

USING THE CLOUD

SCENARIO 2



Original materials created on behalf of the Education and Training Foundation
and funded by the Department for education

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Refers to Essential Skills modules:

Managing and storing information

Protecting privacy

Protecting data

Digital Wellbeing Supported by:

Using devices

Developing Digital Skills (Level 1)

Communicating and sharing

Relates to Standards:

Finding and evaluating information (Entry level)

Managing and storing information



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Creating content, files and ultimately memories in different formats is a consequence of using technology. We create things to keep and re-use or revisit for business, pleasure of for the administration of our lives.

In effect we create our own library of content. Others do the same things. Companies and employers also do it, in fact there isn't an organisation now that doesn't create store and reuse electronic content; we all have libraries.

This scenario helps learners explore where the best place is to put content they create, bearing in mind what they may want to do with it later. It also considers how we all share content, either publicly or in private spaces and how we are increasingly transacting much of our computer activity in the Cloud space and less on our own devices.

It is this personal interaction with the Cloud that is used as a means of familiarising learners with its capability and capacity.





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What is the Cloud?

The three uses of Cloud computing

1. An Infrastructure service

The Cloud provides a physical structure that connects people to content, ideas and resources. It is the structures that allows platforms, storage, retrieval and software to function.

2. A Platform service

The Cloud has software and website services that allows interaction *in* the Cloud as well as using personal devices *through* it. These are operating mechanisms for interacting with everything in the Cloud. It includes browsers, and file storage facilities.

3. An Application service

The Cloud provides operating services and updates to personal devices of software to support how users work and make use of what the Cloud is capable of. It includes manipulation of content, notifications, automatic updates, and interaction in the Cloud itself.



TEACHING TIP

Ask learners to consider what they currently use the Cloud for, or what they think others do with it. Use the three headings (Infrastructure, platform and application) to group the answers. (Entry level)

NB. The Cloud is changing constantly. Teachers should alter the suggestions here to reflect personal views and to reflect increasing complexity.

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The Cloud is in effect a giant library where everything is stored.

Each of us can put and access some of it for our own use, some we can choose to share with others, (as others can do with us), the rest is completely available to all.



TEACHING TIP

Ask learners to think about a physical library they know and make connections between the two.

Select the link to open a PDF that notes the key features of the Cloud (as a virtual library) and an actual library.

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It is full of content and break-out rooms where we can go to interact with others, with suppliers, with providers and with our families and friends.

Whole applications, games and businesses sit on the library shelves and part of the scenario will explore the extent to which the range of things we do has moved from our devices to a central and communal space.



TEACHING TIP

The analogy with a library is a good way of explaining the Cloud.

Consider using content stored on shelves, using an index system, librarians who are experts in what is available.

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The Cloud isn't one place but a collection of giant storage facilities that are connected to each other (and us) wirelessly or by cables.

It explains the use of words like 'web', 'internet', 'network' and 'online', that are more descriptive of the systems and mechanisms of its operation, rather than what it specifically is.



TEACHING TIP

Throughout this Scenario descriptive language relating to 'networks' and 'web' is dropped in favour of using the Cloud to emphasise and improve understanding of its **nature** rather than its **architecture**.



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Using Cloud enabled services

Searching

It is hard to imagine what can't be 'looked up' and found in the Cloud. Content can come in many forms and with different permissions over how the content can be used. Either way, it is a very powerful facility.



TEACHING TIP

Searching involving the work of others may have permissions attached, such as how it can be used, that should be revised.

If in doubt, learners can use the privacy notes attached to most web pages, normally found at the bottom of the content.

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Sharing

The Cloud has been well described as a place for the meeting, not so much of people but a meeting of ideas.

So much of the wider Cloud content is designed to support the sharing of ideas, based on evidence or opinions. It has led to the rise in new skills in how we comment, respond, and behave positively towards others online.

The ability of sharing created content with some, many or all others has led to an explosion in the way businesses run and individuals are able to show their skills to an audience and customer base.





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Learning activity:

Ask learners to consider what products for sale and services offered, they have purchased or engaged in through browsing the Cloud.

Some learners may have family members who are actively selling unwanted or outgrown personal goods.

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Storing

The Cloud provides unlimited amounts of storing space. What is stored can be shared or kept private.

With storage comes Synchronisation that brings two benefits for users, both of which can save time and possible anguish. Files saved in the Cloud can be synchronised with personal devices that are linked to the same Cloud account.

The effect is that only the latest version of a file is 'live' and is shared with every personal device automatically. Some Cloud accounts also provide a 'version' service allowing older versions to be accessed. Some also provide a 'handoff' service, where a file can be started on one device and then picked up and continued on another.

Benefit of synchronising

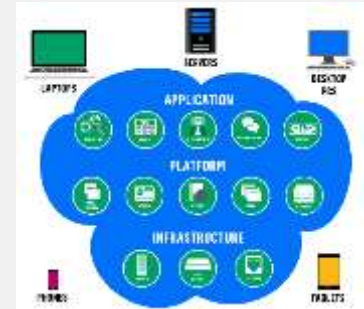
1. Files and folders are not lost if a personal device is damaged, destroyed, replaced or an additional personal device is purchased.
2. Content can be accessed and retrieved by logging into the Cloud account using any other Cloud connected, such as college-based located PCs, desktop devices, etc.

Content is then both protected from loss and accessible through using any Cloud connected device.

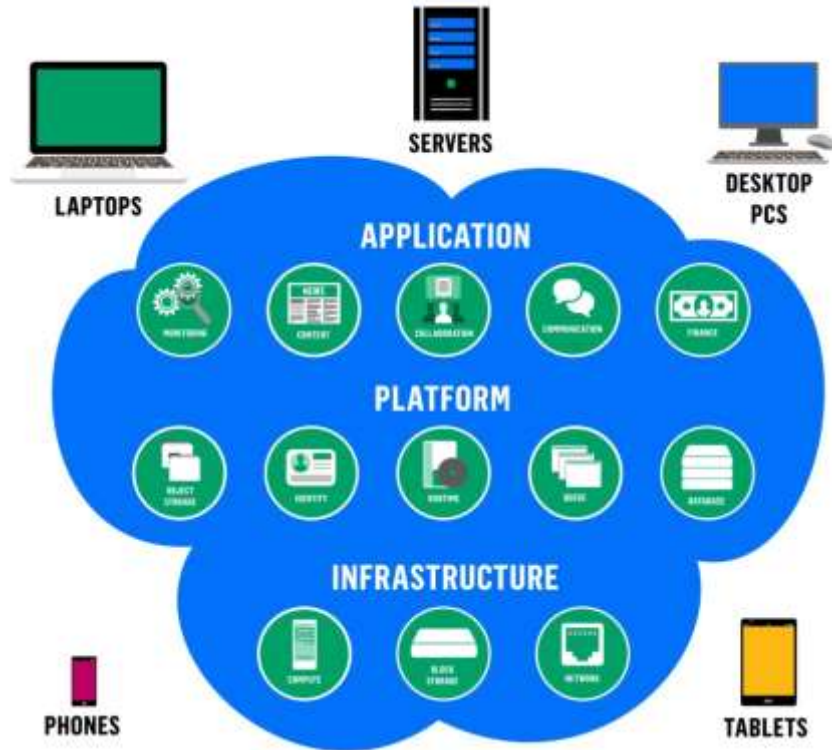
TEACHING TIP

Use a Google image that shows cloud-based computing as it relates to connecting to individual devices by way of illustration.

Use the diagram below to illustrate this (select the image to see a larger version on the following slide).



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Learning activity:

Introduce Cloud-based accounts for storage, such as Apple iCloud, Microsoft 360, Amazon, BT, Sky, Dropbox, Box and Sugarsync.

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Publishing

Perhaps the greatest property of the Cloud is its ability to bring the ideas and products of individuals to the attention of a worldwide market.

Whilst sharing ideas is a major feature of the Cloud as a tool for learning and community improvement, the commercial application of marketing and finding customers is the greatest opportunity and reason to use the Cloud.



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Learning activity:

Ask learners to consider what products and services they now source through using the internet and to share their conclusions with the rest of the class.

An alternative for those that have not used the internet before is to suggest what three things they would like to do via the internet that they currently complete by paper. (Entry level)

Some learners may have family members who are actively selling original work. Ask learners to consider what they have produced or would like to produce that could be shared with a global audience through the Cloud. (Level 1)



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Protecting content

Carelessness or lack of awareness in setting permissions for what is shared via the Cloud is covered in detail in Protecting privacy and Protecting Data.

Learner caution is the best method of staying safe online and whilst there are ways to use technology (see teaching tip) the cautious approach can be summed up as:

- Check twice, send once
- Never share anything that may later cause embarrassment or regret.

TEACHING TIP

Teachers should consider revising three aspects of protection that relates specifically to Cloud setting, covered in Protecting privacy and Protecting Data.

Aspects of protection:

1. Encryption
2. Password security - including two-factor entry
3. Using privacy settings

Knowledge of these risks (Entry level)
Actions taken (Level 1)



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Learning activity:

Managing in the Cloud - what, where and how

At the heart of the Cloud working successfully is the positive and mindful engagement with it by individuals.

The Cloud is at its best when used in supporting two things:

1. **personal file management and**
2. **individual engagement in mass activity.**

In order to do this, users need to acquire the following skills:

1. Managing personal storage in a coherent and efficient manner.
2. Recognising and observing netiquette in dealings with others.
3. Managing personal privacy through preference settings and following sound behaviour of technology.
4. Managing personal data securely.
5. Managing preferences in commercial accounts.



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Learning activity:

Ask learners to explore Cloud accounts by setting one up and adding files to it.

Step 1:

Establish a Cloud-based account and save a file in a folder to it. (Entry level)

- Add further folders and files. (Level 1)
- Find the settings or preferences for the account and explore the settings (Entry level).
- Ask learners to change them to reflect the preferences for each learner (Level 1)



TEACHING TIP

Learners should explore a cloud account they already have (Sky, Amazon, BT, Apple, OneDrive).

If preferred a new one can be set up, even if only as an exercise in order to explore file saving and preferences (Dropbox, Box, Sugar Sync).

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Learning activity:

Ask learners to explore Cloud accounts by setting one up and adding files to it.

Step 2:

- Discuss encryption and turn encryption on where available using settings in personal devices.
- Ask learners to search YouTube for videos to explain this for their given personal device. This can be a paired activity to one personal device (Entry level)



TEACHING TIP

To help learners search for information on encryption, provide some examples of guidance on encryption for operating systems learners use in our class.

Choose generic guides if preferred to show learners. Do this by showing your searching projected onto the class whiteboard.

Where there is uncertainty, consider paring learners with more confident enquirers to work together.

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Learning activity:

Ask learners to explore Cloud accounts by setting one up and adding files to it.

Step 3:

- Visit and explore on a personal device an App Store (Google, Apple, Microsoft). Download a free app (that can be deleted later).
- Visit a range of apps. Ask learners to read the details about how it operates and the degree of interplay between Cloud and device.
- As a good starting point learners should identify the privacy settings on each app. as well as their operating system and, by default, choose the most private setting.
- Then, suggest learners open up individual settings as prompted and when they feel confident



TEACHING TIP

Once learners are actively involved in finding apps and exploring their operation in the Cloud ask them to share their discoveries as they go by sharing them with the class.

Replicate what the learners have found on the board on a screen at the front of the class to support their interest in sharing.

Repeat the YouTube search if required – searching for instructional videos. Repeat pairing where learners are happy to do this, but either don't have devices or are reluctant to use personal devices in class.



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Summary

Cloud computing has been a story of the steady movement of software, services and content moving from sitting on personal machines to sitting in the Cloud and using personal devices to interact with it there. It is likely that this trend will continue. It is currently evidenced in the growth of subscription-based streaming services (TV on-demand for example).

Deciding which services to use, which providers to provide them and the size, and speed of transaction are interconnected choices that constitute its good management.

1. The choices relate to deciding on preferences for the need for entertainment, information and education (in its broadest sense).
2. These considerations are also informed by the personal, professional, commercial and civic life choices and the requirements that flow from them.
3. Ultimately, managing an efficient collection of services that matches the user requirement is the definition of good management of Cloud services.



TEACHING TIP

Provide an image of these three points to facilitate a discussion as a means to get learners thinking about the shape and reach of Cloud services they require.

Select the link to open a PDF that has a brief summary of Cloud management.

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Extension activity

Introduce learners to understanding that Cloud-based services includes subscription TV and streaming channels, and the use of mobile phones. How are these services merging into packages or complementary services?

A wider discussion about the need to exchange information around preferences and viewing habits creates a lot of data for use by providers and perhaps others.

What are the benefits and challenges that might flow from this increased gathering of personal data?

TEACHING TIP

Use the six headings shown in the Appendix 3 to facilitate a discussion about the advantages and disadvantages of where content is stored.

The six headings are: storing, accessing, synchronising, keeping back-ups, managing safety and storage of precious files.

Select the link to open Appendix 3 - a PDF of a comparison of the value of using the Cloud or local spaces for personal storage.

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Further resources

All about the Cloud - main introduction on Wikipedia.

https://en.wikipedia.org/wiki/Cloud_computing

An article and video from 'How stuff works' looking at possible futures in the way the Cloud will change how we all live.

<https://computer.howstuffworks.com/Cloud-computing/Cloud-computing.htm>

Zoom is an example of a Cloud-based virtual meeting space.

<https://zoom.us>

Synchronising files using Microsoft Cloud services. Similar services are available with other providers.

<https://support.office.com/en-us/article/Video-Sync-OneDrive-files-and-folders-3b8246e0-cc3c-4ae7-b4e1-4b4b37d27f68>

Synchronising files using BT Cloud services. Similar services are available with other providers.

<https://www.bt.com/help/broadband/bt-cloud/getting-set-up/use-bt-cloud-to-back-up-content-and-devices/how-do-i-add-files-or-folders-to-bt-cloud-sync->

Information on Encryption and how to set it up.

<https://lifehacker.com/a-beginners-guide-to-encryption-what-it-is-and-how-to-1508196946>

Information on access to Google Cloud storage.

<https://www.google.co.uk/drive/>



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Further resources

Explore how to set up a Skype account for online conversion and meetings.

<https://www.wikihow.com/Set-up-a-Skype-Account>

Explore the use of Cloud computing using Dropbox, in particular.

<https://www.wikihow.com/Category:Dropbox>

Explore how to set up and use an Apple iCloud account.

<https://www.wikihow.com/Category:iCloud>

Explore how to set up and use a Microsoft OneDrive account.

<https://www.wikihow.com/Category:OneDrive>

JISC guidance on the aspects of Cloud computing.

<https://www.jisc.ac.uk/guides/cloud-computing-in-detail>



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Appendices

Select the links to open the PDFs for the appendices.

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[Appendix 2 – Summary of Cloud management](#)

[Appendix 3 – Comparison of the value of using the Cloud or local spaces for personal storage](#)

[Appendix 4 – Three Cloud services](#)



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