

# General: How do I upgrade Bright from SLES11sp2 to SLES11sp3?

*How do I upgrade Bright from SLES11sp2 to SLES11sp3?*

With the following recipe:

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## Introduction

Bright Cluster Manager versions 6.0 and 6.1 support SLES11sp3. They also both support an upgrade from SLES11sp2 to SLES11sp3.

Prerequisites:

- The head node must be able to access the Bright RPM repositories
- The head node must be able to access the SuSE RPM repositories

## Upgrading a software image from SLES11sp2 to SLES11sp3

To upgrade a software image it is advised to clone a SLES11sp2 software image to, for example a "draft" software image, say sles11sp3-image. Then do the upgrade on the 'sles11sp3-image' software image. For example if 'default-image' is a SLES11sp2 software image:

```
# cmsg
% softwareimage
% clone default-image sles11sp3-image
% commit
```

Wait for the cloning process to finish.

Then make sure the Bright Cluster Manager packages are updated to the latest version/release, as follows:

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Check if the Bright repositories are enabled, then refresh the repository info, and update the packages:

```
# zypper -R /cm/images/sles11sp3-image lr

# | Alias | Name | Enabled
# | Refresh
-----+-----+-----+-----
-+-----
1 | Cluster_Manager_Base | Cluster Manager 6.1 - Base | Yes
# | No
2 | Cluster_Manager_Updates | Cluster Manager 6.1 - Updates | Yes
# | No
...
# zypper -R /cm/images/sles11sp3-image ref

# zypper -R /cm/images/sles11sp3-image up
```

To upgrade the software image we can use the zypper command in a chroot environment, because it is the software image that is being upgraded. Thus, we end up using the following commands during the upgrade:

(Error messages and warnings about failing to generate the initrd, not finding the root device can be ignored)

```
# export PBL_SKIP_BOOT_TEST=1
# chroot /cm/images/sles11sp3-image suse_register -d 2 -n -a email=<email address> -a regcode-sles=<key> --restore-repos
# zypper -R /cm/images/sles11sp3-image ref -s
# zypper -R /cm/images/sles11sp3-image update -t patch
# zypper -R /cm/images/sles11sp3-image update -t patch
# zypper -R /cm/images/sles11sp3-image se -t product | grep -h -- "-migration" | cut -d\| -f2
SUSE_SLES-SP3-migration
sle-sdk-SP3-migration
# zypper -R /cm/images/sles11sp3-image in -t product sle-sdk-SP3-migration SUSE_SLES-SP3-migration
# chroot /cm/images/sles11sp3-image suse_register -d 2 -L /root/.suse_register.log
```

To check if the SP3 Pool and Updates repositories are enabled:

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```
# zypper -R /cm/images/sles11sp3-image lr
# zypper -R /cm/images/sles11sp3-image dup --from SLE11-SDK-SP3-Pool -
-from SLE11-SDK-SP3-Updates --from SLES11-SP3-Pool --from SLES11-SP3-U
pdates
# zypper -R /cm/images/sles11sp3-image update -t patch
# chroot /cm/images/sles11sp3-image suse_register -d 2 -L /root/.suse_
register.log
```

Install the libstdc++ 4.7 devel packages:

```
# zypper -R /cm/images/sles11sp3-image in libstdc++47-devel libstdc++4
7-devel-32bit
```

Generate an ECDSA ssh host key:

```
# chroot /cm/images/sles11sp3-image ssh-keygen -t ecdsa -f /etc/ssh/ss
h_host_ecdsa_key -C -N
```

Check that nothing is mounted in the software image during the upgrade. If something is mounted in it, then unmount it:

```
# grep " /cm/images/sp3-image" /proc/mounts
sysfs /cm/images/sp3-image/sys sysfs rw,relatime 0 0
proc /cm/images/sp3-image/var/lib/named/proc proc ro,nosuid,nodev,noe
xec,relatime 0 0
# umount -l /cm/images/sp3-image/sys /cm/images/sp3-image/var/lib/name
d/proc
```

Set the kernel to be used for the 'sles11sp3-image' software image. In the following case it is kernel version '3.0.82-0.7-default':

```
# cmsg
% softwareimage use sp3-image
% set kernelversion 3.0.82-0.7-default
% commit
% createramdisk
```

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## Upgrading the head node from SLES11sp2 to SLES11sp3

Before upgrading the head node, make sure there is a recent backup of the head node available, which can be restored!

Then make sure the Bright Cluster Manager packages are updated to the latest version/release.

Check if the Bright repositories are enabled, refresh the repository info, and update the packages:

```
# zypper lr
# | Alias                | Name                | Enabled
# | Refresh
+-----+-----+-----+
+-----+
1 | Cluster_Manager_Base  | Cluster Manager 6.1 - Base | Yes
# | No
2 | Cluster_Manager_Updates | Cluster Manager 6.1 - Updates | Yes
# | No
...
# zypper ref
# zypper up
```

The following commands can then be run for the upgrade:

```
# chroot /cm/images/sles11sp3-image suse_register -d 2 -n -a email=<email address> -a regcode-sles=<key> --restore-repos
# zypper ref -s
# zypper update -t patch
# zypper update -t patch
# reboot
```

Because MySQL is upgraded with the upgrade from SLES11sp2 to SLES11sp3, stopping the MySQL and CMDaemon services is a good idea:

```
# service cmd stop
```

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```
# service mysql stop

# zypper se -t product | grep -h -- "-migration" | cut -d\| -f2
SUSE_SLES-SP3-migration
sle-sdk-SP3-migration
# zypper in -t product sle-sdk-SP3-migration SUSE_SLES-SP3-migration
# suse_register -d 2 -L /root/.suse_register.log
```

Upgrade to SLES11sp3, where the gcc46 packages will be uninstalled (Solution 1):

```
# zypper dup --from SLE11-SDK-SP3-Pool --from SLE11-SDK-SP3-Updates --
from SLES11-SP3-Pool --from SLES11-SP3-Updates
# zypper update -t patch
# suse_register -d 2 -L /root/.suse_register.log
```

Installation of the gcc 4.7 packages:

```
# zypper in gcc47 gcc47-32bit gcc47-c++ gcc47-fortran gcc47-fortran-32
bit cpp47
```

Changes for the upgrade of MySQL, and advised upgrade of MySQL:

```
# ln -sf my.cnf.5.5 /cm/conf/etc/my.cnf
# cp /cm/conf/etc/my.cnf /etc/my.cnf
# touch /var/lib/mysql/.force_upgrade
# rcmysql restart
```

Change the SP version in the motd file:

```
# sed -i -e 's/Based on SUSE Linux Enterprise Server 11 SP.*$/Based on
SUSE Linux Enterprise Server 11 SP3/g' /etc/motd
```

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Reboot the head node to use the upgraded kernel:

```
# reboot
```

If needed PHP can also be upgraded. PHP is upgraded to version 5.3 in SLES11sp3. PHP is used for the Cluster Manager web-portal: (Accept deinstall for the php5 packages)

```
# zypper in php53
# zypper in apache2-mod_php53 php53-devel php53-ctype php53-dom php53-
iconv php53-json php53-pdo php53-sqlite php53-tokenizer php53-xmlreade
r php53-xmlwriter php53-ldap php53-soap php53-openssl
```

The PHP Apache module may get removed from the Apache module list. To add it again:

```
# a2enmod php5
```

Remove the cm-php-pam package and install the cm-php-pam53 package:

```
# rpm -e cm-php-pam
# zypper in cm-php-pam53
# service apache2 restart
```

Unique solution ID: #1149

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