

| IBM Software Group

ALM ToDo Agile UCM and Buildforge demo

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Demo to Present

- ▶ ALM “ToDo” agile project.
- ▶ Baseline and Build tools
- ▶ ALMBaseline and BTBuild (Build) records
- ▶ Describe tie into ALMActivities
- ▶ In-the-box UCM integration as it works with ALM
- ▶ Demo an example of how BuildForge can be used to drive and populate ALM baseline and build data



Other Demos (TBD)

- Setting the default ALMProject AND ALMTask for UCM
- Using ALM Baseline and Build in a strict process
- Composite Baselines with ALM
- NonUCM usage
- Mixed UCM and NonUCM usage
- Using Build Forge with ALM



Audience

- Release Engineers
- Program Managers
- Developers and Managers
- Quality Engineers



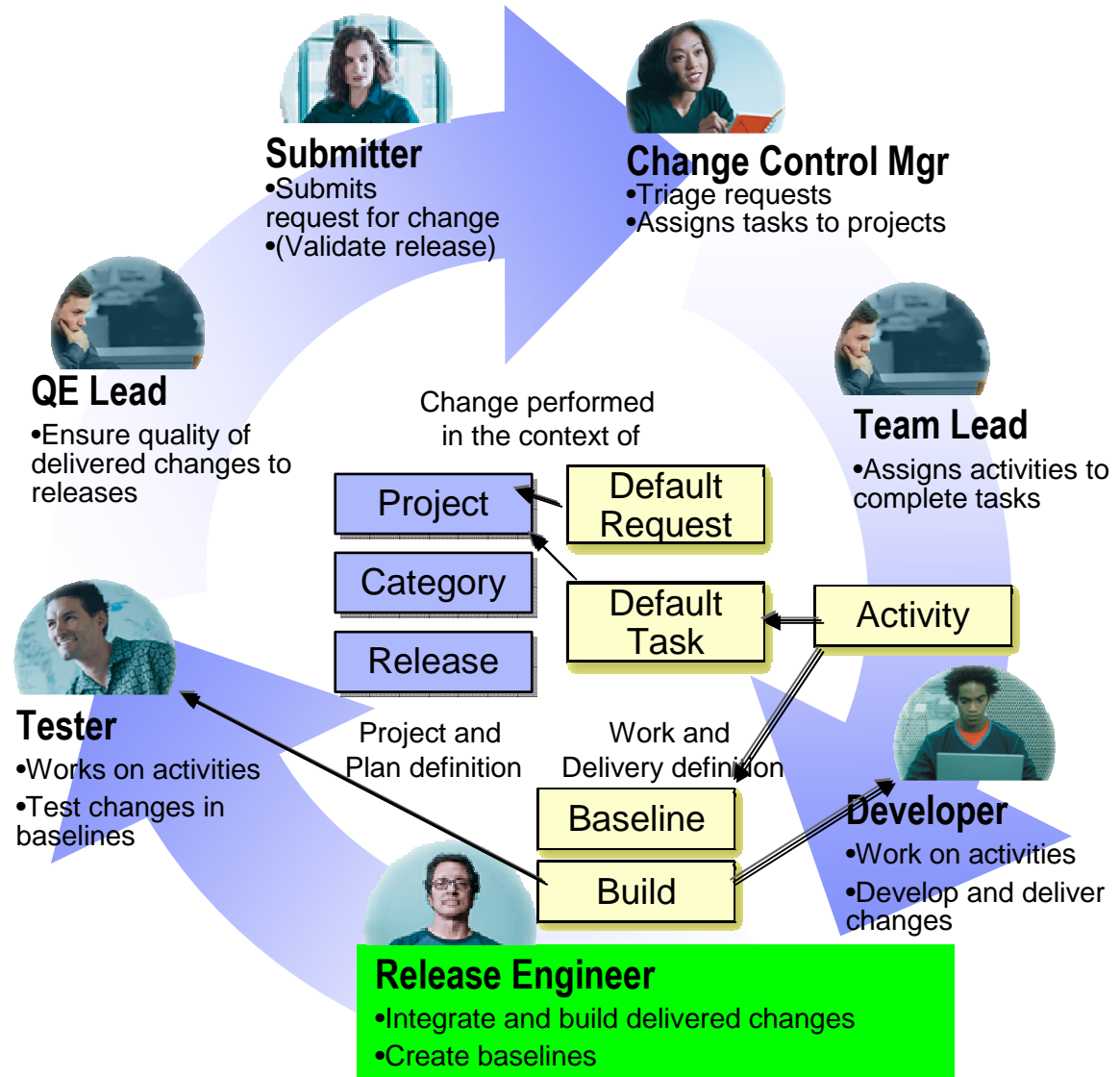
Prerequisites

- View a CQ ALM demo explaining the overall high level ALM work flow and features.

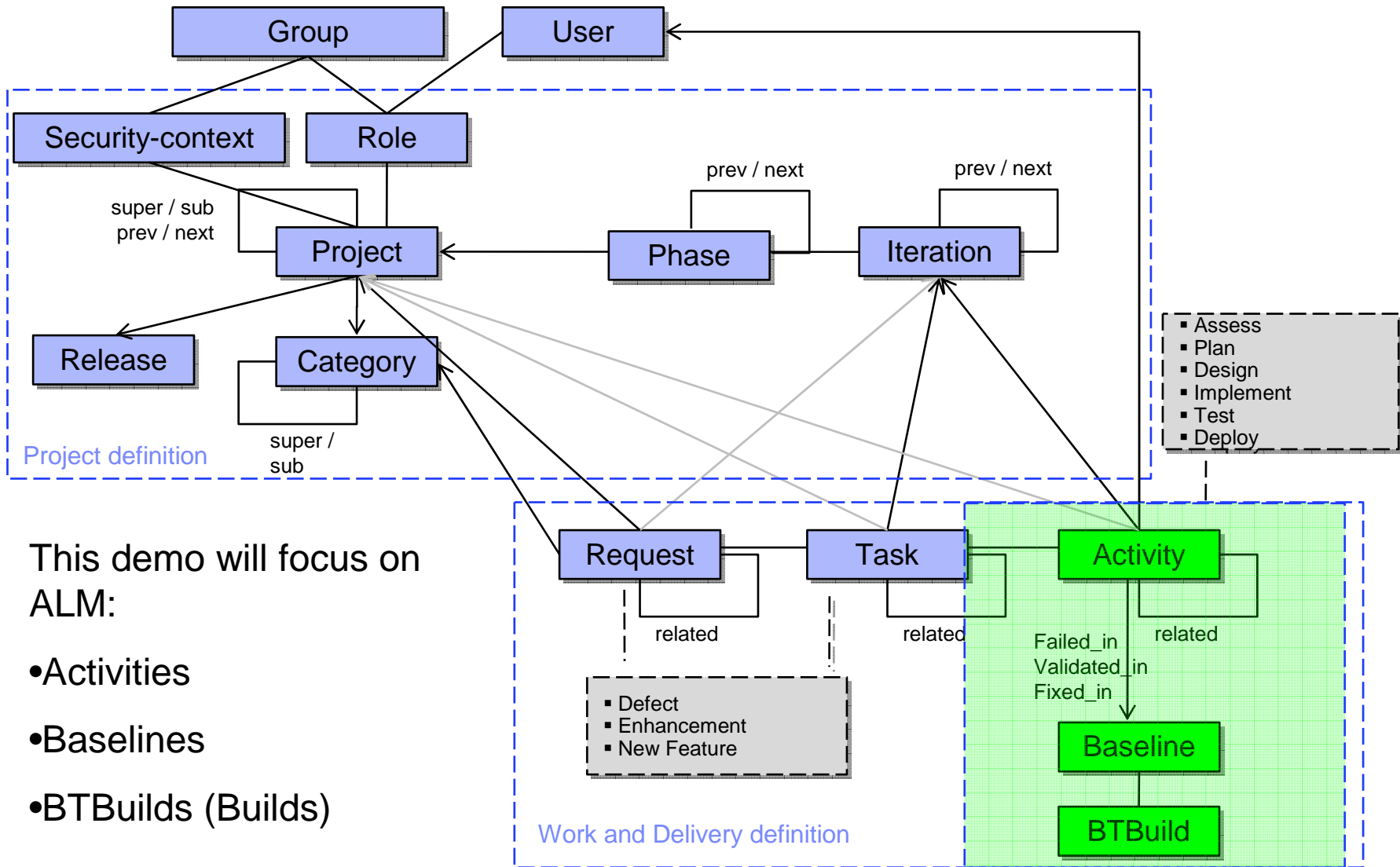


ToDo Agile Project

- Out-of-box ALM Solution for ClearQuest
- ALMProject assigns a Default ALMRequest and Default ALMTask
- Developers create ALMActivities against the default ALMTask
- Baseline and Build records track progress of activities
- Developers and Testers can Verify ALMActivities in Builds



Putting it all together



This demo will focus on ALM:

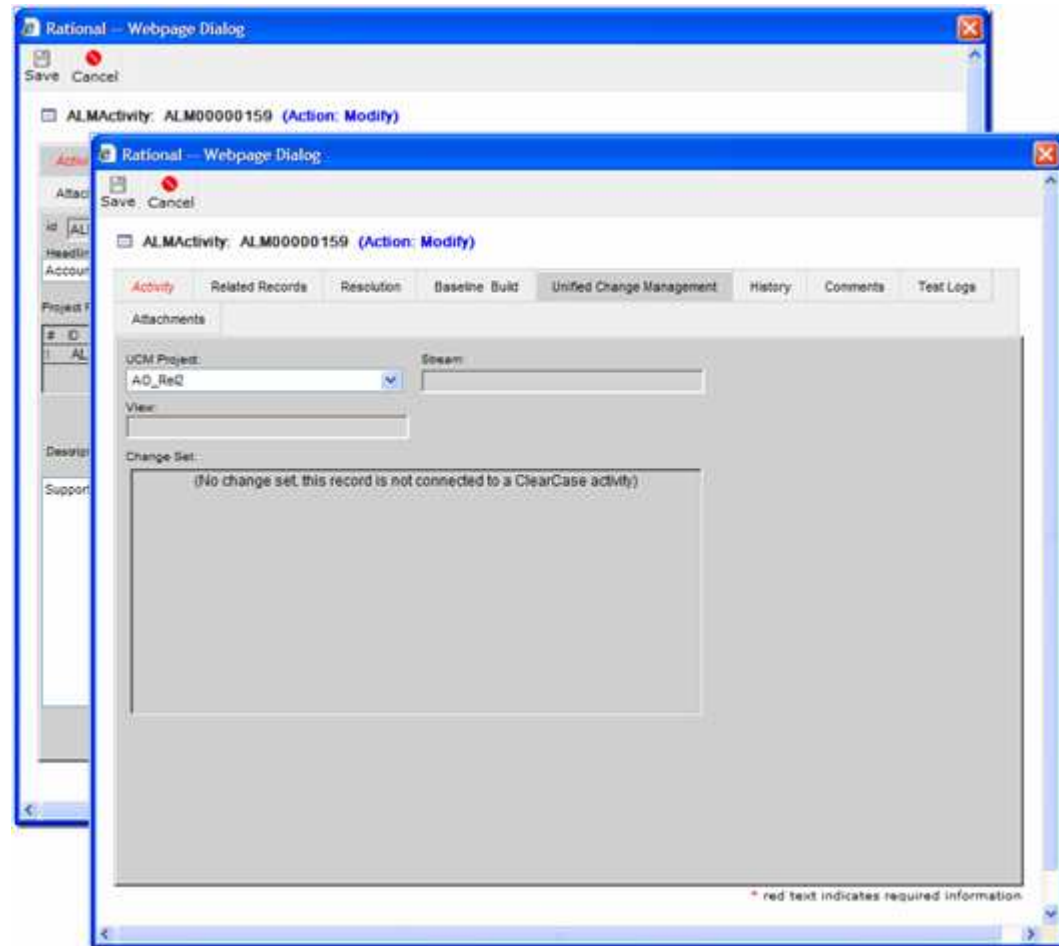
- Activities
- Baselines
- BTBuilds (Builds)



Contributors

Standard in-the-box CC/CQ integration is enabled on the ALMActivity record

ALMActivities are UCM enabled



ALMBaseline

Create (ALMBaseline)

Baseline | Activities | History

Baseline Information

Project: Obsolete

id	Category	Release	Is Obsolete?
ALM00000407	Category_RWM	ReleaseLab...	No

Project	RoleLabel	Primary
ALM00000407	Release...	ReleaseE...

Name:

ucm_stream:

PVOB or Loc: Owner:

Promotion Level:

Composed Of Baselines:

BaselinesInComposites	Name
PVOB_OrLocation	

- 1 Choose Project
- 2 Identify UCM stream
- 3 Identify PVOB or Location
- 4 List completed activities (Diff Baselines)

Create (ALMBaseline)

Baseline | Activities | History

Activities:

Type	State	Owner	ResolutionCode	id
Dev	Completed	Dev_RWM	Fixed	ALM00000500

Automate the creation of the Baseline and Build records as part of your build process

ALM Baselines provide instant knowledge of Status, Disposition, and location of Activity artifacts in UCM and non-UCM baselines and builds.





Contributors

- UCM: a modified ClearTool diffbl finds and adds activities to the Baseline record.
- Optional, Queries in ALM can find Completed activities since the last ALMBaseline

ALMActivities tracked in Baselines

Rational -- Webpage Dialog: ALMActivity: ALM00000159 (Action: Modify)

Save Cancel

Activity Related Records Resolution **Baseline Build** Unified Change Management History Comments Test Logs

Attachments

Fixed In Baselines:

#	Build_System_ID	BuildStatus

Failed In Build (x):

#	Build_System_ID	BuildStatus

No Plan To Test In Build (x):

#	Build_System_ID	BuildStatus

Validated In Build(s):

#	Build_System_ID	BuildStatus

* red text indicates required information

BTBuilds are created off Baselines

- 1 Choose Project
- 2 Set Build Type and Build Status
- 3 Choose Baseline

Create (BTBuild) ALM00000503

Main Build Details ALM History Obsolete?

ALMProject :

id	Category	Release	Is Obsolete?
ALM00000407	Category_RWM	ReleaseLabel01...	No

ALMBuildType: Platform ALMSecurityPolicy: SecurityPolicy_RWM

ALMBuildStatus: Passed ALMOwner: ReleaseEngineer_RWM

ALMRoles:

Project	RoleLabel	Primary
ALM00000...	ReleaseEngi...	Releas...

ALMBaseline:

PVOB_OrLocation	Name	Obsolete	Owner	Project's Category	Project's ReleaseLabel
609PVOBorLOC	609Baseline	No	ReleaseEngi...	Category_RWM	ReleaseLabel0

Automate the creation of the Baseline and Build records as part of your build process



Baseline/Build scripts provided with ALM

- Designed to interface UCM and NonUCM Change Management (CM) systems to ALM
- Written in RATLPerl. Released as source to allow you to extend for your own process if needed
- Fully in ALM documentation
- Commandline –help for addition information



Baseline/Build scripts provided with ALM

■ Create_baseline_record.pl

- ▶ Creates an ALMBaseline record from the commandline

■ Create_build_record.pl

- ▶ Given an ALMBaseline record creates a BTBuild record off it

■ Update_baseline_record.pl

- ▶ Updates an existing ALMBaseline record from UCM or supplied commandline

■ Update_build_record.pl

- ▶ Update an existing BTBuild record from the commandline

■ Runbasicquery.pl

- ▶ Runs a CQ stored query given commandline params for filters and saves the output to a file in a format compatible with above scripts



ALM_Project_ToDo

- Demo Agile development using ALM and UCM

- Options to create and assign ALMActivities to a developer.
 - ▶ Activities can be created and assigned first in ALM
 - Will show up in ClearCase UCM drop down choice
 - ▶ Activities can be created by the Dev as needed
 - Setting a default project will set the default Task and Request
 - Or, another Task created or selected as needed
 - ▶ Project setting of Default task allows for quick and unimpeded checkouts.
 - As needed, Activity can be reassigned to a more appropriate task at a later time
 - Checkouts are unimpeded



Demo

- Working Activities
- Automated Builds
- Validate Activities in Builds



Project_ToDo

DEMO Steps

- Checkout in ClearCase UCM as “Dev_ToDo” ID in ALM
- Standard, “in-the-box” UCM integration is used to tie ClearCase UCM to the ALMActivity
- Prompting for “Activity”
New -> ALMActivity – create an activity as needed.
- Modify File
- Checkin – Use same Activity
- Deliver to Default integration stream
- “Complete” on delivery will display ALMActivity and Prompt for Resolution
 - Standard UCM policy
- Imagine scenario is repeated by many developers during the day
- Checkout/in on Integration Stream
 - Manually complete the activity



Build Forge Project

■ O1_ALM_Project_ToDo

- ▶ **Start the Build**
- ▶ Setting up Build Forge for ALM covered in another demo
- ▶ Review Build steps
 - UCM mkbl – Standard UCM Baseline is made
 - Create_Baseline_Record
 - Runs a diffbl between this new baseline and the last ALMBaseline record stored in ALM.
 - Minimal extra information need be supplied as script can gather information from both ALM and ClearCase UCM
 - Mock source build – builds a web page example
 - Create_Build_Record
 - Given the above Baseline, one or more builds may be created
 - ALM reuses BTBuild record
 - Review in ALM the new Baseline, Activities in the Baseline, BTBuild



Build Forge 01_ALM_Project_ToDo Build run

The screenshot shows the Build Forge web interface in Microsoft Internet Explorer. The browser address bar shows the URL: `http://127.0.0.1/fullcontrol/index.php?mod=jobs&action=edit&bf_id=13`. The page title is "BuildForge - Jobs - Microsoft Internet Explorer".

The interface includes a navigation menu on the left with options: Home, Projects, Libraries, Jobs, Start, Semaphores, Schedules, Environments, Servers, Administration, Help, and Results. The "Jobs" section is currently selected.

The main content area displays details for a specific job:

- Jobs >> BUILD_78**
- Status: **Completed-- Passed-- Built**
- Date: **04/11/08 01:51PM**
- Project: **01_ALM_Project_ToDo**
- Selector: **CCVer**
- Class: **Production** (dropdown menu)

Below the job details, there are buttons for "Filter", "Showing 1 - 5 of 5", "Display All", "Purge Job", "Restart Job", and "Cancel".

The main table displays the build steps:

Step	Step Name	Server (Selector)	Runtime	Result	Chains
1	Setup Build	ALM Build Server (Default)	0:00:30	Passed	
2	UCM mkb1	ALM Build Server (Default)	0:00:07	Passed	
3	Mock Source Build	ALM Build Server (Default)	0:00:06	Passed	
4	create baseline record	ALM Build Server (Default)	0:00:15	Passed	
5	create build record	ALM Build Server (Default)	0:00:09	Passed	

At the bottom of the page, there is a copyright notice: "(c) Copyright International Business Machines Corporation 2003, 2007. All rights reserved." and a "Trusted sites" indicator in the browser status bar.



01_ALM_Project_ToDo

The screenshot shows the BuildForge web interface in Microsoft Internet Explorer. The browser address bar shows the URL: `http://127.0.0.1/fullcontrol/index.php?mod=projects&action=steps.view&bf_id=2`. The interface includes a navigation menu on the left with options like Home, Projects, Adaptors, and Libraries. The main content area displays the project details for '01_ALM_Project_ToDo' with a table of steps.

#	Step Name	Selector	Environment	Result	Access
1	REAMDE			Exit Code	Build Engineer
2	Setup Build		01_ALM_Project_ToDo	Exit Code	Build Engineer
3	UCM mkbl		01_ALM_Project_ToDo	Exit Code	Build Engineer
4	Mock Source Build		01_ALM_Project_ToDo	Exit Code	Build Engineer
5	create baseline record		01_ALM_Project_ToDo	Exit Code	Build Engineer
6	create build record		01_ALM_Project_ToDo	Exit Code	Build Engineer

Below the table, there are buttons for 'Step: REAMDE', 'Save Step', 'Delete Step', and 'Add Note'. The interface also shows a 'Details' tab and 'Notes (0)'. The footer of the browser window contains the copyright notice: '(c) Copyright International Business Machines Corporation 2003, 2007. All rights reserved.'



ALMBaseline Record created by Build Forge

View ALMBaseline stu_pvob_080130 01_ALM_Project_ToDo_78 (ProjectAdmin_ToDo,CQMS.ALMM3.GALWAY@ALM)

Baseline | Activities | History

Baseline Information

Project: Roles: Obsolete

id	Category	Release	Is Obsolete?
ALM00000002	Category_ToDo	ReleaseLab...	No

Project	RoleLabel	Primary
ALM00000002	Release...	ReleaseE...

Name:

ucm_stream:

PVOB or Loc: Owner:

Promotion Level:

Builds:

id	Build_System_ID	BuildStatus
ALM0000...	01_ALM_Project_ToDo_78	Passed



Activities placed on ALMBaseline from Diffbl

View ALMBaseline stu_pvob_080130 01_ALM_Project_ToDo_78 (ProjectAdmin_ToDo,CQMS.ALMM3.GALWAY@ALM)

Baseline | **Activities** | History

Activities: Add New... Remove

ID	Type	State	Owner	ResolutionCode	Headline
ALM00001074	Dev	Completed	Dev_ToDo	Fixed	Todo 0411 0243
ALM00001075	Dev	Completed	Dev_ToDo	Fixed	Todo 0411 0247



BTBuild Record Created off ALMBaseline Record

View BTBuild ALM00001077 (ProjectAdmin_ToDo,CQMS.ALMM3.GALWAY@ALM)

Main | Build Details | **ALM** | History

Obsolete?

ALMProject :

id	Name	Category	Release	Obsolete
ALM00000002	Project_ToDo	Category_ToDo	ReleaseLa...	No

ALMBuildType: ALMSecurityPolicy:

ALMBuildStatus: ALMOwner:

ALMRoles:

Project	RoleLabel	Primary
ALM00000002	ReleaseEngine...	ReleaseEngineer_ToDo

ALMBaseline:

PVOB_OrLocation	Name	Obsolete	Owner	Project's Category	Project's Relea
stu_pvob_080130	01_ALM_Project_T...	NO	ReleaseEngi...	Category_ToDo	ReleaseLabel0



ALMActivities contain their validation status

- Queries report ALMActivities that need to be Validated in BTBuilds
 - ▶ Positive confirmation that Activity has been looked at in a build and determined to work.
- Not all UCM Baselines need an ALMBaseline records
 - ▶ Only Baselines you wish to “Validate” or “Fail” the ALMActivity for a build
 - ▶ ALMBaseline records for a UCM baseline can be created at a later time
 - For example if you decide yesterday’s build should be tracked



ALMActivities marked as Validated or Failed in Builds by Developer or Tester

View ALMActivity ALM00001075 (ProjectAdmin_ToDo,CQMS.ALMM3.GALWAY@ALM)

Activity | Related Records | Resolution | **Baseline and Build** | Unified Change Management | History | Comments | Attachments

Fixed In Baselines:

Baseline Name	Build_System_ID	BuildStatus
01_ALM_Project_ToDo_78	01_ALM_Project_ToDo_78	Passed

BUILDS

Failed In Build (s): New ... Add Remove

Build_System_ID	BuildStatus
-----------------	-------------

No Plan To Test In Build (s): New ... Add Remove

Build_System_ID	BuildStatus
-----------------	-------------

Validated In Build(s): New Add Remove

Build_System_ID	BuildStatus
01_ALM_Project_ToDo_78	Passed