

REPORT REPRINT

QualiSystems targets DevOps with cloud sandboxes

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The company's 'cloud sandboxes' offer automated, self-service creation and orchestration of on-demand infrastructure for DevOps.

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CloudShell 6.3 is the latest release of QualiSystems' network test and automation software, which now supports integrated monitoring with Nagios and hybrid network topologies including physical, virtual and SDN. Its principal application is for use in 'cloud sandboxes' that offer automated, self-service creation and orchestration of on-demand infrastructure that supports the entire DevOps application design and testing lifecycle.

THE 451 TAKE

QualiSystems has translated its smarts into the area of self-service automation and orchestration of infrastructure toward supporting DevOps. The sandboxing capability that is currently used widely for development is being brought to DevOps, where the need for automation and orchestration is critical. The company's CloudShell technology also addresses the problem of shadow IT through automation and orchestration. Its CloudShell revenue is claimed to be growing 100% a year as a result.

TECHNOLOGY

These days, CloudShell is much more than a simulated production environment for application-design testing. It enables design teams to access the very same infrastructure environments on demand from a shared pool of resources, use them for a period of time, then release the infrastructure resources back into the pool. Tear-up and tear-down environments can be used across the application design and testing process. As it notes, not all cloud management platform activity is going to be 'deploy.' For testing, compliance and other teams, the use case is a cycle.

QualiSystems' pivot toward DevOps and automation began in 2013 with the introduction of CloudShell, alongside the existing TestShell it has been known for. This is effectively the application of its infrastructure automation and configuration smarts from the on-premises test-lab automation world to a wider, mixed-environment opportunity that extends its reach into the cloud, configuration automation and DevOps. CloudShell 'packages' are portable combinations of drivers, environments of orchestration, data models, automation, dashboards and resources.

QualiSystems has a broad set of use cases focused on enabling 'line of business' users such as developers, testers, security, compliance, training, sales/marketing, support and QA/manufacturing teams. A typical use-case scenario involves setting up an on-demand sandbox for developers and testers who are testing applications ranging from simple Web-based apps to complex algorithmic trading applications over a high-speed network.

QualiSystems believes that the steps a user must take to do this (provide infrastructure in one or more labs or a public cloud, choose a virtualization platform with a self-service interface, enable users to set up and run their own environments to run their applications and processes) mean a company's options usually boil down to building an entire private cloud dedicated to meet this need – or use QualiSystems.

ROADMAP

QualiSystems will improve the user interface: adding other out-of-the-box functions in terms of virtualization and VLANs, application deployment in three clicks, easier deployment to vCenter, AWS, Docker and OpenStack, and improving application lifecycle management (monitoring, ticketing systems, auto-discovery systems).

Importantly, it is also adding an open source community for all of the automation and orchestration aspects of its product. Besides opening up these components and contributing its own out-of-the-box automation and orchestration, it is also getting endorsements from key customers.

SANDBOX USE CASES

Use cases for CloudShell deployed as a cloud sandbox include: training teams that need to spin up an infrastructure environment for a classroom situation; test teams that need to validate a new build; support teams that need to bring up the exact same infrastructure environment for issue replication and fix verification; sales teams that need to demonstrate technologies running on specific infrastructure environments; design teams that want to dynamically build infrastructure environments on the fly to innovate new services or applications; and development teams that want to offer a way for vendors and contractors to work in a hosted, production-like environment.

CloudShell provides centralized inventory management of all physical, virtual and logical resources; integration of any stack with legacy and dedicated infrastructure, private and public clouds, and industry-specific infrastructure both directly via APIs and CLIs and via any scripting language or IT-automation tools such as Puppet or Chef. It also provides its own visual or script-based automation; graphical environment modeling; design and publishing; user reservation and scheduling; Web-based self-service catalog; and business-intelligence reporting.

A frequent use case for QualiSystems is to create a common developer hub integrated with Jenkins and other tools that support continuous development and deployment of code. Examples of QualiSystems being used in DevOps and continuous integration include Ceragon Networks (IP backhaul), Comcast, Cisco (DevNet) and AT&T.

QualiSystems sales-enablement use cases such as demos, POCs, training and support are being used at Juniper Networks (demos, support), WWT (demos), Pure Storage (demos), Palo Alto Networks (support) and HP (training, support). Examples of partner-enablement use cases such as ISV development, partner certification and SDN/NFV testing include Cisco (ISV partner development and test – DevNet) and Okinawa Open Lab (SDN development and testing).

BUSINESS MODEL

Founded in 2004, QualiSystems claims revenue is growing between 40% and 50% a year, mostly via repeat sales, upselling and new accounts, with some via services. We estimate its revenue to be in the mid-\$20m range. QualiSystems claimed 100 paying customers in Q1 2015. Average initial deal prices were at roughly \$150,000. QualiSystems currently does 70% of its sales direct and 30% via VARs and resellers. By 2017, it hopes to be doing 40% direct, 30% with VARs and resellers, and 30% via partner programs (managed services and other OEMs).

It sells subscription licenses and perpetual licenses with annual maintenance. Support for automation and DevOps tasks is two-thirds of its business today, and is expected to be 90% of its business in 2016. Half of its 150 employees are in the US, half in Israel. It claims more than 100% year-over-year revenue growth for its CloudShell business, while 70% of its business is in cloud automation; although there remains significant opportunity in the maintenance of its older products. The company raised \$20m in funding though 2013, with a further \$8m B round in October 2014 led by strategic investors and IT infrastructure manufacturers (which remain unnamed).

COMPETITION

In bare metal and virtual private clouds, key competitors are Dell's Active System Manager (Gale) and Cisco's Clouppia, while Ravello Systems, Skytap and Hatsize compete in public clouds. Only CSC ServiceMesh (now called Agility) is competitive with QualiSystems across private and public clouds. Otherwise, key competition for QualiSystems remains homegrown environments.

Articulating the difference between QualiSystems and VMware centers on being able to deploy a sandbox for hours, days or weeks in an environment configured entirely to support its needs. QualiSystems argues that customers need an environment that isn't unchanging and fixed. One day, they may want to test a sandbox against a market-data feed; and the next day, against something else. QualiSystems believes this is more flexible than the capability offered in VMware's vRealize – where most of the environment in production, in its view, is controlled by virtualization that 'lands' the app.

QualiSystems says its software gives users control over the virtual environment required to operate applications. It also enables contention for resource allocation versus fixed allocation. It offers now, queued or scheduled execution rather than only 'now.' Under QualiSystems' control, sandboxes – whether virtual or physical – can also be replicated to different teams.

SWOT ANALYSIS

STRENGTHS

IT organizations increasingly must support the competing needs of DevOps, IT and the business. QualiSystems' software can help IT maintain the tricky balance between retaining control and preserving the agility and self-service model that developers now expect in light of their experience with the cloud.

WEAKNESSES

Looking at QualiSystems' success, general-purpose cloud management platforms may seek to capture some of this market's value by adding functions to create environments on-demand for application designers. Can QualiSystems translate its smarts sufficiently to take advantage of the market opportunities of cloud management platforms?

OPPORTUNITIES

The way forward here is for application design and testing to be done in a sandbox, with the resulting image pulled directly and, using configuration management tools such as Puppet and Chef, deployed directly onto production hybrid clouds.

THREATS

The rise of DevOps means that automating the creation of on-demand sandboxes for application design and testing is a first priority within cloud management platforms. QualiSystems isn't yet targeting general-purpose cloud infrastructure, which will bring both opportunity and the threat of increased competition in a sector where there are many full-service suppliers.