



ICT Backups

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1 Introduction

- How many people store photos/files on their computers?
- How many people actually back them up?
- How many people know how to recover them?
- Many don't, family members / friends often ask me to help as it can be complex for non IT people.
- Can you use the cloud?

Yes, the cloud is just somewhere to store files that is managed by a 3rd party.



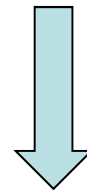
2 Why do we backup files and systems?

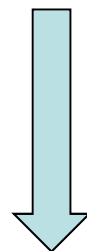
- Businesses rely on ICT more than ever.
- Software can be reinstalled but your data is priceless.
- To prevent loss of data.
- Causes of data loss – Corruption, accidental deletion or overwrite, virus, phishing attack, PC failure, hacking, theft, power failure/spikes.



3 ICT backups at BCKLWN

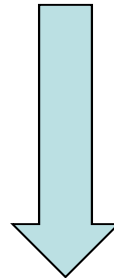
3.1 Flow of data – user inputs data







ComputerHope.com



3.2 What is the scale of what we backup?

- Systems wise – we backup over 60 business applications including Revenues and Benefits, Financials and Email.
- Size of backups taken: 2.0Tb and 1 million changed files per day
- Number of servers backed up? 200
- How often are backups taken? Daily
- Total amount stored in our backup system 100Tb – equivalent to over 1 billion pages of plain text
- How long do we keep backups? 30 days for systems and 365 days for files



3.3 How / where do we backup files?

Systems and files are initially stored in our Datacentre in King's Court.

BCKLWN has two IT backup solutions in place:

a) Spectrum Protect software backup system.

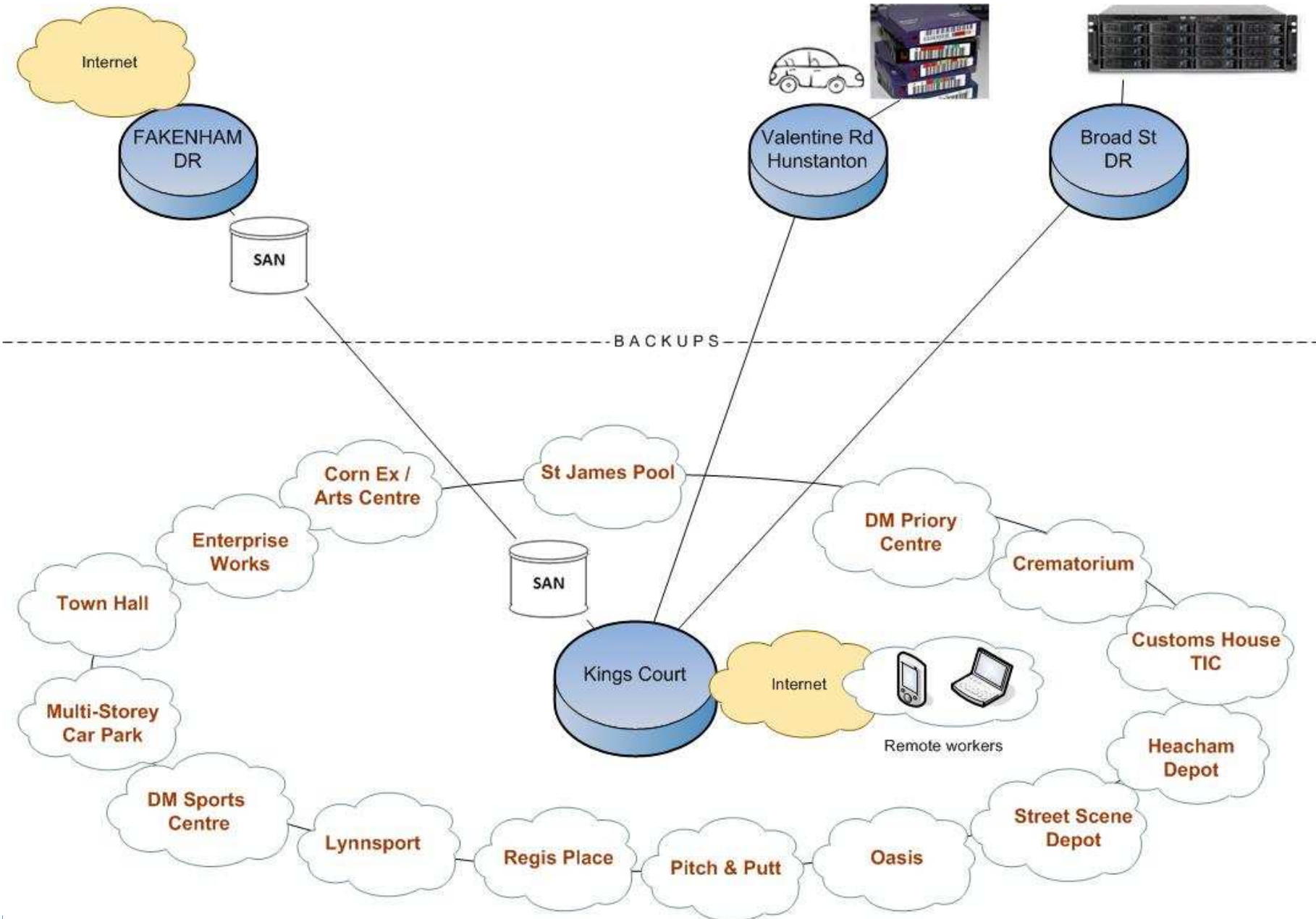
- An archive solution provided by IBM which provides for both full and incremental backup of the Council's data
- Stored at Broad Street
- Weekly transfer of backup tapes to a Council site in Hunstanton.



b) Storage Area Network (SAN) solution

- Provided by Dell
- Effectively replicates a snapshot of Kings Court Data Centre data to a Disaster Recovery (DR) site.
- Daily electronic transfer via dedicated cable, at a facility in Fakenham which is shared with North Norfolk District Council (NNDC)
- recover recent live data in the event of a partial or total loss of data) as key deliverable and is not therefore designed as a method of archiving for extended periods of time.





3.4 What controls do we have in place?

Backup Controls

- Firstly, I requested internal audit undertake an audit of our ICT Backup procedures and Disaster Recovery in 2016. The overall level of assurance was ‘Substantial Assurance’
- Where possible backups are run overnight and are completed before 7am on working days.
- Backups are stored in secure locations. A limited number of authorised personnel have access to the backup application and media copies.



Backup Validation

- The IT Backup systems have been designed to ensure that routine backup operations require no manual intervention.
- The IT department monitor backup operations and the status for backup jobs is checked on a daily basis during the working week.
- Any failed backups are re-run where possible the next working day. If this subsequently fails, the system owner is notified and it would be their decision to either take the system down for a backup or retry the following day.



Backup Restore

- Data is available for restore within a few minutes of a backup job completing on the daily schedule.
- Data will be available during the retention policy of each backup job.
- Requests for data recovery / restores are submitted to the IT Service desk.
- A log of restored jobs is maintained.



3.5 Resources Required

- The ICT Security Officer has day to day responsibility for maintaining the system and producing the necessary documentation and providing training for other members of staff.
- An ICT Technical Services Analyst has been identified to act as second line support to the ICT Security Officer.
- A member of the ICT Business Systems team checks / co-ordinates any system backup reporting or issues.



3.6 Future Developments

- E-services and an influx of new technologies is changing how we do business.
- There is now a notion of 'always on' systems.
- ICT are looking at ways to improve our backup systems to enable more 'hot backups'.
- E.g. No need to shut systems overnight to back them up.
- 'Veaam' is a product we have invested in, to facilitate a reduction in backup times and enable faster recovery times.



Thank you for listening - any questions?



