

Applying Configuration Management to a Legacy Project

NLIT 2007

Mike Mikus

Jim Peirce

Jeff Weiss



Intro

- **LANL ESD**
 - LANL premier resource for software procurement
 - Enterprise resource for nearly 10 years
 - 90,000 lines of code
- **Primary developer retired in 2005**



Challenges

- Enterprise level / production service
- Single developer
- Complex, under-documented code
- Port to new Hardware / OSs
- Limited test area



Configuration Management

- **Code versioning**
- **Bug tracking**
- **Documentation**
- **Traceability**



Selecting a versioning product

- **CVS**
- **Perforce**
- **Source Safe**
- **Subversion**



The case for Subversion

- **Next generation of CVS**
 - Many of original authors
- **Cross-platform**
- **Windows shell integration**
- **Edit / Merge / Commit model**



Deploying Subversion

- **Import codebase**
- **Branch codebase**
- **Remove data files from version control**
- **Import documentation**
- **Deploy client**
- **Train team members**



Selecting task / bug tracking product

- Bugzilla
- Trac



Selecting Trac

- **Cleaner interface**
- **Source code browsing**
- **Wiki support**
- **Tighter integration with Subversion**



Deploying Trac

- **Integrate enterprise authentication module**
- **Establish user permissions**
- **Create components and milestones**



Trac / Subversion benefits

- **Changeset visibility**
 - What
 - Who
 - When
 - Why

Changeset

Changeset 1495 - Electronic Software Distribution - Trac - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

https://esd-dev.lanl.gov/trac/changeset/1495

Trac Tickets Trac Timeline Timeline - Electronic S...

trac
Integrated SCM & Project Management

logged in as jweiss Logout Settings Help/Guide About Trac

Wiki Timeline Roadmap Browse Source View Tickets New Ticket Search Admin

Changeset 1495

Timestamp: 05/09/07 16:54:16 (2 weeks ago)
Author: jweiss

Message: fixed #266. Changed email addresses to lanljit@tig.com

Files:

- source/website/branches/v1.5-production/oesd/esd/newcomporderset.cgi (1 diff)
- source/website/branches/v1.5-production/oesd/esd/newcomporderset2.cgi (1 diff)
- source/website/branches/v1.5-production/sesd/esd/hardeoy.html (1 diff)
- source/website/branches/v1.5-production/sesd/esd/tigcontacts.html (1 diff)
- source/website/branches/v1.5-production/sesd/esd/vendorcontacts.html (1 diff)
- source/website/branches/v1.5-production/sesd/esd/vendorcontacts1.html (1 diff)

View differences: inline

Show 2 lines around each change

Ignore:

- Blank lines
- Case changes
- White space changes

Unmodified Added Removed Modified Copied Moved

source/website/branches/v1.5-production/oesd/esd/newcomporderset.cgi

```
r648 r1495
27 27 print "<html><head><title></title></head><body>${testrun}";
28 28 if (!!${testrun}) {
29 29     ${tigemail}='gail.garrett@tig.com, alexandria.clement@tig.com, esdmaster@lanl.gov';
30 30     ${tigemail}='lanljit@tig.com, esdmaster@lanl.gov';
31 31     ${lmemail}='esdmaster@lanl.gov, jit@holmans.com';
32 32     ${rsemail}='esdmaster@lanl.gov, jit@holmans.com';
```

source/website/branches/v1.5-production/oesd/esd/newcomporderset2.cgi

```
r46 r1495
17 17 print "<html><head><title></title></head><body>${testrun}";
18 18 if (!!${testrun}) {
19 19     ${tigemail}='gail.garrett@tig.com, alexandria.clement@tig.com, esdmaster@lanl.gov';
20 20     ${tigemail}='lanljit@tig.com, esdmaster@lanl.gov';
21 21     ${lmemail}='esdmaster@lanl.gov, jit@holmans.com';
22 22     |e|e|e|
```

source/website/branches/v1.5-production/sesd/esd/hardeoy.html

```
r45 r1495
21 21 <ul>
```



Trac / Subversion benefits

- **Task/bug tracking**

- Who
- Description
- Component
- Version
- Priority
- Status
- E-mail notification

Task / bug tracking

The screenshot shows a web browser window displaying a Trac ticket page. The browser's address bar shows the URL <https://esd-dev.lanl.gov/trac/ticket/286>. The page header includes the Trac logo and navigation links such as 'Wiki', 'Timeline', 'Roadmap', 'Browse Source', 'View Tickets', 'New Ticket', 'Search', and 'Admin'. The ticket title is 'Ticket #286 (closed task: fixed)'. The main content area is titled 'Change TIG E-mail Address' and contains the following information:

- Reported by: u110676
- Assigned to: jweiss
- Priority: major
- Component: Website
- Keywords: jtsubmit3.exe
- Description: jtsubmit3.exe is the (compile WinBatch?) application used to submit hardware orders. At the conclusion of the ordering process, this application generates an e-mail to TIG (and esdmaster@lanl.gov) for the Dell orders placed using the tool. The e-mail appears to be going to Gail Garrett: alexandria.clements@tig.com; esdmaster@lanl.gov. *Gail Garrett* and *alexandria.clements@tig.com* are no longer valid e-mail addresses. This tool needs to be updated to notify lanjit@tig.com (and esdmaster@lanl.gov) instead.

Below the description, there are sections for 'Attachments' (with an 'Attach File' button) and 'Change History'. The change history shows two updates:

- 05/09/07 16:57:17 changed by jweiss: owner changed from jpeirce to jweiss; status changed from new to assigned; version deleted; component changed from Administration Utilities to Website. jtsubmit3.wbt calls newcomporderset.cgi, which is where the email is actually sent.
- 05/09/07 16:57:26 changed by jweiss: status changed from assigned to closed; resolution set to fixed. Fixed w/ [1495].



Trac / Subversion benefits

- **Milestones**
 - Dates
 - Tickets
 - Components
 - Owners

Milestones

The screenshot shows a web browser window with the following elements:

- Browser Title Bar:** Milestone NetworkInstaller-v2.6.1 - Electronic Software Distribution - Trac - Mozilla Firefox
- Address Bar:** <https://esd-dev.lanl.gov/trac/milestone/NetworkInstaller-v2.6.1?by=component>
- Navigation:** Trac Tickets, Trac Timeline, Timeline - Electronic S...
- Trac Logo:** **trac**
Integrated SCM & Project Management
- Search:** A search box with a 'Search' button.
- User Info:** logged in as jweiss | [Logout](#) | [Settings](#) | [Help/Guide](#) | [About Trac](#)
- Navigation Menu:** Wiki | Timeline | **Roadmap** | Browse Source | View Tickets | New Ticket | Search | Admin
- Milestone Title:** **Milestone NetworkInstaller-v2.6.1**
- Completion Info:** Completed 2 weeks ago (05/10/07 16:51:44)
- Progress Bar:** A green bar representing 100% completion.
- Ticket Counts:** Closed tickets: 14 | Active tickets: 0
- Buttons:** Edit milestone info | Delete milestone
- Ticket Status Filter:** Ticket status by Component
- Component Progress:** WindowsNetworkInstaller-UserInterface 14/14 (with a green bar)
- Note:** Note: See [TracRoadmap](#) for help on using the roadmap.
- Footer:** Powered by Trac 0.10dev By Edgewall Software. Visit the Trac open source project at <http://trac.edgewall.com/>

Milestones

The screenshot shows a web browser window displaying the Trac application. The URL is <https://esd-dev.lanl.gov/trac/query?status=closed&milestone=NetworkInsta>. The page title is "Custom Query - Electronic Software Distribution - Trac - Mozilla Firefox".

The Trac interface includes a search bar, navigation tabs (Wiki, Timeline, Roadmap, Browse Source, View Tickets, New Ticket, Search, Admin), and a "Custom Query" section with 14 matches. The filters are set to Status: closed and Milestone: NetworkInstaller-v2.6.1. The results are grouped by descending order.

Ticket	Summary	Owner	Type	Priority	Component	Version
258	On Entry Screen, make "Click Here" the button label, eliminate arrow.	jpeirce	task	blocker	WindowsNetworkInstaller-UserInterface	2.6
259	When logging in as different user, change "hello xxx" info to "Log on as different user".	jpeirce	task	blocker	WindowsNetworkInstaller-UserInterface	2.6
260	When logging in as different user, change focus on "Enter" key to "Login" button.	jpeirce	task	blocker	WindowsNetworkInstaller-UserInterface	2.6
261	When logging in as different user, change focus of "Tab" key when leaving "CryptoCard" field to "Login" button.	jpeirce	task	blocker	WindowsNetworkInstaller-UserInterface	2.6
262	Change all references to "CryptoCard" to "CRYPTOCARD".	jpeirce	task	blocker	WindowsNetworkInstaller-UserInterface	2.6
263	On all "Select a Product," "Select a Version" and "Select an Install" pages, default to top product listed.	jweiss	task	blocker	WindowsNetworkInstaller-UserInterface	2.6
264	On all "Select a Product," "Select a Version" and "Select an Install" pages, change label to "Choose a Product, then click Next or press the Enter key." (or "Choose a Version", or "Choose an Install").	jweiss	task	blocker	WindowsNetworkInstaller-UserInterface	2.6
265	Change Title Bar on LANL ReadMe files to "LANL ReadMe"	jpeirce	task	blocker	WindowsNetworkInstaller-UserInterface	2.6
266	Add "System Requirements" and "Support Info" sections to the top and bottom of the	jweiss	task	blocker	WindowsNetworkInstaller-UserInterface	2.6



Other Features

- **Wiki support**
 - Versioned pages
 - Within tickets
 - Changeset logs
- **Email notification**

Wiki pages

MeetingMinutes_30_Apr_2007 (diff) - Electronic Software Distribution - Trac - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

https://esd-dev.lanl.gov/trac/wiki/MeetingMinutes_30_Apr_2007?action=diff

Trac Tickets Trac Timeline Timeline - Electronic S...

trac
Integrated SCM & Project Management

logged in as jweiss Logout Settings Help/Guide About Trac

Wiki Timeline Roadmap Browse Source View Tickets New Ticket Search Admin

- Previous Change Page History Next Change -

Changes between Version 2 and Version 3 of MeetingMinutes_30_Apr_2007

Author: jweiss (IP: 128.165.129.27)
Timestamp: 05/02/07 15:12:45 (3 weeks ago)
Comment: fixed spelling

Unmodified Added Removed Modified

View differences: inline
Show 2 lines around each change

Ignore:
 Blank lines
 Case changes
 White space changes

Update

MeetingMinutes_30_Apr_2007

v2	v3
37	37
38	38
== Resolutions ==	
39	* Consensus that the focus of the website effort should consist of reengineering.
40	* Consensus that potentially not all requirements will be in scope for first reengineer phase.
41	* Consensus that requirements must be prioritized and segmented into "Must Have" and "Nice to Have".
42	* Consensus that one day per week should be devoted to maintenance of the current systems: website, Network Installer, administration tools.
43	* Consensus that the reengineer project should not be usurped for during the remaining 4 days except in the case of "Severe Impact".
44	* A consensus could "not" be reached for the quantification of "Severe Impact".
45	* Consensus that hardware failure, complete website failure, complete database failure, and complete Network Installer failure constituted "Severe Impact".
46	* Consensus that N division not being able to use the Network Installer because they chose not to play by the lab rules does "not" constitute "Severe Impact".
39	* Consensus that the focus of the website effort should consist of reengineering.
40	* Consensus that potentially not all requirements will be in scope for first reengineer phase.
41	* Consensus that requirements must be prioritized and segmented into "Must Have" and "Nice to Have".
42	* Consensus that one day per week should be devoted to maintenance of the current systems: website, Network Installer, administration tools.
43	* Consensus that the reengineer project should not be usurped for during the remaining 4 days except in the case of "Severe Impact".
44	* A consensus could "not" be reached for the quantification of "Severe Impact".
45	* Consensus that hardware failure, complete website failure, complete database failure, and complete Network Installer failure constituted "Severe Impact".
46	* Consensus that N division not being able to use the Network Installer because they chose not to play by the lab rules does "not" constitute "Severe Impact".
47	47
48	48
== Action Items ==	



Resources

- **Subversion**
 - <http://subversion.tigris.org>

- **Trac**
 - <http://trac.edgewall.org>

- **Contact Speakers**
 - Mike Mikus
 - mikus@lanl.gov
 - 505-667-4861

Q & A

