

Ticketing Systems and Documentation

APRICOT 2009

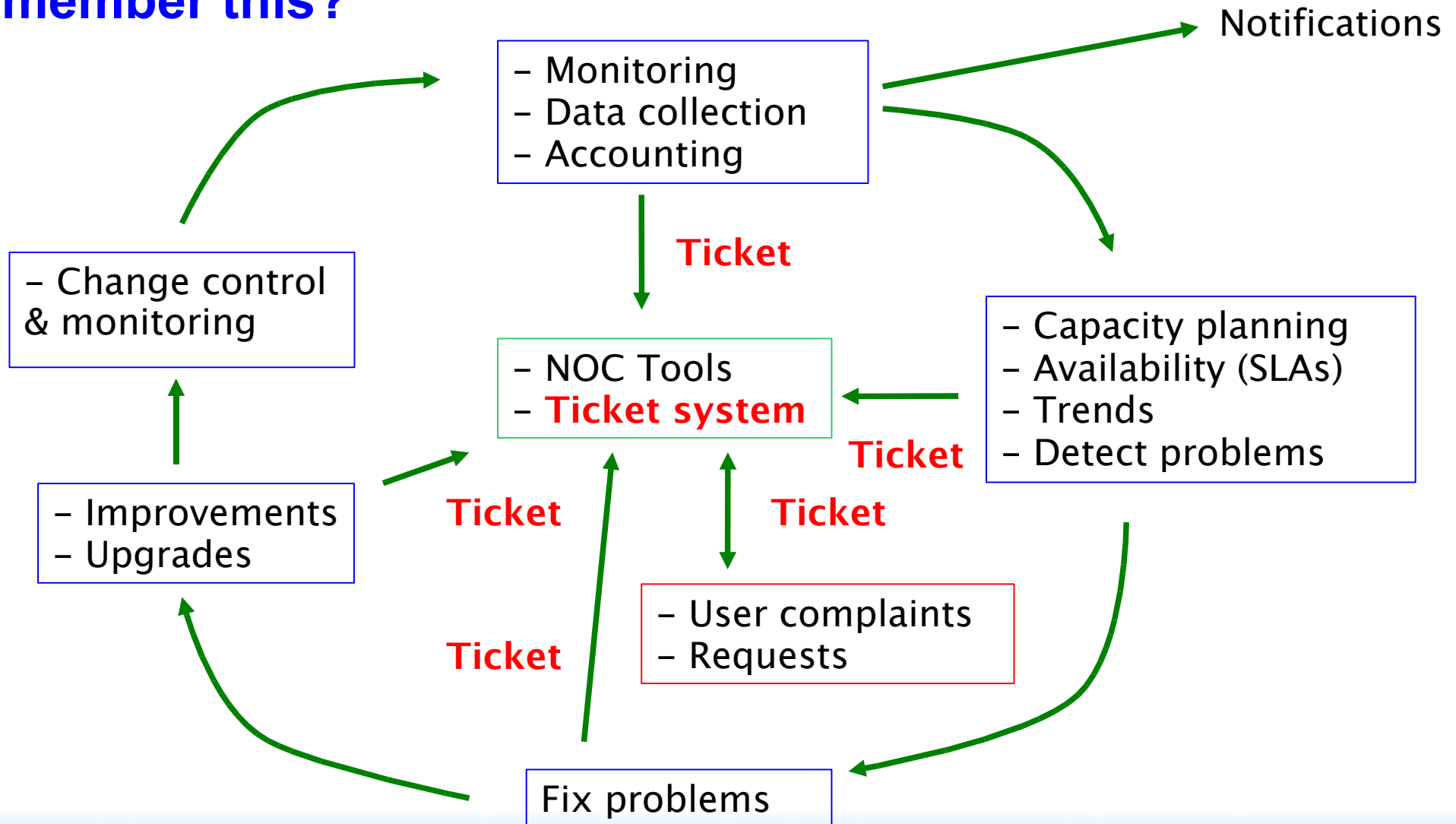
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Why Ticketing Systems?

Remember this?



Ticketing Systems

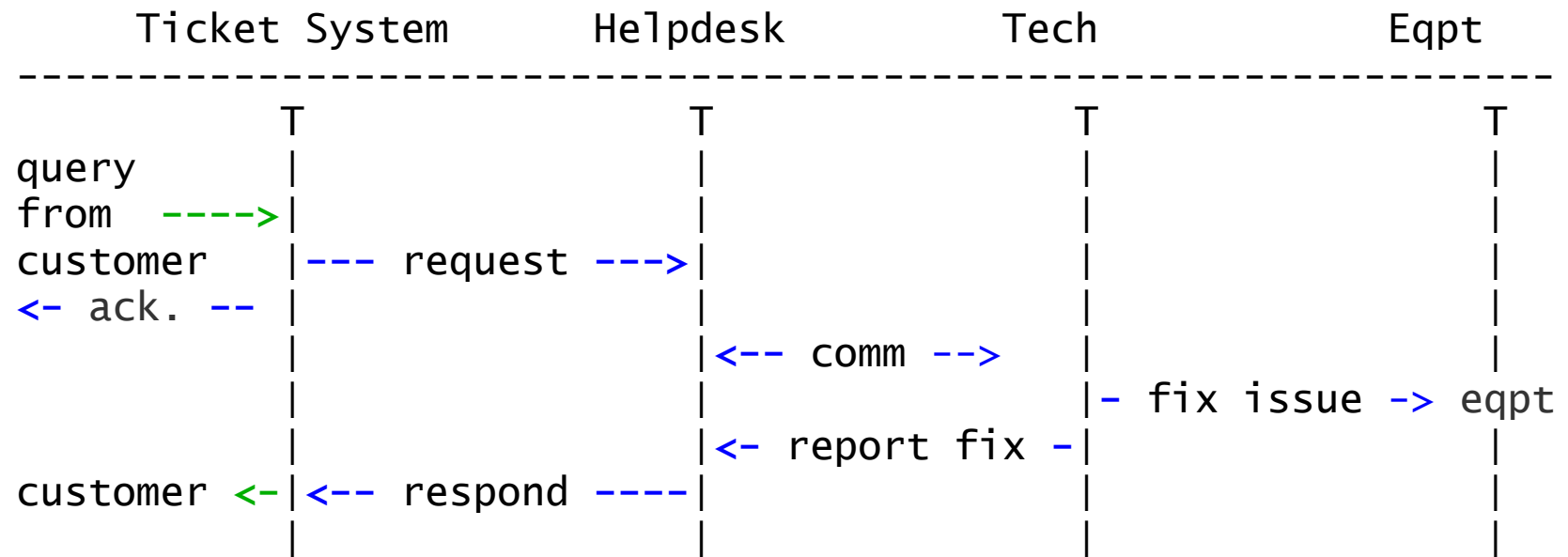
- Why are they important?
 - Track all events, failures and issues
- Focal point for help desk communication
- Use it to track all communications
 - Both internal and external
- Events originating from the outside:
 - customer complaints
- Events originating from the inside:
 - System outages (direct or indirect)
 - Planned maintenance, upgrades, etc.

Ticketing Systems

- Use ticket system to follow each case, including internal communication between technicians
- Each case is assigned a case number
- Each case goes through a similar life cycle:
 - New
 - Open
 - ...
 - Resolved
 - Closed

Ticketing Systems cont.

Help Request with Tickets



Request Tracker & Trac

RT

- Heavily used worldwide.
- Can be customized to your location.
- Somewhat difficult to install and configure.
- Handles large-scale operations.



trac

- A hybrid system that includes a wiki and project management features.
- Ticketing system not as robust as rt, but works well for web-only ticket interface.
- Often used for "trac"king group projects.





RT: Request Tracker

<http://bestpractical.com/rt/>

What's it Look Like?

The screenshot shows the RT web interface in a Mozilla Firefox browser window. The browser title is "RT at a glance - Mozilla Firefox (Build 2008061004)". The page URL is "RT for example.com". The user is logged in as "root" and can access "Preferences" or "Logout".

The main heading is "RT at a glance". There are buttons for "New ticket in", a dropdown menu set to "General", and a "Search" button.

On the left, there is a sidebar menu with the following items: Home, Simple Search, Tickets, Tools, Configuration, Preferences, and Approval.

The main content area is divided into several sections:

- 10 highest priority tickets I own**: A table with columns #, Subject, Priority, Queue, and Status. It shows two tickets: "Office has run out of coffee" (Priority 0, General queue, pending 1 other ticket) and "order more coffee" (Priority 0, General queue, pending 1 other ticket).
- 10 newest unowned tickets**: A table with columns #, Subject, Queue, Status, Created, and an action link. It shows one ticket: "Obtain Series-C funding" (General queue, new status, created 16 min ago, with a "Take" link).
- Bookmarked Tickets**: A table with columns #, Subject, Priority, Queue, and Status. It shows one ticket: "Office has run out of coffee" (Priority 0, General queue, pending 1 other ticket, with a star icon).
- Quick ticket creation**: A form with fields for Subject, Queue (set to General), Owner (set to root), and Content. There is a "Create" button.
- Reminders**: A section with an "Edit" button.
- Quick search**: A table with columns Queue, new, open, and stalled. It shows data for the General queue: 3 new, 0 open, and 0 stalled tickets.
- Dashboards**: A table with columns Name and Subscription. It shows "SLA Performance" with a subscription of "daily at 06:00".
- Refresh**: A section with a dropdown menu set to "Don't refresh this page." and a "Go!" button.

Topics

- What is a ticket management system
 - Necessities and advantages
 - Common functionalities
- Practice with RT (Request Tracker)
 - Global configuration
 - Create users
 - Create queues
 - Assign actions to the queues
 - Create message filters

Ticket Management Systems

- Why do we use the term “ticket”?
- In order to resolve a problem...
 - Who wants what?
 - Who's going to work on this?
 - When did they ask, when was it done?
 - How much time did it take (billing, hours)?
 - What's left to do?
 - Everything is summarized and presented in a simple and intuitive manner.

Applications

- User support
- Security problem management
- Issue Tracking / Incident Management

Essential Functionality

- Several interfaces
 - Web, CLI, e-mail, etc.
- Multiuser
 - At different levels: admin, general user, gues
- Authentication and authorization
- Event history
- Handles dependencies
- Notifications

Components

- Register an event (i.e., ticket creation)
- Assign an owner
- Assign interested parties
- Maintain change history
- Inform interested parties of each change
- Initiative activities based on status or priority

Example: Why Used at the UO?

- Lots of email traffic requesting help, services, etc.
- Archived as text without classification
- Very difficult to find current status or problem history.
- Sometimes problems were forgotten or never resolved.

RT: Advantages

- Open source and free
- Heavily used and tested
- Very active development
- Quite flexible
- Web interface and via email

RT: Disadvantages

- A bit tricky to install the first time...
- It's powerful, so you'll need to spend some time learning how it works.
 - Most distributions have packages that make installation a bit easier:
 - Gentoo, Debian, FreeBSD, etc.

Problem Classification: Queues

- RT allows you to create queues so that problems are classified by type:
 - **Services:** DNS, IP addresses, Radius, LDAP
 - **Connectivity:** Communications infrastructure problems
 - **Security:** Attacks, scans, abuse, etc.
 - **Systems:** Email accounts, passwords, etc
 - General help

Site Configuration

- You'll see this in the installation exercises. Edit the file `/etc/requestrackNN/RT_SiteConfig.pm` and edit the variables as needed. For example:
 - **\$rtname:** Short name for the install
 - **\$Organization:** Long name for the installation
 - **\$CorrespondAddress:** default address for correspondence:
`rt@DOMAIN.FQDN`
 - **\$CommentAddress:** default address for comments:
`rt-comment@DOMAIN.FQDN`
 - **\$Timezone:** (Eg. 'US/Eastern') – possibly autoconfigured
 - **\$WebBaseURL:** “`http://DOMAIN.FQDN`” - might want “https”
 - **\$WebPath:** “`/rt`”

Web Server Configuration

- **Two Options**

- Virtualhost

<http://rt.host.fqdn>

- Subdirectory

<http://host.fqdn/rt>

- **Root user ('root')**

- Change the default password on first login ('password')
 - Assign the complete email for the *root* account

root@host.fqdn

- Assign all user rights:
Global -> User Rights

Email Gateway Configuration

- Example using *sendmail* and *rt-mailgate*

```
ln -s /usr/local/rt3/bin/rt-mailgate rt-mailgate
```

- Add the necessary aliases

```
# vi /etc/aliases
rt: "|rt-mailgate --queue general --action correspond --url
    http://localhost.localdomain/"
rt-comment: "|rt-mailgate --queue general --action comment --url
    http://localhost.localdomain/"
# newaliases
```

- Check the configuration

```
# echo "testing rt" | mail -s "test" rt@localhost
```

User Creation

- Create a userid for each member of your NOC team.
- Assign privileges to each user.

Create Groups

- Create groups of users:
 - Administering privileges by group is more efficient than doing so for each user.

Create Queues

- Create queues for problem categories
 - For example
 - security
 - accounts
 - connectivity
 - Assign users to each queue
 - Different between AdminCC and CC
 - Don't forget to create email *aliases* for each queue

Scripts (actions)

- For each queue create automatic actions
 - There is a group of scripts that apply to all queues.
 - Possible to customize per queue or globally
 - “*scripts*” are “snippets of Perl code”

Extensions

- You can extend the functionality of RT. For example:
 - Send daily emails to remind users of tickets that have not been “taken”
 - Send daily emails to each user reminding them of their pending tickets.
 - Periodically increment ticket priority
 - You can execute commands via email
 - <http://wiki.bestpractical.com/index.cgi?Extensions>

References

- *Best Practical* Web site
<http://bestpractical.com/rt>
- *RT Essentials*. Dave Rolsky et al. O'Reilly



<http://trac.edgewall.org/>

What's it Look Like?



[Login](#) | [Preferences](#) | [Help/Guide](#) | [About Trac](#) | [Register](#)

[Wiki](#) | [Timeline](#)

[Start Page](#) | [Index](#) | [History](#) | [Last Change](#)

Network Management Workshop

APRICOT 2009

From February 18-22, Manila, Phillipines

Course Materials

- [Course Outline](#) (Links to materials and services)
- [Network Diagram](#)
- [Instructors](#)
- [Directory listing](#) of all presentations
- [Photos](#)

Network Operations Center

- [Apt Cacher service](#)
- [Cacti](#)
- [Request Tracker](#)
- [Smokeying](#)

External Links

- [APRICOT 2009 Site](#)
- [APRICOT](#)
- [Network Startup Resource Center](#)
- [ISOC Workshop Resource Centre](#)
- [O'Reilly Media](#)

Download in other formats:

[Plain Text](#)



Powered by **Trac 0.11**
By Edgewall Software.

Visit the Trac open source project at
<http://trac.edgewall.org/>

What's it Do?

Software Configuration Management

- wiki for collaboration
- Interface to subversion for change management.
- Timeline for milestones, progress reports, etc.
- Ticketing system
- Integration with email

Installation

You can create a fairly complex trac project...

- Multiple trac environment configuration.
- Authentication via trac not Apache.
- trac user admin via web interface.
- write-protected for anonymous users.
- Ability to add subversion later.
- Aztech calendar plug-in.

trac: Some Details

- **Let's look at the wiki...**
- **Let's look at the ticketing system...**
- **Let's look at different user views...**
- **Then we'll install.**



Sample Trac Projects

An open project:

<http://ws.edu.isoc.org/trac/afnog08/>

Class web server:

<http://noc.mgmt.conference.apricot.net/trac/netmanage>

Fully available live demo:

<http://www.hosted-projects.com/trac/TracDemo/Demo>

Available installation cookbook:

<http://nsrc.org/workshops/2009/apricot/presos/trac-install-cookbook.txt>

Suggested Trac Exercises

Let's do the following:

- 1.) Install (use the available *cookbook*)
- 2.) Review the install
- 3.) If time, do a few more exercises:
 - Allow *anonymous* user to see tickets.
(add TICKET_VIEW and REPORT_VIEW permissions)
 - Find a plugin you want and install.