aws

Minfy Tech Sets Up Innovative Blockchain Environment in the AWS Cloud for State Government

APN Partner Minfy Technologies helped Webel, which supports the state government of West Bengal, to put cloud infrastructure in place to host blockchain-based applications. Minfy Tech, an IT and managed-services provider, sets up cloud infrastructure to support its customers' applications and IT initiatives. It created a cloud environment with Amazon EC2 and Amazon VPC that hosts blockchain applications that Webel uses to track birth and death records and crowdfunding ledgers.

Helping Businesses and Governments Plot a Path to the Cloud
Minfy Tech proudly proclaims itself a company "born in the cloud." The IT and managed-services provider offers cloud consulting, audit, and advisory services to business and government entities. Since the company's start, it has completed more than 500 cloud-migration projects by taking advantage of Amazon Web Services (AWS) and helps customers put cloud solutions and infrastructure in place that allow the hosting of cloud-native applications.

Headquartered in Hyderabad, India, the company is an Advanced Consulting Partner in the AWS Partner Network (APN). It also holds an AWS Public Sector Partner qualification. "At Minfy Tech, we know business and government agencies face the challenge of embracing cloud technology. As an APN Partner, we help our customers make their journey to the cloud, and we make it as easy as possible," says Rakesh Shaw, enterprise architect at Minfy Tech.

Using Cloud Technology in State Governments
In India, some state governments have been hesitant to move operations to the cloud because they're unfamiliar with the environment. Other state leaders understand the opportunity available in the cloud, but their teams lack the experience to launch cloud environments. Minfy Tech collaborates with multiple state governments across the country, including holding workshops used to inform IT teams about cloud consumption models, cloud dynamics, and potential cost and time savings to be gained by moving to the cloud. "With AWS, Minfy Tech quickly implements the cloud infrastructure needed by state governments to support innovative technology, such as blockchain," notes Shaw.

It was that experience that drew the attention of the West Bengal Electronics Industry Development Corporation Limited, known as Webel. Webel supports the state government of West Bengal by leading and nurturing its IT initiatives. Its goal is to strengthen West Bengal's appeal to corporations in an effort to attract businesses to the region.

Creating a PwC Blockchain Environment
Webel needed to host a blockchain application from PwC and required assistance putting cloud infrastructure in place to support that. A blockchain serves as a decentralized and immutable digital transaction record. Trusted parties can add blocks (bits of information) to the record, which together form a chain of transactions. Those transactions are publicly

Company: Minfy Technologies Private Limited
Industry: Information Technology and Services
Country: India
Employees: 180
Website: www.minfytech.com

About Minfy Tech
Headquartered in Hyderabad, India, Minfy Tech helps customers build cloud solutions for the applications needed by their organizations and customers. The company provides cloud consulting, audit, and advisory services.

Benefits
- Cloud infrastructure put in place in less than a week
- Blockchain application supports birth- and death-record registry
- Registry can handle 4–5 transactions per second
- Blockchain-based crowdfunding app supports 200 concurrent users

AWS Services Used
- Amazon Elastic Compute Cloud (Amazon EC2)
- Amazon Virtual Private Cloud (Amazon VPN)

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>
> Nirmal Ray, Technical General Manager, Webel

visible, and every participant who adds records is held accountable for actions taken within the ledger.

As a government agency, Webel issued a request for proposal to which Minfy Tech and two other companies responded. After the required technical and commercial evaluation process, Webel chose Minfy Tech to complete the project based on its experience in cloud environments. "The review process showed that Minfy Tech is an extremely capable MSP and has a team skilled in using AWS resources. Those abilities and experience made them the right choice for this blockchain project," says Nirmal Ray, technical general manager for Webel.

Minfy Tech created a cloud environment by taking advantage of Amazon Virtual Private Cloud (Amazon VPC) and Amazon Elastic Compute Cloud (Amazon EC2). Using Amazon VPC, Minfy Tech provisioned a logically isolated section of the AWS Cloud to host the application. The company used Amazon EC2 to provide resizable compute capacity in the cloud, enabling Webel to expand the use of the blockchain application as needed to support other government services. The PwC app was loaded to this infrastructure along with Ethereum. The Ethereum platform tracks contracts in blockchain environments and allows applications to run without the risk of downtime, censorship, fraud, or third-party interference.

Delivering Reliable Public Records and Fund Accountability
Webel's initial purpose for creating the PwC blockchain environment was to support two primary government services. The first project was the blockchain-enabled birth and death registration for the New Town Kolkata Development Authority of West Bengal. The second project was a crowdfunding initiative used to raise funds for social services of Vivek Tirtha, a global organization engaged in humanitarian and social service activities at Eco Park, New Town.

"Minfy Tech and AWS teamed up well to ensure the timely delivery of the cloud infrastructure that we needed to host the blockchain application. They were extremely responsible during implementation, and the infrastructure was in place in less than a week," notes Ray.

To avail a birth or death certificate, a citizen uses the application to first request it. The blockchain ledger records the transaction and assigns a unique hash to the applicant. This hash becomes part of the blockchain and therefore part of the public record. Every day, 10 to 12 records are entered in the ledger, but the system has the capacity to manage four to five transactions per second. For the crowdfunding initiative, the value for citizens is that they can donate money from anywhere in the world and track their transactions on the immutable blockchain ledger. Again, the donations become part of the blockchain public ledger. The crowdfunding site has been designed to support up to 200 concurrent users with no degradation of service.

Paving the Way for More Cloud Applications
The ease of this process is driving additional moves to the cloud. "Minfy Tech allowed Webel to begin its cloud journey, one of the first government organizations in our state to do so. We've already seen cost and time savings from this transition. Because of the agility and simplicity of this migration, we anticipate even more cloud migrations in our future," says Ray.

In the six months following this project, Webel has used the cloud infrastructure to host a social media site for New Town, Kolkata, and various programs that support the state's department of transportation. Ray says, "Thanks to Minfy Tech, our journey has been smooth and hassle-free. Having the AWS Cloud infrastructure in place, not only can we host the blockchain application, we can now also launch new services quickly and process additional workloads on the fly."