

OpenNMS Community Welcome Guide

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Contents

Contents

Contents			2
1	Gett	ing Started with the OpenNMS Community	3
2	What is OpenNMS?		
	2.1	OpenNMS Principles	3
	2.2	OpenNMS Projects	4
	2.3	Release Process	4
		2.3.1 Planning	$\overline{4}$
		2.3.2 Developers Conference	$\overline{4}$
		2.3.3 JIRA	$\overline{4}$
		2.3.4 Implementation	5
		2.3.5 Quality Assurance	5
		2.3.6 Release	5
	2.4	Governance	5
	2.1	Governance	0
3	The	OpenNMS Foundation	5
4	Оре	nNMS Community	6
	4.1	OpenNMS Developers	6
		4.1.1 JIRA ID	6
		4.1.2 Licensing	6
		4.1.3 Core Principles	6
		4.1.4 Get the Code	7
		4.1.5 Bugs	7
		4.1.6 Other good resources for developers	7
	4.2	Documentation	7
		4.2.1 Contribute to Documentation	8
	4.3	OpenNMS Ecosystem	8
		4.3.1 Sponsor the OpenNMS Foundation	8
		4.3.2 Individual Member of the Foundation	8
	4.4	Other userful tools	8
		4.4.1 Questions and Answers (ask.opennms.eu)	8
		4.4.2 Wiki	8
		4.4.3 Bug Reporting	9
		4.4.4 Keeping in touch	9
		4.4.5 Mailing Lists	9
_	0		
5	Ope	nNMS Events	11
6	•	- 3	11
	6.1	01 0	11
	6.2	9	11
	6.3	9	11
	6.4	Help Contents	11

1 Getting Started with the OpenNMS Community

Welcome to the *OpenNMS community* - the place of the world's first enterprise grade network management platform developed under the open source model. This document is meant for anyone interested in learning about *OpenNMS*. It is intended for new community members to give the information you are looking for to get started. In this document you will also learn the way how the development process works, which kind of people are involved and the basic "rules" of our community. If you have additional questions, please contact our mailing list opennms-discuss@lists.sourceforge.net. You can subscribe to the list at https://lists.sourceforge.net/lists/listinfo/opennms-discuss

2 What is OpenNMS?

OpenNMS is a network management platform to give you the ability to solve problems in the FCAPS¹ categories. The application gives you access to the management data through a web interface. The OpenNMS project is a collaboration of developers and network management specialists around the world, aiming to produce an open standard for a network management platform. The project aims to deliver a solution for all types of network management issues, massively scalable and feature-rich. The technology consists of a series of interrelated programs delivering various components for a cloud infrastructure solution.

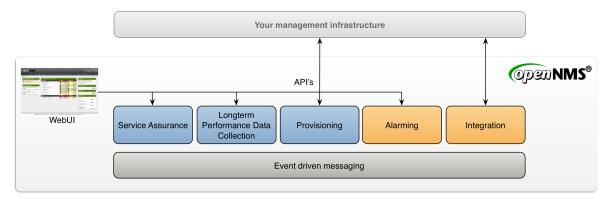


Figure 2.1: OpenNMS parts and principles

The platform of *OpenNMS* today provides a platform for long term performance data collection, service assurance and integration points for your management infrastructure.

2.1 OpenNMS Principles

• Open development model: The entire code of *OpenNMS* is freely available under GNU Public License Version 3².

¹ISO Telecommunications Management Network model and framework for Fault, Configuration, Accounting, Performance and Security categories

 $^{^2\}mathrm{GPLv3}$ license: http://www.gnu.org/copyleft/gpl.html

- Open development process: Every year the development community holds a developers' conference to gather requirements and write specifications for the upcoming release.
- Open community: *OpenNMS* is dedicated to producing a healthy, vibrant, and active developer and user community. Most decisions will be made using a "lazy consensus" model.

2.2 OpenNMS Projects

Network management has many different aspects of integration. Developing integrations against configuration management databases or vendor specific management architectures are common challenges. Otherwise there are also technology-specific topics, like different strategies to store and use time series data. All these different integrations projects are developed in the public git repository hosted at https://www.github.com/opennms.

2.3 Release Process

OpenNMS is currently on a ???-month release cycle, which consists of x-many stages. Details on http://www.opennms.org/ReleaseCycle.

2.3.1 Planning

Do we have a kind of a planning phase to decide which of the features come into a next release? Discussion, feedback to focus on the next release and lightweight spec writing.

2.3.2 Developers Conference

The OpenNMS Group, Inc. sponsors a developers' conference every year - DevJam. This conference brings all core developers and community members together to work on the project. The conference is also used to discuss concepts around the project. We track DevJam topics in our wiki, which can be found at http://www.opennms.org/wiki/Dev-Jam.

2.3.3 JIRA

OpenNMS uses Atlassian JIRA to track issues and for development planning. The development follows the agile Scrum development process. Features are described as stories and will be developed in sprints. Details how we use JIRA for the development process are documented at http://www.opennms.org/wiki/???

2.3.4 Implementation

The implementation stage is split into a number of milestone iterations. The work in progress is published in a feature branch, which should then be proposed for merging when ready. Code is proposed several weeks before each milestone release date so that it can be reviewed in a timely manner. Is it that way?!

2.3.5 Quality Assurance

For quality assurance we use Atlassian Bamboo as continuous integration system³. It is publicly available on http://bamboo.internal.opennms.com:8085. Bamboo compiles and runs tests for feature- and master branches. Additionally, we use SonarQube⁴ for statistic code analysis. Where-is-the-URL-to-Sonar-I-dont-know?!. There are also branches intended to fix bugs, which means that they do not introduce new features. These branches are named after the JIRA issue following the pattern NMS-{issue-number}. Builds are automatically triggered with committing to a feature- or master branch.

2.3.6 Release

Before a stable version is released, we have a release candidate freeze (RCF). This happens a x-days/weeks/months before an actual Release Day - do we have one?!. OpenNMS releases are numbered using the YYYY.N time based scheme (our detailed scheme here, I have seen we changed with Bamboo our release scheme a bit.). For example, an example follows here. The release is identified using a codename. Code names are Is there a pattern for our code names? Code names are chosen by people in the IRC channel or whatever:) More details on https://www.opennms.org/wiki/Release_Naming???.

2.4 Governance

The OpenNMS project is governed by your group here - OGPs + OpenNMS Group?!. Some ideas how OpenStack organized it, Foundation board of directors, technical committee, user comittee and a wiki page http://wiki.openstack.org/Governance/Foundation/Bylaws

3 The OpenNMS Foundation

The OpenNMS Foundation Europe e. V. (OFE) promotes the development, usage and adoption of the network management platform OpenNMS. The OFE organizes conferences and trainings and acts as an advocate for free open source software. The OFE initiates software development

³Open Source Licensed, https://www.atlassian.com/software/bamboo

⁴SonarQube website: http://www.sonarqube.org/

and studies which are made available to the public under the GPL or a suitable successor. The goal of the OFE is to build and establish an ecosystem by providing a set of shared resources, provide a place for users to share, enable technology vendors targeting the platform, assist developers to build the best free network management platform in the industry. The statutes of the foundation can be found at http://www.opennms.eu/statutes/ (in German). You can join the foundation on http://www.opennms.eu/membership/. Members are expected to participate in the OpenNMS community through technical contributions or community building efforts.

4 OpenNMS Community

In *OpenNMS* we have a global community consisting of developers, corporations, service providers, researchers and users.

4.1 OpenNMS Developers

4.1.1 JIRA ID

Atlassian JIRA is the "home" for the project management and its developers: create a JIRA ID on http://issues.opennms.org/secure/Signup!default.jspa if you don't have one already. You'll need it to report bugs, issues or enhancements.

4.1.2 Licensing

If you are a developer interested in contributing to the OpenNMS project you will need to sign the *OpenNMS Contributor Agreement (OCA)*. If you are contributing on behalf of a company, an authorized representative of your company should also sign the *OCA*. You find the instructions and the agreement on http://www.opennms.org/wiki/Contributor_Agreement.

4.1.3 Core Principles

Familiarize yourself with *OpenNMS* principles:

- 1. What "Open" means http://wiki.openstack.org/Open
- 2. Design tenets http://wiki.openstack.org/BasicDesignTenets
- 3. Coding standards http://wiki.openstack.org/CodingStandards
- $4. \ \ The \ release \ cycle \ \texttt{http://wiki.openstack.org/ReleaseCycle}$
- 5. The OpenStack branch model http://wiki.openstack.org/BranchModel

4.1.4 Get the Code

The source code is hosted on GitHub on https://github.com/opennms. Code contributions can be merged into OpenNMS with $pull\ requests$. The workflow to get your source code into OpenNMS is shown in picture 4.1 on page 12.

4.1.5 Bugs

Bugs can be a good place to get your coding feet wet. The bugs confirmed and triaged that should be simple to tackle are tagged 'low hanging fruit' https://bugs.launchpad.net/openstack/+bugs?field.tag=low-hanging-fruit - THIS IS NICE

4.1.6 Other good resources for developers

- Development Mailing List: https://lists.sourceforge.net/lists/listinfo/opennms-devel
- IRC #opennms on Freenode http://webchat.freenode.net/
- Project meetings held publicly on IRC, Google Hangouts, other ideas?!

4.2 Documentation

- Getting Started Get up and running quickly with *OpenNMS* you can use *VirtualBox*⁵ and *Vagrant*⁶ which is documented on http://www.opennms.org/wiki/OpenNMS_and_Vagrant_with_VirtualBox.
- Install on *OpenNMS* on *Debian/Ubuntu* is documented on http://www.opennms.org/wiki/Installation:Debian
- Install on *OpenNMS* based systems on *CentOS/RedHat* is documented on http://www.opennms.org/wiki/Installation:Yum
- General installation documentation can be found on http://www.opennms.org/documentation/installguide.html
- LINK to operational documentation
- LINK to developer documentation
- LINK to API documentation on the RESTful APIs provided by OpenNMS
- Link to glossary with a list of terms and their definition

⁵VirtualBox web site: https://www.virtualbox.org/

⁶ Vagrant web site: http://www.vagrantup.com/

4.2.1 Contribute to Documentation

At the core of OpenStack is the community and collaboration that we do - the same rules for the code apply to documentation too. Ideally any code contribution that is merged into the base has documentation to go with it. Anne Gentle is the coordinator for all documentation efforts, both community-based and "official" docs. The page http://wiki.openstack.org/Documentation/HowTo describes the methods we use to create the basis for world-class documentation for OpenStack developers and users. A GUESS WE DONT HAVE SOMETHING

4.3 OpenNMS Ecosystem

A robust ecosystem is essential to *OpenNMS's* success. There are several ways your company can join this growing and vibrant ecosystem.

4.3.1 Sponsor the OpenNMS Foundation

Organizations can apply to become new members. You can join as an individual or as a company member. Details on membership can be found on http://www.opennms.eu/membership.

4.3.2 Individual Member of the Foundation

Any person can join the *OFE*. As an individual member you can get active in the *OpenNMS* community as a user, developer, business person, art maker, or however else you want to contribute.

4.4 Other userful tools

4.4.1 Questions and Answers (ask opennms eu)

The place where people can ask questions and give answers about *OpenNMS* deployments, operations and development is http://ask.opennms.eu.

4.4.2 Wiki

A lot of good information on getting started with the *OpenNMS* project can be found in the wiki. The search function in the upper right hand corner of the wiki is very powerful and searches both by title and content. The wiki entry can be found at http://www.opennms.org/wiki/Main_Page. In the left navigation menu you can also find links to official documentation, white papers and FAQs.

4.4.3 Bug Reporting

The *OpenNMS* community appreciates testers and their feedback. To report a bug you must first sign up for a *JIRA* account. Check that the bug you found has not already been reported by searching *JIRAs* bugs list: http://issues.opennms.org. In the top menu *Issues*, you can use *Search for Issues* in the project *OpenNMS* with *Type: Buq*.

If you found a new bug, fill out a bug report:

- Give a clear, concise summary.
- Provide as much detail as possible in the description. Paste in your command output or stack traces, link to screenshots, etc.
- Be sure to include which version of the software you are using. This is especially critical if you are using a development or unstable branch.
- Add information about your Java environment which is used by OpenNMS. You can find it in the configuration java.conf in your OpenNMS configuration directory and by running java -version
- Any deployment-specific info is helpful as well. Example: Ubuntu 10.04, which version of PostgreSQL, JRobin, RRDtool, store-by-group- or store-by-foreignsource settings.

4.4.4 Keeping in touch

- Twitter: @opennms
- Blogs of users and developers: http://planet.opennms.org/
- Developers hold real-time discussions at Internet Relay Chat (IRC). Channel #open-stack on Freenode (http://webchat.freenode.net via browser client)
- YouTube Channel with videos from conferences: http://www.youtube.com/user/opennms
- Last conference material and slides from OUCE 2013: http://ouce.opennms.eu/en/ouce2013/public/events

4.4.5 Mailing Lists

The project runs many mailing lists. All our important mailing lists can be found on the wiki page http://www.opennms.org/wiki/Mailing_lists. The most used traffic is on the lists opennms-discuss, opennms-install and opennms-devel. The list opennms-announce is meant to be a low traffic list.

The OpenNMS Group, Inc.

The OpenNMS Group, Inc. is the biggest sponsor of the project. The software itself is licensed under GPLv3+. The company *The OpenNMS Group*, *Inc.* provides professional support and gives those people a place who want to spend significant time of their life to the project. Code development in commercial environment is reflected as a code contribution to the free software project. Besides code contribution, there are other topics like packaging and continuos integration which is also provided publicly to the project.

Order of the Green Polo

The Order of the Green Polo (OGP) is the super secret brotherhood of developers of the *OpenNMS Project*. You can recognize and *OGP* member by their good looks as well as their super-flashy, very coveted *OpenNMS Green Polo*. As Tarus Balog said:

Back in fall of 2004, I wanted to find a way to recognize those people who make *OpenNMS* what it is, and to thank them in some fashion. Ever since the advent of "business casual" workplace attire, the "logo" polo shirt has become a fixture in IT departments around the world. We sell black and white polos with the *OpenNMS* logo on our web site.

But this is much, much, much, different. These are "green" polos, very rare, and they will never be available for sale. Think of them as equivalent to winning *The Masters* golf tournament's green jacket - only harder to get. In order to get one, all one has to do is give up all hope of having a life outside of *OpenNMS*, work long hours for free, and basically become a closed superhero, squashing bugs (or uncovering existence) in a single bound.

OpenNMS Foundation Europe

The OpenNMS Foundation Europe e.V. (OFE) was founded on July 31st, 2012. OFE is a registered non-profit organization in Germany. The objective of the organization is to promote, develop, educate and research around free software and network (management) technologies, especially OpenNMS. To do this, the OFE organizes the OpenNMS User Conference Europe (OUCE) run by foundation members and volunteers. The OFE web site with links to material of the conference can be found at http://www.opennms.eu.

5 OpenNMS Events

- 6 OpenNMS Wiki Layout
- 6.1 Starting page
- 6.2 Recent Changes
- 6.3 Find Page
- 6.4 Help Contents

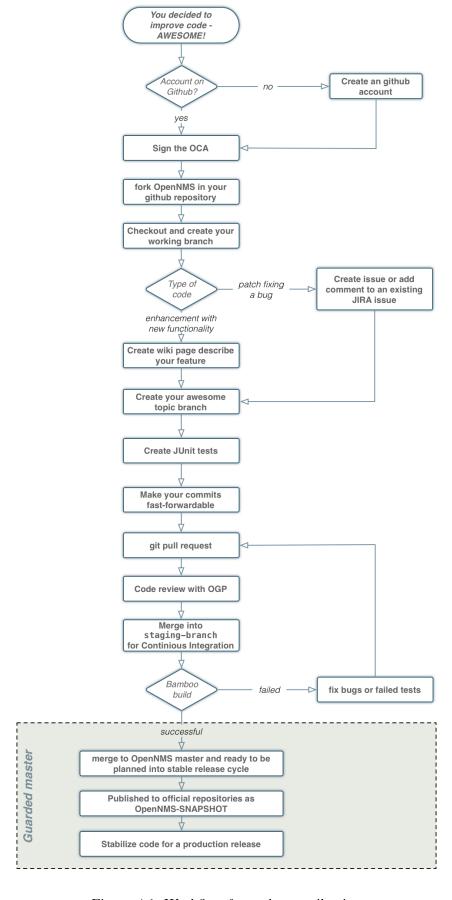


Figure 4.1: Workflow for code contribution