Task A

Firewalls use one or more of three methods to control traffic flowing in and out of the network, describe how each of the following methods work.

Packet filtering

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| Packet filtering firewalls operate inline at junction points where devices such as routers and switches do their work. However, these firewalls don't route packets; rather they compare each packet received to a set of established criteria, such as the allowed IP addresses, packet type, port number and other aspects of the packet protocol headers. |

Proxy service

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| A proxy server acts as a gateway between you and the internet. It’s an intermediary server separating end users from the websites they browse internet traffic flows through the proxy server on its way to the address you requested.  The request then comes back through that same proxy server and then the proxy server forwards the data received from the website to you. Proxy servers are useful because they act as a firewall and web filter themselves. |

Stateful inspection

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| State-aware devices not only examine each packet, but also keep track of whether or not that packet is part of an established TCP or other network session. This offers more security than either packet filtering or circuit monitoring alone but exacts a greater toll on network performance. |

Task B

Identify the pros and cons to using firewall software.

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| **Pros** | **Cons** |
| Monitors traffic that is attempting to enter the network. | For a good one it can incur a high cost, there are plenty of free alternatives but they’re not as effective. |
| It can be very effective in detect trojans. This type of malware work by stealth and is immediately blocked by the firewall. | If a firewall runs in the background constantly then it might require a lot of processing power and consume a high degree of memory which can affect the computers performance. |
| It allows you to manage the activity that takes place on the server and client side. | Can cause disruption to an organisation if employees wish to access certain websites or download genuine software. This could be a result of too many restrictions put on in the first place. |

Task C

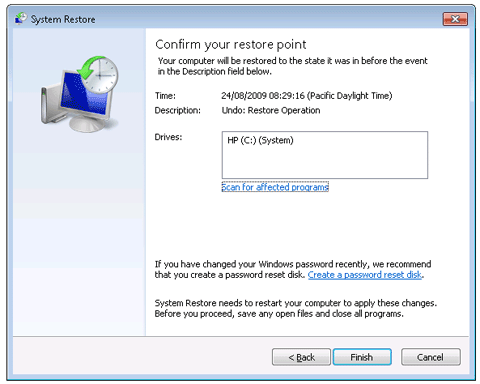
Describe the purpose of a firewall.

Before you write your description, look at the answer builder tool underneath the help you.

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| Description:  A firewall is software that monitors traffic coming into a private network. It is used to detect any unusual traffic trying to enter the network, traffic that might carry serious threats. It can do detect traffic by employing methods such as: packet filtering, proxy service and stateful inspection. | Example: |
| Answer builder:   |  |  |  | | --- | --- | --- | | ⚫ | ⚫⚫ | ⚫⚫⚫ | | What does a firewall do? | Why is a firewall used? | How does a firewall manage data coming in to the network? | | |

Task D

Windows provides an in-built feature called a system restore.



What is the purpose of a system restore?

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Identify some of the issues of using a system restore to retrieve lost data.

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Task E

Descrbe the purpose of backing up data

Before you write your description, look at the answer builder tool underneath the help you.

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| Description: | Example: |
| Answer builder:   |  |  |  | | --- | --- | --- | | ⚫ | ⚫⚫ | ⚫⚫⚫ | | What does backing up data mean? | Why is data backed up? | Provide some examples of backup methods | | |