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This is the second ACS development to be used in Cycle 8. Below is the list of addressed tickets.

News

- [Obsolescence Management](#) for ACS has been prepared
 - An [Obsolescence Roadmap](#) with tentative projection of upgrades during late 2020 and 2021

Code

- Upgraded Boost to 1.66.0 (Same as RHEL / CentOS 8)
- Upgraded xerces-c to 3.2.2 (Same as RHEL / CentOS 8)
- Corrected package version for several Python packages (duplicates, open versions, etc.)
- Java dependencies are now installed using Maven repository as part of ExtProds
- Code to allow random delay when starting monitoring in a component to prevent too much simultaneous hardware demand from components sharing hardware resources (Network, CAN channel, etc.)
- Several improvements to New Makefile (More performant, less warnings, removed some bugs, etc.)
- Python imports no longer require ACS to be running. The code that was implemented in this way, was changed to be used as a singleton instead
- Try to avoid destruction of component while its servant reference may be in use by maciContainerImpl, which leaves a component without etherealization
- ComponentCaller now supports simple asynchronous calls that depend on basic callbacks (CBvoid, CBfloat, ...)
 - Future releases will increase the functionality to support custom callbacks
- Improvements to properly support Octet sequence in Python and objexp
- ACS now compatible with C++14, C++17 and C++2a (Draft of C++20 as of gcc version 8.3.1 20191121)
- Small bug-fixes for Python 3 compatibility in code not frequently used

key	summary	type	created	updated	due	assignee	reporter	priority	status	resolution
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```
git status
On branch integration/COMMON-2020OCT
Your branch is up to date with 'origin/integration/COMMON-2020OCT'.

git log --no-merges --oneline origin/master..origin/integration/COMMON-2020OCT -- ACS
ec14c193cf ICT-17482: Improved implementation of XSD Bindings for Python and Java
c69f9c616e ICT-17481: Protect multiple targets created to compile the same object
14ca3aeca9 ICT-17480: Added OMNI_ROOT variable to new Makefile
e0891c99c2 ICT-15314: Split the target cache to avoid an override when two modules have an IDL with same IDL
module name
cc4358d7bc ICT-15321: Added specific target dependency for IDLs to avoid looking for them before they've been
generated
d106260763 (origin/feature/ICT-16673-componentcaller-to-support-methods-with-callbacks) Component caller
methods with callback support
9ffb046c09 ICT-15314: Corrected small typo in check-target macro
1b14f9d116 ICT-15314: Better handling of repeated targets due to IDL modules and other name clashing in Python
8a8dc2b73f (origin/bugfix/ICT-17443) ICT-17443: Fixed small parenthesis typo in the tests
fd69080424 ICT-17443: Small update of reference fill that was missed
076a94d765 ICT-17443: Fixing python 3 incompatibility in NameTree module Updated the tests to PASS in Python 3
instead of Python 2
```

85d8e4dce6 (origin/bugfix/ICT-15689) ICT-15689: Fixing maci tests due to changes of ICT-15689
 345e3d8dba (origin/feature/ICT-17435) ICT-17435: Bug-fixes and test improvent for ICT-17435 and ICT-17221
 e7444b653c (origin/feature/ICT-9721) ICT-9721: Updating tasktests to be consistent with new attribute
 220ba08c20 ICT-9721: Updating enumprop tests to be consistent with new attribute
 5de41e1c90 ICT-9721: Updating baci tests to be consistent with new attribute
 2dd968a74e ICT-9721: Fixing cdb_rdb tests due to changes in schema monitoringThreadStartMaxDelay attribute
 e66d3aa363 ICT-17435: Import run-time indepedence from ACS for Acssim modules
 b66a00ea46 (origin/feature/ICT-17426) ICT-17426: Import run-time indepedence from ACS for Acspy.Util.BaciHelper
 cc95b3ac7e (origin/feature/ICT-17427) ICT-17427: Import run-time independence for ACSImpl.GenericProperty module
 78d2a3573a (origin/feature/ICT-17425) ICT-17425: Import run-time independence for Acspyalarm module
 a36f2f361f ICT-15689: Fixing small typos in data type handling
 b7ca6bd21d ICT-15689: Several improvements to avoid race condition in etherealization of component
 b9d46ff0c7 ICT-9721: Fixing a typo and improving consistency in monitorThread naming
 3340bccd34 ICT-9721: Changes in cdb_rdb to allow configuration of max start delay for monitoring thread in characteristic component
 81cf6dd8ea ICT-9721: Included a mechanism to configure a maximum for a random delay in the initialization of monitoring thread
 aa48030125 ICT-9721: Just improved indentation of monitorThreadWorker method indentation for the work to come
 ae306e685f (origin/feature/ICT-17356) ICT-17356: Obtaining ID moved outside the if/else clause as is used in both places
 bcf0bf4b6b (origin/task/ICT-17287) ICT-17287: Aligned versions between Python 2 and 3 requirements file to latest version between the two (and the available in the case of Py2)
 57a9bbec8d (origin/ICT-16958-acs-extprods-buildtool-script-to-report-starting-time) ICT-16958: Adding buildJavaDependencies (ICT-17292) to buildTools script
 812cfca086 (origin/feature/ICT-17292) ICT-17292: Added buildJavaDependencies script call in buildTools script
 0d96faad3f ICT-17292: Modified acsMakeJavaClasspath and acsStartJava scripts to include JavaDependencies/lib JARs in the search paths
 b0a86a82c0 ICT-17356: Added warning log for when etherealization is skipped due to activations remaining in the POA
 e4dlffd4d4 (origin/feature/ICT-17280) ICT-17280: Changed boost version to 1.66.0 as decided on the ticket
 e1b6837bb1 ICT-17292: Adding buildJavaDependencies script and initial acs-pom.xml file
 1c86f8cd4b ICT-17288: Fixing small typo in the assignation of pexpect's version
 457d9f06b2 ICT-17288: Assigning specific package version to open Python dependencies
 f4ebdb8985 ICT-17287: Removing numpy dependency duplication and unification of requirements file
 c3511a40ca ICT-17228: Changing xerces-c version to 3.2.2 to be aligned with CentOS 8
 981ddd5a43 (origin/bugfix/ICT-17153) ICT-17153: Removing a leftover script from tests refactoring
 fc59904991 ICT-17153: Updated tests to check behavior when no properties are set Improved tests in general to do better reporting of the success/failure
 9adb3c81fb ICT-17153: Fixed behavior of AcFileFinderForDirectories class to work even if properties are not correctly set
 6b70c8540d (origin/bugfix/ICT-17221) ICT-17221: Fixing a corner case when the type is tk_char instead of tk_octet
 4a0ed6c9f0 (origin/bugfix/ICT-17229) ICT-17229: Fixing exception when handling octet data type in objexp
 7c80a6036f ICT-17221: The Acssim sequence<octet> was fixed to return correct type
 34f0a79153 ICT-17280: Upgrading boost from 1.60 to 1.73
 b53f0e727f ICT-17228: Fixing tests of xercesc and ACSLser/laser-source-cpp for new xerces-c version
 baa34c17a0 ICT-17228: Making parameter, task and bulkDataNT modules xercesc 3 compatible
 b0b656915d (origin/feature/ICT-17279) ICT-17279: Making log4cpp compatible with c++14 and c++17 standards
 42e12a5611 init time and elapsed time for each build stage
 a914c34437 ICT-17228: Upgrade xercesc to version 3.2.3
 a04aecf018 (origin/feature/ICT-17254) ICT-17254: Making acsGUIs/acssampGUI tests compatible with c++14 and c++17 standards
 080f5234bd (origin/feature/ICT-17253) ICT-17253: Making acsdaemon tests compatible with c++14 and c++17 standards
 b94752204b (origin/feature/ICT-17252) ICT-17252: Making enumprop tests compatible with c++14 and c++17 standards
 a7e4857e04 (origin/feature/ICT-17251) ICT-17251: Making acscomponent tests compatible with c++14 and c++17 standards
 dc6a968efb (origin/feature/ICT-17250) ICT-17250: Making acserr tests compatible with c++14 and c++17 standards
 68421f0656 (origin/feature/ICT-17245) ICT-17245: Making acsdaemon compatible with c++14 and c++17 standards
 6b6d32ee6c (origin/feature/ICT-17247) ICT-17247: Making logging compatible with c++14 and c++17 standards
 0320a3a2f5 (origin/feature/ICT-17246) ICT-17246: Adding required dependencies to BulkDataNT module for g++ 8.3 linker
 2c80d207fc (origin/feature/ICT-17243) ICT-17243: Making loki compatible with c++14 and c++17 standards

 git log --no-merges --oneline origin/master..origin/integration/COMMON-2020OCT -- ARCHIVE
 6ce0c06ebb Track changes in the definition of the HWConfigurationTable
 f2d9a17ace (origin/bug/ICT-5490-do-not-create-export-dir-if-no-asdm) ICT-5490 asdmExportLight - upgrade commons-compress library
 d82487fbce ICT-5490 corrected classpath to downgrade some of the jars to the ACS versions
 97cb3c09ce ICT-5490 adapted to changed interface
 11efae4902 ICT-5490 adapted to changed interface

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8ee740def7 ICT-5490 modified to avoid potential NPEs with tns properties
2c859018b9 ICT-5490 do not create export directory if the asdm does not exist
a69b31e398 (origin/ICT-17276-mvn-archive-and-icd-poms-2020oct) ICT-17276: updated poms ->
9ad6340c6e Removed some unneeded columns in the HwConfiguration table. Renamed the MainConfiguration table and
some of the columns in that table
0bd5e601d4 ICT-9558: Required changes in Database DDL for HW/SW tables independence

git log --no-merges --oneline origin/master..origin/integration/COMMON-2020OCT -- ICD

40a4f59fc8 (origin/feature/ICT-9558) The configuration name now refers to the new column in the HwConfiguration
table.
fea6d481ca No code change. Just whitespace like removal of tabs etc.
fd39d93f56 Whitespace only change
7994644bf8 Track changes in the HwConfiguration table
eff45a63c2 No code change. Just whitespace like removal of tabs etc
12688968ff No code change. Just whitespace like removal of tabs etc.
59b3aa93af (origin/bugfix/ICT-17459) ICT-17459: Added --ignore-installed flag to allow different installations
to coexist
75d7e7b096 Track changes in the HW configuration table
e653a55aba These classes now use the latest HW configuration table accessor class
f7b3c7f468 Update the class that access the HW configuration table correspond to the new definition.
c93c23cac0 Make this cloning software compile with the updated definition of the HwConfiguration table. This
was a very crude update and, while it compiles, it will almost certainly not work correctly. This is OK as
these classes are not used anywhere and will be deleted soon.
31083d375b Consolidate duplicate lines
7b474a0edf Remove some unnecessary lines
ac69c80858 ICT-9721: Added configuration for max start delay of monitoring thread in tmcdb-explorer
a69b31e398 (origin/ICT-17276-mvn-archive-and-icd-poms-2020oct) ICT-17276: updated poms ->
4eefc2dcbb (origin/feature/ICT-17228) ICT-17318: Modified CMakeLists.txt files to be compatible with Xerces-c
3.2.2
443e4fd36e (origin/bugfix/ICT-17341) ICT-17341: Modified ICD/ASA/AsaParent to be able to handle different
installation areas for children artifacts
58d4f914f3 ICT-17282: APDM changes for management plan PDF

```

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

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 and 3.6.9
- ACE: 6.4.3
- TAO: 2.4.3
- mico: 2.3.13
- JacORB: 3.9
- omniORB: 4.2.3


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

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