

SIMBAD

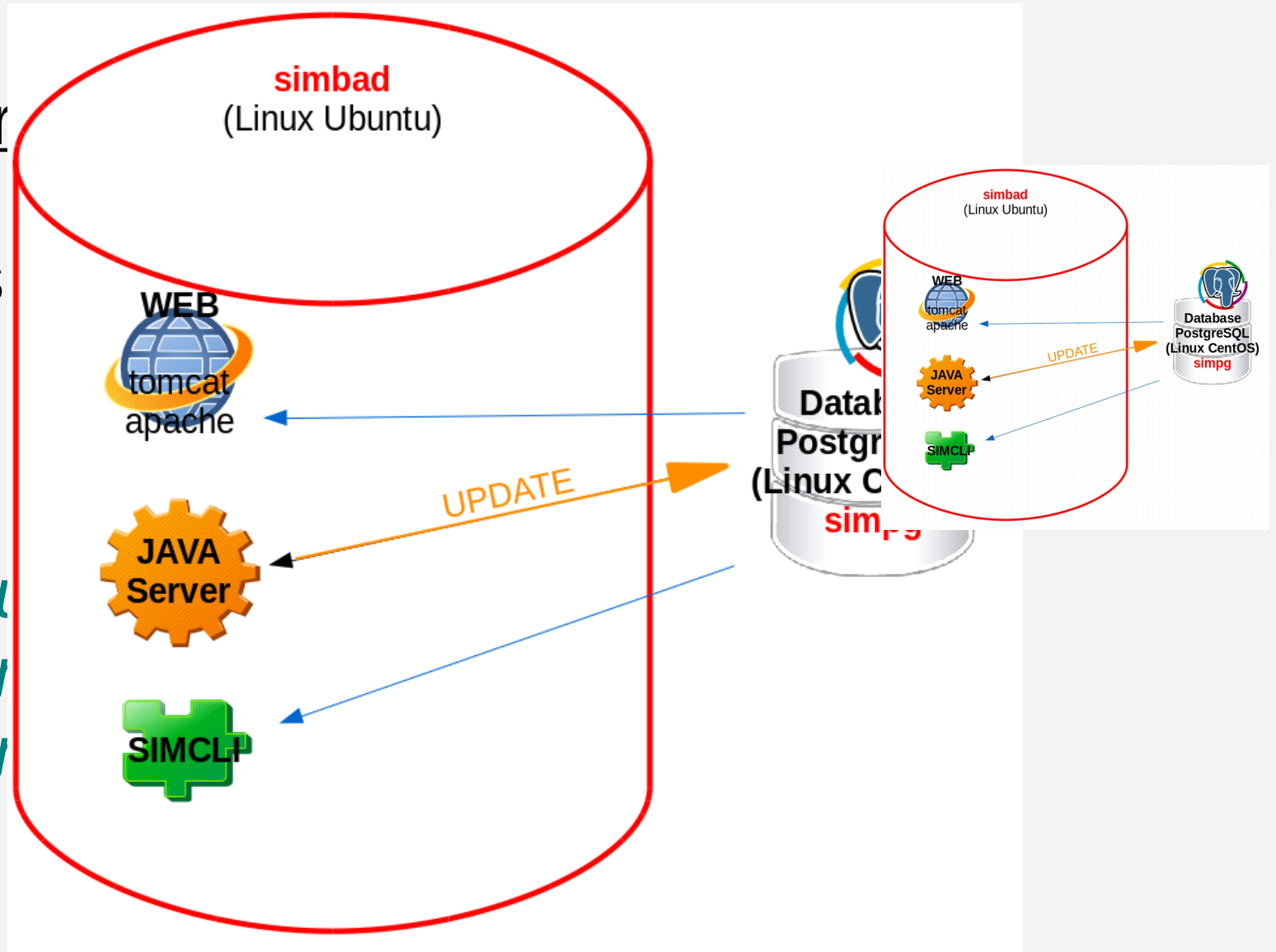
Présentation du service SIMBAD :

- *ce qui existe*
- *comment ça fonctionne*
- *comment évoluer ?*

SIMBAD

Pr
- serveurs

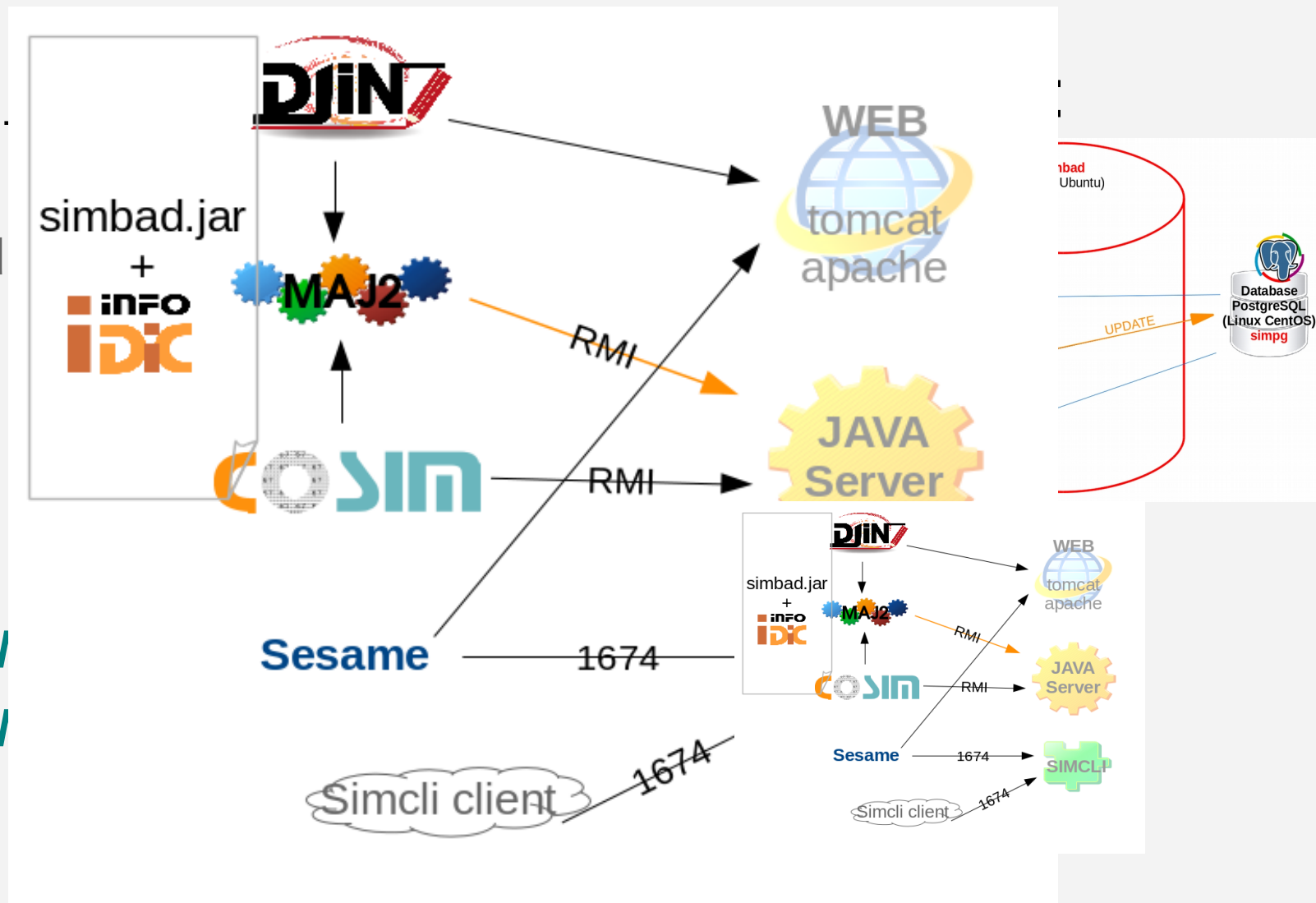
→ ce qu
→ com
→ com



SIMBAD

- serveur
- clients

- CE
- COI
- COI

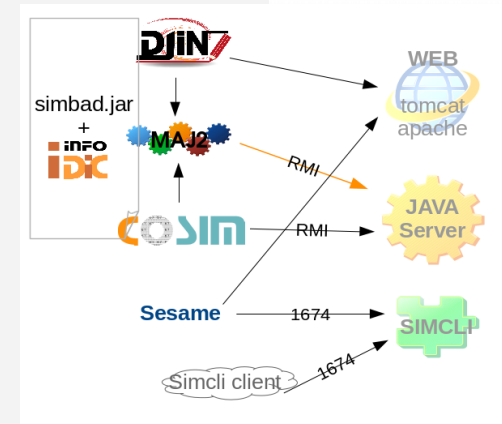
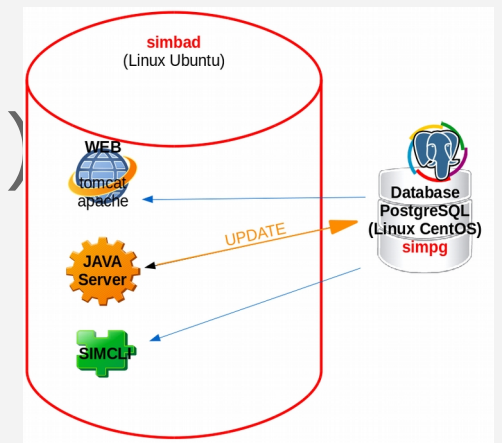


SIMBAD

Présentation du service SIMBAD :

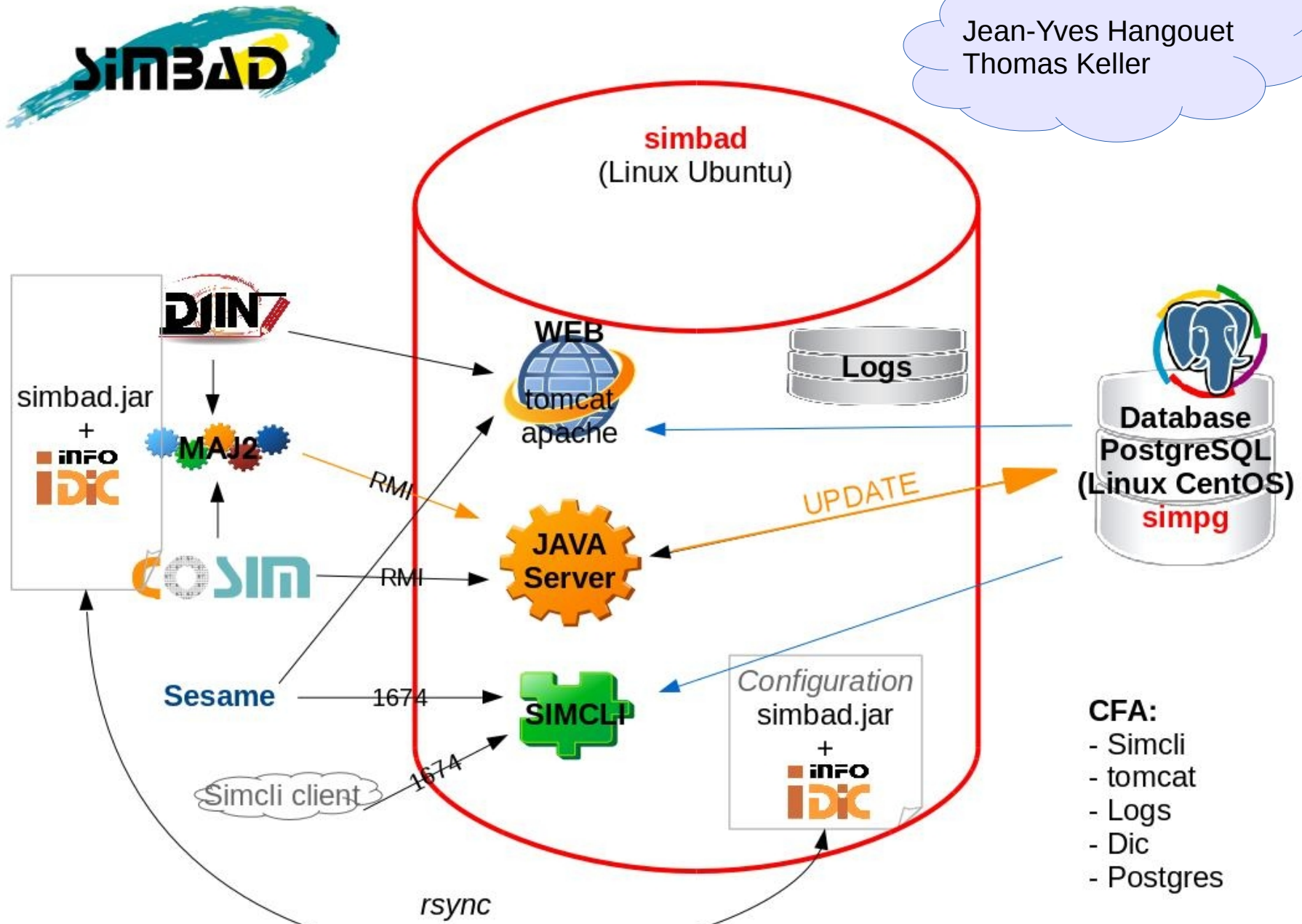
- serveurs (Web, base de données, ...)
- clients (pages web, mises à jour, ...)
- outils annexes (logs, nagios, ...)

- *ce qui existe*
- *comment ça fonctionne*
- *comment évoluer ?*



Infrastructure SIMBAD

Jean-Yves Hangouet
Thomas Keller



BD SIMBAD

- La base de données :

Logiciel de gestion de base de données :

PostgreSQL (depuis 2006) : 54G (espace disque)

- Sauvegarde journalière
- Contenu mis à jour par l'équipe des documentalistes + astronomes

→ uniquement via outils

Arnaud Siebert

Ada Nebot

Catherine Brunet

Caroline Bot

Mihaela Buga

Magali Neuville

Cécile Loup

Emmanuelle Perret

Fabienne Woelfel

Evelyne Son

Patricia Vannier

Laurent Cambrésy

Marianne Brouty

Philippe Vonflie

Aline Eisele

Sylvain Guéhenneux

Soizick Lesteven

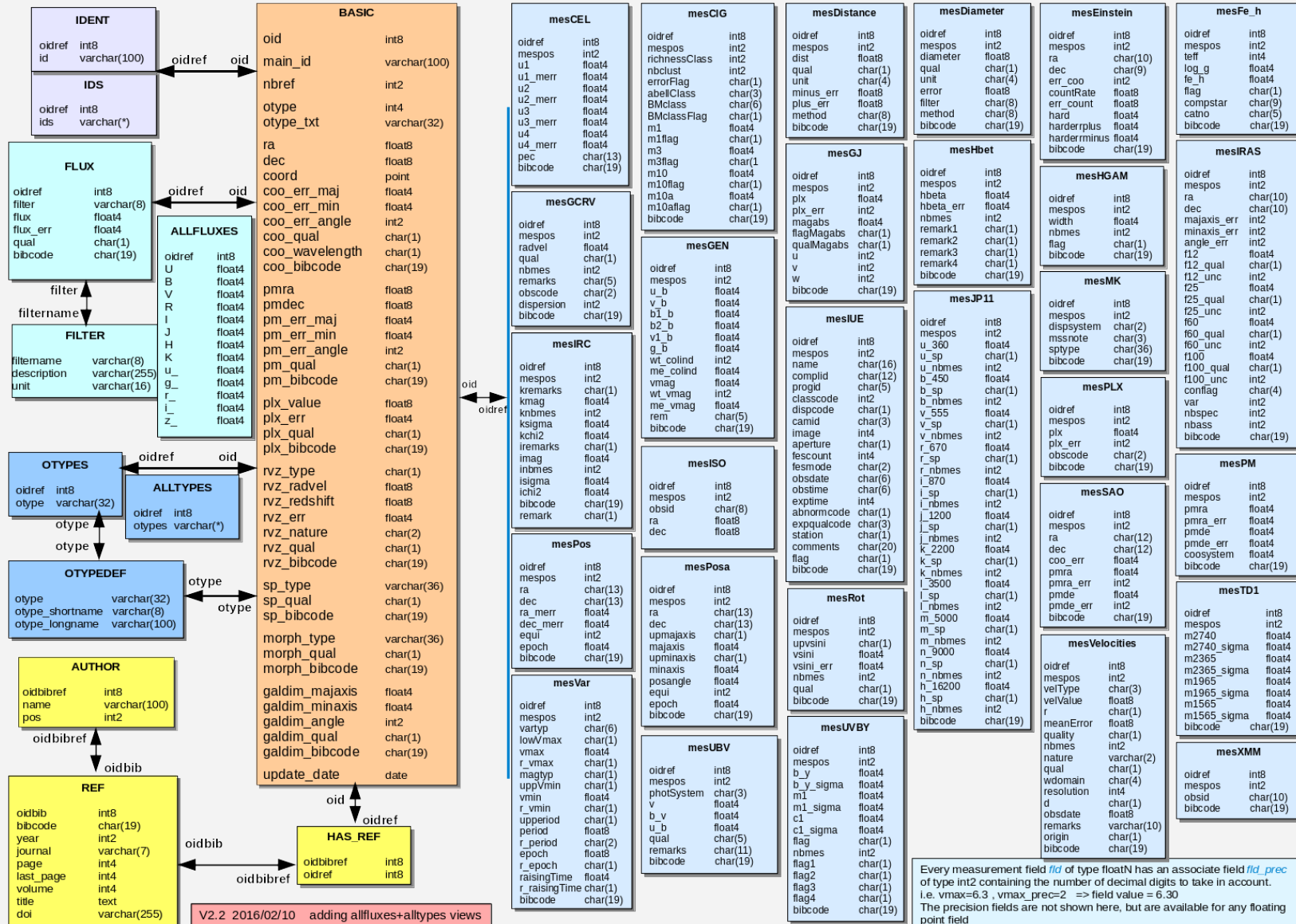
Pierre Ocvirk

Sébastien Derrière

- Maintenance occasionnelle : 300 fichiers SQL

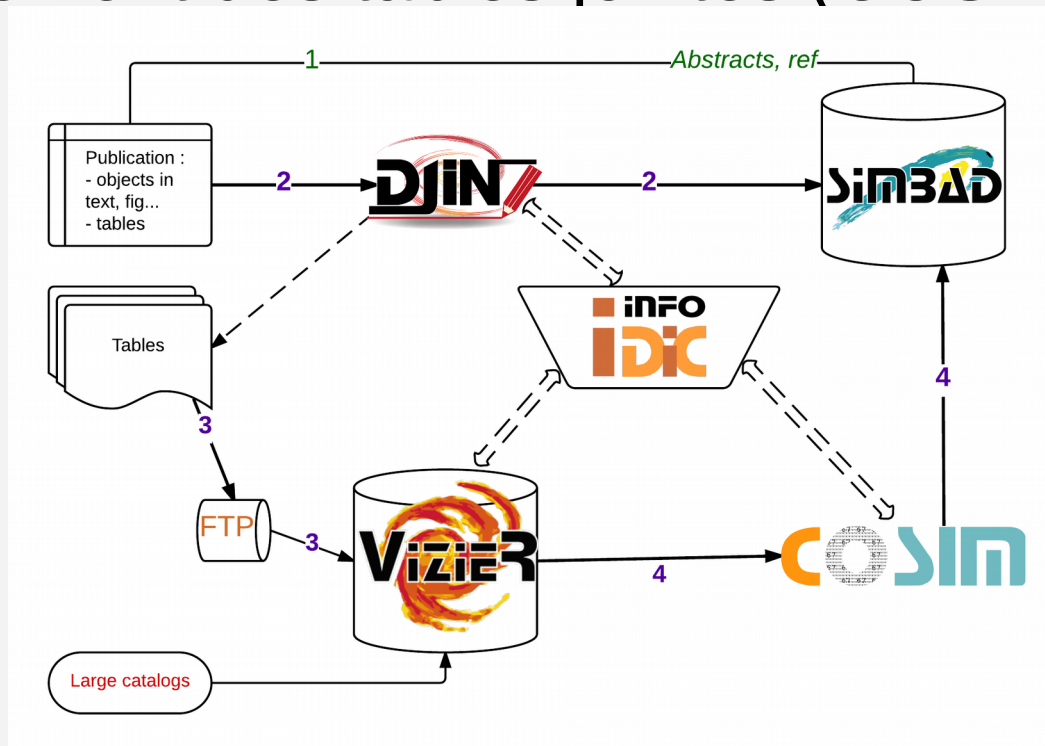
BD SIMBAD

67 tables +900 champs



Pipeline SIMBAD

- Entrée des références (via éditeur / manuelle)
- Ajout d'un acronyme (DicBuilder + AcroBuilder)
 - Traitement du texte de l'article (DJIN) → SIMBAD
 - Traitement des tables jointes (COSIM) → SIMBAD



SIMBAD

- Pages Web (5 à 10 /sec)
 - 55 % utilisateurs **web**
 - Java → HTML
 - + Javascript



The screenshot shows the SIMBAD web interface for the star HD 37124. The page is titled "HD 37124 -- High proper-motion Star". It displays various astronomical data points, including ICRS coordinates, Galactocentric coordinates, proper motions, radial velocity, parallax, spectral type, and fluxes. A search bar is visible at the top right, and a "Interactive AladinLite view" is provided on the right side. The page also includes a "notes" section at the bottom, mentioning a substellar companion and three planets.

Available data : Basic data • Identifiers • Plot & images • Bibliography • Measurements • External archives • Notes • Annotations

Basic data :
HD 37124 -- High proper-motion Star
Other object types: * (AG, AGR, ...), PP (LHS, CL, ...), ** (**), IR (2MASS)
ICRS coord. (ep=J2000) : 05 37 02.48814 +20 43 50.8371 (optical) | 9.22 5.71 90 | A 2007AAA...474...653V
Gal coord. (ep=J2000) : 185.9624 -05.9736 | 9.22 5.71 90 |
Proper motions mas/yr : -80.14 -419.77 [1.05 0.65 0] A 2007AAA...474...653V
Radial velocity / Redshift / cz : V(km/s) -23.02 [0.09] / z(-) -0.000077 [0.000000] / cz -23.02 [0.09]
A 2002ApJS...141...503N
Parallax (mas) : 29.70 [0.70] A 2007AAA...474...653V
Spectral type : G4IV-V D 2000Priv...C.....0F
Fluxes (7) :
B 9.35 [-] C -
V 7.60 [-] C -
R 7.2 [-] E 2003A)...125...984H
I 6.9 [-] E 2003A)...125...984H
J 6.359 [0.020] C 2003yCat.2246...0C
H 6.821 [0.024] C 2003yCat.2246...0C
K 5.952 [0.016] C 2003yCat.2246...0C

notes:

- Substellar companion(s) detected, see HD 37124 in the Extrasolar Planets Encyclopaedia. [14-Jan-2006]
- Has three planets : HD 37124b, HD 37124c, HD 37124d [24-Nov-2005]

- 45% via autres programmes
(Sesame + DJIN + autres sites extérieurs ...)

Clients de mise à jour

```
Console simbadMAJ
Fichier Edition Graphic
....Log URL used: file:///tmp/LogServer.log
Donnez moi votre nom, merci : test
login : test
passwd : *****

!!!!!!!!!!!!!! MAJ EN MODE TEST !!!!!!!!!!!!!!!

output set to file : /home/oberto/.simbad//log.2017.02.27-09-35-01 outtes
O[BJ] | B[IB] | h[elp] : update > o name anais!
### Nouvel objet cree :NAME anais

name anais! : update > a data fe_h | 6051.83 4.05879 | -0.151163 | SUN | | 2017AJ....153...7521K |
Ajout de :fe_h |05879 |51163 |SUN | |17AJ....153...7521K|
name anais! : update > ql

O[BJ] | B[IB] | h[elp] : update > o hd6
Creation date: 30-Sep-2006, last modification: 14-Feb-2017
-----
HR      2
OID= @1368105  OID3=@28292,18  coobox=10581
HR      2
===== Type: * Star
*,IR
pm: 45.50 / -53.67 -----
Identifiers (21):
HD 6          AG-00 4          BD-01 4525
GC 51         GCRV 32          GEN# +1.00000006
GSC 04663-00045  HIC 417          HIP 417
HR 2          IRAS 00024-0046  IRAS F00024-0046
2MASS J00050380-0030109  PPM 174662       SAO 128569
SKY# 143      TYC 4663-45-1    UBV 3
UBV M 7117    uvby98 100000006  YZ 90 5952

Do you want to see more ? n

HD 6 : update > l w
Nombre de ref total : 34
2015A&A...580A..23P : HR      2 , d , catalog:Simbad= TYC 4663- 45-1 , 1
2015AJ...150...66P : HD      6 , d , HD 6;HIP 417;HR 2 , 4
2015AJ...150...88L : HR      2 , d , HR 2;hr0002 , 2
2014A&A...564A...1B : HD      6 , d* , HD 6 , 1
2014A&A...567A..26L : HR      2 , d , lacaizod:Name= HR 2 , 1
2013MNRAS.430..621T : HD      6 , cdx , HD 6 , 7
2012A&A...546A..61D : HR      2 , d , HIP 417 , 1
2012MNRAS.427..343M : HR      2 , d , HIP 417 , 1
2011AJ...142...39H : HD      6 , d , HD 6 , 1
2010A&A...515A.111S : HR      2 , d , HD000006 , 1
2010AJ...139..176F : HR      2 , x , HR2 , 1
2008ApJS...176...59B : HD      6 , scdx , HD 6 , 11
2006AstL...32..759G : HD      6 , d , HIC 417
2001A&A...373..159C : HIP    417 , d , HD 000006 ,
1999MSS...C05....0H : HD      6 , d , HD 6 , 1

HD 6 : update > ql

O[BJ] | B[IB] | h[elp] : update > ooo 12.3 +56.3
### Error: No astronomical object found :
No astronomical object found :
```

- **maj2** (2004)

- Console ligne à ligne (Java)
- Connexion directe à SIMBAD (JavaServer → BD)

Clients de mise à jour

Christian Bonnin

- **DJIN** (2007)
 - Interface graphique (Java)
 - Lecture + extraction d'un PDF distant ou local
 - Récupération du **dictionnaire** en ligne
 - Connexion aux simbad script (Web) pour tester
 - Génération d'un script donné à **maj2**

DJIN

Journal: Apj | **Volume:** 780 | **Bibcode:** 2014ApJ...780..169B

DISCOVERY OF A NEW BLACK HOLE TRANSIENT WITHIN 100 (400 PC) OF M31*

Authors: R. Barnard, M. R. Garcia, F. Primini, and S. S. Murray

Abstract: We identified a new X-ray transient CXOM31 004252.457+411631.17 (T13) in M31 during a 2013 June Chandra observation particularly exciting because it is located within 100' of M31*; it is thought that this region of the bulge is sufficiently dense but only systems with black hole accretors and/or short periods are expected to survive. A follow-up XMM-Newton observation described by a 0.39 ± 0.02 keV disk blackbody; applying this model to the Chandra observation yielded an observed $0.3-10$ keV 0.6×10^4 erg s (4.7×10^3 erg s in the 2.0-10 keV band). Observing with Hubble Space Telescope/Advanced Camera for Surveys counterpart, but allowed us to place an upper limit of $B > 26.9$, corresponding to an absolute V band magnitude >2.0 . From absolute V magnitude, we estimate an orbital period <5 h from an empirical relation. Fitting a disk blackbody + blackbody model allows us to reject a neutron star accretor at a 14 σ level.

Keyword: stars: black holes - X-rays: binaries - X-rays: general Online-only material: color figures

1. INTRODUCTION

Text

We have been monitoring the central region of M31 for the last ~13 years with Chandra, averaging ~1 observation per month, in order to discover X-ray transients. Promising examples are followed up with two Hubble Space Telescope (HST) Advanced Camera for Surveys (ACS) observations, the first is taken a few weeks after outburst, and the second observation is taken ~6 months later; this allows us to identify the counterpart (Barnard et al. 2012, and references therein). We summarized the results of the first 12 transients (labeled T1-T12) found (2012). In this work, we study CXOM31 004252.457+411631.17, referred to hereafter as T13.

We discovered T13 in the 2013 June, 5 ks Chandra ACIS observation of the M31 center, ~95' from the M31 nucleus (M31*). We obtained 92 net source photons, insufficient for spectral modeling; however, the transient was likely to be in one of two thermal states. Assuming a 1 keV disk blackbody model with line-of-sight absorption equivalent to 7×10^{21} H atoms cm^{-2} yielded a $0.3-10$ keV luminosity of $6.1 \pm 0.6 \times 10^3$ erg s. A power law emission model with a photon index of $\Gamma = 1.57 \pm 0.22$ yielded a $0.3-10$ keV luminosity of $8.9 \pm 0.9 \times 10^3$ erg s (Barnard et al. 2013); this corresponded to a black hole binary in a thermally dominated state (Renfild & McClintock 2006). A power law emission model with spectral index 1.7 yielded a $0.3-10$ keV luminosity of $8.9 \pm 0.9 \times 10^3$ erg s (Barnard et al. 2013); this corresponded to a black hole binary in a low state (Renfild & McClintock 2006). Hence, the two possible spectral states for T13 yielded rather similar $0.3-10$ keV luminosities. We found that the locale of T13 was serendipitously observed in one of our earlier HST observations, meaning that we only required one new HST observation.

X-ray transients within the central region of M31 are most likely to contain a low mass secondary, as the majority of stars there are old. Low mass X-ray binaries may be transient X-ray sources due to instabilities in their accretion disks; the disk has two stable phases (hot and cold), and an unstable intermediate phase—matter accumulates in the disk in the cold phase, and is rapidly dumped onto the compact object in the hot phase (see, e.g., Lauer 2003). However, the X-rays produced by accretion from the hot disk prevent the disk from cooling, the X-ray luminosity decays exponentially if the whole disk is ionized, and linearly if only part of the disk is ionized (King & Ritter 1998).

van Paradijs & McClintock (1994) found an empirical relation between the ratio of X-ray to optical luminosities of Galactic X-ray binaries and their orbital periods, suggestive that the optical emission is dominated by reprocessed X-rays in the disk; this relation holds over a 10 mag range in optical luminosity, and appears to be insensitive to inclination. Their chosen X-ray band was 2-10 keV. For an irradiated accretion disk with radius a , X-ray luminosity L_x , optical luminosity L_{opt} , and temperature T , $T^4 \propto L_x/a^2$, while the surface brightness of the disk, S , $\propto T^4$ for typical X-ray binaries (van Paradijs & McClintock 1994). Since $L_{opt} \propto S \cdot a^2$, $L_{opt} \propto L_x^2/a$; also $a \propto P^{1/3}$, where P_{orb} is the orbital period.

van Paradijs & McClintock (1994) defined $Z = (L_x/L_{opt})^{1/2} (P_{orb}/1 \text{ hr})^{1/3}$, choosing $L_{opt} = 2.5 \times 10^3$ erg s $^{-1}$ as a normalizing constant, and found

$$M_v = 1.57(\pm 0.2) - 2.27(\pm 0.32) \log Z \quad (1)$$

However, van Paradijs & McClintock (1994) sampled a mixture of neutron star and black hole binaries, in various spectral states. A cleaner sample was obtained by A. Moa et al. (2013, in preparation), who used only black hole transients at the peaks of their outbursts, and found

$$M_v = 0.84(\pm 0.30) - 2.36(\pm 0.30) \log Z \quad (2)$$

We note that these two relations only differ significantly in normalization, caused by black hole X-ray binaries having larger disks than neutron star binaries with the same period. We have used estimates for 12 M31 transients (T1-T12) observed by Chandra and HST (Barnard et al. 2013).

T13 is particularly interesting because of its close proximity to M31*. Voss & Gilfanov (2007) found an excess of XBs within

Clients de mise à jour

- **COSIM** (2014)
 - Console ligne à ligne (Java)
 - Lecture d'un "parfile" (données issues de Vizier)
 - Recherche des noms et/ou coordonnées dans Simbad (JavaServer) pour trouver des candidats au cross-match

```
.B 2012ApJ...751...22B
.SIGMA COO 300,1000

# cas 1
%I.0 C1* NGC 6530 SCB 113
%J 18 03 36.53-24 23 11.9 C
%COM delta 1000mas; sigma entree 1000mas; sigma sortie
65mas (erreur); COO 1.0
%COM avec SIGMA COO 300,1000 : 1.0

# cas 1B coo galactic
%I.0 C1* NGC 6530 SCB 113
%J G005.9567 -01.1651 C
%COM delta 1000mas; sigma entree 1000mas; sigma sortie
65mas (erreur); COO 1.0
%COM avec SIGMA COO 300,1000 : 1.0
```

Clients de mise à jour

- **COSIM (2014)**

- Calcul de probabilité de bon cross-match avec toutes les autres données

```
Read File : /home/oberto/smb4/NIDS/Tests/parfile-test
SCORE min, max
OT -1 , 1
COO 0.0, 1.0
V 0.0, 0.0
M 0.0, 0.0
IF SCO <(&#x3D;)min : SCO is LOW
IF SCO >=max : SCO is HIGH

!PAR #1
!... id found in the database C1* NGC 6530 SCB 113
! On a 1 seul BON candidat
!=== UPDATE from id : C1* NGC 6530 SCB 113
!+++ 1/1: *iC/ ( 0) 1.0"B ( 1.0) ;
from id
! I 1 / C 0 / ACRO 0 / J 1.0 / V / M
$o C1* NGC 6530 SCB 113
$!c c 18 03 36.53-24 23 11.9 C
$!!c 18 03 36.53-24 23 10.9 (IR ) [70 60 79] B
2003yCat.2246....0C !!Simbad kept
$bye!
%COM avec SIGMA COO 300,1000 : 1.0
```

```
#####
* Identifier incorrect .
NAME not found in Simbad .
Conflicting .
Possible Merge (mult. good) .
Possible Merge (id+coo) .
Already Connected 3
* id not found in Simbad 0
#####
* UPDATE from id 5
* UPDATE from coo 0
NEW 0
DISPLAY 7
#####
total : Entree : 12 / Sortie : 12
##### UPDATE from id #####
----- types d'objets -----
2 *iC/
1 Sy2/
2 Rad/

----- distances -----
tous types d'objets confondus :
Rad 10.0"E - [BGL85] 26
*iC 10.0"D - C1* NGC 6530 SCB 1023
Sy2 10.0"B - M 90
*iC 1.0"B - C1* NGC 6530 SCB 113
Rad 0.9"A - VCS4 J0411-2756

*iC :
10.0"D - C1* NGC 6530 SCB 1023
1.0"B - C1* NGC 6530 SCB 113

Sy2 :
10.0"B - M 90

Rad:
10.0"E - [BGL85] 26
0.9"A - VCS4 J0411-2756
```

- Génération d'un script pour **maj2**

Clients de mise à jour

- **DicBuilder - AcroBuilder (2010)**

– Lecture/écriture d'un fichier texte pour le dictionnaire, acronymes

```
%M [SHT2013]
%C 2016.07.27 2016.10.11
%.t main
%E Starkenburg + Hill + Tolstoy+, 2013
%.v 1.2 - 11-Oct-2016 - Modification
%.v 1.1 - 03-Aug-2016 - Modification
%.v 1.0 - 27-Jul-2016 - Creation
%.c F. Woelfel
%I [SHT2013]
%H S
%F {Scl} NN NNN
%F {Scl}NNN NN
%f Scl002 06
%f Scl031 11
%f Scl 25 031
%f Scl 03 170
%f Scl 03 059
%FL {Scl}_NN_NNN
%FL {Scl}NNN_NN
%N 7+1
%O *
%o Star
%Y VLT X-Shooter and UVES spectroscopic
observations of N=7 stars in the extremely
low-metallicity
    tail of the Sculptor dwarf spheroidal
galaxy.
%W NAME Sculptor Dwarf Galaxy
%R 2013A&A...549A..88S
%DOI 10.1051/0004-6361/201220349
%A STARKENBURG E.
%A HILL V.
```

```
cat = [SHT2013]
description = Starkenburg + Hill +
Tolstoy+, 2013
create = 10.10.16
update = 10.10.16
version = 1.0 10-Oct-2016: bvollmer;
ref = 2013A&A...549A..88S
ref = 2015A&A...583A..67J
size = 8
type = Star
pgm = space()
    text(texte="Scl")
    space()
    uint(binaire, strict, maximum=99,
minimum=0, justification=d:'0')
    space()
    uint(binaire, maximum=999,
minimum=0, justification=d:'0')
pgm = space()
    text(texte="Scl")
    uint(binaire, maximum=999,
minimum=0, justification=d:'0')
    space()
    uint(binaire, maximum=99,
minimum=0, justification=d:'0')
format = {Scl} NN NNN
format = {Scl}NNN NN
exemple = /[SHT2013] Scl002 06
exemple = /[SHT2013] Scl 25 031
```

Clients de mise à jour

- DicBuilder - AcroBuilder** *Interface graphique (Java)*

The screenshot displays the DicBuilder - AcroBuilder Java GUI interface. The main window is titled "Interface de mise à jour des acronymes" and shows search results for the acronym "SHT2013".

Search Results Table:

Formats	Exemple	Corrigé	Normalise	Pgm	type d'o...	Statut	Binaire
{ScL} NN NNN	[SHT2013] ScL002 06	[SHT2013] ScL 2 6	[SHT2013] ScL 2 6	0	Star	ok	020006
{ScL}NNN NN	[SHT2013] ScL031 11	[SHT2013] ScL 31 11	[SHT2013] ScL 31 11	0	Star	ok	1F000B
	[SHT2013] ScL 25 031	[SHT2013] ScL 25 31	[SHT2013] ScL 25 31	0	Star	ok	19001F
	[SHT2013] ScL 03 170	[SHT2013] ScL 3 170	[SHT2013] ScL 3 170	0	Star	ok	0300AA
	[SHT2013] ScL 03 059	[SHT2013] ScL 3 59	[SHT2013] ScL 3 59	0	Star	ok	03003B

Configuration Panel (Left):

- Acronyme [%M]: [SHT2013]
- Nombre d'objets [%N]: 7+1
- Dates [%C]: création 2016.07.27, mise à jour 2016.10.11
- Type d'acronyme [%T]: main (selected)
- Versions [%v]: 1.2 - 11-Oct-2016 - Modification, 1.1 - 03-Aug-2016 - Modification, 1.0 - 27-Jul-2016 - Creation
- Nom d'usage [%U]:
- Description [%E]: Starkenburg + Hill + Tolstoy+, 2013
- Origine [%H]: Simbad (selected), UA, Dictionnaire
- Statut d'intégration [%s]: entièrement intégré

Instructions Panel (Right):

majuscules	texte	entiers N	zone		
minuscules	chaîne	entiers Z	asc. droite	tableau	espace
lettres	l. var	decimaux	déclinaison	options	acronyme
l. grecques	constellations	romains	Long		nr de pgm
		_bintEbutton	Lat		commentaire

Code Editor (Bottom):

```
# programme
space()
text(texte="ScL")
#0
uint(binaire, maximum=99, minimum=0, justification
space()
uint(binaire, maximum=999, minimum=0, justificati
space()
text(texte="ScL")
uint(binaire, maximum=999, minimum=0)
uint(binaire, maximum=99, minimum=0, justificati
#1
ch(binaire)
decimal(binaire, maximum=999, minimum=0, justific
```

Parameters Panel (Bottom Right):

- decimal: decimal (selected)
- optional:
- isBinary:
- binPos: -1
- alignment: droite
- filler: espace
- maximum: 999
- minimum: 0
- plus:
- decimales: 1

Footer:

V2.0.31-Jul-2013 | dic courant du 02-Mar-2017 | pas de dic précédent... | Sauvegardes de 'acro' : 0 (0.00 Mo) | Sauvegardes auto
272Mb/455Mb | 25186 entrées | Répertoire: /home/oberto/simbad/

Clients de mise à jour

- **JournalBuilder** (2008)
 - Interface graphique (Java)
 - Lecture/écriture d'un fichier de config de liste des journaux
- **CorrBibcode** (2008)
 - Ligne de commande (Java)
 - Remplacement de bibcodes dans tous les champs et sous champs

Serveur SIMBAD

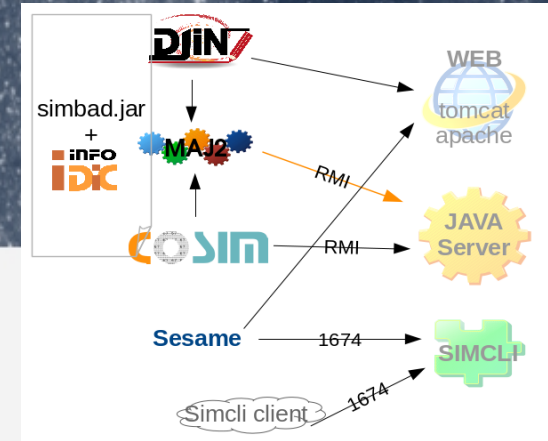
- **Java** (2005)

- Structures du format des données :

Coordonnées : ra dec [ellipse error] qualité(wavelength) bibcode

- Interrogation **SQL** à la Base de Données

- 2 versions : Web (apache tomcat HTTP) + JavaServer (*RMI*)



- **Simcli** (1990)

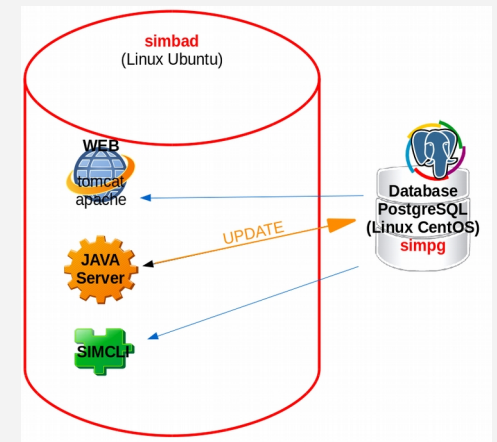
- Connexion spéciale pour un **client C**

- Interrogation **SQL** à la BD

- Tests biblio

- Ancien raccord

- Sesame (partiel)



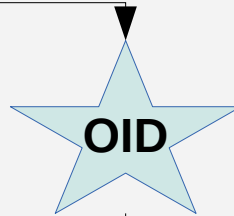
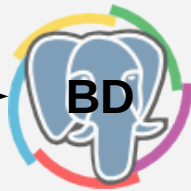
Serveur SIMBAD

- **FileRepository** (fichiers de config)
 - Description des **acronymes**, mesures, **Otypes**, liens **VizieR**, **journaux**, description votable, ...
- **LogServer**
 - Enregistrement de chaque action dans une base + texte (Connexion, requête, traduction SQL, temps exécution)

Pipeline Interrogation SIMBAD

M33
12 10.3 +02 55.7

INFO
iDc
TRADUCTION
JAVA



OPTIONS CLIENTS



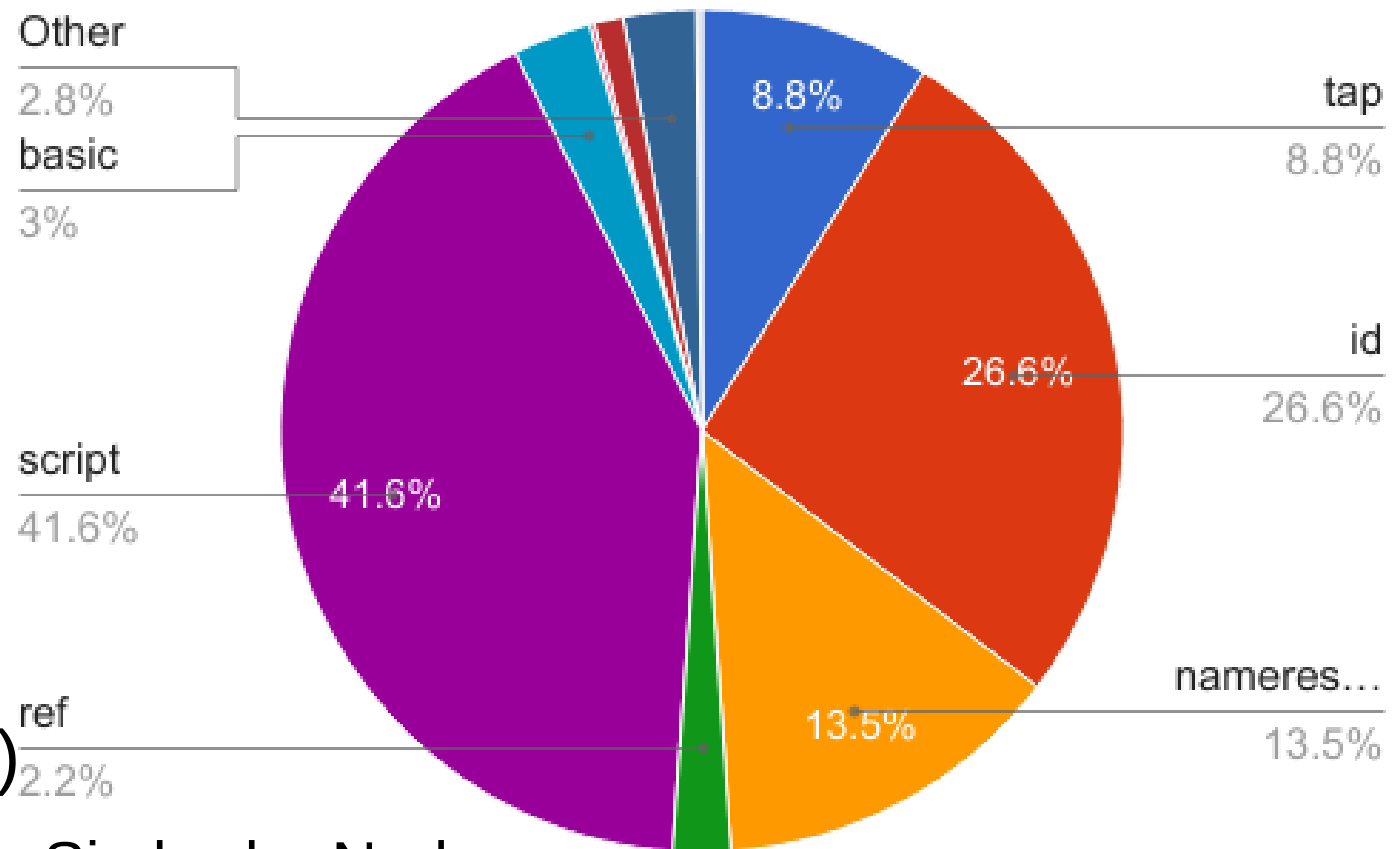
HTML
VOTABLE
ASCII - TSV
JSON

SQL JOINS TABLES

Clients SIMBAD

- **Pages web (2005)** - Java + Javascript

Repartition des usages



- **Sesame (1990)**

- nom → Vizier + Simbad + Ned

=> coordonnées + magnitudes, vitesse etc....

Clients SIMBAD

- **Oldsim**
 - Recherche des versions antérieures
 - Copie mensuelle (Web, parfile)

- Tests journaliers + hebdo (nuits)
 - Vérification des changements
 - Simcli + Web + SQL



Soizick Lesteven
Thomas Delacour

Outils SIMBAD

- Nagios

Thruk

General

Home
Documentation
Panorama View

Services

Simbad
Simbad
SimPg
SimbadUS

VizieR

VizieR
TapVizieR
VizDB
Mirrors
Axel
CdsArc
Vizdata

Aladin
CDS portal
XMatch

Current Status

Tactical Overview
Map
Hosts
Services
Host Groups
Summary (Grid)
Simbad (details)
Service Groups
Summary (Grid)
Mine Map
Problems
Services (Unhandled)
Hosts (Unhandled)
Network Outages

Other links

GLU
Piwik
Simbad
Webalizer Simbad
VizieR
Cdsarc monitoring

Current Network Status

Last Updated: Sat Mar 4 22:43:03 CET 2017
Updated every 90 seconds
Thruk 1.70 - www.thruk.org
Logged in as *anals*

View Service Status Detail For All Host Groups
View Host Status Detail For This Host Group
View Status Overview For This Host Group
View Status Summary For This Host Group
View Status Grid For This Host Group

Host Status Totals

Up	Down	Unreachable	Pending
3	0	0	0

All Problems: 0 **All Types**: 3

Service Status Totals

Ok	Warning	Unknown	Critical	Pending
3	0	0	0	0

select all - unselect all - all problems - all with downtime

Command:

Start:

Options: Force Check: Spread Checks:

Service Status Details For Host Group 'Simbad'

select host / services with leftclick to send multiple commands. Select multiple with shift + mouse.
select all (hosts) - unselect all - all problems - all with downtime

Host	Service	Status	Last Check	Duration	Attempt	Status Information
Simbad	/arc1	OK	22:40:54	25d 12h 48m 25s	1/4	/arc1: 71%used(197534MB/278246MB) (<90%) : OK
	/arc2	WARNING	22:42:14	4d 12h 27m 57s	4/4 #722	/arc2: 94%used(1760259MB/1876641MB) (>90%) : WARNING
	/data	OK	22:42:14	25d 12h 49m 5s	1/4	/data: 86%used(161910MB/187612MB) (<90%) : OK
	/home	OK	22:42:53	11d 11h 9m 13s	1/4	/home: 64%used(8980MB/13951MB) (<85%) : OK
	/tmp	OK	22:41:20	25d 12h 46m 54s	1/4	/tmp: 0%used(17MB/4564MB) (<90%) : OK
	Acces simbad/sim	OK	22:42:46	4d 6h 15m 17s	1/2	Ext: 811, 11% depuis 174.70.186.207. Local: 54, 42% depuis 130.79.128.30
	Apache status	OK	22:42:20	0d 2h 3m 43s	1/4	OK - Apache serves 4 Requests per second with an average CPU utilization of 0%. Busy workers: 16, idle: 59
	Codes Apache	OK	22:40:20	3d 21h 52m 43s	1/2	2xx/3xx=1242, 4xx=1, 5xx=0
	CPU	OK	22:42:50	0d 2h 1m 13s	1/8	Load : 1.06 1.11 1.08 : OK
	DNS	OK	22:42:49	583d 12h 33m 6s	1/8	DNS OK: 0,131 secondes de temps de réponse . simbad renvoie 130.79.128.4
	JavaServer	OK	22:42:03	1d 23h 51m 4s	1/8	OK: Heap usage = 180732896
	Heap memory	OK	22:42:03	1d 23h 51m 4s	1/8	OK: Heap usage = 180732896
	JavaServer	OK	22:42:03	1d 23h 51m 4s	1/8	JMX OK - ThreadCount = 30
	Threads	OK	22:42:03	1d 23h 51m 4s	1/8	JMX OK - ThreadCount = 30
	Occupes	OK	22:42:03	1d 23h 51m 4s	1/8	JMX OK - ThreadCount = 30
	Log_Maj_Count	OK	22:27:52	12d 12h 15m 12s	1/2	POSTGRES_CUSTOM_QUERY OK: DB "simbadlog" (host:simbad) 0
Memoire	OK	22:42:53	3d 17h 10m 18s	1/8	Ram : 41%, Swap : 17% : OK	
Nombre connections	OK	22:40:19	25d 12h 47m 47s	1/4	POSTGRES_BACKENDS OK: DB "simbadlog" (host:simbad) 2 connexions sur 800 (1%)	
Simbad HTTP	OK	22:42:22	22d 6h 42m 47s	1/4	HTTP OK: HTTP/1.1 302 Found - 628 octets en 0,009 secondes de temps de réponse	
SimbadWS	CRITICAL	2016-02-19 14:03:21	415d 1h 47m 33s	4/4 #1027	HTTP CRITICAL: HTTP/1.1 500 Internal Server Error - 781 octets en 0,038 secondes de temps de réponse	

Outils SIMBAD

- GLU : liens URLs entre services + checks

Glu Browser (on aladin.u-strasbg.fr/usr/local/glu/)

Select by: [Resources](#) · [Datatypes](#) · [Services](#) · [Domains](#) Identifier:

Services

[CADC domain:](#)
[.CADC](#)

[CDS domain:](#)
[.SLOAN](#)
[.VizieR](#)
[.aladin](#)
[.annotations](#)
[.biblio](#)
[.extern](#)
[.glu](#)
[.misc](#)
[.portal](#)
[.querycat](#)
[.simbad](#)
[.ws](#)

[SSCXMM domain:](#)
[.xcatdb](#)

CDS/simbad - C.D.S Simbad service

SIMBAD is a database containing data for about 5,500,000 astronomical objects. SIMBAD can be queried by identifiers, measurements may have following type of data: basic data (coordinates, magnitude, spectral type, ...), identifiers, measurements

Manager: Marc Wenger 11 rue de l'Universite 67000 STRASBOURG - FRANCE
Email: Marc.Wenger@astro.u-strasbg.fr
Key words: astronomical objects, database, identifiers, coordinates, bibliography
User doc: [.<SimbadUrl>/guide/guide.html](#)
Managed by: [simbad.u-strasbg.fr](#)

Data types

.B	Bibcode
.I	Identification of astronomical object (Simbad identification)

Resources

.BibcodeHelp	Acces a la page de description du bibcode
.CoordSystems	Coordinate system description.
.HeasarcQuery	Query Heasarc Archives
.HelpPages	Help page
.IUEQuery	Query IUE spectra database (INES)
.JournalList	List of journals and their abbreviation
.MeasurementList	List of measurements and individual access to each measurement
.MesHelp	Description of an individual catalogue in the user's guide
.OType	Retrieve explanations of an object type in SIMBAD
.OTypeList	List of object types
.SIMBAD4	Description of SIMBAD4
.SIMBADQUERYCOORDFORM	Simbad query coordinate form
.SIMBADQUERYIDFORM	Simbad query id form
.SIMBADQUERYREFFORM	Simbad query reference form
.SIMBADSAMPLEFORM	Simbad sample form
.SIMBADSCRIPTFORM	Simbad sample query form.
.SMB.O	Simbad query by a bibliographical reference for the object list
.SimbadD.us	Simbad mirror prefix (USA)
.SimbadDisplay	Simbad mirror resolution
.SimbadG.us	Simbad mirror prefix (USA)
.SimbadGlobal	Test global de Simbad
.SimbadGuide	Simbad mirror resolution
.SimbadH.us	Simbad mirror prefix (USA)
.SimbadHelp	Simbad mirror resolution

Outils SIMBAD

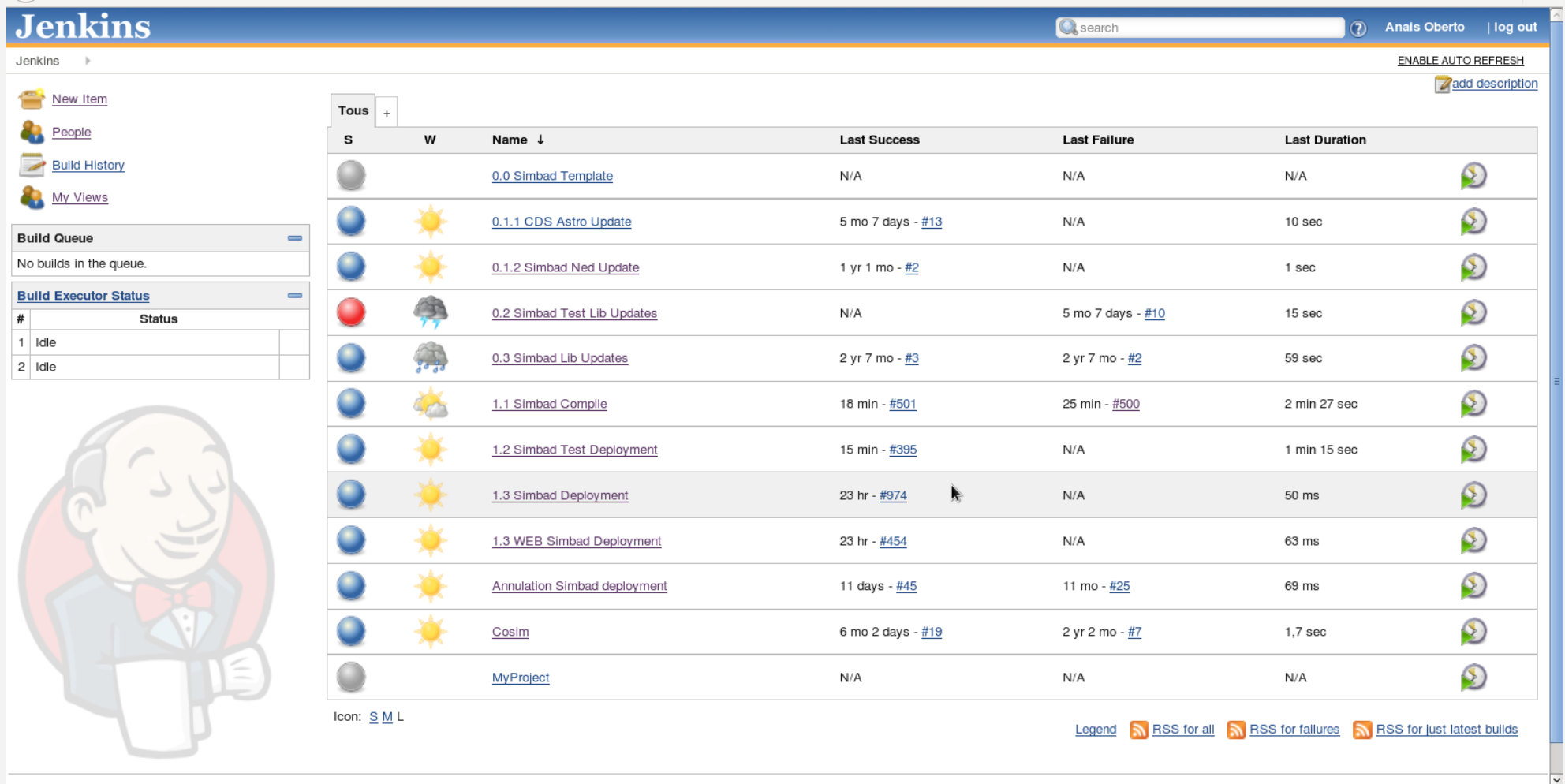
- Redmine

The screenshot shows the Redmine interface for the 'Simbad' project. The 'Issues' tab is selected, and the status is 'all simple opened'. The page includes filter and option menus, an 'Apply' button, and a table of issues grouped by project (COSIM, DicBuilder, DJIN, DJIN2).

#	Subject
COSIM (10)	
<input type="checkbox"/> 2469	Enlever la limite à 100 objets dans la recherche par coordonnées
<input type="checkbox"/> 2429	Arrêt avant la fin
<input type="checkbox"/> 2402	Pouvoir préciser l'époque
<input type="checkbox"/> 2310	anomalie dans le calcul du score M
<input type="checkbox"/> 2287	ne montrer que certains types d'objets en DISPLAY avec une option .SHOW
<input type="checkbox"/> 2270	Pouvoir fixer l'idprinc avec Cosim
<input type="checkbox"/> 2199	Retours sur la version graphique
<input type="checkbox"/> 2149	NAME, Sesame, catalogue non reconnu
<input type="checkbox"/> 2091	Ré-exécution rapide
<input type="checkbox"/> 227	sérialiser les catalogs
DicBuilder (2)	
<input type="checkbox"/> 2221	Problème lors de la création d'un acronyme
<input type="checkbox"/> 2167	Sauvegardes automatiques
DJIN (2)	
<input type="checkbox"/> 2187	les Tables des articles ne sont plus bien "vues" par DJIN
<input type="checkbox"/> 2168	Re: Toujours des problèmes de couleur dans DJIN (Evelyne et Magali concernées également)
DJIN2 (2)	
<input type="checkbox"/> 2445	Gérer les tableaux
<input type="checkbox"/> 2444	Importer tout type de document (Html, Text..)

Outils SIMBAD

- Jenkins : Intégration/déploiement continu



The screenshot displays the Jenkins web interface. At the top, the 'Jenkins' logo is on the left, and a search bar, user name 'Anaïs Oberto', and 'log out' link are on the right. Below the header, there are navigation links for 'New Item', 'People', 'Build History', and 'My Views'. A 'Build Queue' section shows 'No builds in the queue.' Below that, a 'Build Executor Status' table shows two executors in an 'Idle' state.

The main area features a table of build jobs. The table has columns for 'S' (status icon), 'W' (weather icon), 'Name', 'Last Success', 'Last Failure', and 'Last Duration'. The jobs listed include '0.0 Simbad Template', '0.1.1 CDS Astro Update', '0.1.2 Simbad Ned Update', '0.2 Simbad Test Lib Updates', '0.3 Simbad Lib Updates', '1.1 Simbad Compile', '1.2 Simbad Test Deployment', '1.3 Simbad Deployment', '1.3 WEB Simbad Deployment', 'Annulation Simbad deployment', 'Cosim', and 'MyProject'.

At the bottom left, there is a cartoon illustration of a man in a tuxedo. At the bottom right, there are links for 'Legend' and four RSS feeds: 'RSS for all', 'RSS for failures', and 'RSS for just latest builds'.

S	W	Name ↓	Last Success	Last Failure	Last Duration
🌑		0.0 Simbad Template	N/A	N/A	N/A
🌐	☀️	0.1.1 CDS Astro Update	5 mo 7 days - #13	N/A	10 sec
🌐	☀️	0.1.2 Simbad Ned Update	1 yr 1 mo - #2	N/A	1 sec
🌐	☁️	0.2 Simbad Test Lib Updates	N/A	5 mo 7 days - #10	15 sec
🌐	☁️	0.3 Simbad Lib Updates	2 yr 7 mo - #3	2 yr 7 mo - #2	59 sec
🌐	☀️	1.1 Simbad Compile	18 min - #501	25 min - #500	2 min 27 sec
🌐	☀️	1.2 Simbad Test Deployment	15 min - #395	N/A	1 min 15 sec
🌐	☀️	1.3 Simbad Deployment	23 hr - #974	N/A	50 ms
🌐	☀️	1.3 WEB Simbad Deployment	23 hr - #454	N/A	63 ms
🌐	☀️	Annulation Simbad deployment	11 days - #45	11 mo - #25	69 ms
🌐	☀️	Cosim	6 mo 2 days - #19	2 yr 2 mo - #7	1,7 sec
🌑		MyProject	N/A	N/A	N/A

Pipeline Software SIMBAD




```
// si la ref est incomplete
if (ref.getPage().get() == 0
    || ref.getBicode().getLastChar() == Bibcode.NO_AUTHOR) {
    // message de warning
    String rep = dialog(Messages.get("RefWarn5")
        + Messages.get("CmdConfirmN"));
    if (!rep.equalsIgnoreCase("O") && !rep.equalsIgnoreCase("Y")) {
        contextRef = null;
        curRef = null;
        return null;
    }
}
}

```

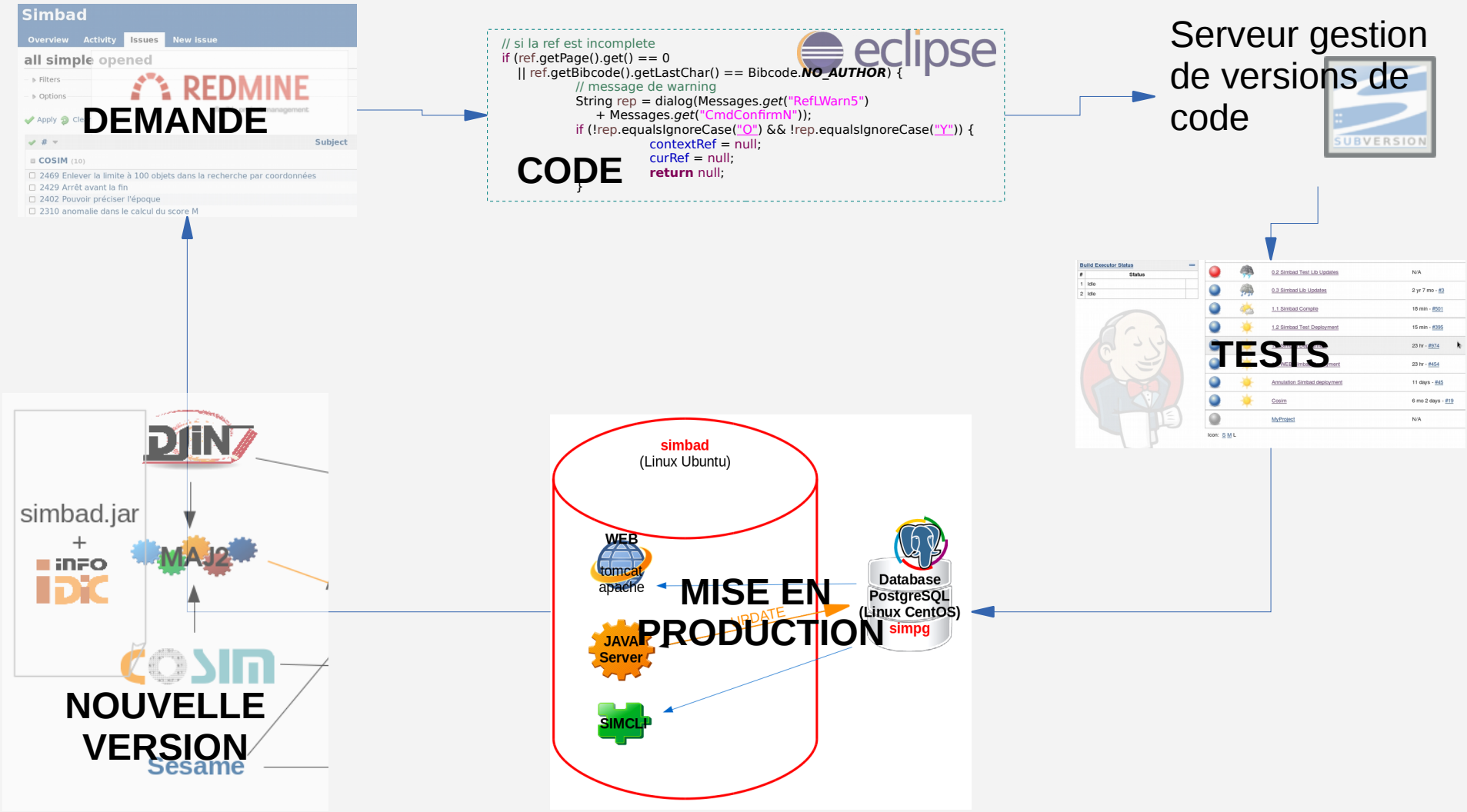
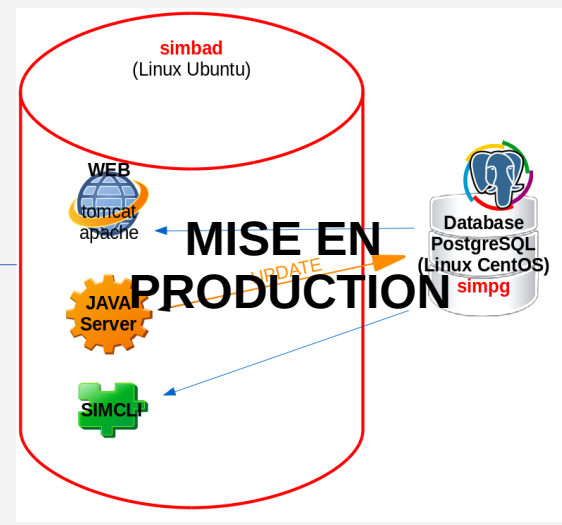
CODE

Serveur gestion de versions de code



#	Status	Build Name	Duration
0	Failed	0.2 Simbad Test Lib Updates	N/A
1	Idle	0.3 Simbad Lib Updates	2 yr 7 mo - #3
2	Idle	1.1 Simbad Compile	19 min - #501
		1.2 Simbad Test Deployment	15 min - #395
		1.3 Simbad Test Deployment	23 hr - #971
		1.4 Simbad Test Deployment	23 hr - #551
		Annulation Simbad deployment	11 days - #45
		Cosim	6 mo 2 days - #13
		MyProject	N/A

TESTS



FIN - MERCI

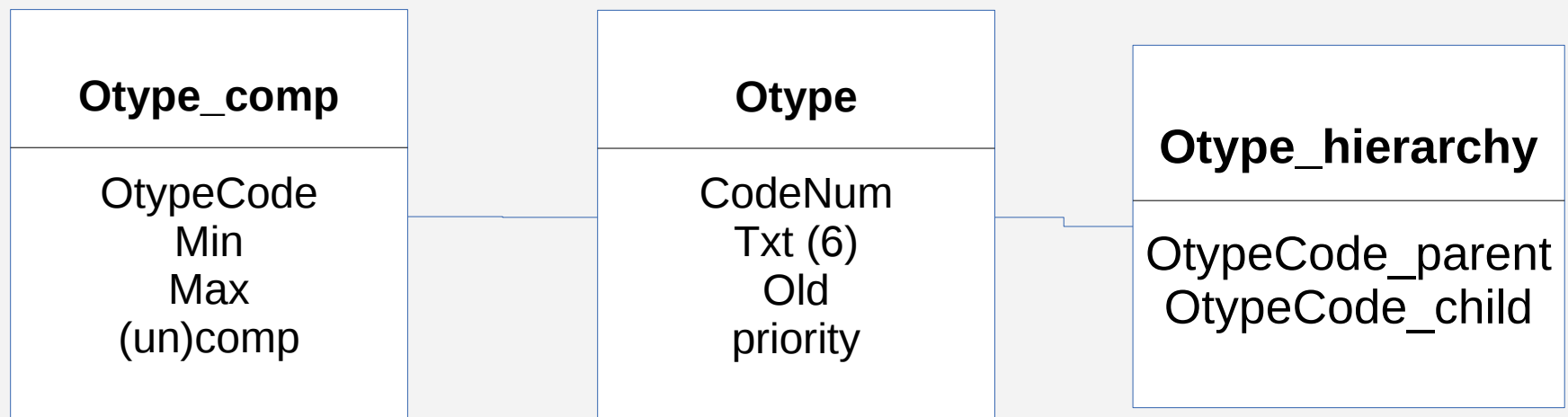
Améliorations Otypes

- Parsing fichier → objets java

☺ Limitation / Homogénéisation

:-(Hiérarchie

12.00.00.0:	multiple_object	mul	"Composite object"
12.01.00.0:	Region	reg	"Region defined in the sky"
12.01.05.0:	Void	vid	"Underdense region of the Universe"
12.02.00.0:	SuperClG	SCG	"Supercluster of Galaxies" SClG
12.03.00.0:	ClG	ClG	"Cluster of Galaxies"
12.04.00.0:	GroupG	GrG	"Group of Galaxies"
12.04.05.0:	Compact_Gr_G	CGG	"Compact Group of Galaxies"
12.05.00.0:	PairG	PaG	"Pair of Galaxies"
12.05.05.0:	IG	IG	"Interacting Galaxies"



Améliorations Mesures (data)

- Parsing entrée regex → champs indépendants
 - ☺ Limitation / Homogénéisation
 - :- (? != Basic Data (certains liens VizierR)

```
[mes CEL]

#      01234567890123456789012345678901234567890123456789012345678901234567890123456789012345678
#CEL  |  U1 : m.e|  U2 : m.e|  U3 : m.e|  U4 : m.e|peculiarities|          reference  |
#-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
#CEL m|12.45:  ~|12.61: .30|    ~:  ~|    ~:  ~|P,CA,NA          |1973$CEL..C.....D|
acronym=CEL
name=Celescope
description=Celescope catalog of ultra-violet photometry,by Davis et al.,
output = |  U1 : m.e|  U2 : m.e|  U3 : m.e|  U4 : m.e|peculiarities|          reference  |

fields = |{U1}:{meU1}|{U2}:{meU2}|{U3}:{meU3}|{U4}:{meU4}|{pec}|{bibcode}|
U1.description = Magn U1 (210-320nm)
U1.alias =
U1.ucd = phot.mag;em.UV.200-300nm
U1.unit = mag
U1.datatype = float
U1.precision = 2 - vrai usage de Mk / fe_h / distance / ubv / rot / plx
U1.width = 5
U1.arraysize = (100 à 1000 /j)
U1.dbtype = float4
U1.dbinfo = null
U1.displayname = U1
U1.displayformat = %5.2d
```

Améliorations Serveurs SIMBAD

```
smbmgr@simbad:~$ checkServers
```

```
postgres(postgres) : 7  
2170,2171,2173,2174,2175,2176,4075
```

```
rmiregistry(smbmgr) : 1  
3326
```

```
httpFileServer(smbmgr) : 1  
3830
```

```
FileServer(smbmgr) : 1  
3946
```

```
LogServer(smbmgr) : 1  
4038
```

```
apache(www-data) : 4  
15947,4976,6071,6489
```

```
apache(root) : 1  
4476
```

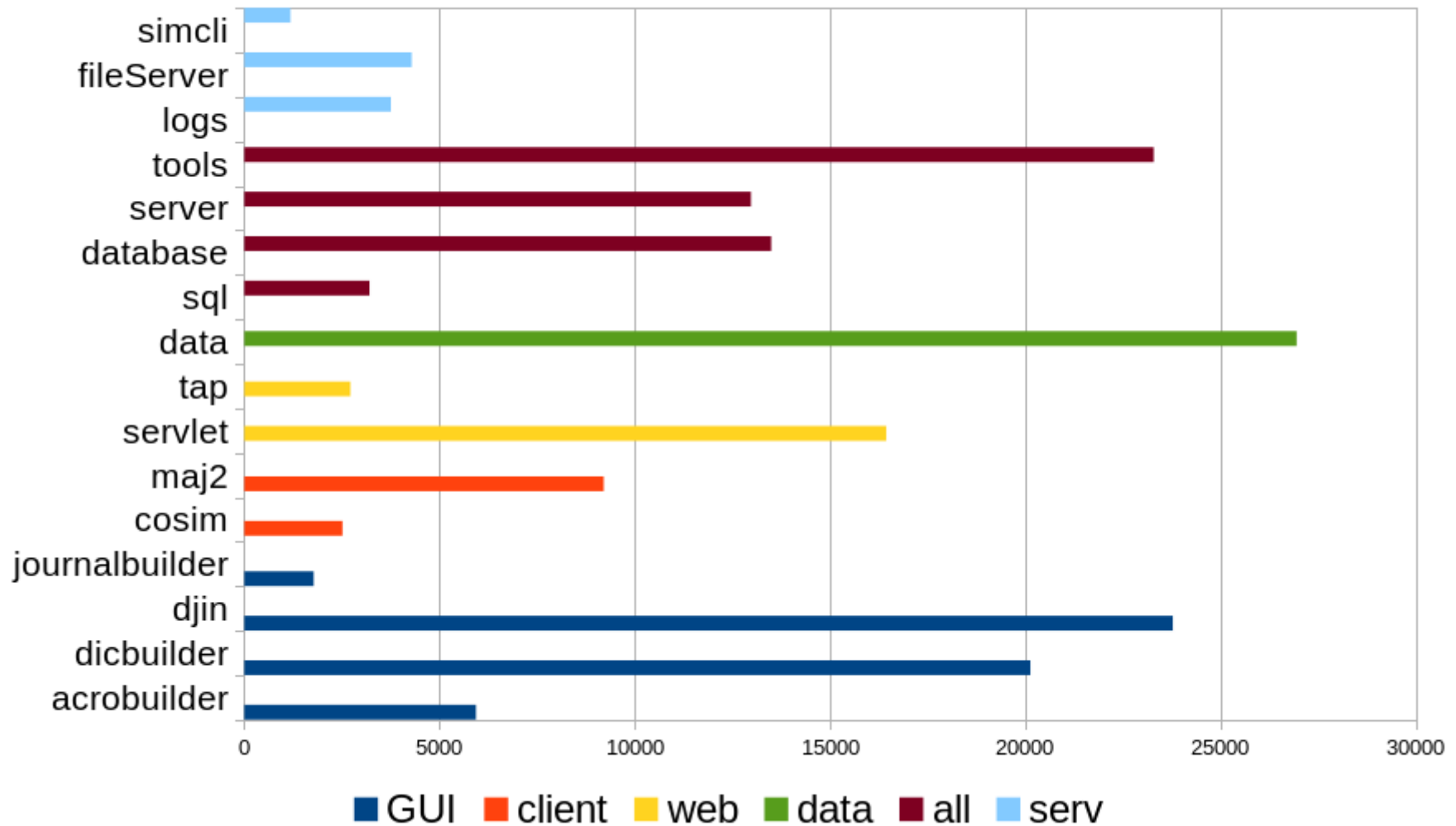
```
tomcat(smbmgr) : 1  
24447
```

```
SimbadServer(smbmgr) : 1  
28156
```

```
SimcliServer(smbmgr) : 1  
28836
```

Améliorations Serveurs SIMBAD

Lignes de code

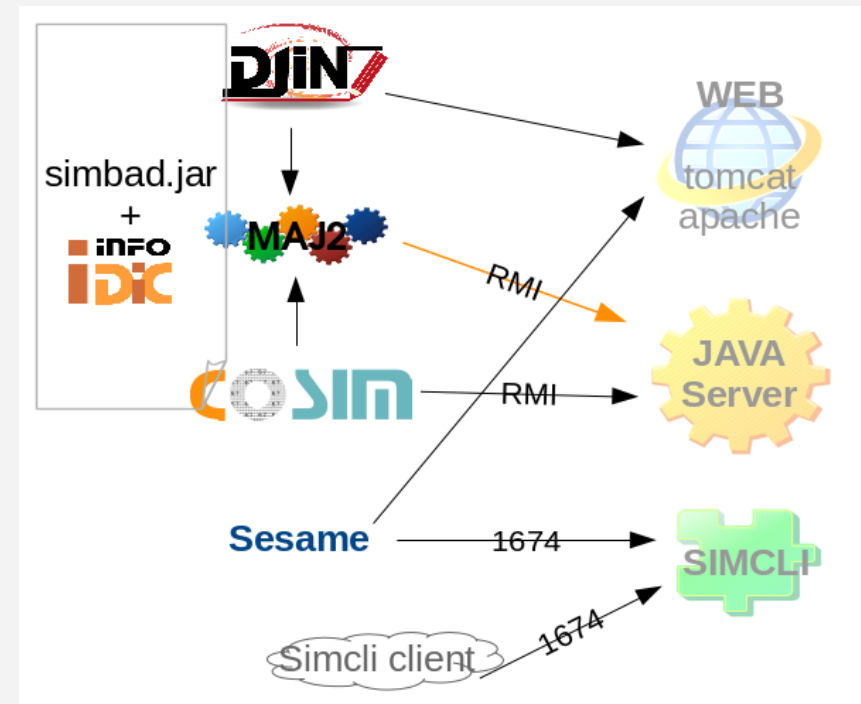


Améliorations Java Serveur

- Java (300K lignes)
 - Connexion spéciale pour maj2, COSIM en RMI
 - Toutes les fonctionnalités (idem tomcat)
 - Interrogation **SQL** à la Base de Données
- Fichiers de config (via FileServer) pour :
 - BD, mesures, dico
- **Pool** à la BD (home made)

Serveur Simcli

- SimcliServer
 - Connexion spéciale pour un **client C**
 - Fonctionnalités basiques
 - Interrogation **SQL** à la Base de Données
 - Uniquement pour compatibilité
 - Tests **biblio**
 - Ancien raccord
 - **Sesame** (partiel)
- Non maintenu ! Mais utilisé
 - ADS – HEASARC - IPAC



Améliorations Pages web

- Servlet de génération HTML
- Options d'affichages utilisées pour la génération du SQL
 - formulaires/templates statiques + javascript async pour les données supplémentaires
 - ☺ Maniabilité des options
 - page dédiée “output options” → barre latérale
 - options de manipulations des listes d'objets (ajout de critères, statistiques)
 - insertion widgets portail
 - ☺ Recherches avancées
 - Changement “criteria query” (pseudo language très rigide) : utilisation interactive, croisement TAP ? Stagiaire TB

Pages web

- Status des sources :

<i>Language</i>	<i>files</i>	<i>comment</i>	<i>code</i>
<i>HTML</i>	<i>89</i>	<i>351</i>	<i>20711</i>
<i>Javascript</i>	<i>47</i>	<i>2461</i>	<i>12926</i>
<i>CSS</i>	<i>28</i>	<i>138</i>	<i>2064</i>
<i>Perl</i>	<i>4</i>	<i>144</i>	<i>1141</i>
<i>Python</i>	<i>18</i>	<i>174</i>	<i>857</i>

Améliorations File Server

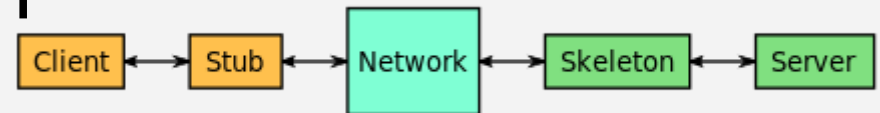
- Fournit 584 fichiers
- Server HTTP (home made) + Serveur Fichiers
- Ecoute sur un port, connexion exigée au lancement des clients
 - ☺ Centralisation des fichiers de config
 - SaltStack : outils de synchro

Améliorations Log Server

- Logs en 3 versions : java + texte + BD
 - ☺ Centralisation des logs
 - :-(Risque de bugs, maintenance, unicité
 - Pile FIFO, homemade
 - Suppression du serveur de logs Simbad (?)
 - !! Utilisé pour SimWatch

Améliorations RMI Server

- Remote Method Invocation



- ☺ Travail déporté

- :-(Connexion continue (reconnexions auto)

- Applications standalone (?)

- Remplacement par une API pure Web

Améliorations

- **Sesame** : (1990) C + awk
 - ☺ Homogénéisation résultats + rapidité
 - copie => décharge Simbad
- **TAP**
 - ☺ Aide à l'écriture des requêtes
 - Refonte pages web + génération didactique + glissé/déposé + sortie vraies pages Simbad web + vues SQL (méga vue tout Simbad ?)
 - base de données dédiée + webapps dédié (autre tomcat ? autre machine ?)

Améliorations

- **Miroir CFA**
 - ☺ Stabilité, redondance
 - Docker, nouvelle machine
- **Liens VizieR**
- **Base de Données Postgres**
 - ☺ Indépendance Mise à jour
 - ☺ Indépendance TAP / scripts
 - Duplication live, stagiaire en cours
- **Tomcat apache** : load balancing (jk.conf)

Améliorations

- **NAME VIRTUAL**

- ☺ Multiplicité des noms transparents (Orion, Orion A, Ori A)

- Accessible en interrogation, pas visibles

- **Dictionnaire**

- ☺ Multi usages, utilisateurs

- Base de données, liens direct avec l'entrée des tables dans Vizier