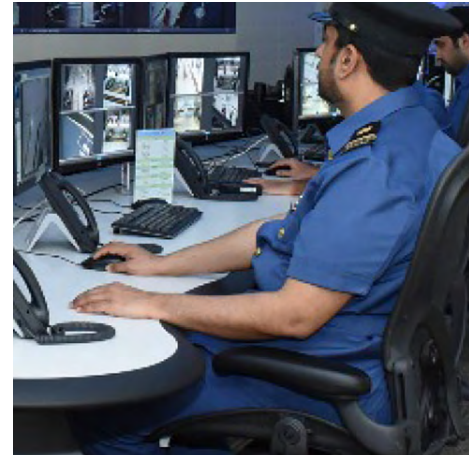# Dubai Customs

Government organization ensures secure, barrier-free trade by scaling its software development, testing, and maintenance capabilities with OpenText.

جمـــارك دبـــي
Dubai Customs

About Dubai Customs

Dubai Customs oversees the free trade of goods and runs customs services at every port in the city-state. Responsible for ensuring secure, legal, and safe trade, the organization plays a significant role in driving economic development in the UAE.

Challenge

Dubai Customs plays a key role in the economic development and prosperity of Dubai, the most populous city-state in the United Arab Emirates (UAE). Founded in 1890, the government organization ensures the smooth flow of trade across state and federal borders, while also preventing illegal or prohibited items from entering the Emirates.

"ALM/QC, UFT One and LoadRunner (Professional) all helped us to scale our testing and management workflows as we grew. Crucially, we've been able to drive this growth while also ensuring round-the-clock uptime for our applications."

KANNAN VENKATACHALAM
Manager Software Testing
Dubai Customs

Every day, Dubai Customs runs over 100,000 checks on goods passing through the Emirates's land, air, and seaports. Responsive, flexible, and performant software empowers the government organization to process high volumes of goods quickly and efficiently. However, any glitches or bugs could delay customs checks and disrupt the movement of goods into and out of Dubai.

To ensure smooth trade all year round, the Information Technology division at Dubai Customs develops and rigorously tests the software powering its operations, running regular maintenance tests to optimize performance. With trade booming in the UAE, the government organization was keen to ensure that it could keep pace.

Chandrashekhar Bhagat, senior software testing lead at Dubai Customs, explained, "When Dubai prospers, we see much greater demand on our core software. Our existing testing processes and systems were not well-prepared to meet higher transaction volumes and workloads. For instance, generating one dataset manually for maintenance testing would take up to three hours. To ensure high efficiency and keep our core applications and services reliable and performant, we decided to look for a solution to enhance and expand our testing

At a Glance

- **Industry**
  Transportation

- **Location**
  United Arab Emirates (UAE)

- **Challenge**
  Growing business demand required applications, services, and transactions to meet the business requirement to deliver quality services.

- **Products and Services**
  ALM/Quality Center
  LoadRunner Professional
  UFT One

- **Success Highlights**
  + Enabled frictionless scalability for all testing workflows.
  + Achieved 76% shorter release cycles.
  + Enhanced productivity with 99% faster dataset creation.

activities and continue to modernize our application landscape."

Solution

To scale application testing and development effortlessly, Dubai Customs combined OpenText™ ALM/Quality Center (ALM/QC), OpenText™ LoadRunner Professional, and OpenText™ UFT One to enable rapid maintenance, operational, performance, and functional testing.

Driving Scalable Application Testing and Development

For over a decade, Dubai Customs has supported functional, performance, and maintenance testing with ALM/QC. With workloads increasing, the government organization decided to upgrade to the latest version of the OpenText solution, taking advantage of the latest features and functionality.

Kannan Venkatachalam, software test manager at Dubai Customs, said, "Over the past 16 years, ALM/QC has supported numerous development cycles and helped to ensure that our software is powerful and stable. Moving to the latest version of the solution was an easy decision."

Today, ALM/QC functions as a one-stop solution for all of the government organization's application lifecycle management activities. Dubai Customs uses the solution to develop, test, deploy, and maintain 15 core applications as well as hundreds of associated services. What's more, ALM/QC provides the government organization with a full audit trail of all development workloads, simplifying version control and compliance reporting.

Stress-Testing Applications at Peak Load in Complex Scenarios

Throughout the year, Dubai Customs sees peaks in demand for certain services which place additional pressure on its core applications. In many cases, these surges are unpredictable, so the government organization regularly tests every application and service against a variety of scenarios. To achieve this, Dubai Customs selected LoadRunner Professional to drive performance load testing across all of its codebases—including Java, .NET, and SQL.

"Our applications are quite complex and integrate with many different government systems," said Chandrashekhar Bhagat. "In some cases, we need to populate applications with data from up to five unique systems to run performance tests. LoadRunner gives us the tools we need to manage the complexity of our software stack, run a comprehensive set of performance tests, and identify and remediate any issues quickly and efficiently."

Enhancing Efficiency with Automation

In partnership with business partner Emitac, Dubai Customs worked to accelerate functional testing activities by harnessing the automation capabilities of UFT One—a move that would significantly increase test coverage.

"One of the major benefits of ALM/QC is that it enables us to reuse test scripts, some of which have served us well for many years," explained Kannan Venkatachalam. "By integrating ALM/QC with UFT One, we can automate a significant proportion of our functional testing activities and trigger them directly from the user-friendly ALM/QC interface."

Results

With OpenText's help, Dubai Customs successfully expanded its software stack from 3 to 15+ core applications along with associated applications over 16 years. ALM/QC, UFT One, and LoadRunner Professional have helped the organization run over 30,000 tests.

Delivered Frictionless Scalability with Support for over 30,000 Test Cases

With data volumes and trade expected to rise, Dubai Customs is working hard to enhance its applications and ensure that they perform well under new pressures. Already, OpenText solutions have helped the government organization increase application testing and lifecycle management activities. To date, Dubai Customs has used OpenText solutions to run over 30,000 unique test cases.

Chandrashekhar Bhagat explained, "When we first started out with ALM/QC we had just three core applications and around 10,000 users. Now we manage 15+ critical applications, hundreds of supporting services, and more than 100,000 transaction simulations. ALM/QC, UFT One, and LoadRunner all helped us to scale our testing and management workflows as we grew. Crucially, we've been able to drive this growth while also ensuring round-the-clock uptime for our applications."

Bader Al Kharoosi, solutions delivery head at Dubai Customs, added, "Dubai Customs' IT services have experienced significant growth, incorporating leading IT practices, processes, and tools from key market players. Utilizing software testing tools from OpenText (formerly Microfocus and HP), we simulate the functional and performance aspects of all applications before production rollout. This strategic approach has added considerable value to our operational capabilities, minimizing functional issues and application failures while maintaining optimal performance."

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> "The automation features in LoadRunner (Professional) and UFT One have been a real game changer, especially for maintenance testing. We can now generate test datasets in minutes."

CHANDRASHEKHAR BHAGAT
Senior Software Testing Lead
Dubai Customs

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Achieved 76% Shorter Release Cycles

Dubai Customs previously took an iterative approach to software development, which meant that release cycles could take up to two months to complete. Since upgrading to the latest version of ALM/QC, the government organization has shifted to an Agile testing approach, with release cycles now cut to two weeks.

"On average, it only takes us 14 days to test and release new versions of our applications," said Kannan Venkatachalam. "This is a huge improvement, and for critical maintenance tasks we've cut build time to just two days. As a result, we can launch releases more regularly to ensure that all of our critical services and applications are always up to date and offer users the latest features—whether that's new functionality or enhanced integrations."

Boosted IT Productivity with Automated Workflows

Previously, IT experts at Dubai Customs would spend up to three hours manually generating data for maintenance tests. By automating this process with LoadRunner Professional and UFT One, IT teams complete the task in just two minutes—99% faster.

Chandrashekhar Bhagat commented, "The automation features in LoadRunner (Professional) and UFT One have been a real game changer, especially for maintenance testing. We can now generate test datasets in minutes, so we can spend more time on application innovation and enhancing workflows. We're now excited to see how the artificial intelligence tools embedded in UFT One will be able to help us to drive further efficiency improvements in the months ahead."

Kannan Venkatachalam concluded, "OpenText solutions give us the tools we need to provide our colleagues with easy-to-use, secure, and reliable software. Ultimately, this plays a key role in supporting the smooth movement of goods to and from Dubai and helps prevent illegal or prohibited items entering the Emirates."

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