



# National ITMX Accelerates Cashless Payments with Hybrid Cloud Platform

**National ITMX**, established by the Thai Bankers' Association and governed by the Bank of Thailand, is a leading developer and service provider of Thailand's electronic payment infrastructure. NITMX supports various electronic payments and fund transfers across diverse channels, including ATMs, over-the-counter, cards, internet and mobile.

## Industry

Financial Services

## Strategic Priorities

- Cloud Infrastructure

## Partner

With over 20 years of experience, **Datapro Computer Systems** serves more than 1,000 customers across diverse industries in Thailand. The leading enterprise IT solutions and service provider is staffed by over 400 skilled professionals.

## VMware footprint

- VMware® Cloud Foundation™
- VMware Aria Operations™

National ITMX (NITMX) is driving Thailand's cashless initiative, with over 70 million users on its PromptPay platform. To meet growing demand, NITMX partnered with Datapro Computer Systems (DCS) to deploy VMware Cloud Foundation, providing scalability and automation. This move allows NITMX to handle 2,600 transactions per second with room for growth without compromising performance. The company has also reaped significant cost savings by optimizing resource utilization and reducing infrastructure requirements.

## Becoming a cashless society

NITMX is the backbone of Thailand's national payment infrastructure and digital financial platform, facilitating seamless and secure electronic transactions nationwide.

In 2017, the company revolutionized the payment landscape with PromptPay, which allows consumers to transfer funds in real time using their mobile phone numbers or national identification numbers. There were more than 70 million PromptPay registered users in April 2023, almost on par with Thailand's population of 71.8 million.

"Thailand aims to become a cashless society and a payments leader, and we play a vital role in this journey," says Niwat Kanwaset, assistant managing director, Platform Ops, NITMX.

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Niwat Kanwaset, Assistant Managing Director, Platform Ops, NITMX

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### Outdated infrastructure hampers move toward digital economy

With 33 member banks and partnerships with global payment players, NITMX has been consistently rolling out new initiatives to boost the financial infrastructure for consumers and businesses, both locally and overseas.

Banking on the success of PromptPay, NITMX branched into PromptBiz, a digital payment infrastructure system for the business sector that makes it easier for small and medium-sized enterprises to access financial sources. And as banks increasingly adopt digital systems to manage their banking structures, NITMX recently developed an Open API infrastructure project to connect between the new systems and the banks' existing core banking systems, enabling them to provide their customers with faster and more convenient online banking services via mobile banking.

In 2021, PromptPay was linked with Singapore's PayNow system, making it a world-first for cross-border fast payments. NITMX was also chosen by the Asian Payment Network to be the hub for connecting payment and transfer systems in the region, establishing cross-border, real-time QR payments with six countries—Cambodia, Indonesia, Japan, Malaysia, Singapore and Vietnam—probably the highest number of such linkages in the world.

Because of these initiatives and more, NITMX was processing more transactions than it had ever done before. Last year, the company processed more than 14 billion transactions.

“We knew that transaction volumes would only grow as Thailand becomes a digital economy. And we had to ensure we were ready for it,” says Niwat. “But our IT infrastructure was reaching its limit, and we needed a scalable solution to accommodate future growth.”

### Migrating to a hybrid cloud platform

With transaction volumes increasing exponentially, NITMX turned to DCS to map out the next iteration of its infrastructure. The VMware Principal Partner started working with NITMX more than seven years ago when it supported the payments provider's move from the traditional three-tier architecture to VMware hyperconverged infrastructure (HCI), featuring vSAN.

“The new solution needs to be stable and available for the best user experience, agile enough to adapt to the rapidly evolving business landscape, and more importantly, ready for the eventual shift to a public cloud,” says Sidthakorn Usanno, managing director, Enterprise System and Infrastructure Business, DCS. “We found the answer in VMware Cloud Foundation, a powerful hybrid cloud platform for modernizing data centers and deploying modern apps.”

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Niwat Kanwaset, Assistant Managing Director, Platform Ops, NITMX

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VMware Cloud Foundation provides NITMX with integrated cloud infrastructure—compute, storage, networking, and security—and cloud management services to run enterprise applications anywhere—in private and public environments—without the complexity of app re-writing.

Partnering with VMware to design and deploy a tailored solution that aligns with the company's unique requirements, DCS supported NITMX in migrating the nationally important PromptPay system to VMware Cloud Foundation. There are now about 80 virtual machines on the hybrid cloud platform.



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### Simplifying operations with automation and lifecycle management

The automation feature in VMware Cloud Foundation has brought true cloud agility to NITMX enterprise applications on-premises, significantly simplifying management and freeing resources for new projects.

The IT team now relies on the lifecycle management services to automate Day 0 to Day 2 operations, such as deploying virtual machines, configuring storage or creating management clusters. Additionally, the automation features help simplify patching, upgrade operations and provision isolated clusters on demand.

Supporting self-service automation through templates for defining policies that bind compute, storage, network and security resources, VMware Cloud Foundation reduces the mundane work from the IT team while ensuring internal users can provision resources easily and quickly.

“By simplifying our operations, members of our IT team can be freed up for other high-value strategic projects,” says Niwat.

NITMX has also benefitted greatly from VM rightsizing recommendations by VMware Aria Operations (formerly VMware vRealize Operations Manager). Because VM sizing is often done on a generic basis from a template and VMs are scaled up when the demand increases, the VMs in the

NITMX environment tend to be oversized. And even if the VM is undersized and struggling to keep up with demand, the team was not always sure how much RAM to add.

“Previously we had no visibility at all. By downsizing our oversized VMs, we not only save capacity but also improve overall performances,” says Niwat. “We also get valuable recommendations on how to efficiently scale up our workloads.”

Through optimizing resource utilization and reducing infrastructure requirements, NITMX achieved significant cost savings.

### Ready for future growth and technological advancements

With VMware Cloud Foundation, NITMX gained a future-ready platform that allows the team to seamlessly manage diverse workloads, maintain high levels of security and achieve operational efficiency, enabling the company to transcend traditional boundaries and play an even bigger role in Thailand’s financial ecosystem.

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The ability to scale on demand ensures that NITMX could adapt to changing market conditions and customer needs. During the COVID-19 pandemic, the number of transactions processed by the payments leader spiked by four times. The scalability of VMware Cloud Foundation ensures NITMX is well-prepared for any unforeseen circumstances.

“VMware Cloud Foundation has transformed our business in remarkable ways,” says Niwat. “We now handle 2,600 transactions per second but have the capacity to go up to 10,000 transactions per second without compromising performance, as our team can dynamically scale infrastructure.”



One of the biggest pain points that the IT team faced in the past was capacity planning, as they could not scale the capacity of its on-premises software-defined data center as flexibly as in the cloud. With VMware Aria Operations analyzing resource consumption trends in its environments and predicting where it is going, NITMX can confidently account for future growth.

As NITMX moves toward a hybrid cloud, VMware Cloud Foundation simplifies the process by delivering a common platform for private and public clouds, enabling the company to quickly and easily move workloads at scale across clouds without rearchitecting applications.

Niwat says, “Thanks to VMware and DCS, we now have a powerful foundation to build a future where financial transactions are seamless, secure and accessible to all, driving economic growth and financial inclusion in Thailand and beyond.”

### Unlocking possibilities for financial inclusion

As part of the next stage in its IT roadmap, NITMX is exploring VMware Aria Operations for Applications (formerly VMware Tanzu Observability by Wavefront), allowing the team to have single-source-of-truth visibility and contextualized information across logs, metrics and traces. This will enable them to continue delivering exceptional SLAs by pinpointing the root cause of the issues for faster resolution.

“The transformative capabilities of VMware solutions empower our commitment to innovation, positioning NITMX as a leader in the digital payment landscape,” says Niwat.