Focus on Science, Not Software Assets

CERN, the leading research facility for investigation into the origins of the universe, chose Genuitec's Secure Delivery Center [SDC] to address their unique open source tooling objectives. With a focus on science coupled with a revolving door of software engineers, CERN needed a solution to facilitate rapid tooling support for control systems of the Large Hadron Collider [LHC].

SDC delivers the exact software needed for CERN engineers to develop and support their numerous tools, while CERN's IT managers benefit by low overhead and rapid knowledge transference.

The Problem

As the creators of the World Wide Web, the world's first massively distributed computing platform, and the LHC, the largest particle collider in history, CERN scientists are experts in working effectively across disciplines. They recognized the growing challenges of advancing their scientific monitoring tools, including the time lost on team churn and collaborative software engineering.

CERN's focus on open source allows their programmers to cost-effectively keep scientific study progressing, but the ever- growing number of projects and the complexities of open source software management required a solution to facilitate their expanding resource base.

Additionally, CERN is a premiere destination for graduate-level students who contribute their skills for months at a time to enhance their education. These students, along with permanent programmers, need to rapidly get their tooling standardized in order to write Java applications that communicate with the LHC.

A corresponding business concern is that CERN's €0.8 billion annual budget is focused on the science of particle

Overview

CERN uses Genuitec's Secure Delivery Center to develop programs for the Large Hadron Collider.

With CERN's focus squarely on science and data analysis, SDC seamlessly allows developers to rapidly switch between projects by delivering the right open source tooling for each task.

CERN by the Numbers

- 10,000+ physicists
- 80 countries represented
- Budget of over €6 billion
- Created the world-wide-web
- History's largest particle collider
- 40 million pictures a second

smashing, making the electricity bill their number-one line item. Developers are asked to address this core budgetary requirement by employing open source whenever possible as they create first-class applications. Over time, CERN had amassed a large collection of source code and project configurations that their teams had to maintain using home-grown solutions.

The Solution

CERN turned to Genuitec's Secure Delivery Center and its private cloud technologies to address its growing management problems. Using SDC, developers and IT managers work together to tailor their development stacks for each project within SDC's private cloud.

CERN uses SDC to go beyond basic Eclipse IDE delivery by precisely tailoring the developer's experience down to visual layout, source code needed, and associated development aides. New students and guest engineers immediately start developing from the same tailored environment when writing applications for the LHC, greatly increasing productivity and reducing training costs.

SDC's combination of a private cloud for developers, easy on-ramping and advanced developer environment configuration is a perfect fit for CERN's advanced technological objectives and their mantra of "science-first."

Takeaways

CERN employs some of the world's smartest scientists, students and engineers. They chose SDC as a cost-effective technology to save time and money on development, allowing them to focus resources on science rather than administrative tasks.

SDC provides CERN:

- Private cloud of project environments
- Advanced IDE customization
- Ease of use for developers
- Project tooling history
- Team license management
- Turn-key administration

Contact Genuitec today to learn how SDC can handle your unique software needs.