

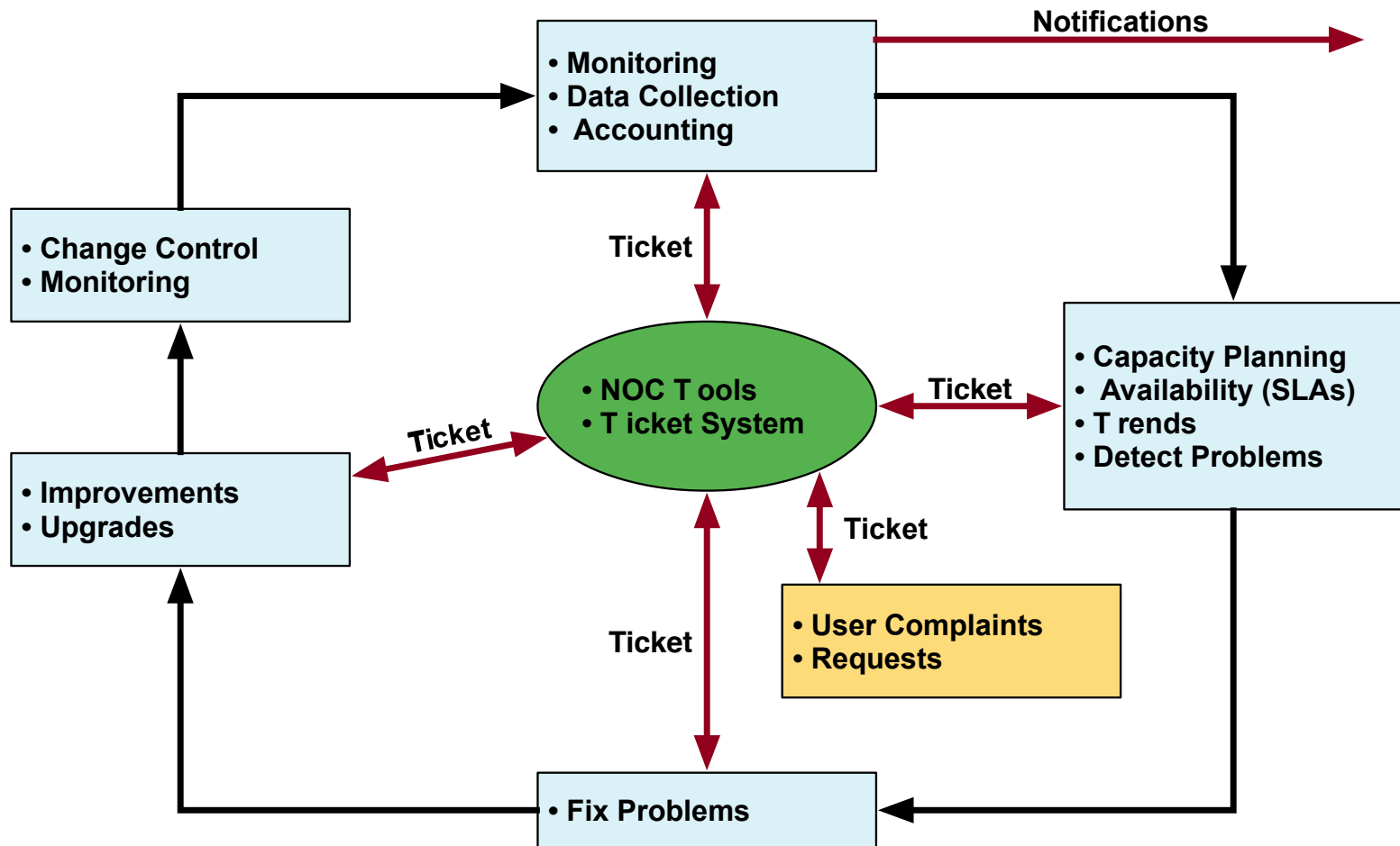
Ticketing Systems with RT

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Why Ticketing Systems?



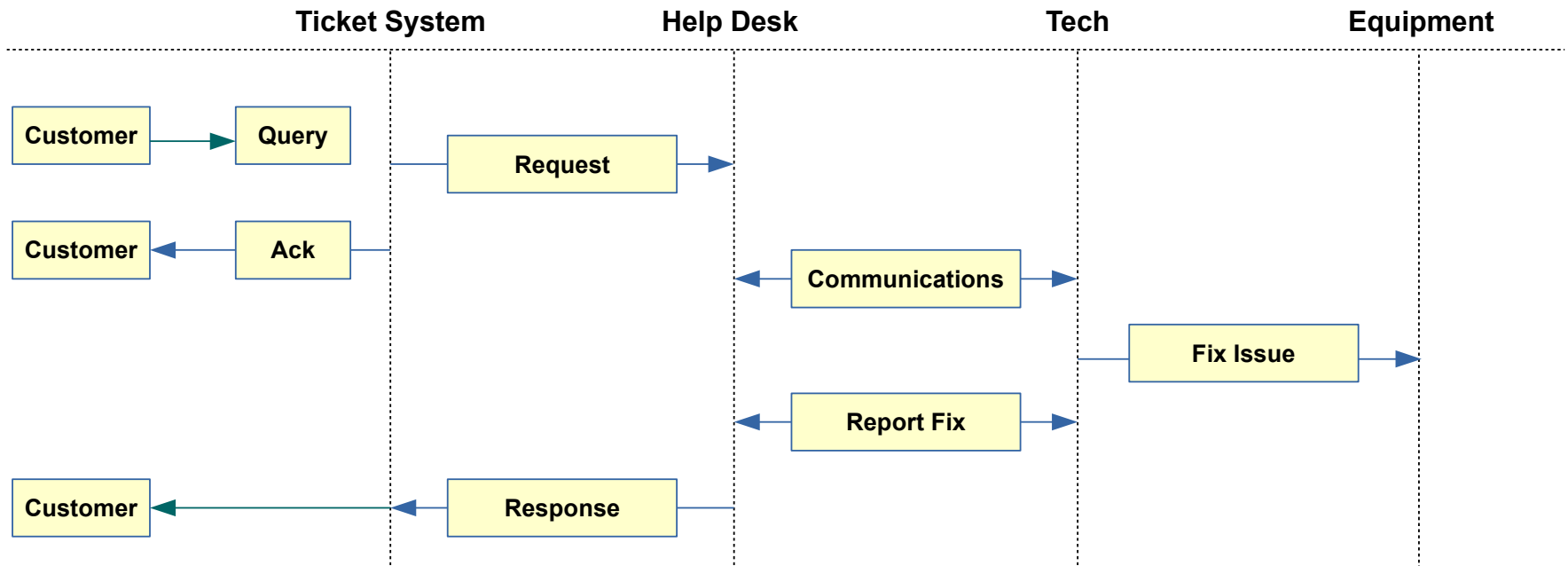
Ticketing Systems

- **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



- 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?

Home ▾ Tickets ▾ Tools ▾ Logged in as root ▾ RT for netmgmt >> << BEST PRACTICAL™

RT at a glance New ticket in General ▾ Search...

Edit

^ 10 highest priority tickets I own Edit

^ My reminders Edit

^ 10 newest unowned tickets Edit

| # | Subject | Queue | Status | Created | |
|---|-------------|-------|--------|-------------|------|
| 3 | Missing cat | net | new | 4 hours ago | Take |
| 2 | Missing cat | net | new | 5 hours ago | Take |

^ Quick search Edit

| Queue | new | open | stalled |
|---------|-----|------|---------|
| General | - | - | - |
| net | 2 | - | - |

^ Bookmarked Tickets Edit

^ Dashboards Edit

^ Quick ticket creation

Subject:

Queue: Owner:

Requestors:

Content:

^ Refresh

Don't refresh this page.

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

Home Tickets Tools Logged in as jesse RT for example.com BEST PRACTICAL

RT at a glance

New ticket in General Search...

10 highest priority tickets I own

| # | Subject | Priority | Queue | Status |
|---|-------------------------------|----------|--------|----------------------|
| 1 | Office has run out of coffee! | 0 | Office | (pending 1 other tic |
| 2 | Order more coffee | 0 | Office | (pending 2 other tic |

10 newest unowned tickets

| # | Subject | Queue | Status | Created |
|---|-------------------------|---------|--------|------------|
| 3 | Obtain Series-C funding | General | new | 52 sec ago |

Bookmarked Tickets

| # | Subject | Priority | Queue |
|---|---|----------|---------|
| 4 | Evaluate responses to RFP for coffee roasts | 0 | General |

Quick ticket creation

Subject:

Queue: Owner:

Requestors: sales@bestpractical.com

Content:

Home Tickets Tools Logged in as jesse RT for example.com BEST PRACTICAL

Create a new ticket

New ticket in General Search...

Basics Details

Create a new ticket

Requestors: sales@bestpractical.com

Cc:

(Sends a carbon-copy of this update to a comma-delimited list of email addresses. These people will receive future updates.)

Admin Cc:

(Sends a carbon-copy of this update to a comma-delimited list of administrative email addresses. These people will receive future updates.)

Subject: Office has run out of coffee!

Describe the issue below:

The worst has happened.

There is no coffee to be found anywhere in the office.

Productivity is at an all-time low!

Attach: Browse... Add More Files

Create

Basics

Queue: Office

Status: new

Owner: Nobody in particular

Operating System: (no value), Epiphany, Filterfresh, Linux, Mac OS X

Select one value

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

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