M-7. dump and restore scripts

1.0   General Information

These scripts will allow RFCs to backup and restore Linux file systems on their RAX boxes.

1.1   Description

There are several types of problems that can happen to a system. These are:

- disk drive failure
- system-wide failure
- software failure
- user error
- system-staff error
- electronic break-ins, vandalism, etc.
- natural and man-made disasters

The dump and restore scripts will take into account disk drive failure, system-wide failure, software failure, and, to a limited extent, user error and system-staff error. It is assumed that due to the system configuration, and the fact that the system will sit behind a firewall, the problem of electronic break-ins, vandalism, etc. will be adequately taken care of and therefore, these problems are not specifically addressed here. Natural and man-made disasters such as tornados, hurricanes, flooding, earthquakes, or aircraft mishaps are not addressed by this script. It is assumed that whatever general plan each facility has for all its computer systems will cover these types of problems.   The dump and restore scripts were based on the guidelines and recommendations made in the "RFC Archive Database/Files System Design" document dated November 30, 2001.

The backup and recovery suite consists of the following scripts:

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dump_script (bash script)
restore_script (bash script)

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The scripts are located in the directory /rfc_arc/scripts/archive_dump/scripts. These scripts, or other local backup procedures, should be used by an office to generate backups of the Linux file system on a routine basis. Since the goal is to lose **no** data, the data/file population strategy will need to be taken into account when determining the frequency of various backups. At a minimum, it is recommended that backups be performed on a weekly basis.

An RFC can choose to use an alternative backup and restore procedure instead of the

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scripts that have been provided. Just make sure that you are doing backups and that you can successfully restore from whatever procedure is utilized. The important thing is that each RFC is performing routine backups of their RAX system.

1.2   Enhancements/Bug Fixes/Changes

Build OB7.2

No changes were made to these scripts for build ob7.2. Information about database backups was eliminated from the documentation. Database backup and restore procedures are discussed in sections M-1 thru M-3.

Note: These scripts require a great deal of customization by each RFC and should be thoroughly tested.

2.0   Configuration Information

The dump_script script uses an exclusion file that the user must set-up. An example exclusion file called "inodes_not_to_dump" is provided. This file consists of inode values, one value per line. The inode value is determined by using the Linux stat command. Also make sure the PATH environment variable includes /sbin.

3.0   Linux File System Backup and Recovery Scripts

The following scripts assume that the version of the dump and restore commands on the Linux system are dump-0.4b27-3 or later.

Both these scripts <u>must</u> be run by user root.

<u>dump_script</u>

This script uses the Linux dump command to provide the file systems backups. Prior to using this script, the user must configure the exclusion file as described in section 2.0 of this document. Once the exclusion file is created, run the script and follow the instructions as prompted. Label and date the tape when the dump is completed. If multiple tapes are involved, make sure the tapes are numbered to indicate the order. The script is designed to allow the office to do backups as frequently as once per day.

<u>restore_script</u>

This script uses the Linux restore command to provide the file system restore capability. This script is quite flexible and utilizes the table of contents file(s) created by the dump_script. This script has a built-in help feature. Simply run the script and follow the

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instructions as prompted. The user can restore a single file, multiple files, an entire directory or several directories.

4.0 Troubleshooting Information

For detailed information on the dump and restore commands used in the scripts, refer to almost any Red Hat Linux book. For specifics on dump and restore command options, the user can also refer to the man pages for these commands. In addition, both scripts have fairly extensive comments embedded in them.

If the user still has problems, contact the RFC Support Group for assistance.

5.0 References

W. Curtis Preston, "Unix Backup & Recovery", O'Reilly 1999