This is the last ACS development to be used in Cycle 11. Below is the list of addressed tickets.

- Python 3.12 along with PyEnv v2.3.28 and PyEnv-VirtualEnv support
    - Logging modified to comply with Python 3.12
    - Tests compatible with unittest in Python 3.12
- Security upgrades for xalan and serializer to 2.7.3
- Small design change in logging statistics classes
- Castor to use java regular expression library (oro dependency is no longer needed)
- Added SHMEM library for BulkDataNT QoS configuration
- XMLDoc attributes in CDB/RDB appear in alma branch instead of MACI/Components

key	summary	type	created	updated	due	assignee	reporter	priority	status	resolution

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```
git status
On branch integration/COMMON-2023DEC
Your branch is up to date with 'origin/integration/COMMON-2023DEC'.

git log --no-merges --oneline --reverse origin/master..origin/integration/COMMON-2023DEC -- ACS
2d6a86cf60f ICT-23069: Updated ACS to 2023DEC version
c5c3671005f (origin/feature/ICT-23050) ICT-23050: No progress bar installing Python dependencies
91eabfb8d1d ICT-23052: LoggingStatistics stored in Logger instead of BaseLog
1d84ec55d7f (origin/feature/ICT-23053) ICT-23053: Ignore pip package in acsParseDeps Additional small
improvements in PyPI package information
2d5c5a0bccd ICT-23049: Added pyenv-virtualenv plugin
a9756240f49 ICT-23049: Initialize PyEnv-virtualenv plugin
4f178ee390e ICT-22926: Upgraded PyEnv to v2.3.28
f2ee9df01d6 (origin/feature/ICT-23049) ICT-23049: Loading virtualenv during installation to confirm it works
4d5dd6041f4 ICT-22925: Upgrade Python to 3.12 with required dependencies
da27f41d94c ICT-22764: Upgraded xalana and serializer to 2.7.3
128e6a9538f (origin/feature/ICT-22536) ICT-22536: Castor to use java regular expression library
123b2f81c16 ICT-23100: Deployment capabilities for 3rd party patched artifacts
9c9bb8c5a4e ICT-22925: Upgrading Pillow version for Pytnon 3.12
6e790cdb299 (origin/feature/ICT-23052) ICT-23052: stats variable to public scope for backwards compatibility
f1aeb13d794 ICT-23100: Parent pom to use ACS_VERSION for versioning
c532a7b2a41 (origin/feature/ICT-23107) ICT-23107: Added SHMEM library for BulkDataNT QoS configuration
52c5b5e07bb ICT-23100: Optional deps with custom pom. Bumped patch version
edbd2df5971 ICT-23100: Castor and Xerces-J to use revision as parent version
cd5735b56e2 ICT-23100: Corrected small bug with parent revision
4e48d56d709 ICT-23100: Small fixes in third-party child poms for consistency
126ac56d131 (origin/feature/ICT-23100) ICT-23100: Patched third party deps should go to M2 repo as well
480e559a723 ICT-22925: Logging to correctly put file and line number on logs
082f8a3065f ICT-22925: Tests compatible with unittest in Python 3.12
2cfe7953046 ICT-22925: Collections, importlib and is_alive updated
969a8cc1eb5 ICT-22925: Importlib additional changes for Python 3.12
02cb07d0d21 (origin/feature/ICT-22925) ICT-22925: Fixed some tests for Python 3.12
75ac4d9142f (origin/bugfix/ICT-23188) ICT-23188: Fix to show XMLDoc attributes in alma branch instead of MACI

git log --no-merges --oneline --reverse origin/master..origin/integration/COMMON-2023DEC -- ARCHIVE

git log --no-merges --oneline --reverse origin/master..origin/integration/COMMON-2023DEC -- ICD
7b9c92bc020 ICT-22867 updated ICD/OBOPS poms to 2023.12
53648f3c8bd ICT-22867 added SB Waiting+ForJAO SubState
c71f4274242 ICT-22867 updated ICD/OBOPS poms to 2023.12
360ac5f6315 ICT-22867 added SB Waiting+ForJAO SubState
0d5181848ef ICT-22925: Upgrade astropy for Python 3.12
5bb92e5a453 (origin/feature/ICT-22764) ICT-22764: Upgrade xalan version for APDM build
a28224cb088 ICT-22903 added substate to email state param
a1a00f65c95 ICT-22903 added SB P2G mail notifications
a5d16b4727f ICT-22903 P2G SB notifications on changes to ObservingTimedOut
f4f569d2699 ICT-22925: ICD tests replaced assertEquals
7a59672d2ae ICT-22903 simplified ICD/OBOPS pom files
e694757b197 (origin/icd-obops/2023DEC) ICT-22903 updated MagicDraw to 2022x v7
38420017105 ICT-22788: APDM changes for C11
0fd806fc65d (origin/feature/ICT-23202) ICT-23202 : added toXML methods to python swig entities for Row and
Table objects
```

OS Support:

- The officially supported OS is the 64 bit version of "Red Hat Enterprise Linux Server release 8.5 (Ootpa)"
    - The binary distribution of ACS (tarball) is made for this OS
    - We also successfully use its clone "CentOS Stream 8"
    - For all machines the expected kernel is 4.18.0
- Unofficially, "CentOS Stream 9" 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: 8.5 (RHEL 8.5.0)
- Java: openjdk-17.x.x
- Python: 3.8.6
- ACE: 7.0.6

- TAO: 3.0.6
- JacORB: 3.9
- omniorb: 4.3.0

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
- cppunit-devel
- doxygen
- graphviz
- astyle
- boost-devel
- swig
- xerces-c-devel
- tcl-devel
- tk-devel

If you need to build doxygen/graphviz instead of installing at OS level, you also need:

- cmake
- libarchive

Legend:

- ✅ : All tests are passing
- ⚠️ : Some tests are failing
- ⛔ : Execution of tests was aborted
- ❌ : Execution of tests failed

The evolution of ACS tests during development of 2022OCT:

Build	Date	Status	Tests	Passed	Skipped	Failed	Coverage (Cpp)	Coverage (Java)	Coverage (Py)	Coverage (Total)
#1	-	-	-	-	-	-	-	-	-	-

Problems Found And Fix Version in This Release

key	summary	type	created	updated	assignee	reporter	priority	status	resolution

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Problems Found And Fix Version in Future Releases

key	summary	type	created	updated	assignee	reporter	priority	status	resolution

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