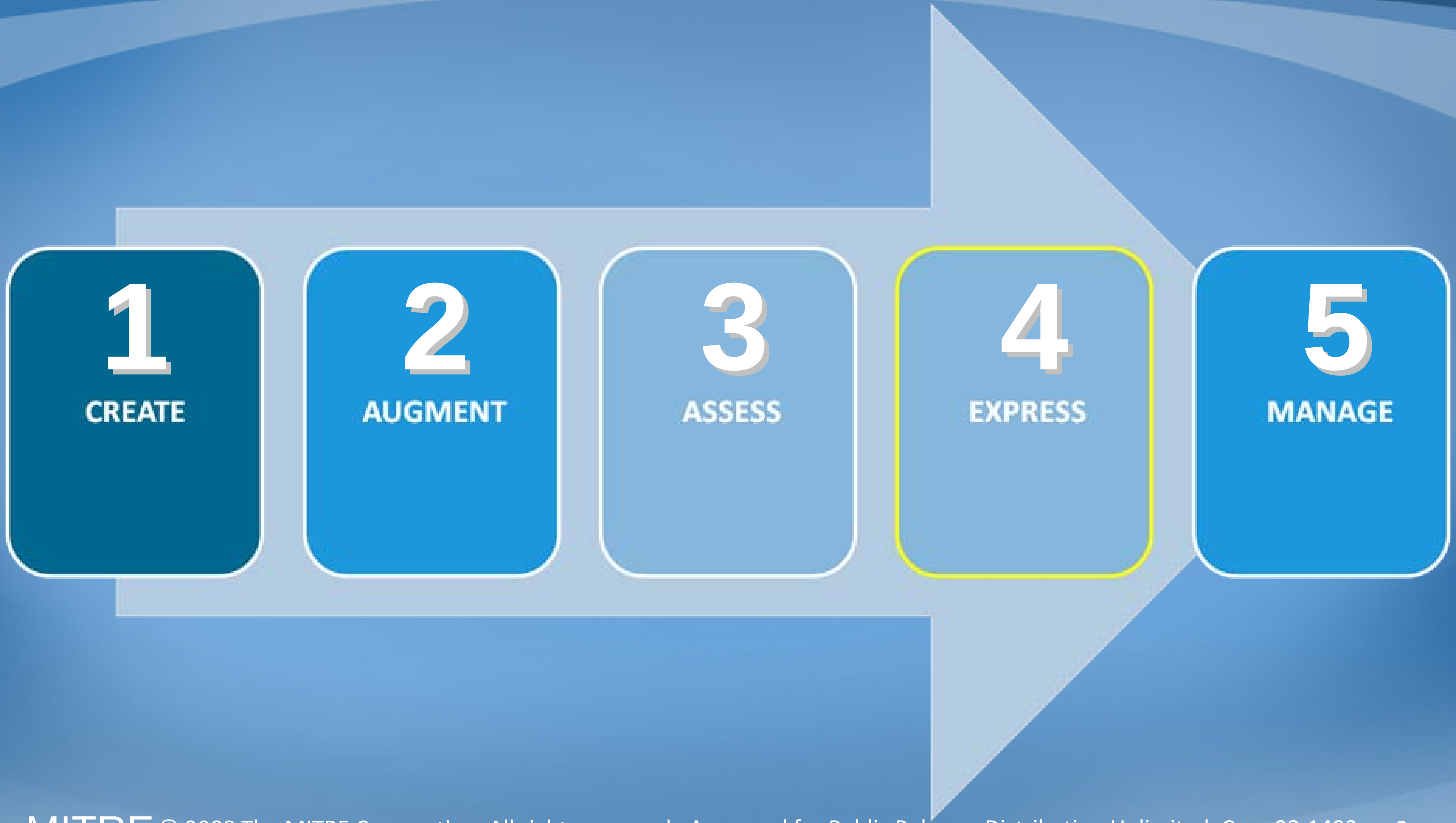
Agenda

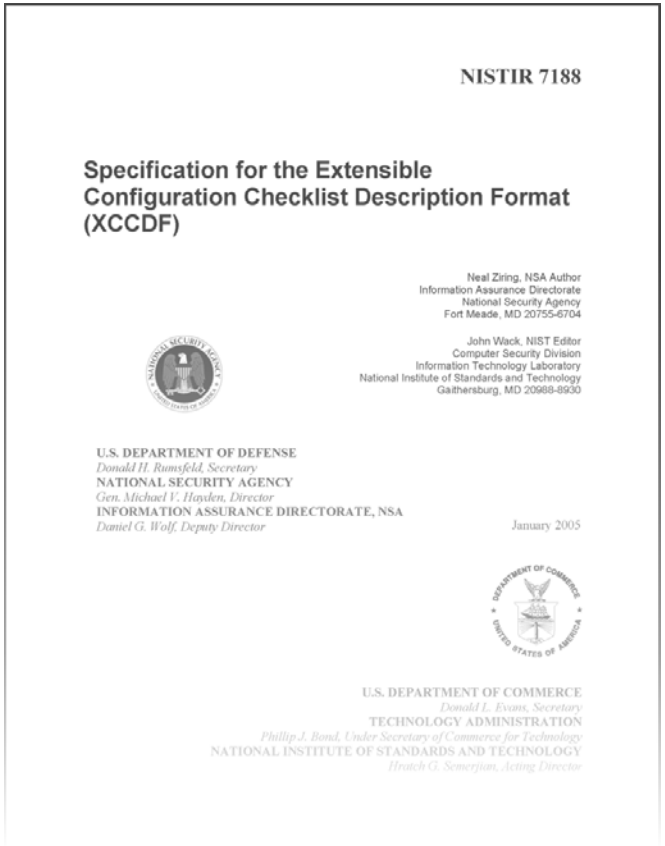
10:00-10:10	Introduction
10:10-11:15	Phase 1: Writing Good Guidance
11:15-11:25	Break
11:25-12:10	Phase 2: Augmenting Rules
12:10-12:45	Phase 3: Automating Assessment
12:45-1:30	Lunch
1:30-2:45	Phase 3, Continued: Automating Assessment
2:45-2:55	Break
2:55-3:45	Phase 4: Benchmark Structure & Tailoring
3:45-4:15	Phase 5: Manage Compliance
4:15-4:30	Wrap Up

Phase 4: Benchmark Structure & Tailoring



What is XCCDF

- **The eXtensible Configuration Checklist Description Format**
- **An XML specification for expressing security benchmarks and recording assessment results**
- **Designed for three purposes:**
  - driving system security checking tools
  - generating human-readable documents and reports
  - scoring and tracking compliance



NISTIR 7188

Specification for the Extensible Configuration Checklist Description Format (XCCDF)

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January 2005

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NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY
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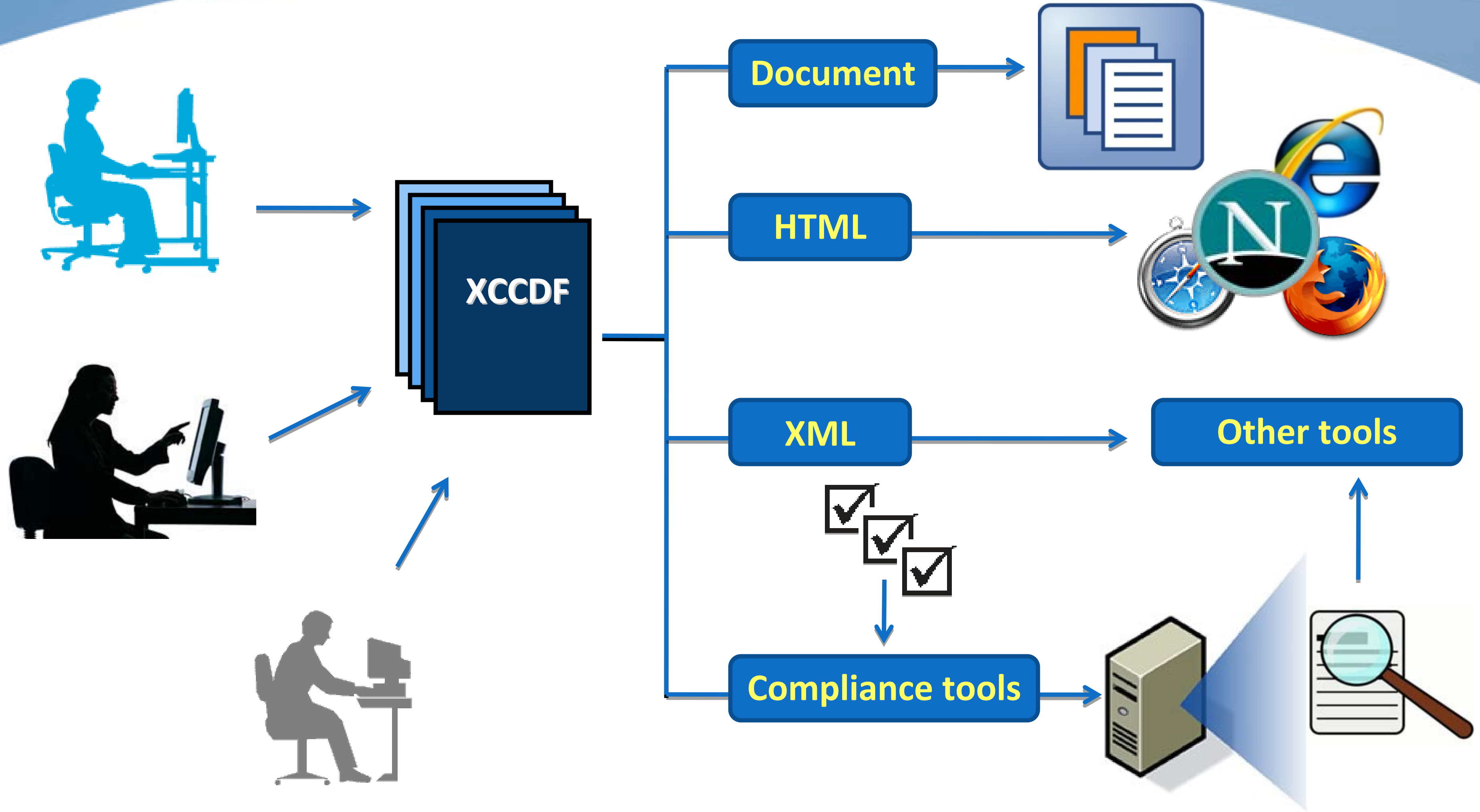
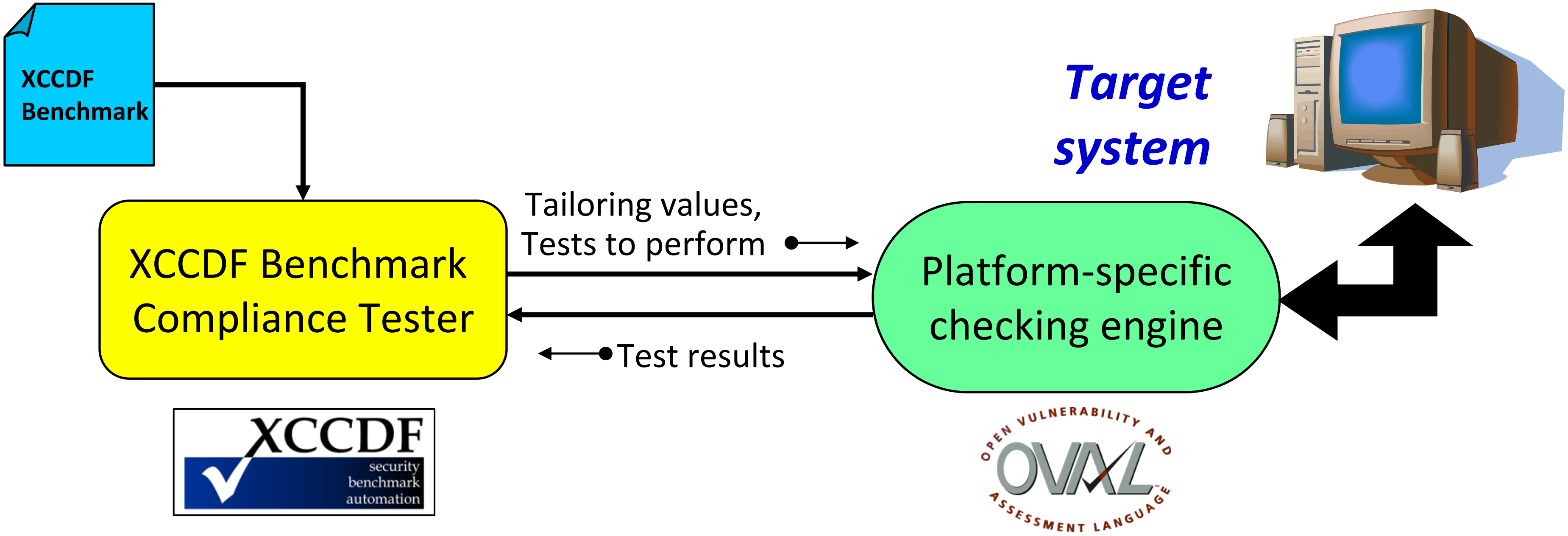
http://nvd.nist.gov/xccdf.cfm

XCCDF Use Cases

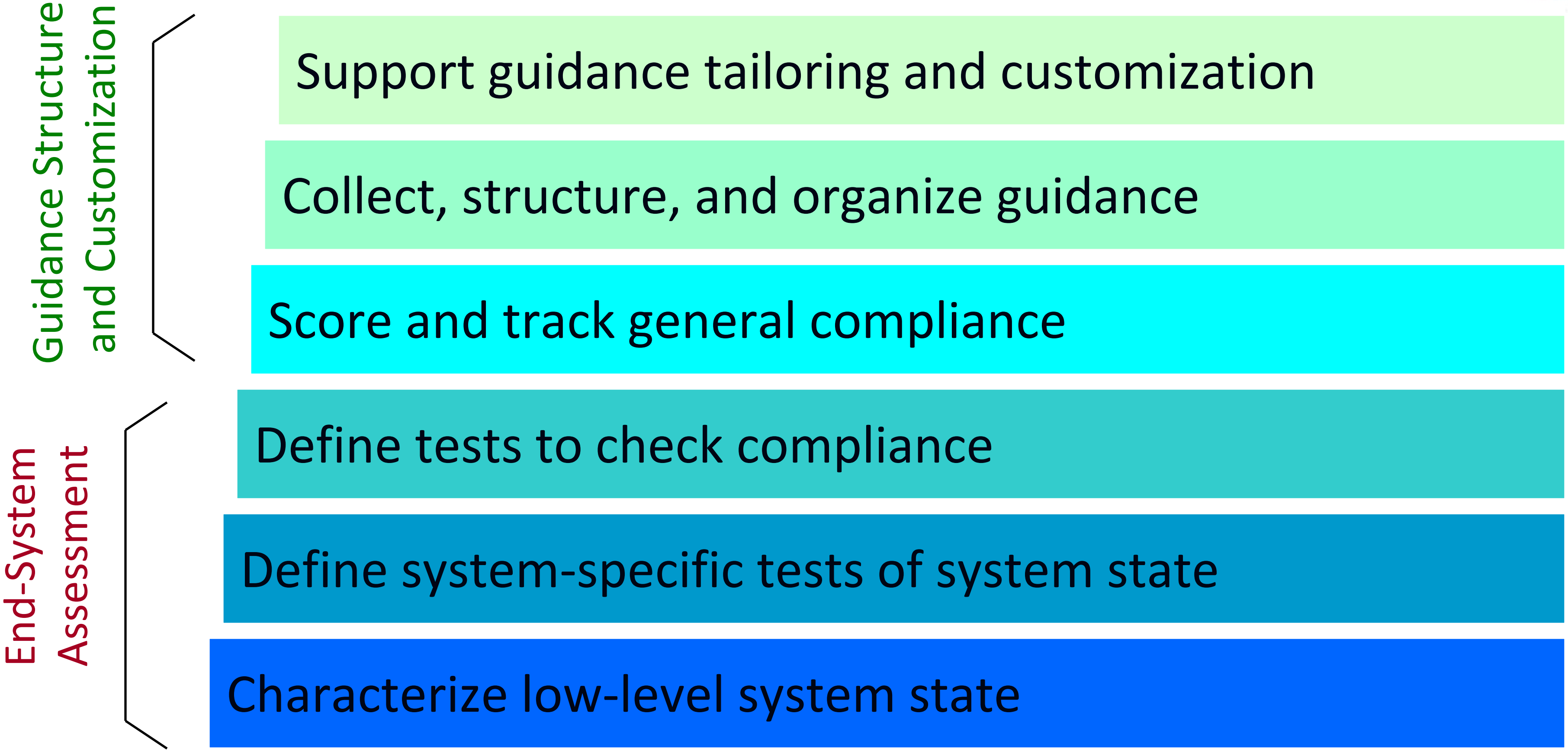


XCCDF and Checking Engines

- XCCDF does ***not*** specify platform-specific system rule checking logic.
- The `Rule/check` element contains information for driving a platform-specific checking engine.


XCCDF Benchmark
Target system
XCCDF Benchmark Compliance Tester
Tailoring values, Tests to perform
Platform-specific checking engine
Test results
XCCDF security benchmark automation
OPEN VULNERABILITY AND ASSESSMENT LANGUAGE OVAL

XCCDF and OVAL Interaction



Guidance Structure and Customization

End-System Assessment

Support guidance tailoring and customization

Collect, structure, and organize guidance

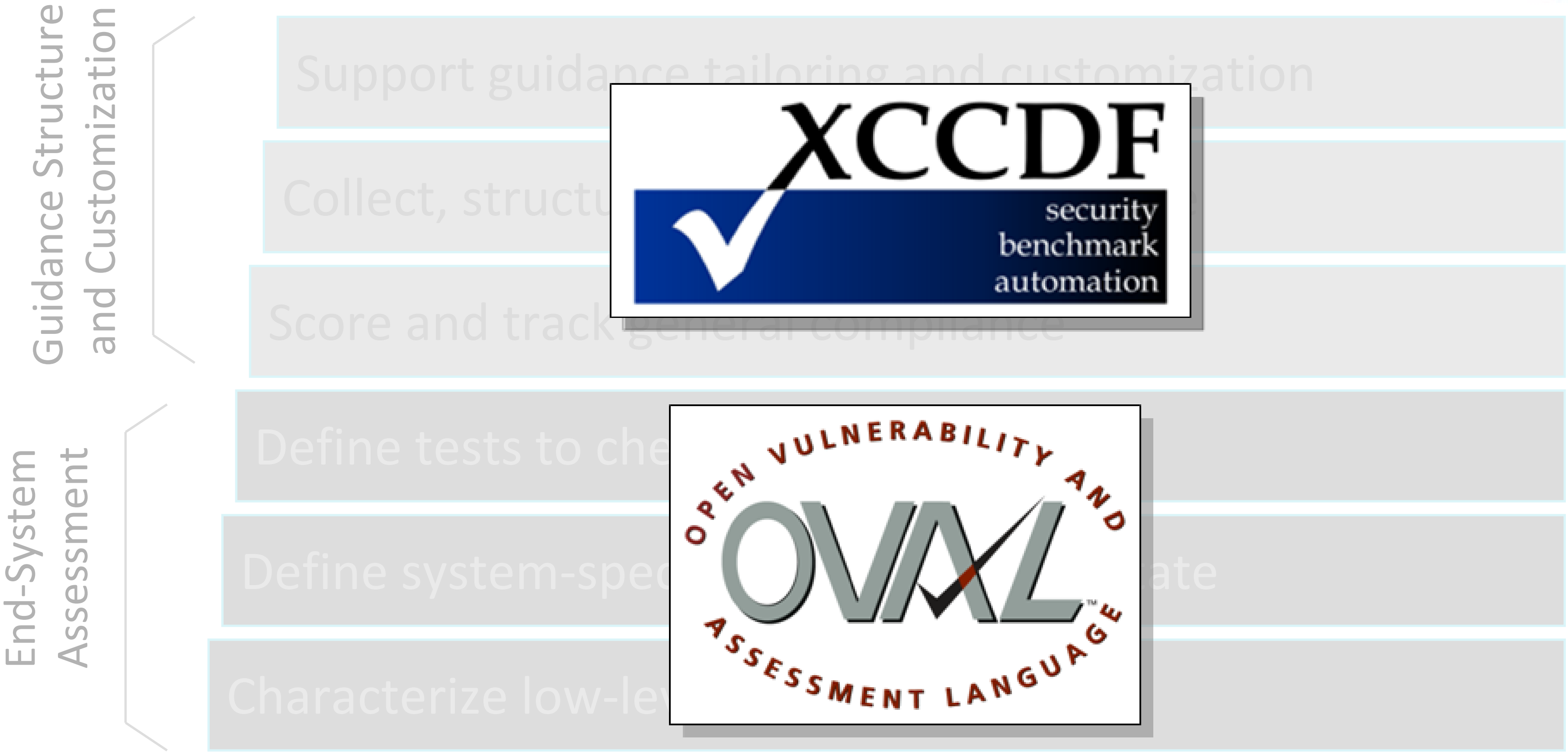
Score and track general compliance

Define tests to check compliance

Define system-specific tests of system state

Characterize low-level system state

XCCDF and OVAL Interaction


Guidance Structure and Customization
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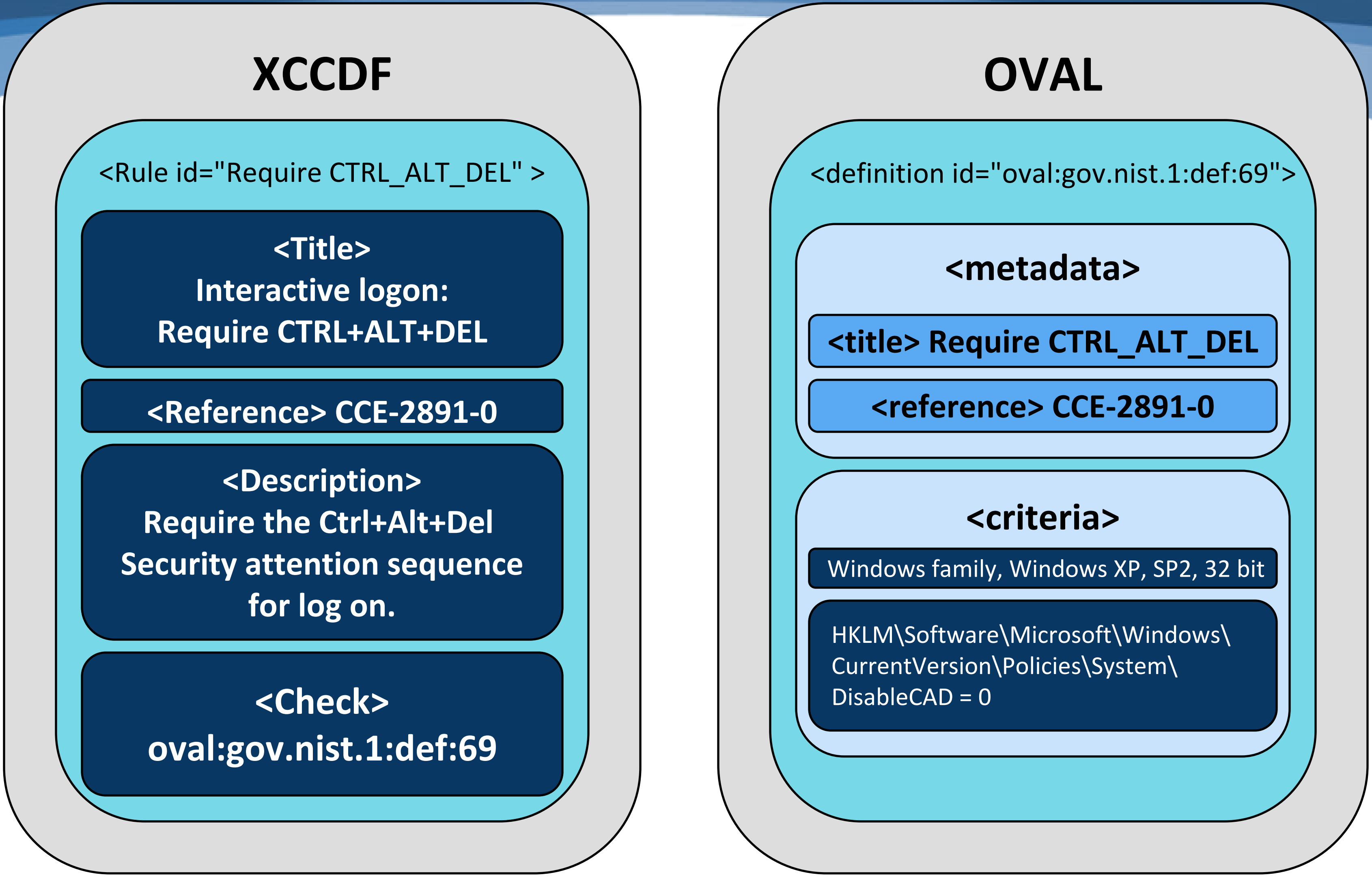
XCCDF
security benchmark automation
OPEN VULNERABILITY AND ASSESSMENT LANGUAGE
OVAL™

XCCDF & OVAL Illustrated



XCCDF

<Rule id="Require CTRL_ALT_DEL" >

<Title>
Interactive logon:
Require CTRL+ALT+DEL

<Reference> CCE-2891-0

<Description>
Require the Ctrl+Alt+Del
Security attention sequence
for log on.

<Check>
oval:gov.nist.1:def:69

OVAL

<definition id="oval:gov.nist.1:def:69">

<metadata>

<title> Require CTRL_ALT_DEL

<reference> CCE-2891-0

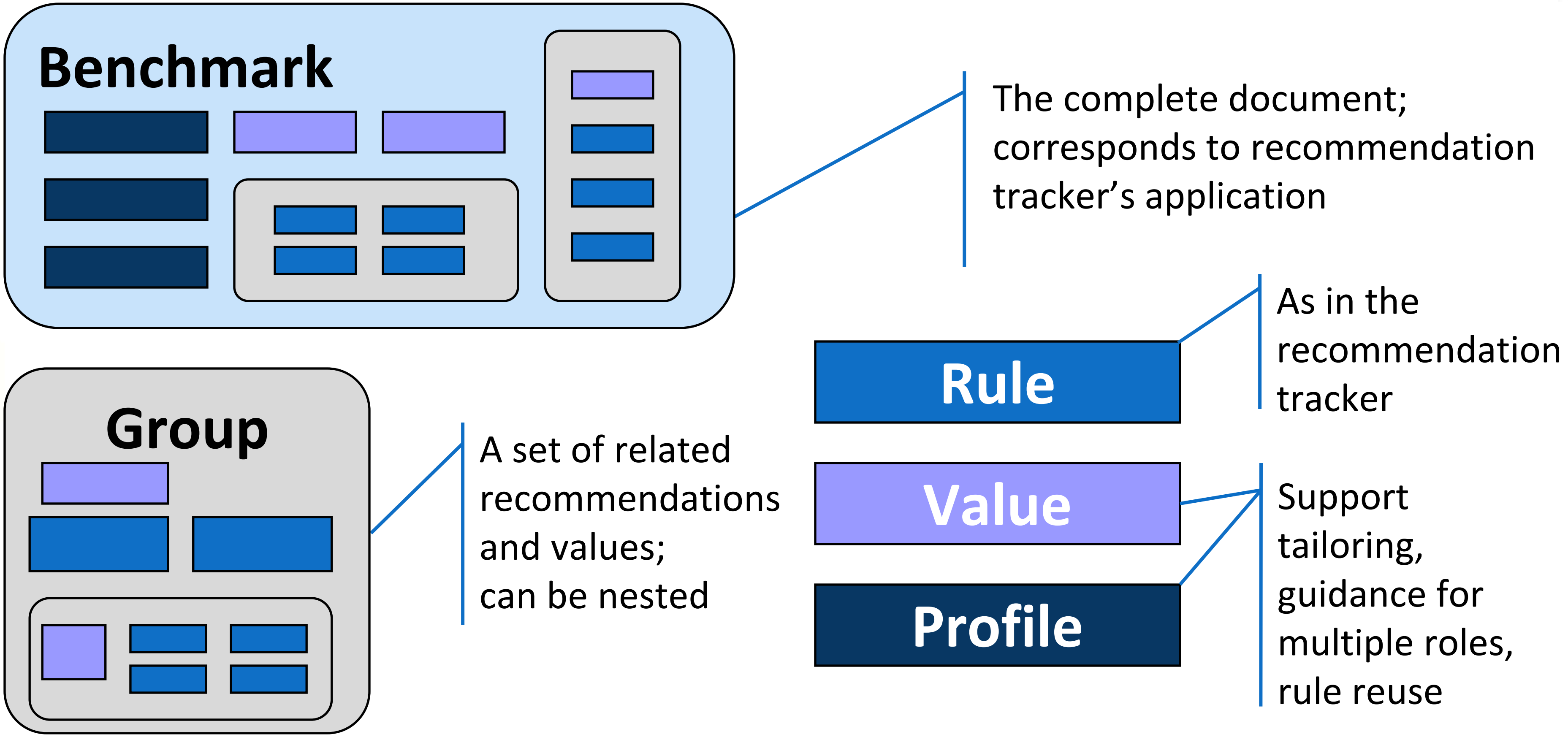
<criteria>

Windows family, Windows XP, SP2, 32 bit

HKLM\Software\Microsoft\Windows\
CurrentVersion\Policies\System\
DisableCAD = 0

XCCDF Data Model

XCCDF defines the following key object types:



Benchmark

The complete document; corresponds to recommendation tracker's application

Rule

As in the recommendation tracker

Group

A set of related recommendations and values; can be nested

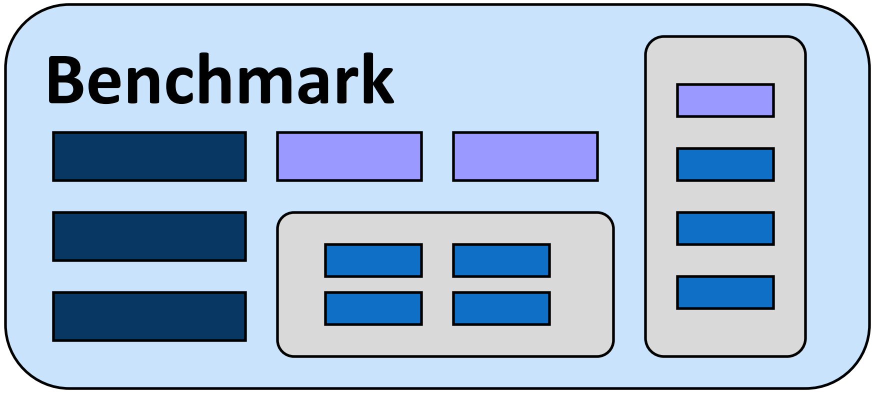
Value

Profile

Support tailoring, guidance for multiple roles, rule reuse

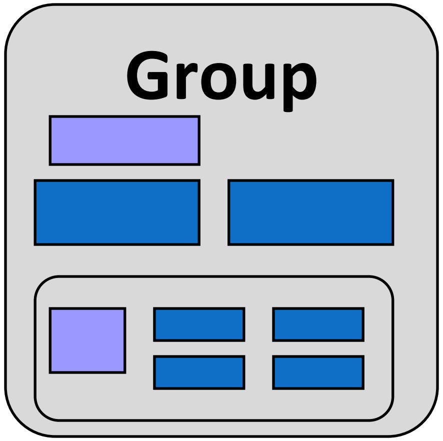
XCCDF Benchmark

```
<Benchmark id="Windows-XP">
   <title>Guidance for Securing Microsoft Windows XP</title>
   <platform idref="cpe:/o:microsoft:windows_xp"/>
   <Profile id="XP-Pro">...</Profile>
   <Group id="Chapter1">
      <Group id="PasswordPolicy">
          <Value>
          <Rule>
      </Group>
      <Group id="AuditPolicy">
           <Rule>
      </Group>
   </Group>
   <Group id="Chapter2">
   </Group>
</Benchmark>
```



XCCDF Group

```
<Group id="account_policies_group">
    <Group id="password_policies">
       <title>Password Policies</title>
       <description>In addition to educating users regarding the
      selection and use of good passwords, it is also important
      to set password parameters so that passwords are
      sufficiently strong...</description>
       <value>...</value>
       <rule>...</rule>
       <rule>...</rule>
    </Group>
</Group>
<Group id="file_permissions_group">
   ...
</Group>
```



XCCDF Rule

```
<Rule id="maximum_password_age" >
    <title>Maximum Password Age</title>
    <description>Set the “Maximum password age” password parameter to 90
   days.</description>
    <reference href="http://cce.mitre.org">CCE-2920-7</reference>
    <rationale>The “Maximum password age” password parameter is set to
         force users to change passwords at regular, defined, intervals…
    </rationale>
    <fixtext>1 - Launch the Local Security Policy editor: Start ->
         All Programs -> Administrative Tools -> Local Security Policy…
    </fixtext>
    <check system="http://oval.mitre.org/XMLSchema/oval-definitions-5">
      <check-export value-id="maximum_password_age_var"
                   export-name="oval:gov.nist.fdcc.xp:var:90"/>
      <check-content-ref href="BDC-XP-oval.xml"
                        name="oval:gov.nist.fdcc.xp:def:17"/>
    </check>
</Rule>
```

Rule

XCCDF Profile

```
<Profile id="federal_desktop_core_configuration">
    <title>Federal Desktop Core Configuration</title>
    <description>This profile represents guidance outlined in
   Federal Desktop Core Configuration settings for Desktop
   systems.</description>
    <!--Password Policy Settings-->
    <select idref="maximum_password_age" selected="true"/>
    <select idref="minimum_password_length" selected="true"/>
    <refine-value idref="maximum_password_age_var"
        selector="5184000_seconds"/>
    <refine-value idref="minimum_password_length_var"
        selector="12_characters"/>
</Profile>
```

Profile

Traditional Options for Creating and Editing Benchmark XML

- Text editor
  - No assistance
  - Thorough understanding of XML and schema needed
- General-purpose XML IDE
  - Syntax highlighting, auto-indent, element begin & end
  - Schema-aware
  - Detailed knowledge of XML and schema still required

Benchmark XML Creation and Editing Simplified

- Generate XCCDF with the Recommendation Tracker
  - All guidance for an application exportable as XCCDF
- Edit XML using the Benchmark Editor
  - Hides XML syntax
  - Provides unified view of benchmark
    - XCCDF and OVAL, and any other XML format
  - Requires greatly reduced knowledge of XML formats

Demo: Benchmark Editor Editing of XCCDF