Disaster recovery at scale

Effective technical disaster recovery provides clinical business continuity

Assuring availability of Clinical Technical Services through effective disaster recovery

Within NHS Integrated Care Boards (ICB), each individual Trust typically has its own dedicated Digital, Data and Technology (DDaT) services.
DDaT services can often be seen as a blocker by Healthcare professionals, when operational services and clinical applications that are required to run 24x7 are unavailable to access at critical times.

An effective disaster recovery solution means any unplanned outages, maintenance or otherwise, of key systems and applications will fail over to an alternative method for everyone to continue working. This is viewed as an enabler for patient care, rather than a blocker.

Challenges

Healthcare services heavily rely on clinical technical systems, making their continuous availability paramount.

Events such as **system failures, cyber attacks**, **natural disasters** and other **unforeseen events** can disrupt clinical operations.

Any **significant downtime in clinical systems** will directly **impact patient** safety, diagnosis, and treatment, whist downtime in other systems can impact **trust operation**.

Safeguarding patient information and sensitive data **during a system outage** poses significant challenges when most continuity is manual.

All healthcare **facilities must adhere to regulatory standards**, requiring a robust disaster recovery strategy.

Solution approach

Identify critical clinical systems, prioritise their recovery, and understand **potential clinical and operational impacts**.

Implement **geographically distributed data centres** and redundant hardware to **ensure failover capabilities**.

Regularly **back up and replicate clinical data** to off-site locations for quick restoration.

Utilise **virtual machines and cloud services** to rapidly deploy systems in case of physical infrastructure failures.

Develop and regularly update a detailed **Disaster Recovery Plan** (DRP), **conducting frequent testing** and simulations to ensure effectiveness.

Benefits

Effective disaster recovery reduces downtime, ensuring minimal interruption to clinical services so healthcare professionals can continue **providing optimal care for patients:**

- A **well-implemented disaster recovery plan** helps healthcare facilities **maintain compliance** with regulatory standards

- Robust backup and replication mechanisms **preserve the integrity and security of patient data**

- Maintaining service availability during disasters **supports better clinical outcomes**, safeguards the institution's reputation, patient trust and avoids unnecessary cost.

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