

Reference	IT-ST-118
Project/ Activity	Next generation Sync and Share platform for CERNBox (ownCloud Infinite Scale)
Duration	1 year, renewable (maximum 2 years)
Profile	<p>Bachelor's degree in Computer Science or equivalent technical experience. Skills in software development (bonus for Go, Python programming languages) and knowledge of Linux system administration. General knowledge or ability to learn quickly. Strong communication skills and ability to become autonomous. Experience with sync and share platforms and frontend development (VueJS framework) will be an asset.</p> <p>The candidate should be keen on understanding, operating and optimizing large-scale distributed storage services.</p>
Description	<p>CERN IT Storage Group is responsible for storing, preserving and distributing LHC data to a worldwide scientific community.</p> <p>Today we transfer yearly more than 1 Exabyte of data and we operate a heterogeneous disk/tape system. In total the group handles more than 400 petabytes of data across about 2,000 data servers (60,000 disks) and 35,000 high-capacity tapes.</p> <p>The Storage Group operates the CERNBox service, a Dropbox-like service for CERN. The service is used by more than 37,000 users and is an indispensable tool for daily workflows of many communities at CERN (physicists, engineers, administration). The platform is based on the open source project ownCloud.</p> <p>The next major version of Owncloud (codename: Infinite Scale) comes with a radical technology change and will integrate core components developed for CERNBox (Reva runtime layer and CS3APIs). The web user interface layer (Ocis web) has been decoupled from the service backend. The new web ui will provide a more streamlined, interactive user experience and the new service backend will allow a more elastic deployment with container technology. This project deals with the preparatory work needed for the full transition of the CERNBox service to the new system. The specific tasks include: design and implementation of the GRPC transport for CERNBox/OCIS; ensure a smooth migration from the baremetal service to Kubernetes; implementation of the OCM protocol in the Reva platform using the CS3APIs.</p> <p>This project is on critical path for CERNBox.</p>
Specific details	<p>The candidate will be working on expanding and designing the GRPC/REST APIs to accommodate the new platform. The candidate will also heavily perform software development tasks to enhance and create new microservices that will complement the existing core service with more functionalities required from the CERNBox user community. The candidate will be part of the development and operations team (10 engineers) and work hand in hand with them.</p>