HPE GreenLake extends on-premises pay-per-use model from infrastructure into services

JEAN ATELSEK
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The company is leveraging its experience with infrastructure capacity management and metering to launch a suite of 'outcome based' services, starting with backup, big data, edge computing and databases.
With GreenLake, HPE is leveraging its experience with infrastructure capacity management and metering to launch a suite of turnkey services that enable pay-per-use billing for on-premises deployments. Based on HPE’s Flex Capacity pay-per-use infrastructure, the offering bundles HPE hardware and support with third-party software and Cloud Cruiser metering and monitoring technology. The company has also made Flex Capacity (now folded into the HPE GreenLake suite) available on more technology platforms and packaged it in a way that can be easily bundled and resold by channel partners.

**THE 451 TAKE**

As cloud deployments become more pervasive and complex, enterprises are demanding public cloud-like flexibility and simplicity for their on-premises environments – particularly the ability to scale resources and pay only for services consumed. Through its Flex Capacity baseline-plus-metering infrastructure offering, HPE has been accumulating experience, partnerships and assets, with the expectation that IT consumption will continue to shift from long-term leasing and subscription to on-demand fulfillment. HPE GreenLake represents the next iteration of this model, expanding beyond infrastructure to deliver what the company calls ‘outcomes-as-a-service,’ with hardware, software and support for business processes (for instance, backups and big data) installed and managed by HPE and charged on a pay-per-use basis.

**CONTEXT**

HPE Pointnext (formerly known as the Technology Services unit) has been busy over the past year, focusing its efforts on ‘making hybrid IT simple’ – and particularly on supporting enterprises that need to keep data and workloads on-premises, but want the flexibility and convenience of public cloud. The company says that its Flex Capacity offering, which provides infrastructure as a fully managed pay-per-use service within the customer datacenter, is approaching $2bn under contract. HPE recently inked partnerships with Wipro and Rackspace to extend the available market for Flex Capacity, enabling those companies to offer fully managed private cloud (in Rackspace’s case, based on OpenStack) running on HPE hardware and billed on a pay-per-use basis.

HPE first launched a hardware pay-per-use model in 2002, and in 2008 it started allowing businesses to flexibly scale storage and compute resources. Flex Capacity is a flexible services contract whereby customers commit to a minimum of resource consumption (typically 70-80% of requested capacity) based on expected near-term demand, and HPE installs equipment, incorporating a buffer of 10-40% beyond that request. The amount billed varies according to actual usage above the minimum on a daily basis. Compute resources are billed by server (based on whether a server is on), per physical core, per VM (based on allocated memory) or per container node. Storage and backup are charged per gigabyte, and networking is billed per port or access point. HPE purchased Cloud Cruiser in February; the technology from Cloud Cruiser’s cost management and optimization tool underlies the usage metering. (In November, HPE stopped selling stand-alone Cloud Cruiser subscriptions.)

HPE believes that consumption-based IT is a growth opportunity, and with HPE GreenLake it’s moving up the stack to offer prepackaged, pre-priced, pay-as-you-go services in addition to infrastructure.

**PRODUCTS**

HPE GreenLake will offer six pay-as-you-go bundles – for backup, big data, edge compute, open source database, SAP HANA and Flex Capacity infrastructure – with plans to roll out more in the future. The backup, big-data and Flex Capacity products are available now; the others are slated for release in early February 2018.

Each of the new offerings carries its own usage metric. Backup, as an example, is delivered via Commvault software running on an HPE StoreOnce or 3PAR machine, and billed per front-end terabyte backed up per month. Rolled into the contract are the professional services to set the levels of installed and buffer capacity, runtime optimization, and lifecycle management, all done by HPE Pointnext.
Similarly, HPE GreenLake Big Data is based on enterprise Hadoop and metered per Hadoop node. HPE owns the hardware, and remotely monitors and manages the solution. The customer pays depending on the number of Hadoop clusters used during the month.

The company is folding Flex Capacity, previously a separate product, into the HPE GreenLake suite, and it now offers more technology choices, including high-performance computing platforms, Docker containers, hyperconverged appliances (acquired via HPE’s purchase of SimpliVity) and Azure Stack running on HPE ProLiant servers.

**BUSINESS MODEL**

HPE has priced the contracts and consumption units to balance the risk that installed capacity will remain unused (and unpaid for) against the promise that customers will continue to add HPE services as their deployments grow. With any on-premises environment, scale has a big influence on cost-effectiveness; what the pay-per-unit model does is drive up utilization by better matching capacity to demand.

The company claims that HPE GreenLake Flex Capacity costs typically reach parity with public cloud TCO at around $150,000 per year for a four-year contract. As the volume increases, so does the cost benefit, with the sweet spot being reached at around $1m per year. With so many variables in both public and private cloud, this is necessarily a simplified view, but it illustrates that a range of workloads, use cases and usage levels can make sense under this model.

HPE emphasizes that configuring and managing HPE GreenLake infrastructure is a hands-on engagement, not just a set of automated processes. To streamline the procurement process, the company has built tools that enable the customer to stipulate a certain level of performance and day-one capacity; pushing a button generates a pre-populated statement of work and pricing that includes the embedded lease, runtime optimization, service levels and active capacity management – all the components that HPE knows are needed to prepackage the offering for hardware teams, account managers and channel partners.

About 95% of existing Flex Capacity agreements are on four-year terms. Contracts can range from $150,000 up to $10m annually, with the average deal size running to millions of dollars. The technology refresh cycle is typically four years, although this can be adjusted up or down; whenever capacity needs to be added, the company offers the latest generation of technology.

**COMPETITION**

For pay-as-you-go infrastructure, Microsoft Azure Stack is an on-premises extension of its Azure public cloud that comes preinstalled on hardware from partners such as Dell EMC, Lenovo and Cisco; HPE’s ProLiant for Azure Stack, when combined with HPE GreenLake Flex Capacity, is a pay-as-you-go alternative offering the same software, but without requiring an equipment purchase or lease. VMware Cloud on AWS is a combination of a specific set of VMware software and dedicated host machines running in AWS datacenters and sold on demand. Oracle Cloud at Customer puts a full stack of Oracle services on Oracle hardware at the customer premises; Oracle owns the hardware and software, and manages the platform in the customer’s datacenter, typically remotely. Dell provides storage devices using this model under its Flex on Demand program, and we wouldn’t be surprised if it extends the concept to servers, as well.
**STRENGTHS**

With pay-per-use experience going back 15 years, almost 400 Flex Capacity contracts under its belt and captive metering technology via the Cloud Cruiser acquisition, HPE’s track record with on-premises capacity planning and infrastructure management speaks for itself. The bundled HPE GreenLake services were developed based on customer demand for turnkey pay-as-you-go backup, big-data and database capabilities.

**WEAKNESSES**

The company needs to get customers and sales teams comfortable with thinking of and costing services in terms of outcomes rather than the underlying hardware, software and support.

**OPPORTUNITIES**

While hybrid cloud is taking off, on-premises deployments still represent a large share of the IT market opportunity. Creating cloud-like ways to consume these resources should extend their value.

**THREATS**

Hybrid cloud alliances between system vendors, software vendors and cloud providers are crowding the market with options. Dell is in a similar situation to HPE, with no cloud to call its own and declining hardware sales, but without the scrutiny of the public market.