

JIRA as CMDB



This is a POC for using JIRA as a CMDB

An Issue is a "Configuration" item like a server, laptop, MySQL Database etc.



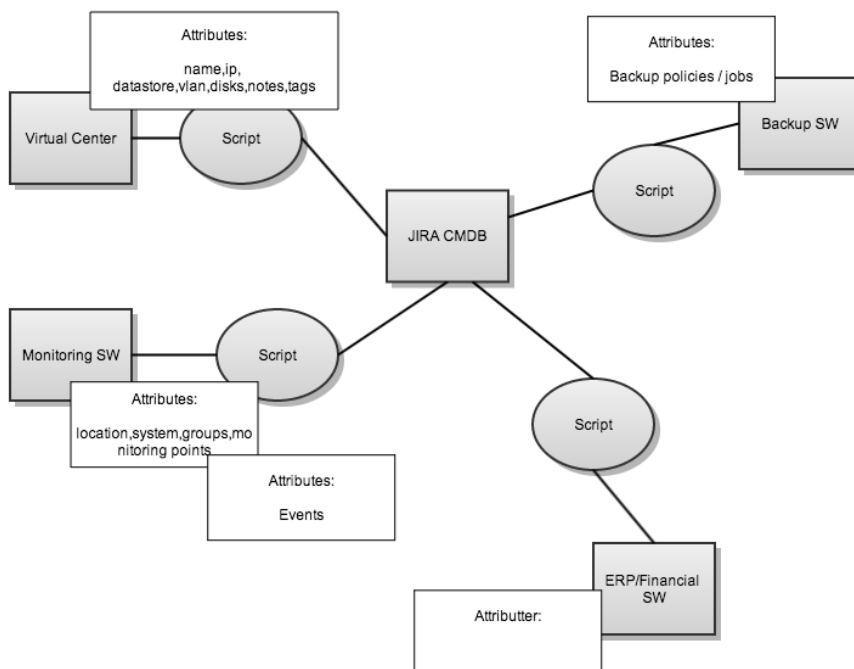
Why?

Well, most of the (seen from a ITIL Service Operation view) data is actually in JIRA, this is Incidents, Changes and Service Requests...

Secondly, JIRA can be seen as a mere Form/workflow control system

- Architecture
- Data validity, quality and maintenance
- Data out
- Simplifying data from scripts
- Sanity Checks
- Reporting
- Screenshots
 - Dashboard
 - Configuration Item (sample for a server)
- Workflow/Lifecycle
- Challenges
- Screenshots
- Tests
- Ideas
 - Metadaa
- Script information

Architechture



Data validity, quality and maintenance

JIRA has strict fields

JIRA has versioning on all field changes (history)

JIRA field can be updated by GUI and programmatically (CLI, RCP, SOAP)

Tabbed input:

Edit Issue

Configure Fields

General Info

Virtual Center

Service And Support

Backup

Monitoring

Summary *

ad02.mshosting.netic.dk

Issue Type *

Server

There are no issue types with compatible field configuration and/or workflow associations.
The issue type can only be changed by [moving](#) this issue.

Assignee

Admin

Attachment

Choose Files

No file chosen

The maximum file upload size is 10.00 MB.

Labels

Begin typing to find and create labels or press down to select a suggested label.

Annotations

Virtual Server

☐ None

☐ Yes

☒ No

IS this a Virtual Server

Comment

Viewable by All Users

Update

Cancel

Fields / Links to Configuration Items from/to other JIRA Issues - Hostname lookup on the Summary field works

Link

JIRA Issue

Web Link

Select a JIRA issue to link this issue to

This issue

relates to

Issue

ad01.ms

or search for an issue

Comment

History Search (Showing 1 of 1 matching issues)

CMDB-1 - ad01.mshosting.netic.dk

ad01.ms (Enter issue key)

Viewable by All Users

Link

Cancel

an alternative to linking could be a (multi)select field on issues in JIRA - like Kepler DB Lookup - <https://marketplace.atlassian.com/plugins/com.keplerrominfo.jira.plugins.databasecf>

Or: <https://marketplace.atlassian.com/plugins/com.consultingtoolsmiths.jira.plugins.createandlink>

Data out

Data can be extracted/fed out via:

JIRA XML/RSS Feeds

Atlassian CLI

SQL Queries

Simplifying data from scripts

Field-values updated via CLI:

```
jira.sh --action setFieldValue --issue "CMDB-4" --field "Memory" --values "1024 MB"
jira.sh --action setFieldValue --issue "CMDB-4" --field "VM Version" --values "9"
```



The CLI only supports updating 2 fields in one call, hence 4 field will required 2 calls - and (possible) 2 notifications fired

Sanity Checks

We want to make a reverse check to make sure data is sane:

- Is Virtual Center attributes aligned with JIRA State ?
- Er der NetVault eller rsync data - i forhold til objektets servicemål/state
- Is Monitoring data correct with Virtual Center Tags
- Is the server in the Financial systems (for invoicing)
- Is monitoring data correct with monitoring system

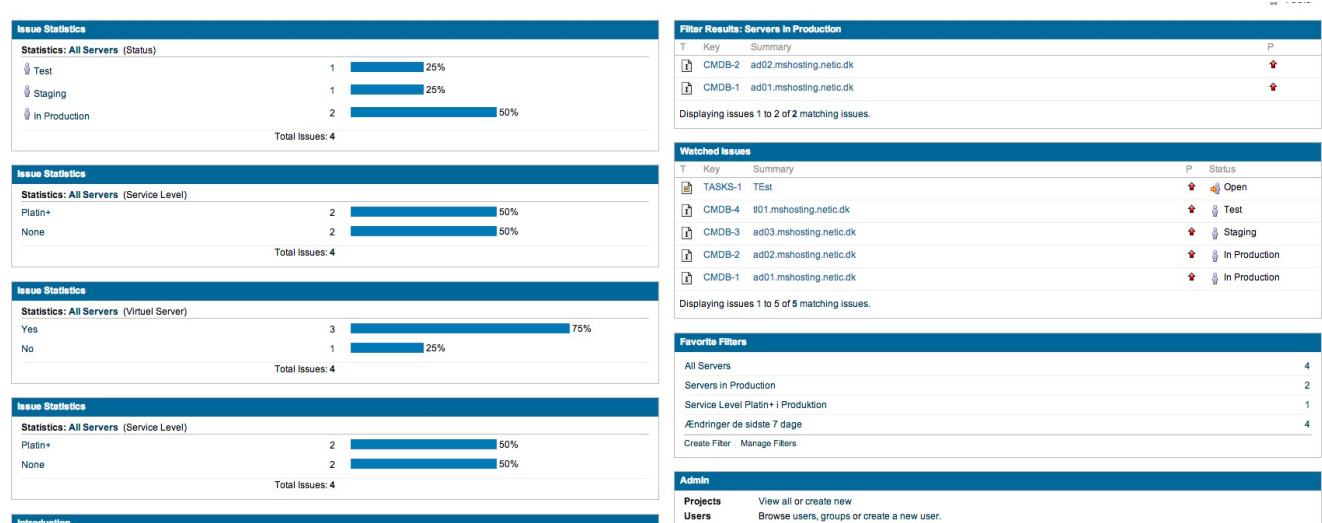
Rapporting

Watchers on the Configuration Item (Issue)

Daily summary: <https://confluence.atlassian.com/display/JIRA/Receiving+a+Daily+Summary+of+Updated+Issues>

Screenshots

Dashboard



Configuration Item (sample for a server)

Links to events / tasks / incidents:



CMDB / CMDB-1

ad01.mshosting.netic.dk

Edit

Assign

Comment

More Actions ▾

Decomission

Workflow ▾

▼ Details

Type: Server

Priority: Major

Labels: None

[General Info](#) [Virtual Center](#) [Service And Support](#) [Monitoring](#)

Service Level: Platin+

DOCS Space: NETIC

▼ Description

Click to add description

▼ Issue Links

relates to

[TASKS-1 TEst](#)

[CMDB-2 ad02.mshosting.netic.dk](#)

Virtual Center Data:



CMDB / CMDB-1

ad01.mshosting.netic.dk

Edit

Assign

Comment

More Actions ▾

Decomission

Workflow ▾

▼ Details

Type: Server

Priority: Major

Labels: None

General Info

Virtual Center

Service And Support

Monitoring

VMware Tools: Old Version

Memory: 4096 MB

VM Version: 7

CPU: Xeon 4 Core

Guest OS: Windows 2008 R2

IP Addresses: 10.0.0.0.1

Virtual Center Folder: Production

▼ Description

Click to add description

▼ Issue Links

relates to

TASKS-1 TEst

CMDB-2 ad02.mshosting.netic.dk

Service / Support data:



CMDB / CMDB-1

ad01.mshosting.netic.dk



Edit

Assign

Comment

More Actions ▾

Decomission

Workflow ▾

▼ Details

Type:  Server

Priority:  Major

Labels: None

[General Info](#)

[Virtual Center](#)

[Service And Support](#)

[Monitoring](#)

Service Level: Platin+

DOCS Space: NETIC

▼ Description

Click to add description

▼ Issue Links

relates to



[TASKS-1](#) TEst



[CMDB-2](#) ad02.mshosting.netic.dk

Monitoreringdata:


CMDB / CMDB-1

ad01.mshosting.netic.dk

Edit
Assign
Comment
More Actions
Decomission
Workflow

Details

Type:  Server

Priority:  Major

Labels: None

General Info
Virtual Center
Service And Support
Monitoring

Monitoring Descrip...

Diagnosticering
Her er test.local brugt i eksemplerne

Kør i en command prompt:

```

dcdiag /test:dns /dnsall /e /v > adddiag.txt
dcdiag /test:registerindns /dnsdomain:test.local >> adddiag.txt
netdiag > netdiag.txt
repadmin /showrepl * /csv > showrepl.csv
Kig på resultatet i adddiag.txt, specielt efter:

Auth Basc Forw Del Dyn RReg Ext

Domain: test.local

ad01.test.local PASS PASS PASS PASS PASS WARN PASS
ad02.test.local PASS PASS PASS FAIL PASS WARN PASS
ad03.test.local PASS PASS PASS PASS PASS WARN PASS
FAIL bør undersøges

Kig på resultatet i netdiag.txt

Kig på resultatet i showrepl.csv (reference: http://technet.microsoft.com/en-us/library/8b46d241-3100-4172-b461-7e6801727845)

Åben på RPC til andre Domain Controllere
Dette er kontrol af at port 135 (RPC) er åben for at DNS replikering virker

Kør i command prompt

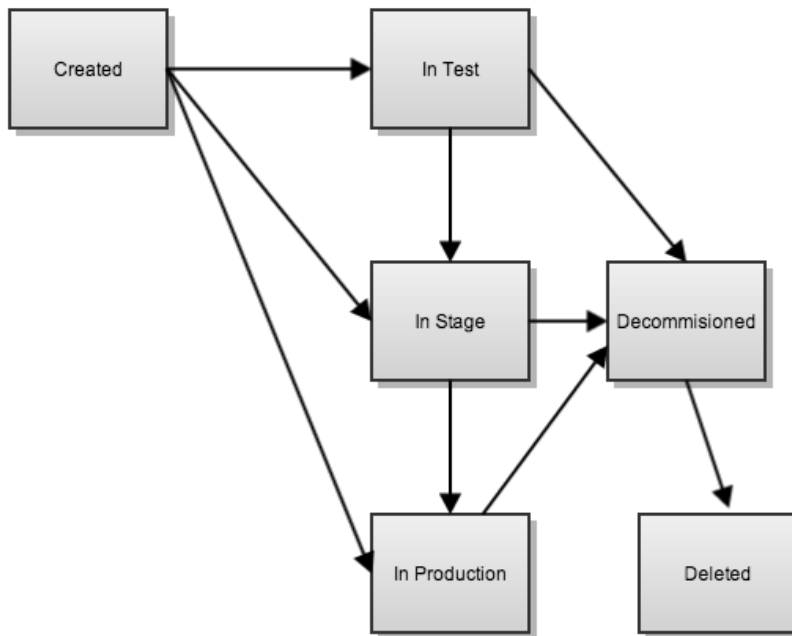
telnet ad02.test.local 135

```

Zenoss URL: <http://zen.netic.dk:8080/zport/dmd/Devices/Server/Windows/devices/ad01.mshosting.netic.dk>

Workflow/Lifecycle

A server (or other Configuration Item) can have a controlled lifecycle (implemented as a workflow):



Challenges

Issues can have server/object-name as Ident

Summary can be non-unique (e.g. 2 Configuration Items with same name can be created)

Does not work: `issuetype=server` and `(Memory changed after startOfWeek("-1") before startOfWeek())`

Screenshots

General

Guest OS: Microsoft Windows Server 2008 R2 (64-...
VM Version: 7
CPU: 1 vCPU
Memory: 4096 MB
Memory Overhead: 51,15 MB
VMware Tools: Running (Out-of-date)
IP Addresses: 77.243.53.162

DNS Name: AD01.mshosting.local
EVC Mode: N/A
State: Powered On
Host: neticvm12.netic.dk
Active Tasks:
vSphere HA Protection: Protected

Commands

- Shut Down Guest
- Suspend
- Restart Guest
- Edit Settings
- Open Console
- Migrate
- Clone to New Virtual Machine

Annotations

Customer: 0
Docs Space: mshosting
NetVault Backup:
Service Level: **GOLD+**
Veeam Backup:
XdcConfig:
Notes: Primer Active Directory Server for Hosted Exchange

Details

Type: Server
Priority: Major
Labels: None

Virtual Center **Service And Support** Backup

VMware Tools: Up to date
Memory: 1024 MB
VM Version: 8
CPU: Xeon 4 Core
Virtual Center Folder: Production

Description

Status OS Hardware Software Events Perf Edit

Device Status

Device: **ad01.mshosting.netic.dk** IP: **77.243.53.162** Status: **Up**

		Component Type
	Availability	100.000%
	Uptime	01d:21h:52m:53s
	State	Production
	Priority	Normal
	Locks	None
	Last Change	2012/10/31 11:10:14
	Last Collection	2012/10/31 11:10:15
	First Seen	2011/05/05 09:56:50
		IpRouteEntry
		HardDisk
		IpInterface
		OSProcess
		FileSystem

Device Information

Organizers

Location: None

Groups: /SLA-24-7/Servers

Systems	/Microsoft Hosting
Collector	localhost

Tests

Updating field(s) with no changes:

```
spiderman:atlassian-cli npn$ ./change-serverfields.sh
There are no field values changed by the parameters specified. Issue CMDB-4 not changed.
spiderman:atlassian-cli npn$
```

Hence, the CLI/JIRA takes care of changes and ignores no changes.

Updating field(s) with changes;

```
spiderman:atlassian-cli npn$ ./change-serverfields.sh
Issue CMDB-4 updated.
spiderman:atlassian-cli npn$
```

Hence, the issue is updated.

Ideas

Metadaa

- Scan servers for all *.sh and *.log files and save in JIRA field - for reference/documentation/searchability
- Save crontab for all servers in JIRA field - for reference/documentation/searchability

Script information

Its an option to put more control into the update-scripts:



This introduces added complexibility and logic outside JIRA.

Flow for updating every value:

