



# Grid Control:

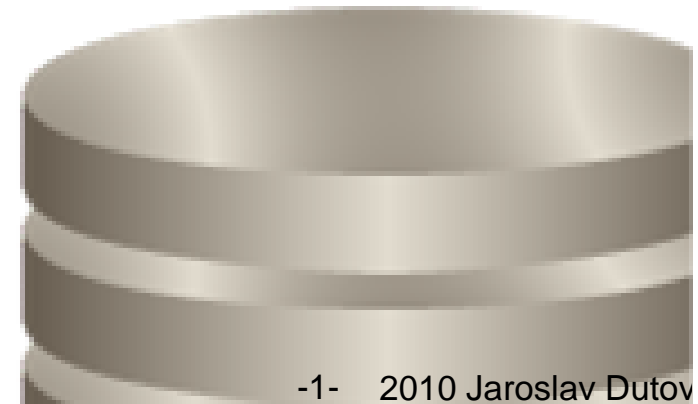
Migration auf 11g und das Leben  
danach

von

Jaroslav Dutov

<j.dutov@dbTotal.de>

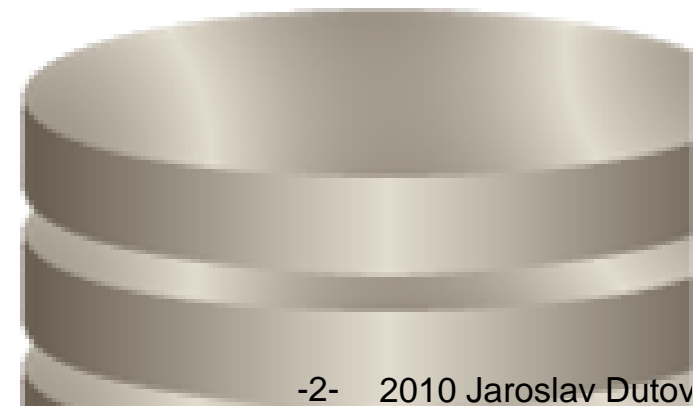
dbTotal.de



# Agenda



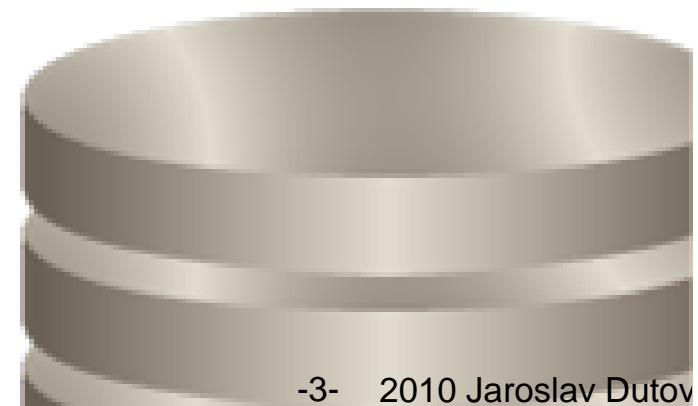
- Überblick
- Architektur
- Neu in 11g
- Upgrade
- Das Leben danach



# Agenda



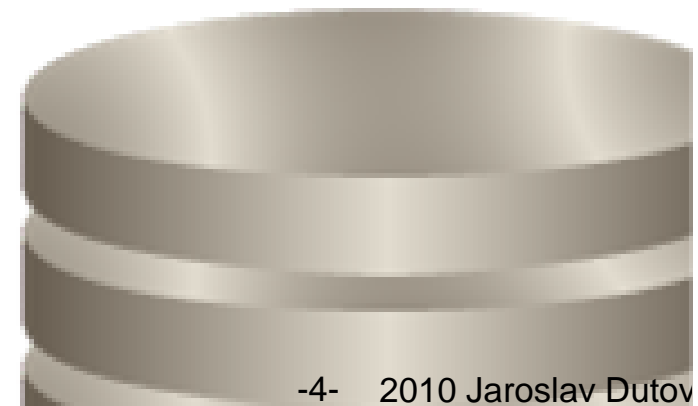
- ∅ Überblick
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# Enterprise Manager Grid Control: Überblick



- System Management Software für die komplette IT Infrastruktur
- Oracle und nicht-Oracle Monitoringsziele
- Packs und Plugins



# Enterprise Manager Grid Control: Packs und Plugins

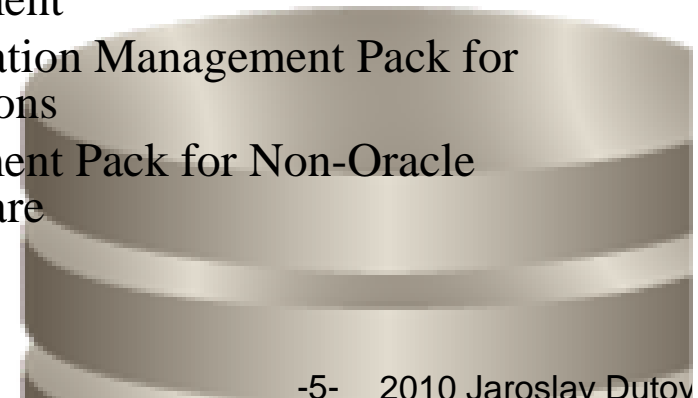


## Datenbank

- Diagnostics Pack
- Tuning Pack
- Change Management Pack
- Configuration Management Pack
- Provisioning and Patch Automation Pack
- Data Masking Pack

## Middleware

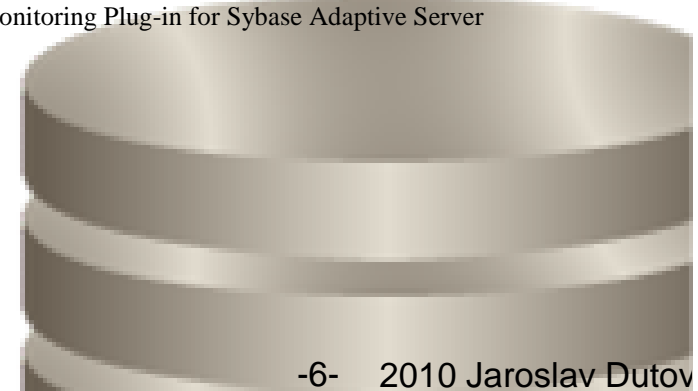
- WebLogic Server Management Pack Enterprise Edition
- SOA Management Pack Enterprise Edition
- Management Pack for WebCenter Suite
- Diagnostics Pack for Oracle Middleware
- Management Pack for Oracle Coherence
- Business Intelligence Management Pack
- Management Pack for Identity Management
- Configuration Management Pack for Applications
- Management Pack for Non-Oracle Middleware



# Enterprise Manager Grid Control: Packs und Plugins



- Standalone Provisioning and Patch Automation Pack
- Deploying Management Plug-Ins for Oracle Enterprise Manager
- Oracle System Monitoring Plug-ins For Hosts
- Oracle System Monitoring Plug-in for Hosts for Operating Systems and Hardware
- Oracle System Monitoring Plug-in for Hosts for Dell Change Automation
- System Monitoring Plug-Ins for Storage
- System Monitoring Plug-Ins for Network
- System Monitoring Plug-Ins for Non-Oracle Middleware
- System Monitoring Plug-Ins for Non-Oracle Databases
- Management Connectors for Remedy
- Management Connector for HP ServiceCenter
- Management Connector for HP Service Manager
- Management Connector for CA Service Desk
- Management Connector for HP OpenView Operations
- Management Connector for IBM Tivoli Enterprise Console
- Management Connector for Microsoft Operations Manager 2005
- Management Connector for Microsoft System Center Operations Manager
- Service Level Management Pack
- Real User Experience Insight
- Real User Experience Insight Accelerator for E-Business Suite
- Real User Experience Insight Accelerator for Siebel
- Real User Experience Insight Accelerator for PeopleSoft
- Application Management Pack for Siebel
- Oracle VM Management Pack
- Linux Management Pack
- Oracle System Monitoring Plug-in for Hosts for Operating Systems and Hardware
- Oracle System Monitoring Plug-in for Hosts for VMware ESX Server
- Oracle System Monitoring Plug-in for Hosts for Dell Change Automation
- Oracle System Monitoring Plug-in for Check Point Firewall
- Oracle System Monitoring Plug-in for Juniper Netscreen Firewall
- Oracle System Monitoring Plug-in for NetApp Filer
- Oracle System Monitoring Plug-in for EMC Symmetrix DMX system
- Oracle System Monitoring Plug-in for EMC CLARiiON system
- Oracle System Monitoring Plug-in for EMC Celerra
- Oracle System Monitoring Plug-in for IBM WebSphere MQ
- Oracle System Monitoring Plug-in for Microsoft Active Directory
- Oracle System Monitoring Plug-in for Microsoft Exchange Server
- Oracle System Monitoring Plug-in for Microsoft .NET Framework
- Oracle System Monitoring Plug-in for Microsoft Commerce Server
- Oracle System Monitoring Plug-in for Microsoft Internet Security and Acceleration Server
- Deploying Management Plug-Ins for Oracle Enterprise Manager
- Oracle System Monitoring Plug-in for Microsoft SQL Server
- Oracle System Monitoring Plug-in for IBM DB2
- Oracle System Monitoring Plug-in for Sybase Adaptive Server Enterprise

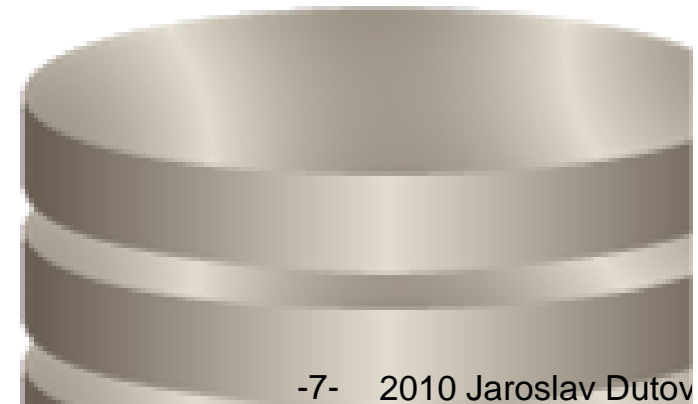


# Enterprise Manager Grid Control: Packs und Plugins



Beim Kunden im Einsatz:

- ca. 90% der Datenbankziele – Diagnostics Pack
- ca. 30% der Datenbankziele - Tuning Pack
- keine anderen Packs oder Plugins lizenziert



# Enterprise Manager Grid Control: Packs und Plugins



**Browse Database Management Offerings**

All **Media Packs** Software License

Rows 15

Type	Product	Price Range	
Software License	<a href="#">Oracle Data Masking Pack</a>	€36.00 - €9,077.00	<input type="button" value="Buy Now"/>
Software License	<a href="#">Oracle Change Management Pack</a>	€11.00 - €2,763.00	<input type="button" value="Buy Now"/>
Software License	<a href="#">Oracle Diagnostics Pack</a>	€16.00 - €3,947.00	<input type="button" value="Buy Now"/>
Software License	<a href="#">Oracle Tuning Pack</a>	€16.00 - €3,947.00	<input type="button" value="Buy Now"/>
Software License	<a href="#">Oracle Configuration Management Pack for Oracle Database</a>	€11.00 - €3,947.00	<input type="button" value="Buy Now"/>
Software License	<a href="#">Oracle Provisioning and Patch Automation Pack for Database</a>	€11.00 - €2,763.00	<input type="button" value="Buy Now"/>
Media Pack	<a href="#">Oracle Enterprise Manager Media Pack</a>	€15.79 - €47.36	<input type="button" value="Buy Now"/>

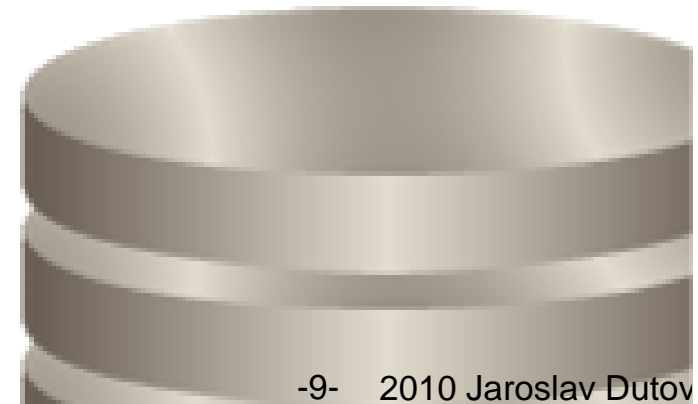
<https://shop.oracle.com>



# Agenda



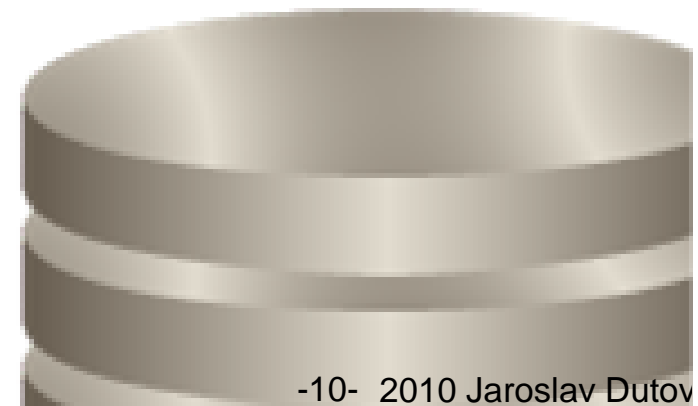
- Überblick
- **Architektur**
- Neu in 11g
- Upgrade
- Das Leben danach



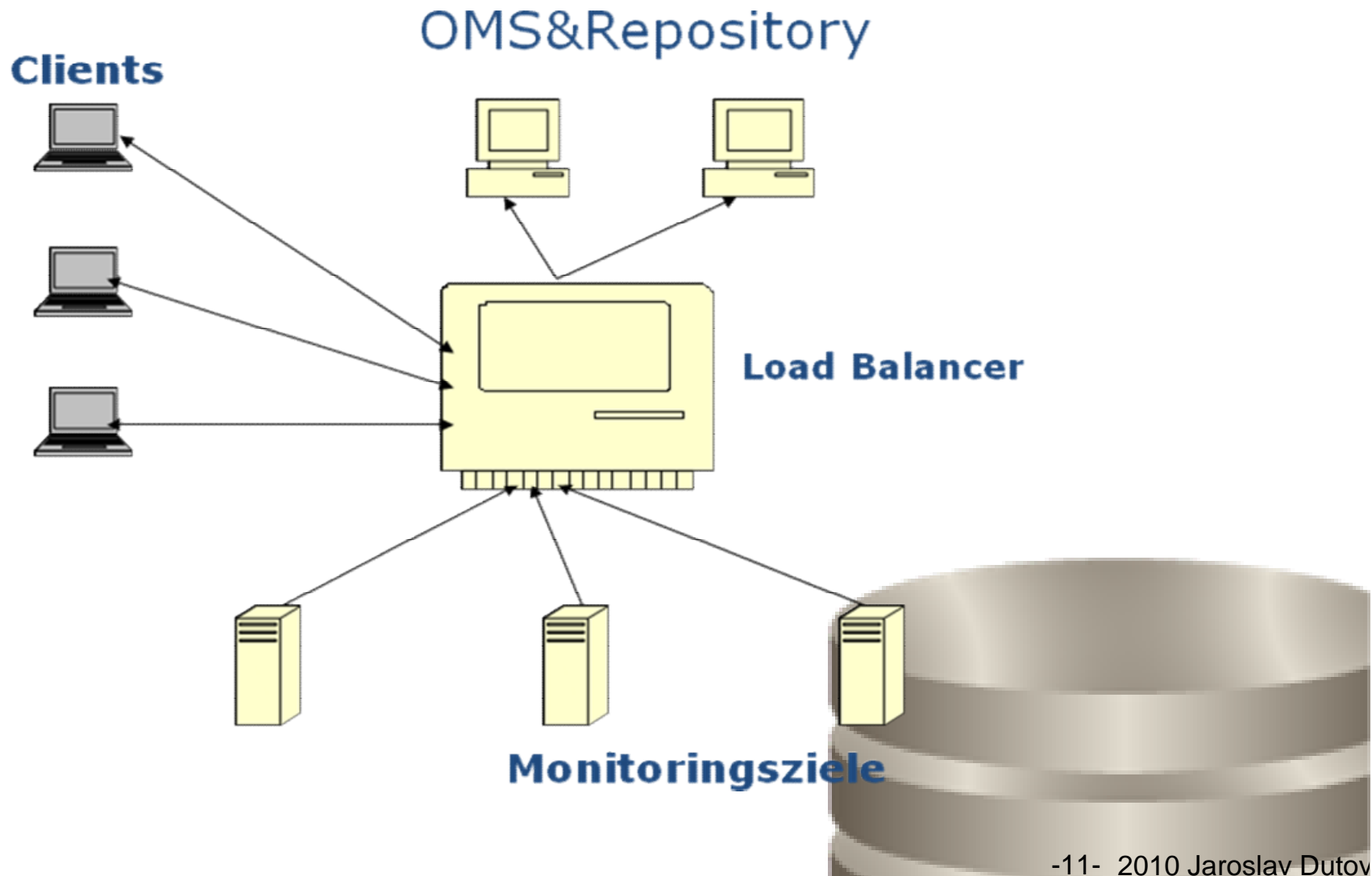
# Enterprise Manager Grid Control: Architektur



- Oracle Management Service (OMS)
- Oracle Management Agent (Management Agent)
- Oracle Management Repository (Management Repository)



# Die verwendete Architektur



# Die verwendete Architektur



- Betriebssystem – Solaris 10, SPARC 64 bit
- OMS – 10.2.0.5, PSU3
- Repository Datenbank – 10.2.0.4
- Load Balancer – Black Box



# Agenda



- Überblick
- Architektur
- **Neu in 11g**
- Upgrade
- Das Leben danach



# Neu in 11g



- Alle Funktionalitäten der 11gR2 Datenbank werden unterstützt
- Application Server - Weblogic Server
- MyOracleSupport Reiter
- und noch mehr...



# Agenda



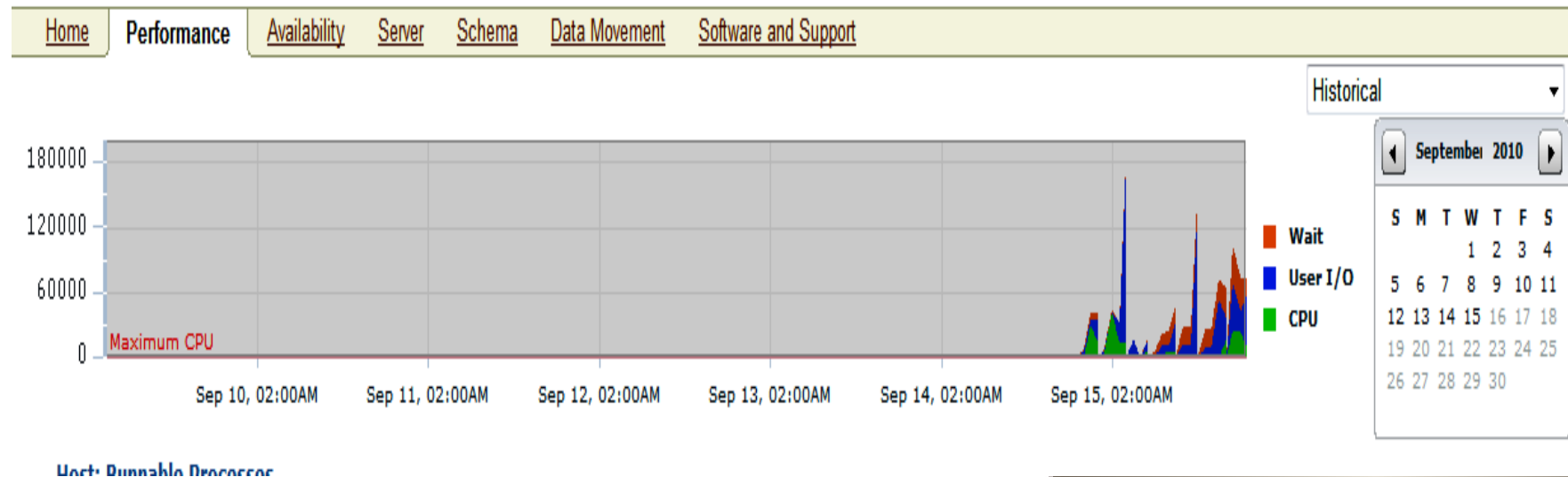
- Überblick
- Architektur
- Neu in 11g
- **Upgrade**
- Das Leben danach



# Die Gründe für den Upgrade



- 11gR2 Datenbanken sollen nach und nach ausgerollt werden
- Bug in der Darstellung der historischen Performancedaten





# Prerequisites



- WebLogic Server 10.3.2
- WebLogic Server Patch WDJ7
- Genügend Platz im Installationsverzeichnis
- 11g Grid Software



# Installation WebLogic Server(silent)



- JDK 64-bit ab Version 1.6.0\_18
- silent.xml vorbereiten
- 10.3.2 WLS auf den beiden Knoten installieren
- Patch WDJ7 über MOS downloaden
- WLS mit dem Patch WDJ7 patchen



# silent.xml



```
<?xml version="1.0" encoding="UTF-8" ?>
<bea-installer>
<input-fields>
<data-value name="BEAHOME"
  value="/opt/oracle/product/middleware" />
<data-value name="WLS_INSTALL_DIR"
  value="/opt/oracle/product/middleware/wlserver_10.3" />
</input-fields>
</bea-installer>
```



# Installation WebLogic Server(silent)



- Wenn die Prerequisites erfüllt sind:

```
java -d64 -jar wls1032_generic.jar -mode=silent -  
silent_xml=/data/silent.xml -log=/data/Inst.log
```

- Patchen

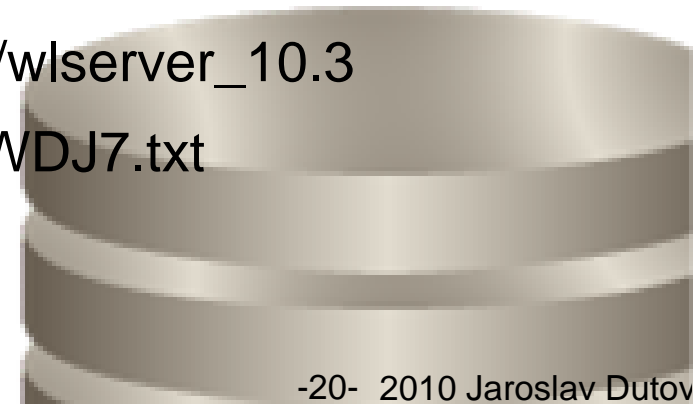
```
cd /opt/oracle/product/middleware/utils/bsu
```

```
./bsu.sh -install
```

```
-patch_download_dir=/data/patch_for_1032
```

```
-prod_dir=/opt/oracle/product/middleware/wlserver_10.3
```

```
-patchlist=WDJ7,XLXA,4D53,NIXN -log=WDJ7.txt
```

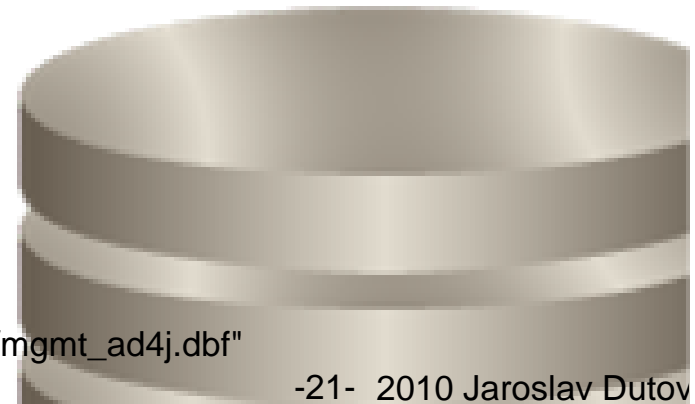


# Grid Control Upgrade(silent)



- Response File upgrade.rsp:

```
RESPONSEFILE_VERSION=2.2.1.0.0
b_upgrade=true
OLD_BASE_DIR="/opt/oracle/product/gc"
SECURITY_UPDATES_VIA_MYORACLESUPPORT=false
DECLINE_SECURITY_UPDATES=true
INSTALL_UPDATES_SELECTION="skip"
ORACLE_MIDDLEWARE_HOME_LOCATION="/opt/oracle/product/middleware"
WLS_ADMIN_SERVER_USERNAME="weblogic"
WLS_ADMIN_SERVER_PASSWORD="Octfest200"
WLS_ADMIN_SERVER_CONFIRM_PASSWORD="Octfest200"
NODE_MANAGER_PASSWORD="Octfest200"
NODE_MANAGER_CONFIRM_PASSWORD="Octfest200"
SYS_PASSWORD="muenchen6"
JVM_DIAGNOSTICS_TABLESPACE_LOCATION="/data/oracle01/mgmt_ad4j.dbf"
```



# Grid Control Upgrade(silent)

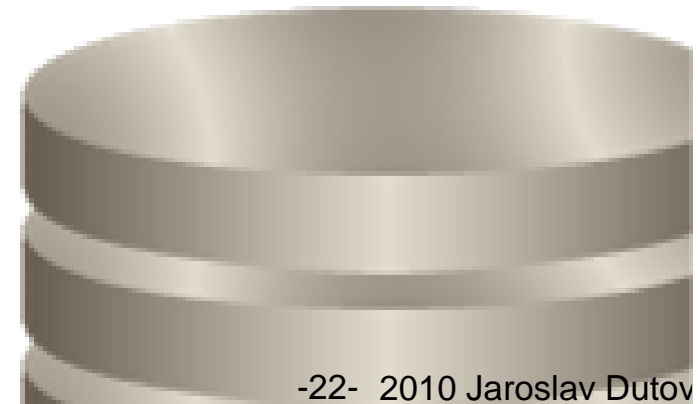


- Response File upgrade.rsp, zweiter Knoten:

-JVM\_DIAGNOSTICS\_TABLESPACE\_LOCATION

+ADMIN\_SERVER\_HOSTNAME

+ADMIN\_SERVER\_PORT



# Grid Control Upgrade(silent)

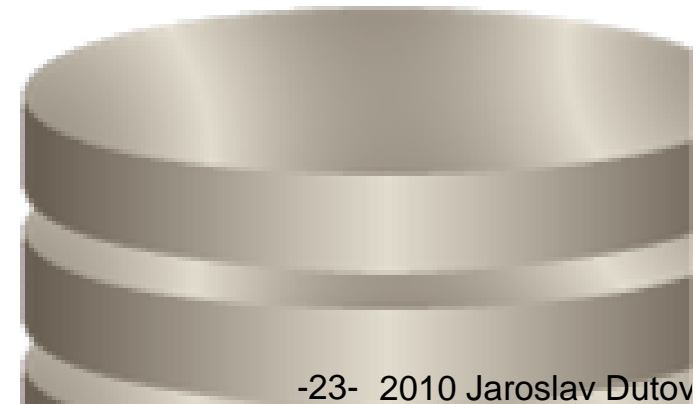


- Den Upgrade durchführen

```
runInstaller -silent -responseFile  
/opt/home/oracle/response/upgrade.rsp
```

- Nach dem Upgrade

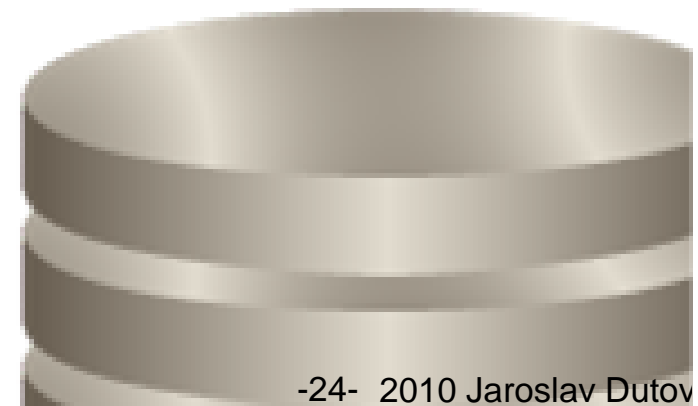
```
$ORACLE_HOME/allroot.sh
```



# Grid Control: Upgrade Agent

- Wird mit dem agentDownload Skript gemacht:

```
agentDownload.linux -u  
-o /opt/oracle/product/agent10g  
-b /opt/oracle/product/agent11g
```

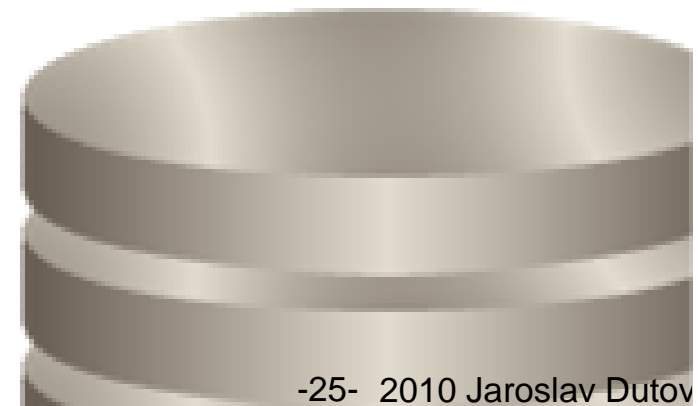




# Probleme beim Upgrade



- der WebLogic Server Patch WDJ7 war relativ umständlich zu beschaffen
- der Prerequisites Check ist beim Repository Datenbank Parameter "compatible" ausgestiegen. Der Wert " 10.2.0.1.0" oder höher wird erwartet. Eingestellt wurde "10.2.0"



# Probleme beim Upgrade



- fälschlicherweise wurde die 32 bit Version des WebLogic Servers installiert. Als Folge – der Upgrade wurde beim " OMS Configuration" Schritt mit folgenden Fehler abgebrochen:

*Error trying to exec*

*/opt/oracle/product/middleware/jdk160\_14/bin/sparcv9/java.*

*Check if file exists and permissions are set correctly.*

*Failed to start a 64-bit JVM process from a 32-bit JVM.*

*Verify all necessary J2SE components have been installed.*

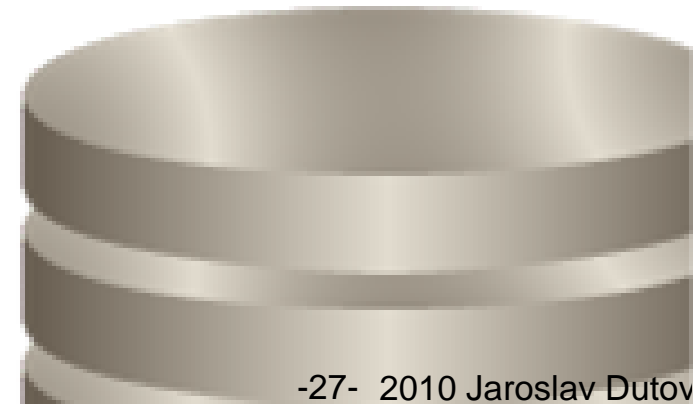
*(Solaris SPARC 64-bit components must be installed after 32-bit components.)*



# Agenda



- Überblick
- Architektur
- Neu in 11g
- Upgrade
- ∅ Das Leben danach



# Das Leben danach



## WebLogic

ORACLE Enterprise Manager  
Grid Control 11g

Home Targets Deployments Alerts Compliance Jobs Reports My Oracle Support

Databases | PROD | Hosts | Middleware | Web Applications | Groups | All Targets

Middleware

Page Refreshed Nov 15, 2010 8:16:02 PM CET Refresh

Search All Go

View Flat List Add Oracle Application Server Go

Remove Configure

Expand All Collapse All

Select	Name	Type	Status	Status Details	Alerts	Policy Violations	Version
<input type="radio"/>	All Middleware						
<input checked="" type="radio"/>	secFarm_GCDomain	Oracle Fusion Middleware Farm	n/a	3 (↑3)	0 0	0 0 0	10.3.2.0
<input type="radio"/>	/secFarm_GCDomain/GCDomain	Oracle WebLogic Domain	n/a	3 (↑3)	0 0	0 0 0	10.3.2.0
<input type="radio"/>	/secFarm_GCDomain/GCDomain/EMGC_ADMINSERVER	Oracle WebLogic Server	↑	↑	0 0	0 0 0	10.3.2.0
<input type="radio"/>	/secFarm_GCDomain/GCDomain/EMGC_OMS1	Oracle WebLogic Server	↑	↑	25 0	0 0 0	10.3.2.0
<input type="radio"/>	/secFarm_GCDomain/GCDomain/EMGC_OMS2	Oracle WebLogic Server	↑	↑	126 0	0 0 0	10.3.2.0
<input type="radio"/>	/secFarm_GCDomain/GCDomain/EMGC_ADMINSERVER/mds-sysman_mds	Metadata Repository	n/a		0 0	0 0 0	10.3.2.0

TIP For an explanation of the icons and symbols used in this page, see the [Icon Key](#).

Related Links

[Application Dependency and Performance Request Monitoring](#) [Customize Table Columns SOA Home](#) [JVM Diagnostics](#)

# Das Leben danach



## WebLogic

ORACLE Enterprise Manager  
Grid Control 11g

Home Targets Deployments Alerts Compliance Jobs

Databases PROD Hosts Middleware Web Applications Groups All Targets

secFarm\_GCDomain

Application Deployments  
WebLogic Domain  
Metadata Repositories

secFarm\_GCDomain

Farm

Summary

To configure and manage this WebLogic Domain, use [Fusion Middleware Control](#) or the [WebLogic Server Administration Console](#).

General

WebLogic Domain Refreshed Sep 22, 2010 10:12:01 AM

Deployments

80% Up (4)  
20% Down (1)

Name	Status	Target
Application Deployments		
emgc	Up	EMGC_OMS1
emgc	Up	EMGC_OMS2
FMW Welcome Page Application(11.1.0.0.0)	Down	EMGC_ADMIN...
OCMRepeater	Up	EMGC_OMS1
OCMRepeater	Up	EMGC_OMS2

Fusion Middleware

100%

Name

- WebLogic Domain
  - GCDomain
    - EMGC\_ADMINSERVER
    - EMGC\_OMS1
    - EMGC\_OMS2
  - Metadata Repositories
    - mds-sysman\_mds

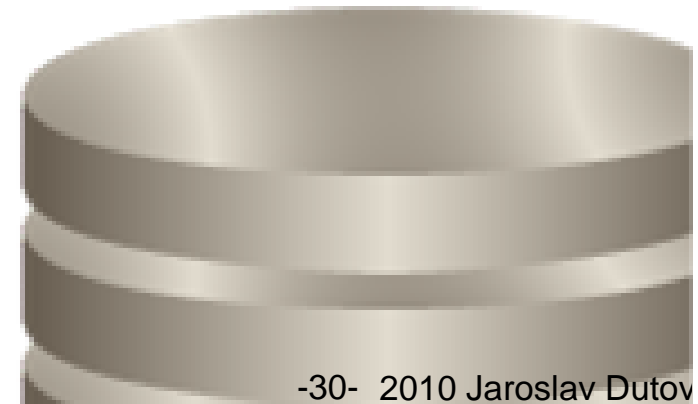
# Das Leben danach



WebLogic

- wegen Performancedegradation muss regelmäßig neu gestartet werden

```
emctl stop oms -all [-force]
```



# Das Leben danach

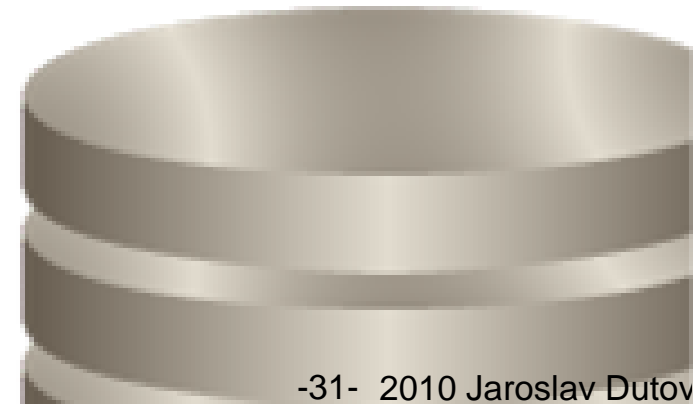


- \$MIDDLEWARE\_HOME

```
infrav02:/opt/oracle/product/middleware
```

```
? du -sh *
```

```
1.5G Oracle_WT
1.5G agent11g
  1K domain-registry.xml
  3K logs
127M modules
  1K ocm.rsp
8.1G oms11g
912M oracle_common
 31K patch_wls1032
 56K registry.dat
  2K registry.xml
 36M utils
525M wlserver_10.3
```



# Das Leben danach



- Die Logfiles

```
infrav02:/opt/oracle/product/gc_inst
```

```
? du -sh *
```

```
9.2G WebTierIH1
```

```
33M em
```

```
6.4G user_projects
```

```
/opt/oracle/product/gc_inst/user_projects/domains/EMGC_DOMAIN/servers/EMGC_OMS2/logs  
access.log*
```

```
infrav02:/opt/oracle/product/gc_inst/WebTierIH1/diagnostics/logs
```

```
? du -sh *
```

```
9.2G OHS
```

```
16K OPMN
```

```
infrav02:/opt/oracle/product/gc_inst/WebTierIH1/diagnostics/logs/OHS/ohs1
```

```
? ll|grep G
```

```
-rw-r----- 1 oracle oinstall 4.2G Nov 15 19:54 mod_wl_ohs.log
```





# Das Leben danach



## MyOracle Support

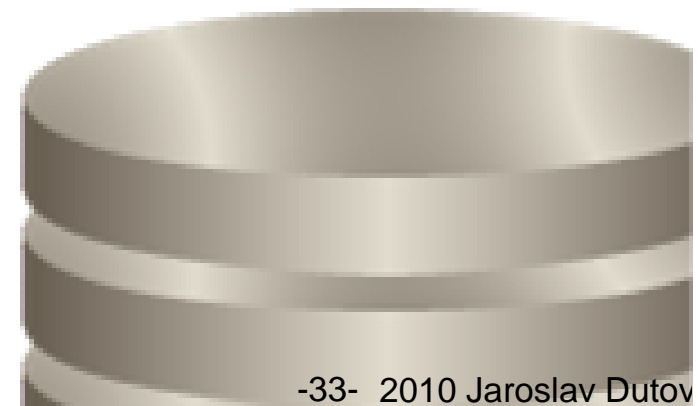
ORACLE Enterprise Manager   
Grid Control 11g

Home Targets Deployments Alerts Compliance Jobs Reports **My Oracle Support** [Setup](#) [Preferences](#) [Help](#) [Logout](#)

### My Oracle Support

**You cannot access My Oracle Support while in offline mode.**

However, you can [patch targets](#) using Enterprise Manager while **My Oracle Support** is offline.  
To go online, configure the [connection setting](#).

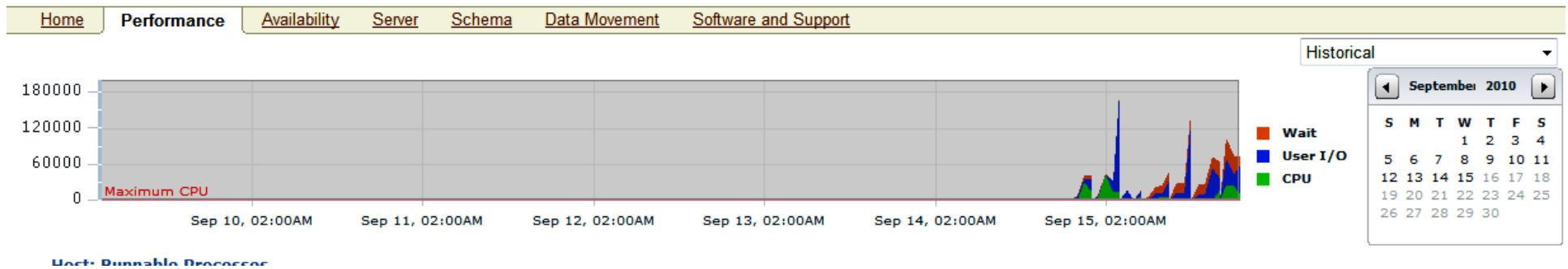


# Das Leben danach

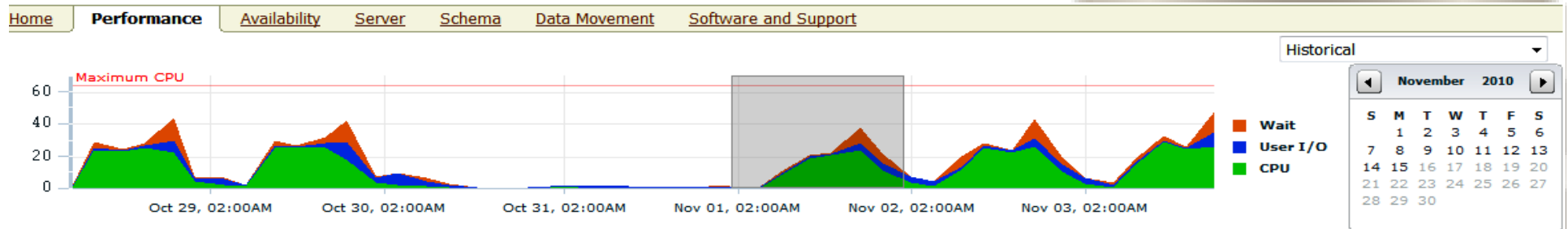


## Die historischen Performancedaten

### Vorher

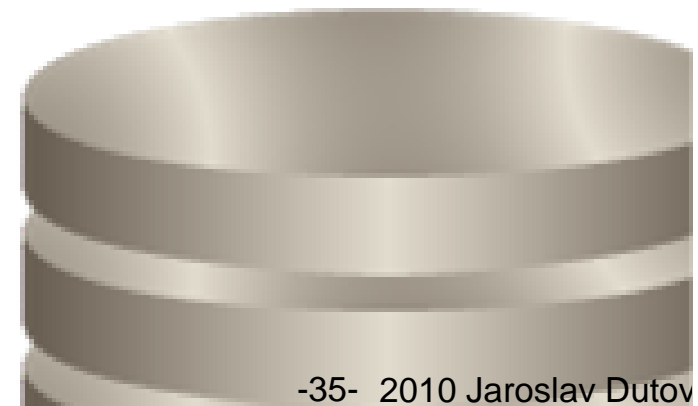


### Nachher





# Ihre Fragen bitte!



# References



- Oracle® Enterprise Manager Grid Control Advanced Installation and Configuration Guide 11g Release 1
- Oracle® Fusion Middleware Installation Guide for Oracle WebLogic Server 11g Release 1
- MOS Note 1063762.1 - How to Install Web Logic Server 10.3.2 for Installing 11g Grid Control
- MOS Note 1072763.1 - How to apply recommended WLS patches on WLS home for 11g Grid Control Install/Upgrade
- MOS Note 1073166.1 - Checklist for EM 10g Grid Control 10.2.0.4/10.2.0.5 to 11.1.0.1.0 OMS and Repository Upgrades
- MOS Note 1073184.1 - FAQ: Grid Control 11g Install / Upgrade Frequently Asked Questions
- MOS Note 1073647.1 - How to check/set the database parameters housing the GC repository before GC Install/upgrade
- Oracle Enterprise Manager Grid Control 11g: Wartung und Pflege von Ralf Durben  
[http://www.oracle.com/global/de/community/dbadmin/tipps/GC11\\_1\\_wartung/index.html](http://www.oracle.com/global/de/community/dbadmin/tipps/GC11_1_wartung/index.html)
- Differences between EM10g and EM11g  
[http://blogs.oracle.com/oem/2010/09/differences\\_between\\_em10g\\_and.html](http://blogs.oracle.com/oem/2010/09/differences_between_em10g_and.html)

