typically compare metrics, logs, and traces from various parts of a complex system to determine which components of the system are experiencing anomalies. By analyzing that data in the context of how the components fit together, it's possible to gain insights about the root cause of complex failures.
REST	Representational State Transfer	REST is a type of API architecture that relies on HTTP to transfer data between applications. REST is notable for being one of the most flexible types of API architectures, which is advantageous for developers who don't want to have to conform to rigid rules. However, REST's flexibility also makes REST-based transactions less predictable and can lead to inconsistency if developers aren't careful about how their applications manage transactions.
S3	Simple Storage Service	Amazon S3 is an object storage service hosted in the AWS cloud. Using S3, AWS customers create storage “buckets” that can store virtually any type of data. S3 and other object storage systems (like Azure Blob Storage) are distinguished by the fact that they don't require data to be stored or organized in a specific way (which is different from, for example, file-system based storage, where data is organized using file system hierarchies). This feature makes object storage one of the most flexible ways to store data in the cloud. It's also usually among the lowest-cost cloud storage options.
SLA	Service-Level Agreement	An SLA defines which level of service a software vendor or IT team promises to its customers or users. Typically, SLAs spell out service expectations using specific metrics; for example, you might guarantee 99.5% uptime for a service, or that major outages will be resolved within 24 hours. SLAs are important because they set clear expectations about IT service performance and reliability.
SLI	Service-Level Indicator	SLI is a measure of the level of performance that IT teams actually achieve in areas such as uptime, latency, and incident response. SLI is different from SLO because SLI measures the service levels a team actually achieves, rather than the levels it targets.
SLO	Service-Level Objective	An SLO is the level of service that an IT team aims to achieve. SLOs typically align with the service-level promises made in SLAs. For example, if your SLA promises uptime of 99.5%, your uptime SLO should be at least 99.5%, because you'll want to achieve the uptime you guarantee to customers. Your SLO could also be higher, if you want to create a margin of error between what you promise and what you aim to deliver. The extent to which you actually achieve your SLOs can be assessed using SLIs, which measure achieved service levels rather than target service levels.
SOAP	Simple Object Access Protocol	SOAP is a type of API protocol that uses HTTP to transfer data. SOAP is similar in many ways to REST, with a key difference being that SOAP defines more rigid and consistent rules regarding how data should be transferred. This makes SOAP beneficial for developers who want clear-cut guidelines about how to implement APIs within an application.
SaaS	Software as a Service	SaaS is a type of software hosting architecture in which applications are delivered to end users over the network. Under the SaaS model, businesses typically host software on servers that they control (which could be on-premises servers or run in the cloud), then allow users to connect to those applications over the internet. SaaS is the opposite of requiring users to install applications locally on their PCs or other devices. The main advantage of SaaS is that it makes software easier to access for end users. It also enables easier updates, and it can provide software vendors with tighter control over security and data privacy. However, because SaaS applications depend centrally on the network, SaaS architectures require careful management of network performance in order to deliver a great end-user experience.
SQL	Structured Query Language	SQL is a type of data query language designed for interacting with and managing data stored in a structured database. There are many implementations of databases that support the SQL standards; popular examples include MySQL and Microsoft SQL Server. In colloquial usage, SQL can also refer to databases designed for SQL-style queries — although formally speaking, SQL is a type of query language, not a database architecture.