

## **Data Center Acronyms Cheat Sheet**

Acronym	Short for	Meaning
ACAE	Air Conditioning Airflow Efficiency	A metric for measuring how much heat HVAC systems remove as a percentage of total cubic feet of airflow. The higher your ACAE, the more energy-efficient your data center is.
ASIC	Application-Specific Integrated Circuit	Computer chips optimized for a specific type of workload, such as AI/ML processing. Deploying ASICs in a data center can help prime the data center for hosting certain types of applications.
ATS	Automatic Transfer Switch	A switch that automatically transitions a data center to use backup power in the event that the primary power supply fails. See also STS.
BGP	Border Gateway Protocol	A protocol for routing network traffic between different sections (called "autonomous systems") of the internet.
вмс	Baseboard Management Controller	A specialized processor that can collect data from a server. BMCs can assist in remote infrastructure monitoring and management.
CDP	Continuous Data Protection	A data backup strategy that focuses on backing up data each time it changes, rather than relying on periodic backups to protect against potential data loss. CDP is the best way to ensure you never lose any information.
CPU	Central Processing Unit	The core processor that executes most code on a server or computer. You can't have data centers without CPUs.
CUE	Carbon Usage Effectiveness	A metric for tracking how much carbon a data center emits. The greener the energy you source for your data center, and the more efficiently you use that energy, the better your CUE metrics.
CXL	Compute Express Link	An open standard for implementing high-performing interconnections between CPUs and other components of a computer or server.
Delta-T	Change in temperature	A measure of how much the temperature drops (or rises) as air flows across IT equipment.  Delta-T is useful for monitoring the efficiency of HVAC systems inside data centers.
ERF	Energy Reuse Factor	A metric for tracking how much energy that is consumed by a data center is reused or recycled. For example, you could use ERF to measure which percentage of the heat produced by servers inside a data center is reused to heat office space adjacent to the data center facility.
FCoE	Fiber Channel over Ethernet	A method for transmitting traffic based on the Fiber Channel protocol over Ethernet networks, making it possible to take advantage of Fiber Channel performance on older, Ethernet-based network infrastructure.
FPGA	Field Programmable Gate Array	An integrated circuit that users can customize to serve a specific purpose. FGPAs are a more flexible way to achieve some of the benefits of an ASIC. Whereas an ASIC can only serve the particular workload for which it was designed, an FGPA can be configured for varying needs.
GEC	Green Energy Coefficient	A metric for tracking how much of a data center's energy originates from sustainable sources, like wind and solar.
GPU	Graphics Processing Unit	A specialized processor designed for graphics rendering. GPUs can also handle AI/ML workloads, which is the main reason they are sometimes deployed on servers inside data centers.
JBOD	Just a Bunch of Disks	A means of configuring multiple disks inside a single storage unit. JBODs can be configured to function as RAID arrays, which offer data reliability benefits, but they are more commonly used as collections of individual disks with data redundancy.
JBOF	Just a Bunch of Flash	A collection of solid-state storage disks inside a single storage unit. A JBOF is a type of JBOD, although not all JBODs consist of solid-state disks.
K8s	Kubernetes	An open source orchestration platform that has become popular as a means of managing applications deployed across multiple servers inside a data center.
MTTD	Mean Time to Detect	The mean time it takes to detect a failure or other problem. Tracking MTTD rates helps to measure the effectiveness of your data center reliability and uptime strategy.
MTTR	Mean Time to Repair	The mean time it takes to remediate or resolve a problem. Like MTTD, MTTR can be tracked to measure data center reliability effectiveness.
NIC	Network Interface Card	A hardware device that provides network connectivity for a server or computer. In a data center, the NICs you select for servers may determine how much network bandwidth they can handle, as well as how many physical network connections they can support.

x86	8086-based processors	A family of computer chip processors widely used in modern PCs and servers.
WUE	Water Usage Effectiveness	A metric for tracking how much water a data center consumes for cooling or similar purposes.
UPS	Uninterruptible Power Supply	A device that can provide backup power inside a data center.
SmartNIC	Smart Network Interface Card	A type of NIC that can handle some network data processing directly. This leads to significantly higher network performance than traditional NICs, which rely on the CPU to process data.
STS	Static Transfer Switch	A switch that can transition a data center to a backup power source. Like an ATS, an STS delivers automated switching; the difference is that ATS switches rely on physical components while STS switches use semiconductors to transfer power. As a result, with an STS, there is no interruption at all in power supply when a transfer occurs.
SSD	Solid-State Drive	A type of storage device that stores data on flash memory. SSD devices typically deliver faster read and write speeds than traditional hard disks, which store data on magnetic platters.
soc	Security Operations Center	A physical or virtual space that serves as the hub for cybersecurity operations.
SATA	Serial ATA	A data transfer protocol. SATA is among the slowest data transfers still in widespread use, although it offers the benefit of broad hardware compatibility and support for storage devices that support large volumes of data.
SAS	Serial-Attached SCSI	A data transfer protocol. SAS is generally faster than SATA, but slower than NVMe.
RPP	Remote Power Panel	Equipment for distributing electrical power to multiple servers.
RISC-V	Reduced Instruction Set Computer Five	An open standard for an instruction set architecture. Due to its open nature and performance advantages, RISC-V is driving many efforts to build next-generation computing hardware.
RDMA	Remote Direct Memory Access	A technology that enables a computer to share data stored in its memory directly with another computer. RDMA is valuable for use cases that require high performance across clusters of servers, such as distributed AI/ML workloads.
RAID	Redundant Array of Disks	A means of configuring multiple disks such that they operate as a single storage unit, with data spread or replicated across multiple disks. RAIDs can increase data reliability, as well as data transfer rates.
QSFP	Quad Small Form Factor Pluggable	A form factor for networking equipment capable of supporting up to 200 gigabytes per second. A variant, QSFP-DD, can support up to 400 gigabytes per second.
PUE	Power Usage Efficiency	A metric for tracking how much of the total energy consumed by a data center is used to power computing equipment. The higher your PUE, the more energy-efficient your data center is.
PCIe	Peripheral Component Interconnect Express	An interface design standard commonly used by add-on hardware devices that users attach to a motherboard, such as GPUs.
OSFP	Octal Small Format Pluggable	A form factor for networking equipment capable of supporting up to 800 gigabytes per second. OSFP is among an emerging class of next-generation network hardware technologies that promise much higher data transfer speeds.
OEM	Original Equipment Manufacturer	The vendor that originally produced a product, even if the product was integrated into a different system or resold by another vendor. For example, Western Digital could be the OEM of a disk drive in a server manufactured by Dell.
ОСР	Open Compute Project	A nonprofit organization that promotes the sharing of data center technology designs and best practices information among major technology companies.
OAM	Open Accelerator Module	A design specification for hardware-based accelerators designed to facilitate interoperability between different devices. If you're deploying a device designed to accelerate a particular workload, choosing an OAM-compliant option will help ensure compatibility with other hardware.
NVMe	Nonvolatile Memory Express	A data transfer protocol commonly used with solid-state storage disks. NVMe is currently the fastest transfer protocol available for the flash-based storage media typically deployed in a data center.
NOC	Network Operations Center	A physical or virtual space that serves as the center of network management operations inside a data center.