

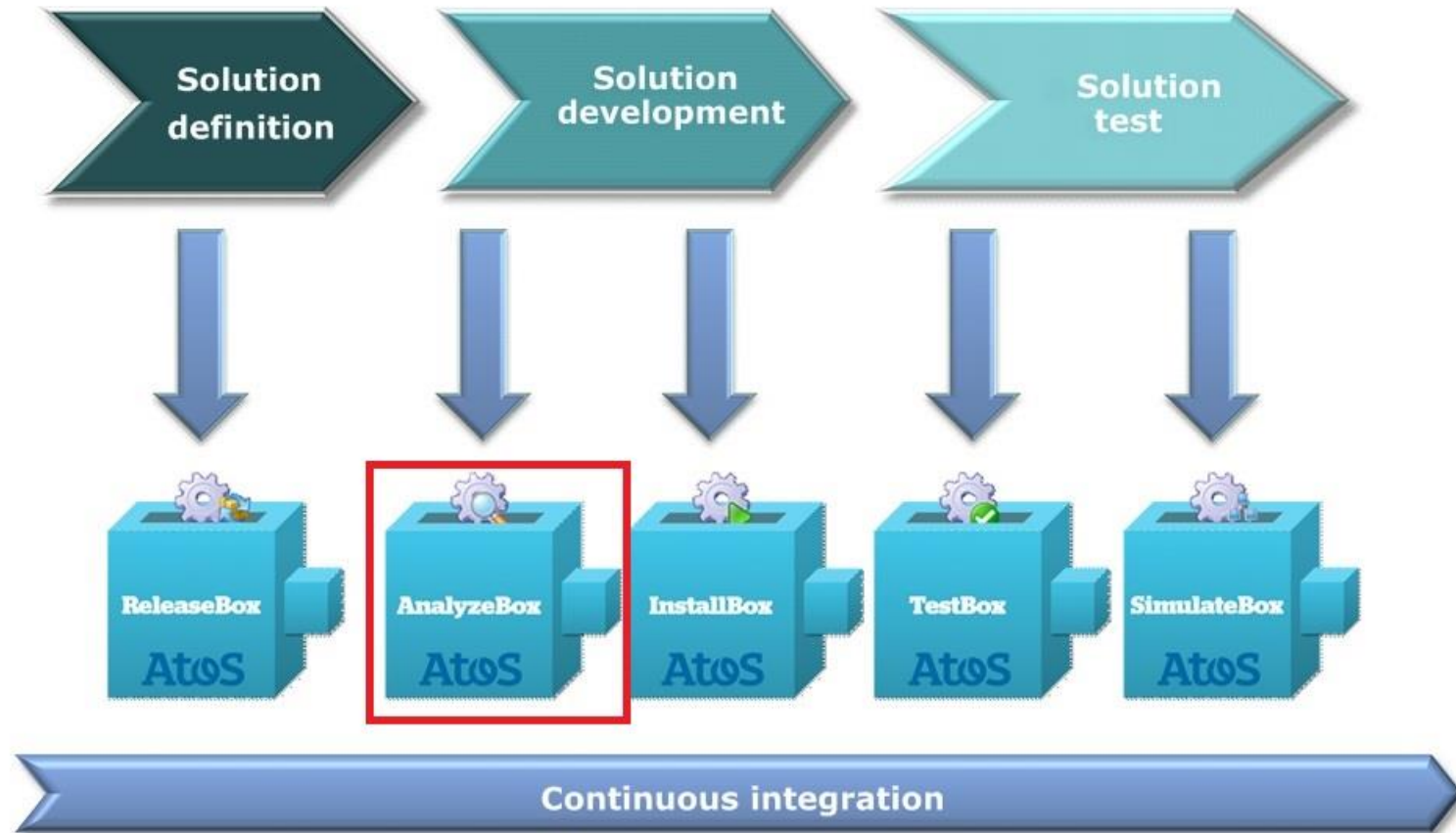


# Check the source quality with AnalyzeBox

June 2016

# An industrial offer

*Complete cover of a project lifecycle*



# AnalyzeBox: Check the source quality

## Presentation



- Check the quality of source of WebMethods or Informatica projects
  - Rules for development conventions, naming conventions, documentation conventions, dead code
- Generate and compute some measures of WebMethods projects only
- Written in Java, multi platforms (Windows, Linux, AIX, Solaris, ...)
- Atos product under license



# AnalyzeBox: Check the source quality

## Presentation



### ▶ WebMethods

- Check source of the packages
- 19 rules and 7 measures provided by default



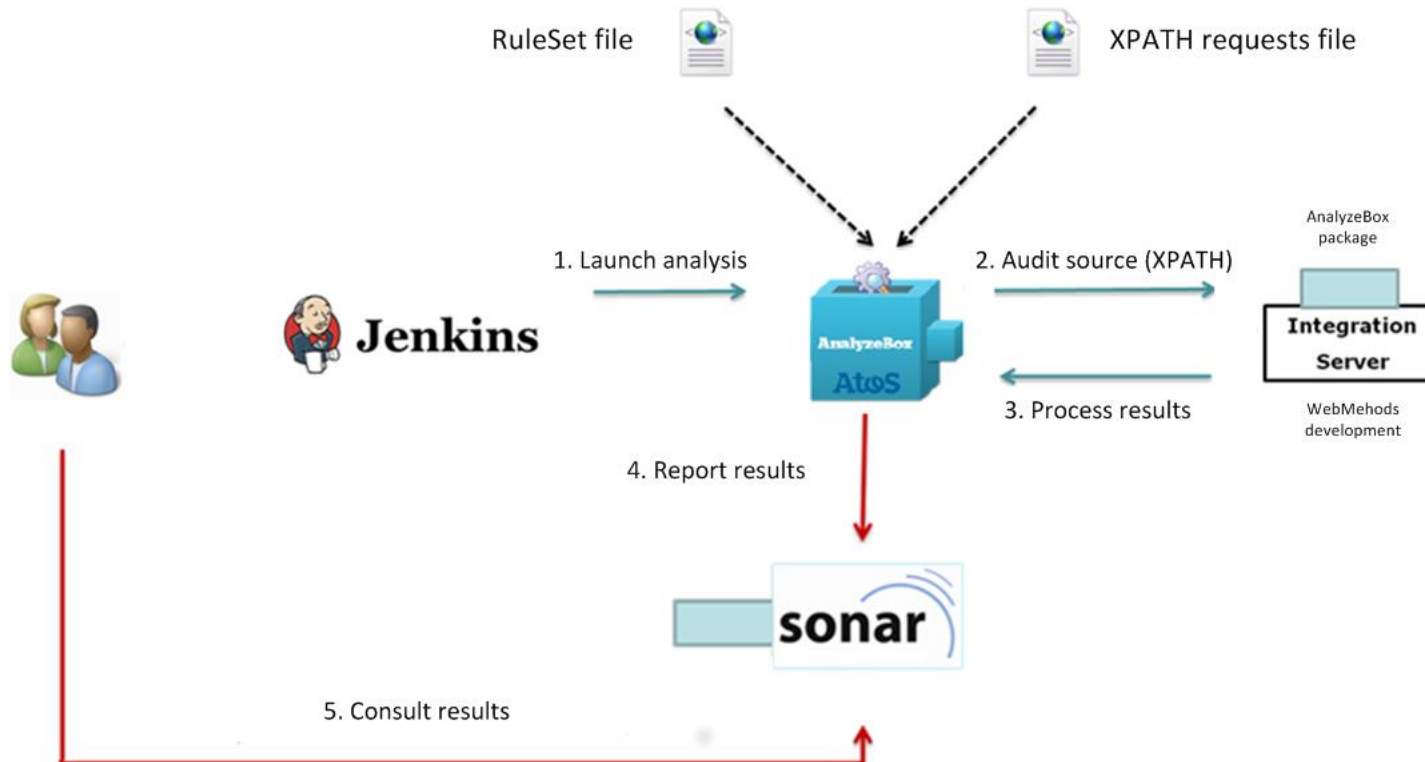
### ▶ Informatica

- Check source of the repository projects
- 29 rules provided by default



# AnalyzeBox: Check the source quality

## WebMethods overview



# AnalyzeBox: Check the source quality

## WebMethods rules definition



### RuleSet file

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<audit>
  <example>
    <report class="com.atos.audit.core.impl.ResultPrinterAnalyzeBox">'reports/AuditWebMethods.xml'</report>
    <rules>
      <rule id="100" class='com.atos.audit.plugin.rule.xml.BasicXmlRuleService'>
        <name>Service comprenant trop de steps</name>
        <ruleset>Convention developpement</ruleset>
        <description>Le service comprend trop de steps</description>
        <priority>WARN</priority>
        <message>Le service comprend trop de steps</message>
        <request file="resources/webmethods/rules/developpementConvention.xml"
          name="service_with_too_step" />
      </rule>
    </rules>
  </example>
</audit>
```

### XPATH requests file

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<requests>
  <mappings class="com.atos.audit.plugin.rule.RuleViolation">
    <mapping beanname="className" xpath="/root/Name/text()" />
    <mapping beanname="packageName" xpath="/root/pkg/text()" />
  </mappings>
  <!-- SERVICE -->
  <request name="service_with_too_step">
    <xpath>count(/root/type[text()='flow']/../flow/*[name()='Node'])
    </xpath>
    <shell>
      Float.valueOf(node).floatValue() > 100
    </shell>
  </request>
```

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## WebMethods measures definition



### MeasureSet file

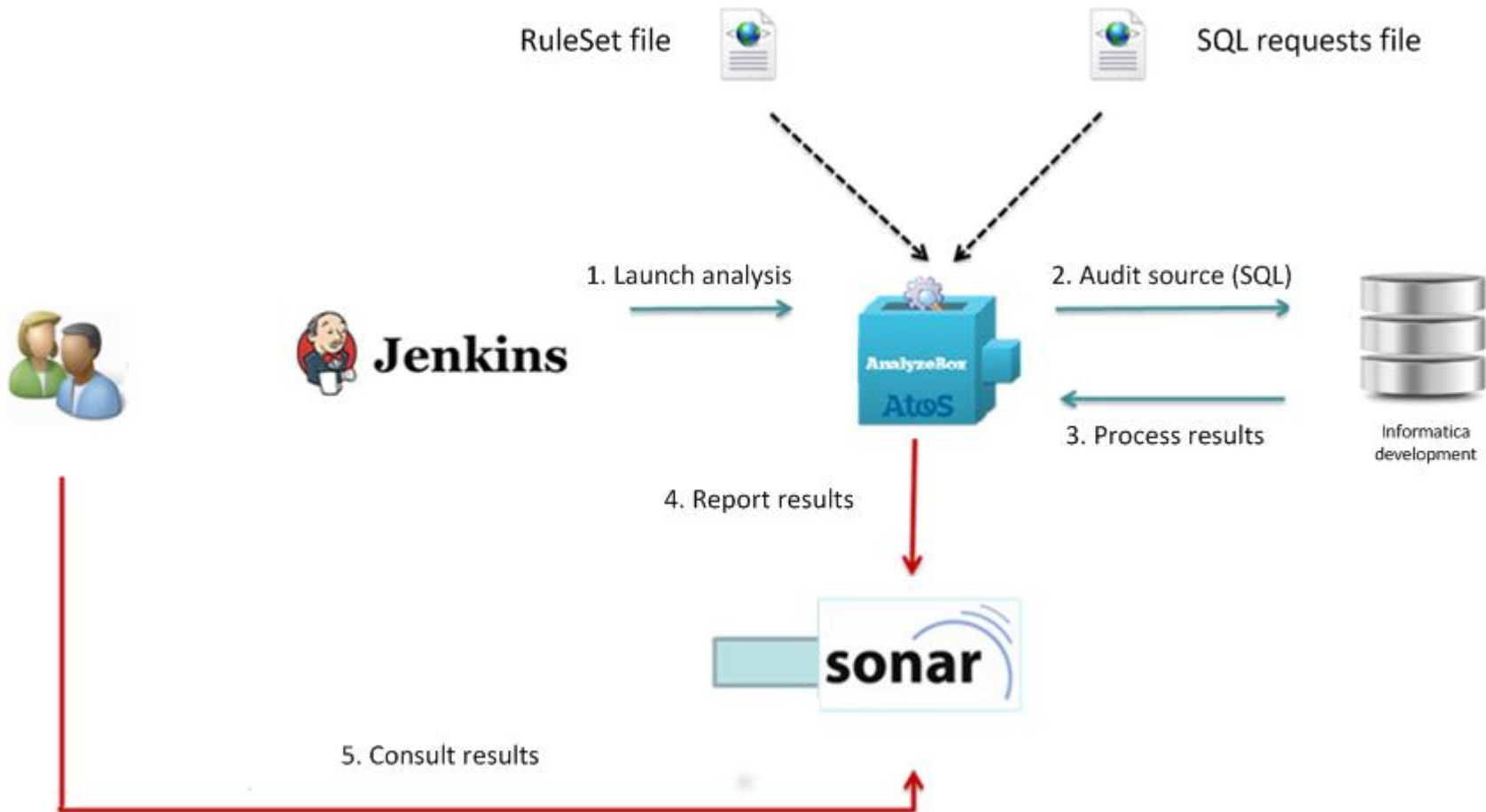
```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<audit>
  <example>
    <report>'reports/AuditWebMethods.xml'</report>
    <measures>
      <measure id="001" class='com.atos.audit.plugin.measure.xml.BasicXmlMeasureService'>
        <name>Total Flow Service</name>
        <description>Le nombre total de Flow Service dans un projet</description>
        <request file="resources/webmethods/measure/measureConvention.xml" name="total_flow" />
      </measure>
    </measures>
  </example>
</audit>
```

### XPATH requests file

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<requests>
  <mappings class="com.atos.audit.plugin.measure.Measure">
  </mappings>
  <request name="total_flow">
    <xpath>count(//root/type[text()='flow'])</xpath>
    <shell>
      double nbTotal = 0;
      for(int i=0; i < resultat.size();i++)
      {nbTotal = nbTotal+Double.parseDouble(resultat.get(i));}
      nbTotal;
    </shell>
  </request>
</requests>
```

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## Informatica overview





# AnalyzeBox: Check the source quality

## Informatica rules definition



### RuleSet file

```
<?xml version="1.0" encoding="ISO-8859-1" ?>
<audit>
  <example>
    <report>'reports/AuditInformatica_SIVA.xml'</report>
    <rules>
      <rule id="1" class='com.atos.audit.plugin.rule.informatica.BasicInformaticaRuleService'>
        <name>Nommage des ports en entrée</name>
        <ruleset>Informatica Convention nommage</ruleset>
        <description>valide le nommage des paramètres d'entrée</description>
        <priority>INFO</priority>
        <message>Le paramètre d'entrée {0} ne respecte pas les conventions de nommages.</message>
        <request file="resources/informatica/rules/namingConvention.xml" name="input_param" />
      </rule>
    </rules>
  </example>
</audit>
```

### SQL requests file

```
<requests>
  <mappings class="com.atos.audit.plugin.rule.RuleViolation">
    <mapping beanname="className" dbname="CLASS_NAME" />
    <mapping beanname="packageName" dbname="PKG_NAME" />
    <mapping beanname="messageParam" dbname="VARIABLE_NAME" />
  </mappings>
  <request name="input_param">
    <sql>
      select ram.subject_area || '.' || ram.mapping_name as PKG_NAME,
             rwi.instance_name as CLASS_NAME,
             rwf.field_name as VARIABLE_NAME
      from (select subject_area, mapping_name, mapping_id from rep_all_mappings
            union
            select subject_area, mapplet_name, mapplet_id from rep_all_mapplets) ram,
           rep_widget_field rwf, rep_widget_inst rwi
      where ram.mapping_id=rwi.mapping_id and rwi.widget_id=rwf.widget_id and rwf.porttype=1
            and (rwf.FIELD_NAME not like '%in%' AND rwf.FIELD_NAME not like '%IN%')
    </sql>
  </request>
</requests>
```

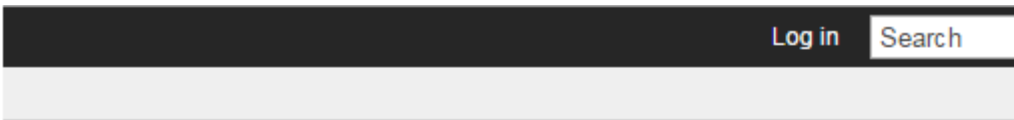
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## Check results in Sonar



### ► Violations results

- The violations results are displayed in the **Issues** part
- Violations are classified by severities
- Leading indicators (upward or downward) are updated after each analysis



Issues		<a href="#">Blocker</a>	0	
13		<a href="#">Critical</a>	0	
		<a href="#">Major</a>	6	
		<a href="#">Minor</a>	7	
		<a href="#">Info</a>	0	

# AnalyzeBox: Check the source quality

## Check results in Sonar



### ► Violations results

- Sonar shows the packages/components with violations
- Sonar shows the violated rules by package/component

The screenshot displays the SonarQube interface with several key areas highlighted by red boxes. At the top, the navigation bar includes 'Measures', 'Issues', and 'Quality Profiles'. The main content area is divided into three sections: 1. A 'Severity' sidebar on the left showing counts for Blocker (0), Critical (0), Major (6), Minor (7), and Info (0). 2. A 'Rule' list on the right showing rules like 'Ne pas utiliser la validation des signatures des services en production' and 'Service mal nommé'. 3. A central area with two panels: 'Audit Webmethods.audit' (13 items) and 'AcmeOrder' (13 items). Below these is a list of components with violations, including 'AcmeOrder.AcmeOrder.AcmeOrder\_1.Default.Validate'. The bottom section shows a detailed view of a component with 4 issues, including a Major issue for the rule 'Ne pas utiliser la validation des signatures des services en production'.

Measures Issues Quality Profiles

Profile Sonar way Time changes...

**Severity**

- Blocker 0
- Critical 0
- Major 6
- Minor 7
- Info 0

**Rule**

- Ne pas utiliser la validation des signatures des services en production
- Service mal nommé
- Commenter les étapes invoke

Liste et nombre de règles violées

Audit Webmethods.audit 13 AcmeOrder 13

- AcmeOrder.AcmeOrder.AcmeOrder\_1.Default.Validate
- AcmeOrder.AcmeOrder.AcmeOrder\_1.Default.Send\_to\_ORMS
- AcmeOrder.AcmeOrder.AcmeOrder\_1.Default.Map\_to\_Canonical
- AcmeOrder.AcmeOrder.AcmeOrder\_1.Default.Receive\_

Liste des composants contenant des violations

Audit audit / Audit Webmethods.audit

AcmeOrder/AcmeOrder.AcmeOrder.AcmeOrder\_1.Default.Map\_to\_Canonical

Duplications Issues Source

4 issues Blocker: 0 Critical: 0 Major: 2 Minor: 2 Info: 0

Time changes... All issues

Ne pas utiliser la validation des signatures des services en production Open environ une heure

# AnalyzeBox: Check the source quality

## Check measures in Sonar



### ► Measures results

- Sonar allows selecting measures to be displayed
- Search criteria and measures to be displayed can be saved (logged in only)

The screenshot shows the Sonar Measures page. At the top, there is a navigation bar with links for Dashboards, Projects, Measures, Issues, Rules, Quality Profiles, and Quality Gates. Below this, the 'Measures' section is active, with a 'New Search' button. The search criteria are set to 'Components: Projects, Sub-proje...' and 'Name contains: AOFR'. There is an 'Add Column' button and a dropdown menu. The table below shows the results of the search, with columns for 'QG', 'NAME', and 'NOMBRE DE FLOWS SERVICE DU PROJET'. The table contains three rows of results, each with a folder icon and a name. The first row is 'Audit AOFrmk\_Utilities', the second is 'Audit Java AOFrmk\_Utilities', and the third is 'Audit Webmethods AOFrmk\_Utilities' with a value of 26. At the bottom, it says '3 results'.

QG	NAME	NOMBRE DE FLOWS SERVICE DU PROJET
	Audit AOFrmk_Utilities	
	Audit Java AOFrmk_Utilities	
	Audit Webmethods AOFrmk_Utilities	26