

## REPORT REPRINT

This Impact Report was published by 451 Research as part of our syndicated Market Insight subscription service and subsequently licensed for commercial use by SUSE.

# SUSE slices deeper into container market with increased support, MicroOS

JAY LYMAN

22 MAR 2017

The company is deepening its support for application container software such as Docker and Kubernetes, but is also providing its own platform, a lightweight version of its SUSE Linux Enterprise Server called MicroOS, for containers.

---

THIS REPORT, LICENSED EXCLUSIVELY TO SUSE, DEVELOPED AND AS PROVIDED BY 451 RESEARCH, LLC, SHALL BE OWNED IN ITS ENTIRETY BY 451 RESEARCH, LLC. THIS REPORT IS SOLELY INTENDED FOR USE BY THE RECIPIENT AND MAY NOT BE REPRODUCED OR REPOSTED, IN WHOLE OR IN PART, BY THE RECIPIENT, WITHOUT EXPRESS PERMISSION FROM 451 RESEARCH.



©2017 451 Research, LLC | [WWW.451RESEARCH.COM](http://WWW.451RESEARCH.COM)

SUSE, supporter of the SUSE Linux Enterprise Server (SLES) operating system and SUSE OpenStack Cloud, is deepening its support of application container software, including Docker and Kubernetes, on its SLES, OpenStack and emergent lightweight version of its flagship SLES operating system: SUSE Linux Enterprise MicroOS. While SUSE has already supported containers as a service (CaaS) for customers with its SLES operating system and SUSE OpenStack Cloud, its latest push involves the newer SLE MicroOS, which is designed specifically for containers. SUSE has good reason to focus on application container software, an enterprise ecosystem worth more than \$1.1bn in 2017 and expected to reach nearly \$3.5bn by 2021, according to 451 Research Market Monitor estimates. In addition, there is no doubt some synergy between OpenStack and containers, with enterprise adopters of OpenStack more likely to be adopters of containers, in part because of the open source nature of both.

---

## THE 451 TAKE

As a Linux and OpenStack distribution provider, it makes sense that SUSE would support containers both with its existing software and also for more forward-looking deployments of containers with its MicroOS lightweight version of SLES. SUSE is not among the first vendors to prioritize enterprise container support, but it is still well-positioned to satisfy growing enterprise demand to leverage containers. Nevertheless, much of its container strategy and technology has yet to be released for its enterprise audience, so the clock is ticking on containers for SUSE.

---

## PRODUCTS

The company is supporting container software such as Docker and Kubernetes with its SLES OS and its SUSE OpenStack Cloud software, although its strategy for containers is more focused on its new SUSE Linux Enterprise MicroOS container host OS. With its latest SUSE OpenStack Cloud 7, SUSE introduced Kubernetes as a service using the Magnum container project within OpenStack. This includes predefined templates to spin up VMs and run Kubernetes on those VMs for multi-tenancy on Kubernetes – a use case for some customers in production, SUSE says. Customers can also leverage its own Kubernetes clusters with SLES as the runtime in containers based on the Open Container Initiative format.

The more forward-looking SUSE CaaS platform is composed of the physical infrastructure at the base, SUSE Linux Enterprise MicroOS, Salt and CloudInit automation for configuration and management of each node, Kubernetes orchestration, and a services dashboard. The SUSE CaaS platform also provides persistent storage, networking, registry, security and logging.

SUSE Enterprise Linux MicroOS, expected to be released this summer, is designed for containers and optimized for large deployments. SUSE says the lighter-weight, container-specific OS will appeal to enterprise customers interested in transactional updates that can be automated and policy-defined. The SUSE Linux Enterprise MicroOS also features a simplified installer and scalability up to thousands of nodes. The company emphasizes that it inherited SLES knowledge and leverages core SLES technologies, such as btrfs technology. SUSE says customers will also benefit from the ability to easily move container applications from SLES to SUSE Linux Enterprise MicroOS. The two flavors share the same code base, and MicroOS is intended to simplify OS management.

With Kubernetes, the SUSE CaaS platform provides an administrative dashboard and user interface for deploying, managing and updating Kubernetes. SUSE follows the upstream Kubernetes releases and provides both dashboard and command-line control. SUSE also supports datacenter integration for what the company describes as a complete offering for container workloads. Among other key components of SUSE's CaaS platform are SUSE Registry and Container Images, which will transition SUSE away from delivering images packaged in RPMs and instead deliver them with standard container engines. SUSE says its registry will feature integration with SUSE Customer Center. It will provide authorization, distribution, upload and chain of trust, maintenance flow, and management of container images through SUSE Manager and SMT.

## STRATEGY

SUSE envisions several key use cases for its CaaS platform, including the enablement of DevOps and microservices implementations for faster and more automated application releases across different infrastructure. SUSE says its CaaS software can also enable businesses to go from concept to production faster by giving developers and IT operations teams the tools they need. Organizations interested in enterprise-grade security and scalability may also be among SUSE CaaS platform users seeking stable and reliable environments. Other highlights include hybrid deployments where the ability to quickly and intelligently respond to demand across private and public clouds is critical. SUSE says its CaaS platform can help customers managing peak demand without downtime or manual intervention.

SUSE's plans also include leveraging acquired Stackato PaaS components, such as the control pane, and layering it on top of its CaaS platform. The company says this will give customers a fully opinionated PaaS on top of the CaaS platform. Even further down the road, SUSE envisions a cloud and container-optimized infrastructure leveraging SLES, OpenStack, Magnum and Kubernetes together.

## COMPETITION

As it pushes deeper into the enterprise container market, SUSE will face competition from some of its familiar foes, as well as a variety of newer challengers that are 'all in' on containers. With its support for Kubernetes now in SLES and OpenStack and soon with its SUSE CaaS platform, SUSE faces competition from a number of other vendors integrating, supporting and participating in the Kubernetes open source project. These include Linux and OpenStack rival Red Hat, which has aggressively embraced containers and Kubernetes, particularly with its OpenShift software.

Other Kubernetes supporters that are among SUSE's competitors are Google, which started Kubernetes and is still among the primary drivers of the software; Apcera with its Trusted Compute Platform that incorporates Kubernetes; Apprenda, which acquired Kubernetes supporter Kismatic; Engine Yard, which acquired and transitioned to the Deis container PaaS with Kubernetes; CoreOS Tectonic; and IBM with Bluemix. Additional Kubernetes players that represent competition for SUSE include Kubernetes startup Heptio, Huawei with its own Kubernetes-based container engine, Pivotal and its Kubo integration of Kubernetes into Cloud Foundry, mixed-use and Kubernetes supporter Rancher Labs, and Univa Navops with its own Kubernetes support.

Other container management and orchestration software outside of Kubernetes is also competition for SUSE, including Docker Swarm, Hashicorp's Nomad, Mesos and Mesosphere DC/OS. SUSE still faces competition from other OpenStack vendors on containers as well, such as AppFormix, AQORN, Bright Computing, Huawei, Oracle, Mirantis, Platform9, Rackspace and Ubuntu backer Canonical.

## SWOT ANALYSIS

### STRENGTHS

SUSE's long-standing support of Linux and OpenStack positions it well in containers, which tend to attract the same open source software audience that includes large enterprises.

### WEAKNESSES

The company is not among the early or most prominent players in containers, where there are a number of competitors, including startups, established players and those promoting their own container-specific and lightweight operating systems.

### OPPORTUNITIES

By supporting existing, early container use among enterprises and more forward-looking container deployments, SUSE may be able to serve both sides of the market as organizations transition between the two.

### THREATS

Competition in the application container market is intense, and SUSE's traditional OS software must contend with emergent models, such as container management and orchestration platforms and lightweight operating systems.