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Simplifying Cloud-Based Workshops with SimpleVM

Tuesday 30 September 2025 14:00 (30 minutes)

SimpleVM is a self-service platform within the OpenStack-based de.NBI Cloud, designed to simplify access to computational resources through its customizable AAI integration. It serves different computational use-cases, including basic data processing, GPU-accelerated machine learning, and cluster computing, all secured by an intrusion detection and prevention system. By providing pre-configured Virtual Research Environments (VREs) accessible via a web browser or SSH, SimpleVM enables researchers to focus on their scientific work without requiring extensive cloud computing expertise. Our VREs come in three categories: Integrated Development Environments (IDEs) like VSCode, Data Science notebooks like RStudio or Jupyterlab, Remote Desktops, and ready-to-run research environments, e.g. for metagenomics.

One of the key features of SimpleVM is its Workshop mode, which enables easy setup and management of virtual machines (VMs) and volumes for workshop attendees. This mode is particularly well-suited for large online workshops, as demonstrated by previous SimpleVM Workshop based events with up to 50 participants. Additionally, the workshop mode is being used in a test installation at Bielefeld University as part of a data science infrastructure project.

In this presentation, we will demonstrate how SimpleVM's workshop mode can be used to streamline cloud-based training. We will showcase several key features that simplify workshop organization. Specifically, we'll demonstrate how to customize VMs from vanilla base images or our pre-configured templates with VREs. You'll also learn how to use the snapshot feature to create a template for attendee VMs. Additionally, we'll show you how to start and assign pre-configured VMs to attendees with just a few clicks. Finally, we'll cover how to provide each attendee with their individual access instructions. Participants can access pre-configured VMs with VRE installed on them easily via their browser. A live demo will illustrate the simplicity and effectiveness of SimpleVMs Workshop mode.

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