Contribution ID: **8** Type: **not specified**

# QA and Testing in CERNBOX: the cornerstone of service development and operation

*Monday, September 28, 2015 9:20 AM (30 minutes)*

QA and Testing in CERNBOX (https://cernbox.cern.ch) presents a serious challenge and is critically important:

- the service deals with user data directly on their local computers (synchronization clients), at present ˜1000 clients connecting daily
- the very nature of synchronization is to propagate changes across computers which also means propagating problems if they occur
- there is a wide range of supported platforms (MacOSX, Windows, major Linux distributions, mobile platforms)
- OS semantics are often incompatible or conflicting: for example HFS is case preserving, NTFS supports the legacy of 8.3 DOS file format, etc.
- the operational environment varies enormously, for example: from fast, reliable network inside computing center to unreliable, high-latency, ad-hoc connections from airports
- etc.

From service development perspective, CERNBOX integrates several complex components which development cycles are disjoint and geographically distributed:

- PB-range storage backend (EOS) developed and operated in-house
- synchronization clients and web-access layer (ownCloud) developed externally

To handle some of the development, integration and operational challenges we have developed a testing framework called Smashbox. In this presentation I will summarize how we use Smashbox for QA and Testing of critical data handling paths of CERNBOX with some real-life examples.

References:

- Source code: https://github.com/cernbox/smashbox
- Mysteries of Dropbox: https://indico.cern.ch/event/336753/session/1/contribution/28
- Smashbox in action: https://owncloud.org/blog/smashbox-in-action

## Availability

Both days

## Will you need the training center (Workshops)?

No

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