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Metrics Guidelines

Latest approved version of these guidelines

EMI_SA2_Metrics_v_1_0.pdf

Introduction

The guidelines below explain:

1. **Process related metrics:** The flow of information from the bug-trackers into ETICS to obtain bug-tracking related metrics. This information is provide primarily to each middleware contact dealing with the bug-tracker. See contact list below.
2. **Software related metrics:** The static analysis software related requirements to configure the metrics software. This information is required by each product team.
3. **GGUS related metrics:** Liaising with the GGUS people to obtain 3rd level incident metrics (2 of which relate to the KPIs in DoW)

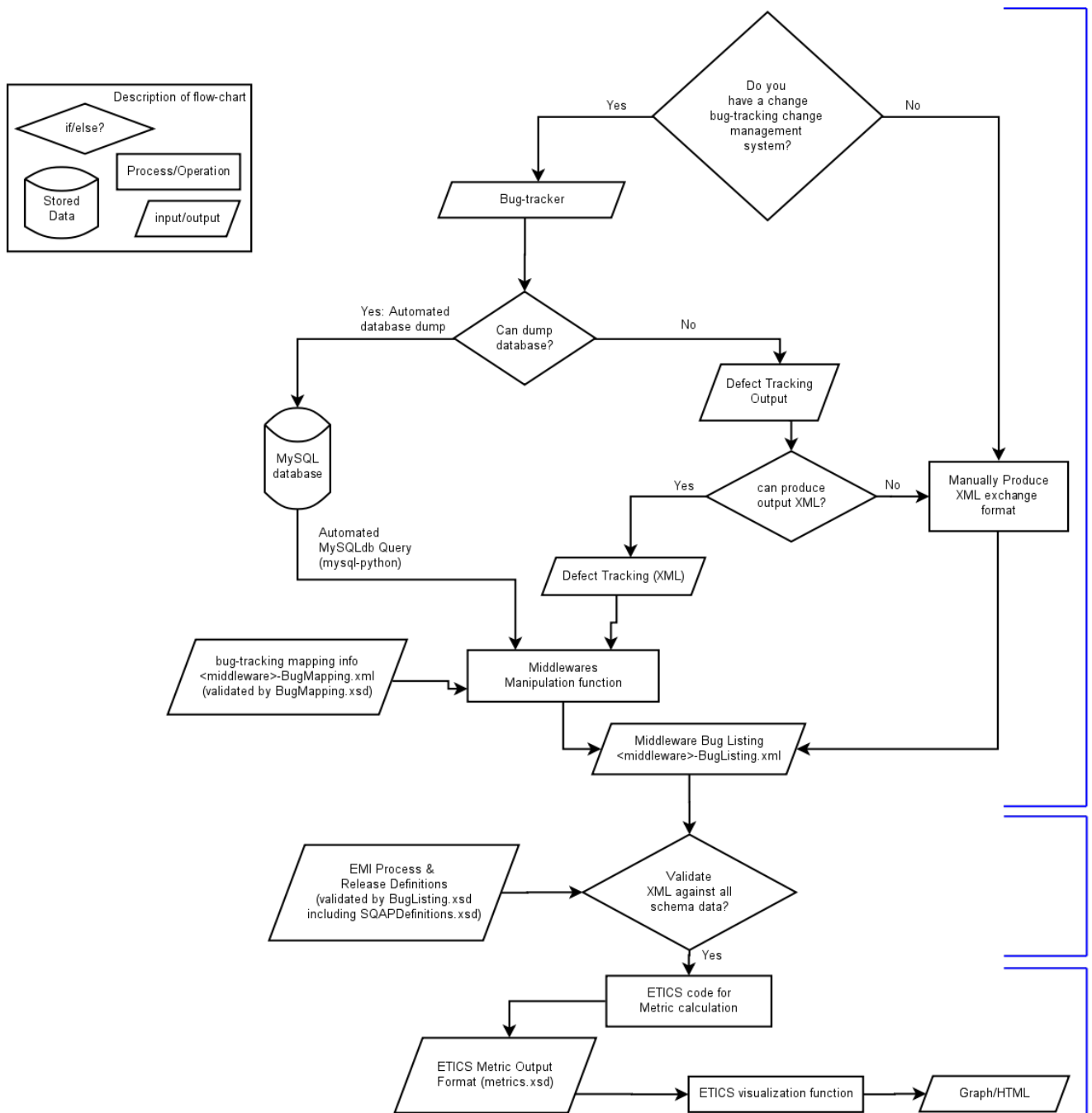
The metrics formulas are described in the Software Quality Assurance Procedure (SQAP) plan. For a fuller description including questionnaires, all metrics in the SQAP, optional metrics, McCall Quality factors, XSD and XML examples, see the internal reference document.

Process related Metrics

In EMI, a number of different bug trackers exist. Each of them extract the metrics in a different way, but all of them must return the results following the same XML format, so that the information per bug tracking ticket can be interpreted and visualised within the ETICS system.

How to obtain bug trackers metrics

The flow of information from the bug-tracker to ETICS required XML format is described below:



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and Vis
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XML Schema: Different Bug-tracking Information presented Uniformly

Schema's, XML examples and conversion scripts (under development)

A subversion repository is viewable at: <https://svnweb.cern.ch/trac/emisa2/browser/metrics/trunk> or can be checked out using:

```
svn co http://svnweb.cern.ch/guest/emisa2/metrics
```

First Steps to Producing a Uniform Framework

Each middleware should primarily concern themselves in the first instance with how to form the

```
<middleware>-BugMapping.xml conforming to BugMapping.xsd
```

and:

```
<middleware>-BugListing.xml conforming to BugListing.xsd
```

Both of these XSD's and corresponding XML files (produced per middleware) conform to the request for change guidelines in the software quality assurance plan (SQAP). Each XML file must be returned to the metrics group for validation and syntax checking. Please send to emi-sa23@eu-emiSPAMNOT.eu.

Validation of Per Middleware Scripts


The `<middleware>-BugMapping.xml` should be visualised using `main-BugMapping.py`, typing the name of the middleware into The `<middleware>-BugListing.xml` should be validated using `xmllint` as in the example:

```
validateAll.sh
```

Persistent Bug-Tracking Collection

Please send a URL to emi-sa23@eu-emiSPAMNOT.eu to specify where your `<middleware>-BugListing.xml` can be obtained on a daily basis.

Software related metrics

 Work in Progress: Needs more input from SA2.4 to provide product teams with a mechanism to correctly produce metric reports with each ETICS build report.

ETICS plugin information

Information about ETICS plugins:

<https://web.infn.it/etics-support/index.php/component/content/category/22-the-plugin-framework>

The structure for software related metrics currently used in the ETICS system is: `MetricsSchema`. The template is available on that page and also here (ETICS CVS link): `metrics.xsd`

Using ETICS metrics

To enable ETICS plugins, you have to append to the requirements this: `-p default.profile=pluginName`

Examples:

- `-p default.profile=ipv6, wsi`
- `-p default.profile=ckjm, aqcm, pmd, checkstyle`

The results of the metrics generation can be found inside the report, in the main links column in the left of the page, as a new entry called "Metrics":

Home
Logs
Package List
Metrics



Module Summary

Project name: org.etics
Module name: org.etics.build-system
Description: Multinode finished
Version: 1.7.3
Release: 1
Vendor: ETICS
License:

Execution Summary

Result: **Success**
Success rate: 100% (26/26)
Start time: 04/08/2010 15:17:40
End time: 04/08/2010 15:39:22
Duration: 00:21:42
Configuration: etics-build-system_R_1_
Tag:
VCS Root: :pserver:anonymous@et
/etics
Platform: sl5_x86_64_gcc412
Build host: lxb7972.cern.ch

ETICS Commands

Get project: etics-get-project
org.etics
Checkout: etics-checkout --config
etics-build-
system_R_1_7_3_1
--project org.etics
--project-config
etics_int
--forcecheckout
--continueonerror
org.etics.build-system

Environment Properties

ANT_HOME: /opt/ant
PYTHONPATH: /home/cor
/dir_6627/
g.etics.bui
framework
c
CLASSPATH: /opt/junit/
/opt/junit/

GGUS related Metrics

Still under discussion with the GGUS team. 2 of 4 metrics are currently calculable already in GGUS.

Contacts

General Metrics Related Enquiries	Contact info: emi-sa23@eu-emiSPAMNOT.eu
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Involvement	Name (Institution)	Contact Information	Reason for Involvement
Lead:	Eamonn Kenny (TCD)	Contact info: EamonnKenny	SA2.3 Metrics Definitions
Participants:	Gianni Pucciani (CERN)	Contact info: GianniPucciani	SA2.3 Metrics Definitions
	Andres Abad Rodriguez (CERN)	Contact info: AndresAbadRodriguez	SA2.4 Metrics Schema's
	Lars Barlindhaug (CERN)	Contact Info: Lars.Barlindhaug@cernSPAMNOT.ch	SA2.4 Metrics Visualisation
	Christian Bernardt (DESY)	Contact Info: christian.berhardt@desySPAMNOT.de	dCache bug-tracking contact point
	Anders Waananen (NBI)	Contact Info: waananen@nbiSPAMNOT.dk	ARC bug-tracking contact point
		Contact Info: m.carpen@cinecaSPAMNOT.it	

Michele Carpena (CINECA)		UNICORE bug-tracking point
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References

Document Repository:	https://svnweb.cern.ch/trac/emisa2/browser/metrics/trunk/doc
Metrics Internal document:	https://svnweb.cern.ch/trac/emisa2/browser/metrics/trunk/doc/Metrics-Report-v0.29.docx
Last Document Update:	2nd November 2010

This topic: EMI > EmiSa2MetricsGuidelines

Topic revision: r22 - 06-Dec-2010 - 14:41:37 - EamonnKenny



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