BigIP F5 BACKUP SOLUTION

Hostname: f5-qa01 (10.1.50.68)

Version : BIG-IP 11.3.0 Build 3117.0 Hotfix HF5

user : f5-backup

kernel : 2.6.32-220.el6.f5.x86_64

OS : RHEL 6.x

Target : serverworkback01 (10.1.50.98)

SYMPTOM : Create an automatic backup solution and export the backuped up file to another Linux Server

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STEP 1:

Verify or create the asymmetric keys for the Linux Server.

```
ssh f5-backup@10.1.50.98


/usr/bin/ssh-keygen -f /export/home/f5-backup/.ssh/id_dsa -q -t dsa -N ""
/usr/bin/ssh-keygen -f /export/home/f5-backup/.ssh/id_rsa -q -t rsa -N ""

cat /export/home/f5-backup/.ssh/id_dsa.pub >> /export/home/f5-
backup/.ssh/authorized_keys
cat /export/home/f5-backup/.ssh/id_rsa.pub >> /export/home/f5-
backup/.ssh/authorized_keys
```

STEP 2:

Verify or create the asymmetric keys for the BigIP F5 network appliance.

```
ssh f5-backup@10.1.50.68

mkdir .ssh

/usr/bin/ssh-keygen -f /home/f5-backup/.ssh/id_dsa -q -t dsa -N ""
/usr/bin/ssh-keygen -f /home/f5-backup/.ssh/id_rsa -q -t rsa -N ""

cat /home/f5-backup/.ssh/id_dsa.pub >> /home/f5-backup/.ssh/authorized_keys
cat /home/f5-backup/.ssh/id_rsa.pub >> /home/f5-backup/.ssh/authorized_keys
```

STEP 3:

Exchange the public keys copying into the "authorized_keys" file between Linux && BigIP systems.

```
cat /export/home/f5-backup/.ssh/authorized_keys

cat /home/f5-backup/.ssh/authorized_keys
```

STEP 4:

Verify or create the directories path to copying the script files into the */opt/scripts* and the backup destination directory */var/local/ucs* in the Linux server.

f5-backup@10.1.50.98 (serverworkback01)

```
su -
mkdir -p /opt/scripts
chown root:f5-backup  /opt/scripts
chmod 770 /opt/scripts
`   mkdir -p /var/local/ucs
chown root:f5-backup /var/local/ucs
chmod 770 /var/local/ucs
```

STEP 5:

Verify or create the directory path to copying the script files into the */opt/scripts* for the BigIP F5 network appliance.

f5-backup@10.1.50.68 (ps-f5-qa01)

```
mkdir -p /opt/scripts
        f5backup.pl – Main Script
        f5hname.sh – Get the BigIP F5 hostname
        f5backup.sh – Save the active configuration
        f5archive.sh – Log rotation
chmod 770 *
```

STEP 6:

Verify or create the backup scheduler entry for the BigIP F5 network appliance.

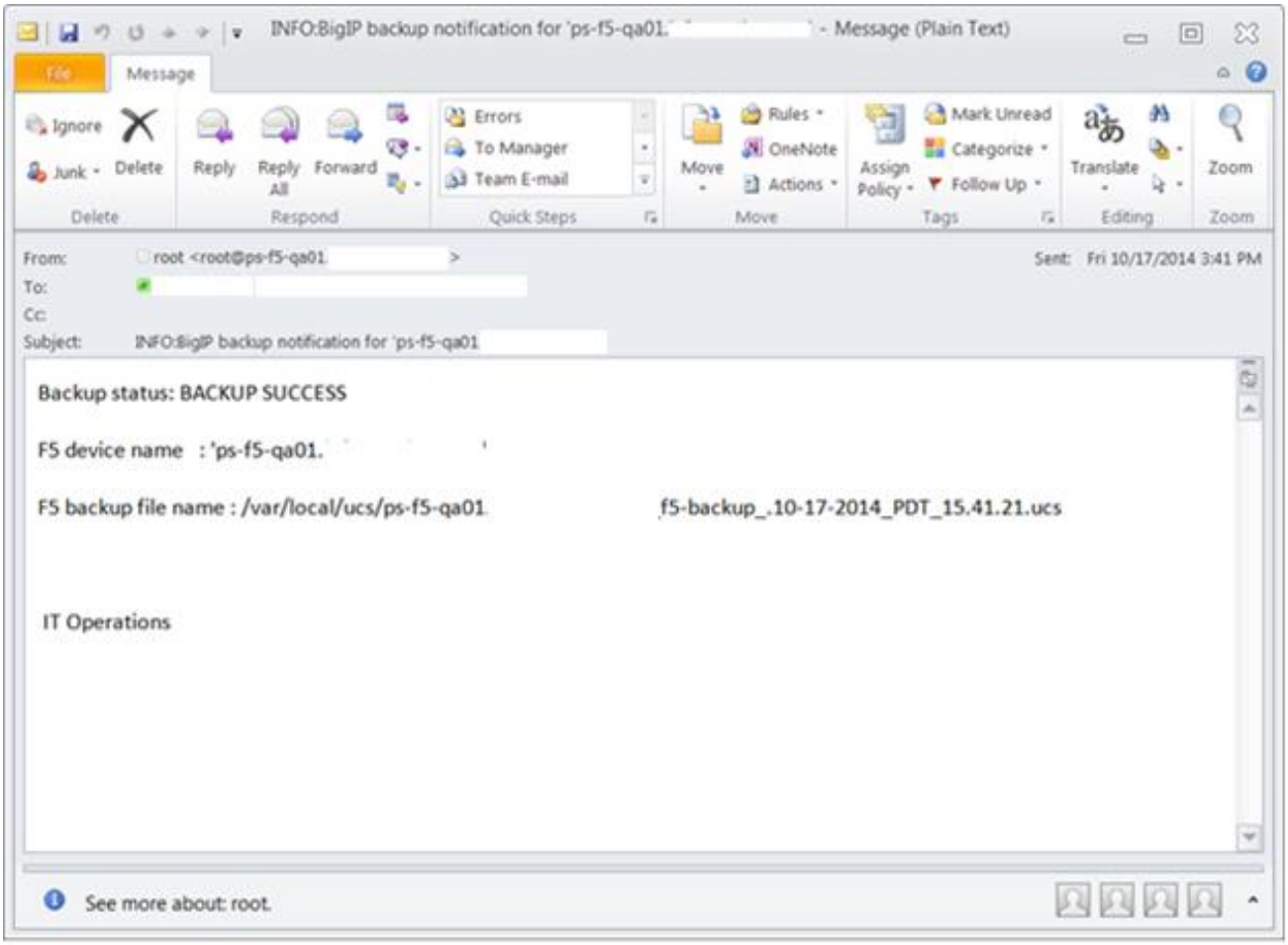
(i.e. crontab –e, OR , /var/spool/cron/f5-backup)

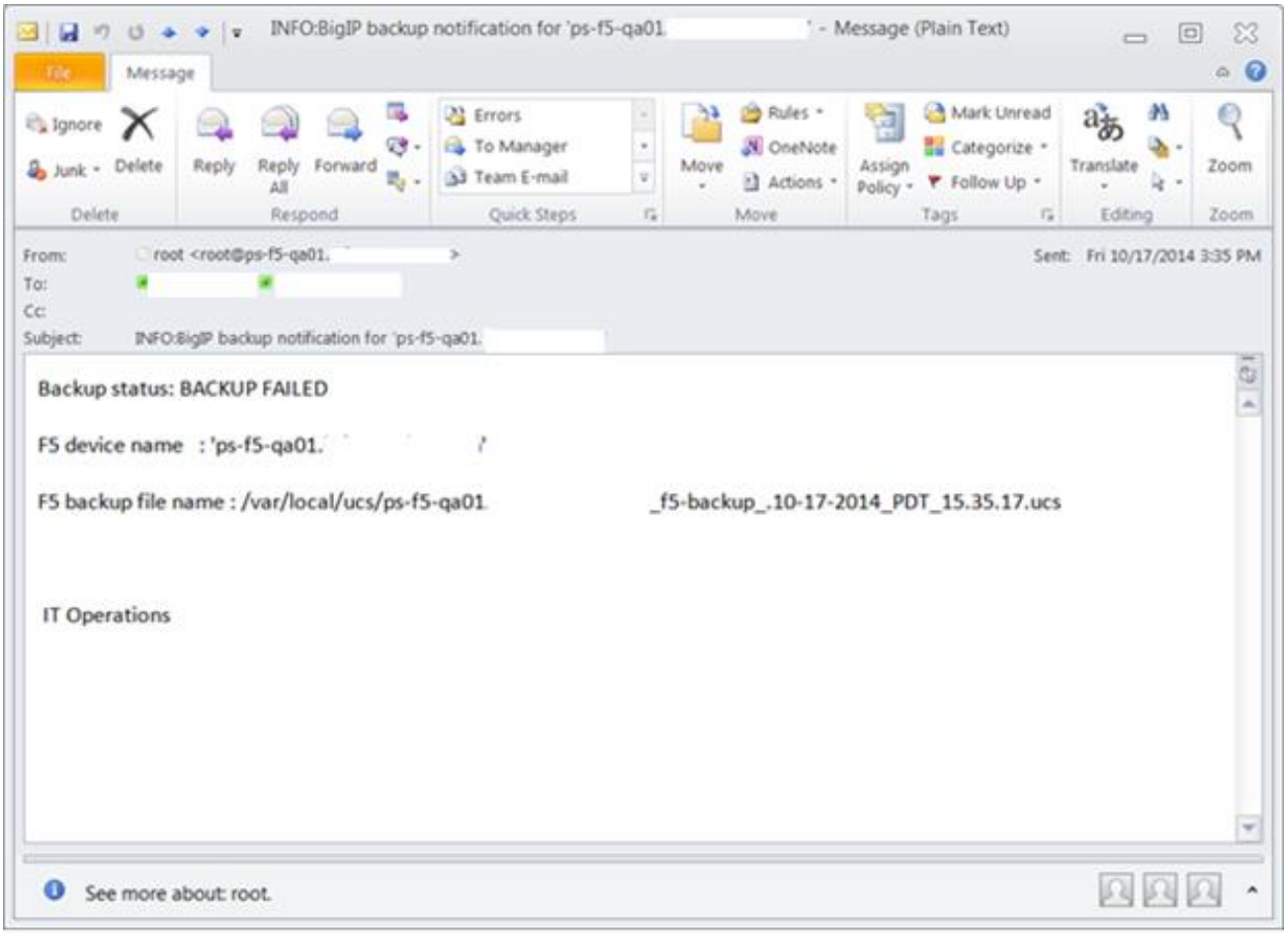
```
# Backup the f5 User Configuration Set (UCS)

00 03 * * * /opt/scripts/f5backup.pl
```

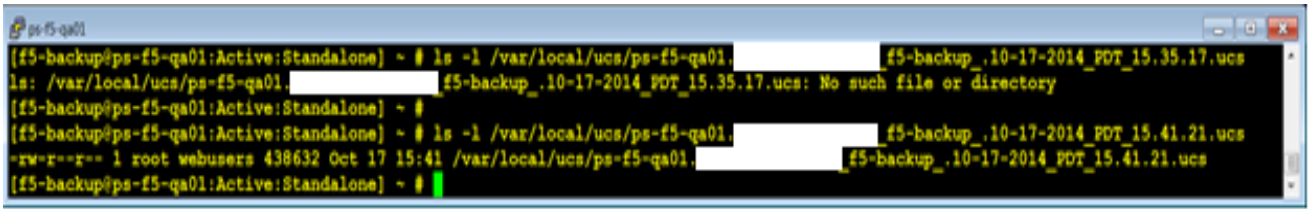
STEP 7:

Run a manual test to verify the backup process.

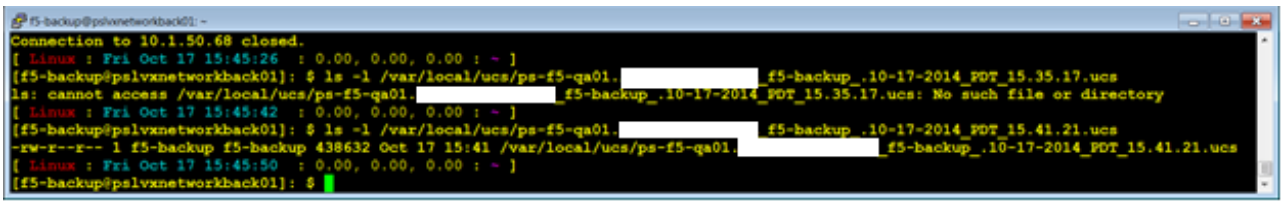



INFO:BigIP backup notification for 'ps-f5-qa01. ' - Message (Plain Text)
File
Message
Ignore
Junk
Delete
Reply
Reply All
Forward
Errors
To Manager
Team E-mail
Move
Rules
OneNote
Actions
Assign Policy
Mark Unread
Categorize
Follow Up
Translate
Zoom
Delete
Respond
Quick Steps
Move
Tags
Editing
Zoom
From: root <root@ps-f5-qa01. >
Sent: Fri 10/17/2014 3:35 PM
To:
Cc:
Subject: INFO:BigIP backup notification for 'ps-f5-qa01.
Backup status: BACKUP FAILED
F5 device name : 'ps-f5-qa01.
F5 backup file name : /var/local/ucs/ps-f5-qa01. _f5-backup_.10-17-2014_PDT_15.35.17.ucs
IT Operations
See more about: root.

F5


ps-f5-qa01
[f5-backup@ps-f5-qa01:Active:Standalone] ~ # ls -l /var/local/ucs/ps-f5-qa01. f5-backup_.10-17-2014_PDT_15.35.17.ucs
ls: /var/local/ucs/ps-f5-qa01. f5-backup_.10-17-2014_PDT_15.35.17.ucs: No such file or directory
[f5-backup@ps-f5-qa01:Active:Standalone] ~ #
[f5-backup@ps-f5-qa01:Active:Standalone] ~ # ls -l /var/local/ucs/ps-f5-qa01. f5-backup_.10-17-2014_PDT_15.41.21.ucs
-rw-r--r-- 1 root webusers 438632 Oct 17 15:41 /var/local/ucs/ps-f5-qa01. f5-backup_.10-17-2014_PDT_15.41.21.ucs
[f5-backup@ps-f5-qa01:Active:Standalone] ~ #

Linux


Connection to 10.1.50.68 closed.
[Linux : Fri Oct 17 15:45:26 : 0.00, 0.00, 0.00 : ~]
[f5-backup@pslvxnetworkback01]: $ ls -l /var/local/ucs/ps-f5-qa01. f5-backup_.10-17-2014_PDT_15.35.17.ucs
ls: cannot access /var/local/ucs/ps-f5-qa01. f5-backup_.10-17-2014_PDT_15.35.17.ucs: No such file or directory
[Linux : Fri Oct 17 15:45:42 : 0.00, 0.00, 0.00 : ~]
[f5-backup@pslvxnetworkback01]: $ ls -l /var/local/ucs/ps-f5-qa01. f5-backup_.10-17-2014_PDT_15.41.21.ucs
-rw-r--r-- 1 f5-backup f5-backup 438632 Oct 17 15:41 /var/local/ucs/ps-f5-qa01. f5-backup_.10-17-2014_PDT_15.41.21.ucs
[Linux : Fri Oct 17 15:45:50 : 0.00, 0.00, 0.00 : ~]
[f5-backup@pslvxnetworkback01]: $

STEP 8:

Add/remove e-mail addresses to receive the backup e-mail notification.

/etc/scripts/f5backup.pl

```
#!/usr/bin/perl


use strict;

use warnings;

use Fcntl 'O_RDONLY';


unlink ("/opt/scripts/hname.txt");

system("/opt/scripts/f5hname.sh");

open(DATA,"<","/opt/scripts/hname.txt") or die "Can't open data";

 my @hname = <DATA>;

 chomp(@hname);

close(DATA);


my $mylbl = '_f5-backup';

my $location = '/var/local/ucs';

my $FileHandle = join("",$hname[0],$mylbl);


&make_unique_file($FileHandle);


my $FHsize = length($FileHandle);

my $FHtrimed = substr($FileHandle,0,$FHsize - 1);



# Creating the current f5backup configuration file

system("/opt/scripts/f5backup.sh '$location/$FHtrimed.ucs'");
```

```
# Copying the f5backup configuration out to the main management server

system("scp -pr '$location/$FHtrimed.ucs' f5-
backup\@10.1.50.98:'$location'");


# Archiving the f5 backups locally

system("/opt/scripts/f5archive.sh '$location'");


# e-mail

my $to      = 'user1@mycompany.com, user2@mycompany.com,
user3@mycompany.com';

my $from    = 'f5-backup@$hname[0]';

my $subject = "INFO:BigIP backup notification for '$hname[0]'";


open(MAIL, "|/usr/sbin/sendmail -t");


## Mail Header

print MAIL "To: $to\n";

print MAIL "From: $from\n";

print MAIL "Subject: $subject\n\n";


## Mail Body

if (-e "$location/$FHtrimed.ucs") {

  print MAIL "F5 Backup status: BACKUP SUCCESS\n\n";

} else {

  print MAIL "F5 Backup status: BACKUP FAILED\n\n";

}

print MAIL "F5 device name   : '$hname[0]'\n\n";

print MAIL "F5 backup file name : /var/local/ucs/$FHtrimed.ucs\n";
```

```
print MAIL "\n \n \n ";

print MAIL "IT Operations\n";

close(MAIL);


exit 0;


sub make_unique_file

{

        my ($file, $date) ;

        $date = `date '+.%m-%d-%Y_%Z_%H.%M.%S'`;

        $_[0] = $_[0] . $date;

}
```

/etc/scripts/f5hname.sh

```
#!/bin/bash


## Get the F5 hostname

#

# Short hostname

#/usr/bin/tmsh list sys global-settings | grep hostname | awk {'print $2'} |
sed -e 's/\(\.\)[^.].*$/\1/' | tr -d '.' > /opt/scripts/hname.txt

#

# Long hostname

/usr/bin/tmsh list sys global-settings | grep hostname | awk {'print $2'}  >
/opt/scripts/hname.txt
```

/etc/scripts/f5backup.sh

```
#!/bin/bash


###

## Saving active configuration...

/usr/bin/tmsh save /sys ucs $1
```

/etc/scripts/f5archive.sh

```
#!/bin/bash


pushd .


cd $1
 if [ ! -d $1/archive ]; then
   mkdir -p $1/archive
   chown f5-backup:webusers $1/archive
 fi


# Delete old UCS files by aged criteria every 180 days
/usr/bin/find $1archive/ -name \*.\*.\*.\*\.ucs -mtime +180 -exec rm -f {} \;


# Move the new UCS files by aged criteria every 15 days to archive/ dir
/usr/bin/find $1 -maxdepth 1 -name \*.\*.\*.\*\.ucs -mtime +15 -exec mv {}
archive/ \;


popd


exit 0;
```