

BINP Workgroup Status Report

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Summary on Recent Achievements

- The prototype of the LCG farm managed by quattor has been successfully installed at BINP site
- An extensive set of tests with quattor-based and mixed quattor/YAIM-based deployment of LCG-2 middleware components has been performed within the prototype
- The workgroup contributed to the activities of CERN IT Grid Deployment group by taking part in the CERN GRID Certification Authority infrastructure upgrade (Apr – May 2005)

private net
inp.nsk.su

BINP LCG Farm Prototype Nodes Configuration

grid03n002
grid03n001

WN

WN

These nodes
installed
automatically
using PXE
and quattor
via grid03
server

grid05

grid04

UI & CE

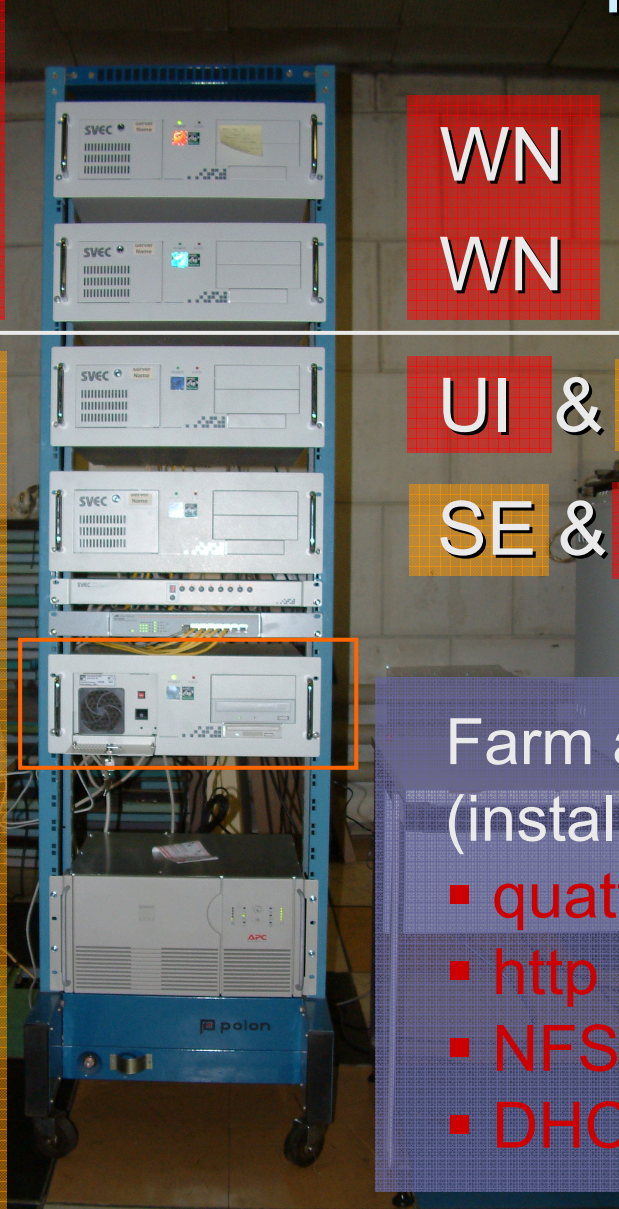
SE & MON

grid03

Farm administration node
(installed manually):

- quattor services
- http server
- NFS server
- DHCP / BOOTP / tftp servers

public net
inp.nsk.su



CERN GRID CA Upgrade

The upgrade was performed by Alexander Zaytsev (BINP) under the supervision of Ian Neilson (CERN IT Department) during the visit to CERN IT Grid Deployment group (Apr – May 2005).

The schedule of activities included the upgrade of the CERN CA hardware and software environment with the aim to push the CA to the point of the full conformance to the "Minimum CA Requirements" document by the European Policy Management Authority for Grid Authentication in e-Science (EUGridPMA).

- The new offline host of the CA is a diskless machine powered by KNOPPIX OS and all the valuable data and scripts are stored on the dedicated private USB drive and the backups – on the dedicated backup USB drive.
- The offline host operator boots the machine when the signing of the new requests is arranged and the shutdown is performed after the signing preventing any of the CA components to persist on the host hardware.
- The boot CD and both USB drives are stored securely in the dedicated safe.
- The CA was switched to the usage of the SHA1 digest generation mechanism, an additional messaging functionality was added on the CA mail gateway, the backup and the CRL staging procedures were rewritten from the scratch and a lot of minor modifications were introduced to all of the CA scripts.

CERN GRID CA Upgrade

The migration procedure of the old CERN CA certificate database, logs and backups was thoroughly documented and the CA switching to the new environment was almost invisible for the End Entity users.

The CERN GRID CA is considered as fully conformant to the "Minimum CA Requirements", but this claim is yet to be approved by the EUGridPMA.

The results of the work are given in the following documents:
"CERN GRID CA Offline Host Management and Security Guide",
"CERN GRID CA Online Host Management Guide" and
"CERN GRID CA Self Audit Against the EUGridPMA Minimum CA Requirements" available upon the request to service-grid-ca@cern.ch or Ian.Neilson@cern.ch

The visit expenses were covered by the travel budget of the BINP group within the CERN-INTAS grant

Future Plans

- The deployment of the LEMON-based monitoring infrastructure of the farm prototype is to be completed in a few weeks
- The farm is scheduled to be extended up to 20 CPUs (with 1 GB of RAM per CPU) by the end of this year
- It is planned to increase the priority of the workgroup collaboration activities in the areas of GRID middleware and computing farm management software development