# **Testing**

Backups are only protective if they are verified as having run currently and tested to ensure the data can be restored. You don’t have a disaster recovery plan unless it has been tested!

A successful test is one that replicated the original school processes, and there are different types of tests:

1. Audit / Review / Check List
2. Desktop / Scenario / Walk-through (Exercise in a Box)
3. Lab-based / Simulation
4. Parallel / Simultaneous
5. Full Test / Real / Interruption

# **What to test**

It is essential that your school can restore individual files, folders, and volumes from backups, by user and by application. Your school may have had to request a restoration of a file previously, and this provides a level of smaller-scale testing, but it will not support school-wide recovery. Partial restoration tests for sensitive and critical data are still very valuable.

For unstructured and user data, you will need to restore the server or network-attached storage (NAS) volumes. Large scale restoration takes time and is disruptive, so it needs to be planned in advance.

Schools also need to plan for outages that damage the whole IT environment, including situations when the server and other drives might be physically damaged. In the case of fire, or electrical or hardware failure, new hardware, or even a different backup site might be necessary.

IT support technicians should also consider, and test, restoration of data held off-site in software-as-a-service (SaaS) applications and in the cloud. Remember there is a difference between cloud storage and cloud backup.

See our website for further information <https://educationdatahub.org.uk/cyber-resilience>

# **How often to test**

Ideally you would be able to test every backup, but that isn’t practical and would potentially be disruptive. A regular and routine testing schedule should be agreed with senior leaders, ensuring priority is given to testing critical systems and data.

# **Is recovery possible and effective?**

Testing whether recovery is actually possible is the primary goal of testing, but it is also necessary to check the time is takes to restore, the completeness of restoration, and the validity of the data after restoration. Damaged datasets are a risk to business continuity and sensitive data loss may result in an ICO reportable data breach.

Testing will show up weaknesses in planning and processes and confirm whether the school can meet recovery time and point objectives. (See the [Education Data Hub](https://educationdatahub.org.uk/cyber-resilience/) website for more information on Restoration Strategies)

# **NCSC** [**Exercise in a Box**](https://www.ncsc.gov.uk/information/exercise-in-a-box)

The National Cyber Security Centre (NCSC) has developed an online tool which may help you find out how resilient your school is to cyber-attacks, and practise your response in a safe environment.

The service provides exercises, based around the main cyber threats, which you can do in your own time.

It includes everything you need for setting up, planning, delivery, and post-exercise activity, all in one place.

# **NCSC** [**Board Toolkit**](https://www.ncsc.gov.uk/collection/board-toolkit)

Governors are crucial to setting strategic direction and the National Cyber Security Centre has a board toolkit which provides:

1. [A general introduction to cyber security](https://www.ncsc.gov.uk/collection/board-toolkit/introduction-cyber-security-board-members).

2. Separate sections, each dealing with an important aspect of cyber security.

For each aspect, we will:

* explain what it is, and why it's important
* recommend what individual **Board members**should be doing
* recommend what the Board should be ensuring **your organisation**is doing
* provide questions and answers which you can use to start crucial discussions with your cyber security experts

3. An Appendix summarising the [legal and regulatory aspects of cyber security](https://www.ncsc.gov.uk/collection/board-toolkit/appendices).

Governors should also refer to: <https://www.ncsc.gov.uk/information/school-governor-questions>