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SITECONF Repository

SITECONF is a repository for site configuration files. These configuration files contain CMS site information required for jobs running at the site (Trivial File Catalogue, TFC; DBfrontier/squid location; address of the data popularity service) and PhEDEx configuration information. The first set of information is kept under "JobConfig" in the "site-local-config.xml" file. The information in SITECONF is maintained by the site administrators.

SITECONF is not the only source of site configuration information in CMS. The repository is structured with an area, the sitename, for each site, i.e. SITECONF/<sitename>/JobConfig/site-local-config.xml.

The JobConfig part of SITECONF needs to be accessible to jobs running at the site. CMS sites have two options for this:

1. they can maintain a **local** copy of the SITECONF section of their site on the worker nodes (or a network filesystem mounted on the worker nodes). The SITECONF section needs to be located at `${CMS_PATH}/SITECONF/local/JobConfig/...` Most installations use `${CMS_PATH}/SITECONF/<sitename>/...` and make `${CMS_PATH}/SITECONF/local` a link to it.
2. they can use the CERN Virtual Machine File System, **CVMFS**, of CMS. The CMS CVMFS provides an up-to-date copy of the SITECONF areas of all sites. Site administrators configure the CVMFS mount at their site such that `/cvmfs/cms.cern.ch/SITECONF/local` points to their site entry. This is done by setting `CMS_LOCAL_SITE` in `/etc/cvmfs/default.local`. The CMS CVMFS support team (Bockjoo Kim) keeps the CVMFS copy synchronized with the repository via a cron job that runs every few hours.

GitLab Organization

The SITECONF repository is currently maintained in CERN's GitLab[☞]. GitLab is an enhanced Git-based repository service. The repository is web accessible to all CMS members:

- SITECONF GitLab[☞]
- GitLab Help[☞]
- Git to GitLab migration information of CERN-IT

The SITECONF GitLab is setup as a group (SITECONF) with a project inside this group for each site (CMS sitename, i.e. TN_CO_Name). This is done to allow direct write access for site administrators to their and only their SITECONF section. Permissions of SITECONF are:

- *owner* of the GitLab group is **cms-comp-ops-site-support-team e-group**. This allows the site support team to create new/remove inactive sites and create/modify files to assist sites.
- *developer* of each GitLab project are the site administrators and executives in the corresponding **cms-<facility>-admin** and **cms-<facility>-exec** e-groups. For more information check the **SITECONF permissions management** section.
- *visibility* of the GitLab projects is restricted to **cms-authorized-users e-group**. This allows anyone in CMS to check out the files of a site and "propose" a change (= create a merge request).

Instructions for site admins

GitLab provides access via SSH key. To get started, please go to the CERN GitLab web page <https://gitlab.cern.ch/>[☞] and use the standard CERN single sign on, SSO, mechanism to logon.

- click on "Profile Settings" in the toolbar on the left
- this changes the toolbar and provides an "SSH Keys" entry, click it
 - ◆ add your SSH key if you have one

- ◊ your SSH key is normally stored in `~/.ssh/id_rsa.pub`. If you have such a file, take the key from there via
- ◊ `cat ~/.ssh/id_rsa.pub`
- ◆ otherwise, create an SSH key with the `ssh-keygen` command and add it
- ◆ detailed SSH key information is available at <https://gitlab.cern.ch/help/ssh/README>↗

Changes to the site admin or site executive list in SiteDB as well as registrations with GitLab take about **12 hours to propagate**, i.e. for the account to get access priviledges!

After your SSH key is registered you can check out the config files of your site, (= project), update some files, and apply the changes:

1. clone the project of your site
 - ◆ `$ git clone ssh://git@gitlab.cern.ch:7999/SITECONF/<name_of_site>.git`
2. update files using your preferred editor, for instance
 - ◆ `$ vi <name_of_site>/JobConfig/site-local-config.xml`
3. remember that any new files need to be added explicitly, i.e.
 - ◆ `$ git add <name_of_site>/JobConfig/a_new_file.txt`
4. commit the change, i.e.
 - ◆ `$ git commit -m "<comment describing the update>"`
5. and push the update to the master branch of SITECONF
 - ◆ `$ git push`

To check the update made it to the SITECONF repository, go to the project in GitLab, i.e. https://gitlab.cern.ch/siteconf/<site_name>↗, or go to the SITECONF GitLab↗, click on "Projects" in the main window, and select your project. The project page lists the last commits.

- for a full list click on "Commits" in the toolbar on the left

To discard a previous commit click on the identifier of the commit, 8-digit hex number. This brings you to a page with details about the update. In the upper right there is a button "Revert" that undoes the update in the commit. Please be carefull and check your config files are as desired afterwards!

Instructions to add a project/site

Run the [createSiteConfProject.py](#)↗ script. If you want to add the project manually, follow these instructions:

Go to - <https://gitlab.cern.ch/projects/new>:

- - ◆ Project owner: Groups-->siteconf
 - ◆ Project name: <sitename>
 - ◆ Import project from: <leave as is>
 - ◆ Description: <sitename> site configuration
 - ◆ Visibility Level: Private (Visibility is set at the group level to xxx for members of the egroup yyyy so CMS members have all read access.)
 - ◆ [Create Project]
- select "edit project" in the config pulldown hidden in the upper right corner of the web page:
 - ◆ Path: <https://gitlab.cern.ch/SITECONF/<sitename>>↗; (use proper upper/lower case string!)
 - ◆ [Rename Project]
- insert at least an empty JobConfig/site-local-config.xml file into the repository asap (Empty repositories have erroneous archives!)
 - ◆ `git clone ssh://git@gitlab.cern.ch:7999/SITECONF/<sitename>.git`
 - ◆ `cd <sitename>`
 - ◆ `mkdir JobConfig`

- ◆ touch JobConfig/site-local-config.xml
- ◆ git add JobConfig/site-local-config.xml
- ◆ git commit -a
- ◆ git push -u origin master
- select "protected branches" in the config pulldown hidden in the upper right corner of the web page (https://gitlab.cern.ch/SITECONF/<SITE_NAME>/protected_branches) (current GiLab release "Settings" on the left menu bar, then "Repository", expand "Protected Branches", choose Branch "master", Allowed to merge "Developers+Masters", Allowed to push "Developers+Masters" push "Protect"):
 - ◆ check the "Developers can push" checkbox for the master branch
- select "services" in the config pulldown hidden in the upper right corner of the web page (current GitLab release "Settings" on the left menu bar, then "Integration"):
 - ◆ select "Emails on push"
 - ◇ check the "Active" checkbox
 - ◇ Recipients: cms-comp-ops-site-support-team@cernNOSPAMPLEASE.ch
 - ◇ [Save changes]
 - ◇ Multiple recipients can be specified, separated by whitespace. More info
 - ◇ uncheck "Jira Jira issue tracker".
- Add CMSSST user as Master to a new project:
 - ◆ Go to https://gitlab.cern.ch/SITECONF/<SITE_NAME>/project_members or find in "Settings->Members"
 - ◆ Select members to invite: CMSSST
 - ◆ Choose a role permission: Master
 - ◆ Press button "Add to project"

Instructions to delete a project/site

Go to - https://gitlab.cern.ch/SITECONF/<cms_site_name>/edit, scroll down and press button "Remove project"

SITECONF permissions management

The access to each of the site's SITECONF project is done via LDAP using the facility mailing lists for executives and administrators in CERN e-groups. This means that users in the *cms-<facility>-admin* and *cms-<facility>-exec* can modify the <https://gitlab.cern.ch/SITECONF/<site>/> project. It is not recommended to give users access manually using gitlab.

When a new site is created, the [updateSiteConfMembers.py](#) will fetch the new site's information from CRIC, create a new gitlab group for the members of each of e-group mailing lists, and give those groups access to the SITECONF project. This script runs automatically every 8 hours. In order for this to work, the site must be registered in CRIC, the SITECONF project must exist and the mailing lists must have the corresponding facility name in CERN e-groups.

This topic: CMSPublic > SiteConfInGitlab

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