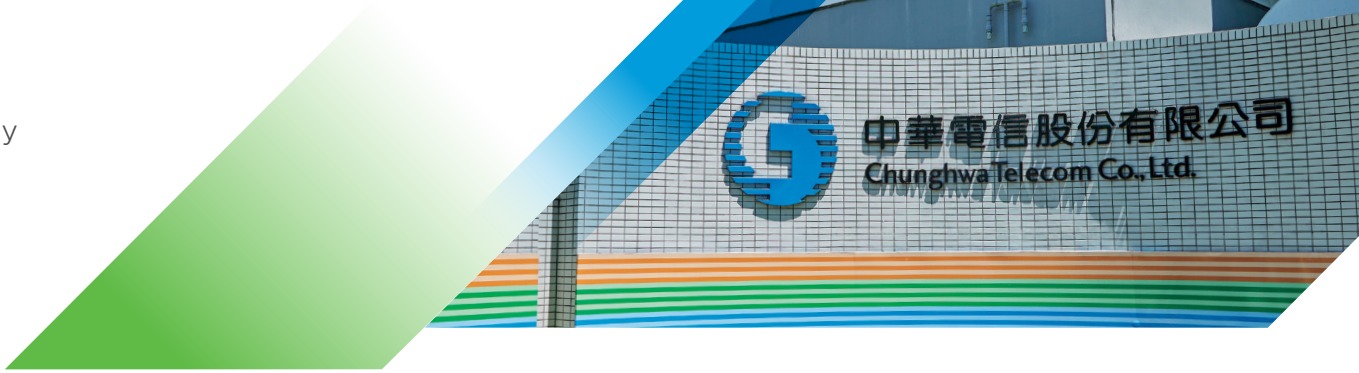
Customer
Case Study



Chunghwa Telecom Accelerates App Modernization and Multi-Cloud Integration

中華電信
Chunghwa Telecom

Chunghwa Telecom has been actively on track to digital transformation in recent years. Having centralized server room control and integrated web portals, information security and cloud resources, now it has moved onto the progressive introduction of network virtualization and containerization, ultimately achieving multi-cloud integration.

Industry

Telecommunications

Location

Taipei, Taiwan

VMware footprint

- VMware Cloud Foundation™
- VMware NSX®
- VMware Tanzu® Kubernetes Grid™

VMware Cloud Foundation with Tanzu leverages containerization

The IT challenge Chunghwa Telecom faced was that the IT team had to both maintain the internal operations of the company and handle the external services. Thus, the team had to manage both the public cloud (hicloud) and the private cloud ("external cloud" for application services). To resolve this, a three-phase digital transformation plan has been devised. This plan is based on an external cloud platform which handles the large number of information systems and improves the efficiency of operations.

Phase 1.0, which is based on VMware vSphere, centralizes server room control, as well as network management, security management and cloud management. Additionally, it integrates web portals, information security and cloud resources, although hundreds of business operations still rely on manual installation and have to go through a cumbersome application process.

Phase 2.0 sees the introduction of solutions such as VMware Cloud Foundation and Software-Defined Data Center (SDDC), to enable network virtualization with VMware NSX, as well as to provide self-service on VMware Cloud Director portals. At this point, the service devices have been fully virtualized, the application processes streamlined, resources allocated automatically, and manual operations greatly reduced.

Most companies aim to ultimately achieve multi-cloud integration in their digital transformation, and Chunghwa Telecom is no exception. The three major international public clouds and hicloud will become extension resources that support the external cloud-based intranet while adhering to the existing information security policies. Therefore, the introduction of VMware Cloud Foundation with Tanzu at Phase 3.0 fully leverages containerization and establishes a modern application architecture. Business operations can be performed directly across multiple clouds without time-consuming P2V conversion.

Infrastructure and application modernization advantages

The two main advantages brought by Chunghwa Telecom digitization are infrastructure modernization and application modernization. Infrastructure modernization has enabled automated deployment and reduced equipment costs by 20% while maintaining the existing information systems and economizing operation manpower.

Application modernization is empowered by VMware Cloud Foundation with Tanzu. With the container platform technology of VMware Tanzu, Chunghwa Telecom is capable of gradually migrating the existing applications to a new container architecture, and helping R&D units streamline the deployment and operation of new services, thus speeding up the development of new services such as AI semantic cloud and smart customer services.

VMware Tanzu assists Chunghwa Telecom in enabling DevOps, shortening the software development life cycle and generating numerous subsequent benefits. For example, now a new version or feature can be completed every two weeks, rather than several months, thanks to the VMware Tanzu Kubernetes Grid underlying environment along with pre-designed scripts and processes. Instead of having to compile all programs and tools from scratch, the provisioning of a service environment can now be achieved with profiles and tools, drastically reducing the service deployment time from a full day to 60 minutes. No longer dependent on manually approval for resource application since the onboarding of VMware Cloud Foundation, Chunghwa Telecom gives system tenants access to resource allocation, hence shortening the resource allocation time for developers from 7 days to 1-2 days.

> "There is a tremendous and urgent need for containerization and multi-cloud architecture in the Chunghwa Telecom business, technology, and management. We not only aspire to achieve internal digital transformation, but also expect the solution to support external services and meet the needs of our clients. VMware has always been there for us at every stage in pursuit of our goals."
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> Ming Chung, Chief Engineering Officer, Data Communications Business Group, Chunghwa Telecom

Increasing application performance with VMware solutions

VMware Cloud Foundation with Tanzu is an innovative platform that supports both traditional application virtualization and modern container applications. It not only integrates open source packages such as Kubernetes, but also incorporates monitoring and management tools including VMware vRealize® Operations™. It can provide developers with safe and self-service access to standardized and consistent Kubernetes in both on-premises environments and public clouds, accelerating application deployment and onboarding while offering a operations management mechanism for modern application services.

In the past, to build a containerized development environment required multiple layers of hardware, OS, Hypervisor and Guest OS. Although portable, performance loss was unavoidable. Now having got rid of the layer stack, VMware Cloud Foundation with Tanzu supports containers directly with the physical layer, therefore increasing application performance by 8% and meeting the expectations of Chungwa Telecom.

The VMware Professional Services (PSO) has demonstrated their utmost professionalism during the introduction of the solution. They not only assisted Chunghwa Telecom in bringing in successful overseas experience at the architecture planning phase, but also explained the Tanzu operation model in sufficient detail through meaningful trainings, which considerably accelerated the building and onboarding of the Tanzu platform.

Chunghwa Telecom looks forward to continuing the close collaboration with VMware on the development of external cloud, hicloud public cloud and even multi-cloud, creating more success stories from infrastructure optimization, cloud service automation, to multi-cloud support for application development environments and more complete internal and external services and solutions.