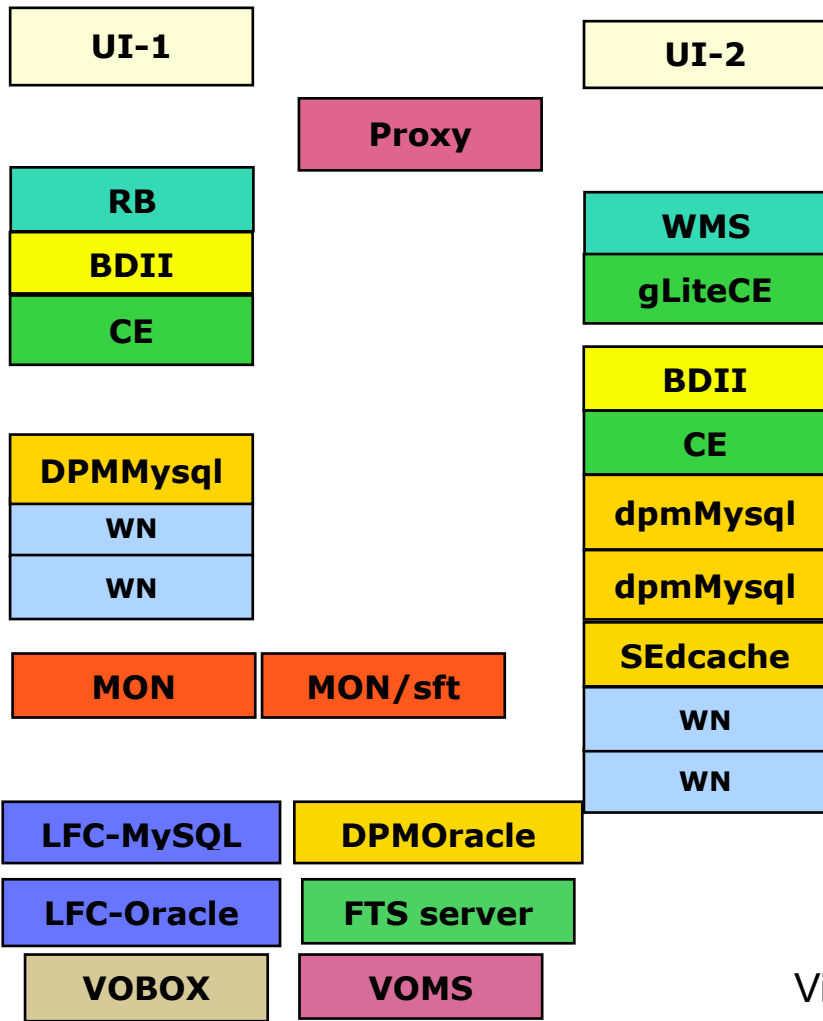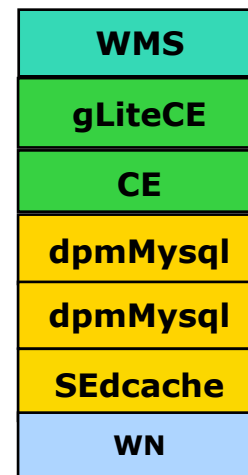# Certification Testbed

Louis Poncet
CERN Grid Deployment

- **Certificate that the middle-ware work and it is deployable**

- **Simulate different configurations**
  - SE dpm + pool (MySQL / Oracle)
  - gliteCE + lcg CE
  - WMS and RB with different job submissions
  - and lot of others ...

- **Running the current production release**
  - Always a set of nodes ready to validate any urgent update

- **Running the next release**
  - Certification process itself

- **Possibility to reinstall any version quickly**
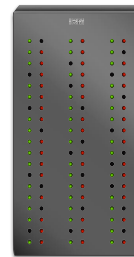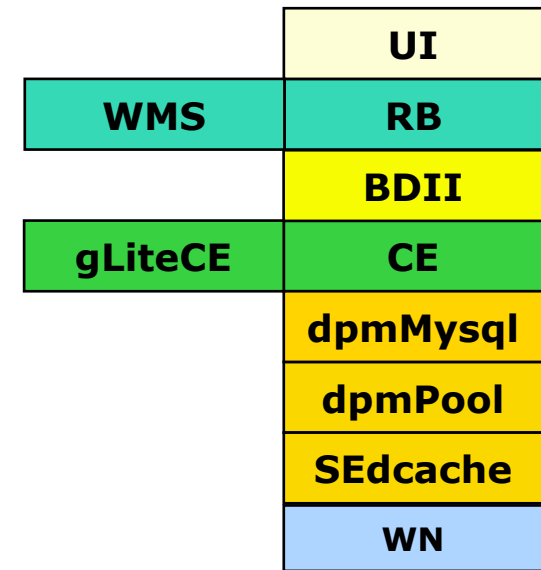 - With the virtualization technology just few minutes are necessary

egee

Enabling Grids for E-sciencE

Constant testing

UI-1

Proxy

RB
BDII
CE

DPMMysql
WN
WN

MON	MON/sft

LFC-MySQL	DPMOracle
LFC-Oracle	FTS server
VOBOX	VOMS

UI-2

WMS
gLiteCE

BDII
CE
dpmMysql
dpmMysql
SEdcache
WN
WN

Virtual Testbed 1

Reinstall from scratch process

WMS
gLiteCE
CE
dpmMysql
dpmMysql
SEdcache
WN

Running Production release

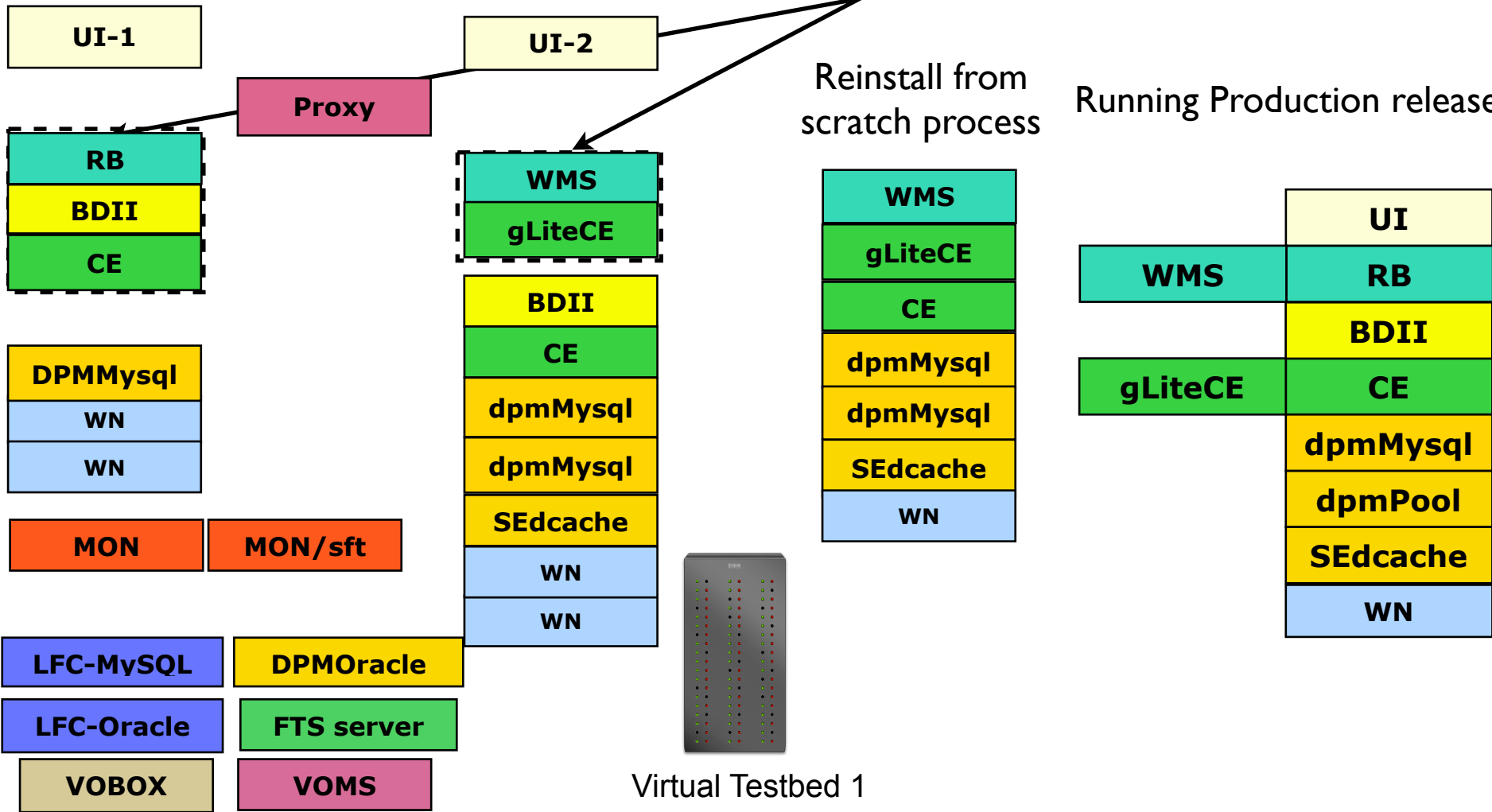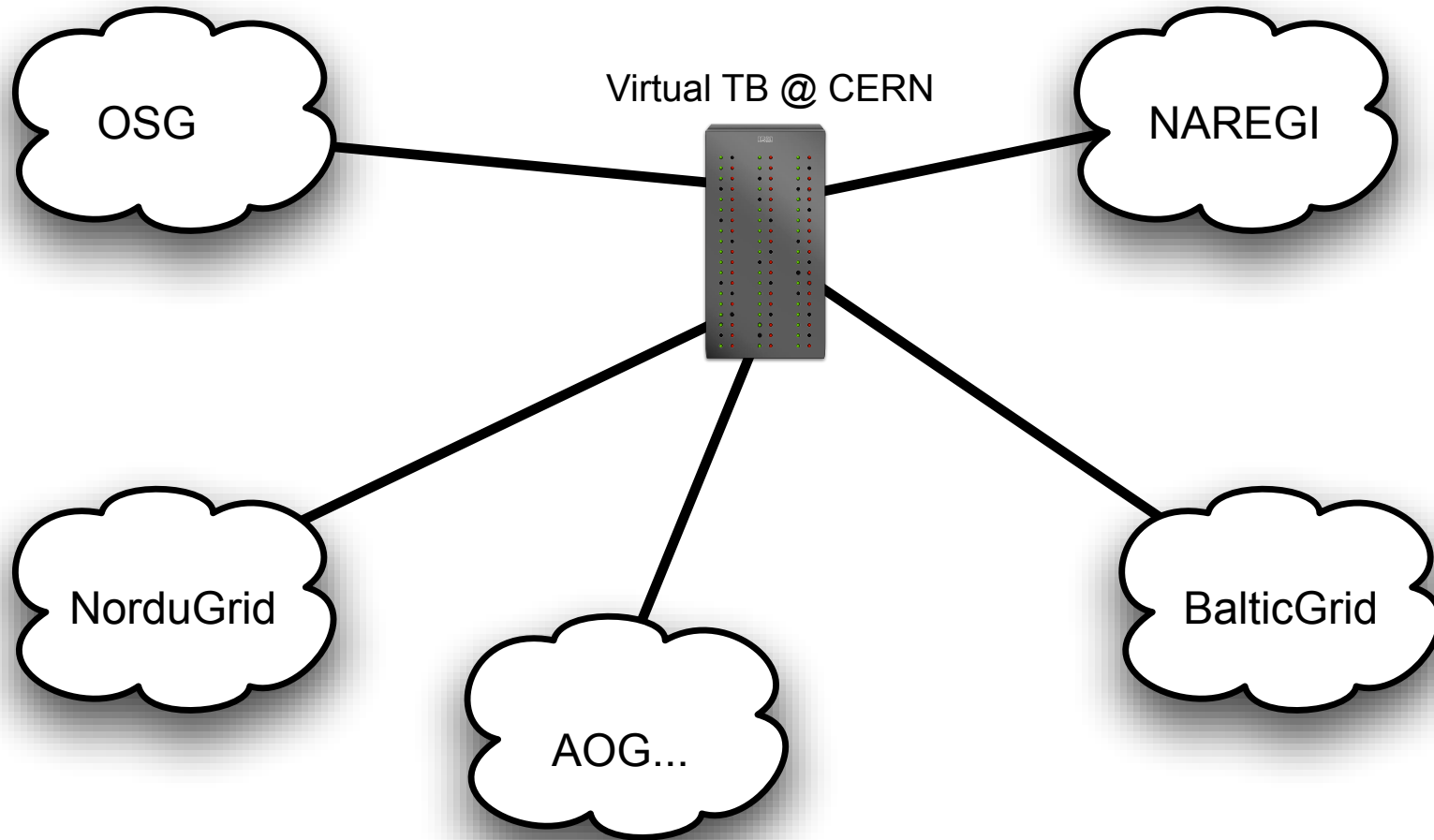|	UI
WMS	RB
	BDII
gLiteCE	CE
	dpmMysql
	dpmPool
	SEdcache
	WN

Constant testing

With inbound access for external certification site ?

UI-1

UI-2

Proxy

Reinstall from scratch process

Running Production release

RB

BDII

CE

WMS

gLiteCE

WMS

gLiteCE

CE

dpmMysql

dpmMysql

SEdcache

WN

UI

WMS

RB

BDII

gLiteCE

CE

DPMMysql

WN

WN

BDII

CE

dpmMysql

dpmMysql

SEdcache

WN

WN

dpmMysql

dpmPool

SEdcache

WN

MON

MON/sft

LFC-MySQL

DPMOracle

LFC-Oracle

FTS server

VOBOX

VOMS

Virtual Testbed 1

eGee

Virtual TB @ CERN

OSG

NAREGI

NorduGrid

AOG...

BalticGrid

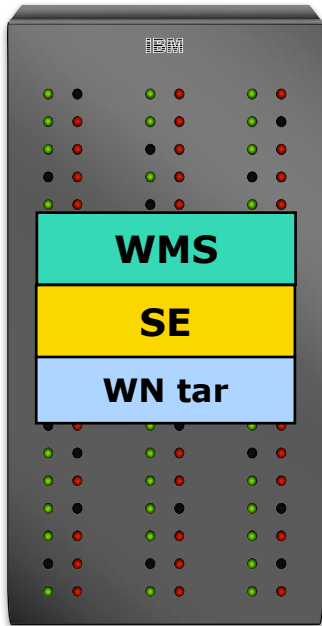**Enabling Grids for E-sciencE**

- **External sites :**
  - Having external expertise on our certification effort
  - External sites with other batch system than Torque
  - Other Operating system in the Certification
- **Any proposal that YOU can make to increase the quality of the certification**
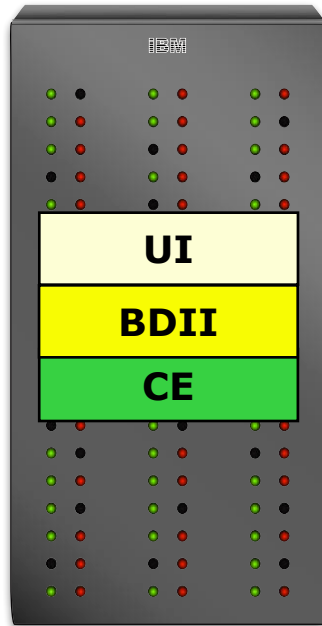
Virtualization in the LCG certification testbed
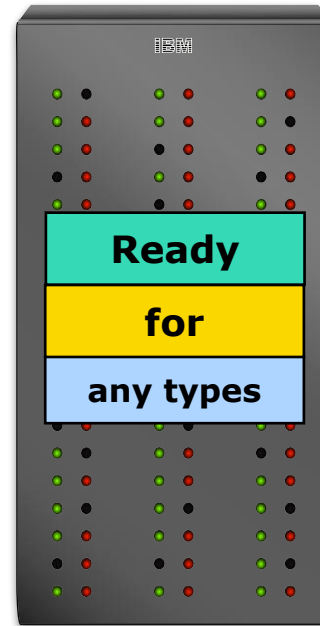
Andreas Unterkircher
CERN Grid Deployment

Information Society

eGee

Xen1 Xen2   Xen3 Xen4

| WMS |
| SE |
| WN tar |

| UI |
| BDII |
| CE |

| Ready |
| for |
| any types |

| Ready |
| for |
| any types |

Virtual Testbed 1
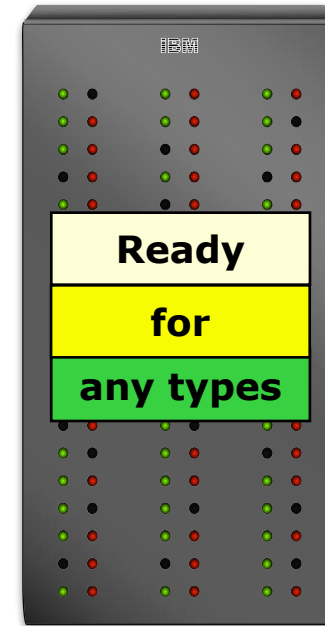
Virtual Testbed
for configuration testing

We used already prepare OS images and reinstall then in few minutes if we have a strange problems we can backup this image and work on it when we want or can.

Enabling Grids for E-sciencE

- **test clean install of new releases.**

- **test update procedures.**

- **test the TAR WN (needs only one WN).**

- **test the TAR UI with different assumptions on already installed software and login shell.**

- **test different batch systems.**

- **consolidate hardware.**

- **save time otherwise spent with OS (re)installation.**

- **…**

Enabling Grids for E-sciencE

- **RPMS for Xen on SLC4 provided by CERN openlab**

- **Scripts to produce tailored images for SLC3, SLC4 and Debian sarge developed by Dimitar Shiyachki.**

- **Four dual Xeons with 16 assignable hostnames to use with Xen.**

- **Workflow:**
  - Install Xen rpms on SLC4 machines & reboot (one time only).
  - Make volumes for every user domain (one for file system, one for swap) with LVM (one time only).
  - Create image with scripts.
  - (Re)format volume and copy image into volume.
  - Start domain.

Enabling Grids for E-sciencE

- **Automation of workflow**
  - Script based (Dimitar)
  - SmartFrog (open source, HP), tools from Intel – in collaboration with CERN openlab
- **Start/shutdown domains with one command.**
- **Start/shutdown complete testbed with one command.**

![egee logo] **Enabling Grids for E-sciencE**