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# Midland ARPSC

## Hamgate Backups

Backup Strategy for hamgate.midland



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### Abstract

Midland ARPSC maintains **hamgate.midland.ampr.org**, a gateway between local RF packet traffic and the remainder of the global packet network. This document outlines the backup mechanism for that hamgate.

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## 1. Introduction

Midland ARPSC maintains **hamgate.midland.ampr.org**, a gateway between local RF packet traffic and the remainder of the global packet network. The hamgate operates unattended in the penthouse of the Mid-Michigan Regional Medical Center. Almost all operation of the hamgate occurs remotely.

Because the hamgate operates as infrastructure, it requires relatively little attention. One issue this causes is that few people are familiar with the internal operation of the hamgate. Because of this it is important that the hamgate be fully backed up in a transparent fashion, that these backups are kept in an easily useable format, and that a number of people have access to these backups.

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## 2. Overview of the Backup Process

On a schedule determined by the [Appendix A, crontab](#), gzipped tar files are created for backup. These files are created locally, and then retrieved from the hamgate by a remote system.

Configuration of the hamgate does not change frequently. However, it is useful to have reasonably frequent full backups in case some change was made that wasn't manually backed up.

The backups are executed as follows:

- Each night the messages on the hamgate are backed up (refer to [Appendix D, /root/JNOSmailBackup2](#)).
- Every Monday, the entire `/jnos` directory tree is backed up (refer to [Appendix C, /root/JNOSbackup](#)). This directory tree includes all the configuration, data and programs specific to JNOS. This backup should allow for restoration of JNOS operation onto an existing Linux system.
- On the fourth of every month, the entire system is backed up (refer to [Appendix B, /root/SystemBackup](#)). This backup should allow for restoration of the entire system onto a blank system.

After the savesets have been created on the hangate, a cron job runs on a server at WB8RCR (refer to [Appendix E, Server crontab](#) for the relevant fragment of that crontab). Other systems with the appropriate SSH keys could (and probably should) retrieve those tar files.

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### **3. Disposition of the backups**

The backups collect at WB8RCR and are not automatically purged. Periodically, some are deleted manually and others saved to optical media. As a minimum, all message files, several JNOS backups and two full backups are preserved on optical media for each year.

In addition, a DVD containing at least one full backup and all the message backups is created on occasion and sent to either W8LSS or WB8FYR.

### A. crontab

```
# crontab for root
mailto=root
#
# Set the time every night
#
37 1 * * * ~/SetTimeCron.sh
#
# Backup the /jnos tree every monday
#
16 4 * * 1 ~/JNOSbackup
#
# Backup the system on the fourth of the month
#
26 4 4 * * ~/SystemBackup
#
# Backup JNOS mail every night
#
6 1 * * * ~/JNOSmailBackup2
#
# Pick up root's mail every night
#
30 5 * * * ~/checkmail
```

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## B. /root/SystemBackup

```
#!/bin/sh
SAVESET=`date -u "+HGmidland-%y%m%d.tgz"`
echo $SAVESET
cd /root
echo "/dev" >./skips
echo "/sys" >>./skips
echo "/media" >>./skips
echo "/tmp" >>./skips
echo "/var/run" >>./skips
echo "/mnt" >>./skips
echo "/opt" >>./skips
echo "/proc" >>./skips
echo "/lost+found" >>./skips
echo "/root/themes" >>./skips
echo "/root/RPMs" >>./skips
echo "*.rpm" >>./skips
echo "*.gz" >>./skips
echo "/backup" >>./skips
rm -f /backup/HGm*
tar -czp --ignore-failed-read -f /backup/$SAVESET -X ./skips /
rm -f ./skips
```

---

## C. /root/JNOSbackup

```
#!/bin/sh -x
SAVESET=`date -u "+hgJNOS-%y%m%d.tgz"`
echo $SAVESET
rm -f /backup/hgJNOS*
tar -czp --ignore-failed-read -f /backup/$SAVESET /jnos
```



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## D. /root/JNOSmailBackup2

```
#!/bin/sh -x
SAVESET=`date -u "+JNOSmail-%y%m%d.tgz"`
echo $SAVESET
cd /backup
rm -f JNOSmail*.tgz
tar -czp --ignore-failed-read -f /backup/$SAVESET /jnos/spool/mail /jnos/
spool/mqueue
```

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### E. Server crontab

```
#=====
#               H a m G a t e   B a c k u p s
#=====
#
# Fetch mail backup from hamgate.midland
#
20 1 * * * scp jjmcd@hgmidland:/backup/JNOSmail* /backup/stage/backup/
hgmidland
#
# Fetch JNOS backup from hamgate.midland on Monday
#
16 5 * * 1 scp jjmcd@hgmidland:/backup/hgJNOS* /backup/stage/backup/hgmidland
#
# Fetch the full backup from hamgate.midland on the fifth
#
17 0 5 * * scp jjmcd@hgmidland:/backup/HGmid* /backup/stage/backup/hgmidland
#
```

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## F. Revision History

Revision 1    Fri Nov 25 2011  
Initial draft

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