

# IaaS: Delivering Enterprise-Level Support to Manufacturers

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As adoption of cloud computing gains momentum within the manufacturing sector, there's a corresponding growth in infrastructure-related services, including Infrastructure-as-a-Service (IaaS) — a way to provide access to compute resources in a cloud-based environment. What sets IaaS apart is that the resources consist of virtualized hardware — infrastructure that is virtual as well as physical. IaaS offerings range from virtual servers to network connections to load balancers.

The major appeal of cloud server hosting is that the software (and with IaaS, the hardware), is virtualized. The hardware resources that support IaaS are pulled from multiple servers and networks, located across multiple off-site data center and maintained independently of the manufacturer using the service. The company pays a monthly fee to access these resources as needed. It's the responsibility of the cloud service provider (CSP) to ensure ongoing maintenance of the hardware and virtualized services. And now that enterprise ERP solutions can live and prosper in the cloud — and that CSPs can install, manage, update, protect and support ERP software for a low monthly fee — the question has shifted from “to migrate or not to migrate?” to “which cloud environment suits us best?”

The CSP assumes responsibility for managing the complexities associated with an IT infrastructure. With that important intermediary, manufacturers can tap into cloud resources as their needs grow rather than purchase, install and integrate new hardware internally. This on-demand scalability enables manufacturers to focus on business objectives, without worrying about keeping up with hardware costs to support expansion.

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For small and midsize manufacturing concerns, IaaS can be especially appealing because they can benefit from enterprise-level infrastructure through a pay-as-you-go model, without the initial cash outlay. IaaS establishes an internal business network in the form of a private cloud and virtual local networks, using a pooled server to store company data and run applications. This basic structure supports easy business expansion and provides essential data protection within a cloud setting.

The growing maturity of IaaS solutions extends to increasingly sophisticated security strategies. Manufacturers concerned with any security vulnerabilities associated with a virtual infrastructure can add their own layer of protection by using encryption or “depersonalizing” data, over and above the CSP’s sophisticated security measures. That said, “over and above” is probably unnecessary; quality CSPs typically provide a level of security that mitigates security risks and protects the outsourced architecture. Manufacturers who take advantage of IaaS solutions also benefit from end-to-end service. That is, they gain storage and network resources that enable them to build custom virtual data centers to meet their specific business requirements.

Additionally, IaaS provides manufacturers with flexibility via à la carte features. Companies can maximize productivity by using only the resources they need. With IaaS, manufacturing operations can monitor their usage and modify services to meet ever-changing technology requirements.

IaaS also gives manufacturers location independence. Broad network access is one of the key characteristics of cloud server hosting because users can access the infrastructure from any location.

An IaaS solution that uses standard hardware across the infrastructure simplifies a company’s processes. There’s also no single point of failure in an IaaS solution, so if one server or network switch were to fail, the manufacturer’s infrastructure would continue to operate without missing a beat.

As manufacturers look to secure a competitive advantage in their specific markets, implementing a virtual infrastructure is often a step in the right direction.

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