



CxProjectStatisticsReporter1 Tool Documentation

[RC1 (Release Candidate #1) REV 1 - September 10th, 2019]



Checkmarx Tool license

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Checkmarx Tool overview

The (SE-developed) Checkmarx Project Statistics Reporter (Python-based) tool is contained in the ZIP file 'CxProjectStatisticsReporter1_1.zip'.

The tool will run under Python v3.4+. You can download an appropriate Python v3.7+ (currently v3.7.4) from:

<http://www.python.org/downloads/>

The tool requires an additional Python package 'requests' that is used to handle communications with the Checkmarx Endpoint via the Checkmarx Rest API. Run the following command to install the package:

```
pip install requests
```

This should install the package and make it available to the tool.

This Checkmarx Project Statistics Reporter (Python-based) tool will read ALL Project(s) and their associated Scan(s) from the Checkmarx Endpoint. If available, the 'oldest' and the 'latest' Scan data will be analyzed and a 'delta' computed. The result of this is a single (generated) HTML file that shows a comparison of Project(s) and their current state with the ability to 'drill' into Scan details.

Note that the User (that is running the tool) SHOULD have full permissions to the Checkmarx Endpoint to report on ALL available Project(s). If the User has restricted permissions (at say a 'team' level), then ONLY the Project(s) that the User has access to will be displayed.

The licensing requirements of the tool are covered in '**Checkmarx Tool license**'...

Checkmarx Tool Diagnostics

For diagnostic purposes, if the tool doesn't perform as expected, rerun it with the '-v' parameter (added to whatever other parameters have been used before) and capture the output into a log file.

Example command:

```
<command-prompt> python CxProjectStatisticsReporter1.py  
--url http://<host-or-IP>:<port-#>  
--user <Cx-User-Id>  
--pswd <Cx-Password>  
-o CxProjectStatisticsReporter1_report.txt  
-f CxProjectStatisticsReporter1_report.html  
  > CxProjectStatisticsReporter1_debug.log 2>&1
```

Send the 'CxProjectStatisticsReporter1_debug.log' file to Checkmarx...

Checkmarx Tool Help

Use the following command line to invoke the tool and get command-line HELP:

<command-prompt> python CxProjectStatisticsReporter1.py --help

HELP output:

CxProjectStatisticsReporter1.py (v1.0515): The Checkmarx Project 'statistics' via Rest API #1 is starting execution from Server [DRCMBP3-4.local] on [2019/09/10 at 12:39:52] under Python [v3.7.3]...

Usage: CxProjectStatisticsReporter1.py [options]

Options:

-h, --help show this help message and exit
-v, --verbose Run VERBOSE
--url=Checkmarx-Server-URL
 Checkmarx Server URL - Protocol/Host/Port - sample:
 --url=http://hostname:8080
--user=Checkmarx-UserId
 Checkmarx Authentication UserId
--pswd=Checkmarx-Password
 Checkmarx Authentication Password
-o OUTPUT_REPORT_FILE, --output-report-file=OUTPUT_REPORT_FILE
 (Output) 'statistics' report file [generated]
-f OUTPUT_HTML_FILE, --output-html-file=OUTPUT_HTML_FILE
 (Output) 'statistics' Html (report) file [generated]

***** NOTES *****

1) The tool will only work with Checkmarx CxSAST v8.8+. It will NOT work on older versions.

2) The '--url=', '--user=', and '--pswd=' parameters MUST be supplied on every command invocation.

3) The User (that is running the tool) SHOULD have full permissions to the Checkmarx Endpoint to report on ALL available Project(s). If the User has restricted permissions (at say a 'team' level), then ONLY the Project(s) that the User has access to will be displayed.

Checkmarx Tool Sample Invocation

Use the following (basic) command line to invoke the tool (using CxSAST v8.8+) <make sure that the Checkmarx Server processes are running and accessible>:

```
<command-prompt> python CxProjectStatisticsReporter1.py
--url http://<host-or-IP>:<port-#>
--user <Cx-User-Id>
--pswd <Cx-Password>
-o CxProjectStatisticsReporter1_report.txt
-f CxProjectStatisticsReporter1_report.html
> CxProjectStatisticsReporter1_debug.log 2>&1
```

--- Sample (Log) Output ---

CxProjectStatisticsReporter1.py (v1.0515): The Checkmarx Project 'statistics' via Rest API #1 is starting execution from Server [DRCMBP3-4.local] on [2019/08/08 at 21:55:09] under Python [v3.7.3]...

CxProjectStatisticsReporter1.py (v1.0515): Command VERBOSE flag is [True]...

CxProjectStatisticsReporter1.py (v1.0515): Command Checkmarx Server URL is [http://192.168.2.190:8080]...

CxProjectStatisticsReporter1.py (v1.0515): Command Checkmarx Authentication UserId is [dcox]...

CxProjectStatisticsReporter1.py (v1.0515): Command Checkmarx Authentication Password is [C0rky9#2016]...

CxProjectStatisticsReporter1.py (v1.0515): Command (Output) 'statistics' report file is [CxProjectStatisticsReporter1_report.txt]...

CxProjectStatisticsReporter1.py (v1.0515): Command (Output) 'statistics' Html (report) file is [CxProjectStatisticsReporter1_report.html]...

CxProjectStatisticsReporter1.py (v1.0515): Generating the Checkmarx (Output) 'statistics' report into the file [CxProjectStatisticsReporter1_report.txt]...

CxProjectStatisticsReporter1.py (v1.0515): Generating the Checkmarx (Output) 'statistics' Html (report) into the file [CxProjectStatisticsReporter1_report.html]...

CxProjectStatisticsReporter1.py (v1.0515): ...

Checkmarx Tool Sample Invocation (continued)

--- Sample (Html) Screen-shot ---

Project	Project Name	Id	Public?	CxLang	Risk Sev	Risk Trend	Team Id	Total Number of Scans	
#(1)	hsqldb_v2.0	2	True	4	100	-33073	\CxServer	3	Details
#(2)	PHP-Mailer	170017	True	6	40	10	\CxServer	200	Details
#(3)	TeamCity1_Build_1	360059	True	4	64	0	\CxServer	1	Details
#(4)	Bookstore_by_Jenkins	360062	True	4	3	-353	\CxServer	4	Details
#(5)	TFS-2018-TFSSampleProject1-CI	390071	True	5	64	0	\CxServer\SP\Company\Users	5	Details
#(6)	JenkinsPipelineCxP_SQLInjectionSample_3	390078	True	3	41	4	\CxServer	12	Details
#(7)	WebGoat-8.0.0.M21	390085	True	5	56	0	\CxServer\SP\Company\Users	1	Details
#(8)	WebGoat-8.0.0.M21_OWASP-Only	390086	True	5	56	0	\CxServer\SP\Company\Users	1	Details
#(9)	PHP-Mailer-Postman-Branch-1	390087	True	5	40	12	\CxServer	2	Details
#(10)	PHP-Mailer-Postman-Branch-2	390088	True	5	40	0	\CxServer	1	Details
#(11)	WebGoat-8.0.0.M21-Postman-Branch-1	390090	True	5	56	0	\CxServer\SP\Company\Users	1	Details
#(12)	HuntMVRPortal	390092	True	8	29	0	\CxServer\SP\Company\Users	1	Details
#(13)	CheckmarxCxCodePlugin1	390093	True	5	19	28	\CxServer	32	Details
#(14)	TestCLI3	390094	True	5	40	0	\CxServer\SP\Company\Users	2	Details
#(15)	JVLOSAPoC	390095	True	0	0	0	\CxServer\SP\Company\Users	0	
#(16)	NodegoatOSAPoC	390096	True	0	0	0	\CxServer\SP\Company\Users	0	
#(17)	WebGoat.NET	390097	True	6	100	0	\CxServer\SP\Company\Users	1	Details
#(18)	nopCommerce	390098	True	0	0	0	\CxServer\SP\Company\Users	0	
#(19)	NodegoatOSAPoC_2	390099	True	0	0	0	\CxServer\SP\Company\Users	0	
#(20)	JVL_Jenkins_Pipeline_Job1	390100	True	0	0	0	\CxServer\SP\Company\Users	0	
#(21)	JVL_Jenkins_Freestyle_Job1	390101	True	0	0	0	\CxServer\SP\Company\Users	0	
#(22)	NPM_Jenkins_Pipeline_Job1	390102	True	0	0	0	\CxServer\SP\Company\Users	0	
#(23)	nopCommerce_Jenkins_Pipeline_Job1	390103	True	0	0	0	\CxServer\SP\Company\Users	0	
#(24)	TestCLI	390208	True	5	19	72	\CxServer\SP\Company\Users	2	Details