

## Client Guideline for System Disaster Recovery

### Data Backup Plan

Prerequisites that the client must keep current and secure:

1. Perform OS backup on the main and auxiliary system at least once a month and after each change in OS configuration.
2. Perform Software backup on the main and auxiliary system at least once a month.
3. Perform Database backup on the auxiliary system daily.
4. Print the system configuration for main and auxiliary system (use `lscfg` command) with each OS backup.
5. Print the file system configuration for both the main and auxiliary systems (`df -k; lspv!`) with each OS backup. (`/etc/filesystems`)
6. Store all of this information and/or tapes in a secure area. Every month, one set of database backup tapes should be saved in a separate location.
7. The new hardware at the disaster site should be equivalent to the current hardware. We often use a single CPU with a mirrored database for the disaster site, so double the disk space is required to mirror. Some systems have 2 different tape drives, the disaster site will need equivalent setup\*.

### Disaster Recovery Plan

Recovery Procedure Steps That The Client Must Perform:

1. Restore OS, using the OS backup tape, according to procedure described in manuals for OS. Client should establish an OS Recovery Procedure. Since the recovery system might be different than client's production system, the system should be restored from main system backup.
2. Install modem for support function – at least 2 should be installed, the modems must be accessible to SCC staff.

Recovery Procedure Steps That Should Be Performed By SCC:

3. If different IP addresses are needed, correct tcp/ip configuration and update `/etc/hosts` file.
  4. Remove definition of all non-OS file systems and volume groups (AIX file systems: `/`, `/tmp`, `/usr`, `/var`, `/home`)
  5. Define physical volumes and volume groups from printouts in prerequisites.
  6. Recreate the file systems according to printouts from the prerequisites.
  7. Restore software and databases from backup tapes.
  8. Create `/u/tmp` directory and subdirectories (`/u/tmp/log`, `/u/tmp/vista`, `/u/tmp/ipcs`) and give them permissions `rwrxrwx`.
  9. Login as `scc` and create `$IPCDIR` directory and subdirectories for all environments.
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## 10.Reboot the system.

\*Some systems have 2 different tape drives - rmt0 on main and aux are 8MM 20GB tape drives. Rmt1 on aux system is Ultrium ult3580-TD1. These systems use 8 MM for AIX and software backup, and the Ultrium tape drive for the DB backup. In these systems the recovery system should have both, so they can restore AIX and software with the 8 MM 20GB tape drive, and DB through the Ultrium tape drive.

### **Additional information and frequently asked questions:**

- These instructions do not include extra steps for Oracle database recovery.
- Periodic testing and revision of the client procedure is the responsibility of the client.

**Q.** Which steps will be done by SCC?

**A.** The process of loading the Operating System to new hardware has to be done by someone at the client site. SCC can assist by phone if necessary. Then if we have modem or network connection, SCC can do the rest of the tasks. The restoration of the Software and Databases will be done by SCC System Engineers and Hardware Specialists.

**Q.** Do we provide immediate response and on-call availability in case of an emergency?

**A.** Yes, This will be done according to our regular on call procedure.

**Q.** What are the commands to restore from tape?

**A.** To restore the AIX from tape one has to boot the system from this tape. The steps are described in standard AIX documentation. Our software and databases would be restored using “tar” or “restore” command.

**Q.** In reference to Recovery Procedure steps performed by SCC number 2, is this a complete list of AIX file systems that should be removed?

**A.** We cannot give a generic list, it depends on what was loaded on the system. In general AIX file systems are /, /usr, /tmp, /var, /home. This is why the printouts in the prerequisites are necessary and also why we suggest restoration by SCC System Engineers.

**Q.** Are there other commands for printing the system configuration and the file system configuration?

**A.** The syntax for some AIX commands:

- `lscfg -vp` > `lscfg.out` (configuration out put)
- `$UDIR/bin/lspv!` > `lspv.out` (drive configuration) (or /u/bin/lspv!)
- `df -k` > `df.out` (file system output)
- `lspp -l` > `lspp.out` (AIX fileset listing)