

Request Tracker

Nachhaltige Problem Verarbeitung inkl. Asset,
Knowledge und Workflow-Management
auf Open Source Basis

Vita

- Björn Schulz
 - Seit 10 Jahren mitverantwortlich fuer den User HelpDesk am DESY in Hamburg.
 - Seit 2002 wird der Request Tracker von Bestpractical bei DESY zur Bearbeitung von Anfragen im IT Umfeld eingesetzt.
- Torsten Brumm
 - Seit 8 Jahren verantwortlich fuer den Betrieb und die Weiterentwicklung des Request Trackers bei Kuehne + Nagel.

Werbung ;-)

- **DESY (Deutsche Elektronen-Synchrotron)**
 - weltweit führenden Beschleunigerzentren zur Erforschung der Materie
 - RT seit 2002 - 370.000+ Tickets / 67 Queues
 - 317 Aktive Supporter / 50.000 User davon ca. 6000 real
 - Start mit mehreren Instancen / Konsolidierung in 2004
 - dCache als eigene Instance: Weltweite Supporter
- **Kuehne + Nagel**
 - führend in internationaler Transport & Logistik Branche
 - 55.000 Angestellte an 900 Standorten in über 100 Ländern
 - 1.500+ Queues, ~10.000 Gruppen, 20.000-70.000 Tickets pro Tag
 - 60.000+ priv. User / ~8.000.000 unpriv. User

Inhalt

- RT: Tickets und mehr (RTFM, AT)
- Technisches drum herum
- Anwendungsbeispiele
- Tipps & Tricks

Request Tracker

RT: Request Tracker

- Open Source (GPL) Issue Tracking System
- Seit 1996 von Jesse Vincent entwickelt
- Objekt orientiertes Perl
- Plattform unabhängig
- Modularer Aufbau
- Schlüsselfunktionen:
 - Identifikation eingehender eMails
 - Vergabe von Prioritäten,
 - Zuweisungen an unterschiedliche Bearbeiter



RT: Request Tracker

- Features:
 - Mandantenfähig / Multilanguage
 - Reminder + Eskalation + Approvals
 - Erweiterbar durch Custom Fields
 - Per Script (Perl) steuerbar
 - GPG Verschlüsselung
 - Diverse Auth. Module (AD, LDAP etc.)

RT: Request Tracker

- Schnittstellen:
 - eMail Interface
 - Web Interface
 - Command Line Interface
 - Konsolen GUI
 - (RT-Client-Console/CPAN)
 - REST API

Technisches

Technisches

- Unix/Linux System
- Perl (ab 5.8.3)
- Datenbank (MySQL, Oracle etc.)
- WebServer (Apache, Lighttpd)
 - mod_perl oder FastCGI
- Mail Server / Fetchmail

Apache Konfiguration

- Apache 2.x
 - Apache Devel Libs nicht vergessen
 - mod_fastcgi oder mod_fcgid
 - alternativ mod_perl2

eMail

- eMail Alias: /etc/aliases

- mail.address: „|/opt/rt3/bin/rt-mailgate
--queue general
--action correspond
--url <http://rt.yourcompany.com>“
- --action: comment|correspond
- --debug
- --timeout=seconds

Fertig!

- Wir haben einen lauffähigen RT !!!
- Danke für's zuhören
- OK, war nur ein Joke, ab hier geht es erst richtig los!

Grundlagen

Grundlagen: RT

- Tickets
- Queues
- Gruppen
- User
- Benutzer def. Felder
- Scripte + Templates

Tickets

- Enthält Infos über:
 - Ersteller
 - Besitzer
 - Betreff
 - Status
 - Queue
 - Zeitangaben

Queues

- Logische Gruppierung von Inhalten
 - Name/Beschreibung
 - Mail Adressen
 - Standard Prioritäten
 - Standard Fälligkeitsdaten

CustomFields

- Frei definierbare Felder für Objekte
 - Queues, Groups, Users
 - RTFM Artikel
 - AT Assets

Welcome to RT

RT für rt38-messenger.int.kn Nicht angemeldet.

Anmelden 3.8.7

Benutzername:

Passwort:

Anmelden

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First Login: Setup II

The screenshot shows the RT 3.8.7 web interface. The top navigation bar includes 'Header Menü' (Logged in as root | Preferences | Logout), 'New ticket in General', and a search bar. The left sidebar has a 'Menü' section with links: Home, Simple Search, Tickets, Tools, Configuration, Preferences, and Approval. The main content area is titled 'RT at a glance' and contains a summary of tickets. It features sections for '10 highest priority tickets I own', '10 newest unowned tickets', 'Bookmarked Tickets', and a 'Quick ticket creation' form. The 'Quick ticket creation' form fields include Subject, Queue (set to General), Owner (set to root), Requestors (set to root@localhost), and Content. To the right of the ticket summary are sections for 'Reminders', 'Quick search' (with a table for General queue: new 0, open 0, stalled 0), 'Dashboards', and 'Refresh' (with a dropdown set to 'Don't refresh this page.' and a 'Go!' button). A red dashed box highlights the 'RT at a glance Body' area. The bottom right corner contains the Best Practical logo and the text '»|« RT 3.8.7 Alle Rechte vorbehalten 1996-2009 Best Practical Solutions, LLC.'

RT for rt38-messenger.int.kn

Header Menü

Logged in as root | Preferences | Logout

New ticket in General Search...

RT at a glance

Home

10 highest priority tickets I own

10 newest unowned tickets

Bookmarked Tickets

Quick ticket creation

Subject:

Queue: General Owner: root

Requestors: root@localhost

Content:

Create

Reminders

Quick search

Queue new open stalled

General 0 0 0

Dashboards

Refresh

Don't refresh this page. Go!

RT at a Glance Summary

RT at a Glance Body

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Erste Probleme

- Test Mail an unsere „General“ Queue

```
[tbrumm@messenger ~]$ mail -s "1. Test" general@localhost  
TEST mit der ersten Mail
```

- Kein Ticket im RT, aber eine Antwort vom RT

```
MAILER-DAEMON Sun Mar 07 01:45 54/2029 "Could not load a valid user"
```

- Default: Niemand darf eine Mail einstellen! -> Konfiguration -> Rechte

Rollenspiele

- User -> Mail Adressen
- Gruppen -> Liste von Usern/Gruppen
 - System Groups (Unprivileged, Privileged, Everyone)
 - User defined Groups
- Rollen (Requestor, Owner, Cc, AdminCc)

Rechte

- Globale Rechte (U/G/R*)
- Objektgebundene Rechte (U/G/R*)
 - Queues
 - CustomFields
 - ...
- * U/G/R = User / Gruppen / Rollen

Erste Lösung

RT for rt38-messenger.int.kn Logged in as root | Preferences | Logout

Home Simple Search Tickets Tools Configuration Users Groups Queues Select Create General Custom Fields Global Tools Preferences Approval

Modify group rights for queue General

Basics · Watchers · Scripts · Templates · Ticket Custom Fields · Transaction Custom Fields · Group Rights · User Rights · History New ticket in General Search...

System groups

	Current rights	New rights
Unprivileged	No rights granted.	StealTicket TakeTicket Watch WatchAsAdminCc (no value)
Privileged	No rights granted.	StealTicket TakeTicket Watch WatchAsAdminCc (no value)
Everyone	<i>(Check box to revoke right)</i> <input type="checkbox"/> CreateTicket	StealTicket TakeTicket Watch WatchAsAdminCc (no value)

Roles

	Current rights	New rights
Requestor	<i>(Check box to revoke right)</i> <input type="checkbox"/> ReplyToTicket <input type="checkbox"/> ShowTicket	StealTicket TakeTicket Watch WatchAsAdminCc (no value)

Unser erstes Ticket

- Test Mail an unsere „General“ Queue

```
[tbrumm@messenger ~]$ mail -s "1. Test" general@localhost  
TEST mit der ersten Mail
```

- Antwort aus dem RT

```
Sun Mar 07 02:41 58/1911 "[rt38-messenger.int.kn #1] AutoReply: 1. Test"
```

RT at a glance

Home

[Home](#)[Simple Search](#)[Tickets](#)[Tools](#)[Configuration](#)[Preferences](#)[Approval](#)[New ticket in](#)[General](#)[Search...](#)

Home

10 highest priority tickets I own[Edit](#)**10 newest unowned tickets**[Edit](#)

#	Subject	Queue	Status	Created	Action
1	1. Test	General	new	4 min ago	Take

Bookmarked Tickets[Edit](#)**Quick ticket creation**Subject: Queue: Owner: Requestors: Content:
[Create](#)**Reminders**[Edit](#)**Quick search**[Edit](#)

Queue	new	open	stalled
General	1	0	0

Dashboards[Edit](#)**Refresh**

Don't refresh this page.

[Go!](#) BEST
PRACTICAL™

Technisches II

Steuerung: RT

- Steuerung durch Scripte + Templates
- Set an Scripten + Templates sind global definiert
- Scripte bestehen aus Conditions, Actions, Templates und States und können Perl verarbeiten
- Scripte werden je nach Condition in einer sortierten Folge ausgeführt
- Scripte können pro Condition auch per Batch ausgeführt werden

Scripte

- Beispiel: Condition „OnCreate“
 - On Create Autoreply To Requestors
 - On Create Notify AdminCcs
- Beide Scripte laufen parallel los
- Erweiterung um CustomField Scanner
-

Scripte

- On Create Autoreply To Requestors
- On Create Notify AdminCcs
- On Create ExtractCustomFieldValues
- Problem: Alle Scripte laufen parallel
- Lösung: Umbenennung der Scripte,
anderer Stage der Scripte

Scripte

- 001_On Create ExtractCustomFieldValues
- 002_On Create Autoreply To Requestors
- 003_On Create Notify AdminCcs
- 002 + 003 laufen im TransaktionBatch Modus
- Ergebnis: Erst werden die eingehenden Daten verarbeitet, dann die Mails versendet

Scripte

- Problem:
 - Global definiere Scripte erschweren die Steuerung
- Lösung:
 - Keine Globalen Scripte (suboptimal)
 - Dirk Pape's: Deaktivate Global Scripts AddOn

Deaktivate Scripts

Scripts which apply to all queues:

- | | |
|--|--|
| <i>inherit on off (select status for queue: inherited, activated, deactivated)</i> | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>(no value)</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>On Correspond Open Tickets with template Blank</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>(no value)</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>On Owner Change Notify Owner with template Transaction</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>(no value)</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>On Create Autoreply To Requestors with template Autoreply</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>(no value)</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>On Create Notify AdminCcs with template Transaction</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>(no value)</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>On Correspond Notify Owner with template Admin Correspondence</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>(no value)</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>On Correspond Notify Requestors and Ccs with template Correspondence</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>(no value)</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>On Correspond Notify Other Recipients with template Correspondence</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>(no value)</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>On Comment Notify Owner with template Admin Comment</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>(no value)</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>On Comment Notify Other Recipients as Comment with template Correspondence</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>(no value)</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>On Resolve Notify Requestors with template Resolved</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>OnCreateCcMail</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>On Create Notify Ccs with template Transaction</i> |
| <input checked="" type="radio"/> <i>(active)</i> | <input type="radio"/> <input checked="" type="radio"/> <i>OnQueueChangeAdmCc</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <input type="radio"/> <i>On Queue Change Notify AdminCcs with template Transaction</i> |
| <input type="radio"/> <i>(inactive)</i> | <input checked="" type="radio"/> <input type="radio"/> <i>On Correspond Notify and AdminCcs with template Correspondence</i> |
| | <input checked="" type="radio"/> <input type="radio"/> <i>On Correspond Notify AdminCcs with template Correspondence</i> |
| <input checked="" type="radio"/> <i>(active)</i> | <input type="radio"/> <input type="radio"/> <i>Move Owner to AdminCC</i> |
| | <input type="radio"/> <input type="radio"/> <i>On Queue Change Reassign Owner with template Blank</i> |
| <input checked="" type="radio"/> <i>(inactive)</i> | <input type="radio"/> <input type="radio"/> <i>OnCreateCheckForGroupmemberAndAddThem</i> |
| | <input type="radio"/> <input type="radio"/> <i>On Create User Defined with template Blank</i> |
| <input checked="" type="radio"/> <i>(active)</i> | <input type="radio"/> <input type="radio"/> <i>OnCreateNotifyOwnerIfSet</i> |
| | <input type="radio"/> <input type="radio"/> <i>On Create Notify Owner with template Admin Correspondence</i> |
| <input checked="" type="radio"/> <i>(inactive)</i> | <input type="radio"/> <input type="radio"/> <i>OnCreateAddAllCCs</i> |
| | <input type="radio"/> <input type="radio"/> <i>On Create User Defined with template Blank</i> |
| <input checked="" type="radio"/> <i>(active)</i> | <input type="radio"/> <input type="radio"/> <i>OnCreateSetPrioByCF</i> |
| | <input type="radio"/> <input type="radio"/> <i>On Create User Defined with template Blank</i> |
| <input checked="" type="radio"/> <i>(active)</i> | <input type="radio"/> <input type="radio"/> <i>OnQueueChangeSetPrioByCF</i> |
| | <input type="radio"/> <input type="radio"/> <i>On Queue Change User Defined with template Blank</i> |
| <input checked="" type="radio"/> <i>(active)</i> | <input type="radio"/> <input type="radio"/> <i>OnCustomFieldValueChangeSetPrioByCF</i> |
| | <input type="radio"/> <input type="radio"/> <i>User Defined User Defined with template Blank</i> |

Update scripts status for this queue [Update status](#)

Current Scripts

(Check box to delete)

- | | | | |
|--|----------------------------------|----------------------------------|--|
| <input type="checkbox"/> <i>delete</i> | <input type="radio"/> <i>on</i> | <input type="radio"/> <i>off</i> | <i>(delete or select status for queue: active, inactive)</i> |
| | <input checked="" type="radio"/> | <input type="radio"/> | <i>0001_ScanForCF</i> |
| | | | <i>On Create Extract Custom Field Values with template CFScanner</i> |

Templates

- Templates steuern den Versand von Mails
- Templates dürfen Perl Code enthalten
- Zugriff auf RT Funktionen möglich
- Aufruf von Perl innerhalb Templates in Form {perl}

Module

RTFM: RT FAQ Manager

- Knowledge Base / Management Tool
- Komplett in RT integriert
- Bedingt per Script steuerbar (Templates mit Logik)

RTFM

- Simple Installation (perl Makefile.pl && make && make install && make initdb)
- RT_SiteConfig.pm anpassen
- Tickets -> Erstellen von RTFM Artikeln
- Ticket -> Abruf von RTFM Artikeln

RTFM in Action

Display · History · Modify · Delete

Basics

Class : General

Problem with my Laptop, Windows is crashing 10 times a day

Content

Hi Support,
Problem: my Laptop is crashing every 5 minutes with a blue screen, pls help

Your User

Try the following Steps:

Solution:
1. Reinstall Windows if it is still crashing;
2. Replace by a MacBook

Links

Refers to :

- Ticket 2: Problem with my Laptop, Windows is crashing 10 times a day

Referred to by :

Topics

Software > Windows

RTFM: Tricks

- RTFM-Article-Templates
 - Erweiterung der RTFM Templates um Ausführbarkeit von Perl
 - Beispiel:

Status: open Owner: Nobody (Unchanged) Worked: Minutes

Update Type: Reply to requestors

Subject: Problem with Printer Server

One-time Cc:

One-time Bcc:

Attach: Durchsuchen... Add More Files

Message: Search for RTFM articles matching

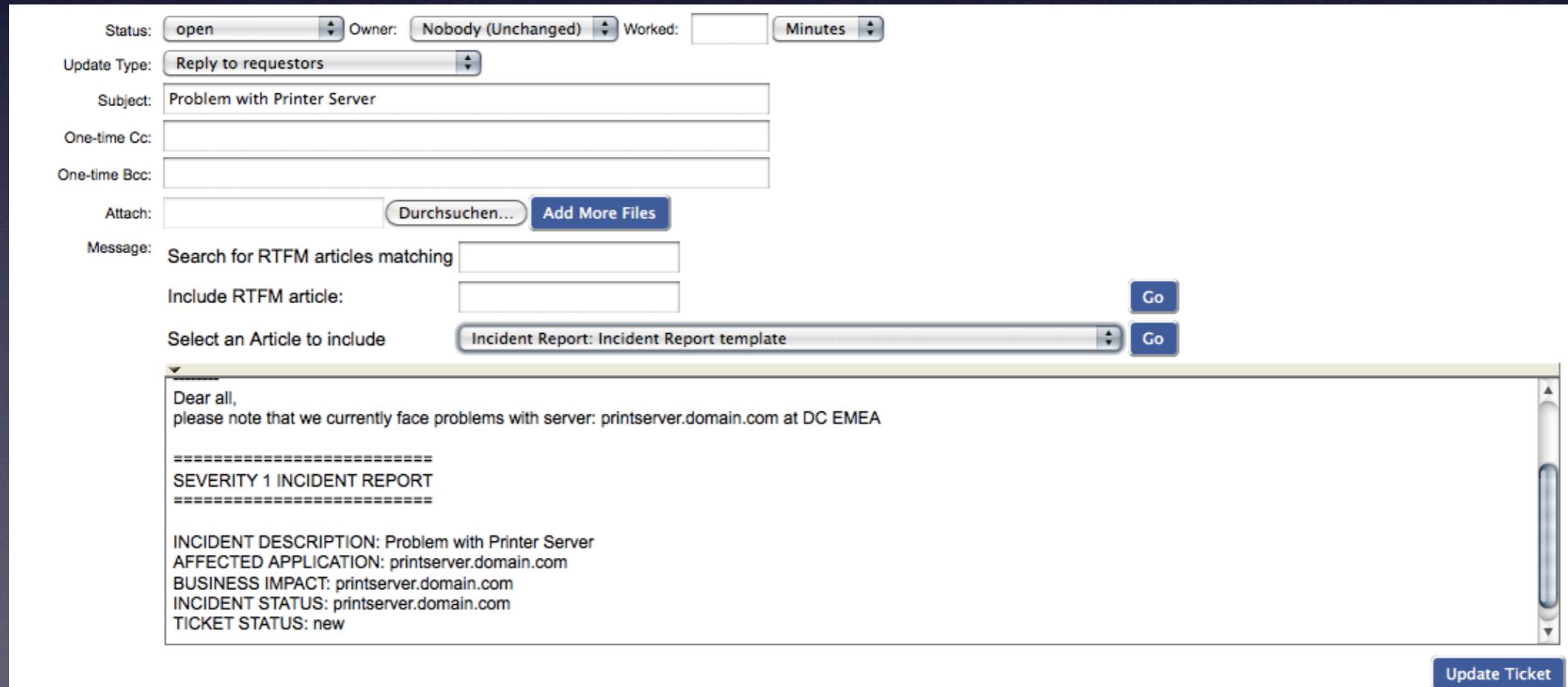
Include RTFM article:

Select an Article to include Incident Report: Incident Report template Go

Dear all,
please note that we currently face problems with server: printserver.domain.com at DC EMEA
=====
SEVERITY 1 INCIDENT REPORT
=====

INCIDENT DESCRIPTION: Problem with Printer Server
AFFECTED APPLICATION: printserver.domain.com
BUSINESS IMPACT: printserver.domain.com
INCIDENT STATUS: printserver.domain.com
TICKET STATUS: new

Update Ticket



AT: Asset Tracker

- Asset Verwaltung
 - Geschrieben von Todd Chapman
- Komplett in RT integriert
- Import und Export Features (CSV)
- Download [Asset Tracker for RT](#)

Weitere Module

- „Must have“ Module
 - RT-Extension-ExtractCustomFieldValues / RT-Extension-CustomField-HideEmptyValues
 - RT-Extension-TicketAging / RT-Extension-TicketLocking
 - RT-Extension-AttributeWalker / RT-Extension-WatchedQueues / RTx-BecomeUser / (RTx-Shredder) für RT < 3.8
 - RTx-Calendar / RT-Extension-CommandByMail
 - RT-Extension-MergeUsers / MergeUsersHistory

Anwendungsbeispiele

Anwendungsbeispiele

(und deren technische Umsetzung)

- Helpdesk
- ITIL / ITSM
- Workflows
- Airfreight Import Support
- Anti Terror Screening
- Investment Approvals
- Software Entwicklung/Support

Helpdesk

- User Calls -> schnelle Maske zur Erfassung von Daten
- User Calls -> schnelle Möglichkeit zum Auffinden von User Requests
- Wissensdatenbank
- Hard- und Software Repository
- User Interface um eigene Requests zu tracken

Helpdesk: Tickets erfassen

- User Call im Helpdesk
- Helpdesk MA muss grundlegende Daten sofort erfassen

Quick ticket creation

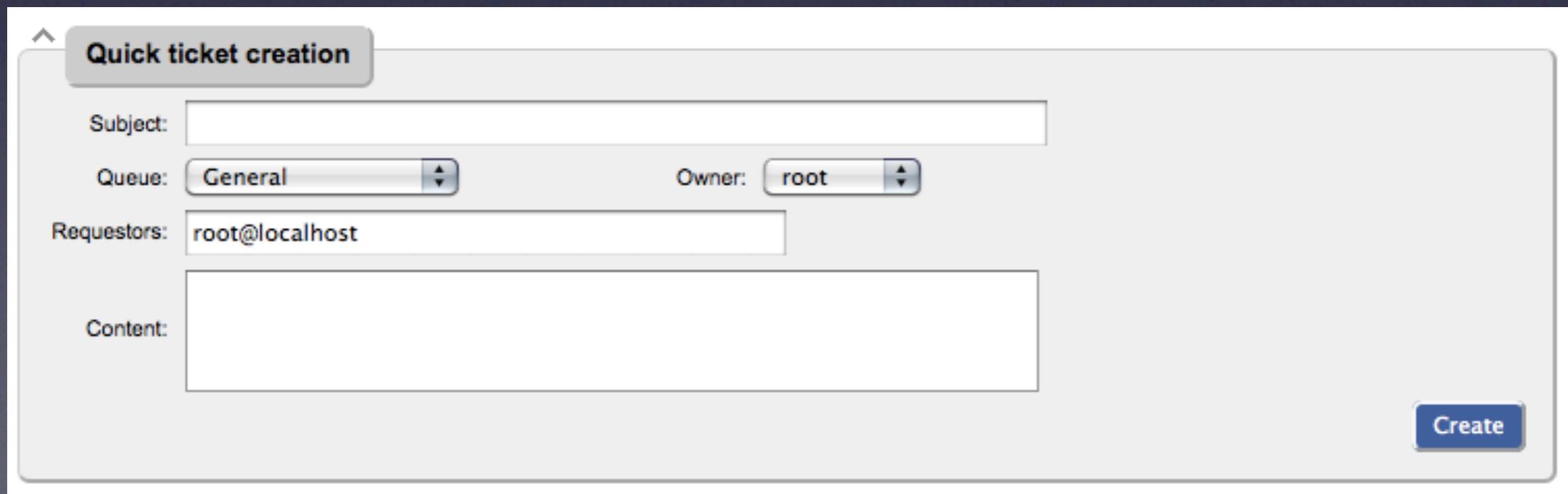
Subject:

Queue: General Owner: root

Requestors: root@localhost

Content:

Create



Helpdesk: Inhalte finden

- Idealfall: User kennt seine Ticket Nummer
- Normalfall: User erinnert sich nur noch an Stickwörter
- Helpdesk benötigt Volltext Suche

The screenshot shows a search interface with the following text:

Search for tickets. Enter id numbers, queues by name, Owners by username and Requestors by email address.

Searching the full text of every ticket can take a long time, but if you need to do it, you can search for any word in full ticket history for any word by typing **fulltext:word**.

RT will look for anything else you enter in ticket subjects.

Below the text is a search input field and a blue "Search" button.

Helpdesk: SelfService

- User will Status seines Problems verfolgen
- User will Updates zu seinem Problem hinterlegen

RT for rt38-messenger.int.kn Logged in as root | Preferences | Logout

Open tickets Closed tickets New ticket Preferences

RT Self Service / Open tickets Goto ticket Search Articles

My open tickets

#	Subject	Status	Requestors	Owner
2	Problem with my Laptop, Windows is crashing 10 times a day	open	root@localhost	Nobody
3	Problem with Printer Server	open	root@localhost	Nobody

ITIL

- Incidents -> Nagios / User Calls
- Changes -> Hard+ Software
- Configuration Database / Assets

Incidents: Nagios

Owner: andreas.mohr-andreas.mohr@kuehne-nagel.com
Requestors: monitor@kuehne-nagel.com
Cc:
AdminCc:

Dates

Created:	Mon Mar 08 10:29:16 2010
Starts:	Not set
Started:	Not set
Last Contact:	Not set
Due:	Not set
Closed:	Not set
Updated:	Mon Mar 08 14:37:53 2010 by andreas.mohr

Custom Fields

System:	harry
Service:	RATES_OTHER_KNratesContracts_28080
Address:	harry.int.kn
State:	CRITICAL

Links

Depends on:
Depended on by:
Parents:
Children:
Refers to:

- asset #541 hank: hank
- asset #542 harry: harry

Referred to by:

Mon Mar 08 10:52:44 2010 monitor@kuehne-nagel.com - Ticket 3112334: Ticket created [Reply] [Comment][Pretask - Posttask][Parent - Child][Clone]

Subject: ** PROBLEM alert - hank/RATES_OTHER_KNratesContracts_8080 is CRITICAL **
To: support@kuehne-nagel.com@kuehne-nagel.com
Date: Mon, 08 Mar 2010 10:43:07 +0000
From: Nagios Admin <monitor@kuehne-nagel.com>

***** Nagios *****

Notification Type: PROBLEM

Service: RATES_OTHER_KNratesContracts_8080
Host: hank
Address: hank.int.kn
State: CRITICAL

Date/Time: Mon Mar 8 10:43:07 UTC 2010

Additional Info:

(Service Check Timed Out)

Mon Mar 08 10:29:18 2010 RT_System - Priority changed from '70' to '0'
Mon Mar 08 10:29:18 2010 RT_System - Reference to asset #542 harry added
Mon Mar 08 10:29:17 2010 RT_System - Priority changed from (no value) to '70'
Mon Mar 08 10:29:16 2010 RT_System - Outgoing email recorded [Show]
Mon Mar 08 10:29:16 2010 RT_System - Outgoing email recorded [Show]
Mon Mar 08 10:29:16 2010 monitor@kuehne-nagel.com - Ticket created [Reply] [Comment][Pretask - Posttask][Parent - Child][Clone]
Subject: ** PROBLEM alert - harry/RATES_OTHER_KNratesContracts_28080 is CRITICAL **
To: support@kuehne-nagel.com@kuehne-nagel.com
Date: Mon, 08 Mar 2010 10:29:14 +0000
From: Nagios Admin <monitor@kuehne-nagel.com>

***** Nagios *****

Notification Type: PROBLEM

Service: RATES_OTHER_KNratesContracts_28080
Host: harry

Download (untitled) [text/plain 225b]

Download (untitled) [text/plain 228b]

Incidents:Asset

- Aktuelle Incidents und Changes am Asset
- Incident und Change History am Asset
- Ticket Eröffnung vom Asset

Links to active Tickets

Referred to by Ticket:

Create linked Ticket

Acerbillng

History (last 10)

			Display mode: Brief headers [Full headers]
#	Mon Mar 08 10:52:46 2010	RT_System - Ticket #3112334 : ** PROBLEM alert - harry/RATES_OTHER_KNratesContracts_28080 is CRITICAL ** (resolved)	[Show]
#	Mon Mar 08 10:52:46 2010	RT_System - Reference by ticket #3112093 added	[Show]
#	Thu Mar 04 03:58:45 2010	RT_System - Ticket #3093441 : ** PROBLEM alert - hank/RATES_OTHER_KNratesContracts_8080 is CRITICAL ** (resolved)	[Show]
#	Thu Mar 04 03:58:45 2010	RT_System - Reference by ticket #3093441 added	[Show]
#	Mon Mar 01 11:31:37 2010	RT_System - Ticket #3076109 : ** PROBLEM alert - hank/RATES_PROCS is CRITICAL ** (resolved)	[Show]
#	Mon Mar 01 11:31:37 2010	RT_System - Reference by ticket #3076109 added	[Show]
#	Wed Feb 17 10:55:09 2010	RT_System - Ticket #3024985 : ** PROBLEM alert - hank/RATES_OTHER_KNratesContracts_8080 is CRITICAL ** (resolved)	[Show]
#	Wed Feb 17 10:55:09 2010	RT_System - Reference by ticket #3024965 added	[Show]
#	Wed Feb 17 10:47:49 2010	RT_System - Ticket #3024965 : ** PROBLEM alert - hank/RATES_OTHER_KNratesContracts_8080 is CRITICAL ** (resolved)	[Show]
#	Wed Feb 17 10:47:49 2010	RT_System - Reference by ticket #3024965 added	[Show]

Changes: RFC

KUEHNE+NAGEL

RT for kuehne-nagel.com

Logged in as torsten.brumm | [Preferences](#) | [Logout](#)

Search

New ticket in [applications-ast-fa](#)

[Home](#) · [Search](#) · [FAQ](#) · [CMDB](#) · [RFC](#) · [Forum](#) · [Tools](#) · [Preferences](#) · [Approval](#)

Request For Change

[RFC](#) · [System Change System](#) · [System Change Opensystems](#) · [IOPM Change](#) · [Proxy Block Request](#) · [Help](#)

The following table shows the RfCs generally available and links (click link to open formular) for each Rfc you are authorized to use:

Change Type	Link
Business Application Change – install, change or delete business applications	Not Authorized: Request Authorisation
Temp Admin Rights – request special rights on the AS/400 systems	Not Authorized: Request Authorisation
Robot Job Change – add,change or delete a robot job	Not Authorized: Request Authorisation
User Account Change – add, change or delete user accounts	Not Authorized: Request Authorisation
Output Queue Change – add, change or delete out queues	Not Authorized: Request Authorisation
General Change – for all other changes	Not Authorized: Request Authorisation
System Change SI – for system wide changes	System Change System
System Change OS – for system wide changes	System Change Opensystems
OPM document request – request a new or change existing OPM document	OPM document request
Proxy Change Form – request a block change for corporate proxy server	Proxy Change Form

If you don't see any links or some links are missing, press "HELP" for further information.

Please fill all change request forms (Rfc) in english.

Thank you.

Changes: New Change

Request for change: OPM document request

RfC · System Change System · System Change Opensystems · IOPM Change · Proxy Block Request · Help

Request for change: OPM document request

* - Indicates a required field.

DESCRIPTION OF CHANGE	
* Requested by	Name: Torsten Brumm Email: my.mailaddy@nix.de OrgUnit: HAM MI-ID
* Request Type	<input checked="" type="radio"/> new document <input type="radio"/> change document
Document Code (* if Request Type = "change document")	4711
* Document Title	New Printer Job
* Document Region	International ▾
Document Country (* if Document Region <> International)	AD  Need help? Click the little book icon to open a list of valid country codes.
Document Branch / Department (e.g. BRE EX)	HAM MI
Document Customer (e.g. Thule, Siemens, ...)	Apple
* Application	Ciel FA ▾
* Document name within application	CFA APPL 4711
* Production System	ASKNDHST ▾
* Test System	ASKNITST ▾

Dates

Created:	Tue Feb 23 12:13:09 2010
Starts:	Not set
Started:	Tue Feb 23 12:13:10 2010
Last Contact:	Not set
Due:	Not set
Closed:	Not set
Updated:	Mon Mar 08 15:03:55 2010 by torsten.brumm

Custom Fields

Application_Name:	RTDB
Description_Reason:	Index optimization
Disadvantage:	RT is acting slow on several searches
Requested_by_Name:	Torsten Brumm
Requested_by_Email:	torsten.brumm@kuehne-nagel.com
Requested_by_OrgUnit:	HAM MI-ID
Budget_relevant:	no
Urgency:	High (Quick implementation to avoid business impact OR change is a prerequisite for another already scheduled change)
Urgency_Reason:	RT is slow on some searches, too many of this kind of searches slows down RT
System_Name:	Amrum
Execution_Start_Date:	2010-03-06 08:00
Execution_End_Date:	2010-03-06 20:00
Alternative_Start_Date:	2010-02-27 22:00
Alternative_End_Date:	2010-02-28 06:00
Dependencies:	None
Fallback_Plan_Implementation:	not needed
Risk:	Normal (Change tested in test environment and fallback plan available)
Necessary_Preparations:	Downtime Announcement
Approved_BUSAPPL_On:	2010-02-23 12:13:10
Approved_by_BUSAPPL:	Brumm, Torsten / Kuehne + Nagel / Ham MI-ID
Escalation:	SecondEscalation

Links

Depends on:	* 3049431: (philipp.potiske) Approval for system change: 3049430 - RTDB on Amrum [resolved]
Depended on by:	
Parents:	
Children:	
Refers to:	* asset #176 amrum
Referred to by:	* 3049431: (philipp.potiske) Approval for system change: 3049430 - RTDB on Amrum [resolved]

Thu Feb 25 12:17:11 2010 PT - Comments added

Subject: Escalation 2 for Ticket #: 3049430 - RTDB on Amrum!
RT-Send-CC: torsten.brumm@kuehne-nagel.com; philipp.potiske@kuehne-nagel.com

Hello,
this is an automated Escalation Mail from the Request Tracker.

!!!! FINAL ESCALATION !!!!

The following Change Request has been escalated for the first time 8 hours ago.
The ticket is now untouched for 16 hours.

Ticket Id: 3049430
Queue name: KN.DE.CR.SYSTEM-OS
Escalation: Escalation FirstEscalation changed to SecondEscalation
Priority: Priority changed from '10' to '20'
Subject: RTDB on Amrum
Requestor: torsten.brumm@kuehne-nagel.com
Ticket URL: http://ticket.int.kn:80/Ticket/Display.html?id=3049430

Please contact the processing team immediately.

Thank you

Thu Feb 25 12:17:11 2010 PT - Priority changed from '10' to '20'

Wed Feb 24 12:16:06 2010 RT_System - Outgoing email about a comment recorded

Wed Feb 24 12:16:06 2010 rt - Comments added

Subject: Escalation 1 for Ticket #: 3049430 - RTDB on Amrum!
RT-Send-CC: torsten.brumm@kuehne-nagel.com; philipp.potiske@kuehne-nagel.com

Hello,
this is an automated Escalation Mail from the Request Tracker.

!!!! FIRST ESCALATION !!!!

The following Change Request is older than 8 hours without being attended to.

Ticket Id: 3049430
Queue name: KN.DE.CR.SYSTEM-OS
Escalation: Escalation InTime changed to FirstEscalation
Priority: Priority changed from (no value) to '10'
Subject: RTDB on Amrum
Requestor: torsten.brumm@kuehne-nagel.com
Ticket URL: http://ticket.int.kn:80/Ticket/Display.html?id=3049430

Please take care of the Change Request immediately.

Thank you

Wed Feb 24 12:16:06 2010 rt - Priority changed from (no value) to '10'

Tue Feb 23 12:13:17 2010 RT_System - Priority changed from '79' to '0'

Tue Feb 23 12:13:14 2010 RT_System - Priority changed from '10' to '79'

Tue Feb 23 12:13:11 2010 RT_System - Priority changed from (no value) to '10'

Tue Feb 23 12:13:11 2010 RT_System - Outgoing email recorded

Tue Feb 23 12:13:11 2010 RT_System - Outgoing email recorded

Tue Feb 23 12:13:10 2010 RT_System - Status changed from 'new' to 'pending'

Tue Feb 23 12:13:09 2010 torsten.brumm - Ticket created

Subject: RTDB on Amrum
Date: Tue, 23 Feb 2010 12:13:09 +0000
To: torsten.brumm@localhost
From: torsten.brumm@kuehne-nagel.com

Application_Name: RTDB
System_Name: Amrum
Description_Reason: Index optimization
Disadvantage: RT is acting slow on several searches
Requested_by_Name: Torsten Brumm
Requested_by_Email: torsten.brumm@kuehne-nagel.com
Requested_by_OrgUnit: HAM MI-ID
Budget_relevant: no
Urgency: High (Quick implementation to avoid business impact OR change is a prerequisite for another already scheduled change)
Urgency_Reason: RT is slow on some searches, too many of this kind of searches slows down RT
Risk: Normal (Change tested in test environment and fallback plan available)
Execution_Start_Date: 2010-03-06 08:00
Execution_End_Date: 2010-03-06 20:00
Alternative_Start_Date: 2010-02-27 22:00
Alternative_End_Date: 2010-02-28 06:00
Dependencies: None
Fallback_Plan_Implementation: not needed
Necessary_Preparations: Downtime Announcement

Mittwoch, 10. März 2010

amrum

[Display](#) · [Edit Basics](#) · [Edit Fields](#) · [Edit IPs](#) · [Edit People](#) · [Edit Links](#) · [Edit All](#) · [View History](#) · [Clone](#)

Asset metadata

Basic Information

Id: 176
Name: amrum
Description: RT DB Server Backup
Status: production
Asset Type: Servers

Responsible People

Administrators:

Owners:

Group: CMDB-Servers-Owner

IP Addresses and Ports

e1000g0: (TCP: 22, 3306)
UDP:

Relations to other Items

Depends On:

- Switch: switch-apz-8-4
Description: Switch for Zone APZ8-4
Status: production

Depended On By:

Refers To:

Referred To By:

Runs On:

Is Running:

- Application: rtedb
Description: Database Application for Request Tracker / Ticket System
Database
Status: production
- Application: knetdb
Description: Database Application for KNET Database
Status: production

Component Of:

- Rack: r-8-p-r
Description: Server Rack Knuerr Miracel ASP
Status: production

Has Component:

Links to active Tickets

Referred to by Ticket:

- 3049430: (torsten.brumm) RTDB on Amrum [open]

Custom Fields

Contact_Name: OSY_SI - HAM MI-ID
Contact_Phone:
Contact_Mail: @kuehne-nagel.com
Organisation: Kuehne + Nagel
Department: Ham MI-ID
Region: Core IT
Maintenance_Contract: DE1005732.pdf
Date_of_Purchase: 2008-09-24
Warranty_Period: 2011-09-23
Height_Units: 2
Position_in_Rack: 10
Manufacturer: Sun
Model: Sun T5220

- Sun Integrated Lights Out Manager 2.0 Supplement for Sun SPARC Enterprise T5120 and T5220 Servers.pdf
- Sun SPARC Enterprise T5120 and T5220 Servers Administration Guide.pdf
- Sun SPARC Enterprise T5120 and T5220 Servers Installation Guide.pdf
- Sun SPARC Enterprise T5120 and T5220 Servers Service Manual.pdf
- Sun SPARC Enterprise T5220 Server Getting Started Guide.pdf

Manual:

PWR_Connections: 2
PWR_Consumption: 1000
Serialnumber:
OS: Sun Solaris
OS_PatchLevel: 10
CPU_Type: UltraSPARC T2 Processor - 8 Cores
CPU_Freq: 1,4 GHz
CPU_Quantity: 1
IF_Network_Quantity: 3
IF_RAC: Yes

IF_RAC_IP:
IF_SAN: No
MEM_Installed: 64 GB
MEM_Row_Used: 16
Storage: internal RAID 01
Virtual_Server: No
Monitored_by: Nagios

Object_Picture: t5220.gif



Additional_Information: Amrum
Administration: Hosting

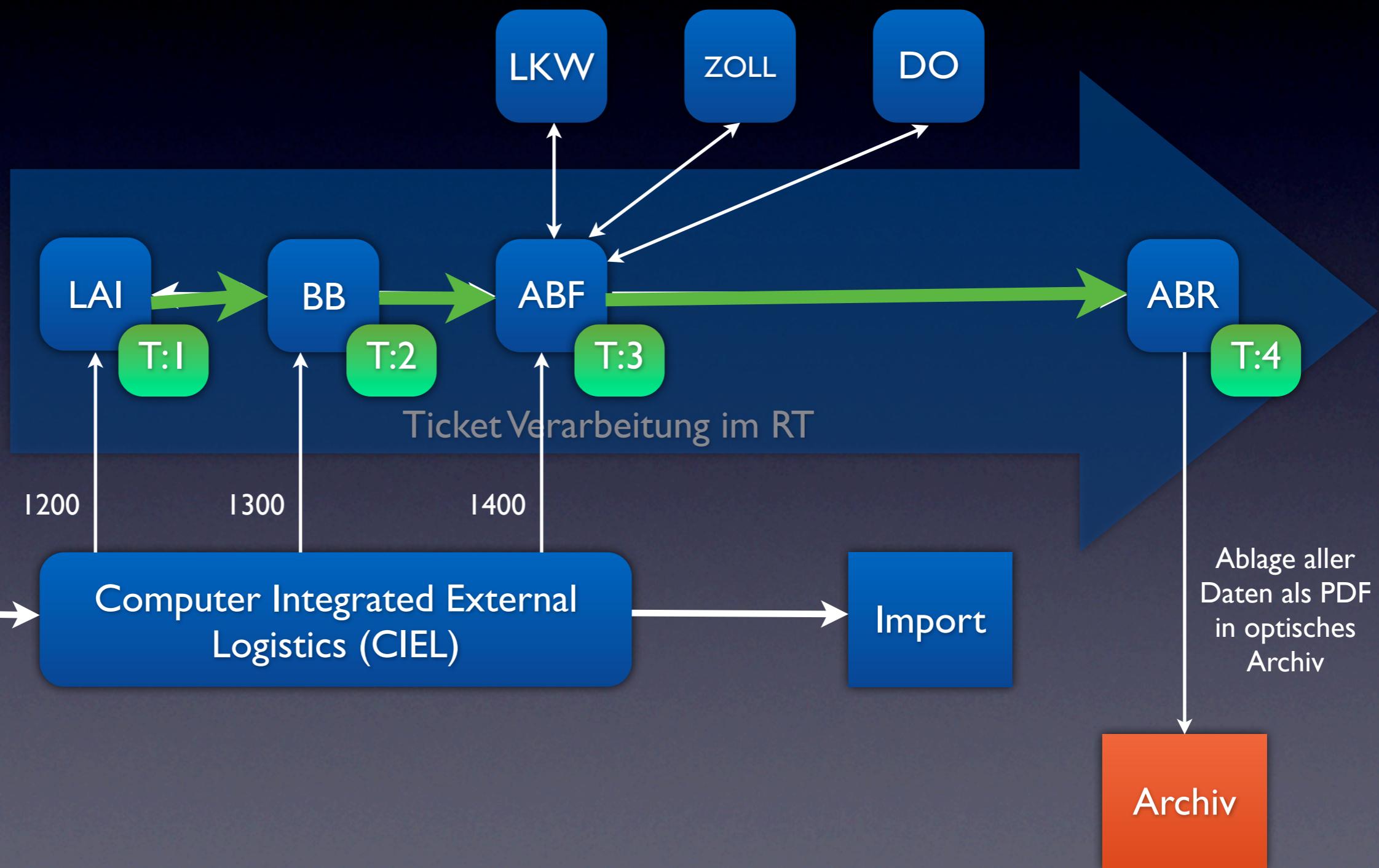
Workflows

- Airfreight Import
- Anti Terror Screening
- Investement Approvals
- Software Entwicklung/Support

Airfreight Import

- Export Haus in Hongkong erfasst Sendung für Hamburg
- Sendungsdaten fallen in HH aus dem Drucker!!
- MA nimmt Ausdruck und füllt Infos ein, scannt und versendet Infos per Mail an Import HUB FFM
- Import HUB MA nimmt Mail Infos, druckt diese und sammelt alle weiteren Infos, scannt und sendet erneut
- Import HUB MA organisiert Zoll Mitarbeiter, LKW's und bereitet Infos für Rechnungsstellung vor, scannt erneut alle Dokumente und versendet diese
- Rechnungsstelle nimmt Infos, trägt diese in Abrechnungssystem ein und stellt Rechnung, scannt die Rechnung und überträgt diese in ein optisches Archiv

Airfreight Import



Airfreight Import

- Technik:
 - LAl: pro Airport eine Queue
 - BB: eine Queue
 - ABF: eine Queue
 - ABR: eine Queue

Airfreight Import

- Angepasste RT Seiten für unterschiedliche Bereiche (LAI, BB, ABF, ABR)
- Reduzierung der Ansichten auf Airfreight Information
- Berechnung des Ladungsvolumens für LKW Voravisierung
- Schnittstelle an ZOLL Systeme
- Implementierung neuer Funktionen für MA Steuerung

Airfreight Import

KUE RT für kue RT for kue-nagel.com #B Anzeige Home · Simple Search · Tickets · Ticketansicht alle Sendungen · Kommende Sendungen · Sendungsübersicht · Sendungssuche · Mitarbeiter Steuerung · Tools · Configuration · Approval Tournummer Zuordnung · ClientID Zuordnung · Massenuebergabe Gruppenintern · Massenuebergabe uebergreifend ClientID Zuordnung

Gruppenleiter der Abfertigung - Client-ID-Zuordnung

Client-ID's den Sachbearbeitern zuordnen

ClientID	Mitarbeiter	Delegierung löschen
BEELI	shaleen.i	<input type="checkbox"/>
BMGIR	ingo.i	<input type="checkbox"/>
CONT	ellen.i	<input type="checkbox"/>
FLEXP	andrea.c	<input type="checkbox"/>
FRITH	maria..	<input type="checkbox"/>
FUJIAL	melanie..	<input type="checkbox"/>
FUJIA	melanie..	<input type="checkbox"/>
FUJI	carolin..	<input type="checkbox"/>
FUJIS	paul..	<input type="checkbox"/>
GIACUI	andrea..	<input type="checkbox"/>
MITS	maria..	<input type="checkbox"/>
MON	shaleen..	<input type="checkbox"/>
MULTL	andrea..	<input type="checkbox"/>
MULTL	andrea..	<input type="checkbox"/>
QUELI	que..	<input type="checkbox"/>
QUELI	quelle..	<input type="checkbox"/>
SIEMK	andrea..	<input type="checkbox"/>
SIEMK	andrea..	<input type="checkbox"/>
SOLE	andrea..	<input type="checkbox"/>
SOLEHE	andrea..	<input type="checkbox"/>

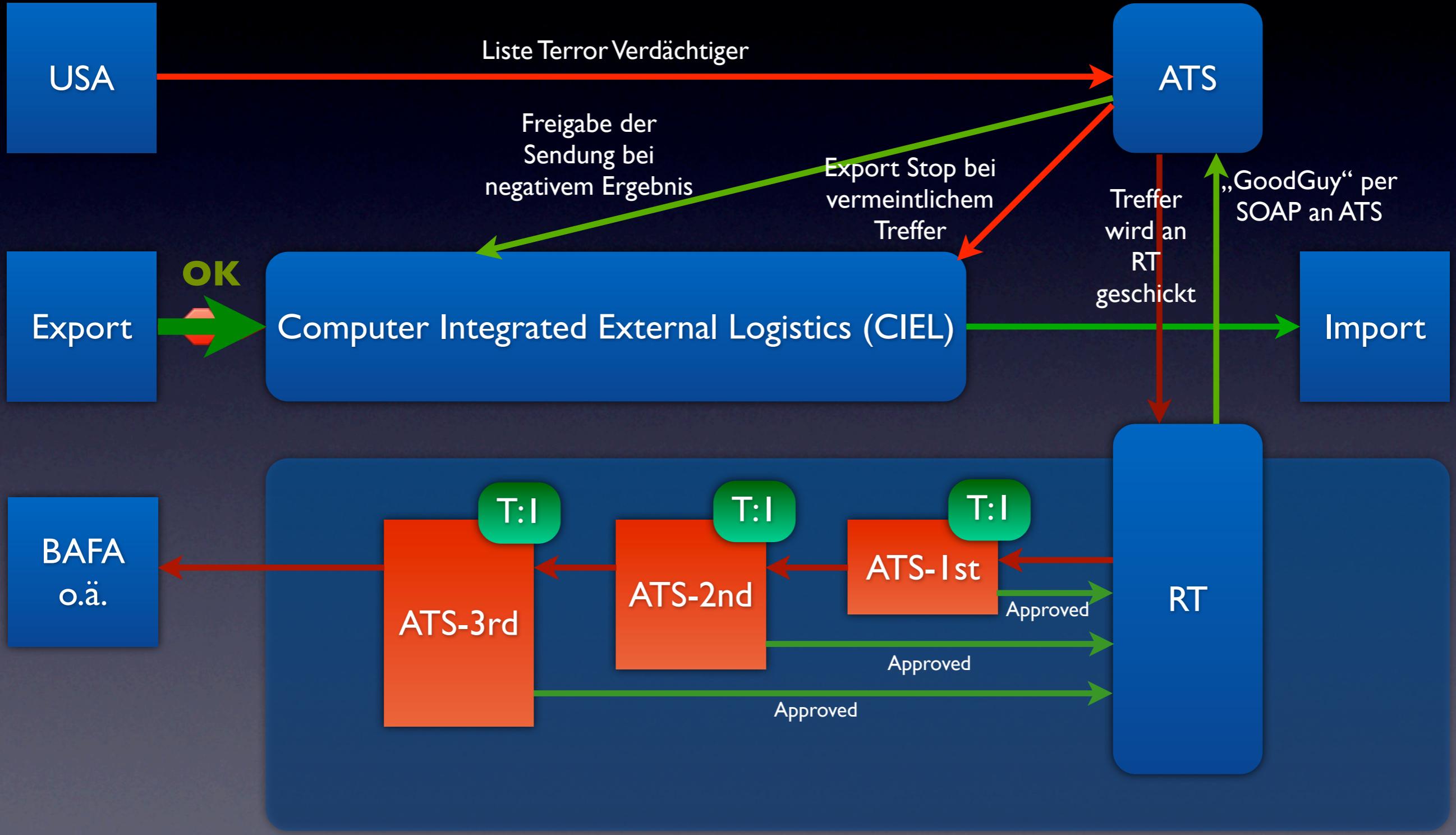
Zuordnung von Client-ID zu Mitarbeiter

Client-ID: Mitarbeiter:

Anti Terror Screening

- USA übersenden täglich „Terror“ Datei
- Screening Software „verarbeitet“ Daten und sperrt Sendungen an vermeintliche Treffer
- Mitarbeiter sichten Daten und geben Sendungen manuell frei

AntiTerrorScreening



AntiTerrorScreening

- Technisches:
 - 3 Queues auf unserem Produktions RT
 - Optische Anpassungen auf Basis von Callbacks / Gruppenmitgliedschaften
 - Kein direkter Zugriff auf die Queues für MA, Zugriff pro Ticket über Gruppenmitgliedschaften geregelt
 - Scripte + Templates für die Informationsverarbeitung

AntiTerrorScreening

Modify a scrip for queue AntiTerrorScreening-FirstLevel

Current: Select scrip · New scrip · Scrip #862

Service Updates:

(Check list)

Scrip Fields

Description: 007_CheckForRespGroup
Condition: On Create
Action: User Defined
Template: Global template: Blank
Stage: TransactionCreate

User Defined conditions and actions

(Use these fields when you choose 'User Defined' for a condition or action)

Custom condition:

Custom action preparation code: return 1;

Custom action cleanup code:

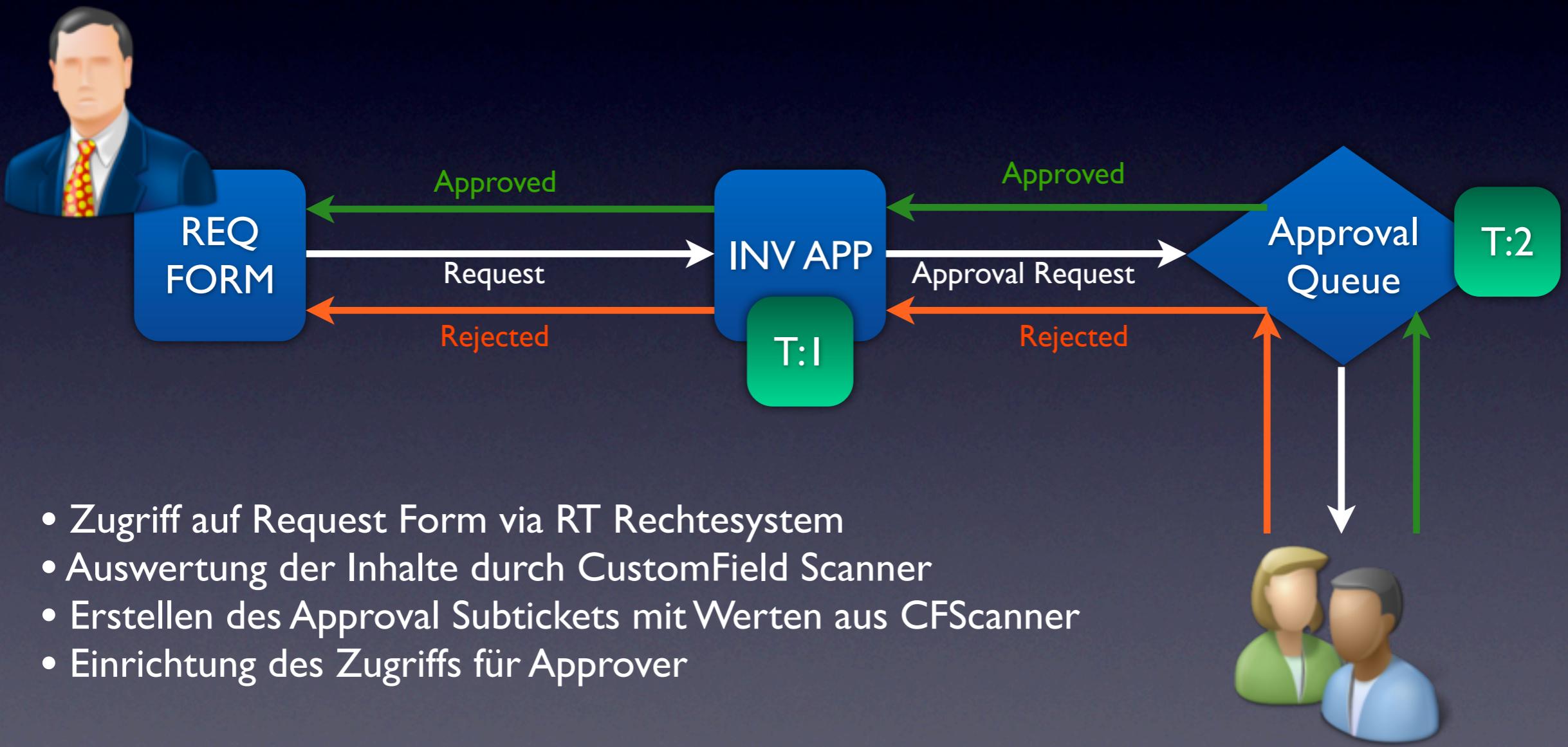
```
$RT::Logger->info("TBRUMM-ATS: SCRIPT START");
sub trim($);

my $BranchTemp = $self->TicketObj->FirstCustomFieldValue('Branch');
my $BranchTempTrim = trim($BranchTemp);
my $BRANCH = $BranchTempTrim;
```

Investment Approvals

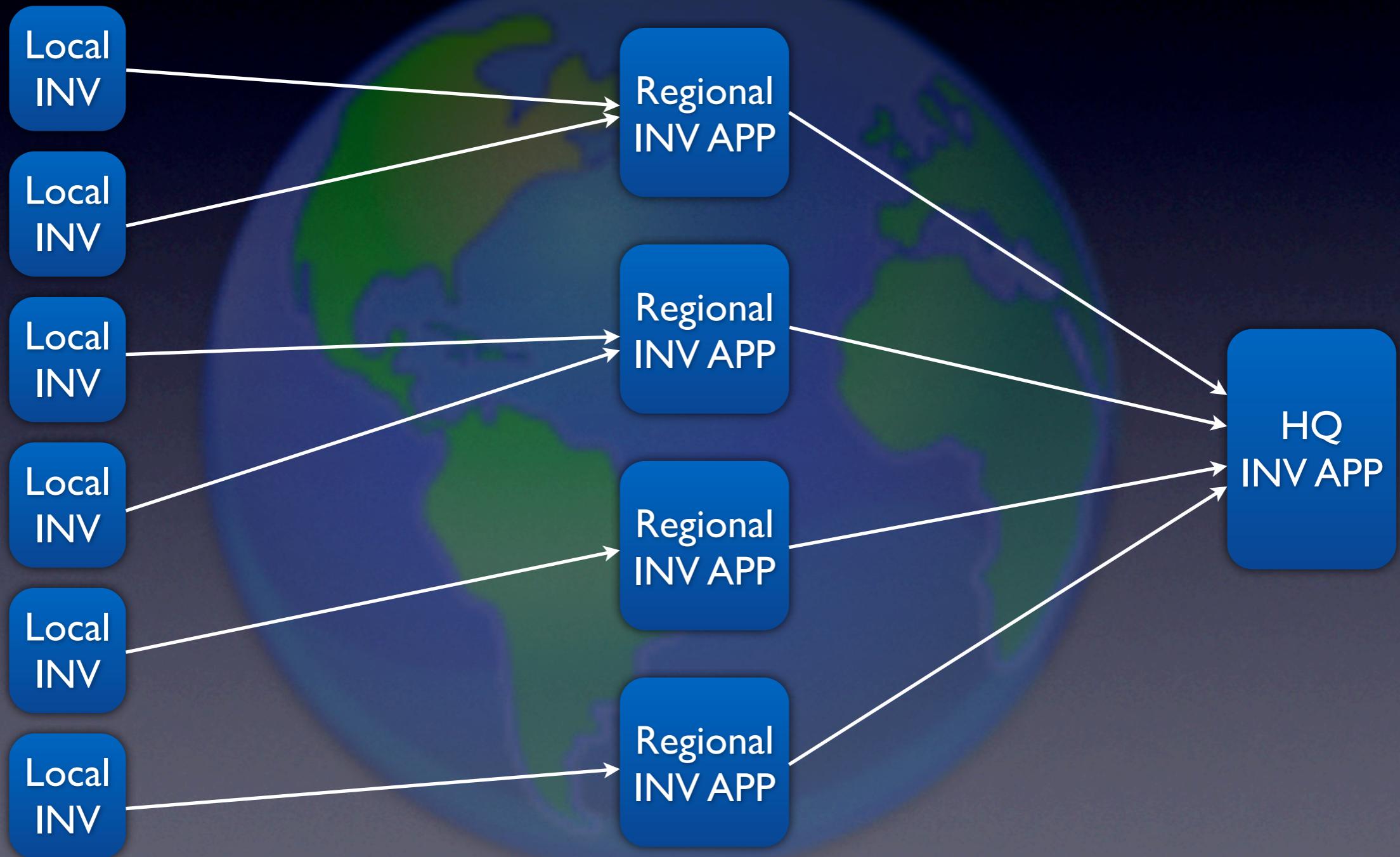
- Dokument / Antrag ausfüllen
- Ausdrucken, unterschreiben, einscannen und per Mail weiter senden
- dann erneut ausdrucken, unterschreiben und wieder einscannen/versenden....

Investment Approvals



Info Mail an Approver
Approver auf Ticket berechtigen

Investment Approvals



Investment Approvals

- Technik:
 - RT ACL
 - CustomFields (Scanner)
 - Default RT Approval Mechanismus
 - Saved Searches

Investment Approvals

#2303906: Approval for Investment: 2303903 - 86 09 007 - Fitting of Infra

Originating ticket: #2303903

Requested_by_Name: @kuehne-nagel.com
Requested_by_Email: @kuehne-nagel.com
Requested_by_Country: France
Requested_by_Region: SWE
Value Capex in CHF: 326.1
Category: Capex
Business Unit: Contract Logistics
Business Field: Shared Warehousing

Tue Sep 29 13:01:34 2009 RT_System - Outgoing email recorded [Show]
Tue Sep 29 13:01:34 2009 - Status changed from 'pending' to 'approved'
Tue Sep 29 13:01:34 2009 RT_System - Outgoing email about a comment recorded [Show]
Tue Sep 29 13:01:33 2009 - Comments added [Pretask - Posttask][Parent - Child][Clone]
RT-Send-CC: @kuehne-nagel.com, @kuehne-nagel.com, @kuehne-nagel.com
Attached Investment Application has been duly signed by Sgi HA/HF.
Kind regards,

Tue Sep 29 11:57:42 2009 - Given to [Show]
Wed Aug 05 10:05:45 2009 - Comments added [Pretask - Posttask][Parent - Child][Clone]
Pending with Sgi GW
Download (untitled) [text/plain 103b]

Fri Jul 31 10:28:08 2009 RT_System - Outgoing email recorded [Show]
Fri Jul 31 10:28:07 2009 RT_System - Status changed from 'new' to 'pending'
Fri Jul 31 10:28:07 2009 - Ticket created [Pretask - Posttask][Parent - Child][Clone]
Subject: 86 09 007 - Fitting of Infra
Date: Fri, 31 Jul 2009 10:28:06 +0000
To: @bruchtal.int.kn
From: @kuehne-nagel.com
Download (untitled) [text/plain 271b]
Requested_by_Name: @kuehne-nagel.com
Requested_by_Email: @kuehne-nagel.com
Requested_by_Region: SWE
Requested_by_Country: France
Value Capex in CHF: 326.1
Value Staff in CHF:
Category: Capex
Business Unit: Contract Logistics
Business Field: Shared Warehousing
Download SW_France_86 09 007.pdf [application/pdf 913.3k]
Download RE Emailing SW_France_8609007 pdf- URGENT.msg [application/octet-stream 184.5k]

Notes
 Approve
 Deny
 No action

Investment Approval

Modify template CFScanner

Select template • New template • [Template #550](#)

Service Updates:

Name: CFScanner
Description: CFScanner
Content: Requested_by_Name Requested_by_Email Requested_by_Regis (.*)\n^Requested_

Modify template CreateApprovalTicket

Select template • New template • [Template #551](#)

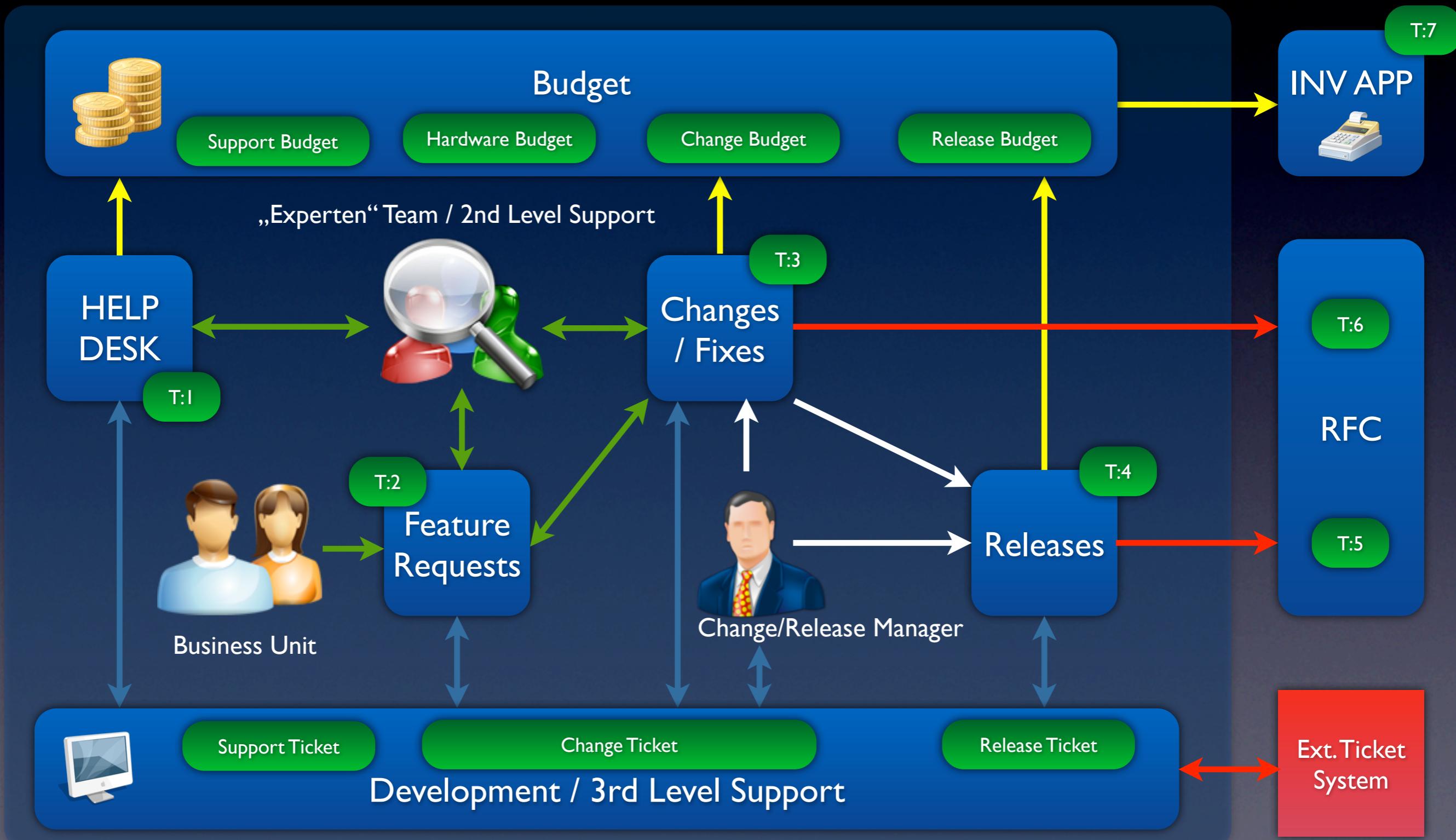
Service Updates:

Name: CreateApprovalTicket
Description: Create the SubTicket for Approval Process
Content: ====Create-Ticket: INVEST Subject: Approval for Investment: {\$Tickets{"TOP"}->Id} - {\$Tickets{"TOP"}->Subject} Depended-On-By: TOP Refers-To: {\$Tickets{'TOP'}->Id()} Queue: APPROVAL-SGI-IA Type: approval Requestor: {\$Tickets{'TOP'}->RequestorAddresses()} AdminCC: my \$group_name = 'APPROVAL-SGI-IA'; my \$groups = RT::Groups->new(\$RT::SystemUser); \$groups->LimitToUserDefinedGroups(); \$groups->Limit('FIELD' => 'Name', 'OPERATOR' => '=', 'VALUE' => \$group_name); \$groups->First->Id; } Content-Type: text/plain Content: Your approval is requested for the ticket {\$Tickets{"TOP"}->Id}: {\$Tickets{"TOP"}->Subject} {\$Tickets{"TOP"}->Transactions->First->Content()} ENDOFCONTENT

Software Entwicklung/ Support

- Entwickler (Externe Programmierer) -> anderes Ticketsystem
- User Probleme (Helpdesk)
- Business Units -> neue Anforderungen
- Change Coordinatoren
- Release Verantwortliche
- Budget Verwaltung (Investment Approvals)
- (Software Verwaltung) -> Subversion
- Software Installation -> Change Management (ITIL)

Software Entwicklung



Software Entwicklung

- Queues:
 - Change
 - Release
 - Budget
 - Business Unit
 - Development
 - Test
 - Training
- Gruppen
 - Change, Release, Budget, Business Unit, Development, Test, Training
- Links
 - Verlinkung der einzelnen Tickets untereinander
- Anpassungen
 - Queue und Gruppen basierte Anpassungen der Menüs
 - Weitergabe Funktion für Ticket Inhalte

Software Entwicklung

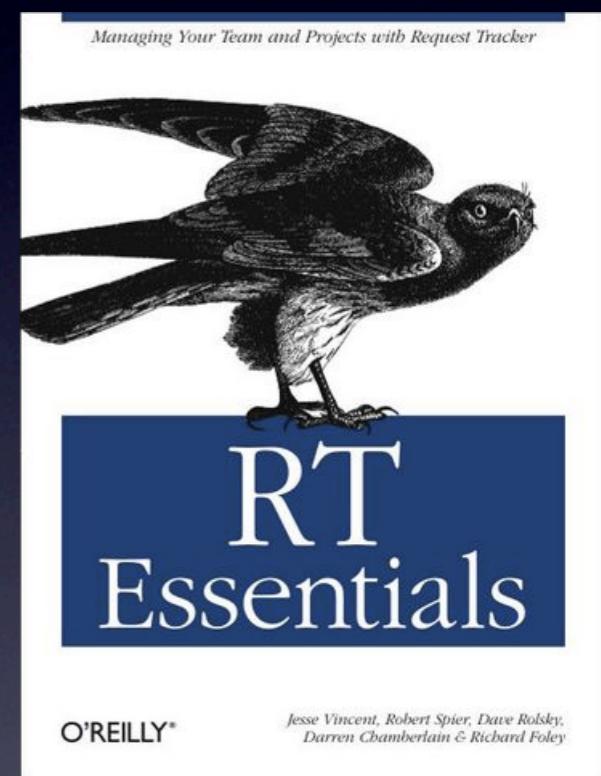
- Problem:
 - Viele unterschiedliche Link Typen zwischen Tickets
 - Übergabe von Informationen zwischen diversen verlinkten Tickets
 - Anfällig für User Fehler

Software Entwicklung

- Lösung:
 - Entwicklung einer Erweiterung für RT durch BPS: RTx::CloneTicketWithData
 - Tickets können mit einem Klick geklont werden, dabei kann benötigter Content ausgewählt werden
 - Anpassung der Erweiterung um Funktionen für Entwicklungsflow
 - User werden durch den Prozess geführt

Weiterführende Informationen

- <http://www.bestpractical.com>
- <http://wiki.bestpractical.com>
- irc://irc.perl.org (#rt)
- <http://github.com/bestpractical/>
- [http:// search.cpan.org](http://search.cpan.org)
- [http:// www.brumm.me](http://www.brumm.me)



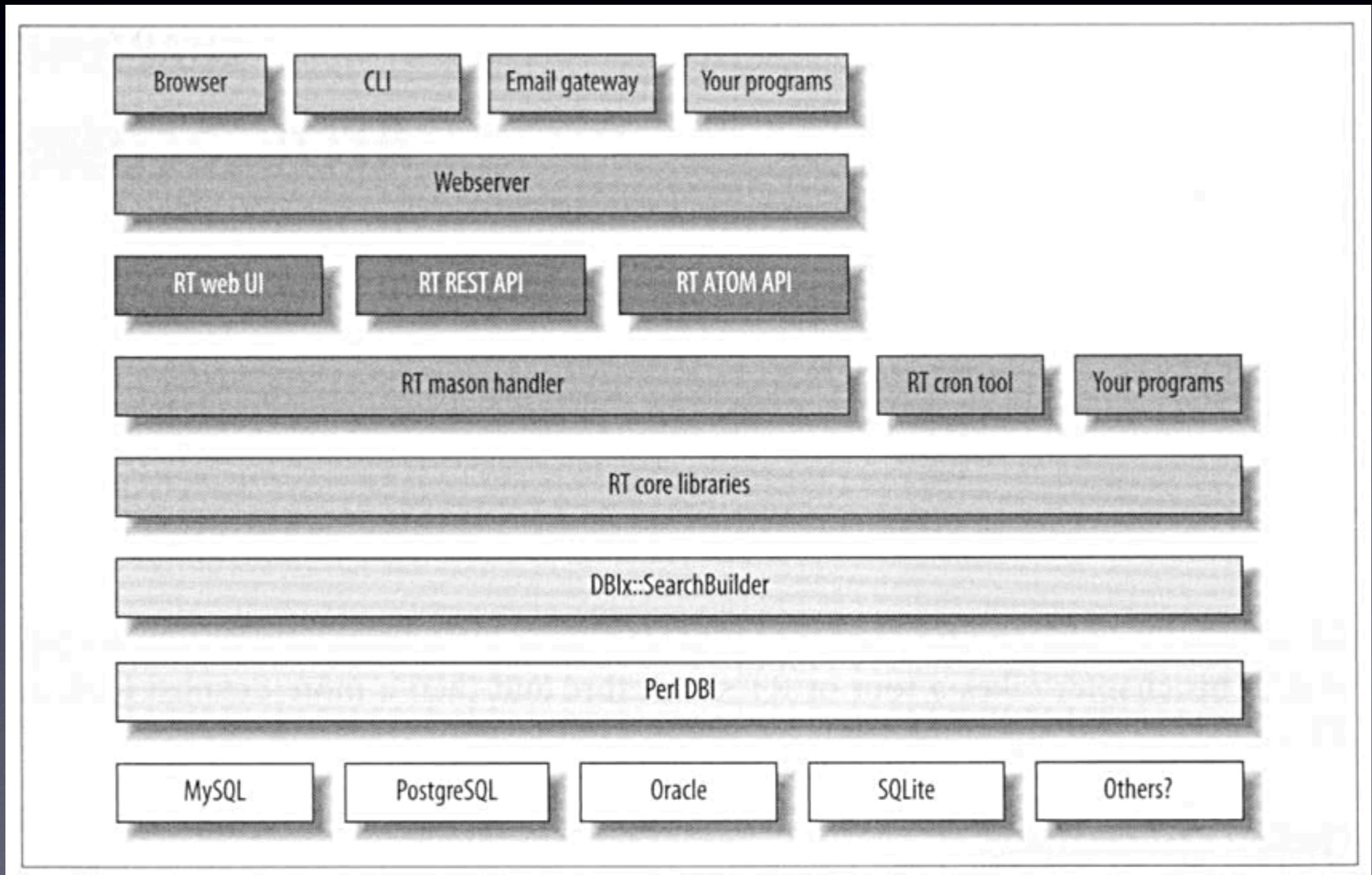
Kontakt

- Torsten Brumm
 - tbrumm@mac.com
- Björn Schulz
 - bjoern.schulz@desy.de

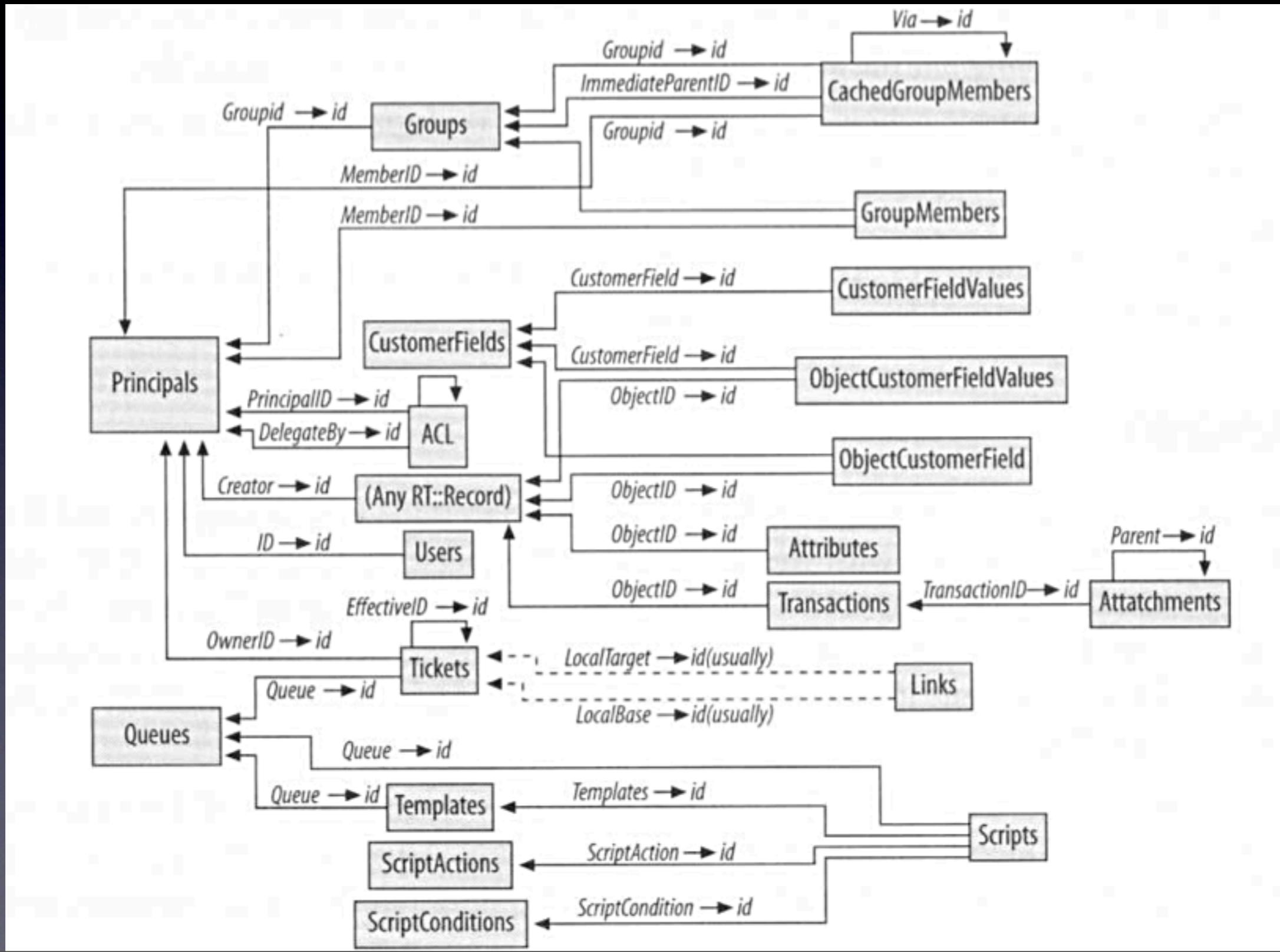
Danke

Tipps & Tricks

Aufbau RT



RT Database Model



Installation

- wget <http://download.bestpractical.com/pub/rt/release/rt.tar.gz>
- tar -xzvf rt.tar.gz
- cd rt
- ./configure --prefix=/opt/rt3 --enable-graphviz --enable-gd \
--enable-gpg --with-web-handler=fastcgi --with-db-type=mysql \
--with-db-database=rt3 --with-db-rt-user=rt3 \
--with-db-rt-pass=ASecureOne --with-web-user=apache \
--with-web-group=apache
- make testdeps
- make fixdeps (ggf. einrichten der CPAN Umgebung)
- make install (danach anpassen der /opt/rt3/etc/RT_SiteConfig.pm)
- make initialize-database

Apache: mod_fastcgi

```
LoadModule fastcgi_module /usr/lib/httpd/modules/mod_fastcgi.so
FastCgiIpcDir /tmp/fcgi
FastCgiServer /opt/rt3/bin/mason_handler.fcgi -idle-timeout 9000 \
-processes 10 -listen-queue-depth 10 -priority 1 -appConnTimeout 305 \
-init-start-delay 5 -restart-delay 2

<VirtualHost *>
    ServerName rt.yourcompany.com
    ServerAdmin support.rt@yourcompany.com
    DocumentRoot /opt/rt3/share/html
    AddHandler fastcgi-script .fcgi
    Alias /NoAuth/images/ /opt/rt3/share/html/NoAuth/images/
    Alias /pics/ /opt/rt3/share/html/NoAuth/images/pics/
    ScriptAlias / /opt/rt3/bin/mason_handler.fcgi/
</VirtualHost>
```

Apache: mod_fcgid

```
LoadModule fcgid_module /usr/lib/httpd/modules/mod_fcgid.so
ProcessLifeTime 3600
SocketPath /tmp/fcgid.sock.rt3
MaxProcessCount 15
MaxRequestsPerProcess 300
<VirtualHost *>
    ServerName rt.yourcompany.com
    ServerAdmin support.rt@yourcompany.com
    DocumentRoot /opt/rt3/share/html/
    AddDefaultCharset UTF-8
    AddHandler fcgid-script .fcgi
    <Directory "/opt/rt3/share/html">
        Options FollowSymLinks ExecCGI
        AllowOverride None
    </Directory>
    Alias /NoAuth/images /opt/rt3/share/html/NoAuth/images
    Alias /pics/ /opt/rt3/share/html/NoAuth/images/pics/
    ScriptAlias / /opt/rt3/bin/mason_handler.fcgi/
</VirtualHost>
```

Apache: FCGID

- FCGID:
 - **IdleTimeout** 20
 - **IdleScanInterval** 2
 - **BusyTimeout** 3000
 - **BusyScanInterval** 10
 - **ErrorScanInterval** 3
 - **ZombieScanInterval** 3
 - **ProcessLifeTime** 3600
 - **SocketPath** /tmp/fcgid.sock.rt3
 - **SpawnScoreUpLimit** 10
 - **SpawnScore** 1
 - **TerminationScore** 2
 - **MaxProcessCount** 15
 - **MaxRequestsPerProcess** 300
 - **DefaultMaxClassProcessCount** 15
 - **DefaultMinClassProcessCount** 3
 - **IPCCConnectTimeout** 20
 - **IPCCCommTimeout** 200
 - **OutputBufferSize** 1280000

Apache: Ext. Konfig

- `SetOutputFilter DEFLATE`
- `SetEnvIfNoCase Request_URI \.(?:gif|jpe?g|png)$ no-gzip dont-vary`
- `SetEnvIfNoCase Request_URI \.pdf$ no-gzip dont-vary`
- `ExpiresActive On`
- `ExpiresByType text/css "A604800"`
- `ExpiresByType image/x-icon "A31536000"`
- `ExpiresByType image/gif "A604800"`
- `ExpiresByType image/jpg "A604800"`
- `ExpiresByType image/jpeg "A604800"`
- `ExpiresByType image/png "A604800"`
- `ExpiresByType application/x-javascript A3600`
- `Header set Cache-Control "must-revalidate"`
- `FileETag MTime Size`

Apache: mod_auth_kerb

```
<Location />
    SetHandler perl-script
    PerlResponseHandler RT::Mason

    SSLRequireSSL
    AuthType Kerberos
    AuthName "RequestTracker Login"
    KrbMethodNegotiate On
    KrbAuthRealms DESY.DE
    KrbMethodK5Passwd ON
    KrbAuthoritative OFF
    KrbSaveCredentials ON
    KrbDelegateBasic ON
    Krb5KeyTab <path>/krb5.HTTP.keytab
    require valid-user
</Location>
```

RT Console

```
[ 3119842 ]
[ New RT-User-Request from Webform ]  
  Id: 3119842          Owner: Nobody  
  Status: new           Requestor 1: :@kuehne-nagel.com  Created: Tue  
  Queue: applications-rt-global    Cc:                                Updated: Tue  
Priority:  
  h: change ticket header  
[ Custom fields ]  
  cost_center:          object:      queue_name:  
  custom_fields:        queue_admins:  queue_watcher:  
    email:             .@kuehne-nagel.com  queue_mail:    realname:  
  neededqueues:        t@kuehne-nagel.com   queue_member:  refuserid:  
  u: change custom fields  
[ 1 / 3 -  @kuehne-nagel.com (2018-03-09 16:08:08) Create ]  
  * Ticket created by [REDACTED]@kuehne-nagel.com  
  EMAIL: [REDACTED].r@kuehne-nagel.com  
  FIRST_NAME_LAST_NAME: [REDACTED]  
  REFERENCE_USERID: [REDACTED]  
  QUEUE_NAMES: especially [REDACTED]t@kuehne-nagel.com  
  COMMENTS:  
  Dear RT-Team,  
  please grant same rights as reference id.  
  rt action [options] [arguments]  
An action is mandatory, an option is clearly optional, and most actions take a number of subactions. The basic actions can operate on any object type, from tickets to queues to users, and most take options that modify the actions' behavior.  
The syntax for rt is essentially:  
  rt action [options] [arguments]  
An action is mandatory, an option is clearly optional, and most actions take a number of subactions. The basic actions can operate on any object type, from tickets to queues to users, and most take options that modify the actions' behavior.  
The syntax for rt is essentially:  
  
create  
  rt create [options] set field=value [field=value]  
The create action creates a new user or ticket. It has the same syntax and options as edit, except that create won't allow you to specify an object ID. See the section on edit below for the full set of options. The new action is another variation for create.  
  e: new comment - npage: next attach. - ppage: prev. attach. - up: scroll up - down: scroll  
  ?: help  q: quit  d: disconnect  a: add a new ticket  o: open a ticket  c: close current tab  p: prev. tab  n: next tab  
[ Relations ]  
  Depends on:  
  Depended on by:  
  Parents:  
  Children:  
  Refers to:  
  Referred to by:
```