

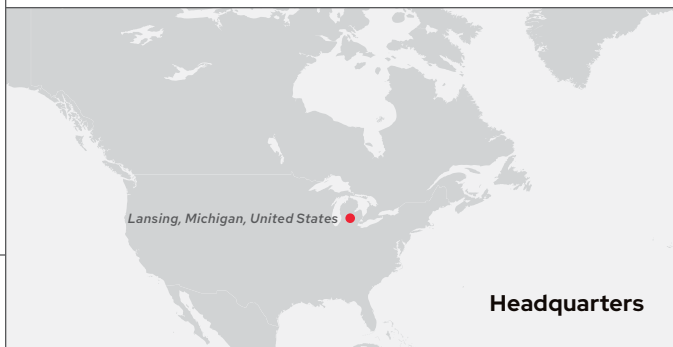
State of Michigan builds cloud-ready digital service environment with Red Hat OpenShift



Software and services

Red Hat® OpenShift®
 Red Hat Ansible®
 Automation Platform
 Red Hat Quay
 Red Hat Consulting

The State of Michigan's Department of Technology, Management, and Budget (DTMB) supports internal and citizen-facing services for 19 state agencies. To keep pace with demand, the department sought to improve development, delivery, and reliability for agencies' digital services by migrating to a container-based infrastructure. With this new environment based on Red Hat OpenShift, DTMB has reduced application delivery times while creating a scalable, vendor-agnostic foundation for future cloud adoption.



Government

49,000 employees
 More than **700** locations

Benefits

- Reduced time to market for new, digital data services
- Improved infrastructure security with consistent container images
- Created cloud-ready infrastructure foundation
- Adopted collaborative work approach to improve efficiency

"We can now rapidly develop prototype applications and get digital services to citizens faster."

Jack Harris
 Chief Technology Officer,
 Michigan Department of Technology,
 Management, and Budget (DTMB)



facebook.com/redhatinc
 @RedHat
 linkedin.com/company/red-hat

“Containerizing our applications helped us establish a vendor-agnostic view of our infrastructure and gives us the freedom to move into cloud environments in the future, where appropriate.”

Jack Harris
Chief Technology Officer,
Michigan Department of Technology,
Management, and Budget (DTMB)

Speeding delivery of innovative IT solutions to Michigan’s agencies

The State of Michigan’s Department of Technology, Management, and Budget (DTMB) supports business operations of 19 state agencies, including health and human services, policing, and environmental protection. Founded in 2002, DTMB focuses on consolidation and consistency, with notable successes including datacenter, IT help desk, and IT security strategy consolidation. The department’s work has saved Michigan millions of dollars.

Recently, DTMB began efforts to support the digital transformation of both citizen-facing services and internal operational processes. A key part of these efforts was consolidating and standardizing the state’s IT infrastructure to support its various agencies with a shared platform.

“In terms of user experience, people want to work from tablets and smartphones, so we need to keep pace,” said Jack Harris, Chief Technology Officer, State of Michigan DTMB. “We want to take advantage of cloud-native operating environments, with all new applications built using a cloud-native architecture, to meet that demand while also streamlining back-office operations.”

DTMB began exploring how container technology could help it improve delivery speeds and costs. For example, a central, shared platform could simplify invoicing for multiple agencies while improving security and visibility. A data hub modernization project for the Department of Health and Human Services (DHHS) presented an ideal opportunity to find a container platform for Michigan’s agencies.

Adopting enterprise container technology with Red Hat OpenShift

To support its digital transformation efforts, DTMB chose to deploy Red Hat OpenShift, supported by Red Hat storage and automation solutions.

“Open source helps us standardize but avoid vendor lock-in. Community innovation is moving as fast as the market, and Red Hat gives us the freedom of open source with the enterprise support and security we need,” said Harris.

DTMB also deployed:

- **Red Hat Ansible Automation Platform**, a solution to automate workflows across different cloud deployments.
- **Red Hat OpenShift Container Storage**, software-defined storage optimized for and integrated with Red Hat OpenShift on premise or in cloud environments.
- **Red Hat Quay**, a container and application registry that supports security for container storage, distribution, and deployment.

During implementation, the department worked closely with Red Hat Consulting to validate the design, oversee implementation, and learn new skills and best practices for its Red Hat OpenShift container environment. Implementation was completed in just seven months, and the solution is now being used for all new application development.

“Red Hat did the proof of concept and lab tests, then supported us throughout implementation,” said Harris. “Containers were new to us, but by the end of the implementation, our engineers and architects knew how to take advantage of our Red Hat OpenShift deployment.”

Creating a standardized, efficient application environment

Reduced time to market for new, digital data services

With a container-based environment for cloud-native development, DTMB can support innovative projects for the State of Michigan's government agencies at the speed of demand.

"The modular nature of Red Hat OpenShift helps us speed our time to market," said Harris. "We can now rapidly develop prototype applications and get digital services to citizens faster."

For example, Michigan's DHHS now uses its security-focused container environment to deliver healthcare applications and data securely to citizens, other agencies, and healthcare professionals, supporting more effective patient care.

Improved infrastructure security with consistent container images

DTMB ensures its container infrastructure meets regulatory and security requirements by enhancing Red Hat OpenShift with Red Hat Quay.

"We wanted to manage containers centrally, with built-in control, security, and visibility," said David Tremblay, Director of Technical Services, State of Michigan DTMB. "We spent a lot of time up front figuring out permissions and making sure our containers follow best practices for success with Red Hat OpenShift. Red Hat Quay provides a good security baseline to help us fix vulnerabilities before code goes into production."

Created flexible foundation for future cloud adoption

By automating various infrastructure management workflows with Ansible Automation Platform and Red Hat OpenShift, DTMB has created an efficient, reliable foundation to support its plans to adopt cloud computing as part of its IT environment.

"Containerizing our applications helped us establish a vendor-agnostic view of our infrastructure and gives us the freedom to move into cloud environments in the future, where appropriate," said Harris.

Adopted collaborative work approach to improve efficiency

Working closely with Red Hat Consulting has not only helped shape DTMB's initial implementation of its new container technology but also accelerated cultural change within the organization. Now, operations teams and developers can use a common foundation to collaborate on projects.

"With an approach that is different from the way we're used to working, we've been able to bring teams together to ask and answer difficult questions," said Tremblay. "In the past, we faced drawn-out deployment cycles due to isolation and ineffective communication. Working with Red Hat to deploy OpenShift, and maintaining that relationship, has helped us create a process that has been very collaborative. Our developers feel invested in a platform they helped create."

Expanding automation to continue improving efficiency

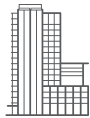
After successfully standardizing new application development on Red Hat OpenShift, DTMB is now reviewing its legacy applications for potential migration to the new container-based environment.

The department plans to continue focusing on automating manual tasks to continue improving its efficiency. "Automation is an ongoing journey," said Harris. "We're looking to build more automation into both our on-premise and cloud operations."

About the Michigan Department of Technology, Management, and Budget (DTMB)

DTMB supports the business operations of the State of Michigan's agencies. Its services include building management and maintenance, IT, centralized contracting and procurement, budget and financial management, space planning and leasing, construction management, motor vehicle fleet operations, and oversight of the state retirement systems. www.michigan.gov/dtmb/

About Red Hat



Red Hat is the world's leading provider of enterprise open source software solutions, using a community-powered approach to deliver reliable and high-performing Linux, hybrid cloud, container, and Kubernetes technologies. Red Hat helps customers integrate new and existing IT applications, develop cloud-native applications, standardize on our industry-leading operating system, and automate, secure, and manage complex environments. Award-winning support, training, and consulting services make Red Hat a trusted adviser to the Fortune 500. As a strategic partner to cloud providers, system integrators, application vendors, customers, and open source communities, Red Hat can help organizations prepare for the digital future.



facebook.com/redhatinc
@RedHat
linkedin.com/company/red-hat

North America
1 888 REDHAT1
www.redhat.com

**Europe, Middle East,
and Africa**
00800 7334 2835
europe@redhat.com

Asia Pacific
+65 6490 4200
apac@redhat.com

Latin America
+54 11 4329 7300
info-latam@redhat.com