# Major Cloud Service Offerings BigU Relies On

BigU’s ERP and related services are hosted in the cloud using a Platform as a Serv ice (PaaS) model. PaaS arrangements vary, potentially employing a variety of different platform services. BigU benefits from several key services including database as a service (DBaaS), Container Services, and Disaster Recovery as a Service (DRaaS).

A Relational Database Management (RDBMS) system manages the data for BigU’s ERP system. In the past, when the system was deployed on BigU’s premises, BigU resources (people) managed the entire computing stack undergirding the database. They managed servers, networks, installed RDBMS software, backups, and testing environments. In many ways, the skills and tools to keep things at this level functioning had little to do with the specifics of the ERP system software but more to do with operating systems and utility programs. In the cloud environment these “platform” level activities can be largely delivered through a DBaaS offering. BigU people configure, monitor, and interact with the service, but many activities such as network provisioning, hardware investments and maintenance, operating system installation and patching, and storage system management are handled by the cloud provider who has invested in hyper-scale efficiencies and deep expertise. Even with use of the DBaaS offering, BigU database administrators have lots to do to monitor performance, configure and tune database settings, manage the database schema, ensure appropriate availability of backups, and more.

The ERP application is deployed using the cloud provider’s container service. Building on vast experience, the cloud provider creates container templates that can be efficient and secure. BigU chooses from available templates and adapts as needed to deploy various underlying components to support connectivity, web interfaces, administrative access, and middleware tools. They can then deploy a container without too much consideration of the underlying virtual machines. As with DBaaS, the cloud provider’s expertise and hyper-scale facilities take care of platform-level concerns allowing BigU resources to focus on user-facing features of their customized ERP implementation. The provider monitors various threats, including cyber threats, that can impact the components in the container and provides tested scripts for patching and maintenance. Using the container service allows BigU to perform most ERP maintenance tasks without any down time. They pay for a temporary new container and deploy updated system components. Once that is sufficiently tested, they can seamlessly transfer operations to the newly deployed container and the old container can be retired.

Disaster recovery capabilities are much stronger for BigU since they moved to the cloud. BigU had previously invested in various remote site functions to make it possible to bring up key functions in the case of a disaster. But the cloud provider’s hyper-scale facilities allow well-tested disaster recovery capabilities. This one feature alone might have justified the move to the cloud. The configuration details of the system containers are backed up and stored where they can be initialized in an alternate data center in the unlikely event that the primary datacenter shuts down. The DBaaS service is similarly capable. Frequent and remotely distributed backups of the database logs allow BigU to claim that no more than 15 minutes of data would be lost in a disaster - recovery point objective (RPO) – and the system can be back up in two hours – recovery time objective (RTO) – even if services need to be transferred to the backup datacenter.

On prem or in the cloud, none of these services are inexpensive. But many risks have been reduced through standard cloud capabilities that would have otherwise been infeasibly expensive. The hardware investments (capital and ongoing) are now included in the bill as an operating cost. And the PaaS arrangement reduces BigU’s need to recruit and retain some expensive and hard-to-hire expertise.