Keeping on Trac

Managing the Operational Process

System Administrators Mini Conf Linux.Conf.AU 2009 Hobart Australia

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Keeping on Trac

Why I don't use Post It Notes. Documentation that doesn't suck. Keeping managers off my back. Not bugging my team. Hassle free holidays.





- Introduction to Trac
- Trac Concepts
- Tips and Tricks
- Example Environments



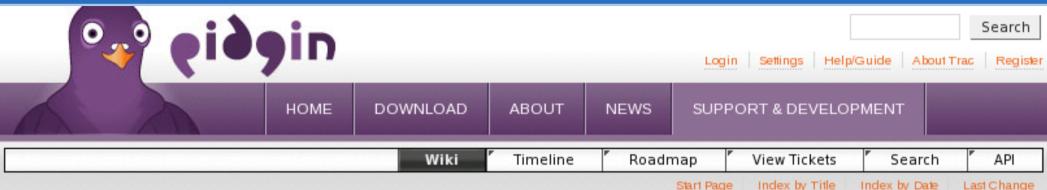
What is Trac?

- Lightweight web based project management framework
- Open Source -
 - Modified BSD License



- Developed at http://trac.edgewall.com
- Widely used by a variety of Open Source projects





Pidgin, Finch, and libpurple

Pidgin is a graphical IM program that lets you sign on to AIM, Jabber, MSN, Yahoo!, and other IM networks. It uses GTK+. It was formerly called Gaim.

Finch is a console-based IM program that lets you sign on to AIM, Jabber, MSN, Yahoo!, and other IM networks. It uses neuroes. It was formerly called Gaim-text.

libpurple is a library used for developing IM programs. See What is libpurple? for more information.

For Users

Help 🛾

- Frequently Asked Questions Look here first!
- Using This Site
 - o Tips for Bug Reports You must be logged in to submit bug reports!
 - Get a Backtrace Follow these directions to help us debug crashes.
- Using Pidgin







About Screenshots Downloads Documentation End-user docs Technical docs Contribute Community

VirtualBox

Login Settings Register

search... Help/Guide

Welcome to VirtualBox.org!

VirtualBox is a family of powerful x86 virtualization products for enterprise as well as home use. Not only is VirtualBox an extremely feature rich, high performance product for enterprise customers, it is also the only professional solution that is freely available as Open Source Software under the terms of the GNU General Public License (GPL). See "About VirtualBox" for an introduction.

Presently, VirtualBox runs on Windows, Linux, Macintosh and OpenSolaris hosts and supports a large number of guest operating systems including but not limited to Windows (NT 4.0, 2000, XP, Server 2003, Vista), DOS/Windows 3.x, Linux (2.4 and 2.6), and OpenBSD.

VirtualBox is being actively developed with frequent releases

News Flash

New June 06, 2008 VirtualBox 1.6.2 released!

Sun today released VirtualBox 1.6.2, a maintenance release. See the ChangeLog for a list of changes since VirtualBox 1.6.0.

New May 2, 2008 VirtualBox 1.6 released!

The first major release since being acquired by Sun Microsystems is now available. Version 1.6 has new Mac and Solaris host platform support, new high performance virtual devices, improved scalability and Web Services. Get it now, Get it



Operational Management

Our Needs

- Move beyond Post-it notes
- Prioritise work
- Document process and procedure
- Management visibility
- Reporting
- Version Control

Potential Solutions

- Bugzilla
- Trac
- Redmine
- Jira/Confluence



Why Trac?

- Provides an integrated approach to managing a project or team
- Key features -
 - Ticketing for tasks and bug tracking
 - Documentation via searchable simple to use Wiki
 - Version control with strong support for Subversion
 - All sections can reference each other
- Simple to install, configure, manage and use



Key Trac Concepts

- Trac is much more than a bug tracker
- Use Trac to capture even the most mundane administration tasks
 - Office stationary or equipment orders
 - Change of phone or ISP plan
 - RMA of failed hardware
- Focus is on a single project rather than a series of projects
 - For OpenMedia our company is the project
- Multiple projects off a single install
 - Easy to host a series of projects on a single system



Trac Front Page

integrated SCM & Project Management				Login Prefe	rences Help/Guide	Search About Trac
	Wiki	Timeline	Roadmap	Browse Source	View Tickets	Search
				Start Pag	e Index History	Last Change

Welcome to Trac 0.11

Trac is a **minimalistic** approach to **web-based** management of **software projects**. Its goal is to simplify effective tracking and handling of software issues, enhancements and overall progress.

All aspects of Trac have been designed with the single goal to **help developers write great software** while **staying out of the way** and imposing as little as possible on a team's established process and culture.

As all Wiki pages, this page is editable, this means that you can modify the contents of this page simply by using your web-browser. Simply click on the "Edit this page" link at the bottom of the page. WikiFormatting will give you a detailed description of available Wiki formatting commands.

"trac-admin yourenvdir initenv" created a new Trac environment, containing a default set of wiki pages and some sample data. This newly created environment also contains documentation to help you get started with your project.

You can use trac-admin to configure \Rightarrow Trac to better fit your project, especially in regard to *components*, versions and milestones.

TracGuide is a good place to start.

Enjoy!



Trac Timeline

i trac					
Integrated SCM & Project Management					Search
integrated sew & roject management	logged in as stev	e Logout F	Preferences	Help/Guide	About Trac
Wiki Timeline Roadmap Browse So	ource View Tick	ets New	/ Ticket	Search	Admin
Timeline					Next Period →
06/27/08:Today				anges from 06	
 15:35 Ticket #2 (Implement requirement D1 of UberProduct) Refer to AlphaRequirements 15:32 Ticket #1 (Setup SVN environment) created by steve 	-		Rej V Mil	days back ket changes pository checkin lestones ki changes	
Create initial directory structure for our Subversion environme 15:28 AlphaRequirements created by steve	nt		j₂ Wi	ki changes	Update
15:27 UberProduct edited by steve (diff)					
15:26 UberProduct created by steve					
15:09 CamelCase created by trac					
15:09 InterMapTxt created by trac					
15:09 InterTrac created by trac					
			Ope	nMe	edia

Trac Roadmap

trac		
Integrated SCM & Project Management		Search
- Integrated sent a risjett management	logged in as steve Logout Pref	erences Help/Guide About Trac
Wiki Timeline Roadmap	Browse Source View Tickets New Tic	ket Search Admin

Roadmap

Milestone: Alpha Release of Uber Project	Show already completed milestones	
Due in <mark>5 weeks</mark> (08/04/08)	Update	
Needs to meet all of the specifications for UberProduct defined under AlphaRequirements		

Milestone: Beta 1 of UberProduct

Due in 3 months (10/01/08)

Must hit the first beta by 1st October if UberProduct is to make it into the shops for Christmas

Add new milestone





Trac Tickets

- Capture all of your work items.
- Reasonably standard set of fields
 - Type e.g. defect, enhancement or task
 - Component The project module or subsystem
 - Priority The importance of this bug, task etc.
 - Milestone Based on Roadmap entries
 - Assigned to Principal person responsible for ticket
 - Summary Single line brief description of the ticket
 - Description Make use of TracWiki syntax



Trac New Ticket

coperties Summary: Setup initial Apache environment required for Project Purple Reporter: steve Description: B I A B E - 1 + Create a secure virtual apache host on our test server called pptest	
Summary: Setup initial Apache environment required for Project Purple Reporter: steve Description: B I A I I I	
Reporter: steve Description: B I A S E - 1 →	
Description: $B I A \otimes B - 1 \rightarrow$	
The create a secure wirtual anache heat on our test secure called intest	
Reference [wiki:"ProjectPurple/PhaselRequirements"] for specification and <u>SSL</u> Certificate details	
Assign to: Type: task	
Priority: major 🛟 Milestone: Alpha Release of ProjectPurple 🛟	
Component: Webserver 🗘 Version:	
Keywords: Cc:	

Trac Completed Ticket

	" Wiki	Timeline	Roadmap	Browse Source	logged in as steve View Tickets	New T	eferences Ticket	Help/Guid Search	Admin
icket #4 (new	task)						← Prev	ious Ticket	Next Ticket
Setup initial Ap	ache environm	ent require	d for Project	Purple	Opened 84 second Last modified 0 se				
Reported by:	steve		Owned by	y:	steeve				
Priority:	major		Milestone	e 1	Alpha Release of Projecti	Purple			
Component:	Webserver		Version:						
Keywords:			Cc:						
Description (last mod	ified by steve) (diff)								
Create a secure v	virtual apache ho	st on our tes	t server called	pptest for Pro	ojectPurple.	Reply			
Reference Project	Purple/Phase1Re	equirements	for specificatio	on and SSL Ce	rtificate details				
Reference frojeci	a a picy i haberia	quiremento	for specification						



Version Control

- Doesn't have an integrated version control tool.
- Leverage's Subversion
- Support for other Version Control tools in development http://trac.edgewall.org/wiki/VersioningSystemBackend
- Excellent web based browser and diff tool for Subversion



Trac Installation

Number of on-line guides

http://trac.edgewall.org/wiki/TracInstall http://trac.edgewall.org/wiki/TracInstallPlatforms

Install guide from OSDC 2008

http://www.openmedia.co.nz/openmedia/presentations/osdc/

 Usable environment, complete with version control, in under 30 minutes



Trac Administration

- Excellent documentation provided by edgewall
- Command line management via trac-admin tool trac-admin help
- First create your new Trac environment

trac-admin /var/trac/MyProject initenv

 Now add Subversion as a component managed by a team member

trac-admin /var/trac/MyProject component add \
 Subversion steve



Trac – User Management

- Define your team or company structure
- Assign permissions to groups, and then assign your team members to those groups.
- Trac 0.11 has a web admin interface
 - Available as a plug-in for the 0.10 series.
- Create an admin account

trac-admin /var/trac/MyProject/ permission add \
steve TRAC_ADMIN

Covered in detail at

http://trac.edgewall.org/wiki/TracPermissions



Tips and Tricks

- How can we make the best use of any project management tool?
- Focus is on Trac, but could be applied to other tools such as
 - bugzilla
 - launchpad
 - Redmine
 - Jira



Use Trac to Set-up Trac

Document the set-up of your Trac and Subversion environment

Ticket #1 (new task)

Reported by:	steve	Assigned to:	steve
Priority:	critical	Milestone:	
Component:	subversion	Version:	
Keywords:		Cc:	
Description			Re



Ticket Types and Components

- Default Types are development focused
 - Defect, enhancement and task
- Default Components are simple examples and should be replaced
- Components allow auto assignment of new tickets to team members
- Effective use means simple reports can be easily generated



Sample Types and Components

Additional useful Types might be

- Project
- Change Request
- Service Order
- New User account
- Components might be specific applications, or different customers
 - Authentication
 - System Monitoring
 - Trac



TracLinks and WikiMacros

- TracLinks allows seamless linking between tickets, wiki and subversion
 - Wiki pages should use CamelCase where possible or [wiki:Page] where this isn't appropriate
 - Reference tickets via #number or [ticket:number]
 - #27 or [ticket:27]
 - Ref subversion change sets by revision number
 - r21 or [changeset:21]
 - You can link to a specific location with your Subversion repository via source:/path e.g.

[source:/trunk/project/documentation/Readme]

- WikiMacros extend Trac's core engine
 - [[PageOutline]] Table of contents based on headings
 - [[Image]] Layout control of images

Subversion post-commit hook

- Highly recommend development teams to utilise the trac-post-commit-hook add-on
- Installation details covered in the Trac FAQ http://trac.edgewall.org/wiki/TracFaq
- Auto-updates Trac tickets by using a simple syntax in Subversion commit messages
 - closes #ticket Marks ticket closed with comment
 - refs #ticket Just adds comment to ticket



post-commit-hook example

Updating the Apache configuration files in SVN

Apache configuration for additional ProjectPurple virtual instance, refs #57, closes #91.

This commit will update 2 tickets

- #91 will be closed, with the comment text and a reference to the subversion commit.
- #57 will get the commit text and a reference to the subversion commit.



Never commit without a ticket

- If you are doing any version control updates that don't reference or close a ticket you aren't making the best use of Trac
- Even simple tasks can benefit from capturing the process of performing the work
- Use the post-commit-hook



Version more than your code

- Avoid poor document management standards Design Document rev57a(steve's copy).doc
- Subversion is less than ideal for binary formats
 - Do you have a document management solution?
- Tickets can track work on documents -
 - Who were all of the contributors?
- You can refer to older document revisions

Please reference [source:/trunk/docs/design.doc@57 design doc] revision 57 as an example of how not to write documentation



I'm not a coder!

All sysadmin's code

- Shell scripts
- Perl scripts

Manage configuration data

- Webserver
- DNS
- Puppet/CFEngine
- Firewall settings
- Managing Trac for other departments



Example Environments

- Operational Team
- Development Team(s)
- Managing your business
- Multiple Projects



Operational Team

Roadmap

- Milestone for each large scale deliverable or project
- Capture large bodies of work
- Sets time frames

Documentation

- Living artefacts
- Can be referenced from tickets
- Use closed tickets to update
- Version Control
 - Management scripts
 - Settings



User Management

- Any sensitive information?
- Read only access of Wiki for non sysadmin team members?
- Ticket Types
 - Project
 - Bug
 - Testing
 - Change Request
 - Release sign off

Operational Components

Ticket Components

- Core Infrastructure
 - Server or site based grouping
 - Firewall, network and voice
- Managed Middleware
 - Webservers Apache / IIS / lighthttpd
 - Databases MySQL, Postgresql, Oracle
 - Java Websphere, Jboss, Tomcat
- Operational Tasks
 - User Management
 - Security
 - Patching
- Customers
 - Who are you delivering to?



Development Team

Roadmap

- Milestone for each large scale deliverable or project
- Capture large bodies of work
- Sets time frames
- Wiki for key documentation
 - [[InterTrac]] and [[InterWiki]]
- Version Control
 - Code
 - Settings



User Management

- Fine grained control of code repository?
- Read only access of Wiki for non development team members?
- Ticket Types
 - Project
 - Bug
 - Testing
 - Change Request
 - Release sign off

Development Components

Web Focused Ticket Components

- Core products
 - Website
 - E-commerce engine
 - B2B layer
- Sub or re-used components
 - XML-RPC, SOAP, REST
 - Credit card clearing
 - Images and branding
- Third party code/libraries
 - Log4j, xerces
- Development infrastructure
 - Tools
 - Middleware



Business Management

Roadmap

- Capture each financial quarter
- Focus on major business goals
- Documentation
 - Living artefacts
 - Easily searchable
- Version Control
 - Sufficient document management solution?
- User Management
 - Any sensitive information?
 - Restricted access?



- Approval
- Orders

Ticket Components

- Departments
 - HR
 - Accounting
 - Marketing
- Tasks
 - Salary
 - Stationary
 - Invoicing
 - Leave Request



Bringing it all together

SMB

- Single Trac environment
 - appropriate ticket types and categories

SME

- Multiple Trac environments
 - Office Admin
 - Operational Group(s)
 - Development Group(s)

Enterprise

- Consider alternative large scale tools
 - Redmine
 - Jira / Confluence
- Trac still fits within niche groups

The not so good

Relatively few niggles

- Administration
 - 0.11 release has integrated the TracAdmin plug-in
 - Permission model needs improving
 - Can't have public and private wiki sections
 - Customer or public tickets and internal tickets.

Ticket Assignment

- Cannot auto assign to a group or team
- Work flow
 - Small improvements in 0.11
- Inconsistencies



Some have been resolved in 0.11



Links and References

Edgewall

- http://www.edgewall.org/
- http://trac.edgewall.org/
- TracHacks
 - http://trac-hacks.org/wiki/TracHacks
- Mylyn
 - http://www.eclipse.org/mylyn/
- Redmine
 - http://www.redmine.org/
- OpenMedia
 - http://www.openmedia.co.nz





