



CF

Computing Facilities

CERN IT  
Department

# SINDES

## Secure INformation DELivery System

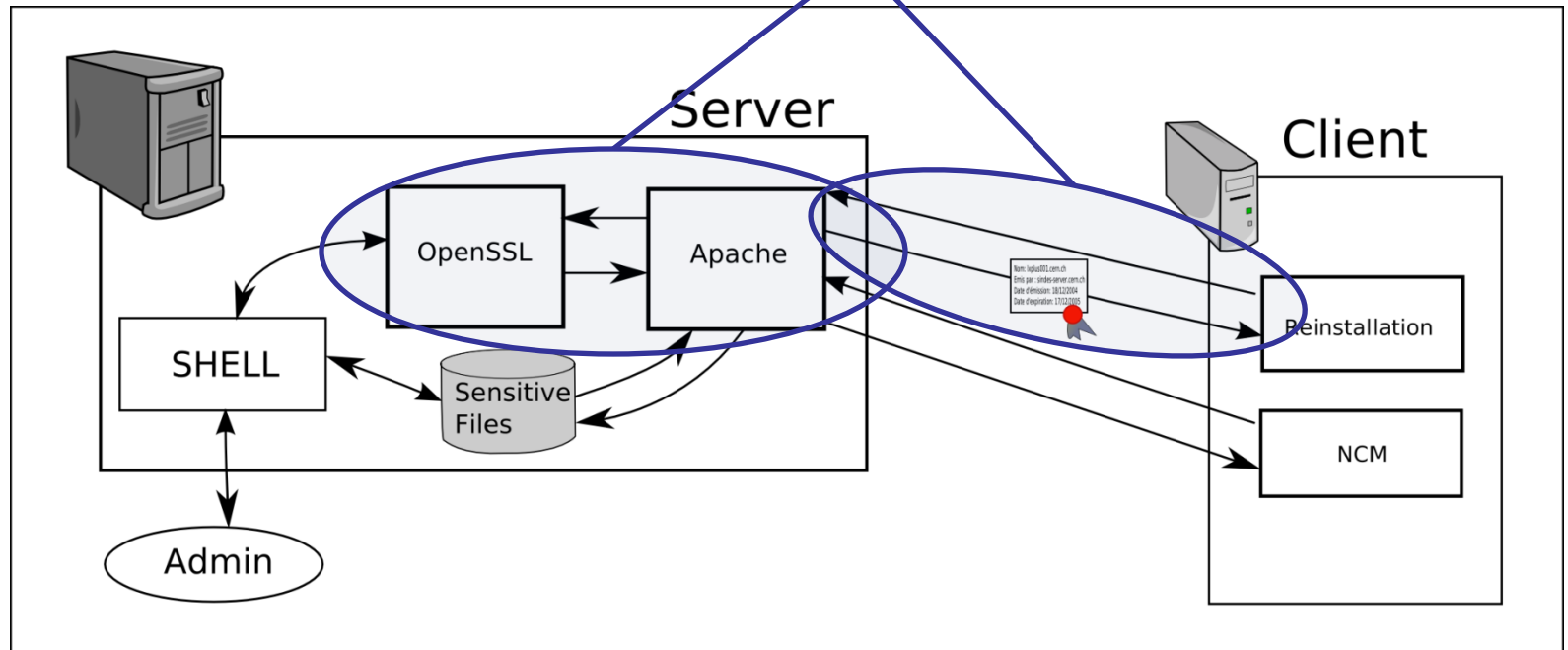
*CERN IT/CF-ASI*

- **What is SINDES**
- Weak points
- How to improve

- Main purpose:
  - CA - manage the certificates
  - Store & deliver confidential information

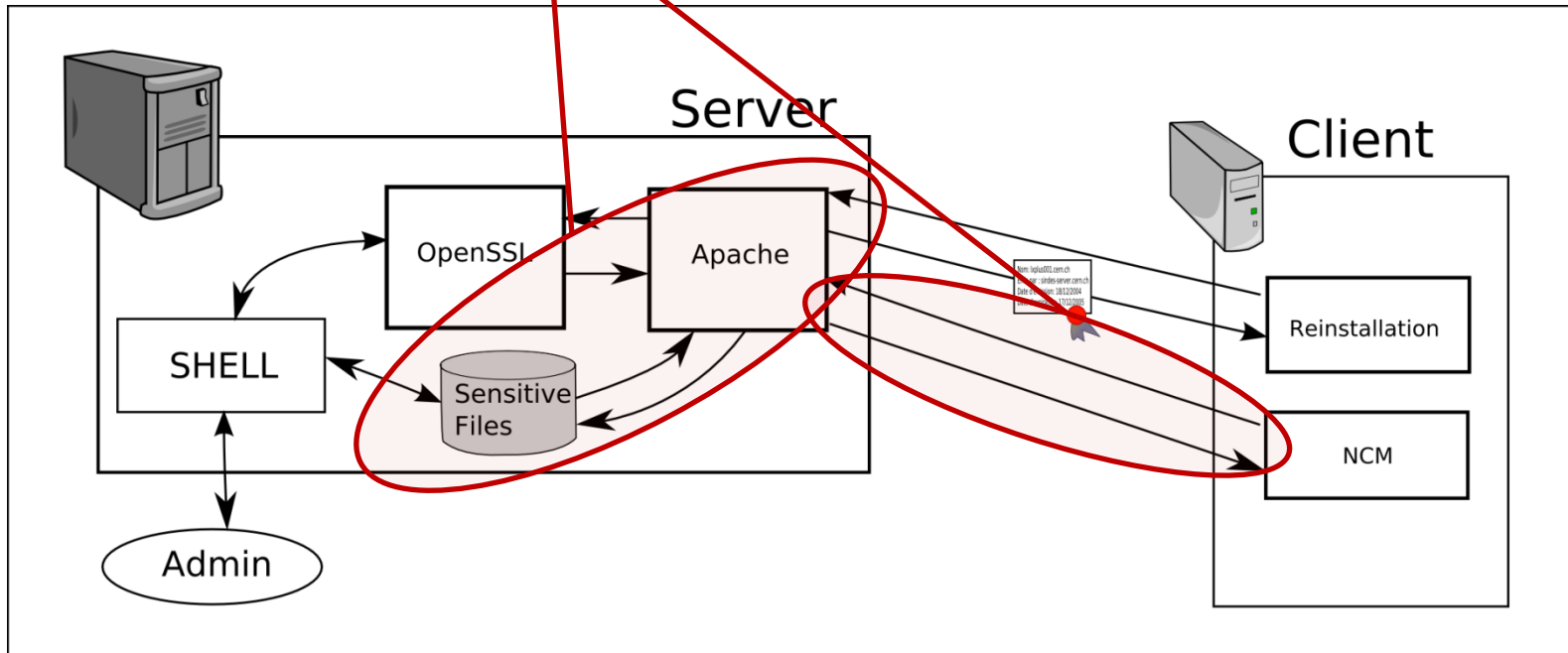
**CA functionality:**

- Create certificates
- Sign certificates
- **Confirm identities**
- Revoke certificates



**Storage centre**

- Upload secret files
- Store passwords
- Deliver files in a secure way



- Main purpose:
  - CA - manage the certificates
  - Store & deliver confidential information
- Architecture based on OpenSSL x509 standard, Apache with mod\_ssl and mod\_rewrite
- Automated certification process – client has defined time window to ask for a certificate

- What is SINDES
- **Weak points**
- How to improve

- Usability

- No delete file feature
- Only two target types:
  - cluster
  - host

today also subcluster type needed

- No mechanism to move a machine between clusters
- No view file feature; fetch file to client only
- No file versioning



- Security issues:
  - Only one SINDES system user
    - anybody with the access may tamper any file stored with SINDES
    - no user information in log files
  - No privileges granularity

- On the one hand:
  - System in production serving more than 8.000 hosts at CERN
  - A number of crucial applications relying on SINDES CA functionality to authenticate (i.e. Lemon, CDB, CluMan)
- On the other hand:
  - Limited functionality
  - Room for improvement in security aspect

- What is SINDES
- Weak points
- **How to improve**

- Ways of improvement
  - Enhance the usability and security in the current version of the system
  - Find and adopt a new tool, keep the functionality
    - Freeware tools: i.e. *wallet* by Russ Allbery  
<http://www.eyrie.org/~eagle/software/wallet/>
  - Write a completely new tool
- We have 1 year manpower starting from the 1<sup>st</sup> October 2010



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Thank you

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We would be glad to receive any feedback  
from You!

*jan.dudziec@cern.ch*