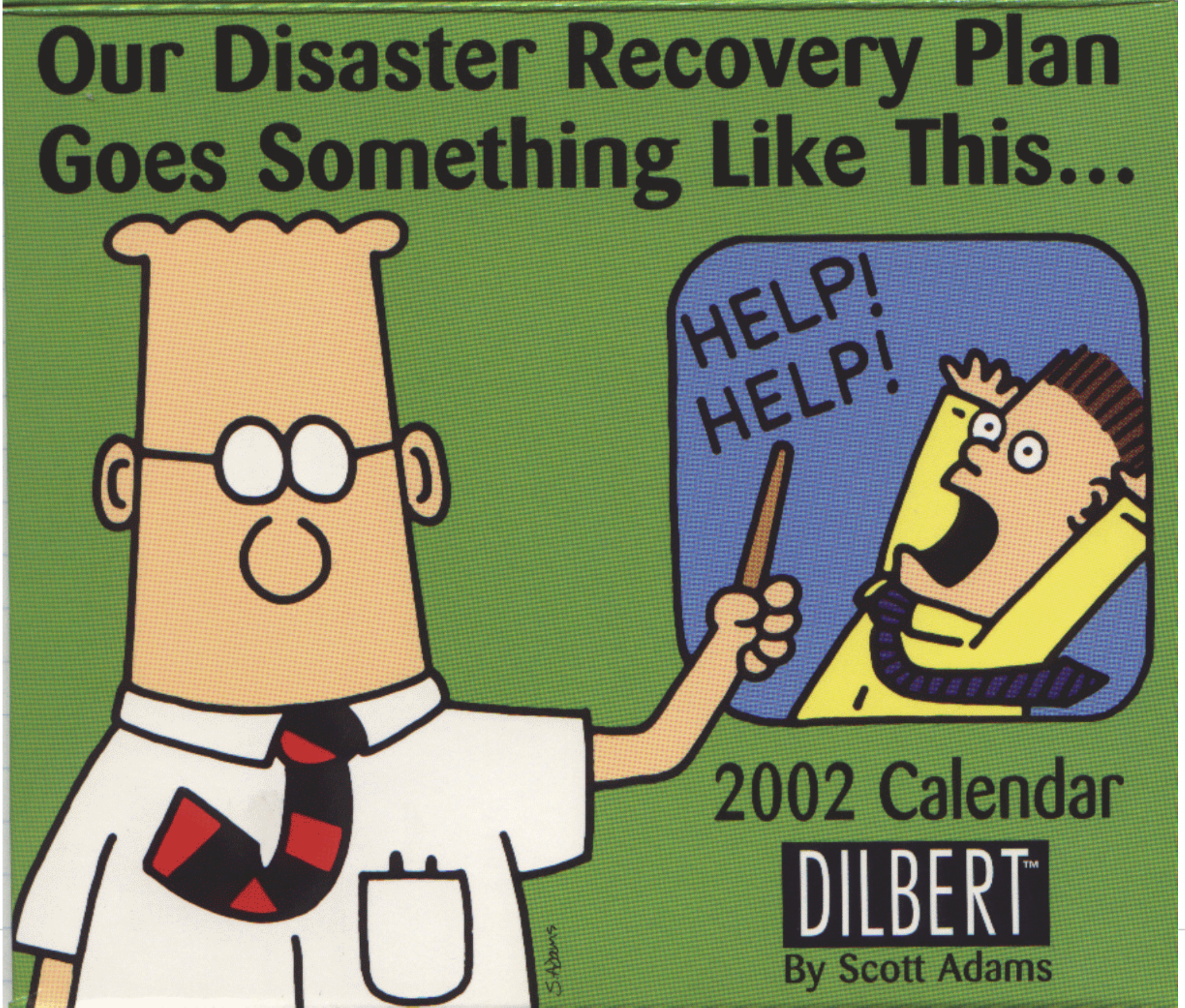
Our Disaster Recovery Plan Goes Something Like This...



2002 Calendar

DILBERT™

By Scott Adams

Abakus Plus d.o.o. - Histroy

- From 1992, ~20 employees
- 24 years of experience with GNU/Linux and High-Availability
- Oracle on GNU/Linux: since RDBMS 7.1.5 & Forms 3.0 (before Oracle!)

Abakus Plus d.o.o. - Portfolio

- Hardware
  - Servers
  - Active Backup Server
  - SAN Storage Systems
  - Routers, Firewalls
- Services
  - Oracle Database Administration
  - System administration
  - Network administration
  - Custom Software Development

- Software
  - Backup Server / DejaVu
  - Arbiter – audit trail
  - APPM – performance monitor
  - AMON – IT infrastructure monitor
  - DMS – Document Management System
  - FIS – Flight Information System
  - Distribtion of Editions
  - MediaWiki

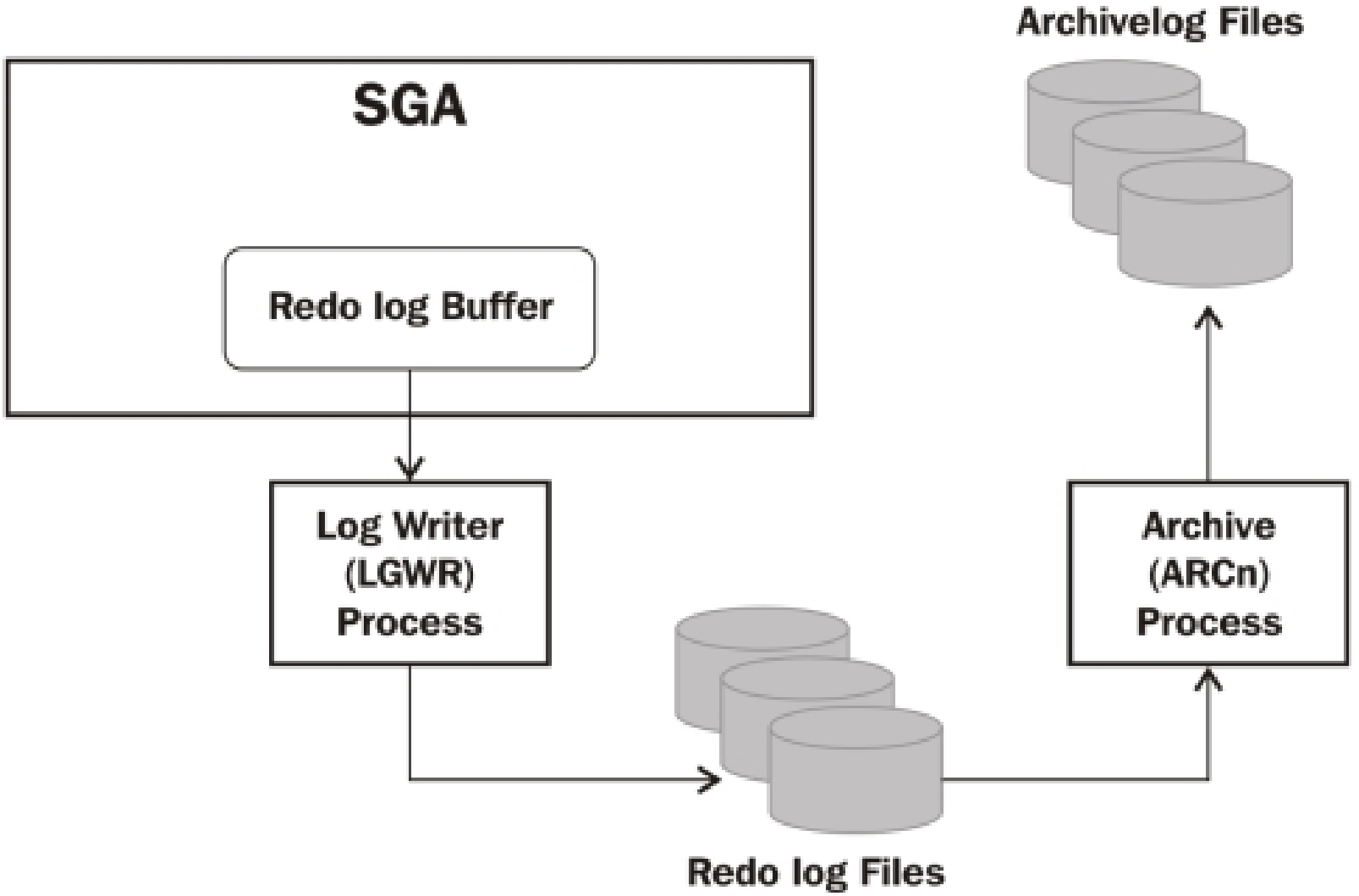
Disaster

- Natural disaster (flood, earthquake, ..)
- Hardware failure
- Accidentally modified/erased data
- Sabotage

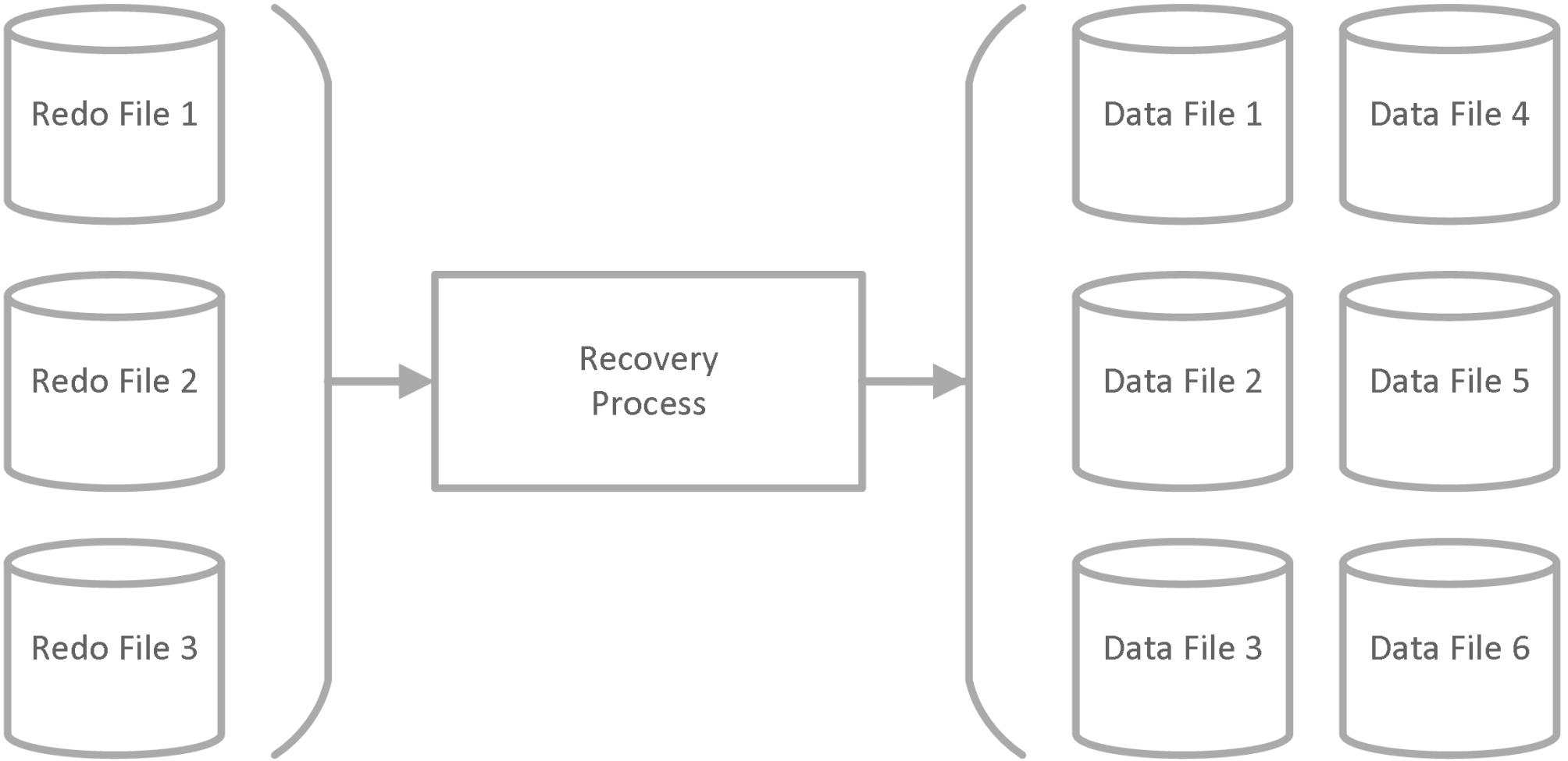
Disaster Recovery Site

- Geo-location of DR site
- Human resources
- Third party services (ICT)
- Network connectivity

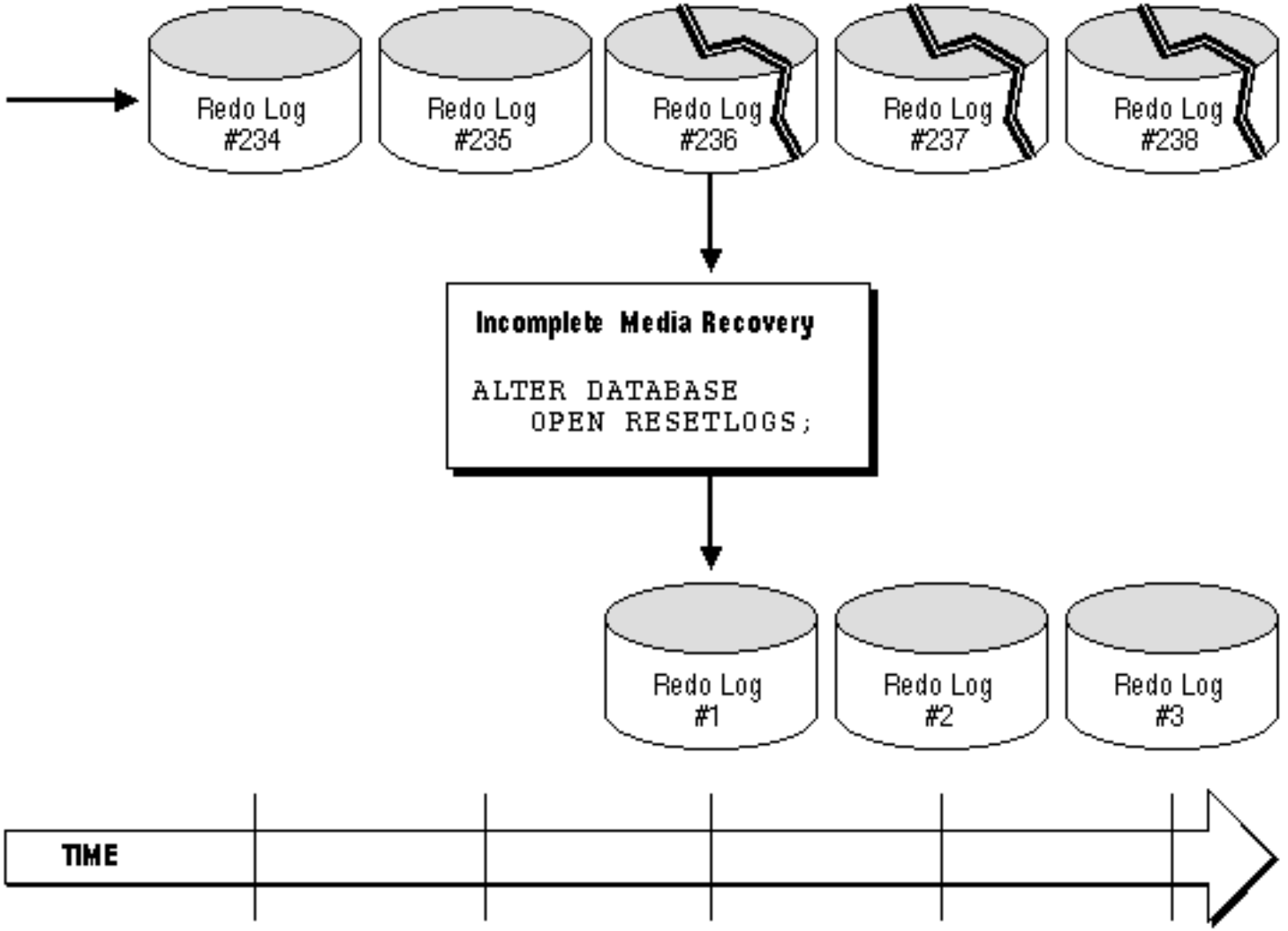
Oracle Redo


Archivelog Files
SGA
Redo log Buffer
Log Writer
(LGWR)
Process
Archive
(ARCn)
Process
Redo log Files

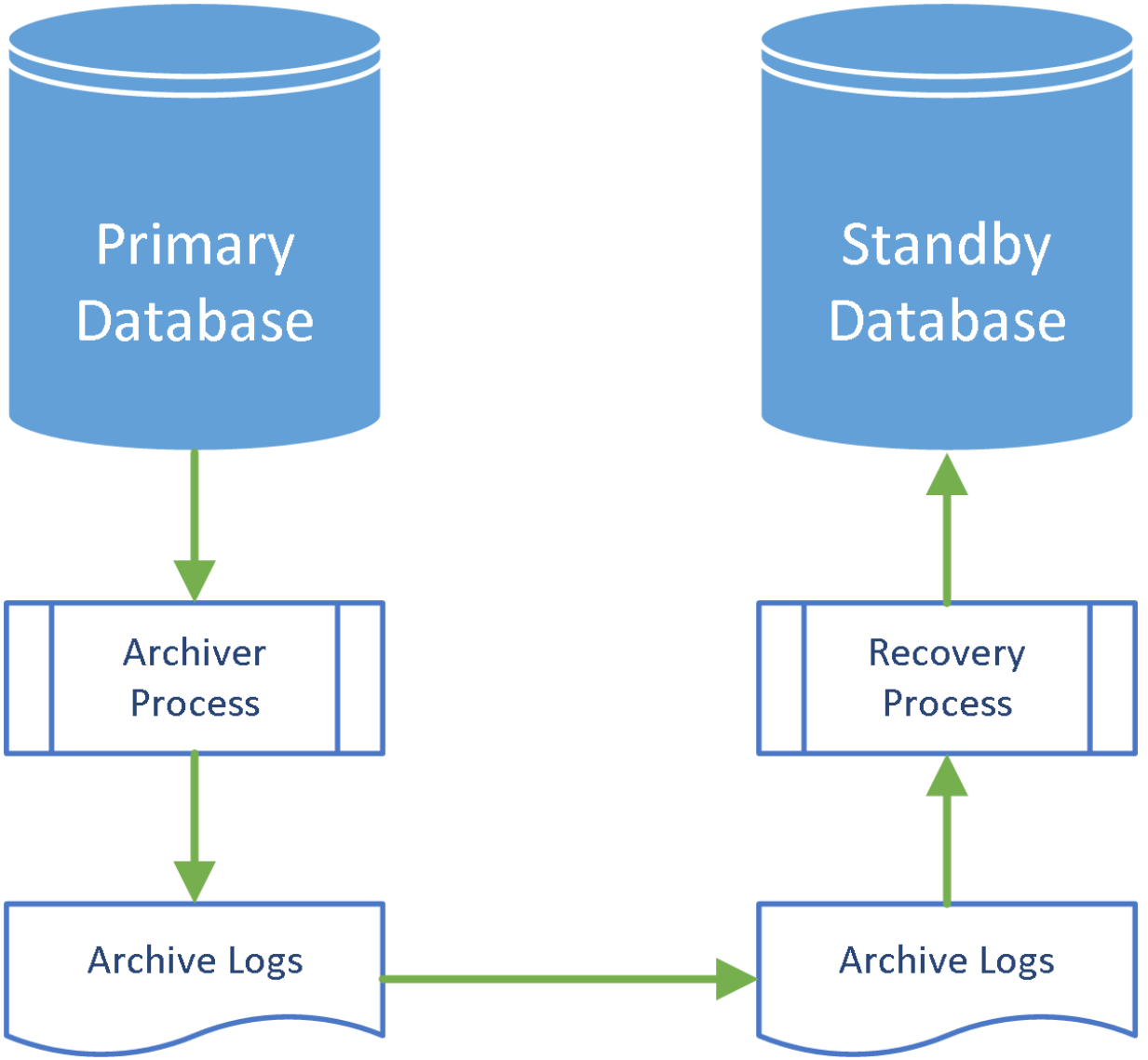
Oracle Crash Recovery



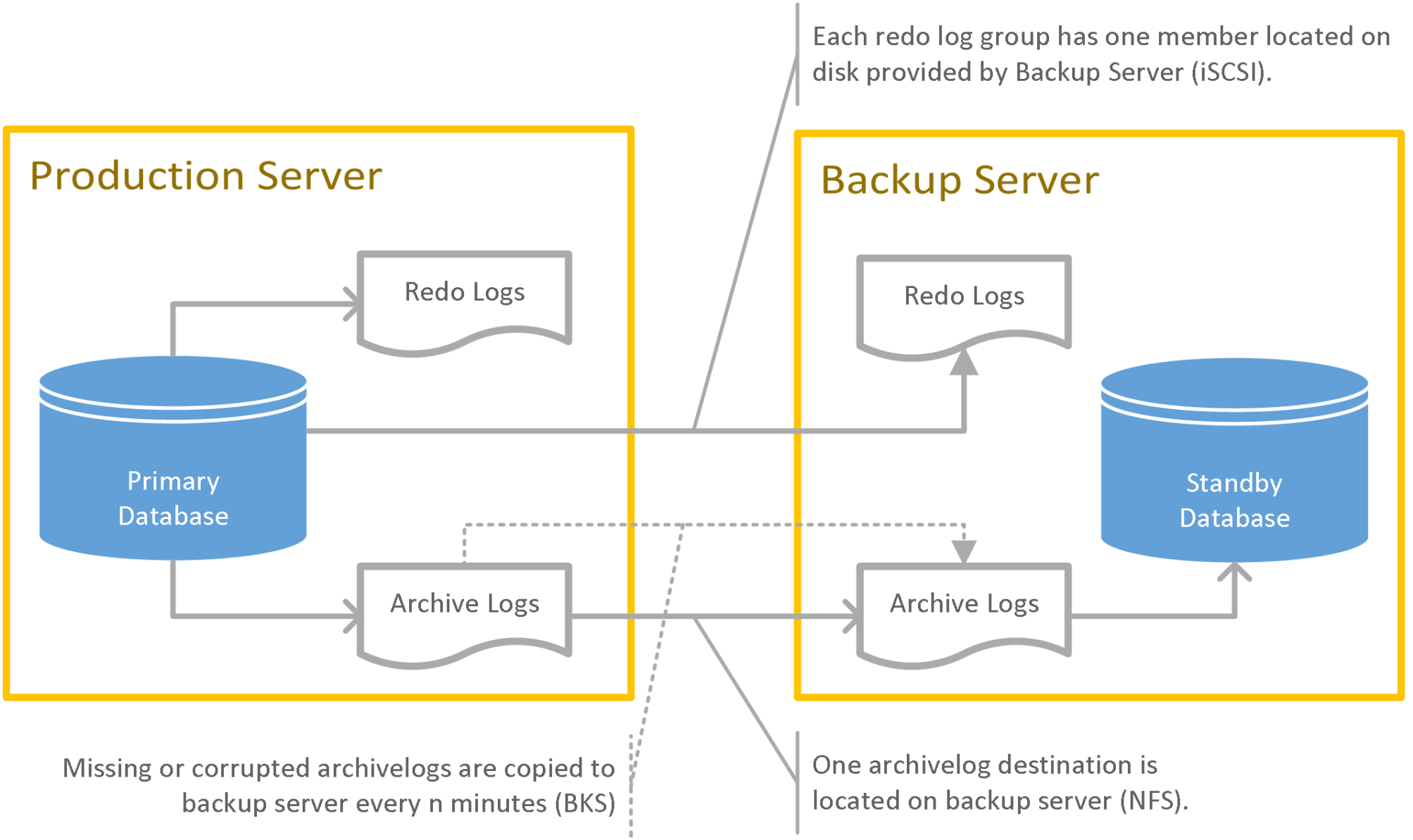
Oracle Incomplete Recovery



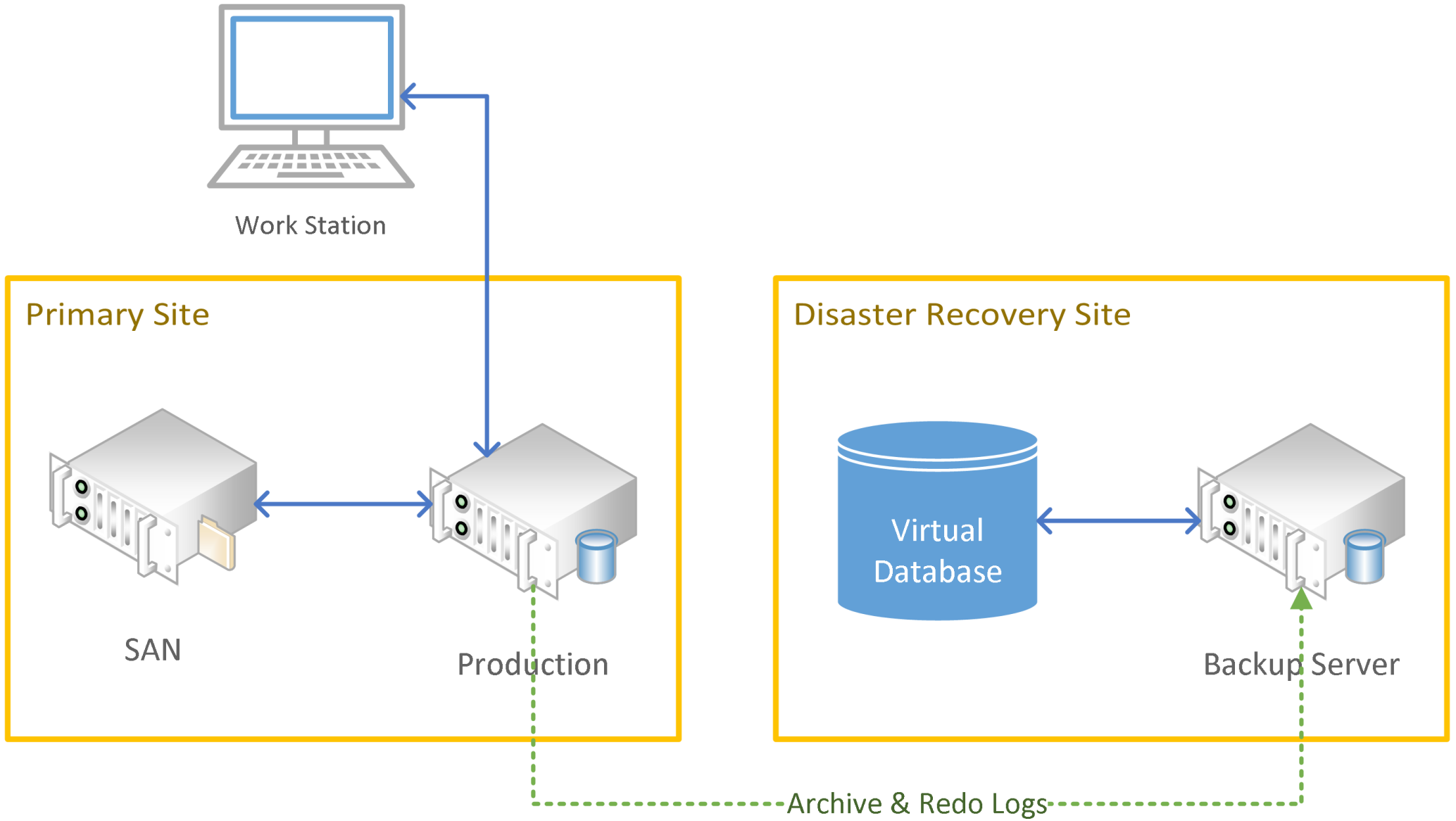
Oracle Physical Standby



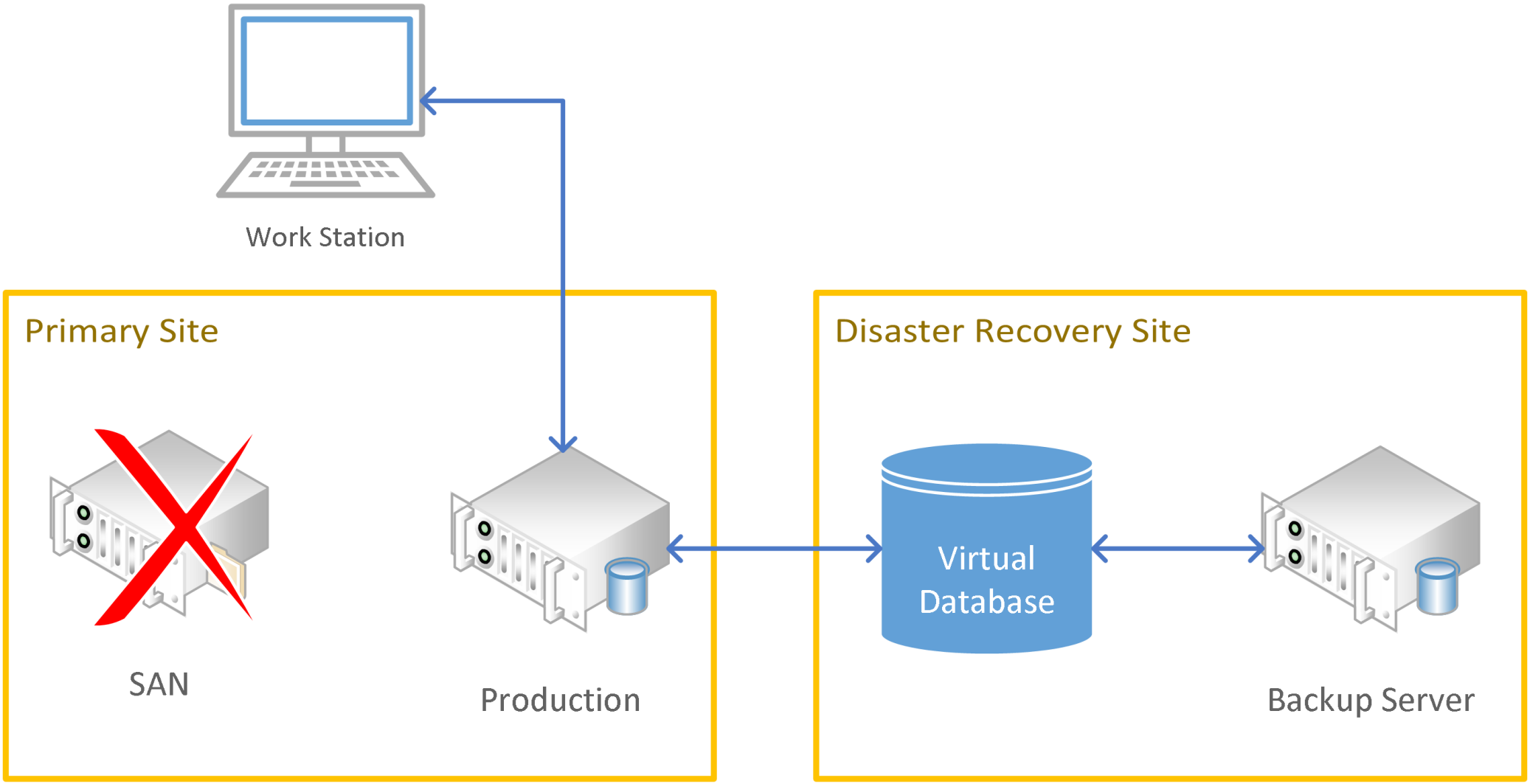
Backup Server – Total Data Protection



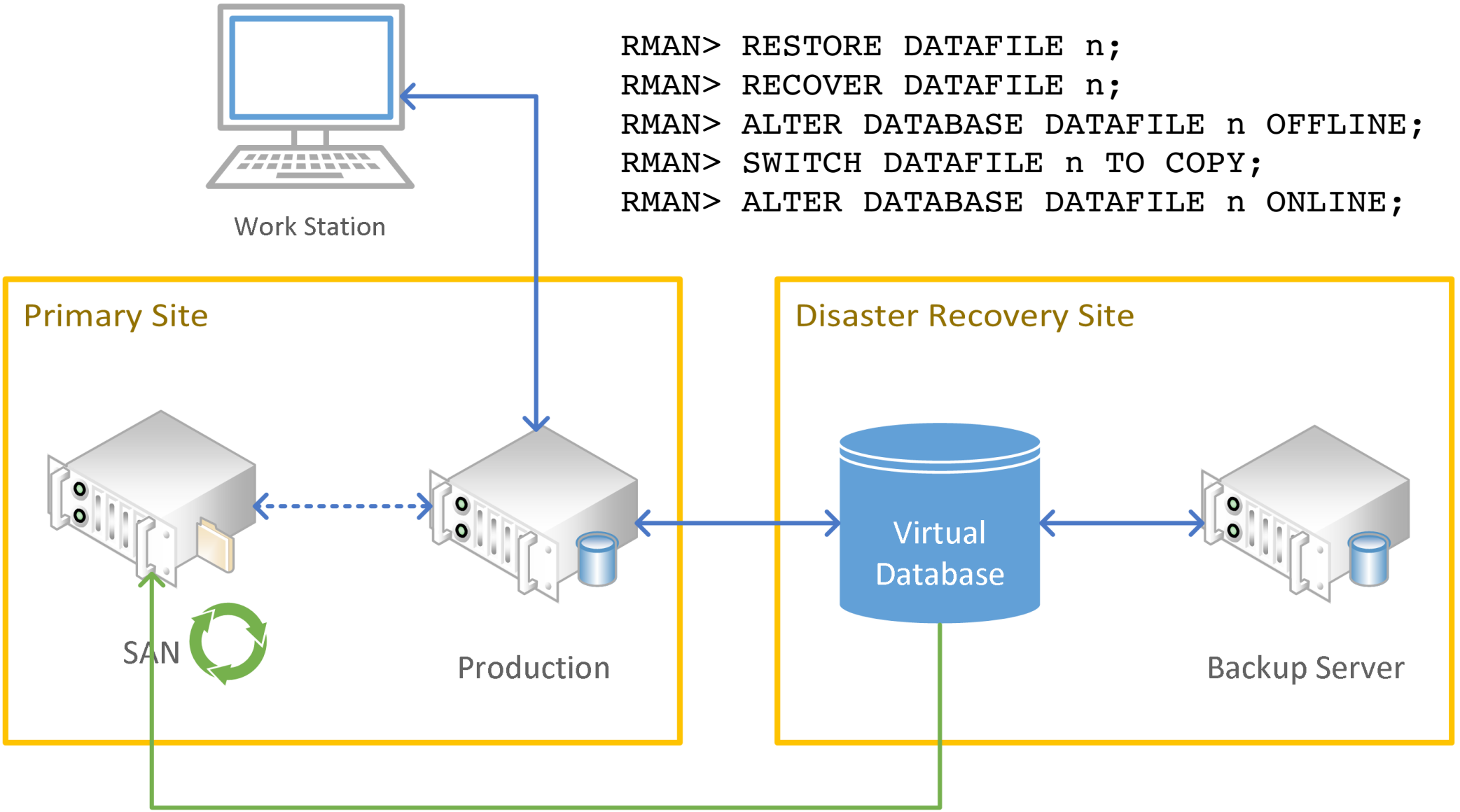
Environment



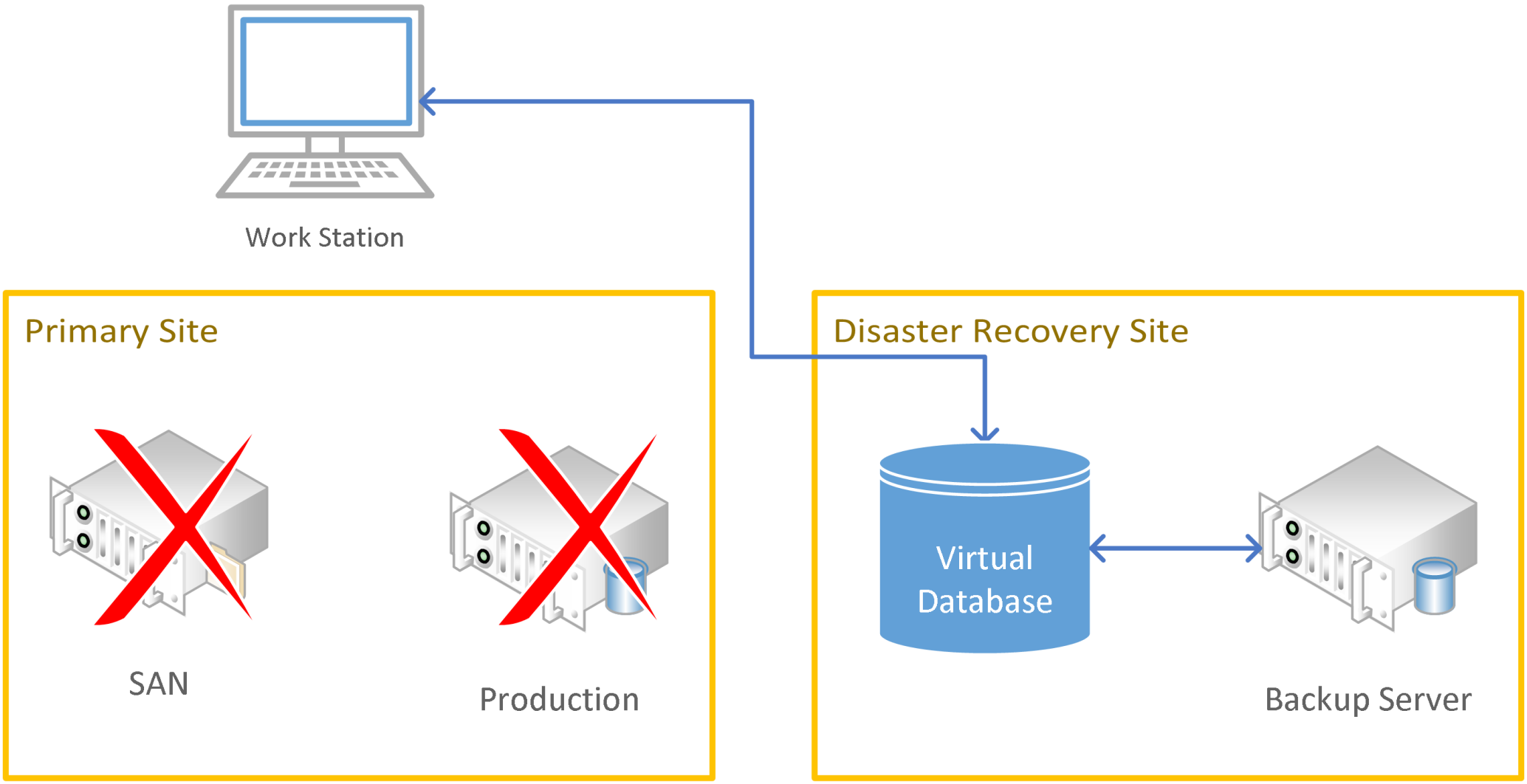
Disaster Scenario 1 – SAN Failure



Disaster Scenario 1 – SAN Recovery



Disaster Scenario 2 – Primary Site Failure



Disaster Scenario 3

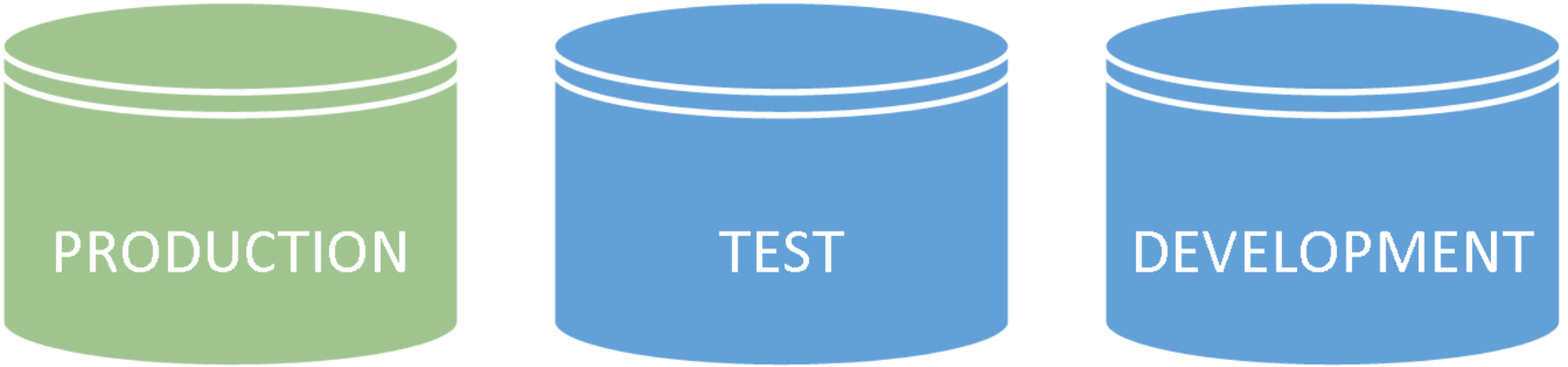
```
----- Original Message -----
From: xxxxxxxxxxxxxxxxxxxxxx
To: "Abakus DBA" <dba@abakus.si>
> Sent: Tuesday, 4. Marec 2014 11:43:55
> Subjects: The database from Friday
>
> a procedure that ran over the weekend went
> wrong. Can you restore the friday's database
> somewhere where we could repeat the procedure
> and debug it?
>
```

Disaster Scenario 3 (more examples)

- *"Procedure usually runs 15 minutes, last night it took 3 hours to complete."*
- *"Bug in production code updated too many rows."*
- *"Developers accidently truncated the wrong table."*

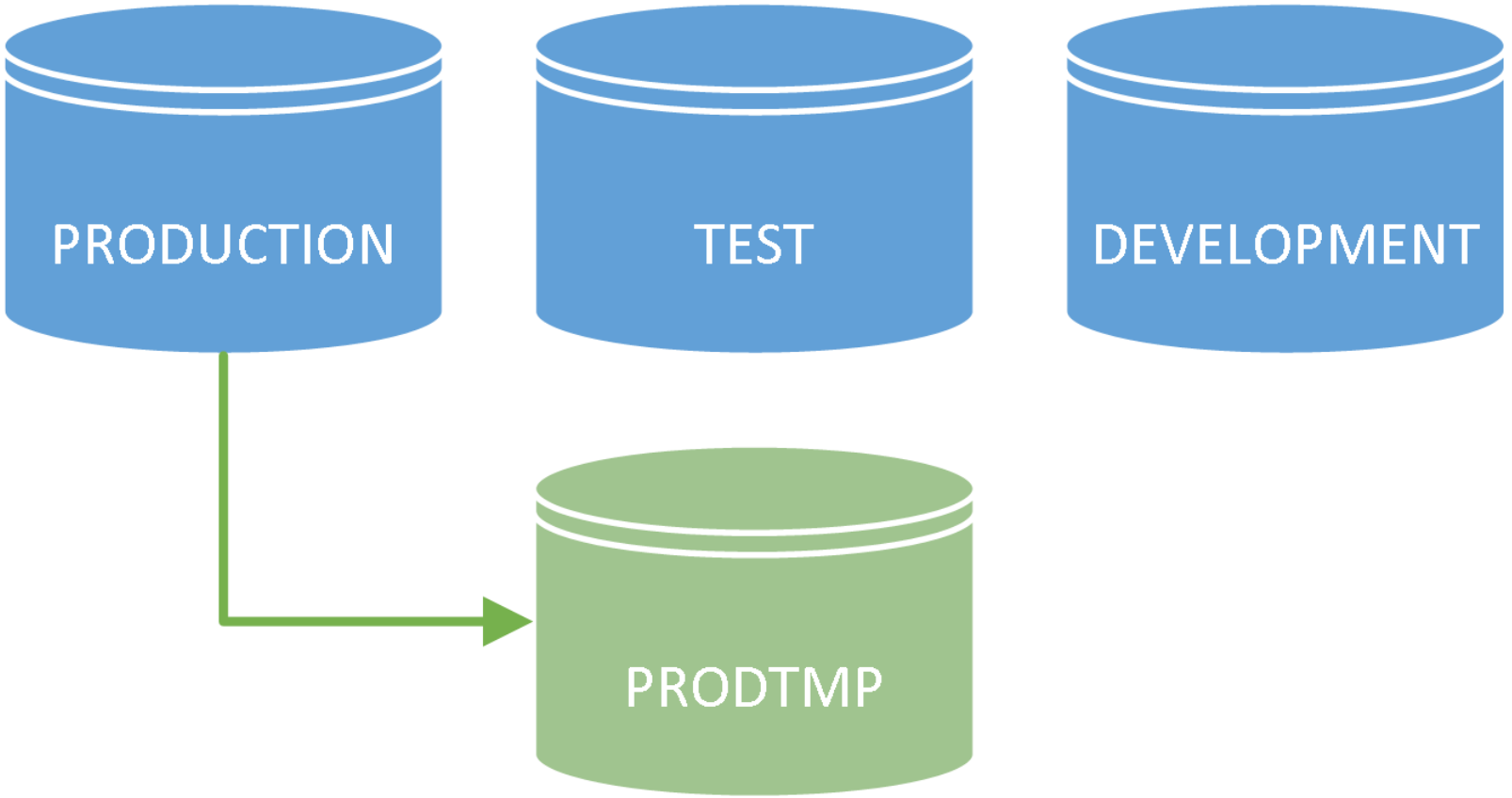
Disaster Scenario 3 – Solution a)

- Debug on PRODUCTION environment.



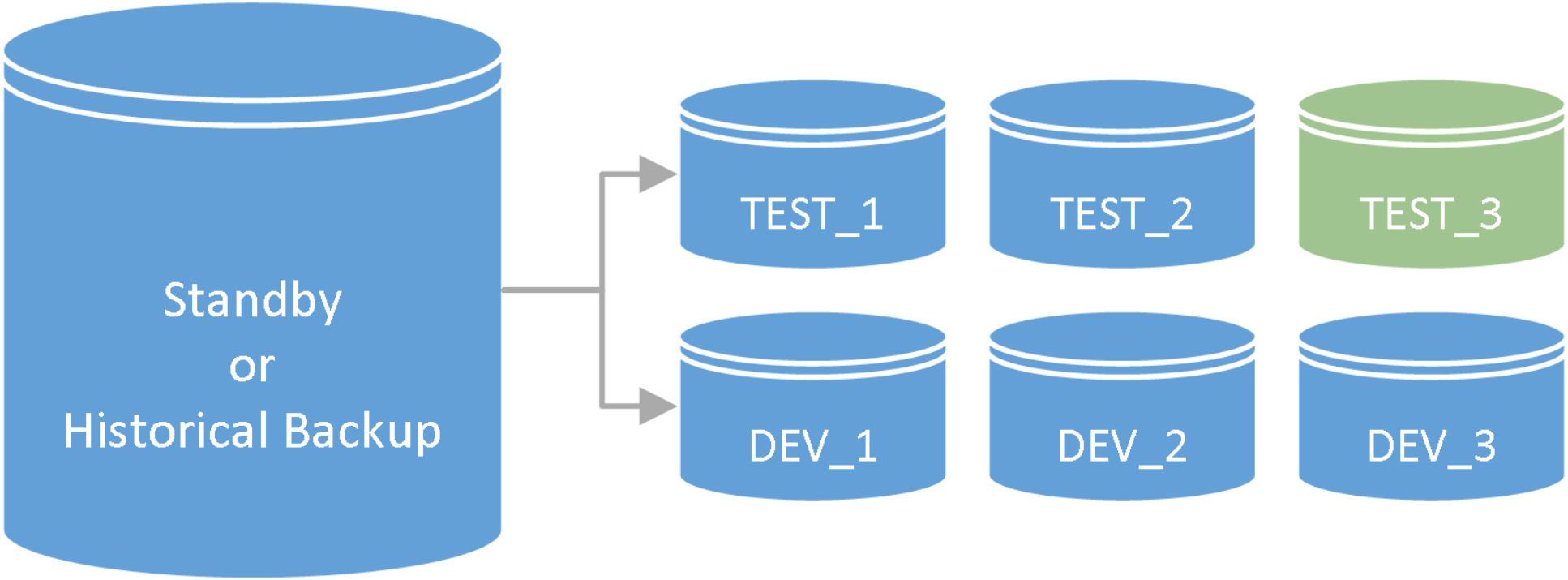
Disaster Scenario 3 – Solution b)

```
RMAN> DUPLICATE DATABASE TO 'PRODTMP'
BACKUP LOCATION '/path/to/backup/';
```



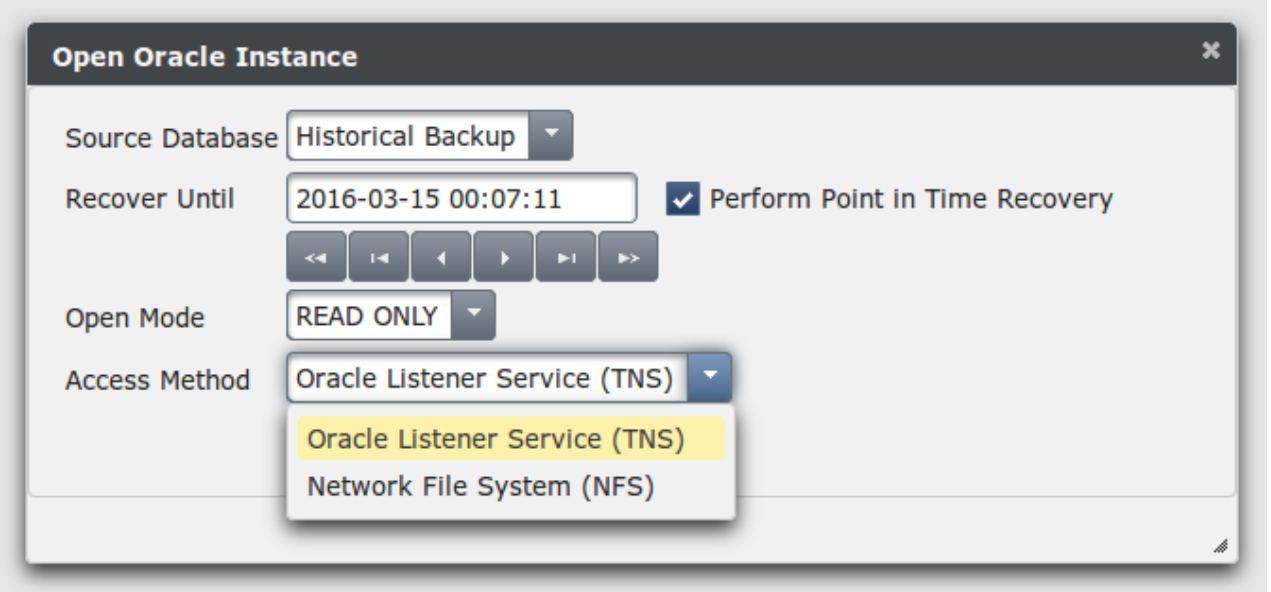
Backup Server: DejaVu

- DEV database for each developer team.
- Point in time TEST database for each problem.
- Creation of new TEST database only takes a few minutes.



Backup Server: DejaVu

- Connect to the Backup server.
- Open the database from required time in read-only or read-write mode.
- Execute failed job and debug it.



DejaVu – Final Solution

Deja-Vu Virtual Databases
Running on Backup Server

- Test Database @ 2016-01-30
- Accept. Database @ 2015-08-09
- Devel. Database @ 2016-03-14
- Debug Database @ 2016-02-12
- John's Database @ 2016-03-15
- Dave's Database @ 2015-10-19

http://www.abakus.si/