

Software Installation Procedures: ALICE Experiment

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The s/w installation procedure for the ALICE experiment

- ▶ Specific software installation onto the ALICE software area placed at each site
 - ▶ Independent s/w installation at each site
 - ▶ Same software area structure for all T0, T1 and T2 sites
 - ▶ **Each site is fully independent of any other one**
- ▶ The s/w area is reachable through the ALICE VOBOXES
 - ▶ The \$VO_EXP_SW_DIR area is directly accessible in all VOBOXES (by service definition)
 - ▶ File system structure shared among WNs and VOBOXES
 - ▶ The access to VOBOXES is restricted to lcgadm only and therefore to this area also
 - ▶ Required at all ALICE sites: T0, T1 and T2
 - ▶ **Mandatory service to enter the ALICE production**

Principle of operations: VOBOXES

- ▶ Same VOBOX requirements for all T0, T1 and T2 sites
 - ▶ Required in addition to all standard LCG Services
 - ▶ Entry door to the LCG Environment
 - ▶ Runs standard LCG components and **ALICE specific services**
- ▶ Uniform deployment
 - ▶ Same behavior for T1 and T2 in terms of production
 - ▶ Differences between T1 and T2 sites a matter of QoS only
 - ▶ T1 sites raw data production, T2 sites MonteCarlo production and analysis (fully described in the ALICE Computing Model)
- ▶ s/w installation and maintenance entirely ALICE responsibility
 - ▶ Based on a regional principle
 - ▶ Set of ALICE experts matched to groups of sites
 - ▶ Working in close contact with the site admins
- ▶ Site and service related issues managed by the site admin

Requirements for the ALICE VOBOXES

- ▶ **WLCG configuration**
 - ▶ ALICE requires the standard VOBOX service with no extra features
- ▶ **ALICE configuration**
 - ▶ The specific requirements have been included in a public document: **VOBOX Security and Operations Questionnaires**
 - ▶ Distributed to all site managers before setting up
- ▶ **Support for the whole production**
 - ▶ Regional experts handle the VOBOXES
 - ▶ Who is who perfectly established in all sites
 - ▶ Central support placed at CERN

What is ALICE installing into the VOBOX?

▶ Software area

- ▶ Specific reconstruction, production, simulation and analysis s/w packages
 - ▶ `cd $VO_ALICE_SW_DIR/alien`
- ▶ Software updated automatically through PackMan, running as specific ALICE service at all VOBOXES
 - ▶ `cd $VO_ALICE_SW_DIR/packages`
- ▶ Application software distribution principles:
 - ▶ PackMan does not install user applications
 - ▶ The ALICE applications are centrally built and validated

How to maintain the service s/w?

- ▶ **Installation of a new VOBOX and new s/w installation**
 - ▶ Ensure the site has followed the connection conditions included in the ALICE VOBOX questionnaire
 - ▶ Get in touch with the experts at CERN for support
 - ▶ If this is the 1st time, normally the VOBOX is going to be setup by the experts at CERN or the regional representatives
 - ▶ Follow the well detailed instructions: alien.cern.ch
 - ▶ Basically 2 instructions:
 - Get the installation script via wget
 - Execute it and follow its instructions
- ▶ **Upgrade of an already existing VOBOX**
 - ▶ Announced to all sites via the ALICE TF list and the weekly TF meeting
 - ▶ The upgrade of the s/w has been simplified via the execution of a command line only