



## WHIRLPOOL CORPORATION POWERS GLOBAL PRODUCT INNOVATION WITH CLOUD COMPUTING BUILT ON VMWARE



### INDUSTRY MANUFACTURING

### LOCATION BENTON CHARTER TOWNSHIP, MICHIGAN

### KEY CHALLENGES

- Meet changing customer demands for more complex, connected appliances
- Provide global engineering teams with rapid access to applications and enhanced collaboration
- Better manage storage across dispersed teams

### SOLUTION

Whirlpool Corporation elevates global engineering collaboration and accelerates product development with VMware vCloud Air Dedicated Cloud and VMware vSAN to drive market-leading innovations in home appliances that benefit millions of people worldwide.

### BUSINESS BENEFITS

- Poised to lead the industry in connected home appliances
- Empowered engineering teams to design faster and smarter for greater innovation
- Achieved six-figure CapEx savings for new development and test systems

As the world's largest home appliance maker, Whirlpool Corporation delivers trusted products in brands including Whirlpool, Maytag, KitchenAid, and Jenn-Air, that customers have used for decades to care for their families. At the core of the company's success is its continued focus on innovation and quality to provide consumers with the latest breakthroughs, whether they are looking for better ways to wash their clothes, bake a meal, or simply relax at home.

With over 70 manufacturing and research centers worldwide, and an impressive production output of 1.4 products every second, Whirlpool Corporation depends on proven technologies to keep innovation and output high and operating costs low. One trend accelerating the pace of change at Whirlpool Corporation is a new era of connected home appliances made possible by the Internet of Things (IoT). For a company committed to being a market leader, this means Whirlpool Corporation engineers and developers need streamlined access to the applications and infrastructure to help ensure they are always working with the latest tools and information.

### The Challenge

A truly global company, Whirlpool Corporation invests in the communities and economies where its customers live. "We're in every region," says Michael Pfarrer, Infrastructure Systems Manager at Whirlpool Corporation. "If you live in India, we make a refrigerator for you in India. We want our products to be relevant and to have a positive impact on all the people we touch."

As part of its commitment, Whirlpool Corporation constantly incorporates consumer feedback into product development. The IoT has taken customer engagement to new levels, giving people many ways to provide frequent feedback. For a company known for world-class service, this level of engagement is helpful as Whirlpool Corporation looks to respond quickly to customer needs and strengthen its position in diverse markets.

"Our world is changing daily, with new demands and new requirements," says Pfarrer. "The cloud makes it easier for us to address changes and go after new market opportunities. By adopting a scalable platform for software development and testing, we're giving our engineering teams worldwide the ability to easily get the services and information needed to design products best suited to their regions, while adhering to Whirlpool Corporation's high standard of quality."

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MICHAEL PFARRER  
INFRASTRUCTURE SYSTEMS MANAGER  
WHIRLPOOL CORPORATION

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The company set out to extend development and testing to the cloud but needed a dedicated solution that would work seamlessly with its existing VMware vSphere environment. “We wanted the ability to move a VM to the cloud and back without anybody knowing or caring where it is,” says Pfarrer. “The solution had to be transparent to our designers and engineers everywhere and easy for my team to execute.”

Whirlpool Corporation also needed to reliably share storage between teams and across geographies without having to manage many large storage systems. “We knew a virtual storage platform could meet our goals, but we weren’t sure if any really offered what we were looking for. In the end, we needed an environment that not only enabled our design and manufacturing teams to keep up with the pace of change in our industry but also to lead it,” Pfarrer says.

### The Solution

To make its engineering environment cloud-ready, Whirlpool Corporation chose VMware vCloud Air Dedicated Cloud for data center extension. By providing a physically isolated infrastructure as a service (IaaS) platform in the public cloud, vCloud Air Dedicated Cloud makes it easy for Whirlpool Corporation to move development and test environments to the cloud and back.

“We picked vCloud Air because there’s no conversion needed,” says Pfarrer. “It’s an extension of our data center. Our IT team can use their existing expertise and avoid spending value time learning new skills or making architectural changes to run workloads in the cloud.”

Using VMware Hybrid Cloud Manager, Whirlpool Corporation can move live, running workloads to vCloud Air with zero downtime or move multiple workloads with a scheduled cutover. “It’s a real advantage for Whirlpool Corporation that VMware leads this market,” says Pfarrer. “There’s no other public cloud provider that offers this type of bi-directional workload portability—and it’s completely transparent to my end users.”

To improve data management and access, Whirlpool Corporation also turned to VMware vSAN, replacing HP and Hitachi storage environments. “We went from having to manage multiple large SAN systems to managing a simple, streamlined virtual storage environment that allows for sharing storage across global teams,” says Pfarrer.

### Business Results & Benefits

With vCloud Air Dedicated Cloud, Whirlpool Corporation benefits from the security of a private cloud solution with the cost efficiencies of public cloud to reduce capital expenditures (CapEx). IT can deliver resources at the pace of innovation, empowering engineers and software developers to work faster and smarter to enhance product quality. Meanwhile, VMware vSAN has freed up data center space and increased Oracle database performance by 150%, further accelerating engineering workflows.

“VMware solutions are transforming our entire process of supporting our application and product developers,” says Pfarrer. “For example, if I get a request for new lab systems, I can virtualize it instead of paying half a million dollars for new equipment. Equally impressive, I can deliver it in days rather than the three to four months that it would take to roll out a physical infrastructure globally.

#### VMWARE FOOTPRINT

- VMware vSphere ESXi 6.0
- VMware vCloud Air Dedicated Cloud
- VMware vSAN

#### APPLICATIONS VIRTUALIZED

- PTC Windchill
- PTC CREO
- Oracle database
- Custom applications

“Since going with the VMWare suite of tools,” continues Pfarrer, “Whirlpool Corporation has been able to improve stability while reducing the total development turnaround time by 50%.”

More rapid development cycles are allowing Whirlpool Corporation to respond faster to customer needs and feature requests. Accelerated development will also help the company extend its leadership in the global home appliances market, while addressing consumer demands for products that are more connected in a world where the Internet of Things is the new normal.

“The advances we’re enjoying with the help of VMware cloud solutions are allowing us to focus on what we do best: making washers, dryers, microwaves, and other appliances that change the way people care for themselves and their families,” says Pfarrer.

#### Looking Ahead

In the future, Whirlpool Corporation will use vCloud Air to move more applications to the cloud following the same flexible model. “If our CIO walked in tomorrow and said ‘move everything to the cloud,’ we could easily do it,” says Pfarrer. “I’m excited about the roadmap that VMware has laid out and how that will support us as we continually reinvent what our products can do.”

