ATACAMA LARGE MILIMITER ARRAY

ALMA COMMON SOFTWARE

USM ACS Developers

Distribution and Instalation
–
Project 001 Summary
Report

Doc. No. USM-DIS-0001

Issue 1.0

Date 30/07/2004

Prepared for Review

Keywords: ACS, RPM, Distribution, Packaging, Install

Prepared . . . . Mauricio Araya . . . . 29/06/2004 . . . .
                 Name   Date   Signature

Approved . . . . Rodrigo Araya . . . .
                 Name   Date   Signature

Released . . . . Marco Salgado . . . .
                 Name   Date   Signature

This page was intentionally left blank

Change Record

Issue/Rev.	Date	Section/Parag. affected	Reason/Initiation/Documents/Remarks
1.0	30/07/04	All	First Draft.
1.X	30/07/04	All	Spell check and grammar corrections.

This page was intentionally left blank

Contents

This page was intentionally left blank

1 INTRODUCTION

1.1 PURPOSE

This document is an "end of activity" report, and describes all aspect of planning and realization of the **Project 001**. The *A*CS Installation and Configuration expirience at the ACS/USM Laboratory is the main source of information of this document, followed by manuals and documentation that ESO and ALMA project provides.

1.2 SCOPE

The attendence public of this document are ACS newcomers, packagers and sysadmins. Also, USM/ACS Laboratory people must read this document as an example of "end of activity" reports.

1.3 REFERENCE DOCUMENTS

[1] LSO-INS-ESO-00500-0001   –   Guide for Document Preparation
[2] USM-GUI-0001   –   Document Preparation Guidelines

1.4 ABBREVIATIONS AND ACRONYMS

ACS   ALMA Common Software
ESO   EUROPEAN SOUTHERN OBSERVATORY

1.5 GLOSSARY

1.6 STYLISTIC CONVENTIONS

The following styles are used:

bold
in the text, for commands, filenames, pre/suffixes as they have to be typed.

italic
in the text, for parts that have to be substituted with the real content before typing.

`teletype`
for examples

`<name>`
in examples, for parts that have to be substituted with the real content before typing.

bold and *italic* are also used to highlight words.

2   OVERVIEW

Project 001 is the first step to explore and use ACS. Installation and Configuration of ACS it is not a trivial task nowadays[1]: source and binary tarballs are the only joint files that helps the installation, and configuration must be done over a hard directory structure with a lot of diverse files (i.e. source, binary, configuration, example). The good news is that the documentation about it is extense, including specifications and procedures to install, configure and manage ACS.

Then, **Project 001** was specified to overcome the following points:

- Install ACS binaries and sources in more than one Linux Distribution.

- Try to compile ACS at any distribution.

- Package ACS as RPM

3   Installation

The *ACS Linux LGPL binary installation* was tested in three distributions: RedHat 9, Fedora Core 1 and Debian Woody. For each distribution a different procedure was used, but all of them based in *ACS Quick Start Guide*[2].

3.1   RedHat 9

No major problems was detected in the installation by following *ACS Quick Start Guide*. The following notes was taken:

- All tools, applications and configuration files are in the tarball file.

- A user must be created to own the files. (called almamgr)

- The tarball was uncompressed under /opt/alma , not /alma , so a symbolic link was created.

- For each user some environment variables are needed to run ACS. The file .bash_profile.acs exports those variables, but is very unconfortable to source the file every time. The file was included as an instruction of the .bashrc of each user. The problem of .bash_profile is that X-terminals (i.e xterm, konsole, etc) do not source this file in their initialitation.

An installation script was made for USM computers:

```
#!/bin/sh
# Variables

targz="current    .tar.gz"
urltargz="acs.    inf.utfsm.cl/$targz"
usr="almamgr"
usrroot="/opt/    $usr"
uid="666"
group="alma"
```

---

[1]The current ACS version is 3.1.0

[2]http://www.eso.org/ almamgr/AlmaAcs/Releases/ACS_3_1/Distribution/acs-quick-start.html

```
gid="666"

# CODE

clear
id=$(id -u)
if test $id != '0'; then
      echo "[Error]:  you must be root"
      exit
fi
echo "—— ACS – UIFSM – DISTRIBUTION  – INSTALATION  ——"
echo ""
echo "REMEMBER: before installing ACS, you need: pdksh, "
echo "glibc-devel,  itcl and tclx (debian needs libelf)"
echo ""
echo -n "Are you sure you want to continue  (y/n):"
read x
case $x in
   y) clear
   ;;
   *) echo -e "\n[Instalatio  n Cancelled]"
   ;;
esac;

echo -n "Creating  Group..."
groupadd -g $gid $group
echo -e " [DONE]\n"
echo -n "Creating  User..."
useradd -g $gid -u $uid -d $usrroot  -m -s /bin/bash  $usr
echo -e " [DONE]\n"
echo -n "Downloading  ACS..."
wget $urltargz
echo -e " [DONE]\n"

echo -n "Untaring  ACS..."
mv $targz $usrroot
chown $usr.$group  $usrroot/$targ   z
su – $usr -c "cd $usrroot;  tar xzvf $targz"
echo -e " [DONE]\n"

echo -n "Configurating   ACS..."
su – $usr -c "cd $usrroot;  cp -ra alma/ACS-3.1/AC   SSW/config/.acs ."
su – $usr -c 'echo ". .acs/.bash_prof  ile.acs" >> .bashrc'
ln -s $usrroot/alma   /alma
echo "Select a password  for ACS user"
passwd $usr
```

3.2   Fedora Core 1

No major problems either was found in the installation of ACS on Fedora Core 1. ACS binaries works perfectly under Fedora, but the dependencies versions do not match. The lastest packages of pdksh, glibc-devel, itcl and tclx have no conflicts with ACS installation. The installation procedure (and script) are the same, but remember to full upgrade the packages pdksh, glibc-devel, itcl and tclx before installing.

3.3   Debian Woody

ACS binaries run under Woody, but some considerations must be taken:

- glibc (libc6) must be the same version of RedHat 9.

- pdksh, glibc-devel, itcl, tclx and **libelf** packages are needed.

- GNU tools that ACS tarball provides are not compatible with Debian, so the evironment variable `GNU_ROOT` must be changed from `/alma/ACS-3.1/gnu` to `/usr`. A good idea is to change `TCLTK_ROOT` variable too.

- Debian has not `gtar`, but `tar` implements `gtar` functionality. A symbolic link of `tar` as `gtar` is enought to overcome this problem.

4   Compilation

No enougth documentation was found about how a clean ACS complation must be done (maybe is internal). The *Installation Manual*[3] just explain how to use `make` to compile only the libraries, but no referece about Alma-Tools or the internal structure of the `Makefile` is provided. Clean sources of ACS can only be downloaded directly from the CVS, but no public access was found. A HowTo of compiling ACS under Debian was found with new compilation rules and patches: this task is covered by **Project 003**.

5   Packaging

---

[3]http://www.eso.org/ almamgr/AlmaAcs/Releases/ACS_3_1/Docs/ACS-Installation-Manual.pdf