



# FUJITSU Cloud Service S5 CentOS 5.4 to 5.6 Upgrade Planning and Implementation

This guide details the steps to configure the CentOS 5.4 to 5.6 upgrade package installation using the yum software package manager with CentOS 5.4 Servers on the FUJITSU Cloud Service S5.

## Introduction

The yum package supplied with CentOS is a software package manager that installs, updates, and removes packages on RPM-based systems. Yum makes use of an external XML repository accessed via HTTP. In order to enable yum we first need to enable DNS and then allow HTTP access through the virtual system (v-sys) firewall. Several tasks are required to enable yum,

- Configure a Public IP Address: Setup a virtual system (v-sys) on the FUJITSU Cloud Service S5 for Internet connectivity.
- Configure Firewall for DNS: Enable DNS services to the Internet through the firewall.
- Configure Network Address Translation (NAT): Create NAT between the Global IP Address and the Private IP Address in the DMZ zone.
- Configure Firewall Rules: Modify the firewall settings to allow DNS and HTTP traffic.
- Configure VM to use DNS: Setup the local resolver on each VM requiring DNS services.

It is highly recommended that the CentOS 5.6 upgrade procedure is first performed on a Test CentOS 5.4 Server prior to applying to Live Servers.

## Assumptions

- User Account, Certificate and connectivity to the FUJITSU Cloud Service S5.
- Familiarity with the FUJITSU Cloud Service S5 Portal basic configuration and administration tasks.
- Familiarity with the FUJITSU Cloud Service S5 Portal System Manager and Design Studio.
- Familiarity with Linux / CentOS configuration and administration tasks.
- At least one CentOS 5.4 Economy Server on the FUJITSU Cloud Service S5 located in a DMZ zone.
- The yum service has been configured – See the “How To” **FUJITSU Cloud Service S5 - Setup and Configure A Software Package Manager with CentOS 5 4 Servers**.
- Local to CentOS file transfer functionality is configured – See the “How To” **FUJITSU Cloud Service S5 - Setup and Configuration of the FTP Service under CentOS 5.4 Server**
- Servers to be upgraded have been Backed Up via System Manager

## Configure Firewall Rules for the yum Update Server

If not already configured, change the Firewall settings to permit yum Internet connectivity for the designated CentOS Server or in this example, allow any server in the DMZ connectivity for yum updates. For further information, please refer to the “How To” **FUJITSU Cloud Service S5 - Setup and Configure A Software Package Manager with CentOS 5 4 Servers**.

FROM	TO	ID	Source	Source Port	Target/Service	Target Port	Protocol	Action	Log
DMZ	Internet	45001	any	any	DNS	—	—	Accept	On
DMZ	Internet	45002	any	any	NTP	—	—	Accept	On
DMZ	Internet	45003	any	any	yum	—	—	Accept	On
DMZ	Internet	45004	any	any	any	http(80)	TCP	Accept	On
DMZ	Internet	45006	any	any	any	https(443)	TCP	Accept	On
DMZ	Internet	45007	any	any	any	smtp(25)	TCP	Accept	On

**Configure the CentOS 5.6 Update Package Source for yum**

1. Establish an SSH session with the CentOS Server and login as **root**
2. Change to the **/etc/yum.repos.d** directory and verify whether a copy of the **CentOS-Base.repo** file already exists (if it does exist rename as **CentOS-Base.repo.old**)

```

login as: root
Access denied
root@172.16.20.14's password:
Last login: Mon Jan 23 10:23:22 2012 from 172.16.20.231
[root@localhost ~]# cd /etc/yum.repos.d
[root@localhost yum.repos.d]# ls -l
total 16
-rw-r--r-- 1 root root 2245 Oct  1  2009 CentOS-Base.repo
-rw-r--r-- 1 root root  626 Oct  1  2009 CentOS-Media.repo
[root@localhost yum.repos.d]# mv CentOS-Base.repo CentOS-Base.repo.old
[root@localhost yum.repos.d]# ls -al
total 40
drwxr-xr-x  2 root root  4096 Jan 23 10:27
drwxr-xr-x 101 root root 12288 Jan 23 09:22
-rw-r--r--  1 root root  2245 Oct  1  2009 CentOS-Base.repo.old
-rw-r--r--  1 root root   626 Oct  1  2009 CentOS-Media.repo
[root@localhost yum.repos.d]#

```

3. In order to simplify the next section, copy the text below into a local editor such as notepad.exe, save locally and rename the file as **"CentOS-Base.repo"**

```

[base]
name=CentOS-$releasever - Base
baseurl=http://yum.globalcloud.fujitsu.com.au/centos/5.6/os/$basearch/
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-5

#released updates
#[updates]
name=CentOS-$releasever - Updates
##mirrorlist=http://mirrorlist.centos.org/?release=$releasever&arch=$basearch&repo=updates
#$basearch/
#baseurl=http://yum.globalcloud.fujitsu.com.au/centos/5.6/updates/$basearch/
#gpgcheck=1
#gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-5
#packages used/produced in the build but not released

[addons]
name=CentOS-$releasever - Addons
baseurl=http://yum.globalcloud.fujitsu.com.au/centos/5.6/addons/$basearch/
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-5
#additional packages that may be useful

[extras]
name=CentOS-$releasever - Extras
baseurl=http://yum.globalcloud.fujitsu.com.au/centos/5.6/extras/$basearch/
gpgcheck=1
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-5
#additional packages that extend functionality of existing packages

[centosplus]

```

```

name=CentOS-$releasever - Plus
gpgcheck=1
enabled=0
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-5

#contrib - packages by Centos Users
[contrib]
name=CentOS-$releasever - Contrib
baseurl=http://yum.globalcloud.fujitsu.com.au/centos/5.6/centosplus/$basearch/
gpgcheck=1
enabled=0
gpgkey=file:///etc/pki/rpm-gpg/RPM-GPG-KEY-CentOS-5
    
```

- From the local command line, establish connectivity with the target CentOS Server (in this example 172.16.20.14)

```

C:\Users\chafera\Documents\Cloud\FGCP\Documentation\Drafts>psftp 172.16.20.14
login as: root
Access denied
root@172.16.20.14's password:
Remote working directory is /root
psftp>
    
```

- Change to the `/etc/yum.repos.d` directory and transfer the local copy of the `CentOS-Base.repo` to the CentOS Server.

```

C:\Users\chafera\Documents\Cloud\FGCP\Documentation\Drafts>psftp 172.16.20.14
login as: root
Access denied
root@172.16.20.14's password:
Remote working directory is /root
psftp> cd /etc/yum.repos.d
Remote directory is now /etc/yum.repos.d
psftp> put CentOS-Base.repo
local:CentOS-Base.repo => remote:/etc/yum.repos.d/CentOS-Base.repo
psftp> exit

C:\Users\chafera\Documents\Cloud\FGCP\Documentation\Drafts>
    
```

- Re-establish an SSH session with the CentOS Server and login as `root` and test connectivity with the Fujitsu Update Server (`yum.globalcloud.fujitsu.com.au`)

```

[root@localhost ~]# nslookup yum.globalcloud.fujitsu.com.au
Server:          137.172.209.9
Address:         137.172.209.9#53

Non-authoritative answer:
Name:   yum.globalcloud.fujitsu.com.au
Address: 137.172.209.9

[root@localhost ~]# █
    
```

- Note:** It is imperative that the `CentOS-Base.repo` configuration specified in Step 3. Utilising the default file may result in an update to a currently unsupported version of CentOS.

8. Run the yum update to patch the OS to version 5.6

```
[root@localhost yum.repos.d]# ls -al
total 56
drwxr-xr-x  2 root root  4096 Feb  1  2011 .
drwxr-xr-x 102 root root 12288 Jan 24 18:31 ..
-rw-r--r--  1 root root  1915 Jan 24 18:01 CentOS-Base.repo
-rw-r--r--  1 root root  1868 Jan 23 20:53 CentOS-Base.repo.old
-rw-r--r--  1 root root  1926 Feb  9  2011 CentOS-Base.repo.rpmnew
-rw-r--r--  1 root root   631 Feb  9  2011 CentOS-Debuginfo.repo
-rw-r--r--  1 root root   626 Feb  9  2011 CentOS-Media.repo
-rw-r--r--  1 root root  4663 Feb  9  2011 CentOS-Vault.repo
[root@localhost yum.repos.d]# yum update
```

9. During the update process (after the updates have been verified) you will be presented with the prompt: **is this ok [y/N]:**  
Enter **y** to complete the process  
**Note: it will take up to 2 Hours to perform the update.**
10. Once complete, the OS version can be verified by running **cat /etc/\*release\***

```
Complete!
[root@localhost yum.repos.d]# cat /etc/*release*
cat: /etc/lsb-release.d: Is a directory
CentOS release 5.6 (Final)
You have new mail in /var/spool/mail/root
[root@localhost yum.repos.d]#
```

The update to CentOS 5.6 is now complete.

Contact

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