SLAC's Experience with the RT Request Tracker

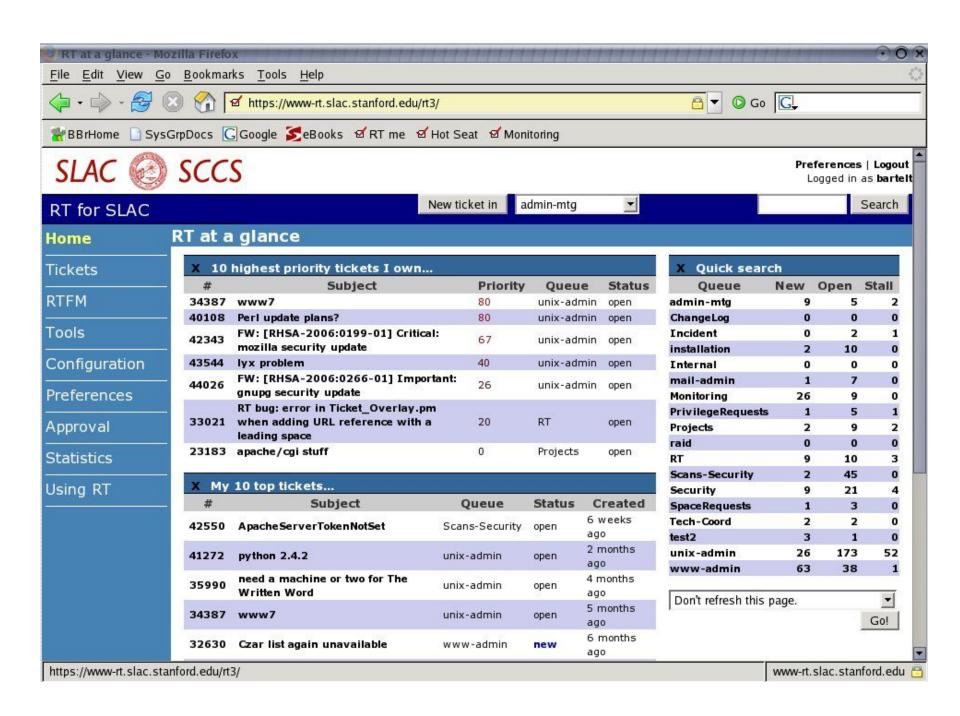
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HEPiX – April, 2006

Background & Motivation

- Unix requests: 'unix-admin' mailing list
- "database" is mail archive
- Need application to thread email, with a real DB, with search functionality
- Continue to provide email interface for users (and solvers); also want web, CLI
- SLAC's helpdesk uses Remedy not really suitable for our needs

RT(3) – BestPractical.com

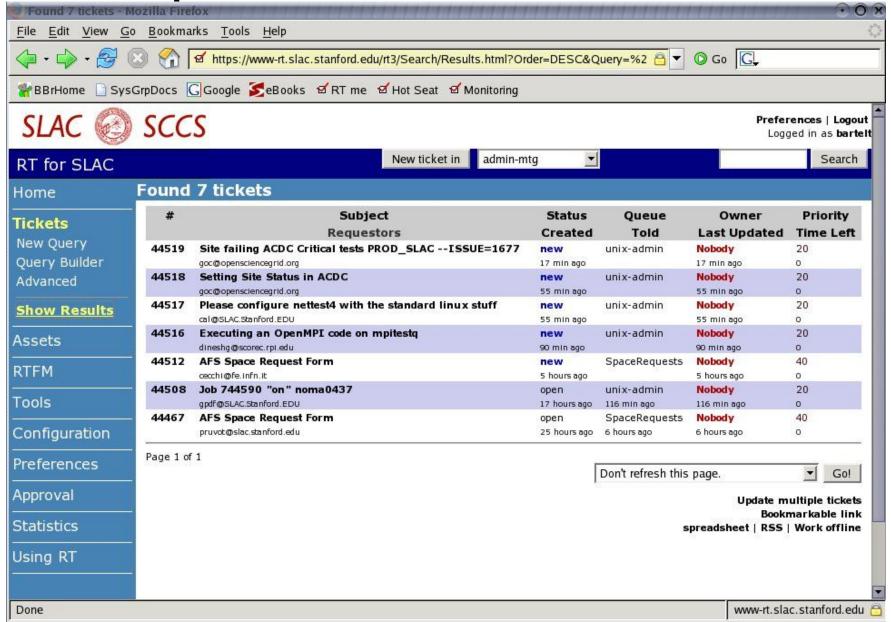
- Looked at a number of alternatives, selected RT3 from BestPractical.com (others: Jitterbug, Roundup, OTRS, Keystone)
- Free, with source
- Email, web and CL interfaces
- Customizable: through web, or in source code (perl)
- Active user community, active developers; used at (at least) one other HEP lab



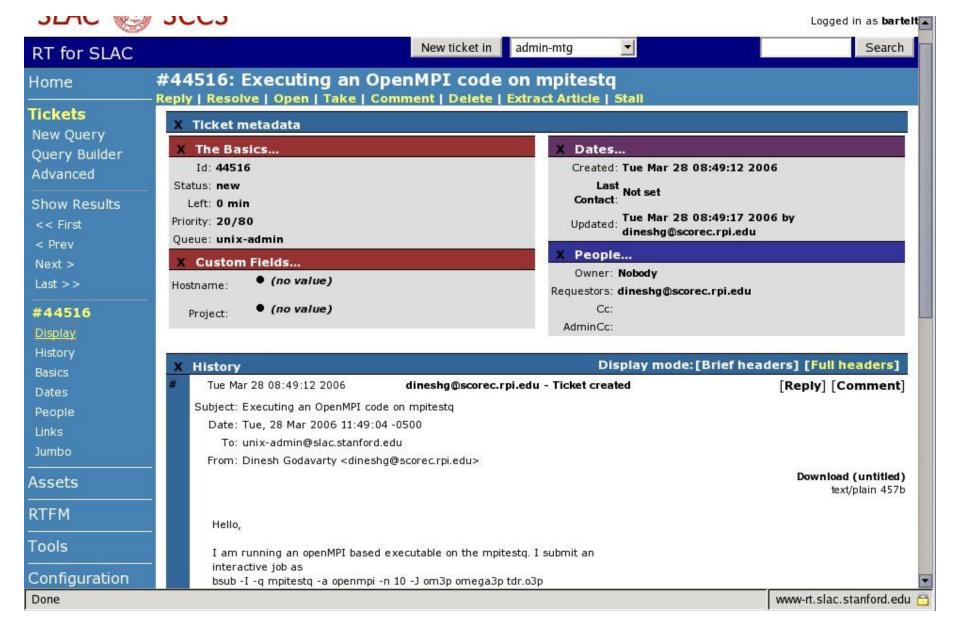
Workflow

- Requestor sends email to unix-admin
- Goes to RT unix-admin queue; RT sends autoreply, and forwards message to queue's "Watchers"
- During business hours, "hotseat" person will solve or assign ticket to an "owner" (or another watcher may grab it)
- Hotseat or solver may add comments (not sent to requestors) or correspondence (which is); change queue, other fields

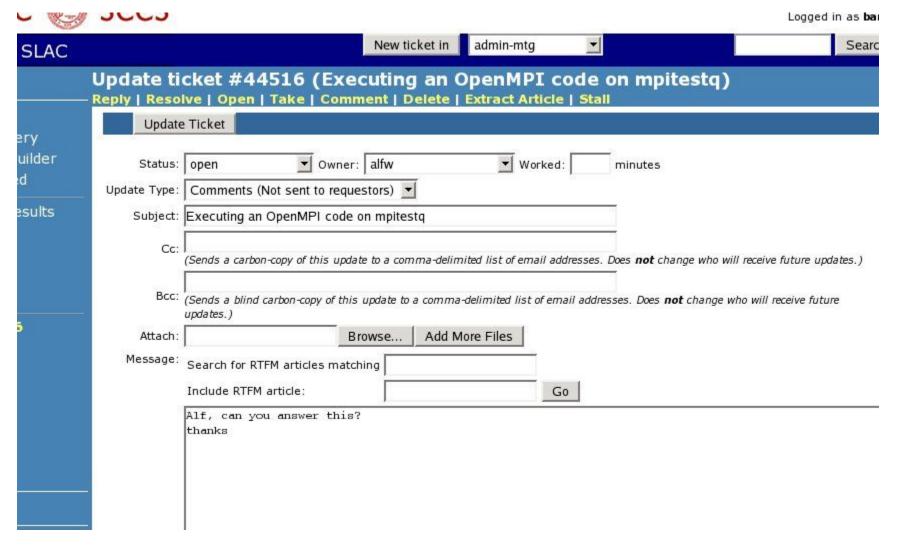
Open, Unowned Tickets



Close-up: One Ticket



Assign Owner, Add Comment



Solver's Actions

- Owner can correspond with requestor
- Add comments
- Comments or correspondence may quote a previous message in the ticket
- When solved, change status to "Resolved"
 - "closing" the ticket. ("Deleted", "Rejected")

Close-up: Queues

Queue	New	Open	Stall
admin-mtg	8	5	2
ChangeLog	0	0	0
Incident	0	2	. 1
installation	5	11	0
Internal	0	0	0
mail-admin	0	12	0
Monitoring	19	10	0
PrivilegeRequests	. 0	4	1
Projects	2	9	2
raid	0	0	0
RT	9	10	3
Scans-Security	3	47	0
Security	9	21	4
SpaceRequests	0	2	0
Tech-Coord	0	5	1
test2	4	1	0
unix-admin	30	172	50
www-admin	80	41	1

Note: queue names, numbers, are all links

Installation details

- Use RedHat (first: RH9; now RHEL 3)
- Initially used RT 3.0.10; now 3.4.2
- Apache 1.3.x with mod_perl
- Locally installed perl with extra modules
- MySQL 4.0.x (from MySQL rpms), accessible only from localhost
- RT also supports Oracle and PostgreSQL; or fastCGI instead of mod_perl

Authentication

- Email is unauthenticated
- Unprivileged RT users created from incoming email
- Solvers authenticate through the web: apache mod_auth_pam => AFS
- Experimentation with Krb5 auth (not prod)
- Problems (more later)
 - Multiple user entries
 - The "losing authentication" problem

Basic Configuration

- Establish queues for different types of requests; groups to manage solvers' privileges; scrips and templates for automation: autoreplies, email to watchers, etc.
- Email to single account: procmail script forwards to rt-mailgate, setting basic parameters based on incoming address; rt-mailgate forwards to http

Procmail excerpts (1)

```
QUEUE=unix-admin
 ACTION=correspond
 FROM=`$FORMAIL -rt -xTo:`
# This makes mail to admin-log a comment instead of correspondence.
 :0
 * ^(To|Cc): .*admin-log
 * !^(To|Cc): .*unix-admin
 { ACTION=comment }
# This puts ranger, swatch, and root messages in a special queue.
 :0 E
 * ^From:.*(ranger|swatch|root)
 { QUEUE=Monitoring
  ACTION=comment
```

Procmail excerpts (2)

Put the ticket into RT. The --subject is a locally-added # option to echo the subject with ticket number back.

```
SUBJECT=`/usr/etc/systems/rt-mailgate \
--subject --queue $QUEUE --action $ACTION \
--url https://webscs01.slac.stanford.edu/rt3/ 2>&1`
```

Everything not handled by RT, put into incoming.

:0 E /var/spool/mail/unix-admin-incoming

Backup

- Nightly mysqldump of DB to local file; then copied to AFS (cronjob)
- Config files, local mods: tar file in AFS (manual); move to CVS?
- Also have second machine for test & development; can be used as backup, in case of hardware failure

Query Builder

- Construct complicated database queries
- Choose display ordering, etc.
- Save query in DB and/or as bookmark

Query Builder X Add Criteria **X** Query Aggregator: F AND C OR Owner = 'bartelt' AND Status != 'resolved' AND Queue != 'Projects' id less than AND Status != 'rejected' -Subject matches -Queue is Status is ▼ is Owner -Requestor EmailAddress 🔻 contains And/Or **▼**||belongs to Delete Created Before ▼ Time Worked less than X Saved searches less than Priority Privacy: My saved searches HasMember ▼ is Description: + Project contains Save Hostname contains Load saved search: My saved searches Load Add additional criteria Add X Display Columns Add Columns: Format: Show Columns: id Order by: lid Link: id Descending -Subject Status Rows per [ExtendedStatus Status Title: page: Subject QueueName **OueueName** Delete Size: -OwnerName Style: -

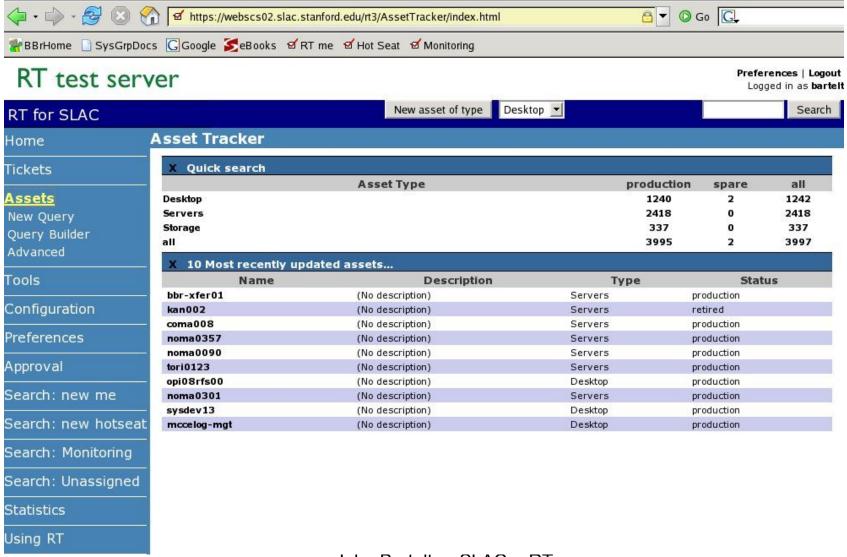
Search

Do the Search

Customization

- GUI tweaks: \$RT/local/html/ overrides
 \$RT/share/html/ other hooks, too
- Add-ons (some recently installed by Chuck):
 - RTFM (RT FAQ manager)
 - Asset Manager
 - Rights Matrix
 - Statistics
 - Color-coding
 - Priority aging (backed out for now...)
 - Paging

Asset Manager



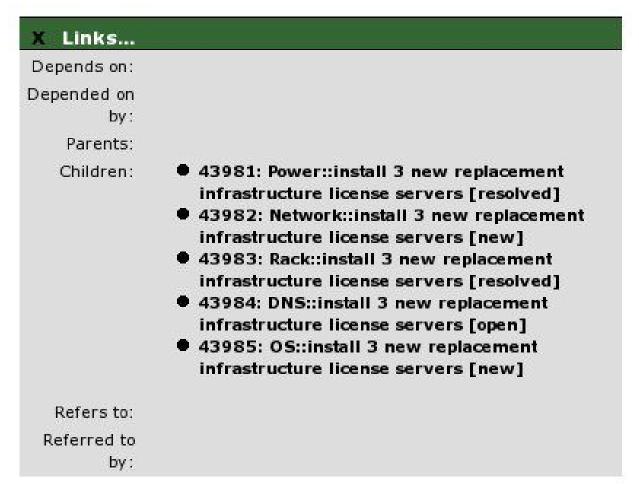
Installation Tickets

- Installation Queue tickets have children tickets automatically created
 - Order status
 - Power
 - Network
 - Rack
 - Arrays
 - DNS
 - OS Install



Custom fields, children tickets

Parent Installation Ticket - Links



Links to children

Suitable for limited projects

[any ticket can have links to related tickets or other URLs]

Results, Impressions, etc.

- Solvers generally like; takes some getting use to. Interface is (mostly) logical if not always intuitive. Threading & searching are huge improvement over old mailbox.
- Requestors also generally fine with it; some complaints about number of emails; interactions with BaBar's HyperNews
- Much less likely to lose track of requests
- Adopted by www-admin & mail-admin
- Approaching 50k tickets

Problems...

- Apache/browser authentication problem (intermittent; not solved; Krb5?)
- Broke HyperNews threading in 3.0; fixed in 3.4 (now respects *In-Reply-To* header)
- Poor interaction with HelpDesk's Remedy system (tech-coords, main-tech use both)
- Multiple userids; email v. web autocreation
- Can't unmerge merged tickets
- No version control for scrips & templates

Dec. 29th Email Explosion

- One incoming spoof; one autoreply to spoofed address = mailing list (obsolete)
- Forwarded to other lists; one in particular forwarded to dozens of more lists
- 100s of "no permission", autoreplies, bouncing around, generated complaints
- CTB tried to fix; RDC pulled plug
- Fixes: \$RedistributeAutoGeneratedMessages=0
 and more filtering at procmail & in RT

BestPractical.com provides

- User & Devel mailing lists (lots of traffic)
- Wiki (useful)
- Training
- Support contracts

Future of RT at SLAC

- Would like single problem/request reporting/tracking system for SCCS: RT or something else?
- Open RT Web interface to users (single sign-on web?)
- Deploy enhanced CLI from DESY?
- RT 3.6.x (improved custom fields, other per-user customization)