This is the fifth ACS development to be used in Cycle 9. Below is the list of addressed tickets.

- Obsolescence management including changes originally planned for 2 releases
    - Third party tools (Upgrades and cleanup)
        - expat, shunit
    - Java (~50 dependencies + clean-up) – Most notably
        - Hibernate
        - Spring
        - JAXB
        - Coexistence of javax.*-api and jakarta.*-api JAR files to allow future migrations
    - Python (14 dependencies) – Most notably
        - numpy
        - matplotlib
        - setuptools
    - Support for Python 3.8 (3.6 is still default, 3.8 will be made default in 2022FEB)
    - Support to patch Maven dependencies
        - They get installed to $ALMASW_INSTDIR/JavaDependencies/lib/<artifactId>-<version>-acs.jar
        - Examples are castor and xercesImpl
- New BACI properties (longLongSeq and uLongLongSeq)
    - Implementation in C++, Java and Python
    - Some cleanup and alignments in Java and Python (Missing BACI property types and misspellings)
- New Makefile bug-fixes and improvements
    - Support of MAKE_ONLY directive
- Patched pip to allow --target + --target-scripts directories
    - Proposed patch to upstream, currently in review
- ACS Makefile allows to deploy PY_PACKAGES to a PyPI server generating a setup.py from Makefile/rules.mk information
- Python component code is now correctly reloaded on activation without restarting the container (Just make sure no references are left before requesting your new reference)

key	summary	type	created	updated	due	assignee	reporter	priority	status	resolution

⚠ Jira project doesn't exist or you don't have permission to view it.

View these issues in Jira

```
git status
On branch integration/COMMON-2021OCT
Your branch is up to date with 'origin/integration/COMMON-2021OCT'.

git log --no-merges --oneline --reverse origin/master..origin/integration/COMMON-2021OCT -- ACS
41edf74f0e ICT-18858: Upgraded 2021AUG Java dependencies
0c5dafa8a8 ICT-18859: Updated 2021AUG Python dependencies
ad6fd5048a ICT-18904: Added support for DOUBLE DEFAULT value in HSQLDB
929c01de62 ICT-18904: Updated cdb_rdb DDL file according to new DEFAULT for DOUBLE
ef7ce03be4 ICT-18858: Updated hamcrest-core version for eventGUI
698cee948e ICT-18859: Upgrade ipython to 7.16.1, latest compatible with Python 3.6.x
1294f5adb7 ICT-18858: Replaced hamcrest-core and hamcrest-library by hamcrest
324d194cb1 ICT-18469: Moved shunit2 to ExtProds
62d353b351 ICT-18469: Upgraded shunit2 to 2.1.8
687b96e8f5 ICT-18469: Removed old shunit2 (2.1.5) version
3eefbe4a78 ICT-18468: Moved expat to ExtProds
142a08a21c ICT-18468: Cleanup of expat as ExtProd
076cead669 ICT-18468: Moving expat Makefile to be an LCU specific one
990a23a2aa ICT-18468: Made expat in ExtProds compatible with VxWorks
```

```
b88139f0e1 ICT-18468: ExtProd expat clean-up
f1097fd626 ICT-18858: Changed eventGUI dependency from hacmrest-core to hamcrest
c4bd547ad4 ICT-18858: Exclude hamcrest-core-1.3 dependency to avoid clash with 2.2
6a209cdbce (origin/feature/ICT-18469) ICT-18469: Small bug-fixes to install shunit2
06cbf1ed9d ICT-19109 updated ACS version for 2021OCT
c632aae462 (origin/feature/ICT-18859) ICT-18859: Upgraded astroid and pylint to latest version
17435af87e (origin/feature/ICT-18858) ICT-18858: Upgraded mysql-connector-java with latest version
cf90215e04 ICT-19118 updated python dependencies for 2021OCT
698b80d002 ICT-19118: Updated numpy and matplotlib to be compatible w/ py 3.6.9
f5ec41cdda ICT-19118: Fixing xmlpybind tests to consider test directory
9b034e3e24 (origin/feature/ICT-19118) ICT-19118: Fixing acspycommon tests for mock upgrade
7d81d76525 ICT-19180: NC Consumer to properly store subscriptions for reinit
31a7f13478 (origin/feature/ICT-19077) ICT-19077: Added MAKE_ONLY functionality to New Makefile
7b72361bba (origin/bugfix/ICT-19180) ICT-19180: Changed pointer for local instance of T event
e2ad9c246c initial changes for ICT-16295 (generate coredump/stacktrace) -  still testing
41fc73e185 ICT-19207: Added Python 3.8.12 to the list of available interpreters
eb71fb6d0a ICT-19023: Added common and BACI support: longLongSeq and uLongLongSeq
6cd059ee4c (origin/feature/ICT-19215) ICT-19215: Disable Pip warning due to newer version available
ca326e78e8 ICT-19207: Changing Python version to 3.8.6 to be compatible w/PyEnv
de8bc6ef84 ICT-19218: Java implementation for longLongSeq and uLongLongSeq
a73cbbcd54 ICT-19219: Python longLongSeq, uLongLongSeq and others implementation
90d5701c18 ICT-19236: Added support for longLongSeq and uLongLongSeq in moncollect
a878839460 (origin/feature/ICT-19023) ICT-19023: Updating several testing files of moncollect and jbaci
ad1c2dad11 ICT-19023: Re-doing all the changes but with javax package for hibernate Commits re-created
hibernate 5.4.27 for javax instead of jakarta: 2cb289f8ef ICT-19116 updated 2021OCT java dependencies
33d6593910 ICT-19143: Make schema bindings compatible with JAXB XJC 3.0.2 643908af18 ICT-19143: Additional
change for schema bindings with JAXB 3.0.2 0b903db942 ICT-19116: Changes in ARCHIVE and ICD for Java
dependencies 6384443fd8 ICT-19116: Additional changes in ARCHIVE and ICD for Java dependencies 4c92131210 ICT-
19116: Several fixes for tests to pass df55aba52f ICT-19116: Removed pdf-transcoder due to conflicting classes
in jar c391d82406 ICT-19116: Updated SharedJars Makefile to remove pdf-transcoder 389a622403 ICT-19159: Changes
for hibernate 5.5.6.Final to work with ACS 2cd7b05e2d ICT-19116: xjc script to use jakarta.activation-api-*.jar
7ff78e1138 ICT-19159: Add exclusion of hibernate-core in hibernate-jcache fad28d99ff ICT-19116: Upgraded slf4j-
api dependency in GUIs 3d2e5fb2c9 ICT-19159: Changes to ARCHIVE for hibernate-core-jakarta 5.5.6.Final
9a225b9d81 ICT-19159: Upgrade of ICD to be compatible with Hibernate 5.5.6.Final 2987aa412d ICT-19159: Upgrade
c3p0 for hibernate 5.5.6.Final dc562359ef ICT-19159: More changes for c3p0 in hibernate 5.5.6.Final 1204d9619d
ICT-19159: More updates of ARCHIVE for hibernate 5.5.6.Final 0296049d94 ICT-19159: More updates of ICD for
hibernate 5.5.6.Final b0dab39f03 ICT-19159: Updated hibernate-entitymanager and fixed hibernate tests
c3a5acafad ICT-19159: Updated hibernate tests for 5.5.6.Final 0224e568ca ICT-19116: Update byte-buddy to be
compatible with mockito-core f92df94ba9 ICT-19116: Fixing tests for upgrade of junit dependencies 1e53871d20
ICT-19116: ARCHIVE fix for new byte-buddy version 5bd43b1753 ICT-19159: Some adjustments to hibernate tests for
5.5.6.Final 51fa495cdd ICT-19159: TMCDB Explorer changes for Hibernate + spring patch ea40e1d68f ICT-19116:
Aesthetical changes in acs-jdeps 17dc76be09 ICT-19116: Simplified the install of patched Java dependencies
5ba0e5d1b0 ICT-19189: Changed xercesImpl building mechanism and related files ed3941ec53 ICT-19116: Cleaning up
acs-pom.xml 2ce3903b3b ICT-19116: Ensure the use of xerces SAXParser + small fixes 8504591984 ICT-19116: Adding
jakarta.mail implementation besides the API 2475c626a7 ICT-19116: Corrected small acs-pom.xml dependency typo
752a438d78 ICT-19116: Some fixes for tmcdb-explorer runtime
8a755a9655 ICT-19116: Further fixes for tmcdb-explorer runtime
68179d1be5 (origin/bugfix/ICT-19253) ICT-19253: Fixed Java IDL compilation to include expected dependencies
780bf4a9c9 ICT-19116/ICT-19189: Spring by ACS + Castor maven target + cleanup
7456747c0f ICT-19116: Updated spring dependencies across ACS/ARCHIVE/ICD
a96b0badaa ICT-19116: More corrections for castor JAR name change
35810310cb ICT-19116: Aligning spring-ldap to reqs of spring-security-ldap
0c15a281bc ICT-19189: Consider modules when calculating acs-pom.xml dependencies
7a48932168 ICT-19292: Patch pip to allow --target-scripts directory
6ecb4c4fbe (origin/feature/ICT-19207) ICT-19207: Also compile OmniORB for Python 3.8
ebe8a22456 ICT-19292: Adding missing patch for Pip
50d656b059 (origin/feature/ICT-19292) ICT-12292: Pip --target-scripts choose appropriate dir from temp dir
08951e47af ICT-19116: Fixing hibernate tests for new version
be454979ed ICT-19116: Explicitly setting DocumentBuilderFactory
90566860dc ICT-19116: Ensure xerces is used on acsStartJava -endorsed ...
46ded18841 ICT-19116: XjcBuilder to consider INTLIST/INTROOT
a1916f065d ICT-19255: add generate_setup.py script
8c8628d1a0 ICT-19255: add --filename option
a054710868 ICT-19255: New fields to setup.py to remove warns and reduced verbosity
cbd40d98bf ICT-19255: ACS Makefile support for geenerate_setup.py
665019900a ICT-19255: Added generate_setup to Kit/acs Makefile
538fa7ffb6 ICT-19255: Install acs-py.req for dependency version discovery
9c670b0fe8 (origin/feature/ICT-19366) ICT-19366: Py container reload moved to from deactivation to activation
0b17501625 first version of set_python_dependencies script
6f55508972 working on find_dependencies.py script
af9b50a194 update ext_pkgs getter
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50a49a1f95 getting acs and third party dependencies ok
d9ecc7725a update instructions
d6bde3cb8d ICT-19172: Recreating changes for Criteria API with javax ICT-19172: updated cdb_rdb module to use
javax.persistence ICT-19172: updated Tools/hibernate module to use javax.persistence ICT-19172: updated ACSLaser
/alarmHibernate module to use javax.persistence ICT-19172: updated acsdaemon module to use javax.persistence
ICT-19172: updated HibernateWDALImpl.java class migration ICT-19172: updated cdb_rdb HibernateWDALImpl class
ICT-19172: updated HibernateWDAlarmPluginImpl class ICT-19172: updated imports and the use of TypedQuery for
AcsStartRemote class ICT-19172: replacement of HibernateWDALImpl class in cdb_rdb ICT-19172 updated criteria
API for acsdaemon module ICT-19172 updated criteria API for ACSLaser module
1f314158c7 ICT-19326: Updated Makefile to support <PKG>_PKG_NAME
047be81e10 (origin/bugfix/ICT-19430) ICT-19430: Ensure correct use of parsing classes for XMLIDL
97198a3598 (origin/feature/ICT-19198) ICT-19198: Helper class to read and set component code in TMCDB
8e60422ef6 ICT-19172: Some fixes for JPA CriteriaQuery after some tests
beaa9ce9ce (origin/feature/ICT-19172-javax) ICT-19172: Check for no result in AcsStartRemote class
1d40098d90 (origin/feature/ICT-19255) ICT-19327, ICT-19328: Added _PKGS and _EXT_PKGS for ACS PY_PACKAGES
8973125b5d ICT-19440: New Makefile prevention of concurrent creation of dir
529d33c352 ICT-19441: Added check of dependencies for MIDL preprocessing
747c9e375d ICT-19440: Additional care for object/$1.idl in Java
4f759ac6cb (origin/bugfix/ICT-19440) ICT-19447: New MK Allow INTROOT/INTLIST to contain -I/-L in dir names


git log --no-merges --oneline --reverse origin/master..origin/integration/COMMON-2021OCT -- ARCHIVE
41edf74f0e ICT-18858: Upgraded 2021AUG Java dependencies
91baa7d6af ICT-18858: Updated hsqldb version for ARCHIVE/TMCDB/Database
1283805e6a ICT-19034 updating ARCHIVE parent pom. Aligned plugin versions with ARCHIVE-SERVICES. Simplified
profiles
1f0165d367 ICT-19034 further simplification of profiles
5949985c4e ICT-19034 aligned maven compiler plugin version with ARCHIVE-SERVICES, removed unnecessary
properties from PipelineUtils
e4228c92c0 ICT-19034 corrected location of compiler plugin - it should not be in a profile
fd678b0e77 (origin/bugfix/ICT-15099-xmlrpc-sourcecat-service-log-requests) ICT-15099 re-enabled logging for
xmlrpc requests. Over time it appears to have rotted.
4ae427c565 ICT-11388: updated poms -> 2021.10-SNAPSHOT
ad1c2dad11 ICT-19023: Re-doing all the changes but with javax package for hibernate Commits re-created
hibernate 5.4.27 for javax instead of jakarta: 2cb289f8ef ICT-19116 updated 2021OCT java dependencies
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780bf4a9c9 ICT-19116/ICT-19189: Spring by ACS + Castor maven target + cleanup
7456747c0f ICT-19116: Updated spring dependencies across ACS/ARCHIVE/ICD
9fa778a175 ICT-19301 updated startup scripts for DataPacker
7b3fab4c6d (origin/ICT-19301-datapacker-upgrade-spring-version) ICT-19301 corrected an error in the script for
asdmSize


git log --no-merges --oneline --reverse origin/master..origin/integration/COMMON-2021OCT -- ICD
b9d4d378d0 Included code to avoid null pointer exception when no configuration is selected
7ca6851782 (origin/bugfix/ICT-17861-tmcdb-explorers-find-configuration-wizard-nullpointerexception) removed
print out  message, minor change
41edf74f0e ICT-18858: Upgraded 2021AUG Java dependencies
afdab43c1f Updated POM versions for 2021OCT
6e25cc3bac ICT-18858: Updated hsqldb and junit versions for TMCDB Explorer
4ae427c565 ICT-11388: updated poms -> 2021.10-SNAPSHOT
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752a438d78 ICT-19116: Some fixes for tmcdb-explorer runtime
8a755a9655 ICT-19116: Further fixes for tmcdb-explorer runtime
780bf4a9c9 ICT-19116/ICT-19189: Spring by ACS + Castor maven target + cleanup
7456747c0f ICT-19116: Updated spring dependencies across ACS/ARCHIVE/ICD
fa7fb6036b (origin/feature/ICT-19290) ICT-19290: Updated Makefile/module.mk to use pip's --target
eb2efa831d ICD/ADAPT: Improved logging, Eclipse admin files
5a7069f999 ICT-17028 message-bus: improved Javadoc
9b499b34cd ICT-17028 adapt-messages: minor improvements
c1110d88ad ICT-17028 message-bus-rabbitmq: initial fix
3529f2d728 ICT-17028 ICD/ADAPT Eclipse stuff
1c8dd69e07 ICT-17028 IntelliJ stuff
05e797632e ICT-17028 message-bus: minor changes
813e4e59cc ICT-17028: Eclipse and IntelliJ stuff
96f49562ba ICT-17028 message-bus-rabbitmq: refactored, removed sendOne()
bced29b056 ICT-17028 adapt-messages: incorporated PR feedback
b91ec47e99 ICT-17028 Upgraded ADAPT version to 2021.10-SNAPSHOT
d8846a23ba ICT-17028 heartbeat-sender: reverted change causing potential NPE
d13ac03e0d ICT-17028 fixed minor problem
088af70424 ICT-17028 adapt-messages: minor improvement
a8263de50c ICT-17028 adapt-messages: minor improvements
597c27f0e8 ICT-17028 message-bus: refactored broker hierarchy removing sendOne()
2977672541 ICT-17028 HeartbeatSender: improved demo
09ce6c30ae ICT-17028 HeartbeatSender: improved demo
```

OS Support:

- The officially supported OS is the 64 bit version of "Red Hat Enterprise Linux Server release 7.6 (Maipo)"
    - The binary distribution of ACS (tarball) is made for this OS
    - We also successfully use its clone "CentOS 7.6"
    - For all machines the expected kernel is 3.10
- Unofficially, CentOS 8.3 has also been used successfully

The expected and actual versions of compilers, ORBs and various RPMs can be found by running the command =acsConfigReport=, both for required RPMs and for software shipped together with ACS. To get a rough overview before installing ACS, here are the most basic ones:

- Gcc: 4.8.5 RHEL 7.6
- Java: openjdk-11.0.4
- Python: 2.7.16, 3.6.9 and 3.8.6
- ACE: 6.5.11
- TAO: 2.5.11
- JacORB: 3.9
- omniorb: 4.2.4

The operating system dependencies are:

- redhat-lsb-core
- ksh
- gcc
- gcc-c++
- gcc-fortran
- libX11-devel

- libffi-devel
- perl
- readline-devel
- bzip2
- bzip2-devel
- openssl-devel
- openldap-devel
- libxml2-devel
- freetype-devel
- libxslt-devel
- sqlite-devel
- expat-devel
- bison
- flex
- autoconf
- unzip
- dos2unix
- tcl-devel
- tk-devel
- procmail

There is a new requirement needed to replace cppunit (Since 2020DEC):

- cppunit-devel

There is a new requirement needed to replace doxygen and graphviz (Since 2021APR):

- doxygen
- graphviz

Problems Found And Fix Version in This Release

key	summary	type	created	updated	due	assignee	reporter	priority	status	resolution

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Problems Found And Fix Version in Future Releases

key	summary	type	created	updated	due	assignee	reporter	priority	status	resolution	fixVersion

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