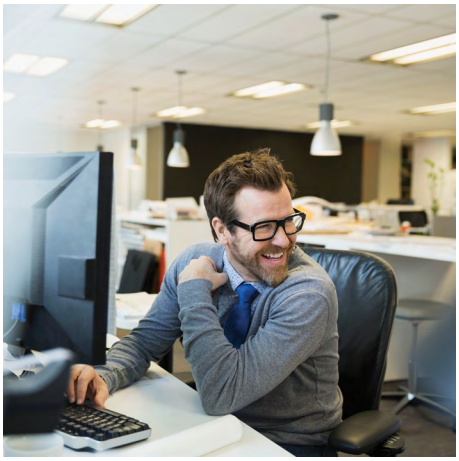
MICRO FOCUS

Case Study

Application Delivery Management

# Michigan Manufacturing Company

LoadRunner Cloud provisions 40 cloud load generators in just minutes, leveraging unique TruClient technology and creating 1,000 distributed, concurrent virtual users for key application



## Overview

Michigan Manufacturing Company supplies seats and components for more than 25 million cars a year. With one in every three seats in the world coming from its facilities, it works with all major automakers and vehicle classes. Founded in 2016, it now has 250 assembly plants and 86,000 employees. Its market share is nearly double that of its nearest competitor.

## Challenge

The company developed an application to capture the real-time status of production in any of its global plants. The resulting dashboard contains data specific to plants, production lines, shifts, and customer demand; all metrics that determine how the plant is tracking against its production goals. The application is launched on large TV screens set up in manufacturing plants across the globe.

The Performance Test Lead at Michigan Manufacturing Company, explains further: "The dashboard contains multiple graphs that are automatically refreshed every 15 seconds. This happens via an API call that runs in the browser throughout the day, collects data from the database, and updates the dashboard without manual intervention. For testing purposes, we needed to simulate the concurrent launch of the dashboard on 1,000 TV screens and measure the application performance and impact on server hardware capacity."

He continues: "We typically used Micro Focus® LoadRunner Enterprise for any on-premise application testing, but the volumes of this particular test would require at least 40 load generators. This would take too long to set up, we estimated 2-3 weeks, and our existing test set up just was not geared towards this."

The company wanted to find a cloud-based solution that would eliminate the need to manage hardware infrastructure to accommodate large-scale testing. They also wanted to make sure they could balance the load testing requirements between multiple geographical regions,

**"We estimate a 50 percent saving in labor costs because LoadRunner Cloud automates the entire test process for us. Having a cloud-based solution also means we don't incur any extra costs to create LGs across different geographies, enabling large-scale testing with 1,000 concurrent users."**

**PERFORMANCE TEST LEAD**
Michigan Manufacturing Company

## At a Glance

- **Industry**
  Automotive
- **Location**
  Michigan, USA
- **Challenge**
  Managing more than 40 load generators machine to simulate the required virtual users load to measure key application performance
- **Products and Services**
  LoadRunner Cloud
  LoadRunner Enterprise
- **Results**
  + 50% cost saving through labor efficiencies and eliminated hardware
  + Provision 40 cloud load generators (LGs) within minutes
  + Flexible licensing for every testing scenario
  + Full automation ensures no scope for errors
  + Cloud solution enables easy load testing across geographies

> **"Thanks to Micro Focus' flexible licensing structure, we are able to switch between LoadRunner Enterprise and LoadRunner Cloud, depending on the test scenario we manage at that particular point in time."**
>
> **PERFORMANCE TEST LEAD**
> Michigan Manufacturing Company



which would be online at different times during a 24-hr period. This would allow more accurate recreation of the production load.

## Solution

Much of the company's testing infrastructure leverages Micro Focus technology, the 'TruClient-Web protocol was used to create a test script and to simulate the real-time dashboard launch, and browser activity. The API calls that run within the browser every 15 seconds were exactly simulated by the script, when the team was introduced to Micro Focus LoadRunner Cloud they soon found this to be the answer for tests that require more than 40 load generators.

The Performance Test Lead comments on the implementation: "Leveraging LoadRunner Cloud, we set up a cloud-based test environment in Amazon Web Services (AWS) so that we can just spin up the required Load Generators (LGs) and ramp up 1,000 sessions without the need to install and configure LGs separately. It took just a few minutes to do this and connect the regions we selected. The test is started automatically and will run constantly for 2-3 hours, collating the test results automatically."

There is no scope for errors as the entire process, starting from provisioning the LGs, executing the tests, and collating the test results, is automated. The cloud-based solution automatically and instantaneously provisions the required LGs on the cloud with the necessary software already installed.

## Results

In the new LoadRunner Cloud test environment, creating test scripts is easy and requires minimal effort. With the cloud set up and 24/7 access, a central team can execute tests and collate the results, without needing to involve the local teams in the regions. For the Performance Test Lead this is a key benefit: "We estimate a 50 percent saving in labor costs because LoadRunner Cloud automates the entire test process for us. Having a cloud-based solution also means we don't incur any extra costs to create LGs across different geographies, enabling large-scale testing with 1,000 concurrent users."

Michigan Manufacturing Company supports testing across on-premise and web applications. The Performance Test Lead explains how Micro Focus delivered full flexibility: "For our client-facing on-premise application testing, we are very satisfied with our use of LoadRunner Enterprise. Thanks to Micro Focus' flexible licensing structure, we are able to switch between LoadRunner Enterprise and LoadRunner Cloud, depending on the test scenario we manage at that particular point in time."

He concludes: "We have a great partnership with Micro Focus and any support we needed in setting up our comprehensive application testing framework has been readily and expertly given."