RHN Satellite OpenSCAP Primer

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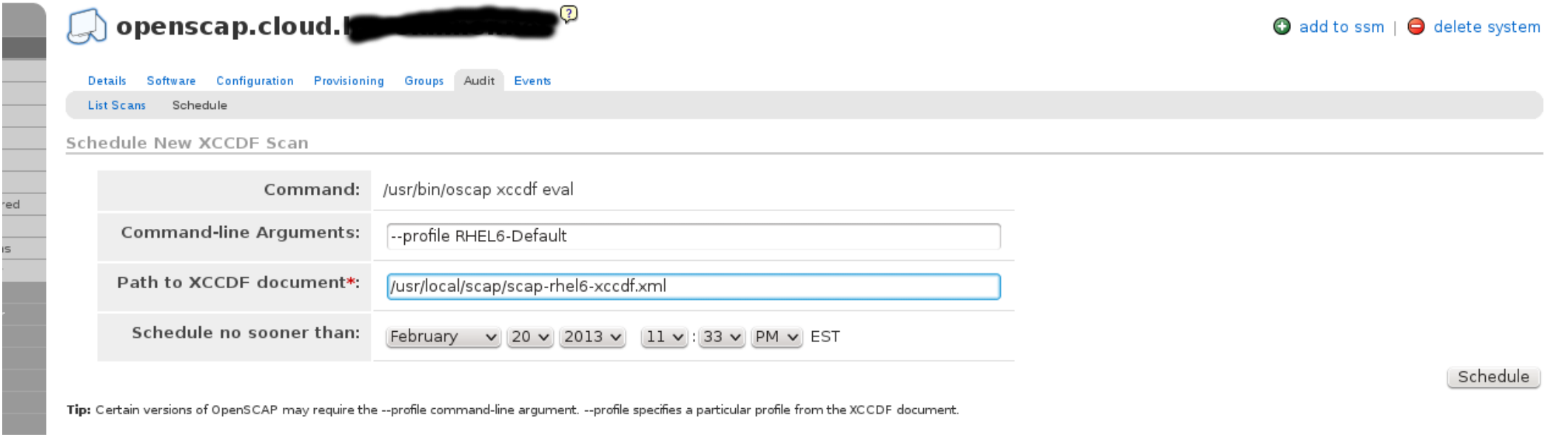
What is OpenSCAP?

- Open source implementation of SCAP
  - SCAP: Standardized compliance checking solution developed by NIST for maintaining system security.
- Specifically, it is an auditing tool
  - Utilizes XCCDF: Extensible Configuration Checklist Description Format
    - ??? - Standard way of defining content to scan
- How to use?
  - RHN Satellite version 5.5 includes OpenSCAP
  - Need SCAP content – rules to scan
    - From scratch?
    - From online resources like NIST
    - From RH

Walk through example

- Install Red Hat provided SCAP definitions on Satellite
  - Join RHEL 6 Optional Channel
    - Install openscap-content RPM
      - [root@sat ~]# rpm -ql openscap-content
      - /usr/share/openscap/scap-oval.xml
      - /usr/share/openscap/scap-rhel6-oval.xml
      - /usr/share/openscap/scap-rhel6-xccdf.xml
      - /usr/share/openscap/scap-xccdf.xml
    - scp scap-rhel6-xccdf.xml and scap-rhel6-oval.xml to client
- Client
  - Join RHEL 6 RHN Tools Channel
    - Install spacewalk-oscap RPM from Satellite
    - Install osad if you haven't – osad lets you schedule tasks in Satellite
    - Start osad or you'll have to manually rhn_check

On Satellite :: Schedule scan



List Scans :: Baseline, then Pass

openscap.cloud.[redacted]

add to ssm | delete system

Details | Software | Configuration | Provisioning | Groups | Audit | Events

List Scans | Schedule

OpenSCAP Scans

1 - 3 of 3

Xccdf Test Result	Completed	Compliance	P	F	E	U	N	K	S	I	X	Total
OSCAP-Test-RHEL6-Default	Wed Feb 20 22:30:08 CST 2013	96 %	71	3	0	0	0	0	69	0	0	143
OSCAP-Test-RHEL6-Default	Wed Feb 20 09:57:51 CST 2013	96 %	71	3	0	0	0	0	69	0	0	143
OSCAP-Test-default-profile	Wed Feb 20 09:45:09 CST 2013	N/A	0	0	0	0	0	0	143	0	0	143

1 - 3 of 3

Download CSV

Tip: Compliance column represents unweighted pass/fail ration. Compliance = P/(Total - S - I).

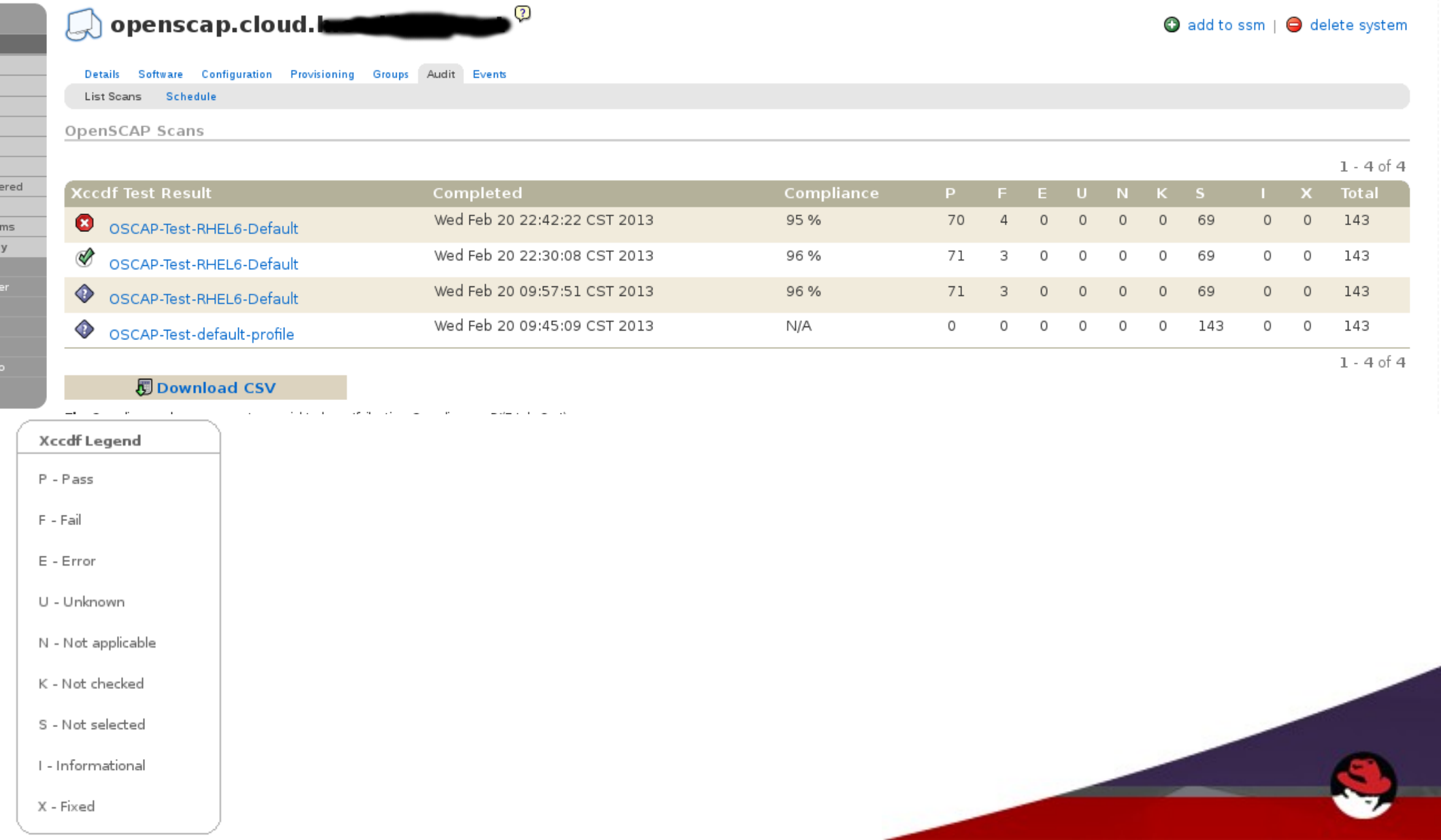
Xccdf Legend

- P - Pass
- F - Fail
- E - Error
- U - Unknown
- N - Not applicable
- K - Not checked
- S - Not selected
- I - Informational
- X - Fixed

Break Client

- service auditd stop
- chkconfig auditd off

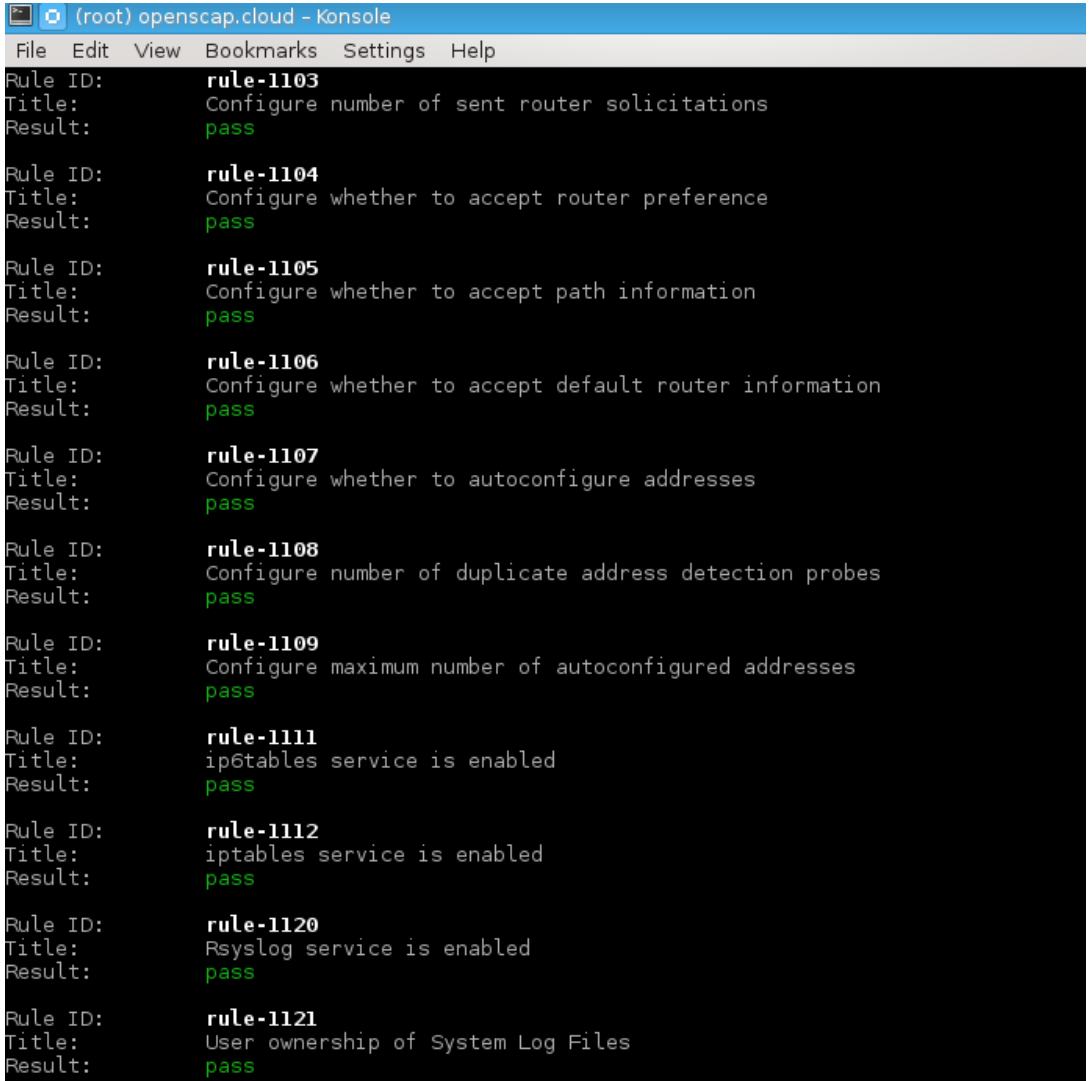
Client changes :: Scan Fails



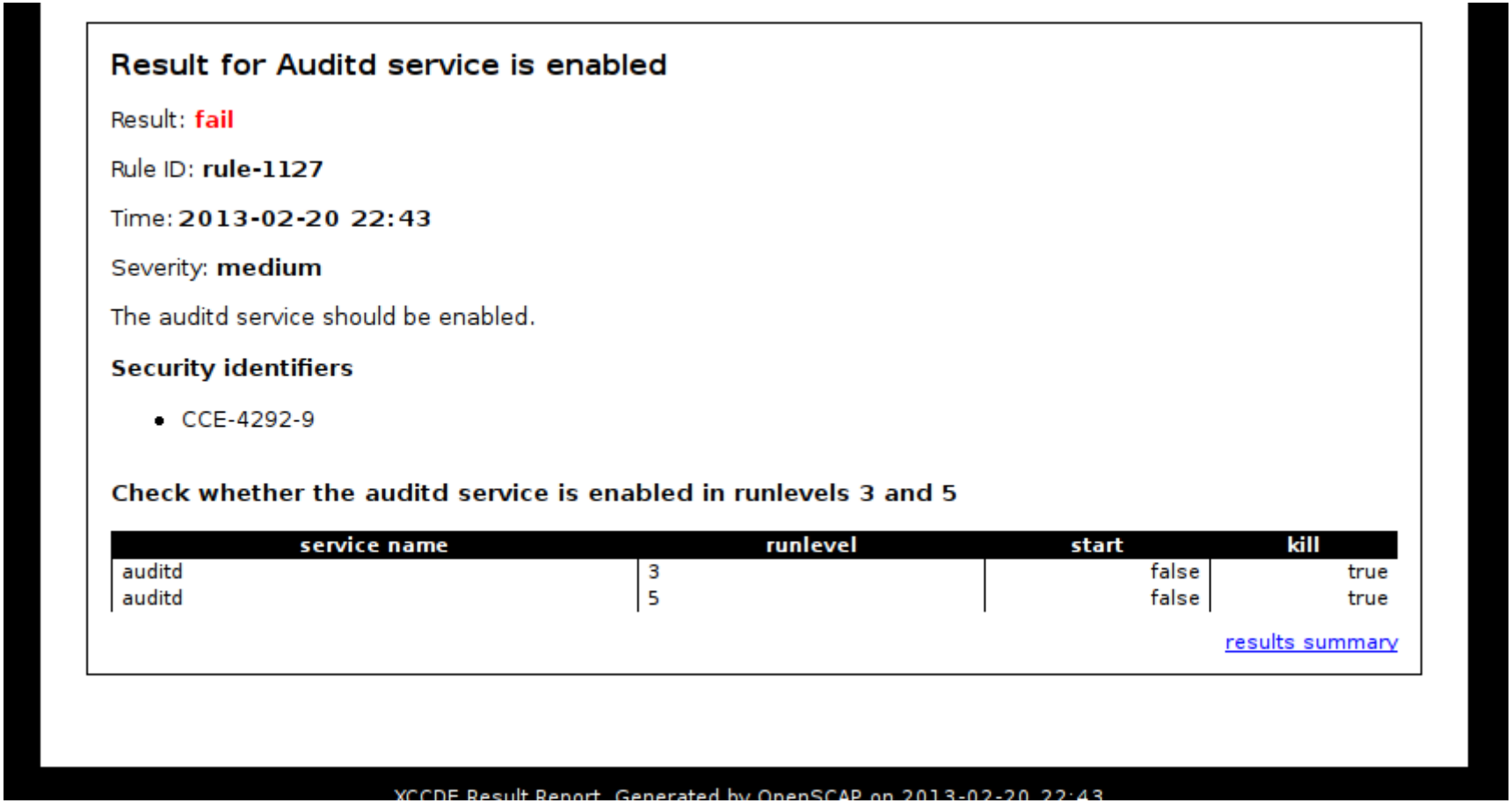
Client side :: Manual run for detailed report

- oscap xccdf eval --results result2.xml --report report2.html --oval-results --profile RHEL6-Default scap-rhel6-xccdf.xml scap-rhel6-oval.xml

OVAL: Open Vulnerability and Assessment Language



For failure details, look at html report on client



Result for Auditd service is enabled

Result: **fail**

Rule ID: **rule-1127**

Time: **2013-02-20 22:43**

Severity: **medium**

The auditd service should be enabled.

Security identifiers

- CCE-4292-9

Check whether the auditd service is enabled in runlevels 3 and 5

service name	runlevel	start	kill
auditd	3	false	true
auditd	5	false	true

results summary

XCCDF Result Report, Generated by OpenSCAP on 2013-02-20 22:43

CCE: Common Configuration Enumeration
http://cce.mitre.org

Inspect SCAP template for rule details

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<Rule id="rule-1127" selected="false" weight="10.000000" severity="medium">

<status date="2010-07-01">accepted</status>

<title xml:lang="en-US">**Auditd service is enabled**</title>

<description xml:lang="en-US">The auditd service should be enabled.</description>

<ident system="http://cce.mitre.org">CCE-4292-9</ident>

<check system="http://oval.mitre.org/XMLSchema/oval-definitions-5">

<check-content-ref name="oval:org.open-scap.rhel6:def:1127" href="scap-rhel6-oval.xml"/>

</check>

</Rule>

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In Conclusion

- Create SCAP rules
- Deploy
- Baseline
- Schedule scans
- Stay in compliance

Resources:

http://www.open-scap.org/page/Main_Page

http://cce.mitre.org/

http://oval.mitre.org/

http://scap.nist.gov/specifications/xccdf/

https://access.redhat.com/knowledge/docs/en-US/Red_Hat_Network_Satellite/5.5/html/User_Guide/chap-Red_Hat_Network_Satellite-User_Guide-OpenSCAP.html