Developing a Network:

This is setting up IP addresses in properties in ‘Local Area Connection’ in the Network and Sharing Centre in Control Panel. I deselected all of the networks checkboxes accept the TCP/IP4 checkbox and changed the IP address to a certain one for the workstation.

This is configuring the certain IP address by using command line, making sure my own workstation is connected to the network with the new IP address. I configured the IP address by seeing a confirmation on the screen that the IP address of the workstation has been identified and also using
a ping command to test the connectivity from one workstation to another which has been successful. It was necessary in setting up the network as the IP address is required to create the network, for devices to connect to workstations to the network.

Setting up three user accounts, one of them includes an administrator. Creating two standard user accounts, an administrator and setting up a password for each of the accounts that I have created. Logging off and logging back on to check that the account work correctly. It was necessary in the setting up of the network so that they have accounts for the network to be compatible for users to communicate with each other on the network.
I have created seven files in one of the five folders, in the accounts folder to be shared by users across the network, going into accounts properties to set the setting to be shared within the users. It was necessary as it is one of the requirements for users to have shared folders and files.

**Increasing Network Complexity:**

Adding a printer to the network by adding a device in the hardware and sound section in control panel then searched to find the device installed which is the printer and then test print paper to check that the printing device is working. Logging out and logging into each of the created accounts to check that the users have access to the printer. This addition helps to meet the network requirements for work purposes as users are able to produce their own work.
Setting up a remote desktop facility by going onto 'Remote Desktop Connection' in the start menu, entering in the computer IP addresses to connect to the certain computer, with one desktop I connected to on top of the computer desktop that I am currently using. This addition helps to meet the network requirement of needing to access your work desktop whenever you are away from work, so the users can work from their offices at long distances.

**Testing the Network:**

<table>
<thead>
<tr>
<th>Test</th>
<th>Method</th>
<th>Expected Outcome</th>
<th>Actual Outcome</th>
<th>Corrective Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check Connectivity Of Workstation</td>
<td>Check it by using the PING test.</td>
<td>Can use office programs, anti-software program, applications, internet, etc.</td>
<td>Can use office programs, anti-software program, applications, internet, etc.</td>
<td>N/A</td>
</tr>
<tr>
<td>User Login And Password</td>
<td>Administer to see that the user name and login are there.</td>
<td>User name and login are there as expected.</td>
<td>The administrator and the user accounts are</td>
<td>N/A</td>
</tr>
</tbody>
</table>
# Rosa Rawlings

**BTEC Level 2 Extended Certificate in Information and Creative Technology**

**Unit 11: Computer Networks**

**Assignment 3: Features and Design of a Computer Network**

<table>
<thead>
<tr>
<th>Access To Personal Folder</th>
<th>Tested by the user logging on and clicking onto the personal folder.</th>
<th>The user will be able to access to their personal folder without any issues.</th>
<th>Able to access the ‘Accounts’ folder in a shared folder with all of the seven files that I have created.</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access To Shared Folder</td>
<td>The user logging on and clicking onto the personal folder.</td>
<td>The user will be able to access to their shared folder without any issues.</td>
<td>Able to access to the personal folder through the shared folder.</td>
<td>N/A</td>
</tr>
<tr>
<td>Check Connectivity To Printer</td>
<td>Check it by printing a document.</td>
<td>Printed paper.</td>
<td>Same picture on the screen as it was on paper with decent graphics.</td>
<td>N/A</td>
</tr>
<tr>
<td>Check Remote Desktop</td>
<td>Tested through a user name and password to get to the remote desktop.</td>
<td>Managed to get to the remote desktop without any issues.</td>
<td>There was one issue with finding the certain computer to get to the remote desktop</td>
<td>Fiddling around with the computers, managed to find the matched PC.</td>
</tr>
</tbody>
</table>

## Evidence of PING Testing

![Ping Test Result](image)
Rosa Rawlings
BTEC Level 2 Extended Certificate in Information and Creative Technology
Unit 11: Computer Networks
Assignment 3: Features and Design of a Computer Network

Checking the User Account User Name and Password

Checking Access to Files

Connection through a Remote Desktop
User Feedback:

1. Are you able to access and use the computer network?
   - No internet access.

2. Are you able to set access rights and set login restrictions?
   - Yes.

3. Do you have your own individual folder with full access rights?
   - Yes, have full access to my own individual folder at fast reasonable speed.

4. Can you access to at least six other user’s folders with different access rights?
   - No, difficult to access shared folders with full access rights.

5. Do you have a minimum of seven files on the network?
   - The files are simple to access.

6. Can you connect to the laser printer?
   - Printer needs to be set as default.

7. Can you use a remote desktop?
   - Yes, there’s connectivity to the remote desktop.
Adding a router to the network for access to the internet and have users access to the shared folders through a remote desktop.

**Refining the Network:**
The improvements based on the user feedback are to consider how the network could be improved. The improvement of access to the internet is setting up back up routines to support the protocol that I have set up. Adjusting the shared settings so users can have full access to each other’s folders and having the folders stored on a shared network location; set the printer to the default printer. The desktop icons can be all crowded up on the remote desktop so the desktop icons could be limited.

**How The Network Meets User Requirements & Review of User Requirements:**

Original Requirements:

- All team members must be able to access and use the computer network.
- The computer network must be configured to allow adding more users, changing access rights, and setting login restrictions.
- All team members must have their own individual folder on the computer network with full access rights.
- Everyone should be able to access each other’s folders with different access rights. This should be configured for at least six people.
- Everyone will be working with a minimum of seven files on the network.
- All computers in the network must be able to connect to the laser printer.
- The computer network should make use of remote desktop to allow users to take control of other computers in the network.

After the improvements have been made the network meets the above original requirements. I have improved the access to the internet to meet the requirement of being able to access and use the computer network by setting up back up routines to support the protocol for the network. The access rights and setting login restrictions are met as users can have access to their accounts through a password and users can set their own login restrictions with more secured passwords. I set the folder for every user to have the same folder and tested the with each user that they can access their own same folder. I have improved the shared settings so users can have full access to each other’s folders through the same settings for each user to have the same folder, then test with each user that they now have access to each other’s folders. As the users have the same folder they also have the same files, at least seven files, after testing users have easy straightforward access to the files. Going into desktop devices settings, I have improved the connectivity to the laser printer by adjusting the settings to default. Lastly I met the remote desktop requirements, as for each computer has the same protocol to be able to access onto a different computer desktop.

The requirements have all been successfully met after changing the internet, shared folders and printer faults. The user said regarding of the necessary improvements that there isn’t any internet access, that it was difficult to access shared folders with full access rights and that the printer needs to be set as default.
Evaluation of the Network:
The original design, packet tracer is scanning a packet header and forward the packet as a result to send messages from one computer to another. With the improvement made for access to the internet, there is a packet tracer and that it does what it is supposed to do. The difference is that I have the internet access with the packet tracer but with the user feedback saying they can’t access the internet which is where the packet tracer is, I have made the changes so that users can have access to the internet with the packet tracer.

Justified changes that were made from refining the network, the changes I have suggested are to have back up routines for the protocol to have access to the internet, to adjust the shared settings for users to have full access to each other’s folders and changing the printer settings to default settings for connectivity to the printer. This would help the user to do research, pick up resources from the internet, each other’s folders for work purposes in functionality. The printer for the graphics part of the work purposes in reliability and functionality. All of these to meet the requirements for the required performance.

Recommendations I could do for further development is addition of new devices that would be a scanner and tablets. With scanners missing from the office environment wouldn’t meet the user requirement for handwritten and draw paper to be transferred onto a PC. With tablets users can take work home with them or anywhere else without having to know the protocol number to get onto a remote desktop. An upgrade of the laser printer as it doesn’t meet every user’s needs in the quality and the graphics of the printer, as a new upgraded printer goes with the new modern technology of tablets.

The difference in cost between the original and final network is less than expected. That account management and remote desktop is not all needed after setting the network. As you can create user accounts onto a computer itself without requiring a costly account management. It isn’t necessary to buy a remote desktop when you have an installed remote desktop onto each of the computers. Only requiring a created protocol to able to use the remote desktop.