

Continuous Integration (Jenkins)



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Agenda

- What's Continuous Integration
- Jenkins
 - Features
 - Plugin
 - Security Management
- Demo
- Q&A



What's Continuous Integration?



- In software engineering, continuous integration (CI) implements **continuous processes** of applying quality control - small pieces of effort, applied frequently.
Continuous integration aims to improve the quality of software, and to reduce the time taken to deliver it, by replacing the traditional practice of applying quality control **after** completing all development.

Ref: http://en.wikipedia.org/wiki/Continuous_integration



History

- Continuous Integration emerged in the Extreme Programming (XP) community, and XP advocates Martin Fowler and Kent Beck first wrote about continuous integration circa 1999.



Continuous Integration



- Continuous Integration is a software development practice where members of a team **integrate their work frequently**, usually each person integrates at least daily - leading to multiple integrations per day. Each integration is **verified** by an automated build (including test) to detect integration errors as quickly as possible.

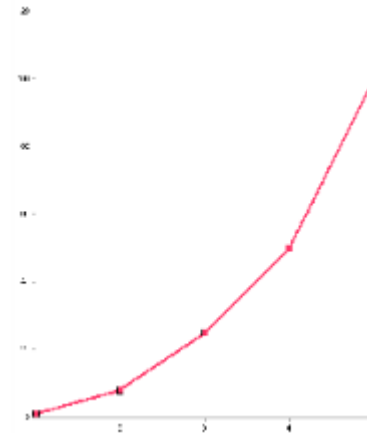
-- Martin Fowler

Ref: <http://martinfowler.com/articles/continuousIntegration.html>



Why Continuous Integration?

- Integration is hard, effort increase exponentially with
 - Number of components
 - Number of bugs
 - Time since last integration





Continuous Integration Benefit

- Project Management
 - Detect system development problems earlier
 - Reduce risks of cost, schedule, and budget
- Code Quality
 - Measurable and visible code quality
 - Continuous automatic regression unit test



Lots of people are using Jenkins...



Best Practice of CI

- Single Source Repository.
- Automate the Build and Test
- Everyone Commits Every Day
- Keep the Build Fast
- Everyone can see what's happening
- Automate Deployment (Optional)



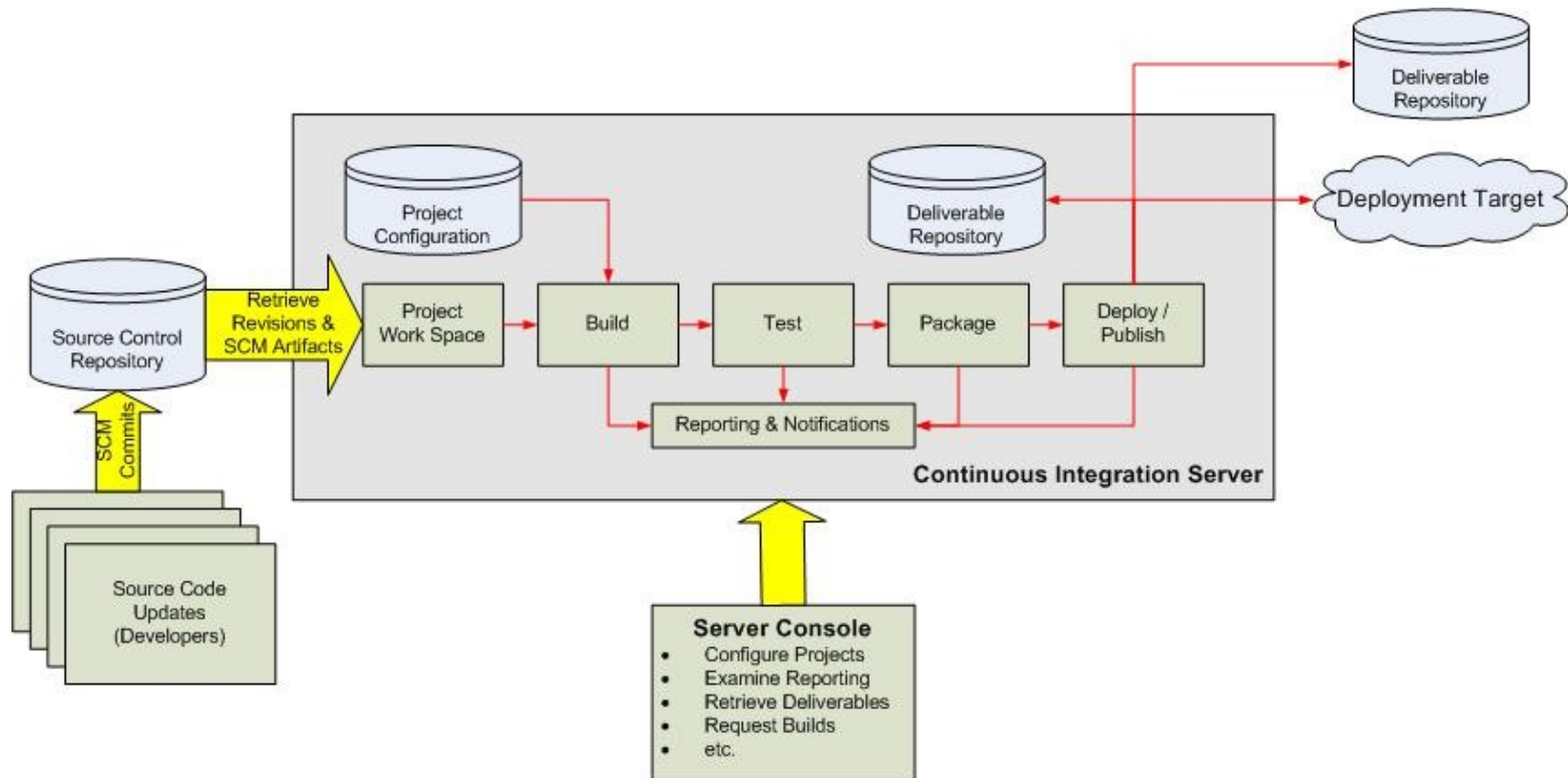
What's Jenkins



1. An open source CI server
2. More then 85000 installations (May 2014)
3. Plug-in extensibility (Over 900 plugins)
4. MIT license



Continuous Integration Overview



Jenkins Features

- Trigger a build
- Get source code from repository
- Automatically build and test
- Generate report & notify
- Deploy
- Distributed build



Jenkins Requirement



- Web Server (Tomcat, WebLogic, ...)
- Build tool (Maven, Ant)
- SCM (Git, Svn, Cvs, ...)



Jenkins Plugins

- Build triggers
- Source code management
- Build tools
- Build notifiers
- Build reports
- Artifact uploaders
- UI plugins
- Authentication and user management

Build Trigger

- Manually click build button
- Build periodically
- Build whenever a SNAPSHOT dependency is built
- Build after other projects are built
- Poll SCM
- IRC, Jabber, ...

Get Source Code (1/2)



- CVS (build-in)
- SVN (build-in)
- GIT (requires Git)
- ClearCase (requires ClearCase)
- Mercurial, PVCS, VSS, ...



Get Source Code (2/2)



- Get current snapshot
- Get baseline (tag)

Source Code Management

☐ None
☐ CVS
☐ CVS Projectset
☒ Subversion

Modules

Repository URL ?

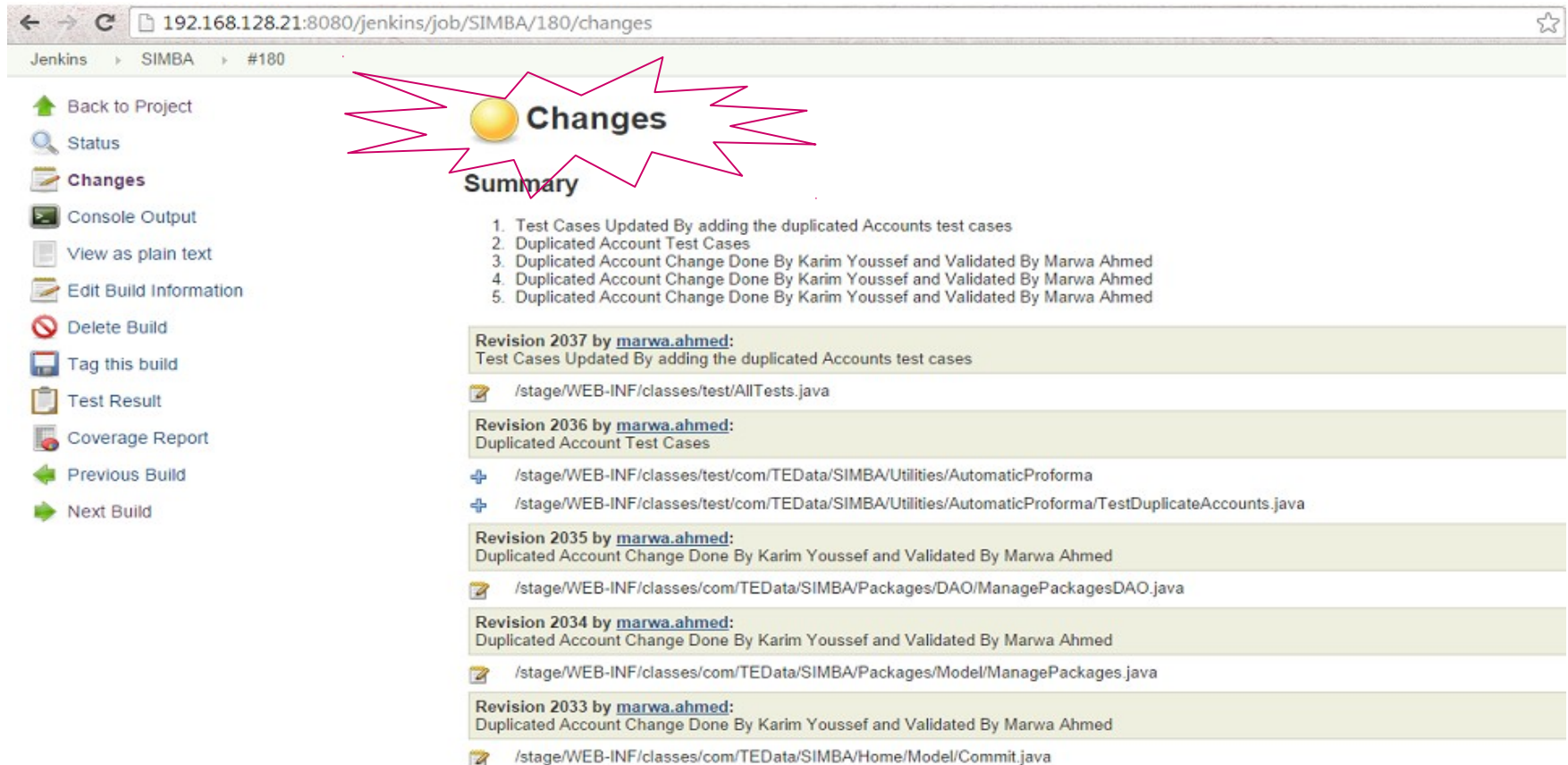
Local module directory (optional) ?

Repository depth ?

Ignore externals ☐ ?



Code Change History



← → ↻ 192.168.128.21:8080/jenkins/job/SIMBA/180/changes ☆


Jenkins > SIMBA > #180

- Back to Project
- Status
- Changes**
- Console Output
- View as plain text
- Edit Build Information
- Delete Build
- Tag this build
- Test Result
- Coverage Report
- Previous Build
- Next Build


Changes Summary


1. Test Cases Updated By adding the duplicated Accounts test cases
2. Duplicated Account Test Cases
3. Duplicated Account Change Done By Karim Youssef and Validated By Marwa Ahmed
4. Duplicated Account Change Done By Karim Youssef and Validated By Marwa Ahmed
5. Duplicated Account Change Done By Karim Youssef and Validated By Marwa Ahmed

Revision 2037 by [marwa.ahmed](#):
Test Cases Updated By adding the duplicated Accounts test cases


 /stage/WEB-INF/classes/test/AllTests.java

Revision 2036 by [marwa.ahmed](#):
Duplicated Account Test Cases


 /stage/WEB-INF/classes/test/com/TEDData/SIMBA/Utilities/AutomaticProforma

 /stage/WEB-INF/classes/test/com/TEDData/SIMBA/Utilities/AutomaticProforma/TestDuplicateAccounts.java


Revision 2035 by [marwa.ahmed](#):
Duplicated Account Change Done By Karim Youssef and Validated By Marwa Ahmed

 /stage/WEB-INF/classes/com/TEDData/SIMBA/Packages/DAO/ManagePackagesDAO.java

Revision 2034 by [marwa.ahmed](#):
Duplicated Account Change Done By Karim Youssef and Validated By Marwa Ahmed

 /stage/WEB-INF/classes/com/TEDData/SIMBA/Packages/Model/ManagePackages.java

Revision 2033 by [marwa.ahmed](#):
Duplicated Account Change Done By Karim Youssef and Validated By Marwa Ahmed

 /stage/WEB-INF/classes/com/TEDData/SIMBA/Home/Model/Commit.java

Build Tools

- Java
 - Maven (build-in), Ant, Gradle
- .Net
 - MSBuild, PowerShell
- Shell script
 - Python, Ruby, Groovy



Build Wrapper

- Build name (version no) setter
- Virtual machine (VMWare, Virtual Box)
- Set environment variable
- ClearCase release plugin
- ...



Build Notifier

- E-mail
- Twitter
- Jabber
- IRC
- RSS
- Google calendar
- ...



Build Report



- Static Code Analysis
 - Checkstyle, PMD, Findbugs, Compiler Warning
- Test Report & Code Coverage
 - JUnit, TestNG, Cobertura, Clover
- Open Tasks



CheckStyle



CheckStyle Result

Warnings Trend

All Warnings	New Warnings	Fixed Warnings
6766	2	0

Summary

Total	High Priority	Normal Priority	Low Priority
6766	6766	0	0

Details

Modules	Package	Files	Categories	Types	Warnings	Details	New
				Type	Total	Distribution	
				AvoidInlineConditionalsCheck	47	<div></div>	
				AvoidNestedBlocksCheck	2	<div></div>	
				AvoidStarImportCheck	1	<div></div>	
				ConstantNameCheck	11	<div></div>	
				DesignForExtensionCheck	789	<div></div>	
				EmptyBlockCheck	29	<div></div>	
				FinalClassCheck	5	<div></div>	
				FinalParametersCheck	980	<div></div>	
				HiddenFieldCheck	288	<div></div>	
				HideUtilityClassConstructorCheck	9	<div></div>	
				InnerAssignmentCheck	1	<div></div>	
				InterfaceIsTypeCheck	8	<div></div>	
				JavadocMethodCheck	1472	<div></div>	
				JavadocPackageCheck	1	<div></div>	





FindBugs

FindBugs Result

Warnings Trend

All Warnings	New this build	Fixed Warnings
22	0	0

Summary

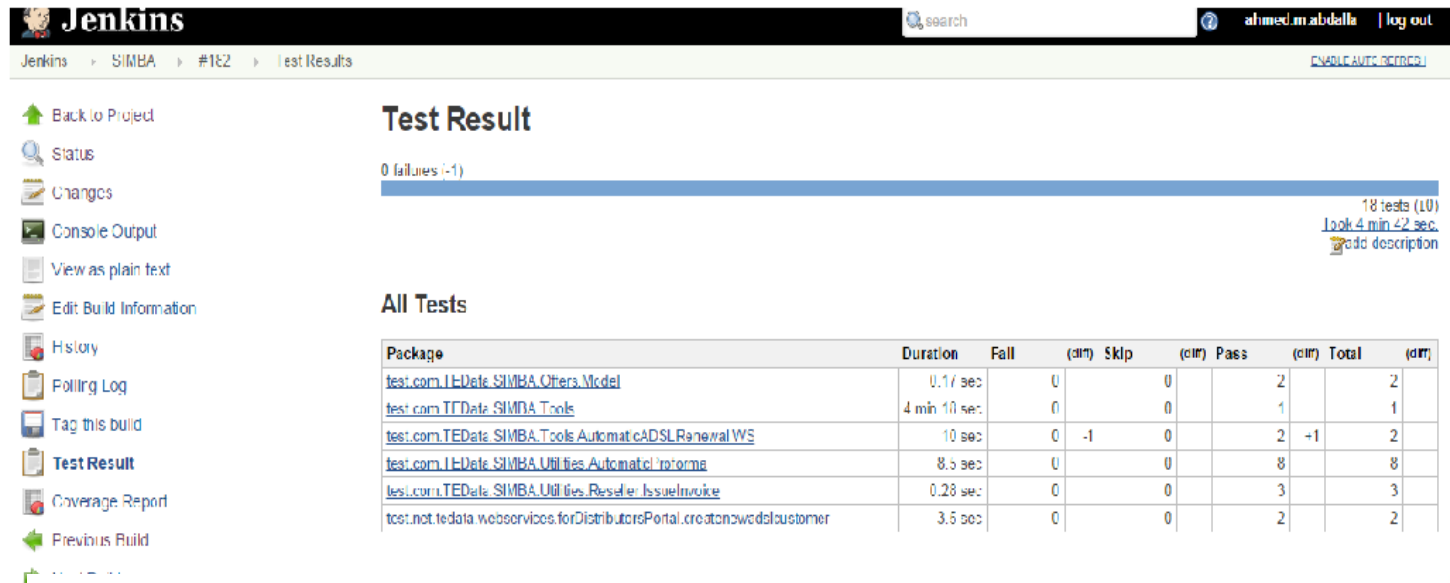
Total	High Priority	Normal Priority	Low Priority
22	0	0	22

Details

Modules	Package	Files	Categories	Types	Warnings	Details
---------	---------	-------	------------	--------------	----------	---------

Type	Total	Distribution
CN_IMPLEMENTS_CLONE_BUT_NOT_CLONEABLE	1	<div></div>
DLS_DEAD_LOCAL_STORE	1	<div></div>
EI_EXPOSE_REP	4	<div></div>
EI_EXPOSE_REP2	7	<div></div>
EQ_CHECK_FOR_OPERAND_NOT_COMPATIBLE_WITH_THIS	3	<div></div>
EQ_DOESNT_OVERRIDE_EQUALS	2	<div></div>
ICAST_IDIV_CAST_TO_DOUBLE	1	<div></div>
OBL_UNSATISFIED_OBLIGATION	1	<div></div>
RV_RETURN_VALUE_IGNORED_BAD_PRACTICE	1	<div></div>
WA_AWAIT_NOT_IN_LOOP	1	<div></div>
Total	22	

Test Report



A screenshot of the Jenkins web interface showing a test result for build #182. The left sidebar contains navigation links: Back to Project, Status, Changes, Console Output, View as plain text, Edit Build Information, History, Polling Log, Tag this build, Test Result (selected), Coverage Report, and Previous Build. The main content area is titled 'Test Result' and shows '0 failures (-1)'. It indicates 18 tests (10) took 4 min 42 sec. Below this is a table of 'All Tests' with columns: Package, Duration, Fail, (diff) Skip, (diff) Pass, (diff) Total, and (diff). The table lists several test packages, including test.com.TEData.SIMBA.Others.Model, test.com.TEData.SIMBA.Tools, test.com.TEData.SIMBA.Tools.AutomaticADSLRenewal.WS, test.com.TEData.SIMBA.Utilities.AutomaticInvoice, test.com.TEData.SIMBA.Utilities.Reseller.IssueInvoice, and test.not.tedata.webservices.forDistributorsPortal.createonwednesdaycustomer.

Package	Duration	Fail	(diff) Skip	(diff) Pass	(diff) Total	(diff)
test.com.TEData.SIMBA.Others.Model	0.17 sec	0	0	2	2	
test.com.TEData.SIMBA.Tools	4 min 10 sec	0	0	1	1	
test.com.TEData.SIMBA.Tools.AutomaticADSLRenewal.WS	10 sec	0	-1	2	+1	2
test.com.TEData.SIMBA.Utilities.AutomaticInvoice	8.5 sec	0	0	8	8	
test.com.TEData.SIMBA.Utilities.Reseller.IssueInvoice	0.28 sec	0	0	3	3	
test.not.tedata.webservices.forDistributorsPortal.createonwednesdaycustomer	3.5 sec	0	0	2	2	





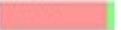



A screenshot of the Jenkins web interface showing a test result for build #189. The left sidebar contains navigation links: Back to Project, Status, Changes, Console Output, View as plain text, Edit Build Information, History, Tag this build, Test Result (selected), Coverage Report, and Previous Build. The main content area is titled 'Test Result : test.com.TEData.SIMBA.Tools.AutomaticADSLRenewal.WS' and shows '0 failures (±0)'. It indicates 2 tests (±0) took 17 sec. Below this is a table of 'All Tests' with columns: Class, Duration, Fail, (diff) Skip, (diff) Pass, (diff) Total, and (diff). The table lists one test class: TestAutomaticADSLRenewal.

Class	Duration	Fail	(diff) Skip	(diff) Pass	(diff) Total	(diff)
TestAutomaticADSLRenewal	17 sec	0	0	2	2	











































Test Code Coverage



Overall Coverage Summary

name	instruction	branch	complexity	line	method	class
all classes	M: 742021 C: 57881 7% 	M: 50816 C: 2550 4% 	M: 45348 C: 2021 5% 	M: 131242 C: 12042 6% 	M: 15853 C: 2170 12% 	M: 1151 C: 187 14% 

Coverage Breakdown by Package

name	instruction	branch	complexity	line	method	class
ChangeSpeedWS	M: 503 C: 0 0% 	M: 40 C: 0 0% 	M: 40 C: 0 0% 	M: 120 C: 0 0% 	M: 17 C: 0 0% 	M: 2 C: 0 0% 
MiddlewareFamily_pkg	M: 1408 C: 0 0% 	M: 146 C: 0 0% 	M: 132 C: 0 0% 	M: 305 C: 0 0% 	M: 59 C: 0 0% 	M: 7 C: 0 0% 
PrepaidWS_pkg	M: 1248 C: 0 0% 	M: 98 C: 0 0% 	M: 72 C: 0 0% 	M: 240 C: 0 0% 	M: 23 C: 0 0% 	M: 3 C: 0 0% 
broadcast_pkg	M: 4709 C: 3448 42% 	M: 740 C: 93 11% 	M: 601 C: 27 4% 	M: 691 C: 610 38% 	M: 181 C: 28 13% 	M: 1 C: 11 92% 
capped_pkg	M: 6758 C: 0 0% 	M: 400 C: 0 0% 	M: 368 C: 0 0% 	M: 1100 C: 0 0% 	M: 123 C: 0 0% 	M: 8 C: 0 0% 
com.TEData.Cards.Actions.DAO	M: 12 C: 0 0% 	M: 0 C: 0 0% 	M: 1 C: 0 0% 	M: 6 C: 0 0% 	M: 1 C: 0 0% 	M: 1 C: 0 0% 
com.TEData.Cards.Cards.DAO	M: 488 C: 0 ... 	M: 30 C: 0 ... 	M: 26 C: 0 ... 	M: 102 C: 0 ... 	M: 11 C: 0 ... 	M: 2 C: 0 ... 



Artifact uploaders

- Tomcat
- JBoss
- Glassfish
- WebSphere
- FTP
- SSH



UI Enhancement

- Dashboard
- Sectioned view
- iPhone/Android



Security Management



- Security Realm
 - LDAP
 - Jenkins's own user database
 - Delegate to servlet container
- Authorization
 - Anyone can do anything
 - Logged-in users can do anything
 - Matrix-based security
 - Project-based Matrix Authorization Strategy
 - Legacy mode



Security Management



- Matrix-based security

Jenkins > Configure Global Security

Authorization

- ☐ Anyone can do anything
- ☐ Legacy mode
- ☐ Logged-in users can do anything
- ☐ Matrix-based security
- ☒ Project-based Matrix Authorization Strategy

User/group	Administer	Read	Run	Scripts	Upload	Plugins	Configure	Update	Center	Create	Update	View	Delete	Manage	Domains	Configure	Delete	Slave	Create	Disconnect	Connect	Build	Create	Delete
BSSResources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IT BSS	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ahmed.m.abdalla	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
elhusssein.hashem	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ghada.selim	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
hazem.atia	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
karim.a.mostafa	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
mohamed.salaheldin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Anonymous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

User/group to add:

- Project-based Matrix Authorization

Discard Old Builds

☒ Enable project-based security

User/group	Delete	Configure	Read	Discover	Build	Workspace	Cancel	Run	Delete	Update	SCM	Tag
ahmed.m.abdalla	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
mohamed.abozaed	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
mohamed.ahassan	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
mohamed.hanfy	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
mostafa.salem	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
sara.elkady	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anonymous	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

User/group to add:

Build History (trend)

- #54 Aug 31, 2014 11:13:04 AM 3 MB
- #53 Aug 27, 2014 3:43:09 PM 3 MB



Security Management Plugins

- Active directory, OpenID, MySQL, ...
- Role based privilege control

Global roles

Role	Overall	Slave			Job						Run			View			SCM	
	Administer	Read	Configure	Delete	Create	Delete	Configure	Read	Build	Workspace	Delete	Update	Artifacts	Create	Delete	Configure	Tag	
admin	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
anonymous	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
job-creator	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Role to add

Add

Project roles

Role	Pattern	Job					Run			
		Delete	Configure	Read	Build	Workspace	Delete	Update	Artifacts	
		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sample	Sample.*	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Plugin Usage Statistics



	A	H	I	J	K	L	M	N	O	P	Q	R	S	T	U
1	plugin	2009-06	2009-07	2009-08	2009-09	2009-10	2009-11	2009-12	2010-01	2010-02	2010-03	2010-04	2010-05	2010-06	2010-07
2	TOTAL INSTALLS	11026	11918	12092	12972	13379	15222	15812	16578	17936	20037	20670	21210	22182	23159
3	ssh-slaves	7715	9306	9985	11081	11759	13668	14415	15302	16712	18832	19515	20059	21054	22040
4	maven- plugin	8568	9983	10483	11459	12076	13941	14617	15424	16762	18823	19462	19981	20937	21917
5	subversion	1791	6391	8035	9505	10614	12653	13563	14551	16071	18289	19035	19711	20771	21792
6	cvs	0	0	0	1	0	0	8	4625	9192	12384	13816	15173	16568	18001
7	scis-ad	0	0	2818	6634	8572	10848	11957	13133	14831	17164	18022	16502	14433	13328
8	analysis-ci	0	0	0	1	1	2	1261	2449	3551	4454	4958	5446	5863	6338
9	email-ext	2349	2572	2694	2880	2956	3372	3492	3725	3965	4332	4473	4615	4906	5187
10	greenballs	1183	1417	1508	1700	1853	2198	2460	2698	2978	3376	3536	3708	3949	4248
11	findbugs	2781	2937	2973	3154	3107	3315	3302	3277	3554	3825	3843	3949	4040	4186
12	checkstyle	2354	2534	2588	2781	2728	2996	2914	2951	3228	3484	3595	3654	3754	3908
13	cobertura	2051	2185	2265	2431	2455	2713	2821	2911	3176	3495	3581	3658	3763	3906
14	warnings	2078	2225	2290	2338	2450	2676	2663	2651	2829	3061	3201	3249	3400	3498
15	pmd	2033	2189	2233	2422	2393	2572	2546	2578	2800	3098	3071	3160	3238	3402
16	disk-usage	1666	1803	1886	2026	2080	2369	2489	2535	2663	2928	2979	2980	3068	3169
17	sonar	1024	1137	1178	1332	1454	1730	1798	1869	2019	2368	2549	2641	2875	2944
18	tasks	1868	2004	1998	2055	2085	2329	2305	2306	2387	2600	2692	2662	2780	2833
19	violations	1366	1471	1531	1624	1720	1881	1947	2009	2200	2397	2407	2461	2523	2625
20	deploy	1221	1259	1292	1380	1478	1669	1727	1776	1862	2139	2213	2188	2374	2494
21	jira	1179	1255	1278	1387	1456	1628	1717	1775	1899	2153	2207	2245	2381	2489
22	chucknorri	1	1	1	168	688	985	1203	1419	1678	1972	2137	2262	2344	2476
23	svn-tag	1175	1312	1328	1382	1423	1643	1685	1716	1810	2034	2040	2084	2206	2338
24	git	558	609	661	693	798	938	1046	1159	1325	1613	1778	1853	1951	2265
25	active- directory	1123	1219	1237	1314	1365	1491	1571	1651	1790	1917	1989	2047	2095	2223

Ref: <http://jenkins-ci.org/content/updated-usage-stats-available>



Demo



Questions & Answers

