



Preparing for a Disaster: Tips and Techniques

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“dis-as-ter ...noun A grave occurrence having ruinous results.”

Webster's II Office Dictionary



“re-cov-ery verb To get back, regain”

Webster's II Office Dictionary



Preparing for a Disaster.....

The bad hair day....

- Is how you feel during a disaster
- Is how you feel after discovering the disaster
- Is how you feel during the recovery process after the disaster

Preparing for a Disaster.....

The bad hair day....

- Identify different types of IT disasters
- How to identify the risks and costs associated with each type of disaster
- How to prepare for a disaster
- General up-front decisions with management
- Recovery specific items for the HP3000
- Recovery suggestions for the 9000 environment
- Questions and answers

Preparing for a Disaster.....

The bad hair day....

- Different types of IT disasters
 - Internal
 - External
 - Hardware malfunction
 - Acts of nature
 - Government Agency

Preparing for a Disaster.....

The bad hair day....

- Internal Disaster
 - Programmer oops
 - End user oops
 - Computer operator oops
 - Un-planned corporate audits
 - Administrator oops
 - Undocumented network changes
 - Disgruntled Employee - not an oops

Preparing for a Disaster.....

The bad hair day....

- External Disaster
 - Contract Programmer oops
 - End user oops
 - Customer oops
 - Web service attack
 - Email virus attacks
 - Hackers

Preparing for a Disaster.....

The bad hair day....

- Hardware Malfunction
 - Disk crashes
 - CPU failures
 - Memory corruption
 - Network failures
 - Disgruntled Employee - not an oops

Preparing for a Disaster.....

The bad hair day....

- Acts of nature
 - Blizzards
 - Ice storms
 - Earthquakes
 - Hurricanes
 - Tornadoes
 - Airplanes falling out of the sky
- HNS
 - Our Maryland facility is subject to all of the above except for earthquakes

Preparing for a Disaster.....

The bad hair day....

- HNS

- Our San Diego, CA and Mexico facilities are subject to earthquakes
- Our international facilities are subject to other types of weather phenomenon

- Your facility is next to what?

- A gas station?
- On top of a fault line?
- A military base?

Preparing for a Disaster.....

The bad hair day....

- Government Agencies
 - IRS asking for back tax data
 - SEC asking for Sarbanes-Oxley (SAR-OX) data
 - HIPAA changes
 - DOJ seeking ITAR data
 - US Customs regarding Import/Export data
 - Various state agency requirements, depending on what states you have business functions in

Preparing for a Disaster.....

The bad hair day....

- Identifying Risks and Costs

- Risks , costs, and penalties are unique to each business
- Can a disaster impact my ability to do my business functions, if so, how long?
- Can a programmer wipe out critical files? Can a user do the same? Can we recover a missing order?
- Can we be sued? If so by whom and for what financial exposure?
- Can we provide SAR-OX data? Do we have US Customs documentation? Can Senior Management face consequences?
- Can we survive a natural disaster?

Preparing for a Disaster.....

The bad hair day....

- Identifying Risks and Costs
 - What will it cost my organization to recover from any of the types of disasters?
 - It depends....

Preparing for a Disaster.....

The bad hair day....

- Identifying Risks and Costs
 - It depends....
 - What the disaster is...
 - What preparation is taken in advance
 - What decisions your management makes
 - How much liability your management can assume
 - How much value is placed on data by your management
 - What federal and state laws apply to your business

Preparing for a Disaster.....

The bad hair day....

- Preparing for Disaster
 - Identify areas of risk and exposure
 - Itemize what is important to your business
 - Document everything
 - Get a **SERIOUS** commitment from your management

Preparing for a Disaster.....

The bad hair day....

- Areas of risk and exposure
 - Your computing facility
 - Your system
 - Your application
 - Your network
 - Your printing capabilities
 - Your data storage
 - Your back-ups
 - Your data
 - Your HR department

Preparing for a Disaster.....

The bad hair day....

- What is important to running my Business?
 - My data
 - My applications
 - Service level agreements with management to prioritize what is deemed business/mission critical
 - My network to remote facilities
 - My staff's well being

Preparing for a Disaster.....

The bad hair day....

- Documentation is crucial
 - Identify the risks and exposures for Senior Management in a formal document to present your D/R business case
 - Identify and record what is business critical in terms of your systems, applications, network requirements, personnel requirements
 - Identify what type of resources and facilities you'll need to do the job
 - Use a D/R specialist to guide you initially

Preparing for a Disaster.....

The bad hair day....

- Up front resources - Major Disaster
 - Your regularly scheduled backups
 - Daily, Weekly, Monthly, Quarterly, and annual
 - Hot site / Cold Site - company owned
 - Hot site / Cold Site - D/R contract
 - Direct to D/R contractor

Preparing for a Disaster.....

The bad hair day....

- Major Disaster - Recovery items for the 3000
 - Documentation on your production system
 - Customized SLT's
 - A HP3000 with equivalent operating system
 - A HP3000 with performance capacity, based on business requirements
 - A HP3000 with appropriate licensing and third party software
 - A portable copy of your data
 - Trained staff
 - Recovery procedures

Preparing for a Disaster.....

The bad hair day....

- Major Disaster - Recovery items for the 3000
 - Documentation on your production system
 - Up to date hardcopy of SYSGEN
 - Up to date hardcopy of SYSINFO data
 - Up to date hardcopy of NMMGR output
 - Up to date hardcopy of HP contact info
 - Up to date hardcopy of a list of your third party vendors information, including your licensing agreements
 - Up to date copy of your application documentation
 - Electronic copy of everything above at your D/R site

Third Party Info list

Items needed

<u>Company</u> <u>Dates</u>	<u>Product</u>	<u>JUPITER</u>	<u>7.0 pp1</u> <u>Ready</u>	<u>Phone</u> <u>Number</u>	<u>Contact</u>	<u>Web addr</u>
Adager 7/1 - 6/30						
	Adager	010621	Yes	800-533-7346	Tech. Support	adager.con
Allegro						
	X-Over	20021007		408-252-2330	Tech Support	
						allegro.con
Bradmark						
	DBAudit	3.3.00		800-275-2723		bradmark.c

Preparing for a Disaster.....

The bad hair day....

- Major Disaster - Recovery items for the 3000
 - Customized SLT's
 - Your system unique files
 - Required files for parallel restores
 - EDITOR.PUB.SYS to create batch restore jobs
 - Your accounting structure job outputs (BULDJOB1 and 2)
 - Add your system files via SYSGEN's sysfile utility

Preparing for a Disaster.....

The bad hair day....

- Major Disaster - Recovery items for the 3000
 - Customized SLT's

- CCIESINS.SYS:sysgen
- SYSGEN version E.02.01 : catalog version E.02.01 FRI, JUL 9, 2004, 1:56 PM
- Copyright 1987 Hewlett-Packard Co. All Rights Reserved.
- **note** Retrieving NMMGR configuration data...
- ** First level command **
- io log (lo) misc (mi) spu (sp)
- sysfile (sy)
- basegroup (ba) keep(ke) permyes (pe) show (sh)
- tape (ta)
- clear (cl) (c) exit (ex) (e) help (he) (h) oclose (oc)
- redo

Preparing for a Disaster.....

The bad hair day....

- Major Disaster - Recovery items for the 3000
 - Customized SLT's

```
• sysgen> sy

•      ** SYSFILE configurator commands **

•      aauto (aa)      aboot (ab)      acmsl (ac)      asprog (as)
•      cmsl (cm)       dauto (da)       dboot (db)       dcmsl (dc)
•      dsprog (ds)     lcmsl (lc)       rauto (ra)       rboot (rb)
•      rcat (rc)       rcmsl (rcm)      rdcc (rd)        ripl (ri)
•      rnmlib (rn)     rsprog (rs)      show (sh)

•      clear (cl) (c)  exit (ex) (e)   help (he) (h)    hold (ho)
```

Preparing for a Disaster.....

The bad hair day....

- Major Disaster - Recovery items for the 3000
 - Customized SLT's

```
sysfile> sh
DISC AUTOBOOT = AUTOBOOT.MPEXL.SYS
TAPE AUTOBOOT = NONE
SYSTEM CATALOG = CATALOG.PUB.SYS
CM SL = SL.PUB.SYS
NMCONFIG FILE = NMCONFIG.PUB.SYS
NM LIB = NL.PUB.SYS

BOOT FILE          FILENAME          TYPE
-----
START.MPEXL.SYS    START.MPEXL.SYS    disc boot
SAT.MPEXL.SYS      SAT.MPEXL.SYS      disc boot
DUMP.MPEXL.SYS     DUMP.MPEXL.SYS     disc boot
STAGEISL.MPEXL.SYS STAGEISL.MPEXL.SYS disc boot

UPDATE.MPEXL.SYS   UPDATE.MPEXL.SYS   tape boot
```

Preparing for a Disaster.....

The bad hair day....

- Major Disaster - Recovery items for the 3000
 - An equivalent 3000 for performance
 - Buy or lease now as the availability is diminishing
 - Get appropriate user licensing from HP for your disaster scenario
 - Make sure it is working on a periodic basis
 - Fire it up at least twice a month
 - Pre-make arrangements with hardware vendors to provide additional equipment during your disaster
 - Trained staff at D/R facility on your D/R system
 - Disk and tape mediums MUST be compatible
 - Recovery / restore procedures documented and updated on a periodic basis

Preparing for a Disaster.....

The bad hair day....

- Major Disaster - Recovery items for the 3000
 - A portable copy of your data
 - Good current back-ups
 - Backups created with 'DIRECTORY' option and all volume sets are included
 - Off-site storage of your backups
 - Make sure that your staff and D/R staff have access to the
 - off-site storage facility
 - Trained staff at D/R facility
 - Recovery / restore procedures documented

Preparing for a Disaster.....

The bad hair day....

- Major Disaster - Recovery items for the 3000
 - Shadowed Data is better than a portable copy of your data
 - Printing and printers
 - Networking staff and network connectivity
 - Key staff members if available
 - apps, technical staff, operations, and management
 - Housing, transportation
 - Recovery / restore documentation

Preparing for a Disaster.....

The bad hair day....

- Major Disaster - Trained Staff
 - Will it be my staff performing the recovery?
 - Probably not
 - Verify that the D/R facility staff is trained in MPE/iX
 - Make sure they know basic system manager commands
 - If it is your staff
 - Arrange for transportation
 - Temporary housing
 - Employee health benefits

Preparing for a Disaster.....

The bad hair day....

- Major Disaster - Recovery Procedures
 - Senior Administrator should provide ahead of time
 - Hard and electronic copy at D/R Site. Preferably in .doc format
 - Restore procedures tested in-house on a development system
 - Getting access to the portable copy of your data
 - Senior Administrator should verify the trained staff at the D/R site or provide customized training
 - All documented and updated on a periodic basis

Preparing for a Disaster.....

The bad hair day....

- Major Disaster - **TEST, TEST, TEST**
 - Establish a test date which has the least impact on your business
 - Expect that the first test will probably fail
 - Document the successes and failures
 - Update documentation
 - Test again - this is not a one time process
 - Repeat, Repeat, Repeat

Preparing for a Disaster.....

The bad hair day....

- HP9000 Recommendations
 - Implement MCSERVICEGuard
 - BCV volume technology and data storage replication
 - Create two 'Ignite' tapes on a periodic basis
 - keep one on-site and one off-site
 - Networking documentation
 - Database specific technology
 - Add your database administrator(s) to your key personnel list
 - Add 'Basis' if using SAP

Preparing for a Disaster.....

The bad hair day....

- HP9000 Recommendations
 - Download/upload patch analysis from ITRC on a regular basis
 - Keep as current as possible based on your applications
 - Create new 'Ignite' tapes after patching
 - Additional tools available from your HP ASC for the asking
 - **SYSINFO** for documenting your hardware



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