

REPORT REPRINT

HPE joins the blockchain race with mission-critical offering

CSILLA ZSIGRI

22 DEC 2017

The company is joining the blockchain gang and expects to move customers from proofs of concept and pilots to production implementations in the next couple of years.

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Hewlett Packard Enterprise is working with financial customers, automakers and airlines on implementing blockchain-based applications for different use cases. Its Mission Critical Distributed Ledger Technology (DLT) offering is based on R3 Corda and can be deployed on-premises as well as in the cloud or in a hybrid environment. This offering is expected to be publicly available in early 2018.

THE 451 TAKE

Most enterprises showing some level of blockchain usage are at the discovery and evaluation phase, according to our research. With lack of real-world enterprise experience and scarcity of skills in blockchain technology and potential applications, there is a tremendous opportunity for third-party expertise and support for use case definition, proofs of concept and production deployments. HPE may check the boxes, but it has some serious competition. Of the tech giants, IBM was the quickest to include blockchain in its service portfolio and others like Microsoft and Oracle have followed suit. HPE will need to establish credibility sooner rather than later to capture the attention of those enterprises that will be making platform decisions in 2018.

CONTEXT

Bitcoin and other cryptocurrencies – what HPE calls ‘blockchain 1.0’ – have without a doubt captured the attention of people and even businesses. However, while these consumer-to-consumer implementations are public (anonymous and fully transparent), enterprise use cases have a different set of requirements – championed by speed and privacy. HPE has labeled this as ‘blockchain 2.0’ – where enterprises transact with enterprises – and this is where its current focus is. These enterprises live and breathe in a world of regulations and don’t necessarily want to disclose information about key purchases and deals to their competitors; therefore, they seek a permissioned blockchain network that can provide a higher level of privacy.

STRATEGY

Enterprises will be making blockchain platform decisions in 2018, some of them with the intention of moving pilot projects into production within the next couple of years, and HPE wants to be a part of that and make sure that its servers and infrastructure are ready to handle all sorts of blockchain applications and use cases – be it on-premises, in the cloud or in a hybrid environment.

HPE works with strategic partners including Intel, Microsoft and R3 to provide a mission-critical blockchain solution, and Accenture and PwC to help customers understand the benefits and challenges of blockchain. It is also a member of the Enterprise Ethereum Alliance and is talking with Hyperledger to learn how it can help customers that use those platforms. Under the Pointnext umbrella, HPE offers hackathons where developers work with HPE experts on use cases and proofs of concept.

As previously mentioned, the company is focusing on B2B transactions (‘blockchain 2.0’), but is also helping customers experiment with and talk about what it calls ‘blockchain 3.0’ – things transacting with everything. It’s basically where AI, blockchain and IoT come together in a perfect storm.

TECHNOLOGY

HPE’s mission-critical blockchain solution leverages R3 Corda – a permissioned distributed ledger platform designed for the financial industry – which is encapsulated into HPE’s fault-tolerant NonStop operating system. The offering is available on-premises for production by using specialized hardware, and remotely as a service for proofs of concept.

The company chose R3 Corda because many of its financial customers were already using it to process transactions. R3 Corda was specifically designed for the highly regulated financial services industry, while Ethereum and Hyperledger Fabric intend to stay independent of any specific industries. (We are aware of efforts seeking to integrate R3 Corda into Hyperledger.) HPE is also experimenting with Ethereum.

R3 Corda operates in a permissioned mode, where consensus is achieved at the transaction level by the involved parties only. Corda in particular has different nodes (participants in a network) with different roles. To avoid double-spending, consensus over uniqueness is reached among notary nodes. For transaction validity, the consensus protocol is pluggable. Consensus is achieved when both transaction uniqueness and validity are ensured. Corda does not require a native cryptocurrency or token because consensus is not reached through mining.

CUSTOMERS

According to a recent 451 Research Voice of the Enterprise survey, 20% of organizations surveyed are using blockchain in a discovery or evaluation phase, 4% are running trials or pilots, 2% in test and development environments, 2% undertaking initial implementations of production applications and less than 1% have broad implementation of production applications. There is a sizeable opportunity for third-party expertise to support these enterprises to define and carry out proofs of concept and initial deployments.

HPE is primarily working with financial institutions – an industry that has been investing the most in experimenting with blockchain technology. The rest of the use cases are mostly supply chain related.

HPE is collaborating with automakers to capture data, store it on the blockchain and edge devices, and monetize it (set the data free but not for free). The company is also working with airlines to track all the data that different parts of their jets (digital twins) create each flight. With blockchain technology, a digital thread can be created that links together every transaction throughout the life of a car or an airplane.

In terms of pricing, the company did not reveal fees, but customers will need to buy the hardware for the on-premises implementation and pay a monthly fee for the as-a-service offering. HPE will also offer blockchain workshops and hackathons for a fee.

COMPETITION

AWS has teamed up with the Digital Currency Group to create a blockchain-as-a-service offering for financial services firms.

Chain Inc offers its Chain Core platform based on the Chain protocol. It's positioned as an enterprise-grade blockchain infrastructure designed to build financial service applications.

IBM's Blockchain Platform, along with a series of consulting services, enable organizations to quickly activate, develop, operate, govern and secure their own blockchain-enabled business networks. It is based on the Hyperledger Fabric v1.0 framework and Hyperledger Composer blockchain application development tool, and runs in the IBM Cloud.

Microsoft is a founding member of the Enterprise Ethereum Alliance and its blockchain-as-a-service offering was designed to work with the Ethereum blockchain. Its recently launched, open Confidential Consortium (Coco) Framework is intended to reduce the complicated development techniques needed to meet the operational and security needs of enterprises. Coco basically reevaluates existing assumptions of public blockchains in the context of a permissioned consortium where participants are known. With Coco, Microsoft expects to offer a foundation with which existing blockchain protocols can be integrated to deliver enterprise-ready solutions.

With its new Blockchain Cloud Service (BCS), Oracle aims to enable enterprises to explore different blockchain use cases without having to set up new infrastructure for each. It is a PaaS offering that leverages Hyperledger Fabric v1.0, and the company plans to expand the platform's capabilities as customer needs dictate. Oracle BCS uses the company's public cloud and is also available on the Oracle Cloud Machine (OCM) for on-premises deployment. BCS is also offered as a managed service, and enables integration with existing Hyperledger Fabric applications, as well as other applications for enterprise resource planning, supply chain management and customer experience within the enterprise and across companies.

SWOT ANALYSIS

STRENGTHS

HPE is developing a solid offering that caters to enterprise requirements such as privacy, reliability, scalability and speed, and has the ability to provide enterprises that are considering or evaluating blockchain technology with an end-to-end solution.

WEAKNESSES

R3 Corda is a good fit for financial services use cases; however, use cases in other industries may require capabilities that Corda does not have. HPE needs to make sure it can provide choice and flexibility to its customers and prove that its business model can generate profitable revenue.

OPPORTUNITIES

Blockchain promises to do for transactions what the internet has done for information. Adoption of this technology will likely be gradual and steady - according to our research, currently about 28% of enterprises are evaluating or using blockchain. Most of these enterprises are at the discovery and evaluation phase, and we expect demand to grow in the coming years.

THREATS

Other tech giants such as IBM, Microsoft and Oracle have already launched their industry-neutral, enterprise-grade blockchain platforms. Defining a clear value proposition and differentiation will be key.