ZAP JENKINS PLUGIN

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ZAP Jenkins Plugin Project Lead

WHAT IS ZAP?

- An easy to use webapp pentest tool
- Completely free and open source
- An OWASP flagship project
- Ideal for beginners
- But also used by professionals
- Ideal for devs, esp. for automated security tests
- Becoming a framework for advanced testing

See here for more information.

REQUIREMENTS

		
Firefox	**ZAP**	**Jenkins**

Install	→	Setup	→	Run

ZAP JENKINS PLUGIN – FEATURES

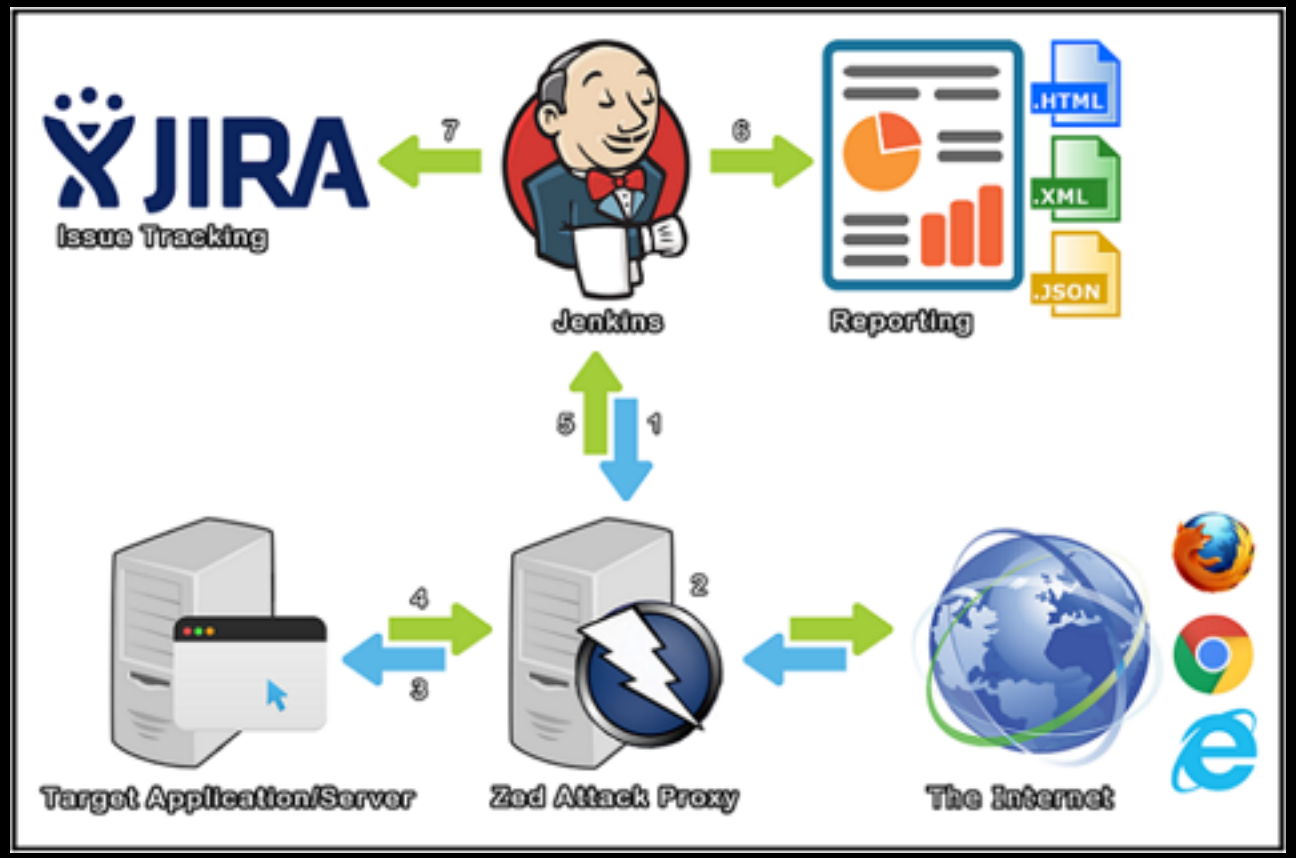
- Manage Sessions (Load or Persist)
- Define Context (Name, Include URLs and Exclude URLs)
- Attack Contexts (Spider Scan, AJAX Spider, Active Scan)

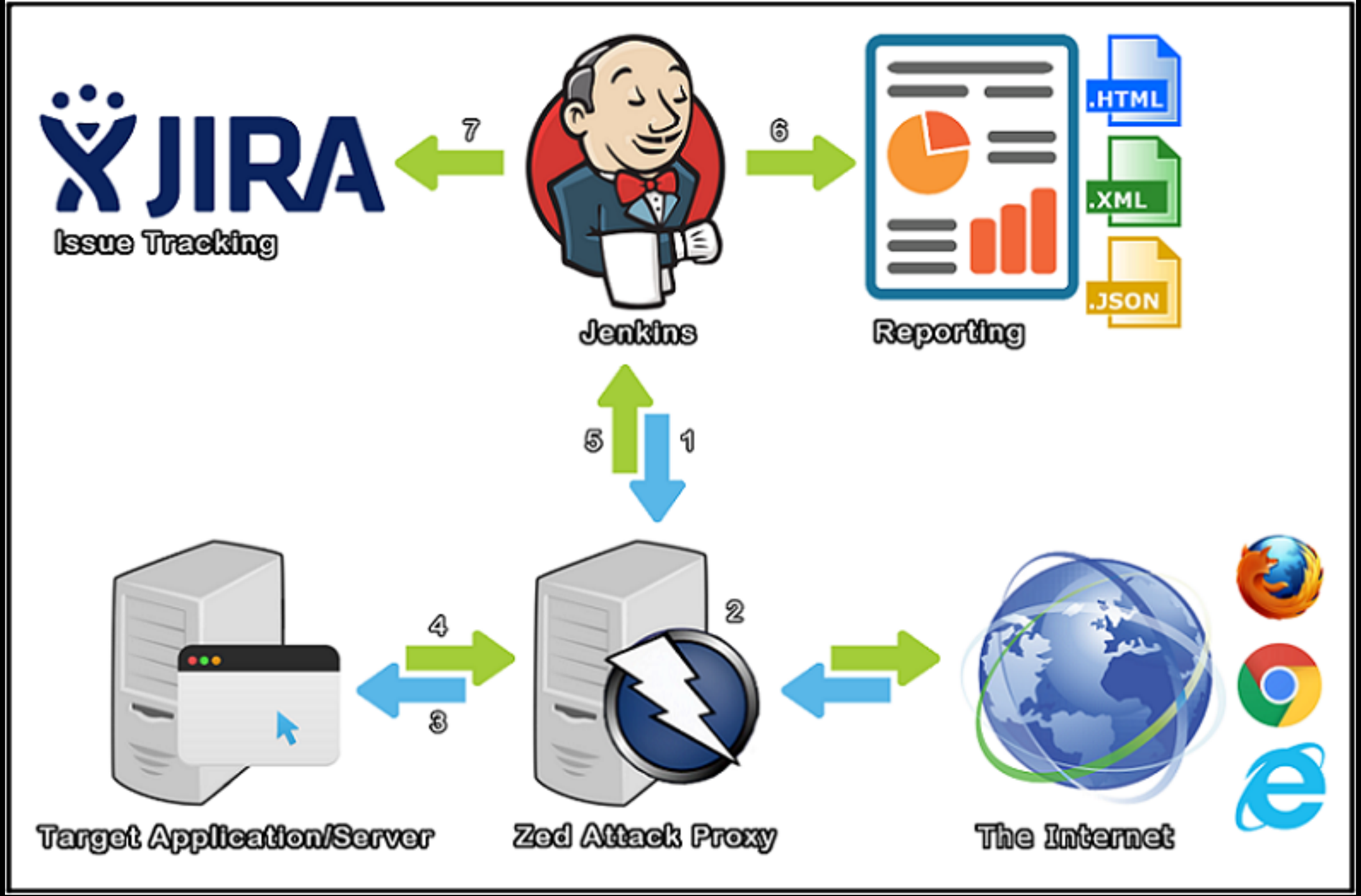
You can also:

- Setup Authentication (Form Based or Script Based)
- Run as Pre-Build as part of a Selenium Build
- Generate Reports (

)

ZAP IN A CI ENVIRONMENT




JIRA
Issue Tracking
7
Jenkins
6
Reporting
.HTML
.XML
.JSON
5
1
4
3
2
Target Application/Server
Zed Attack Proxy
The Internet

JENKINS

1. Download desired war release (Requires Jenkins 1.580.1+ to run)
2. Create a Jenkins folder and extract the WAR file into it.
3. Create a JENKINS_HOME environment variable.
4. Start Jenkins from the cmd line with

   %JAVA_HOME%\bin\java.exe -jar %JENKINS_HOME%\jenkins.war
5. Install the following plugins:
   - EnvInject Plugin
   - Summary Display Plugin
   - HTML Publisher Plugin
   - zap plugin
6. Set Jenkins to run on 127.0.0.1:8080

ZAP

1. Download release (Requires ZAP Weekly 2016-09-05 or later)
2. Create a ZAP folder and extract the files into it.
3. Create a ZAPROXY_HOME environment variable.
4. Modify zap.bat
   - java %jvmopts% -jar zap-D-2016-09-05.jar %*

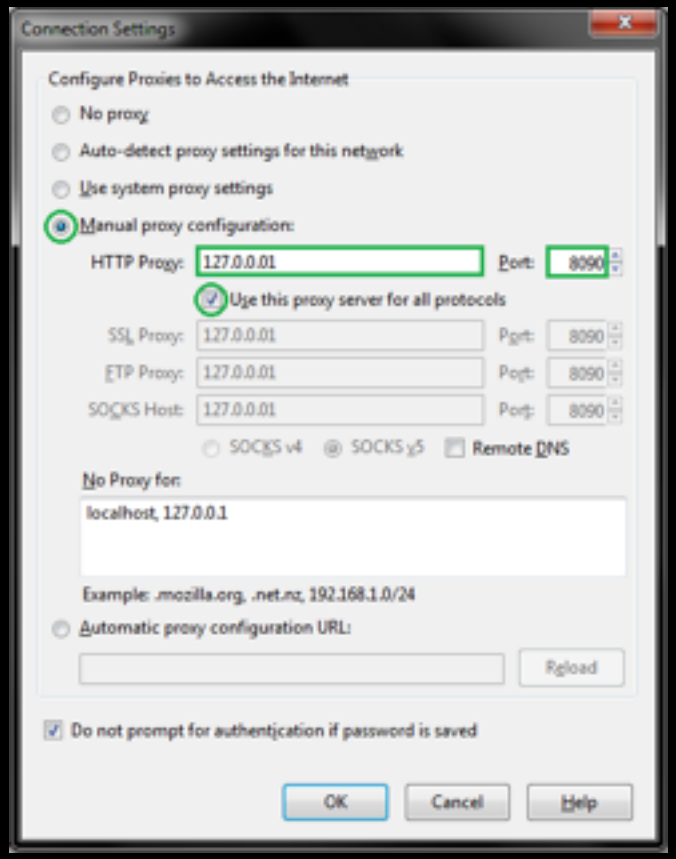
   To
   - java %jvmopts% -jar %ZAPROXY_HOME%\zap-D-2016-09-05.jar %*
5. Start ZAP from the cmd line with

   %ZAPROXY_HOME%\zap.bat -installdir %ZAPROXY_HOME%

FIREFOX

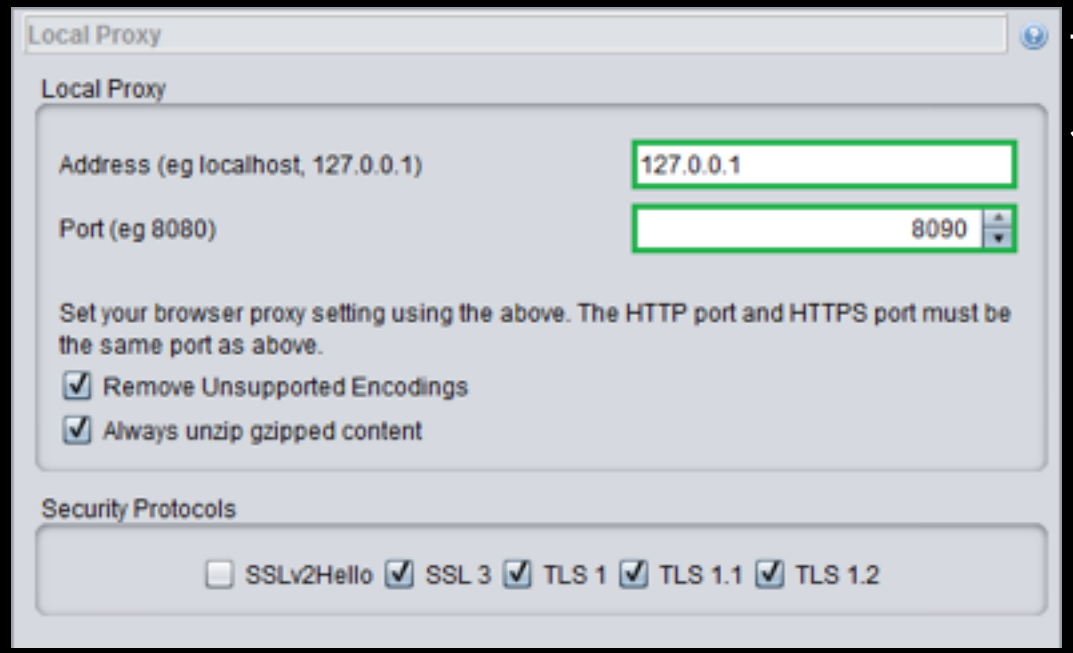
1. Download a selenium supported version of Firefox
   - ZAP supports one of the following versions of Firefox.
   - Download and install a supported release.

FIREFOX – LOCAL PROXY SETTINGS



The host and port set here should be the SAME set in ZAP and in the ZAP Jenkins plugin.

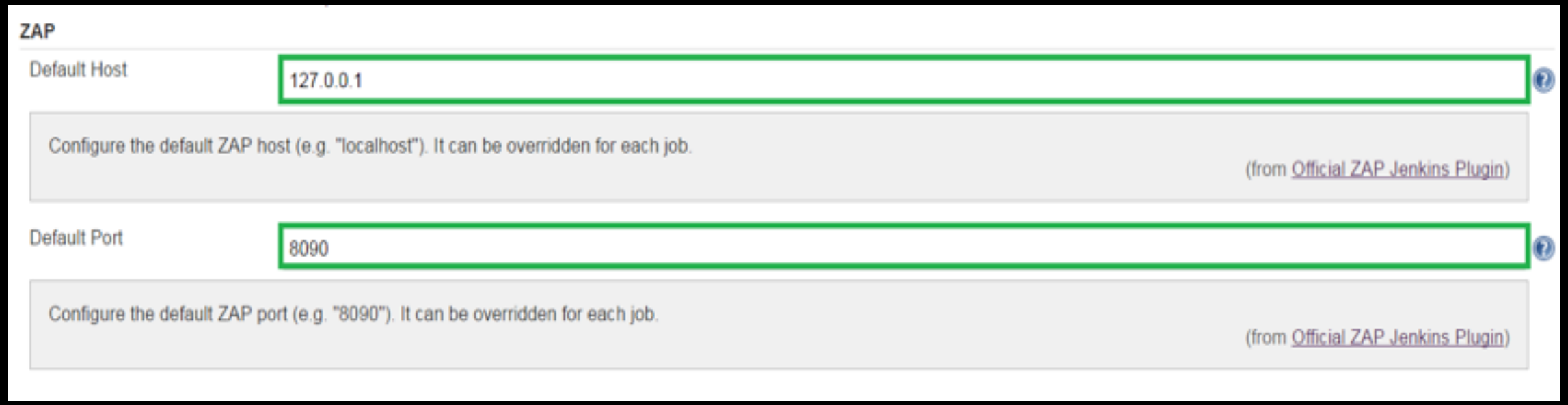
ZAP – LOCAL PROXY SETTINGS



The host and port set here should be the SAME set in Firefox and in the ZAP Jenkins plugin.

ZAP → Tools → Options → Local Proxy

JENKINS – LOCAL PROXY SETTINGS



Jenkins → Manage Jenkins → Configure System → ZAP

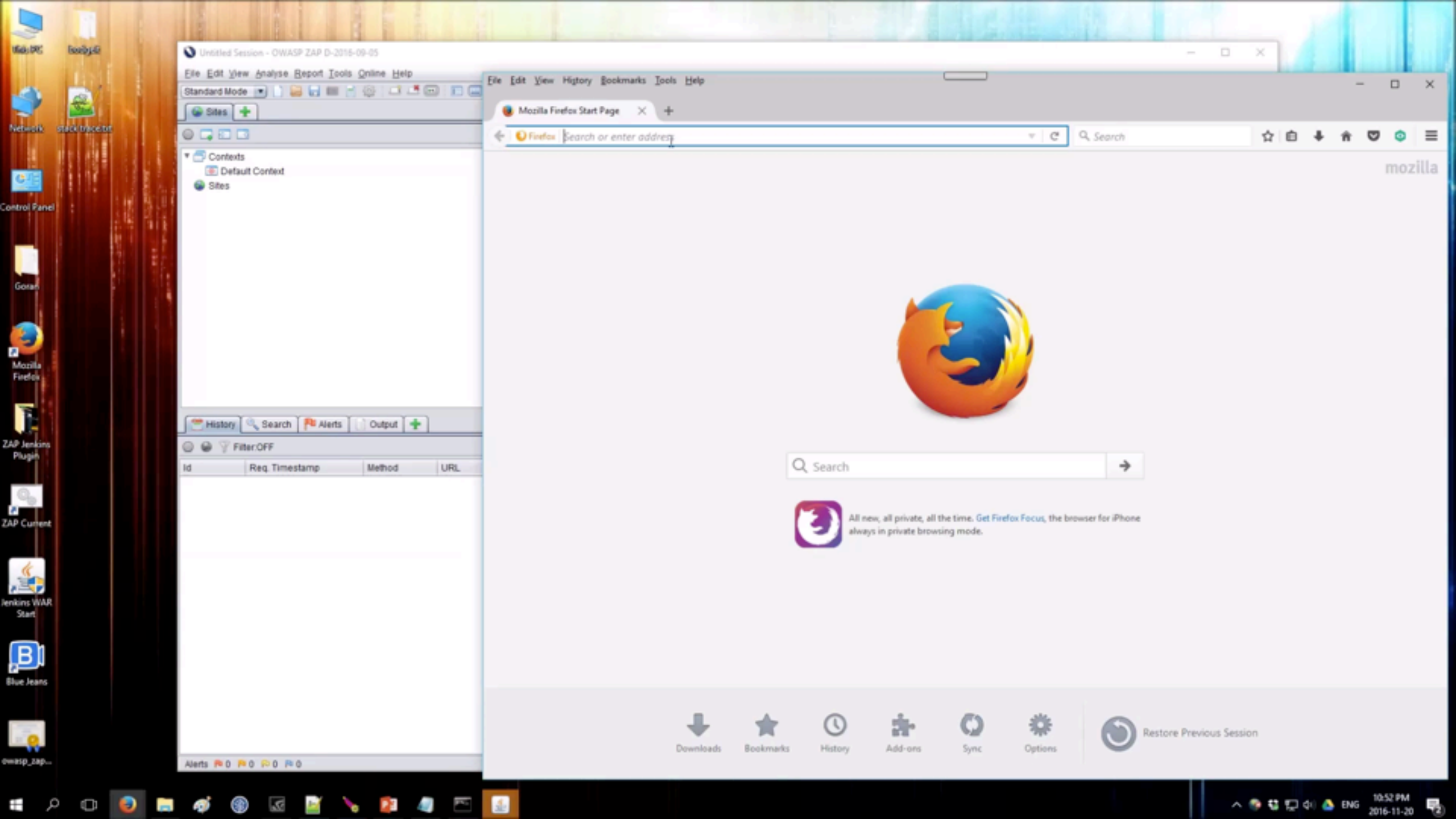
The host and port set here should be the SAME set in ZAP and in Firefox.

ZAP – MAP YOUR SITE

- Map your site and Configure the Job to Execute ZAP

Or

- Write a Selenium Script and Configure the Job to Execute ZAP as part of a Selenium Build

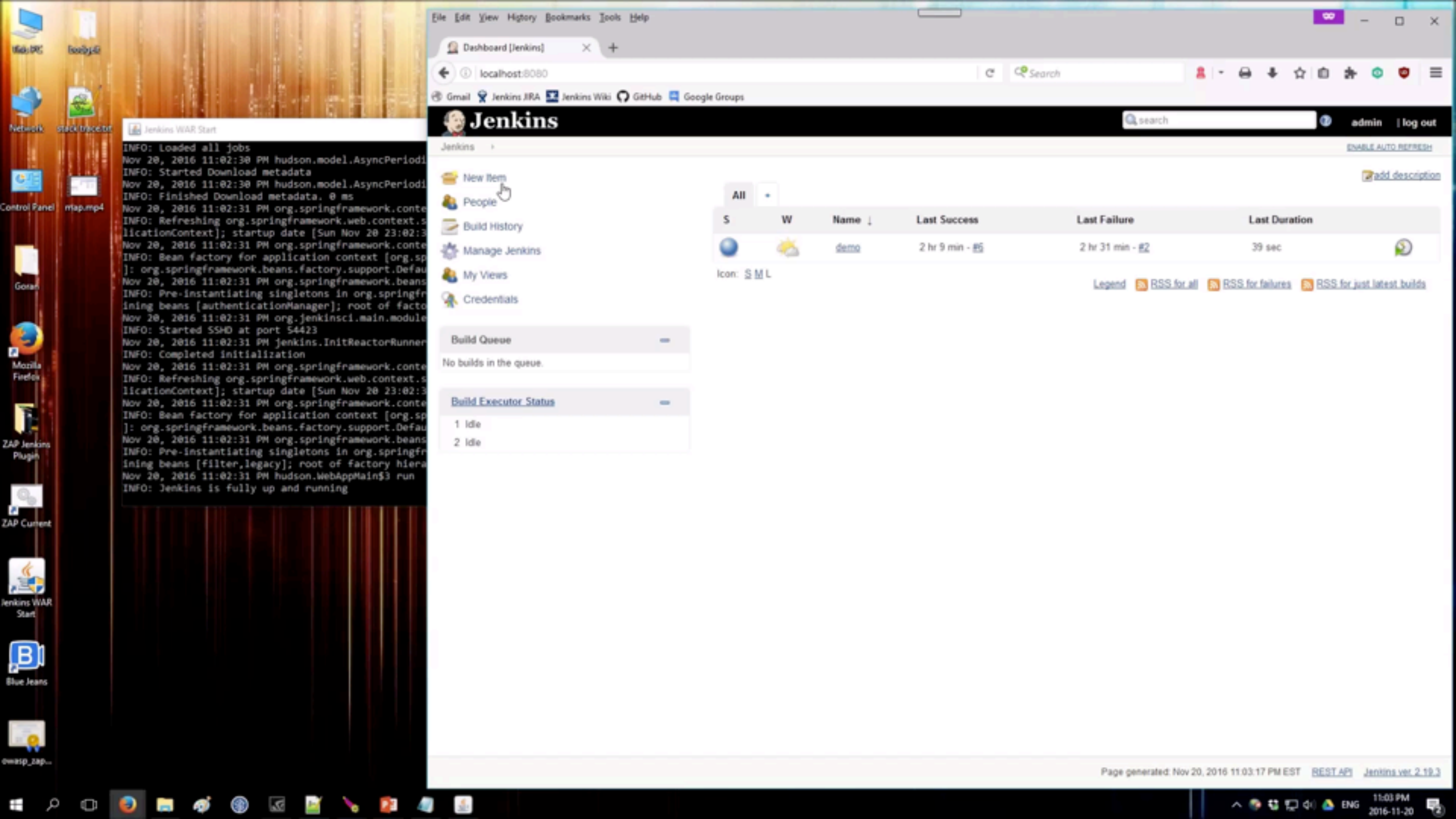

Untitled Session - OWASP ZAP D-2016-09-05
File Edit View Analyse Report Tools Online Help
Standard Mode
Sites
Contexts
Default Context
Sites
History Search Alerts Output
Filter:OFF
Id Req. Timestamp Method URL
Alerts 0 0 0 0
File Edit View History Bookmarks Tools Help
Mozilla Firefox Start Page
Search or enter address
Search
mozilla
Search
All new, all private, all the time. Get Firefox Focus, the browser for iPhone always in private browsing mode.
Downloads
Bookmarks
History
Add-ons
Sync
Options
Restore Previous Session
Network
Control Panel
Goran
Mozilla Firefox
ZAP Jenkins Plugin
ZAP Current
Jenkins WAR Start
Blue Jeans
owasp_zap...
ENG
10:52 PM
2016-11-20

JENKINS – NEW JOB

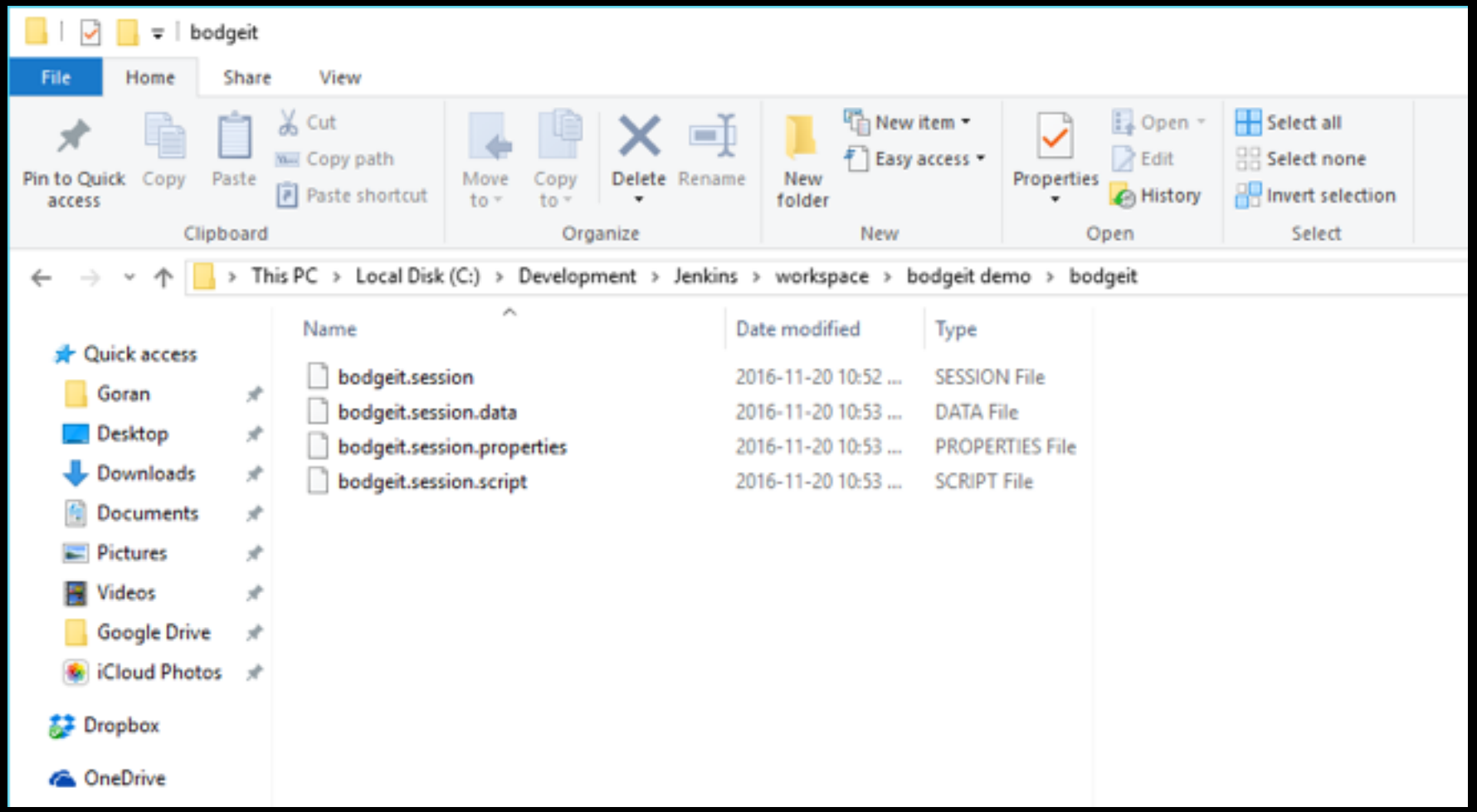
1. Create a new Freestyle project

2. Restrict the build to the desired machine
   - (Slave or Master, machine on which ZAP is installed and the build will be run)

3. Run the Build to create the workspace


Jenkins WAR Start
INFO: Loaded all jobs
Nov 20, 2016 11:02:30 PM hudson.model.AsyncPeriodi
INFO: Started Download metadata
Nov 20, 2016 11:02:30 PM hudson.model.AsyncPeriodi
INFO: Finished Download metadata. 0 ms
Nov 20, 2016 11:02:31 PM org.springframework.conte
INFO: Refreshing org.springframework.web.context.s
licationContext]; startup date [Sun Nov 20 23:02:3
Nov 20, 2016 11:02:31 PM org.springframework.conte
INFO: Bean factory for application context [org.sp
]: org.springframework.beans.factory.support.Defau
Nov 20, 2016 11:02:31 PM org.springframework.beans
INFO: Pre-instantiating singletons in org.springfr
ining beans [authenticationManager]; root of facto
Nov 20, 2016 11:02:31 PM org.jenkinsci.main.module
INFO: Started SSHD at port 54423
Nov 20, 2016 11:02:31 PM jenkins.InitReactorRunner
INFO: Completed initialization
Nov 20, 2016 11:02:31 PM org.springframework.conte
INFO: Refreshing org.springframework.web.context.s
licationContext]; startup date [Sun Nov 20 23:02:3
Nov 20, 2016 11:02:31 PM org.springframework.conte
INFO: Bean factory for application context [org.sp
]: org.springframework.beans.factory.support.Defau
Nov 20, 2016 11:02:31 PM org.springframework.beans
INFO: Pre-instantiating singletons in org.springfr
ining beans [filter,legacy]; root of factory hiera
Nov 20, 2016 11:02:31 PM hudson.WebAppMain$3 run
INFO: Jenkins is fully up and running
File Edit View History Bookmarks Tools Help
Dashboard [Jenkins]
localhost:8080
Search
Gmail Jenkins JIRA Jenkins Wiki GitHub Google Groups
Jenkins
search
admin | log out
Jenkins
ENABLE AUTO REFRESH
New Item
People
Build History
Manage Jenkins
My Views
Credentials
add description
All
S W Name ↓ Last Success Last Failure Last Duration
demo 2 hr 9 min - #5 2 hr 31 min - #2 39 sec
Icon: S M L
Legend RSS for all RSS for failures RSS for just latest builds
Build Queue
No builds in the queue.
Build Executor Status
1 Idle
2 Idle
Page generated: Nov 20, 2016 11:03:17 PM EST REST API Jenkins ver. 2.19.3
Control Panel
Network
Goran
Mozilla Firefox
ZAP Jenkins Plugin
ZAP Current
Jenkins WAR Start
Blue Jeans
owasp_zap...
ENG
11:03 PM
2016-11-20

JENKINS – SESSION VISIBILITY



- Copy the previously persisted session from the ZAP UI into the Job's workspace.

JENKINS – JOB CONFIG

1. Add an **Execute ZAP** build step
2. Add an **Archive the Artifacts** post-build action
3. Add a **Publish HTML Reports** post-build action

bodgeit demo [Jenkins] | Dashboard [Jenkins]

localhost:8080/job/bodgeit demo/

Gmail | Jenkins JIRA | Jenkins Wiki | GitHub | Google Groups

Jenkins

search | admin | log out

Jenkins › bodgeit demo ›

ENABLE AUTO REFRESH

- Back to Dashboard
- Status
- Changes
- Workspace
- Build Now
- Delete Project
- Configure
- Move

Build History trend

find

#1 Nov 20, 2016 11:03 PM

RSS for all RSS for failures

Project bodgeit demo

add description

Disable Project

Workspace

Recent Changes

Permalinks

Page generated: Nov 20, 2016 11:03:53 PM EST REST API Jenkins ver. 2.19.3

ENG 11:13 PM 2016-11-20

ONE TO ONE ALERTS

Site: http://127.0.0.1

Summary of Alerts

Risk Level	Number of Alerts
High	2
Medium	6
Low	5
Informational	1

Alert Details

High	Anti CSRF Tokens Scanner	Top
Description	A cross-site request forgery is an attack that involves forcing a victim to send an HTTP request to a target destination without their knowledge or intent in order to perform an action as the victim. The underlying cause is application functionality using predictable URL/form actions in a repeatable way. The nature of the attack is that CSRF exploits the trust that a web site has for a user. By contrast, cross-site scripting (XSS) exploits the trust that a user has for a web site. Like XSS, CSRF attacks are not necessarily cross-site, but they can be. Cross-site request forgery is also known as CSRF, XSRF, one-click attack, session riding, confused deputy, and sea surf. CSRF attacks are effective in a number of situations, including: * The victim has an active session on the target site. * The victim is authenticated via HTTP auth on the target site. * The victim is on the same local network as the target site. CSRF has primarily been used to perform an action against a target site using the victim's privileges, but recent techniques have been discovered to disclose information by gaining access to the response. The risk of information disclosure is dramatically increased when the target site is vulnerable to XSS, because

THANK YOU!

- Documentation: See the Wiki for more details.
- Questions: Ask on our Google Group.
- Issue Tracking: Report on the Jenkins JIRA for the project, please read the JIRA guidelines before reporting an issue.
- Your feedback will drive our future development and determine which features we focus on.