

EBCUG

August Meeting



DATABASE
APPLIANCES



DATABASE
APPLIANCES

The revolutionary impact of iSCSI enabled appliances:

- Disaster Recovery**
- Highly Availability**
- Clustering**
- Open standards**
- Lower costs**
- Democratization of SAN**

iSCSI: Disaster Recovery, High Availability and Clustering

- ❑ **Disaster Recovery: Complete data and infrastructure redundancy via iSCSI over a LAN/WAN.**
- ❑ **High Availability: Replication and auto-sensing failover**
- ❑ **Clustering: rack-mounted 1TB & 3TB systems clusterable to 1PB**

iSCSI:

Open Standards = Lower Costs

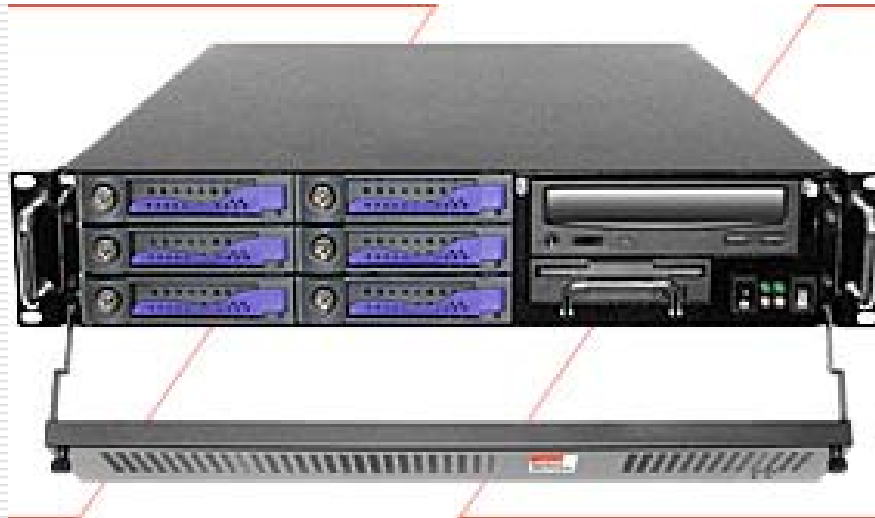
□ Current SAN is

- **Proprietary**
- **Distance Limited**
- **Expensive**

□ iSCSI is

- **TCP/IP based**
- **Not Distance Limited**
- **Non-proprietary**

The Power of the Appliance



- Pre-installed, dedicated system**
- Separates primary and secondary architectures**
- Condenses complex processes**

...
DATABASE
APPLIANCES

Database Appliances

Our core focus is providing state-of-the-art iSCSI enabled computer appliances for :



Pre-Configured Database Servers



Backup, Recovery & Disaster Recovery



SAN



BackupButler

A Revolution In Backup, Recovery and Disaster Recovery



○○○
DATABASE
APPLIANCES

Revolutionary Solution

BackupButler resolves the problems with current backup regimens, lowers TCO and provides industry-first disaster recovery capabilities.

What is your backup & recovery architecture lacking?

Existing Backup Architecture Limitations

1. Inadequate Recovery & Disaster Recovery

Tape is the most common backup medium and is problematic for operational Recovery and insufficient for Disaster Recovery

2. Complex & Costly Architecture

Several components (tape, backup software, backup hardware, programs, processes) must be tied together

3. Not Comprehensive

**Often only the most visible systems are included
Backup and Restore times are excessive**

Existing Backup Limitations

1. Inadequate Recovery & Disaster Recovery

During “normal” recovery, the most frequent cause of a slow or unsuccessful recovery is the medium:

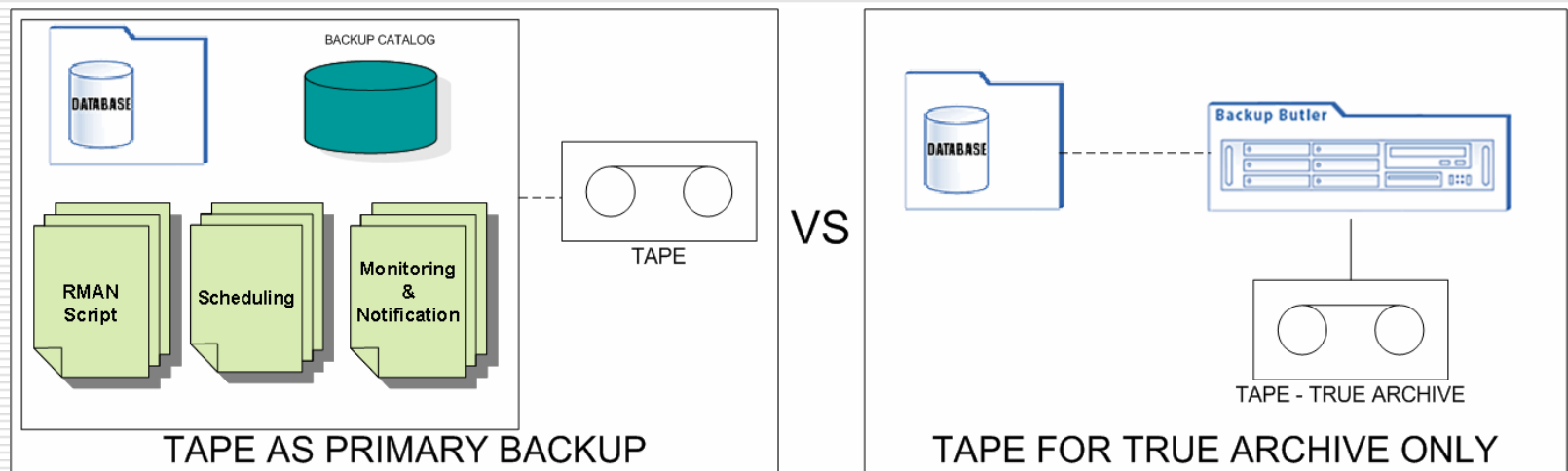
TAPE

**During a disaster, do you want to be
reliant on just a**

TAPE?

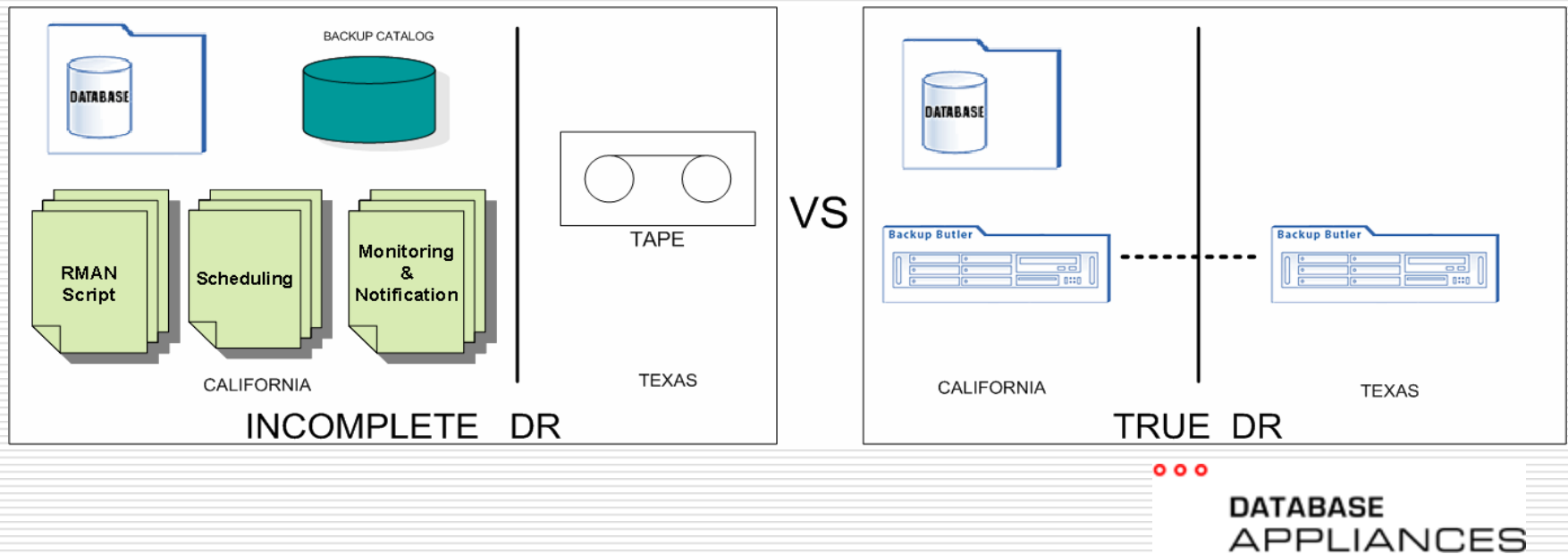
Archaic Tape Technology: No longer the correct choice

Tape is no longer the correct choice for your front-line recovery requirements. Tape should only be used for archive.

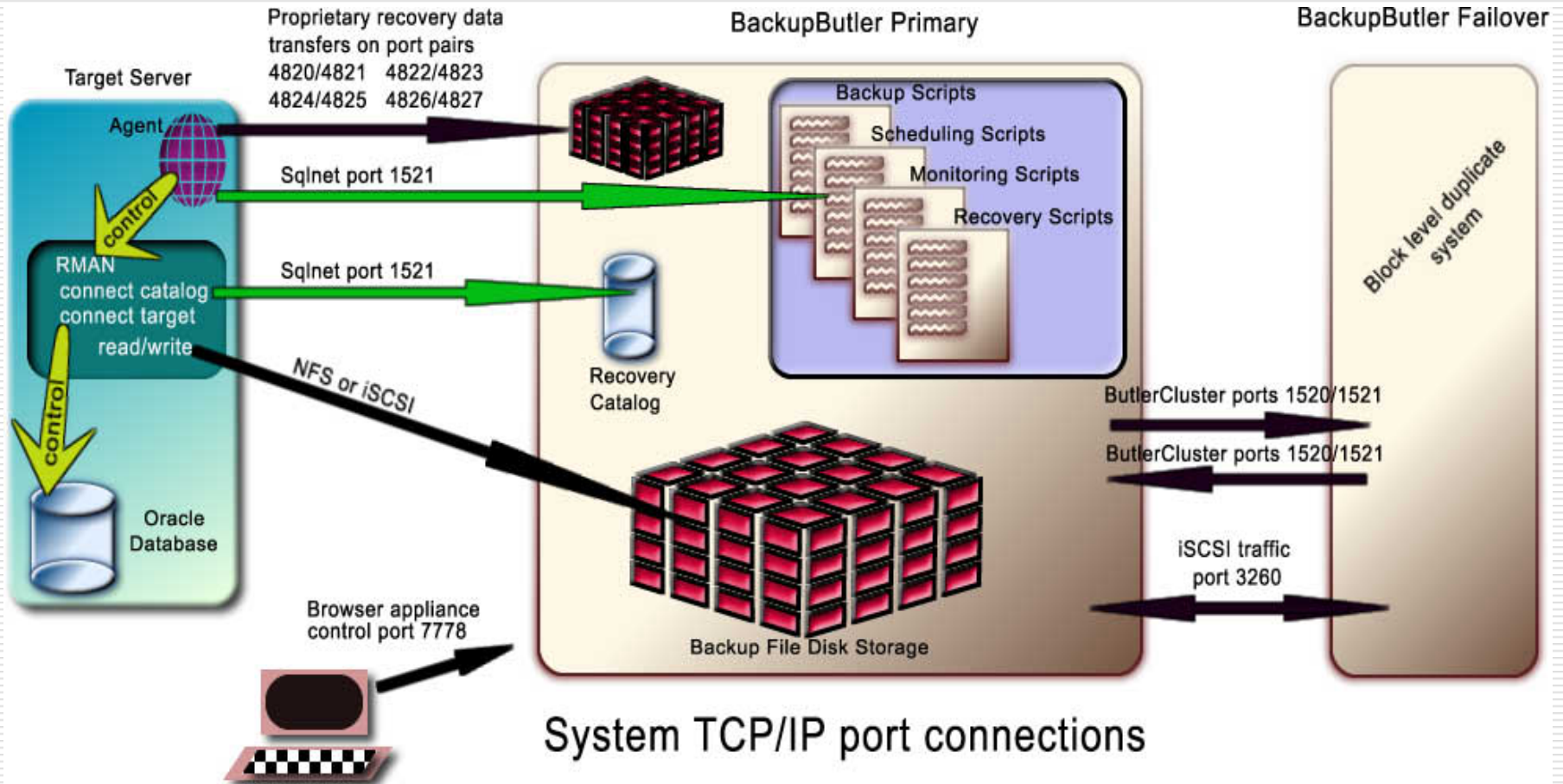


Complete Disaster Recovery via built-in iSCSI

BackupButler's built-in iSCSI allows units to be mirrored across a WAN or LAN for a complete *Disaster Recovery Infrastructure!*



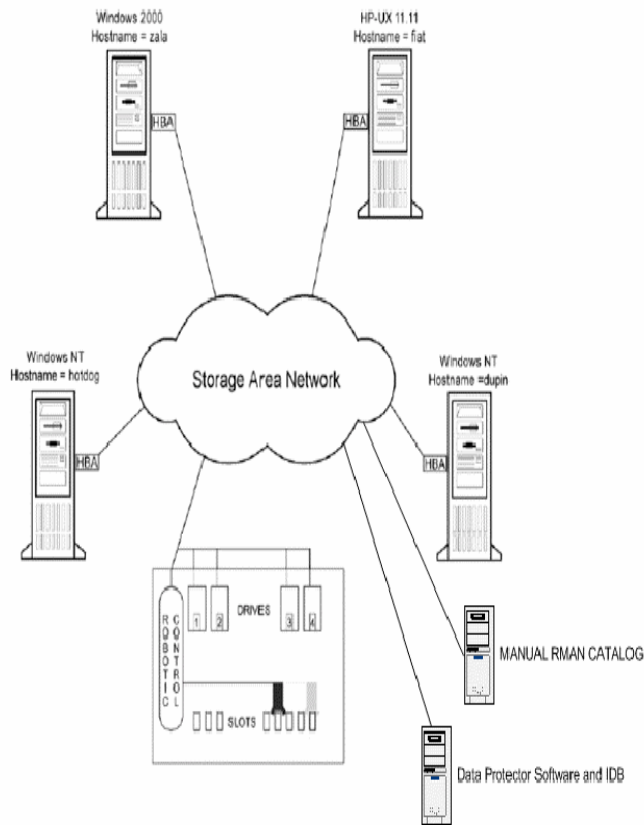
TCP/IP traffic flow



Existing Backup Limitations

2. Complex & Costly Architecture

A Typical Backup Architecture



- Hardware Intensive**
- Software Intensive**
- Labor Intensive - setup, scripting etc.**
- Numerous failure domains**
- Almost all rely on tape**
- Too Complex!**

...
DATABASE
APPLIANCES

Existing Backup Limitations

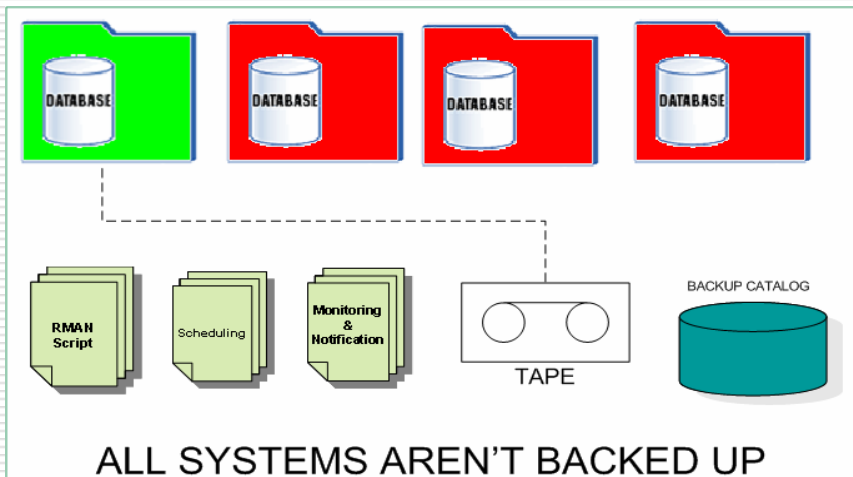
- 3. Not Comprehensive - Not all systems are included**

Are You Backing Up All of Your Systems?

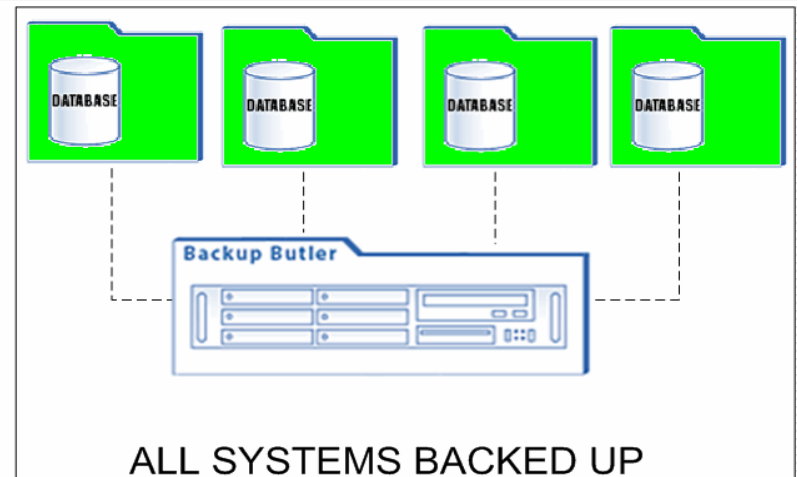
- Few organizations routinely backup all systems**
- However, nearly all systems are considered someone's "production"**
- Each of your Development, Test & QA systems are important for company projects and milestones**

Protection of all systems

... is important and they need to be backed up *or restored* easily, quickly and reliably.



VS



...
DATABASE
APPLIANCES

Performance, Reliability & Process Improvements

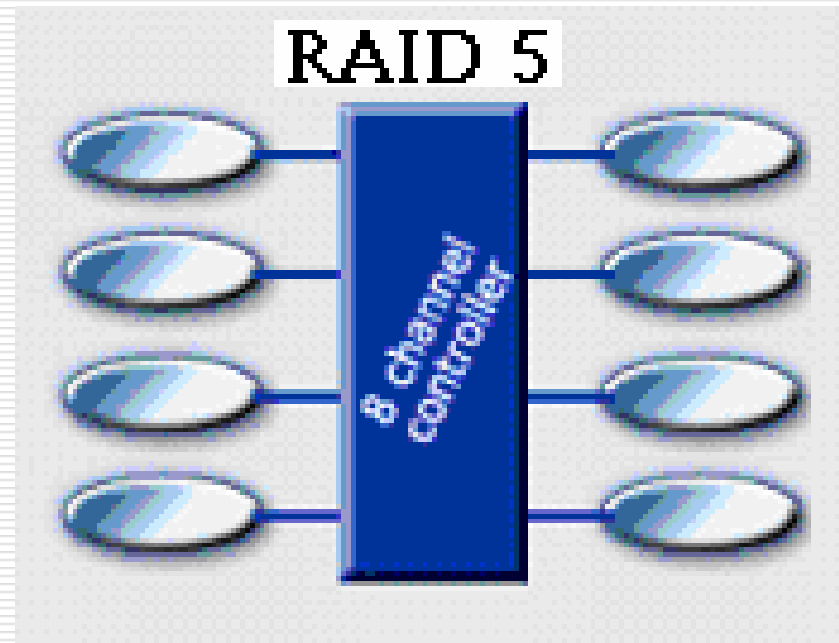
BackupButler

RAID Disk Technology:

As opposed to tape, disks provide immediate, multiplexed, sequential and random access.

Allows for:

- **backup and recovery times measured in seconds or minutes as opposed to hours with tape**
- **Concurrent backup and/or restores**



**DATABASE
APPLIANCES**

BackupButler Ease of Use

The screenshot displays the BackupButler web interface. At the top left is the 'backup BUTLER' logo. The main header area contains 'DATABASE APPLIANCES' and navigation links for 'Home' and 'Logout'. Below the header is a date 'June 13, 2003' and another 'Logout' link. A horizontal menu of 'Main Tabs' includes 'Waiting', 'Events', 'Library', 'Agents', 'Manifests', 'Preferences', 'Utilities', and 'Help'. Below this, 'Sub tabs visible only when main tab selected' are shown, including 'Waiting Sort By Agent' and 'Waiting Sort By Frequency'. A 'Subtab Report' link is also visible. The main content area is a table of tasks.

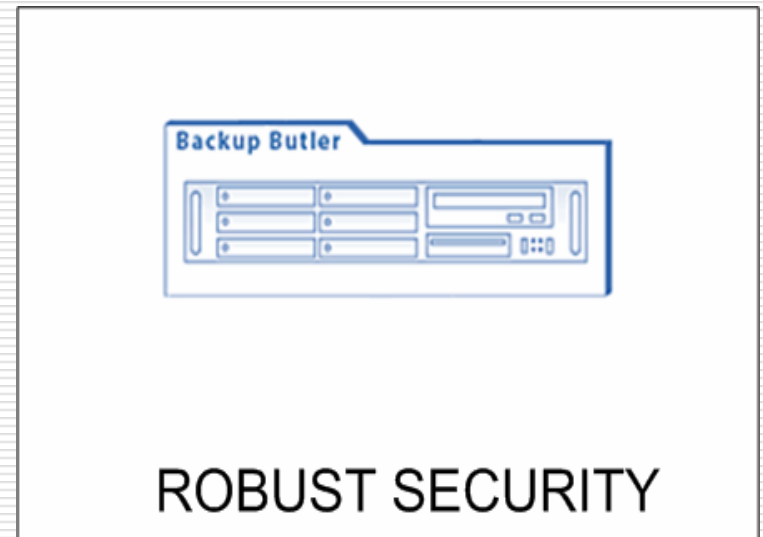
Owner	Year	Month	Week	Day	Hour	Minute	Synopsis	Pause	Task Id	Status	Complete	Updated On
hp1_Popeye	0	0	0	0	0	5	Backup archive logs.	ON	1303	HAS BEEN EXECUTED BY hp1_Popeye	WAITING	2003 MAR:19 /Wednesday 04:57:40
hp1_Popeye	0	0	0	0	3	1	Incremental level 1 database backup	ON	1314	HAS BEEN EXECUTED BY hp1_Popeye	WAITING	2003 MAR:19 /Wednesday 05:01:17
hp1_Popeye	0	0	0	0	4	1	Backup archive logs, delete after successfull completion.	ON	1311	HAS BEEN EXECUTED BY hp1_Popeye	WAITING	2003 MAR:19 /Wednesday 05:02:09
hp1_Popeye	0	0	0	0	5	1	Report obsolete backup datasets, redundancy 3, crosscheck backup, delete expred.	ON	1316	HAS BEEN EXECUTED BY hp1_Popeye	WAITING	2003 MAR:19 /Wednesday 05:03:11
hp1_Popeye	0	0	0	0	23	30	Level 0 backup the basis of the incremental backup strategy.	ON	1312	HAS BEEN EXECUTED BY hp1_Popeye	WAITING	2003 MAR:19 /Wednesday 05:03:43
hp2_Popeye	0	0	0	0	0	5	Backup archive logs.	OFF	1203	HAS BEEN READ BY hp2_Popeye, TASK QUEUED.	WAITING	2003 JUN:05 Thursday 11:59:02
hp2_Popeye	0	0	0	0	0	45	Backup archive logs.	OFF	1253	Process error, UNSUCCESSFULLY EXECUTED BY hp2_Popeye	WAITING	2003 JUN:05 Thursday 12:01:00
hp2_Popeye	0	0	0	0	3	1	Incremental level 1 database backup	OFF	1214	HAS BEEN EXECUTED BY hp2_Popeye	WAITING	2003 MAY:04 Sunday 01:56:02

- All backup and recovery activities are accomplished via point & click through our web interface.



BackupButler Security

- ❑ **Built for government level security (in use at High Security Federal Government Agencies)**
- ❑ **Backup files are encrypted (Triple DES)**
- ❑ **Built-in intrusion detection (Linux Tripwire)**
- ❑ **Complete audit trail**
- ❑ **Physical disk locks**



Cost Reductions

Backup & Recovery TCO (Total Cost of Ownership):

TCO must include all factors:

- 1. Downtime costs.**
- 2. Labor costs to install, use and maintain the architecture and processes.**
- 3. Product and infrastructure costs.**

BackupButler

Reducing total downtime

BackupButler offers the fastest way to recover your systems, thereby ensuring the least amount of downtime costs.

BackupButler

Reducing the IT Workload

- **BackupButler offers**
 - **Fastest installation and configuration**
 - **Point & Click tasks**
 - **The elimination of scripting**
- **This allows administrators to concentrate on mission critical objectives**

BackupButler's Cost Effective Architecture

- **Leverages off-the-shelf components including high capacity ATA disk drives, multi-channel RAID cards and Intel certified components**
- **= Dramatic product cost savings**

BackupButler improves your ...

- ❑ **Disaster Recovery Capabilities**
- ❑ **Resource Allocations/Commitments**
- ❑ **Standby Architectures**
- ❑ **Service Level Agreements**
- ❑ **Cost Outlays**
- ❑ **Entire Backup and Recovery Regimen**

A Backup & Recovery Revolution

**Database Appliances'
BackupButler has revolutionized
the backup & recovery process
and establishes a new standard
for enterprise system
maintenance and recovery.**

Database Appliances



The Revolution In Backup And Recovery