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Functioneel testen met JMeter

Ervaringen van 3 functioneel testers

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- **Toolkeuze**

- Randvoorwaarden
- Voor- en nadelen
- Marktonderzoek

- **JMeter toegepast**

- Wat is JMeter
- Integratiemogelijkheden

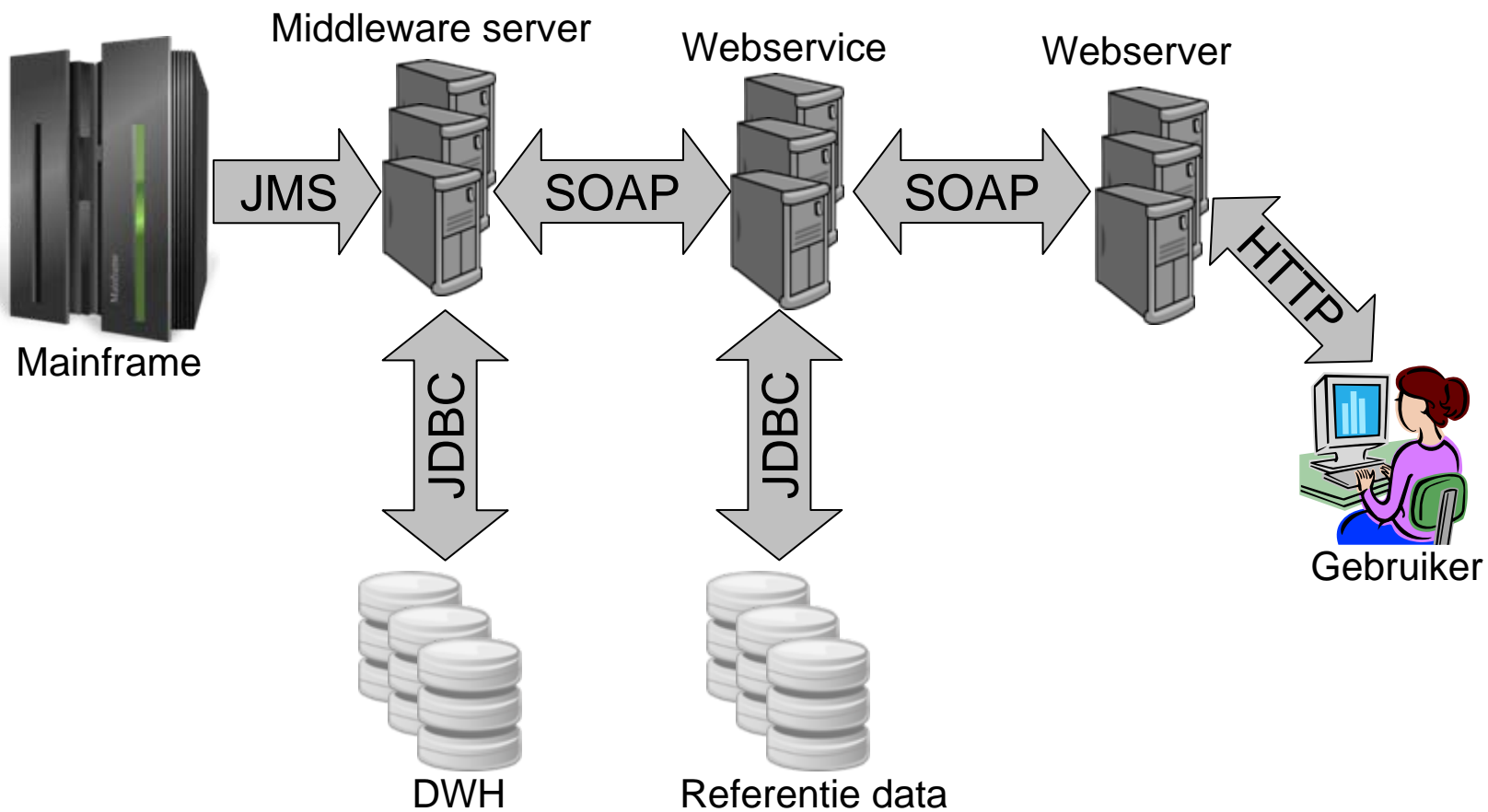
- **JMeter in de praktijk**

- Demonstratie
- Lessons Learned

- **Vragen**



Randvoorwaarden





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Voordelen open source





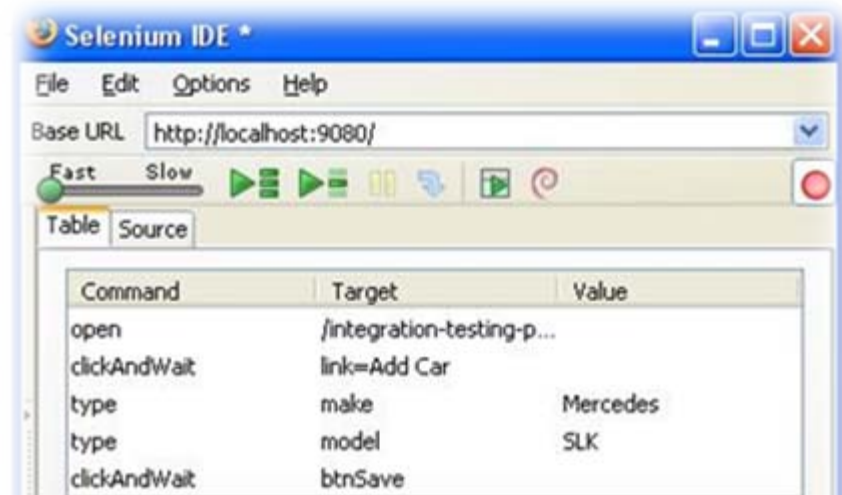
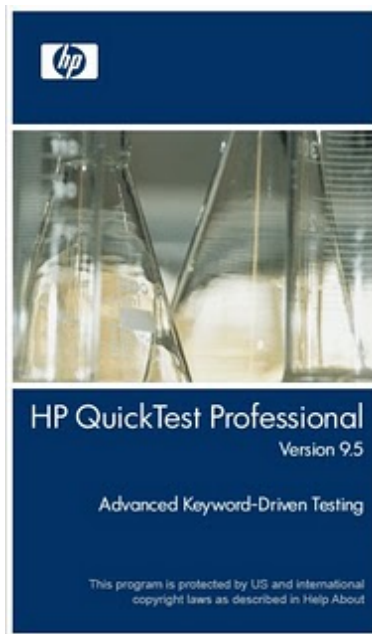
Nadelen open source





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Marktonderzoek



iTKO  LISA™

eviware
soapUI pro

Conclusie marktonderzoek

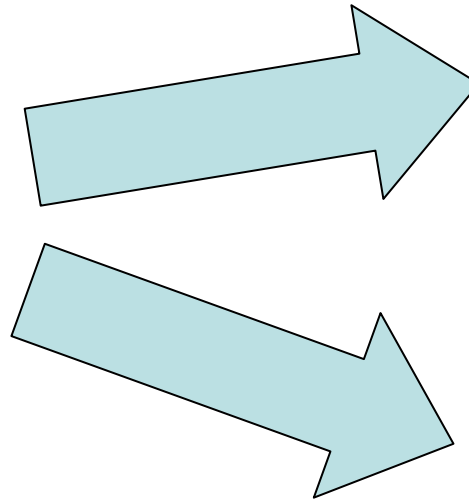


- ✓ Open source
- ✓ Stand alone
- ✓ http en https
- ✓ SOAP bericht
- ✓ JMS (Java Message Service)
- ✓ JDBC (Java DataBase Connectie)
- ✗ Gebruikersvriendelijk (GUI/wizard)
- ✗ Extra functionaliteiten eenvoudig toevoegen

Wat is JMeter



<http://jakarta.apache.org/jmeter/>
(Tutorial, Documentatie, Community)



Wat is JMeter

The screenshot displays the Apache JMeter graphical user interface. The menu bar at the top includes File, Edit, Run, Options, and Help. The main window is titled "Demo Webservice Testen Jmeter" and shows a test plan structure in the left sidebar. The test plan includes a Testcase with the following elements: JDBC Connection Configuration, HTTP Authorization Manager, HTTP Cookie Manager, User Defined Variables, HTTP Request, Response Assertion, View Results Tree, Select Max post_id, Get Max Post ID, View Results Tree, JDBC INSERT, View Results Tree, JDBC SELECT, Response Assertion, View Results Tree, and View Results Tree. The "View Results Tree" panel is active, showing a tree view of the test results. The tree shows the following structure: HTTP Request, Select Max post_id, JDBC INSERT, and JDBC SELECT. Under JDBC SELECT, there is a Response Assertion. The "Write results to file / Read from file" section is visible, with a "Filename" field, a "Browse..." button, and checkboxes for "Log/Display Only: Errors" and "Successes". A "Configure" button is also present. The "Sampler result" panel is empty.



Integratiemogelijkheden



HP Quality Center

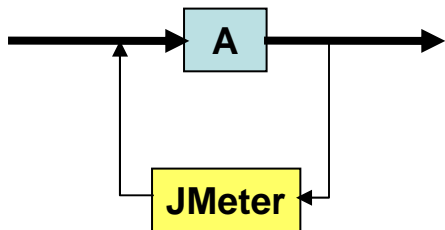


webMethods.
Optimize



HP Quality Center

Integratiemogelijkheden

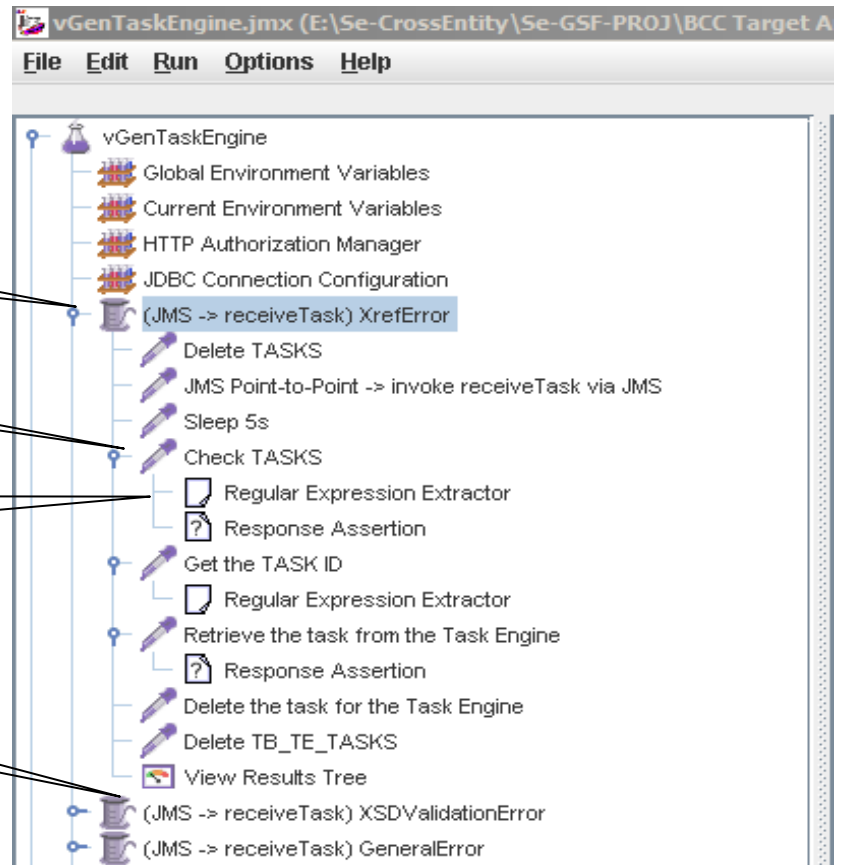


Testgeval

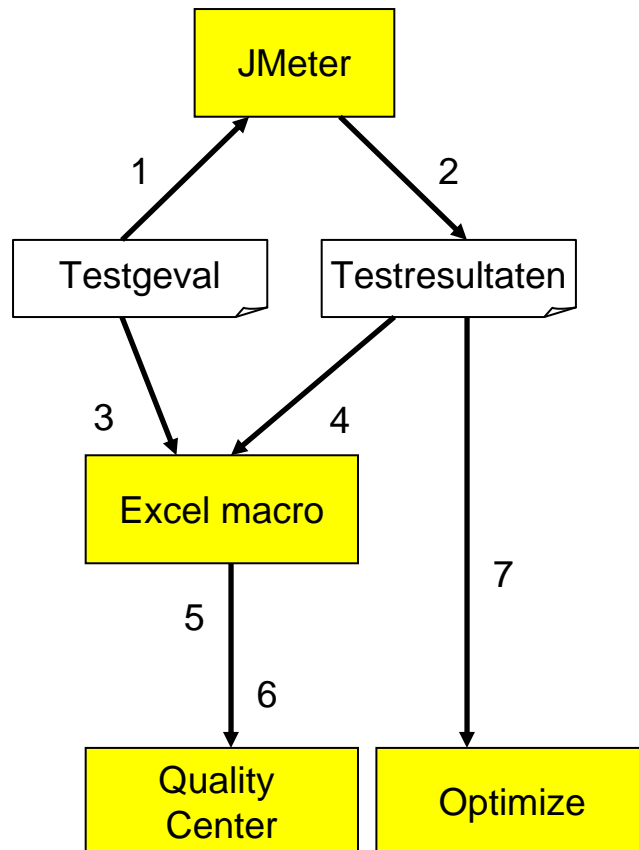
Teststap

Actie teststappen

Testresultaten

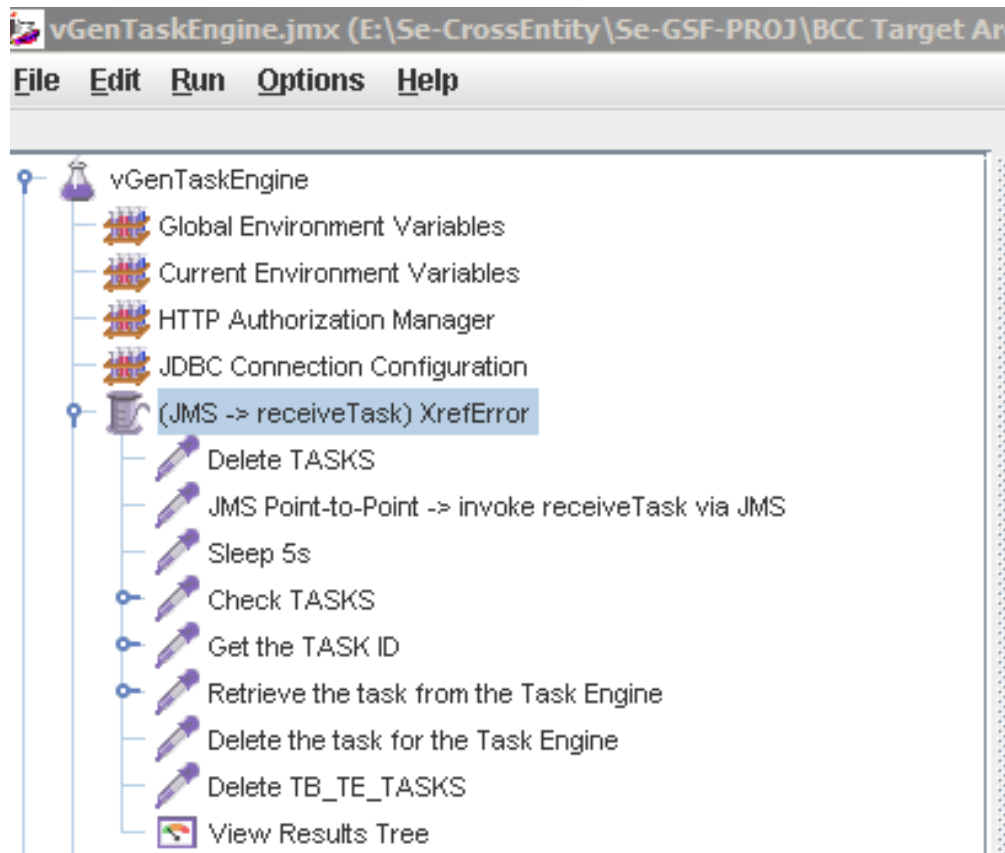


Integratiemogelijkheden



1. JMeter leest tesgeval
2. JMeter schrijft resultaten weg
3. Macro leest tesgeval
4. Macro leest resultaten
5. Inloggen op Quality Centre
6. Macro schrijft data naar QC modules
7. Resultaat bestand gekopieerd naar Optimize

Jmeter Test Script



QC Test Plan

The screenshot displays the Mercury Quality Center interface. On the left, a navigation sidebar includes icons for Requirements, Test Plan, Test Lab, Defects, and Dashboard. The main area shows a hierarchical tree of test plan elements under the 'Subject' folder, including 'Unattached', 'Archive', 'IRaP', 'Distribution Agreement', 'Distribution Agreement Task', 'Distribution Agreement Task Log', 'Integration Layer', and 'Task Engine'. The 'Task Engine' folder is expanded, listing various test cases such as '(JMS - receiveTask) American Client', '(JMS - receiveTask) American Market', '(JMS - receiveTask) American System', '(JMS - receiveTask) Asian Client', '(JMS - receiveTask) Asian Market', '(JMS - receiveTask) Asian System', '(JMS - receiveTask) European Client', '(JMS - receiveTask) European Market', '(JMS - receiveTask) European System', '(JMS - receiveTask) GeneralError', '(JMS - receiveTask) TechnicalError', '(JMS - receiveTask) XrefError', '(JMS - receiveTask) XSDValidationError', and several 'vjmeter.vgentaskengine.priv.services...' entries.

On the right side, the 'Design Steps' tab is active, showing a table of test steps:

Step Name	D
Delete TASKS	
JMS Point-to-Point - invoke receiveTask via JMS	
Sleep 5s	
Check TASKS	
Get the TASK ID	
Retrieve the task from the Task Engine	
Delete the task for the Task Engine	
Delete TB_TE_TASKS	
View Results Tree	

QC Test Lab

MERCURY
Quality Center

Test Sets Edit View Tests Analysis

Requirements
Test Plan
Test Lab
Defects
Dashboard

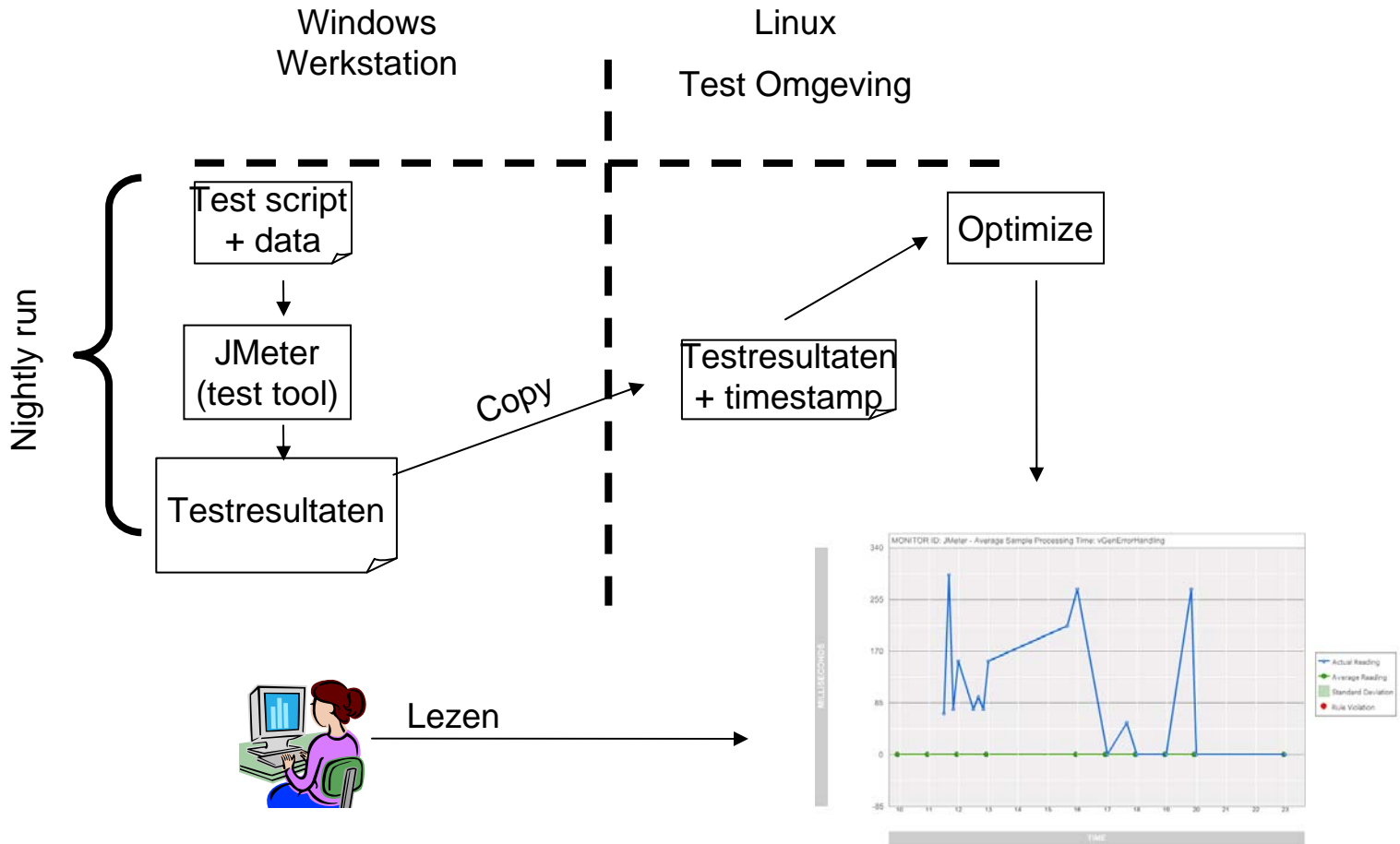
Root
Unattached
IRaP
Task Engine
ProjectName

Select Tests Run Run Test Set

Execution Grid Execution Flow Test Set Properties Linked Defects

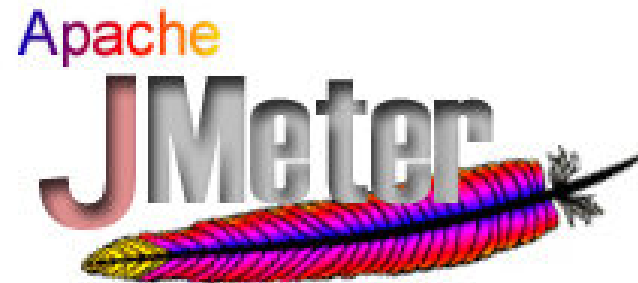
Plan: Test Name	Plan: Type	Status
[1](JMS - receiveTask) XrefError	MANUAL	Passed
[1](JMS - receiveTask) XSDValidationError	MANUAL	Failed
[1](JMS - receiveTask) GeneralError	MANUAL	Passed
[1](JMS - receiveTask) TechnicalError	MANUAL	Passed
[1](JMS - receiveTask) American Client	MANUAL	Passed
[1](JMS - receiveTask) American Market	MANUAL	Passed
[1](JMS - receiveTask) American System	MANUAL	Passed
[1](JMS - receiveTask) Asian System	MANUAL	Passed
[1](JMS - receiveTask) Asian Market	MANUAL	Passed
[1](JMS - receiveTask) Asian Client	MANUAL	Passed
[1](JMS - receiveTask) European Client	MANUAL	Passed
[1](JMS - receiveTask) European Market	MANUAL	Passed
[1](JMS - receiveTask) European System	MANUAL	Passed
[1]vjmeter.vgentaskengine.priv.services.taskcreate1	MANUAL	Failed
[1]vjmeter.vgentaskengine.priv.services.taskgetTas	MANUAL	Passed
[1]vjmeter.vgentaskengine.priv.services.utilsgenera	MANUAL	Passed
[1]vjmeter.vgentaskengine.priv.services.utilsgetReg	MANUAL	Passed
[1]vjmeter.vgentaskengine.priv.services.utilsincrem	MANUAL	Passed
[1]vjmeter.vgentaskengine.priv.services.utilselectC	MANUAL	Passed

Optimize



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Demonstratie JMeter





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Lessons Learned

- Vroegtijdig toepassen van Jmeter in project: wijzigingen in webservice
- Onderhoudbaarheid testscripts
- Integratie van webservices
- Technische vaardigheden
- Van non-secure naar secure omgeving

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