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CERN, Rackspace Collaborate on Hybrid Cloud

Posted by **Andrew Conry Murray**
July 01, 2013

CERN has entered an agreement with cloud provider Rackspace to develop a hybrid cloud based on OpenStack. The agreement falls under the auspices of CERN's [openlab](#), a joint public/private partnership that gives CERN a chance to get its hands on new technology, while vendors get feedback on products used in the IT infrastructure that supports CERN's Large Hadron Collider (LHC). Other openlab partners include HP, Huawei and Intel.

"The Large Hadron Collider requirements create extreme computing challenges, and openlab allows us to research with industry to validate upcoming products and technologies," said [Tim Bell](#), group leader of the OIS Group at CERN, in an e-mail to *Network Computing*.

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CERN's IT department already deploys a large-scale OpenStack cloud, which Bell said will eventually encompass up to 15,000 servers in two data centers by 2015. In addition, two LHC experiments, ATLAS and CMS, have OpenStack clouds that filter a petabyte per second of data from LHC experiments. Bell noted that the LHC is currently being upgraded through 2015; in the meantime, the servers can be used for physics analysis and simulation.

[CERN is just one example of OpenStack's widespread uptake. See how CERN and others are embracing the open-source platform in "[10 Signs OpenStack Has Come Into Its Own.](#)"]

The openlab partnership between CERN and Rackspace will test the federation of private and public cloud resources, according to Bell. With a hybrid cloud, CERN can tap additional compute resources during peak demands.



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"A typical use case would be where the demand from the physicists exceeds the resources that are available in the CERN clouds," said Bell. "This often occurs coming up to scientific conferences in order to process the latest data from the LHC and its experiments in order to improve scientific precision of their analysis."

The openlab partnership will help CERN investigate techniques for managing workload scheduling between the private and public clouds. Bell said low I/O applications with high CPU demands would be the easiest to deploy from CERN into the public cloud.

When asked about security concerns, which are always an issue with moving data off premises, Bell said, "Given that the initial application in the public cloud would be simulation of collisions, this data would not raise confidentiality concerns."

Bell said CERN has been working with OpenStack since 2011. As you might expect, the organization of scientists and researchers was drawn to OpenStack's open source routes and vibrant community. In addition, Bell noted "strong commercial involvement and other production installations at scale make it an attractive platform for us."

As part of the agreement, Rackspace and openlab will create a reference architecture to federate among the Rackspace Private Cloud, Rackspace Public Cloud and CERN's internal OpenStack cloud. Rackspace will also fund one full-time position at CERN to help with the federation project. CERN will deploy Rackspace Private Cloud platform onto some of the servers it uses for physics experiments.

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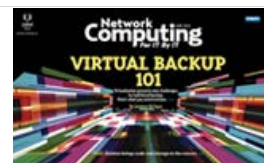
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Eddie Mayan

Second last week, I heard the news that Ektron collaborate with rackspace to performs enterprises Hybrid cloud service to clients now its collaborate with CERN. last week Microsoft announce that it will collaborate to Oracle to perform better cloud service. now waiting for more news between both cloud war.
[CloudReviews.com](#)



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