



Nutanix Supports the Yogyakarta City Communication, Informatics and Encryption Office to Realize Smart City Vision

Indonesia's Jogja Smart Service (JSS), a virtual city hall, delivers integrated public services directly to citizens.

Yogyakarta, or is also known as Jogja or Jogjakarta, is one of the cities in Java Island, Indonesia. The City is well-known for its fine art, traditional cultures and famous as one of the education centers of Indonesia.

The Yogyakarta City Government believes that the development of e-government is vital and can also be viewed as a change in the way the government interacts with communities, businesses, and its citizens. This aligns with the Presidential Regulation Number 95/2018 which sets out a vision to implement e-government and develop a national portal on e-service by 2025.

KEY RESULTS

- **Handle 2x increase in user base with ease**
Speed, robustness and performance helped serve more than 200,000 JSS users
- **Achieved business resiliency and overall 50% TCO savings**
Zero unplanned down-time for critical workloads, with up to 80% savings in man-hours
- **Improved application response time by up to 90%**
Application response time reduced to <5 sec
- **Ability to start small and scale whenever required**
Allows for more efficient use of government IT spending; flexibility is key to realising a e-government

INDUSTRY

Government

GEO

APJ

WEBSITE

<https://jss.jogjakota.go.id>

CITIZEN SERVICES

- A total of 229 applications are available for government services ranging from KTP (Kartu Tanda Penduduk - Residential Identity Card), birth certificate, death certificate, job vacancy, health, business, tourism, procurement, education, transportation, and more.

PRODUCTS

Nutanix Cloud Infrastructure (NCI)

- AOS Storage
- AHV Virtualization
- Nutanix Kubernetes Engine

Nutanix Cloud Manager (NCM)

- Intelligent Operations



“The Nutanix platform gives us scalability and efficiency to our overall plan and blue map. The hope is that the Jogja Smart Service (JSS) application and the Yogyakarta City Smart City program can become an example for the implementation of e-government that is in line with regulations. Through the speed and flexibility of technology, it will also greatly assist the formation of the city's digital ecosystem as a whole which can encourage the realization of a digital economy”

– Ignatius Trihastono, S, Sos., M.M., Head of the Yogyakarta City Communication, Informatics and Encryption Office.

As such, the Yogyakarta City Communication, Informatics and Encryption Office (Diskominfo) set out to integrate various government information systems into a single application, namely Jogja Smart Service (JSS) with the concepts of Single ID, Single Window, and Single Sign On. The goal of JSS itself is to create accessible and integrated public services by optimizing information technology and data owned by the Yogyakarta City Government.

Diskominfo collaborated with Nutanix to advance their digital modernization by integrating all 229 government applications into JSS, greatly improving citizen services delivery and transparency. Diskominfo is determined to increase the speed, robustness and performance of the system to serve more than 217,000 JSS users.

CHALLENGES

There are currently hundreds of applications for Yogyakarta's citizens in JSS such as health, business, tourism, procurement, education, transportation, etc. The Diskominfo team had used separate IT systems which made it hard to synchronize data and this issue is made more complex when handling large sets of data across a large number of physical servers.

Maintaining servers would often create unnecessary downtime, such as increasing RAM in a server virtual machine. Other routine operations such as creating a VM in virtualization would often be complex and take up to several hours. On top of these, the IT team is also facing difficulties handling the development of hundreds of applications, data integration, maintenance of uptime and resource allocation.

The team realized they needed a flexible infrastructure that would allow them to be agile, scale for growth and meet the needs of the public. The platform of choice should also be easy to operate and help them move towards a more efficient and agile DevOps delivery mode for faster application development.

SOLUTION

Diskominfo decided to eliminate the legacy infrastructure and chose to use Nutanix hyperconverged solution. 90% of their core system applications now run on Nutanix Cloud Platform and its AHV virtualization, helping to provide high performance and high availability for the citizens of Yogyakarta City.

Trihastono said, “We chose Nutanix for the development of the Yogyakarta City smart society concept. Integration between related institutions is also increasingly real and in line with increasing accountability and increasing public trust. We believe that transparency of information will also improve the user experience of applications by speeding up launch times and improving application response times.”

Other Nutanix tools deployed consist of the Nutanix Kubernetes Engine (NKE) as a container tool and Nutanix Cloud Manager.

CUSTOMER OUTCOMES

Implementing DevOps For Efficiency and Flexibility

Switching to a DevOps model using Microservices and Kubernetes running on top of the Nutanix Kubernetes Engine is a way to simplify the development and orchestration of the DiskominfoSan application.

“We have been able to drive efficiency and reduce costs without compromising on application performance. In addition, the DiskominfoSan team has also succeeded in eliminating silos between related teams and creating a good work environment as shown by the improved application response time of less than 5 secs. Our digital transformation journey with Nutanix can be described in three words: flexibility, efficiency and speed,” said Trihastono.

“Everything can now be managed automatically and frees up the IT team to be more proactive and the team to be able to focus on innovation,” added Trihastono

Switching to Nutanix also allows DiskominfoSan to modify an Application Programming Interface (API) without disturbing other processes with zero downtime. “The process of moving the updated code and collaboration between the development team and from the field team is becoming more integrated, something which was difficult for us to achieve previously.”

80% savings in man-hours and 50% reduction in overall IT operating costs

“Now almost all of our systems have been automated. A lot of manual work is eliminated so that our team is relieved from problems related to infrastructure maintenance. They can focus more on other critical things and we have enjoyed a savings of at least 80% in man-hours,” Trihastono said.

Improved performance and public trust

DiskominfoSan has started using big data platforms to make smarter city policies. By migrating to Nutanix, DiskominfoSan can handle every aspect of data collection and analysis swiftly to improve performance and support Yogyakarta City Government programs.

“Public service intersects with our citizens in many aspects of their lives. For this reason, it is very important for us to always maintain performance in providing quality and transparent public services, hence strengthening the public's trust in us. Our Nutanix solution played a very important role in realizing our vision and helping us to achieve and handle a two-times increase in JSS users, as well as being an important partner in developing strategies and technology ecosystems at DiskominfoSan,” Trihastono said.

Zero tolerance for downtime

Nutanix Cloud Platform supports DiskominfoSan in maximizing computing and virtualization services for various types of applications. All JSS information and services must be available 24x7 without having to rely on government offices operating hours.

“We often experience large spikes of visitors to our website or application. With Nutanix, we can leverage resources to ensure performance doesn't drop no matter the situation. Even if a problem arises, tracking can be done through Nutanix Cloud Manager so that the network status is all in front of us. I don't have to worry about our infrastructure anymore,” said Trihastono.

THE NEXT STEP

“Currently we are in the process of ISO 27001:2013 certification. Moving forward, Diskominfo is ready to innovate with Nutanix and is committed to jointly supporting the creation of a smart society ecosystem.”

“Collaboration with Nutanix is enabling us to continue to bring progress to advancing the Smart City program in Yogyakarta. There are still many aspects that we need to develop for the future. The percentage of users must also continue to increase in line with the automation of various services. More technology support is needed and for that we have considered implementing new solutions such as Nutanix Files Storage which will help better centralized governance of data security and resilience,” concluded Trihastono.



T. 855.NUTANIX (855.688.2649) | F. 408.916.4039
info@nutanix.com | www.nutanix.com | [twitter@nutanix](https://twitter.com/nutanix)

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