



# **Global Trade & Transportation Execution in the Cloud**

A QAD Leadership White Paper for Global  
Trade and Transportation Execution

# CONTENTS

Introduction	3
How Cloud Applies to Transportation Execution and Logistics	4
Why Does Cloud Create Positive Outcomes?	4
Transportation, Global Trade and Logistics in the Cloud	5
The Cloud – Myths and Realities	5
How This Information Can Be Put to Use	7
About QAD – Trusted Global Trade and Transportation Execution	7

# GLOBAL TRADE & TRANSPORTATION EXECUTION IN THE CLOUD

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## INTRODUCTION

Businesses around the world are moving enterprise applications, platforms, and infrastructure to the cloud at an increasing rate. Yet, surprisingly, there continue to be skeptics and naysayers. We believe the data speaks volumes about both the importance of cloud in accelerating business performance and its firmly secured place as a foundational element in enterprise IT.

**For many companies, Cloud solutions are now the default option for deploying technology and business innovations. According to Gartner, worldwide end-user spending on public cloud is forecast to grow 20.7% to total \$591.8 billion in 2023, up from \$410.9 billion in 2021.**

What is driving this sweeping migration to cloud solutions? It's not technology for technology's sake. Globally, enterprises that embrace cloud infrastructure report tangible business impacts that all others are still trying to achieve. In an IBM report summarizing over 800 IT leader surveys across 24 industries in 13 countries, strategic cloud adopters exhibited twice the revenue growth of the laggards and achieved 2.5 times the profit growth. Unless there is a drastic reversal of these trends, it is clear cloud solutions will be the mainstay for years to come.



# GLOBAL TRADE & TRANSPORTATION EXECUTION IN THE CLOUD

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## HOW CLOUD APPLIES TO TRANSPORTATION EXECUTION AND LOGISTICS

This whitepaper examines cloud advantages and traditional misconceptions from the perspective of transportation execution and logistics – both providers and customers. We'll answer questions such as, What are the main advantages of cloud solutions? Are there real drawbacks or just lingering myths? How do shippers and logistics platform users benefit from cloud implementations? What questions should you be asking a prospective cloud solution provider?

## WHY DOES CLOUD CREATE POSITIVE OUTCOMES?

The advantages of cloud solutions are not a big secret. Applying virtualization technology and scalable operational models to computing, applications, platforms, and infrastructure yields similar results in nearly any industry.

### SCALABILITY

The core value of public cloud is scalability. When the demand on computing resources such as processing, storage, memory, etc. increases dynamically, cloud environments respond with dynamic allocation of resources to handle the load.

Private cloud environments may not necessarily scale dynamically. However, provisioning additional resources is still faster than upgrading dedicated on-premise configuration assets. Furthermore, it is your provider, not you, who is responsible for making computer resources available to you.

### FASTER DEPLOYMENT

Cloud deployment is far faster than machine-specific rollouts. There are no user or group level upgrades to manage, rarely any infrastructure

adjustments necessary, and configuration is typically done at a centralized application or platform level where it can be universally tested along with any system integrations.

### REDUCED MAINTENANCE AND IT OVERHEAD

For customers, cloud can drastically reduce maintenance and IT overhead. IT staff can focus on business performance and strategic advancements rather than routine IT maintenance, bug fixes or upgrades. With a solid cloud solution, your provider generally takes on those burdens. Your provider also bears responsibility for hardware maintenance and upgrades. When infrastructure is eventually updated, it's invisible to your IT organization and your finance department.

### DISASTER RECOVERY

It was noted earlier that virtualization can provide an added level of redundancy if resources are planned appropriately, but solid cloud solutions offer another form of reliability to customers: disaster recovery. When a cloud solution is built on virtualized hardware resources that are geographically and systematically independent, your organization has part of its disaster recovery plan built in. Rather than planning for, procuring and maintaining the infrastructure, licenses and application resources to duplicate critical business systems in the event of a disaster, your task is reduced to finding alternative access to your cloud solution, typically for only an affected subset of your workforce. Not all cloud providers consider this element in the design of cloud solutions, but it's something you should look for in a solution.

# GLOBAL TRADE & TRANSPORTATION EXECUTION IN THE CLOUD

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## TRANSPORTATION, GLOBAL TRADE AND LOGISTICS IN THE CLOUD

### CONTINUOUS UPDATES OF CARRIER DATA

Taking a closer look at how cloud impacts global trade, transportation and other shipping and supply chain logistics solutions, it becomes clear that the advantages go far beyond efficiency. For example, in a transportation execution platform, there are ubiquitous connections to data and external systems such as carrier networks and integrations that

change often. With a cloud implementation, your provider is keeping track of all the carrier interface updates and making those changes in the system so that you always have access to the latest carrier data such as routing information.

### ONGOING UPDATES OF TRADE COMPLIANCE CONTENT

The same ongoing updating occurs with trade compliance content. When denied party screening lists and international export regulations change, you cannot afford to have a lag in updates to your compliance library. The point of putting your compliance checks in line with the rest of your workflow is to ensure continuous compliance. In this regard, having a cloud-based shipping logistics platform is a matter of risk management and avoidance of costly penalties.

### COMPETITIVE ADVANTAGE

What organizations need to understand is that cloud deployments for logistics solutions create a competitive advantage. Those with access to the newest application features and up-to-date data stores for their logistics operation, have capabilities that competitors don't. That gives your company a competitive edge in delivery, customer service, and cost savings.

## THE CLOUD - MYTHS AND REALITIES

Despite the documented growth of cloud services and the measured business performance improvements garnered from adoption, there remain skeptics and die-hard opponents voicing concerns over higher risk in the cloud model. We will take a look at these here.

### MYTH 1 – CLOUD APPLICATIONS AREN'T FLEXIBLE OR CONFIGURABLE

Cloud skeptics often assume applications are one-size-fits all in the cloud because everyone shares the same code and resource base. That couldn't be further from the truth. Just like with on-premise implementations, every cloud solution offers some level of configuration. The extent of customizable features and performance has more to do with the design of the software than the cloud architecture. So, cloud deployment poses no fundamental obstacle to customization.

### MYTH 2 – CLOUD PRODUCTS ARE INTRINSICALLY LESS SECURE

This concern, above most others, is based often on little more than erroneous perception born of some high profile security issues by early cloud product providers. Every software product model has security risks. It is how those risks are managed that determines whether a meaningful breach occurs. Cloud services, by virtue of being hosted in highly secure data centers with multiple layers of access control and up-to-date firewall and software barriers, can be made more secure than on-premise solutions when security is a deliberate focus. Additionally, cloud providers are able to extend the experience and knowledge acquired from multiple customers and cloud solutions to offer industry best practices and a well-tested and more secure solution than an on-premise instance.

# GLOBAL TRADE & TRANSPORTATION EXECUTION IN THE CLOUD

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This is not to say cloud services are impenetrable. However, with most industry studies reporting that 50-80% of business data breaches come from internal sources (employees, IT department mistakes, etc.) versus external ones (hackers, malware, DOS attacks, etc.) it becomes clear that cloud services are not intrinsically more susceptible to security threats. It is merely human nature to focus on external threat sources because they have a larger element of the unknown, are easier not to trust, and are actually easier to avert.

High quality cloud platform providers do all of the things that mitigate security risk just as a highly skilled internal IT team would do for an on-premise solution, except that you aren't bearing the direct costs for staying abreast of the latest security measures. Security-sensitive cloud products may use dedicated circuits between isolated data centers; there will be data segmentation and/or encryption at an appropriate level within the product architecture; and authentication measures will be used to manage user access.

## MYTH 3 – CLOUD SOLUTIONS DO NOT OFFER THE PERFORMANCE OF ON-PREMISE OR DESKTOP APPLICATIONS

A true cloud solution will leverage scalable computing resources. When resources are sized appropriately and shortcuts are avoided, there is no reason a cloud solution should underperform an on-premise one in terms of computing power. In fact, to allay these performance concerns, high quality cloud solution providers often contractually guarantee performance with specific SLAs in their cloud services agreement.

There was a time when very high volume shippers should have opted for on-premise transportation execution, supply chain, and logistics platforms due to network latency. But with network architecture becoming a more sophisticated part of business IT planning and higher bandwidth connectivity available at affordable rates, latency is no longer a significant concern. However, you ideally should look for a provider with a data center presence on all continents across the globe — and in cases where superfast speed and/or adherence to in-country data storage regulations are necessary, in your own country.

## MYTH 4 – CONNECTIVITY FAILURE HAS TOO LARGE AN IMPACT ON CLOUD SERVICES

This is an interesting objection made by opponents of cloud adoption. It is interesting not because a connectivity loss will have a detrimental impact on cloud accessibility — that is true; it is interesting because connectivity loss also has a large and detrimental impact on on-premise transportation execution, supply chain and logistics systems. On-premise or cloud-based, carrier connectivity and trade compliance updates are delivered electronically. The deployment model is inconsequential — any model will require connectivity.

## HOW THIS INFORMATION CAN BE PUT TO USE

If you're considering a cloud solution for your transportation, supply chain and/or logistics operation, or if you're considering replacing your existing systems with a cloud-based deployment, you can use this whitepaper as a vetting guide for your solution provider.

# GLOBAL TRADE & TRANSPORTATION EXECUTION IN THE CLOUD

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What questions should you ask? Here's a handy list for your first evaluation session:

1. Does the provider have a 'solution architect' to unify all components of your cloud system: product, computing and storage resources, configuration, connectivity, and security?
2. What is their service level agreement (SLA), not just for technical and user support, but for system availability, system performance, and disaster recovery (DR). When assessing the DR plan, make sure to first determine what you really need. Do you need to know you will not lose any data, or will your operation need a hot failover system backing up your main platform? Know your needs as the cost of different plans varies dramatically.
3. What kinds of security does the provider have in place to make the cloud solution equivalent to or more secure than an on-premise installation? How is data managed? What authentication and encryption measures are employed? Does the provider use dedicated circuits to connect virtualized nodes? What kind of data centers are used and to what levels are they certified?
4. What customizations are available for the system? Here you should make sure you know what is mandatory for your organization.
5. What performance requirements must be met, and how does the provider meet them? Can they help you with network or connectivity resources? Do they have global coverage in the areas you need it, especially with their carrier network?

These 5 areas of questioning can help you quickly narrow the field of possible providers for your

transportation, supply chain or logistics operations platform. Once you have a few promising candidates, you should connect with their sales engineering team to ensure you'll get the system you need to drive the business performance you want.

## ABOUT QAD - TRUSTED GLOBAL TRADE AND TRANSPORTATION EXECUTION (GTTE)

[QAD GTTE](#) provides industry-leading global trade compliance, and multi carrier transportation execution solutions from a single, integrated platform. An ISO-certified company, QAD assists companies to streamline their import, export and transportation operations, optimize deliveries, and increase logistics ROI. QAD GTTE is a scalable and extensible solution that integrates with existing ERP and WMS solutions. Industry leaders in every region of the world rely on QAD to leverage thousands of carrier services and manage millions of global trade and shipping transactions every day.

For more information about QAD, visit our website: [www.qad.com](http://www.qad.com)

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