



Oracle10g og Linux

Ingemar Jansson Haverstad

ingemar@oraklet.no

www.oraklet.no/foredrag

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ORACLE
Certified Professional



Agenda

- Linux
 - Dialekter
 - Administrasjon
- Oracle10g
 - Installasjon
 - Oppgradering
 - Verktøy





Navn	Størrelse	Type	Dato endret
Course	8 oppføringer	mappe	2005-03-06 21:56:25
Desktop	0 oppføringer	mappe	2005-05-29 20:13:14
Infopag	6 oppføringer	mappe	2005-02-16 20:27:50
tmp	0 oppføringer	mappe	2005-06-06 16:57:43
vmware	0 oppføringer	mappe	2005-06-06 17:47:44
Linux.sxi	6,8 KB	OpenOffice.org Impress-presentasjon	2005-06-20 21:22:20

```
ingemar@tuppen:/felles/UGN
Fil Rediger Vis Terminal Fener Hjelp
[ingemar@tuppen UGN]$ ls -ltr
totalt 3149
-rw-r--r-- 1 eirik maren 27541 okt 22 2003 Optimizer9i.sxi
-rw-r--r-- 1 eirik maren 201959 okt 22 2003 Optimizer9i.pdf
-rwxr--r-- 1 ingemar ingemar 14085 des 18 2003 2004 CALL FOR PAPERS.sxw
-rwxr--r-- 1 ingemar ingemar 120710 des 18 2003 2004 CALL FOR PAPERS.pdf
-rwxr--r-- 1 ingemar ingemar 418002 mar 19 2004 OUGN_Jan_Bjelde.pdf
-rwxr--r-- 1 ingemar ingemar 147968 mar 23 2004 Oracle10g_RAC.ppt
-rwxr--r-- 1 ingemar ingemar 40580 mar 23 2004 Oracle10g_RAC.sxi
-rwxr--r-- 1 ingemar ingemar 279576 mar 23 2004 Oracle10g_RAC.pdf
-rw-rw-r-- 1 ingemar ingemar 55545 mai 2 2004 RAC.sxi
-rw-rw-r-- 1 ingemar ingemar 169378 mai 2 2004 RAC.pdf
-rw-rw-r-- 1 ingemar ingemar 54557 mai 5 2004 RAC_Troms.sxi
drwxr-xr-x 2 ingemar ingemar 416 jun 2 2004 TPC
-rwxr--r-- 1 ingemar ingemar 364133 jun 14 2004 RAC-Troms.pdf
-rwxr--r-- 1 ingemar ingemar 14276 feb 8 22:21 CALL FOR PAPERS 2005.sxw
-rwxr--r-- 1 ingemar ingemar 129980 feb 8 22:23 CALL FOR PAPERS 2005.pdf
-rwxr--r-- 1 ingemar ingemar 176318 apr 27 08:15 OUGN-2-mai.pdf
-rwxr--r-- 1 ingemar ingemar 52299 mai 1 16:07 OUGN-2-mai.sxi
-rwxr--r-- 1 ingemar ingemar 864696 mai 25 00:09 OUGN-Ingemar.pdf
-rwxr--r-- 1 ingemar ingemar 52935 mai 25 00:13 OUGN.sxi
[ingemar@tuppen UGN]$ soffice OUGN.sxi
bash: soffice: command not found
[ingemar@tuppen UGN]$
```

```
ingemar@tuppen:~/tmp
Fil Rediger Vis Terminal Fener Hjelp
[ingemar@tuppen tmp]$ xwd > Linux.xwd
```



Linux dialekter

- SUSE/Novell
 - SLES 8 og 9
- Red Hat  redhat.
 - Red Hat AS/ES/EL
 - 2.1, 3 og 4
- SUSE 9.3
- Red Hat 
 - Fedora Core 4
- Debian 
- Mandriva
- Linux From Scratch – LFS
- Knoppix og Ubuntu
- United Linux 1.0
- Asian
 - Asianux 1 og 2
 - Red Flag DC China
 - Miracle Linux Japan

Linux distribusjon

- 2.6 kjernen er den mest aktuelle
- Linux er influert av UNIX
 - 4.3 BSD
 - System V
 - og Xenix
- Hver dialekt har laget egne system verktøy

Hvilken plattform?

- *Oracle9i*

x86: 9.2.0.4

Itanium: 9.2.0.2

AMD64: 9.2.0.4

- *Patcher*

x86: 9.2.0.6

Itanium: 9.2.0.5

AMD64: 9.2.0.6

- *Oracle10g*

x86: 10.1.0.3

Itanium: 10.1.0.3

AMD64: 10.1.0.3

- *Patcher*

x86: 10.1.0.4

Itanium: -

AMD64: -

Maskinkrav

Linux

- CPU

Tekst: Pentium 200 Mhz

Grafisk: Pentium II 400 Mhz

- Minne

Tekst: 64 MB

Grafisk: 256 MB

- Disk

– Server 1,1 GB

Oracle

- CPU

- Minne

Grafisk: 512 MB

- Disk

– EE + DB 3,7 GB

Ikke kjøp den nyeste modellen!

Desktop og server

Desktop

- Ha det gøy
- Teste nye versjoner
- Eksperimentell hardware
- Fikse på egen hånd
- Dualboot Linux/Windows

Server

- Høy oppetid
- Etablerte versjoner
- Utprøvd hardware
- Supportavtale

Forberedelser: Linux dialekt

```
[root@tuppen ~]$ cat /etc/issue  
Fedora Core release 3 (Heidelberg)  
Kernel \r on an \m
```

```
[root@tuppen ~]$ uname -a  
Linux tuppen.oraklet.no 2.6.11-1.27_FC3 ... i686 i386
```

```
[root@tuppen ~]$ cat /etc/fedora-release  
Fedora Core release 3 (Heidelberg)
```

```
[root@tuppen ~]# cat /etc/redhat-release  
redhat-3
```

Forberedelser: Filsystem

```
[root@tuppen ~]# mkfs.ext3 /dev/hda8 -L /oracle
mke2fs 1.36 (05-Feb-2005)
Filesystem label=/oracle
OS type: Linux
Block size=4096 (log=2)
Fragment size=4096 (log=2)
1040384 inodes, 2078362 blocks
103918 blocks (5.00%) reserved for the super user
First data block=0
Maximum filesystem blocks=2130706432
...
Writing inode tables: done
Creating journal (8192 blocks): done
Writing superblocks and filesystem accounting information: done
```

```
[root@tuppen ~]# vi /etc/fstab
LABEL=/oracle      /oracle            ext3               defaults           1 2
```

Forberedelser: Oracle bruker

```
[root@tuppen ~]# groupadd oinstall  
[root@tuppen ~]# groupadd dba  
[root@tuppen ~]# groupadd oper
```

```
[root@tuppen ~]# useradd -g oinstall -G dba,oper oracle
```

```
[root@tuppen ~]# passwd oracle  
Changing password for user oracle.  
New UNIX password: #####  
Retype new UNIX password: #####  
passwd: all authentication tokens updated successfully.
```

```
[root@tuppen ~]# chown oracle:oinstall /oracle
```

Forberedelser: Oracle profil

```
[oracle@tuppen ~]$ vi .bash_profile
...
export ORACLE_BASE=/oracle
export ORACLE_HOME=${ORACLE_BASE}/product/10.1.0/db

export ORACLE_SID=TEST

export NLS_LANG=NORWEGIAN_NORWAY.WE8ISO8859P1

PATH=${ORACLE_HOME}/bin:$PATH
export CDPATH=.:${ORACLE_HOME}:${ORACLE_BASE}/admin/${ORACLE_SID}

export LANG=en_US

PS1=$(hostname)':${ORACLE_SID}> '
...
```

```
[oracle@tuppen ~]$ . .bash_profile
tuppen:TEST>
```



Oracle Universal Installer

```
[ingemar@tuppen ~]$ xhost +  
access control disabled, clients can connect from any host
```

```
[oracle@tuppen ~]$ export DISPLAY=localhost:0  
[oracle@tuppen ~]$ xclock
```

```
[oracle@tuppen ~]$ cd /Download/Oracle10g/Database/Disk1
```

```
[oracle@tuppen Disk1]$ ./runInstaller  
Starting Oracle Universal Installer...
```

```
Checking installer requirements...
```

```
Checking operating system version:  
  must be redhat-2.1, UnitedLinux-1.0 or redhat-3  
                                           Passed
```

```
All installer requirements met.
```

```
Preparing to launch Oracle Universal Installer from  
/tmp/OraInstall2005-06-19_10-05-53PM. Please wait ...
```

10g

Welcome

The Oracle Universal Installer guides you through the installation and configuration of your Oracle products.

Click "Installed Products..." to see all installed products.

Deinstall Products...

About Oracle Universal Installer...

Help

Installed Products...

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Specify File Locations

Source

Enter the full path of the file representing the product(s) you want to install:

Path:

Destination

Enter or select a name for the installation and the full path where you want to install the product.

Name:

Path:

10g

Select Installation Type

Oracle Database 10g 10.1.0.2.0

What type of installation do you want?

Enterprise Edition (871MB)

Oracle Database 10g Enterprise Edition, the first database designed for the grid, is a self-managing database that has the scalability, performance, high availability and security features required to run the most demanding, mission critical applications.

Standard Edition (833MB)

Oracle Database 10g Standard Edition is ideal for workgroups, departments and small-to-medium sized businesses looking for a lower-cost offering.

Custom

Enables you to choose individual components to install.

Product Languages...

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The installer will now verify that the system meets all the minimum requirements for installing and configuring the chosen product. You are required to manually verify and confirm the items that are flagged as warnings or manual checks. For details on performing those checks, click on the item and see the details at the bottom.

Check	Type	Status
Checking operating system certification	Automatic	<input checked="" type="checkbox"/> Succeeded
Checking kernel parameters	Automatic	<input checked="" type="checkbox"/> Succeeded
Checking recommended operating system packages	Automatic	<input type="checkbox"/> Warning
Checking recommended glibc version	Automatic	<input checked="" type="checkbox"/> Succeeded
Validating ORACLE_BASE location (if set)	Automatic	<input checked="" type="checkbox"/> Succeeded

[Retry](#) [Stop](#)

1 requirements to be verified.

```
Checking recommended operating system packages
Checking for make-3.79; found make-3.80-5. Passed
Checking for binutils-2.11.90.0.8-12; found binutils-2.15.92.0.2-5. Passed
Checking for gcc-2.96; found Not found. Failed <<<<
Checking for openmotif-2.1.30-11; found Not found. Failed <<<<
```

[Help](#) [Installed Products...](#) [Back](#) [Next](#) [Install](#) [Cancel](#)

Linux pakker

```
[root@tuppen root]# cd /usr/bin
[root@tuppen bin]# mv gcc gcc343
[root@tuppen bin]# ln -s gcc296 gcc
[root@tuppen bin]# gcc -v
Reading specs from /usr/lib/gcc-lib/i386-redhat-
  linux7/2.96/specs
gcc version 2.96 20000731 (Red Hat Linux 7.3 2.96-128)
```

```
[root@tuppen bin]# rpm -qa | grep -i openmotif
openmotif-2.2.3-6.FC3.1
```

- **Forskjellige dialekter, ulike forutsetninger...**

Kjerne parametere

```
[root@tuppen /]# cd /etc/  
[root@tuppen etc]# cp sysctl.conf sysctl.conf-19062005
```

```
[root@tuppen etc]# vi sysctl.conf  
# Oracle 10g parameters  
# Shared memory  
kernel.shmall = 2097152  
kernel.shmmax = 2147483648  
kernel.shmmni = 4096  
  
# semaphores: semmsl, semmns, semopm, semmni  
kernel.sem = 256      32000    100      142
```

```
[root@tuppen etc]# sysctl -p  
kernel.shmall = 2097152  
kernel.shmmax = 2147483648  
kernel.shmmni = 4096  
kernel.sem = 256      32000    100      142
```

Available Product Components

Oracle Database 10g

The following are components that you can install as part of Oracle Database 10g. Which of these components do you want to install?

Components	Install Status
<input checked="" type="checkbox"/> Oracle Database 10g 10.1.0.2.0	New Install
<input checked="" type="checkbox"/> Oracle Database 10g 10.1.0.2.0	New Install
<input checked="" type="checkbox"/> Enterprise Edition Options 10.1.0.2.0	New Install
<input checked="" type="checkbox"/> Oracle Advanced Security 10.1.0.2.0	New Install
<input checked="" type="checkbox"/> Oracle Partitioning 10.1.0.2.0	New Install
<input type="checkbox"/> Oracle Spatial 10.1.0.2.0	Not Installed
<input type="checkbox"/> Oracle Label Security 10.1.0.2.0	Not Installed
<input type="checkbox"/> Oracle OLAP 10.1.0.2.0	Not Installed
<input type="checkbox"/> Data Mining Scoring Engine 10.1.0.2.0	Not Installed
<input checked="" type="checkbox"/> Oracle Net Services 10.1.0.2.0	New Install
<input checked="" type="checkbox"/> Oracle Net Listener 10.1.0.2.0	New Install

Show all components, including required dependencies.

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Privileged Operating System Groups

`SYSDBA` and `SYSOPER` privileges are required to create a database using operating system (OS) authentication. These are granted through membership in the UNIX groups `OSDBA` and `OSOPER`, respectively, and the `dba` group is usually used for this purpose. If you would like another group used, enter the names of the UNIX groups of which you are a member, to be used for `OSDBA` and `OSOPER`.

Database Administrator (OSDBA) Group

Database Operator (OSOPER) Group

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Create Database

If you want to create a new database, Oracle recommends using the Oracle Database Configuration Assistant. This tool provides a simple, graphical method for creating a database, and can be automatically launched at the end of installation. Do you want to create a new database by using this tool?

Yes

No

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Summary

Oracle Database 10g 10.1.0.2.0

Global Settings

- Source: /Download/Oracle/Linux/Oracle10g/Database/Disk1/stage/products.xml
- Oracle Home: /oracle/product/10.1.0/db (OraDb10g)
- Installation Type: Custom

Product Languages

- Norwegian
- English

Space Requirements

- /oracle/ Required 830MB : Available 7.35 GB
- / Required 128MB (only as temporary space) : Available 280MB

New Installations (146 products)

- Advanced Queueing (AQ) API 10.1.0.2.0
- Advanced Replication 10.1.0.2.0
- Agent Required Support Files 10.1.0.2.0

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Install

- ✓ Copy successful
- ✓ **Linking 'Oracle Net Required Support Files 10.1.0.2.0 '**

Setup pending...

Configuration pending...

Linking ntcontab

100%

Stop installation...

You can find a log of this install session at:

`/oracle/orainventory/logs/installActions2005-06-19_10-05-53PM.log`

Thank you for choosing
Oracle



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Installed Products...

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Superbruker - root

```
[root@tuppen oracle]# /oracle/product/10.1.0/db/root.sh
```

```
Running Oracle10 root.sh script...
```

```
The following environment variables are set as:
```

```
ORACLE_OWNER= oracle
```

```
ORACLE_HOME= /oracle/product/10.1.0/db
```

```
Creating /etc/oratab file...
```

```
Adding entry to /etc/oratab file...
```

```
/etc/oracle does not exist. Creating it now.
```

```
Successfully accumulated necessary OCR keys.
```

```
Creating OCR keys for user 'root', privgrp 'root'..
```

```
Oracle Cluster Registry for cluster has been initialized
```

```
Adding to inittab
```

```
Checking the status of Oracle init process...
```

```
Expecting the CRS daemons to be up within 600 seconds.
```

```
CSS is active on these nodes.
```

```
tuppen
```

```
CSS is active on all nodes.
```

```
Oracle CSS service is installed and running under init(1M)
```

```
[root@tuppen oracle]# tail -1 /etc/inittab
```

```
h1:35:respawn:/etc/init.d/init.cssd run >/dev/null 2>&1
```



A configuration script needs to be run as root before installation can proceed. Leaving this window open, open another window and run '/oracle/product/10.1.0/db/root.sh' as root, then return to this window and click OK to continue.

OK

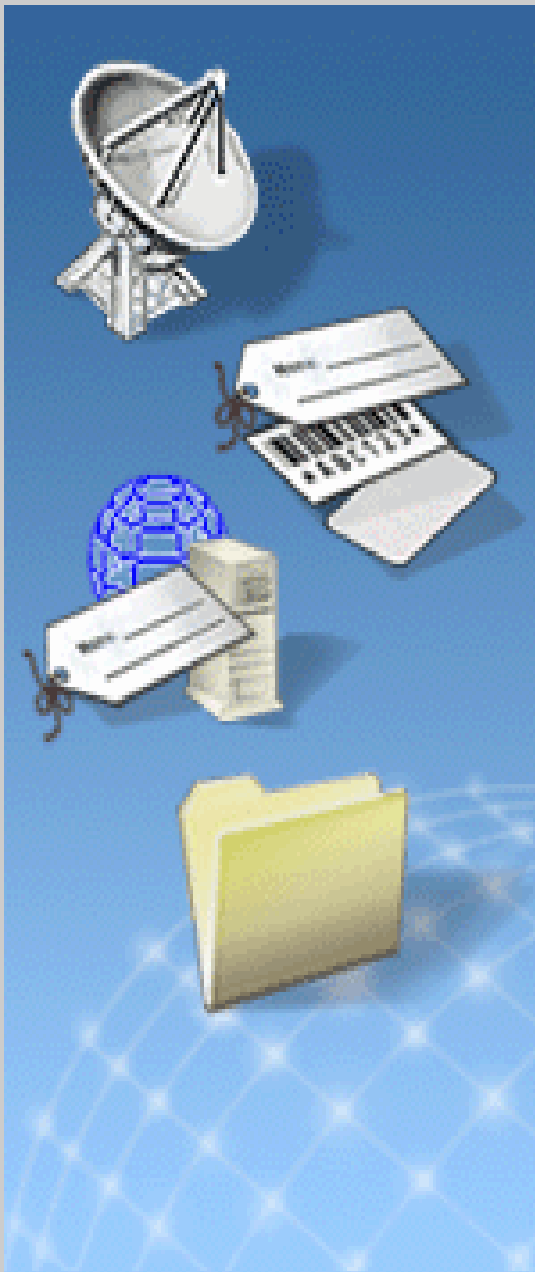
Configuration Assistants

The following configuration assistants will configure and start the components you selected earlier.

Tool Name	Status	Type
<input type="checkbox"/> iSQL*Plus Configuration Assistant	In progress...	Optional
<input checked="" type="checkbox"/> Oracle Net Configuration Assistant	Pending...	Optional

Details (see full log at /oracle/orainventory/logs/installActions2005-06-19_10-05-53PM.log):

```
=====
Output generated from configuration assistant "iSQL*Plus Configuration Assistant":
iSQL*Plus 10.1.0.2.0
Copyright (c) 2004 Oracle. All rights reserved.
Starting iSQL*Plus ...
```



Welcome to the Oracle Net Configuration Assistant.
This tool will take you through the common configuration steps,
listed below.

Listener configuration

Naming Methods configuration

Or, you can choose to have the Oracle Net Configuration Assistant complete a typical configuration for you. Click Help for more information.

Perform typical configuration.

Avbryt

Hjelp

◀ Tilbake

Neste ▶

End of Installation

The installation of Oracle Database 10g was successful.

Please remember...

The following J2EE Applications have been deployed and are accessible at the URLs listed below.

Ultra Search URL:

<http://tuppen.oraklet.no:5620/ultrasearch>

Ultra Search Administration Tool URL:

<http://tuppen.oraklet.no:5620/ultrasearch/admin>

iSQL*Plus URL:

<http://tuppen.oraklet.no:5560/isqlplus>

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Oppgradering til 10.1.0.4

```
[root@tuppen Disk1]# /etc/init.d/init.cssd stop
```

```
Shutting down CRS daemon.
```

```
Shutting down EVM daemon.
```

```
Shutting down CSS daemon.
```

```
Shutdown request successfully issued.
```

```
[root@tuppen Disk1]$ df -h /oracle
```

Filesystem	Size	Used	Avail	Use%	Mounted on
/dev/hda8	7,9G	1,2G	6,3G	16%	/oracle

```
[oracle@tuppen Disk1]$ ./runInstaller
```

```
Starting Oracle Universal Installer...
```

```
Checking installer requirements...
```

```
Checking operating system version: must be redhat-2.1,  
redhat-3, redhat-4, SuSE-8, SuSE-9 or UnitedLinux-1.0
```

```
Passed
```

```
All installer requirements met.
```

```
Oracle Universal Installer, Version 10.1.0.4.0 Production  
Copyright (C) 1999, 2005, Oracle. All rights reserved.
```

Summary

Oracle Database 10g Patch Set 2 10.1.0.4.0

Global Settings

- Source: /Download/Oracle/Linux/Oracle10g/10.1.0.4-Patch/Disk1/stage/products.xml
- Oracle Home: /oracle/product/10.1.0/db (OraDb10g)

Product Languages

- English
- Norwegian

Space Requirements

- /oracle/ Required 692MB : Available 6.22 GB
- / Required 54MB (only as temporary space) : Available 284MB

Upgrades (4 products)

New Installations (110 products)

- Advanced Queueing (AQ) API Patch 10.1.0.4.0
- Advanced Replication Patch 10.1.0.4.0
- Agent Required Support Files Patch 10.1.0.4.0

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End of Installation

The installation of Oracle Database 10g Patch Set 2 was successful.

[Help](#)

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[Exit](#)

Oracle verktøy

- `dbca` Database Configuration Assistant
- `emca` Enterprise Manager Configuration Assistant
- `netca` Network Configuration Assistant
- `netmgr` Network Manager
- `oidca` OID Configuration Assistant
- `oidadmin` OID Manager
- `oemapp` Enterprise Manager
- `esm` Enterprise Security Manager

Linux programmer

Server

- Samba
- Postfix
- Apache
- VNCserver

- IPtables
- nessus
- Nmap

- rlwrap

Klient

- Thunderbird
- Firefox
- OpenOffice
- VNCviewer
- Gimp
- Eclipse
- OpenSSH
- OpenSSL

- (putty)

Oracle brannmur - iptables

- Åpne port 1521 mot server med IP adresse 202.54.1.20
 - Port 1521 inn
 - Ukjent port ut, etablert

```
[root@tuppen /root]# grep 1521 /etc/sysconfig/iptables
-A INPUT -p tcp \
    -s 0/0 \
    --sport 1024:65535 \
    -d 202.54.1.20 \
    --dport 1521 \
    -m state --state NEW,ESTABLISHED -j ACCEPT

-A OUTPUT -p tcp \
    -s 202.54.1.50 \
    --sport 1521 \
    -d 0/0 \
    --dport 1024:65535 \
    -m state --state ESTABLISHED -j ACCEPT
```