Distributed testbed management

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Information Society

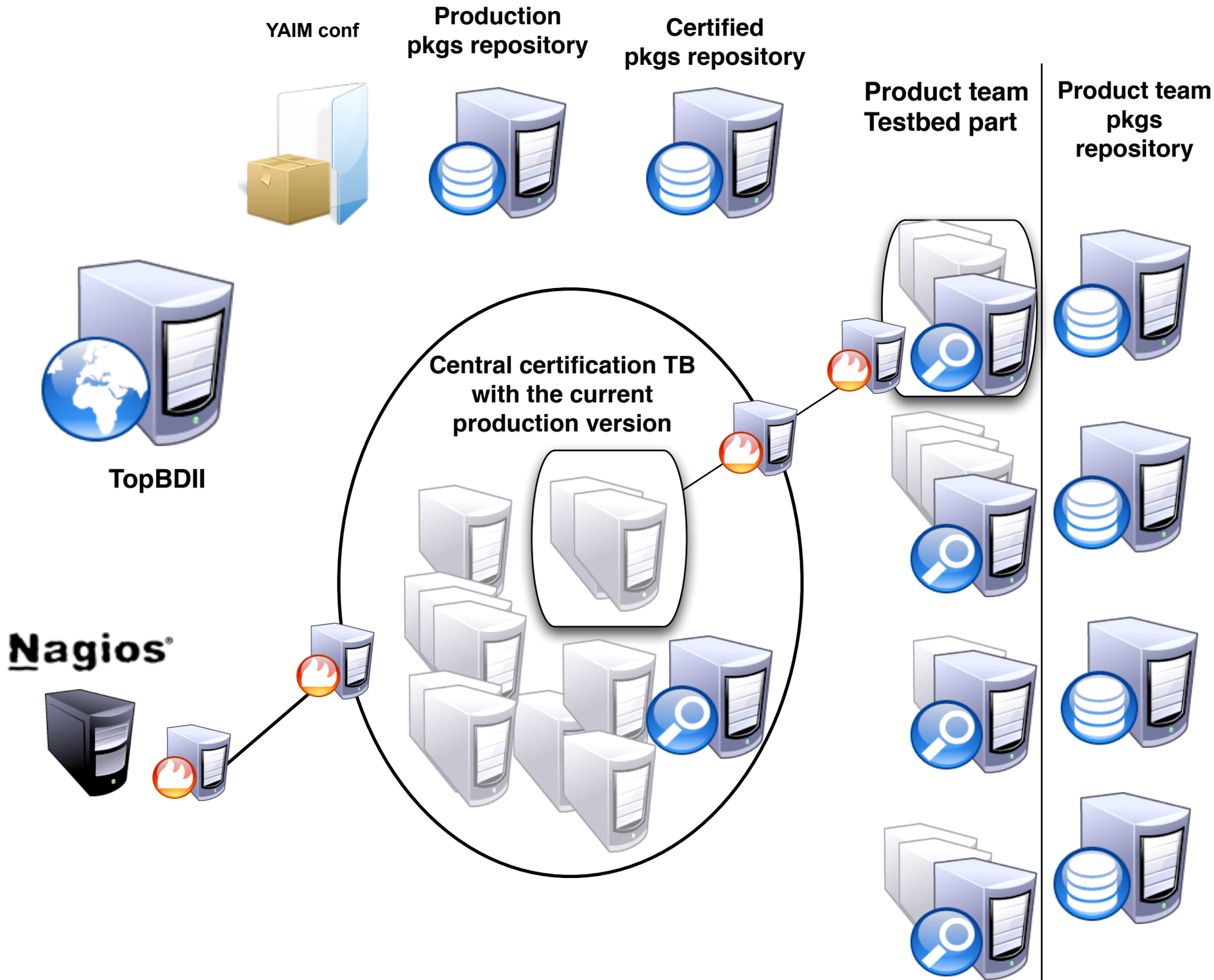
Summary

- What are the changes in the certification process
- Resources available
- Building a testbed on demand
- Custom site for certification scenario
- Sharing configuration information
- VO, CA, VOMS server certification
- Responsability per team

Changes

- **Each product team certifies its own product**
- **Each team has to maintain its type of node on a testbed**
  - Product node type is generally the server-side of a service and layers of the other products
  - There is also the client-side type of nodes (UI, WN and VOBOX) that are not one product, but the client-side of almost all products
- **Certification can be done in parallel with the other teams**
- **Product has to be backward-compatible with the production version**
- **Product team method = each team releases their own product**

Resources available



Configuration information sharing

- To configure the stable testbed we need collaboration between all product teams
- All team has to provide its own part of the YAIM configuration part
- When we don't need to add or remove types of node the maintenance of the central testbed "should" be really simple

wiki informations page

TWiki > EGEE Web > SA3 > EGEETestbeds > EgiTestbed (07-Dec-2009, LouisPoncet)

Documents and URL

- DitributedProductTeamTestbed.pdf: Talk about shared Testbed design
- DynBDII.swf: BDII information provide configuration Video tutorial
- NagiosReconf.swf: NAGIOS reconfiguration Video tutorial
- GridSystemAdmin.pdf: Draft about the system administration of small sites and about EGI testbed

Product team

Authorization

(Christoph Witzig, SWITCH)

- Type of nodes :
- Hostnames :
- BDII ldap resource uri :
- Firewall information :
- Admin contact :

E-mail : Instant Messenger Phone :

VO Management

(Vincenzo Ciaschini, INFN)

- Type of nodes :
- Hostnames :
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E-mail : Instant Messenger Phone :

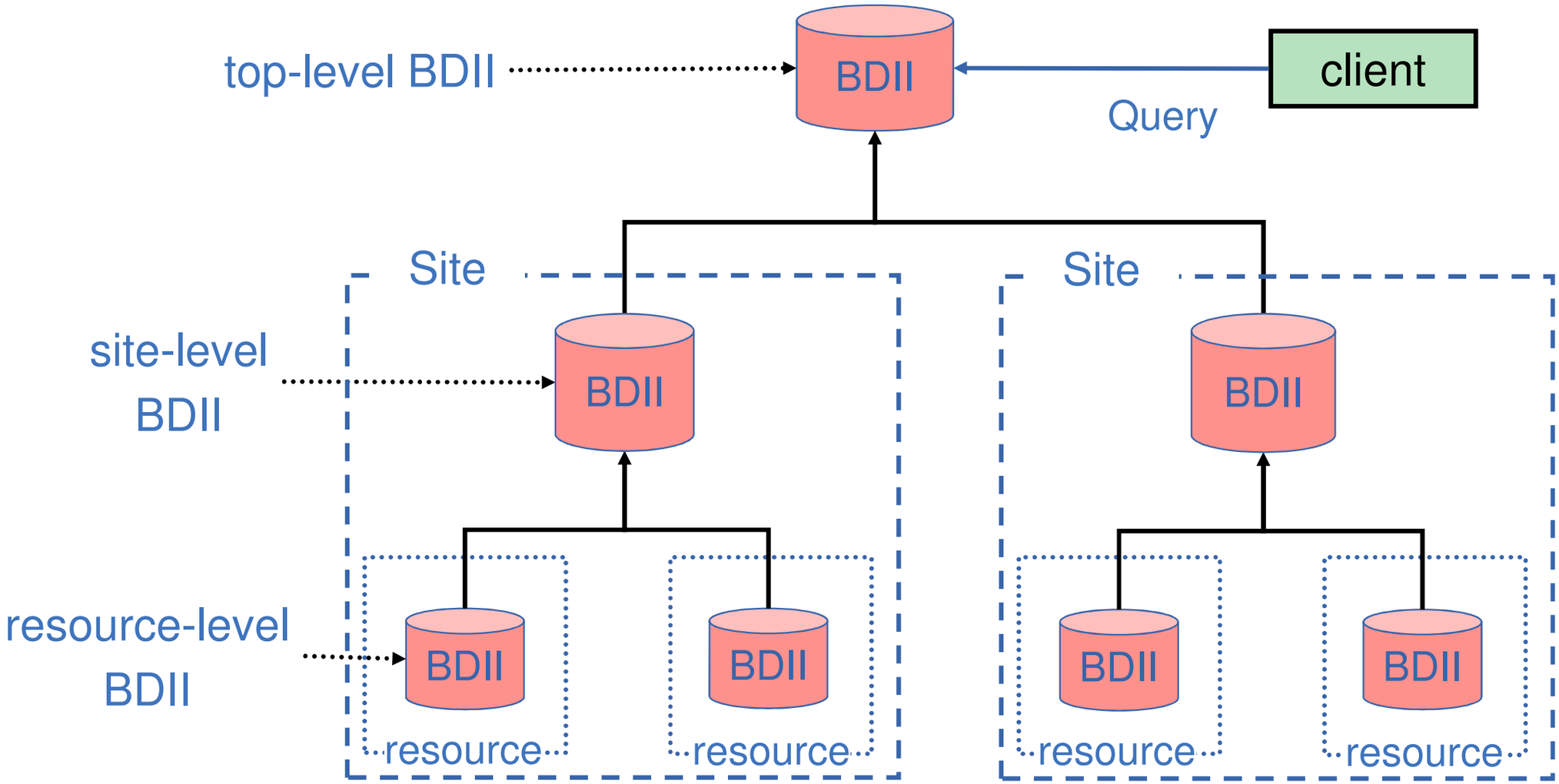
Security Infrastructure Product Team

(John White, HIP)

Building a testbed on demand

- **A certification scenario needs a set of node types and my nodes**
  - How to get those resources only by installing my nodes
- **The art of the GIP plugin**
  - The architecture of BDII allows us to design a site the way that we want creating our information provider
- **How to get any resources like ones on my site**
  - siteBDII get node resources
  - topBDII get siteBDIIs resources
  - A customBDII provide filtered and arranged resources
- **A BDII configuration is a set of ldap strings to fetch information about resources in the correct format**
  - We need to be able to add new resources to the site and top BDII by ourselves
- **An information provider is a module that produces information published by the BDII server (can be static or dynamic)**

BDII architecture



Top BDII config

BDII Web Config

Files	Commands
cert-tb-cern	Show Link Edit Delete
Testbed-Top	Show Link Edit Delete
site-info.def	Show Link Edit Delete

Create a new file

David Horat

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BDII config edition

BDII Web Config

cert-tb-cern

Line format: [IDENTIFIER] [URL]

```
#
# Site A BDII Conf File
#

CE  ldap://lxbra2307.cern.ch:2170/mds-vo-name=resource,o=grid
CTBSA3INFN ldap://cream-37.pd.infn.it:2170/mds-vo-name=resource,o=grid
BDII  ldap://lxbra2306.cern.ch:2170/mds-vo-name=resource,o=grid

CREAMCE  ldap://lxbra2308.cern.ch:2170/mds-vo-name=resource,o=grid
SE  ldap://lxbra1910.cern.ch:2170/mds-vo-name=resource,o=grid
DPM  ldap://lxb7608v1.cern.ch:2170/mds-vo-name=resource,o=grid
LFC  ldap://lxb7608v3.cern.ch:2170/mds-vo-name=resource,o=grid
PX  ldap://lxbra2304.cern.ch:2170/mds-vo-name=resource,o=grid
FTS  ldap://lxbra2310.cern.ch:2170/mds-vo-name=resource,o=grid
VOBOX  ldap://lxb7607v2.cern.ch.cern.ch:2170/mds-vo-name=resource,o=grid
LFCAZER  ldap://vtb-generic-92.cern.ch:2170/mds-vo-name=resource,o=grid

# Andrew Certification
AE-CREAM ldap://vtb-generic-104.cern.ch:2170/mds-vo-name=resource,o=grid
AE-LCGCE  ldap://vtb-generic-100.cern.ch:2170/mds-vo-name=resource,o=grid

# Alex certification
ALEX_CREAM ldap://vtb-generic-114.cern.ch:2170/mds-vo-name=resource,o=grid
```

Save Cancel

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Customize site

Top BDIIs
all resources

Production
pkgs repository

Certified
pkgs repository

Product A
pkgs repository

A part of the central certification
TB with the current
production version

Product A
certification

YAIM
configuration

Custom Top/site BDII

ncg

Nagios

VO, CAs and VOMS server

- **A certification VO**
  - Only used on the certification grid
- **Two VOMS servers**
  - Central stable one (production release)
  - The product team one for certification
  - With the support of the certification VO only
- **A set of test users**
  - Each certifier will use a certification test user configured to use the CA and VO certification

Responsability

Authorization (Christoph Witzig, SWITCH)	Authz Service (SWITCH, HIP, INFN, NIKHEF) Shibboleth interoperability (SWITCH)	ARGUS SLCS_client
VO Management (Elisabetta, INFN)	VOMS (INFN) VOMSAdmin (INFN)	VOMS
Security Infrastructure Product Team (John White, HIP)	Delegation Framework (CERN, HIP, STFC) Trustmanager (HIP) Util-Java (HIP) Hydra (HIP) DICOM (HIP) myProxy Integration (HIP) LCAS/LCMAPS (NIKHEF) glExec (NIKHEF) SCAS (NIKHEF) Gridsite (STFC)	Hydra PX SCAS GLEXEC_wn
Information Systems (Laurence Field, CERN)	BDII (CERN) GLUE Schema (CERN)	BDII

Responsability

Compute Element (Massimo Sgaravatto, INFN)	CREAM (INFN) CEMon (INFN) BLAH (INFN)	CREAM
Job Management (Marco Cecchi, INFN)	WMS (INFN, ED)	WMS
Logging & Bookkeeping (Ales Krenek, CESNET)	Proxy and attribute certificate renewal (CESNET) Logging &Bookkeeping (CESNET) Gsoap-plugin (CESNET)	LB
Data Management (Ákos Frohner, CERN)	CGSI_gSOAP (CERN) DPM (CERN) GFAL /lcg_util (CERN) LFC (CERN) FTS (CERN)	FTS (various) DPM (various) LFC
Integrated Clients (Andreas Unterkircher, CERN)	Proxy Renewal (Elisa @ ???) GSI-SSH (External - TBC)	UI WN VO Box

Responsability

Batch System Integration (Jan Just Keijser, NIKHEF)	Torque SA3, NIKHEF) LSF – unsupported Condor(PIC) SGE (CESGA)	<LRMS>_utils BATCH servers WNs per Batch CEs per BAtch
MPI (John Walsh, TCD)	MPI Task Force	MPI WNs
dCache (Patrick Fuhrmann, DESY)	dCache (DESY)	dcache (various)
AMGA (Soonwook Hwang, KISTI)	AMGA (KISTI)	AMGA

Conclusion

- Main testbed administrates using “all” product teams in a shared environment
- Testbed pieces for certification of products
- Three package repositories production, certified and ETICS
- Configuration-sharing with all the product teams
- Art of the testbed design using BDIIs from any site
- VO, CA VOMS server for certification only

Question

Links

- **NAGIOS configuration and installation**
  - https://twiki.cern.ch/twiki/bin/view/EGEE/GridMonitoringNcgYaim
- **BDII editor**
  - https://svnweb.cern.ch/trac/gridinfo/browser/poorman
- **Video demo**
  - In my personal twiki page https://twiki.cern.ch/twiki/bin/view/Main/LouisPoncet
  - https://twiki.cern.ch/twiki/pub/Main/LouisPoncet/DynBDII.swf
  - https://twiki.cern.ch/twiki/pub/Main/LouisPoncet/NagiosReconf.swf
- **EGI testbed wiki page**
  - https://twiki.cern.ch/twiki/bin/view/EGEE/EgiTestbed