Ticketing Systems with RT

Network Startup Resource Center
www.nsrc.org

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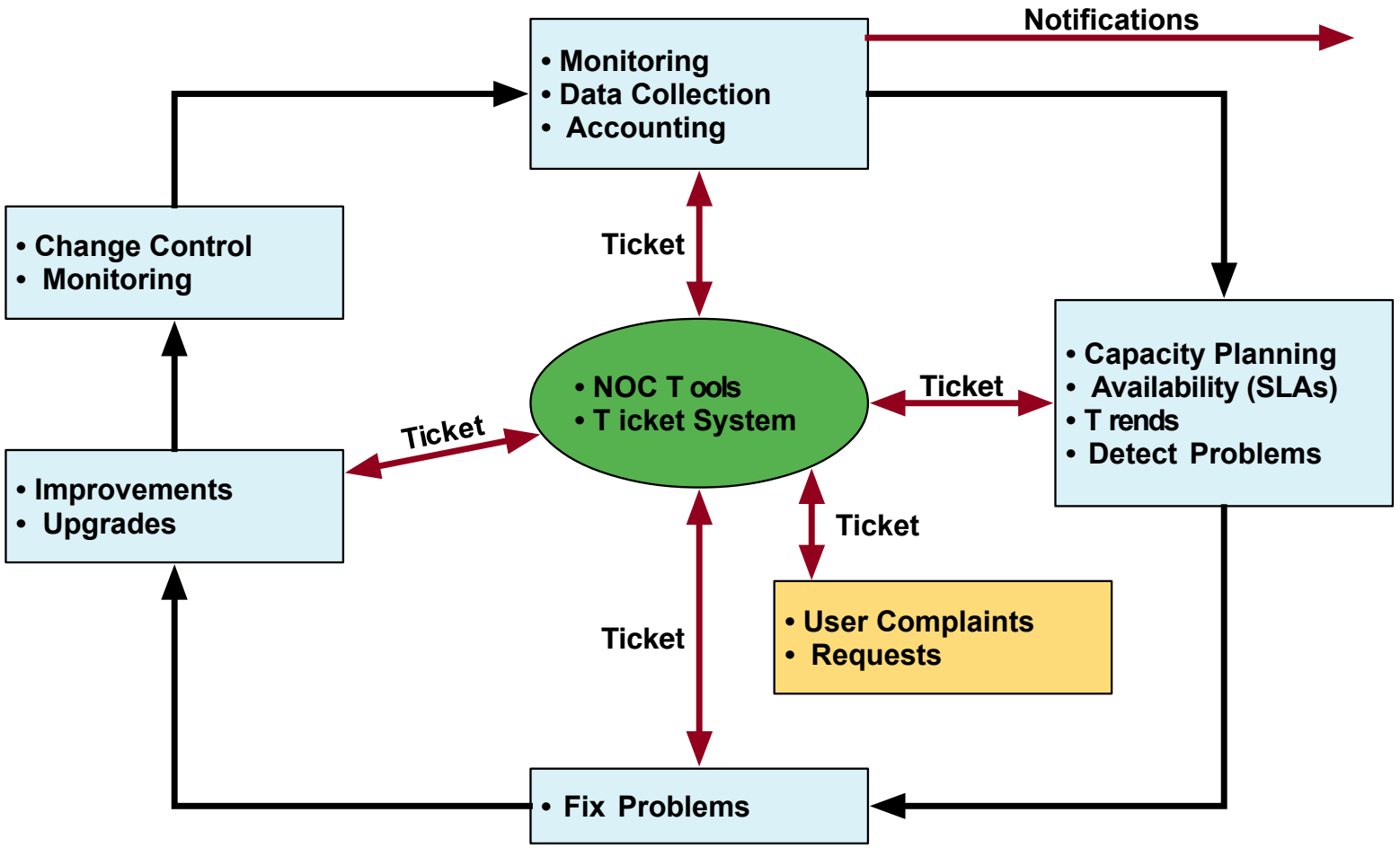
Why Ticketing Systems?



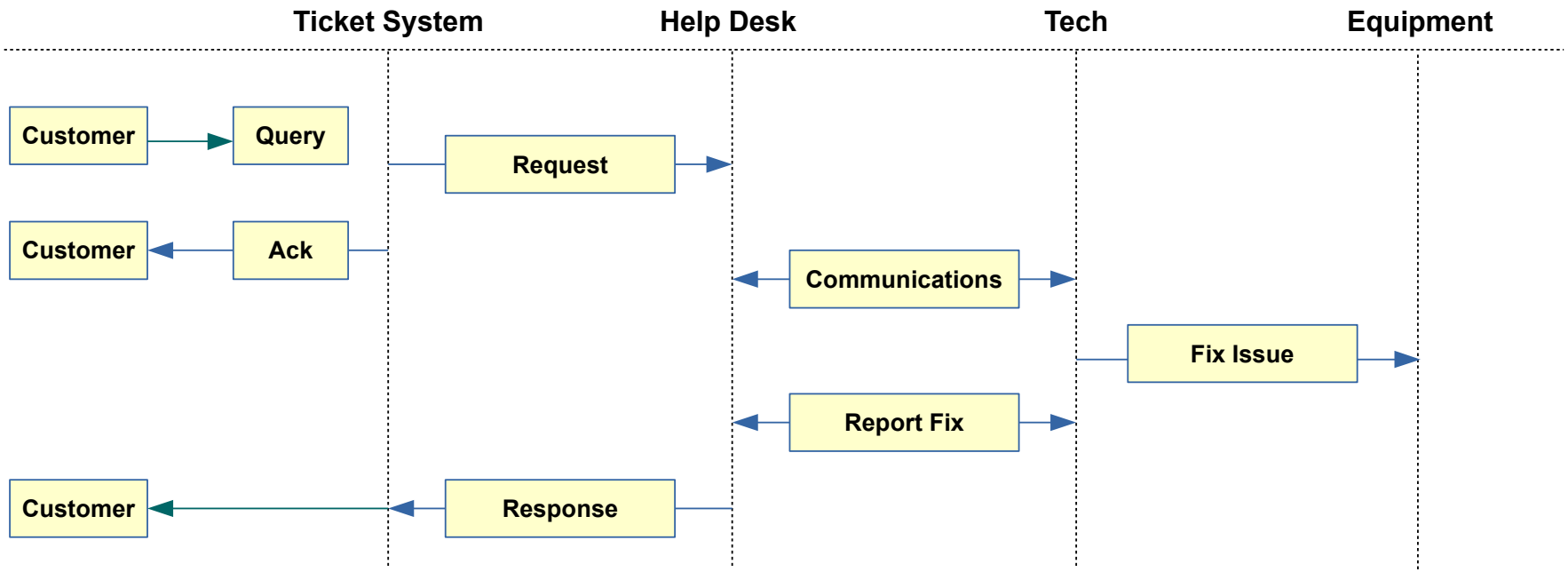
Ticketing Systems

- **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 (Contd.)

- Use ticket system to follow cases, including communication between techs
- Each case is assigned a case number
- Each case goes through a similar life cycle:
  - *New – Open – … – Resolved – Closed*

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
Integrated SCM & Project Management

- A hybrid including wiki & project management features
- Web-only ticket system works well but not robust as RT
- Often used for ”trac”king group projects.
- Used for this course: http://noc.ws.nsrc.org/wiki/

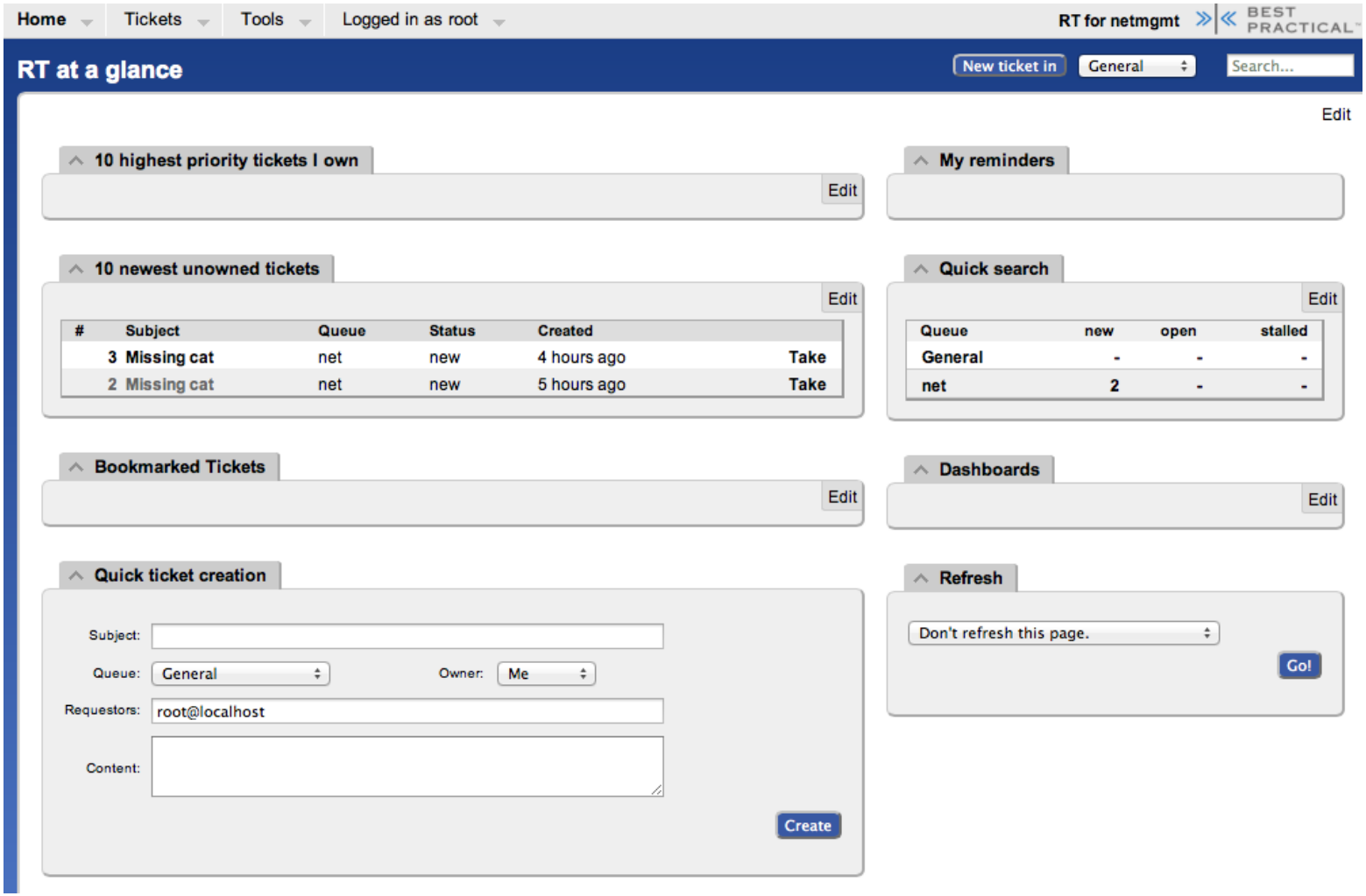
A Few Others

- **Bugzilla:** http://www.bugzilla.org/
- **Cerberus:** http://www.cerberusweb.com/
- **Eticket:** http://www.eticketsupport.com/
- **Itracker:** http://www.itracker.org/
- **Jutda Helpdesk:** http://www.jutdahelpdesk.com/
- **Mystic:** http://www.hulihanapplications.com/projects/mystic
- **OTRS:** http://otrs.org/
- **OsTicket:** http://osticket.com/
- **Simple Ticket:** http://www.simpleticket.net/
- **Trouble Ticket Express:**
  http://www.troubleticketexpress.com/

RT: Request Tracker

http://bestpractical.com/rt/

What Does It Look Like?



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, guest
- Authentication and authorization
- Event history
- Handles dependencies
- Notifications

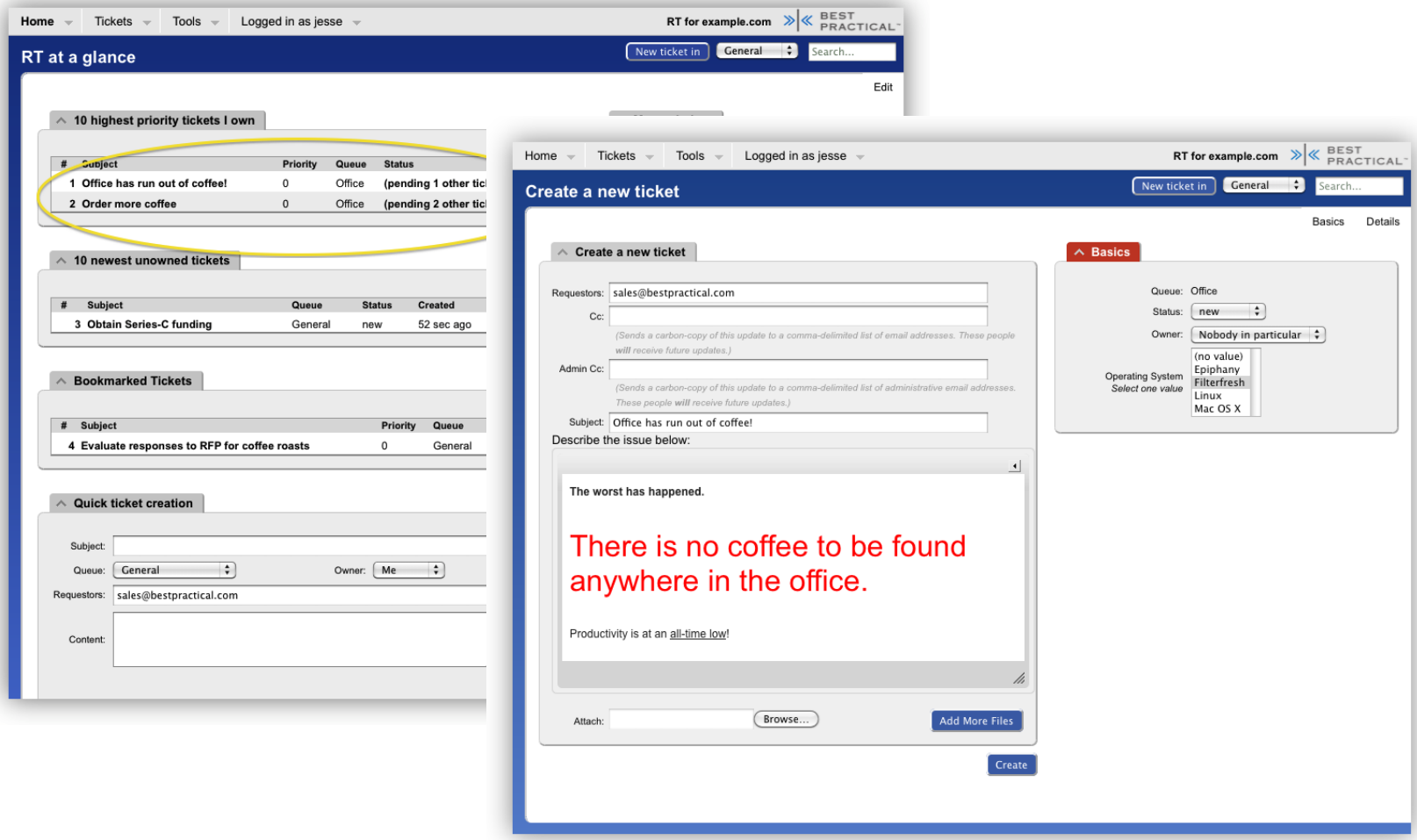
Components

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

Typical Support Scenario

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

Critical Issues & Tickets



RT: Advantages

- Open source and free
- Heavily used and tested
- Very active development
- Flexible
- Web interface or control via email
- Backend database (MySQL, Postgresql, Oracle, SQLite)

RT: Disadvantages

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

Problem Classification: Queues

- **Services:** DNS, IP addresses, Radius, LDAP
- **Security:** Attacks, scans, abuse, etc.
- **Systems:** Email accounts, passwords, etc
- **Networking:** Network Services Group
- **Help Desk:** Those who deal with end-users

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

User Creation

- Create a userid for each member of your 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 groups and groups to each queue

- Different between AdminCC and CC
- Don't forget to create email *aliases* for each queue

rt-mailgate

rt-mailgate facility lets us:

- Define virtual users on the RT server that correspond to ticket queues in RT.
- Allow third-party software (Nagios, Cacti, Smokeping, etc.) to automatically generate tickets in specified queues via email.
- Provide a simple interface through which end-users can communicate with your support organization via RT.

Scripts (actions)

Create automatic actions for queues

- There is a group of scrips that apply to all queues.
  - Possible to customize per queue or globally
  - "*scrips*" are "snippets of Perl code"
  - Chapter 6 of the O'Reilly "*RT Essentials*" book
  - Details on how to use Scrips: http://requesttracker.wikia.com/wiki/Scrip

Extensions

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

References

- *Best Practical* Web site
  http://bestpractical.com/rt
- *RT Essentials*. Dave Rolsky et al. O'Reilly Media, Inc.
- Contributions to RT:
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