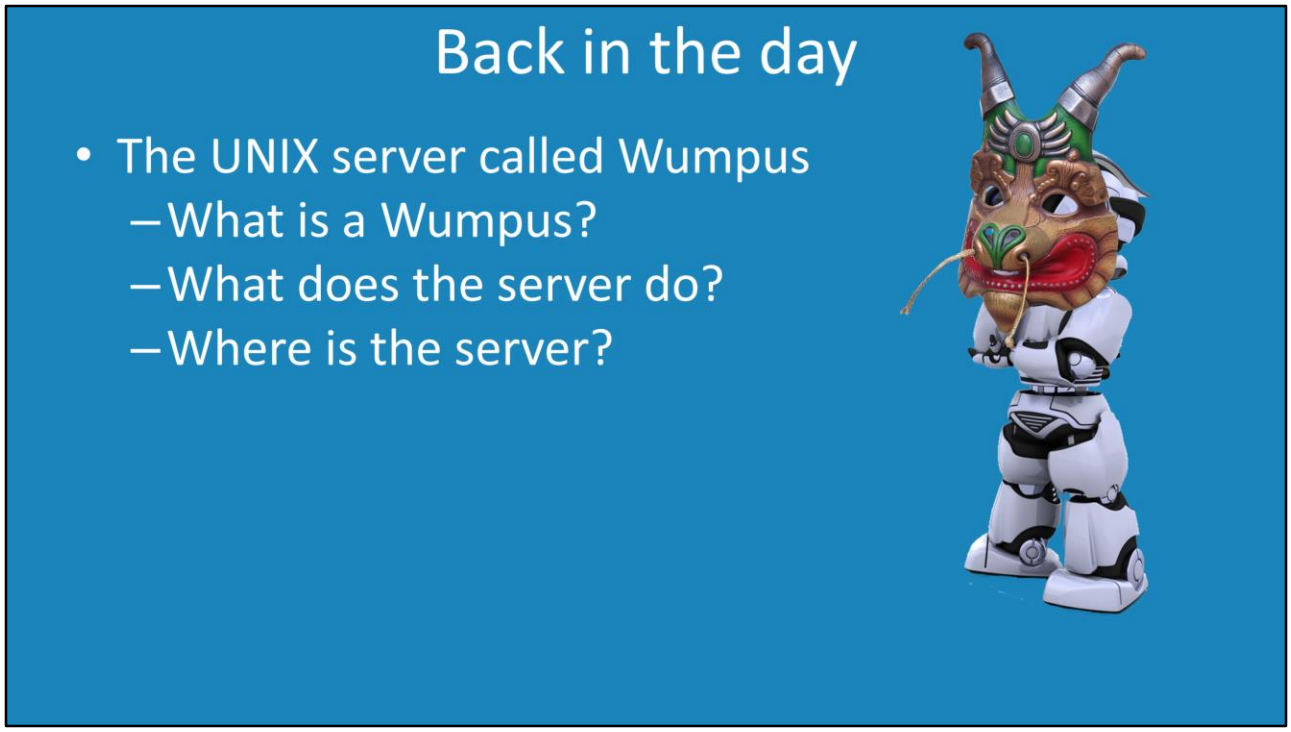
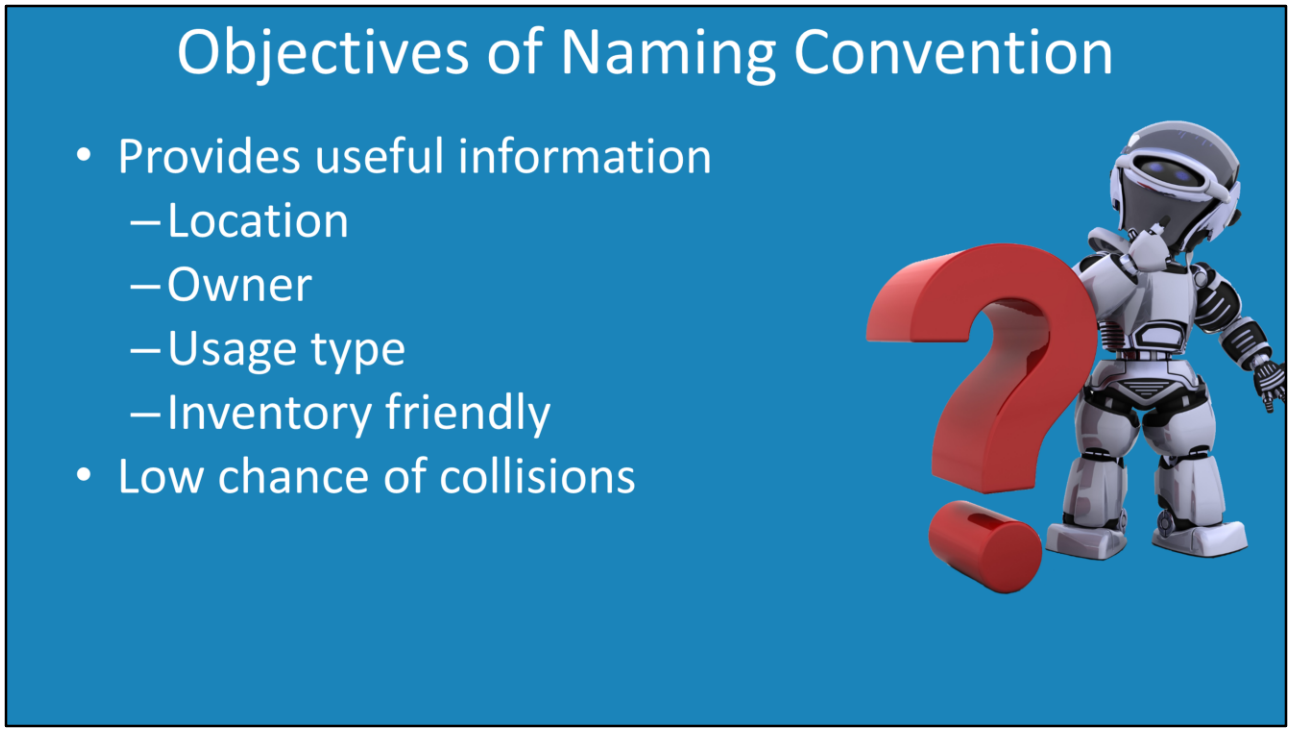
This video will look at some naming convention that can be used on networks for computers, e-mail and file shares. There are many different naming conventions used in the world and these are just some examples of what you may use. It is important that a naming convention is used on your network as, when the network becomes larger, it will be more manageable if a naming convention was used early on.



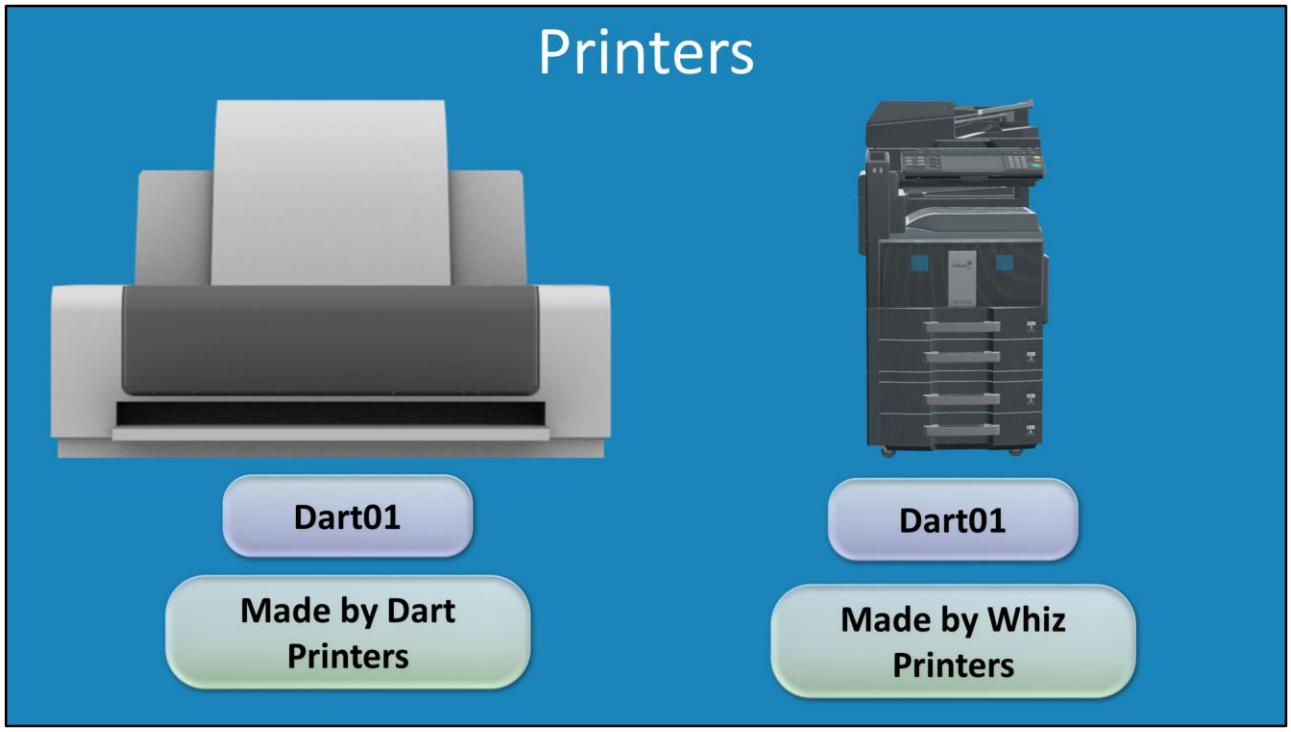
Back in the day

00:22 - In the old days of computing, I used a Unix server called a Wumpus. Now, does the name Wumpus provide much description as to what or where the server is? Unfortunately, it doesn't explain a thing. In small networks, you could name the resources any arbitrary name such as Simpsons or movie characters but that does not provide any information about the resource itself nor is it viewed as professional in IT. Many have regretted using a bad naming convention early on and in today's professional IT environment it is not even considered. In this video, we will discuss how to name your printers, computers, servers, email addresses and file shares. But first, we need to ask what makes a good naming convention



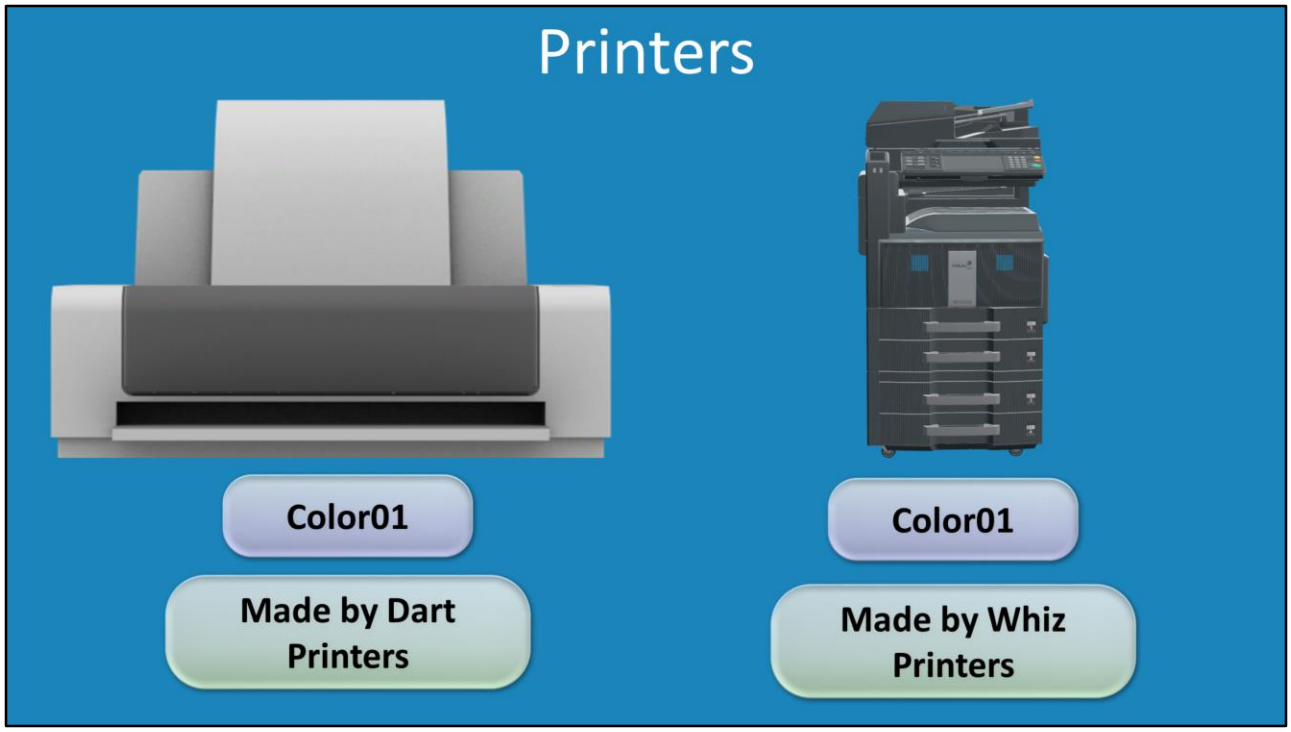
Objectives of Naming Convention

1:18 - The variety of naming conventions in use today is huge, and seemingly every company has their own naming convention. Ultimately, the decision about which naming convention to use comes down to the individual administrator, company board or possibly executives. A naming convention that could be considered useful provides information such as a location, an owner, or what it is used for. Be sure to consider current and future needs when it comes to a naming convention. If you do not have a global network, that is a computer network spanning more than one country, it is not necessary to state the country in the naming convention. Factors such as location, country or state, should all be considered to make the most out of the network naming convention. When using auditing software, the naming convention should be 'inventory friendly' as it will allow hardware tracking to be exponentially easier; which, as an IT administrator, directly relates to less headaches. Consider using very unique names to reduce the chance of conflicts which can be common with email addresses. If it's too simple, such as John@company.com there is a high likelihood that there will be another John at the company who will end up using John2@company.com, which looks unprofessional.



Printers

2:46- One of the biggest mistakes that may come back to haunt you is including the model name in the Printer's network name. Consider a printer made by the company Dart, thus named Dart01. The issue that may arise is when the printer is replaced by a printer made by a different company. The problem occurs when the replacement printer is made by a different company, such as Whiz Printers. In an effort to reduce administrative work and have quicker up-time, this Whiz printer is named Dart01. If you were to change the printer name, it would require reinstallation on all computers with it already installed. If the printers failed suddenly, the quickest solution would be to replace it and use the name already in place.



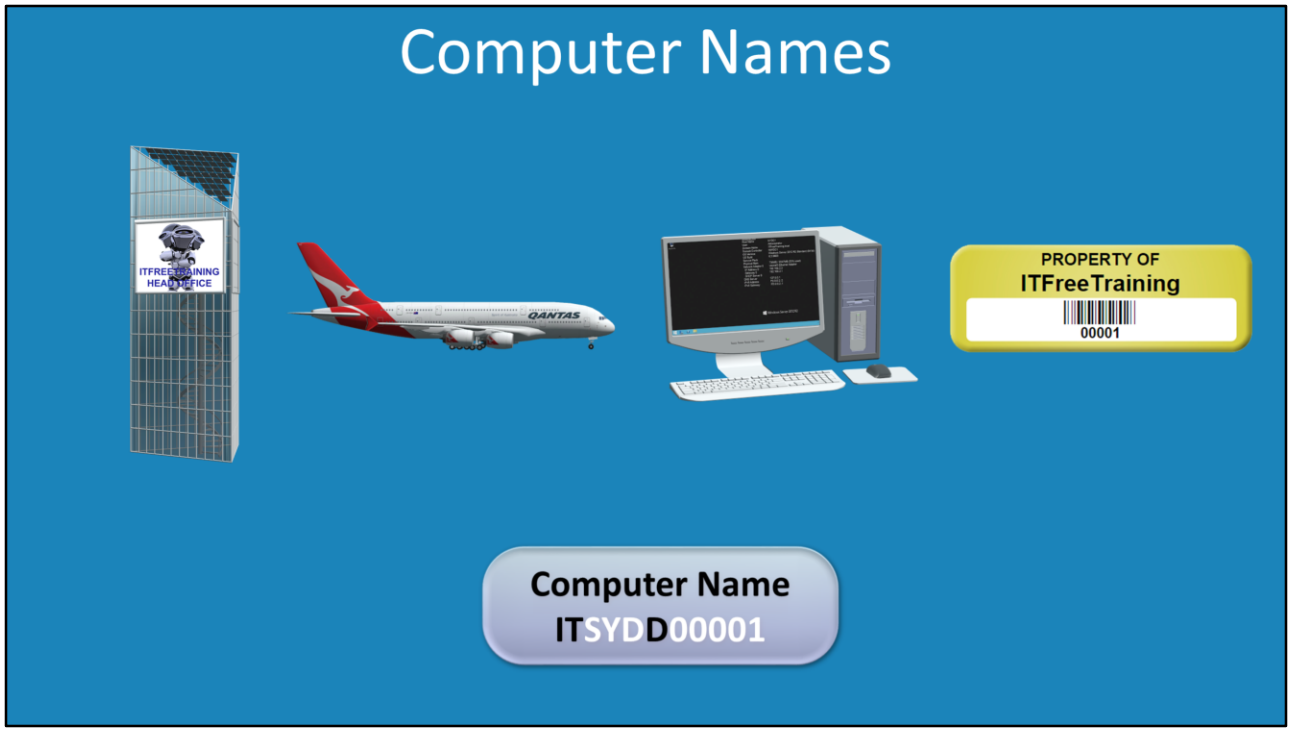
There are occurrences where a printers have been replaced, but kept the name of the old brand for years. You could potentially name the printer after the characteristics of the printer, such as whether it's a color printer or not. Say the printer has been replaced with one that does many different features such as double sided printing, collating, stapling and A3 printing. If you were to retain the old name, Color01, this would not explain or detail what new features the printer has.

Printer Naming Standard 1

4:12 - We'll look at two different standards in this video though there are virtually infinite ways in which to name your own network. It all comes down to choosing which suits the company's requirements the best. Consider a printer located in a US Office, in the state of New York, situated on level 1 of the building, specifically in the art department. Furthermore, this is the 3rd printer to be installed in this location. This would result in a name of 'USANYLVL1ART03'. It is as long as it is descriptive but it explains exactly what and where it is. This would be good for a very large corporation such as Microsoft who has over 100,000 employees located around the globe.

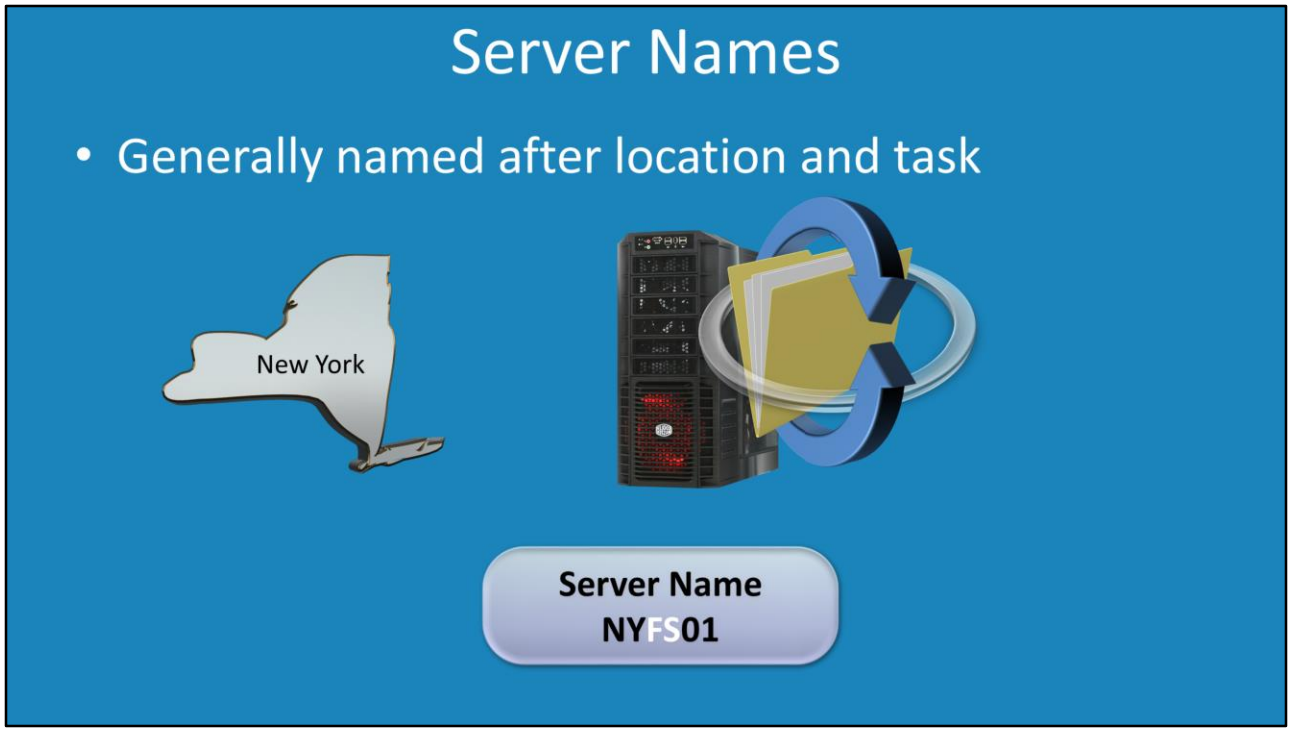
Printer Naming Standard 2

5:10 – This second standard is a simpler version of the first. More suited for small businesses with a small number of printers but located over a large area. This example would utilize the local airport's international code combined with the number of the printer. In this case it would be SYD03, but this could be fit to use country codes depending on what you require. This may seem too simple but consider that most companies are using a small number of photocopiers rather than a large number of printers. Looking at the typical utilization of printers, you'll notice that there are a fairly small amount of printers compared to 10 or 20 years ago. Ultimately it is a matter of the network administrator looking at current and future requirements of the network.



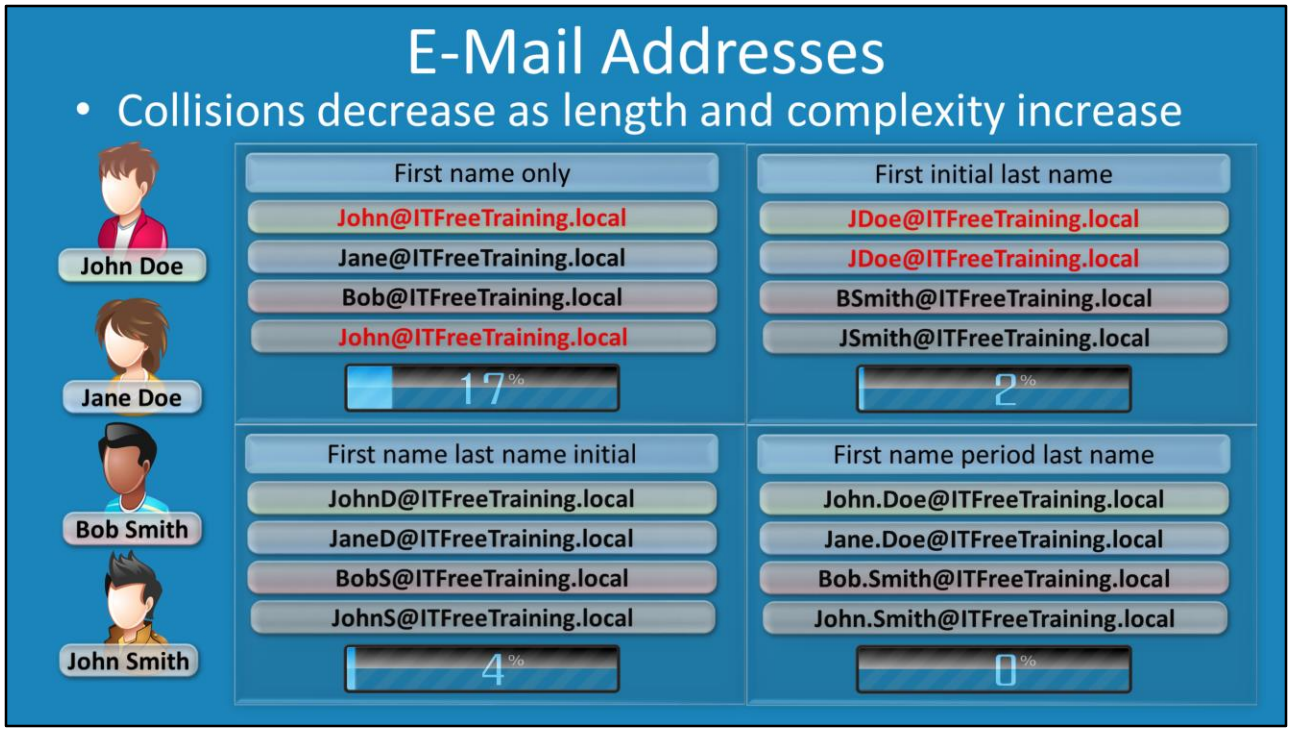
Computer Names

6:05 – The next point to consider is how you will be naming the computers themselves. One example is to start with the division. Companies are typically divided up into different areas but generally fall under one umbrella which will generally be the one providing the funding for the computers. After the division, consider the location, such as in this example, the closest airport's international code but you can use the country or state code. Next the type of computer, such as in this case, a desktop. You could even be so specific to state the operating system. Lastly, this example will include the asset tag. Some companies will utilize asset tags to assist in tracking and identification. The serial number of the PC could be used as well, but ensure to keep the name to around 15 characters long for compatibility reasons. Combined, these elements provide 'ITSYDD00001'. As this name is quite descriptive, an administrator would be likely to know a lot about the PC if it appeared in a log file.



Server Names

7:16 – The next standard we will look at is Server Names. Often times, a server is named on its location and its function. In this example, the server would be called NYFS01 since it is located in New York and functions as a file system. If more file servers were added to the environment, the number in the server name could just be incremented. In many situations, there are a lot less servers than there are compared to desktops and laptops. Due to this, it is not necessary to include the asset tag in the server name. Even if you have a large server room with 100's of servers, the servers are all located in one area and would require much less work to audit and inventory so there is no need for the asset tag. As always, it is up to the administrator on how this will be handled. Details such as the server operating system in the name is often avoided because it will often be upgraded or the server replaced over time. It is not uncommon for end users to be connecting to one single server and over the years the server operating system is upgraded and the hardware itself replaced but the name of the server will need to stay the same to avoid having to reconfigure many workstations and users.



E-Mail Addresses

8:25 - The next standard we will examine is email addresses. Like before there are many different styles and conventions in use. However the point to keep in mind is that collisions and problems with a username already existing decrease as length and complexity are added to the equation. To understand collisions, let's look at an example. Currently, there are 4 users; John Doe, Jane Doe, Bob Smith, and John Smith. So to start, let's look at an example using just their first names:

First name only:

John@ITFreeTraining.local
Jane@ITFreeTraining.local
Bob@ITFreeTraining.local
John@ITFreeTraining.local

As you can see, right now there are two users with the first name of John. This is called a collision, when two or more user names result in the same email address. In many cases, companies will add a number to the end of one of the email addresses to ensure uniqueness. Of course, it is in our best interest to create a naming system that decreases the number of collisions. To test how good this standard is, we have run 1,000 names, created with a random name generator, through several naming standards. Of these 1000, 17% had the same name as another person in their organization. Though this standard creates very short e-mail addresses, in a

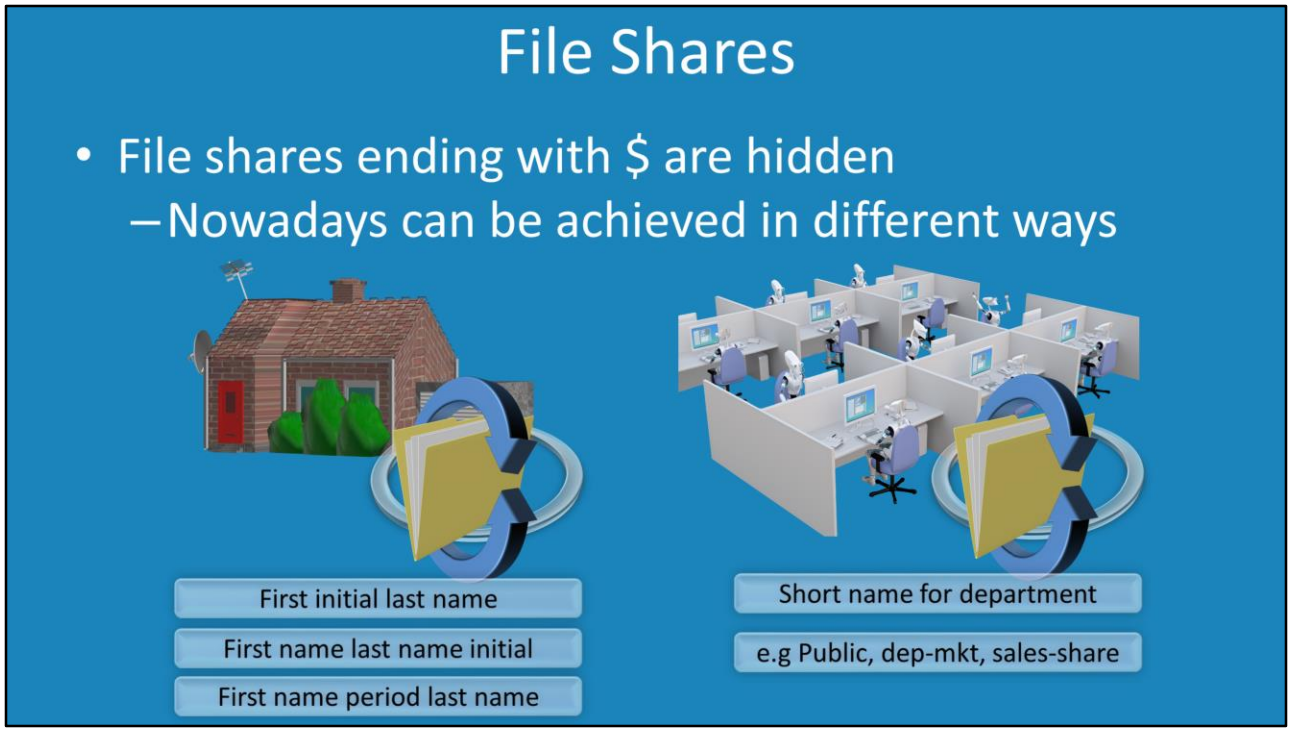
reasonably sized organization there will be quite a few collisions that will appear. The next standard we'll look at is first initial plus last name:

First initial last name:
JDoe@ITFreeTraining.local
JDoe@ITFreeTraining.local
BSmith@ITFreeTraining.local
JSmith@ITFreeTraining.local

When we run this standard through the 1,000 name test, we get 2% collisions. The next standard is First name and last name initial.

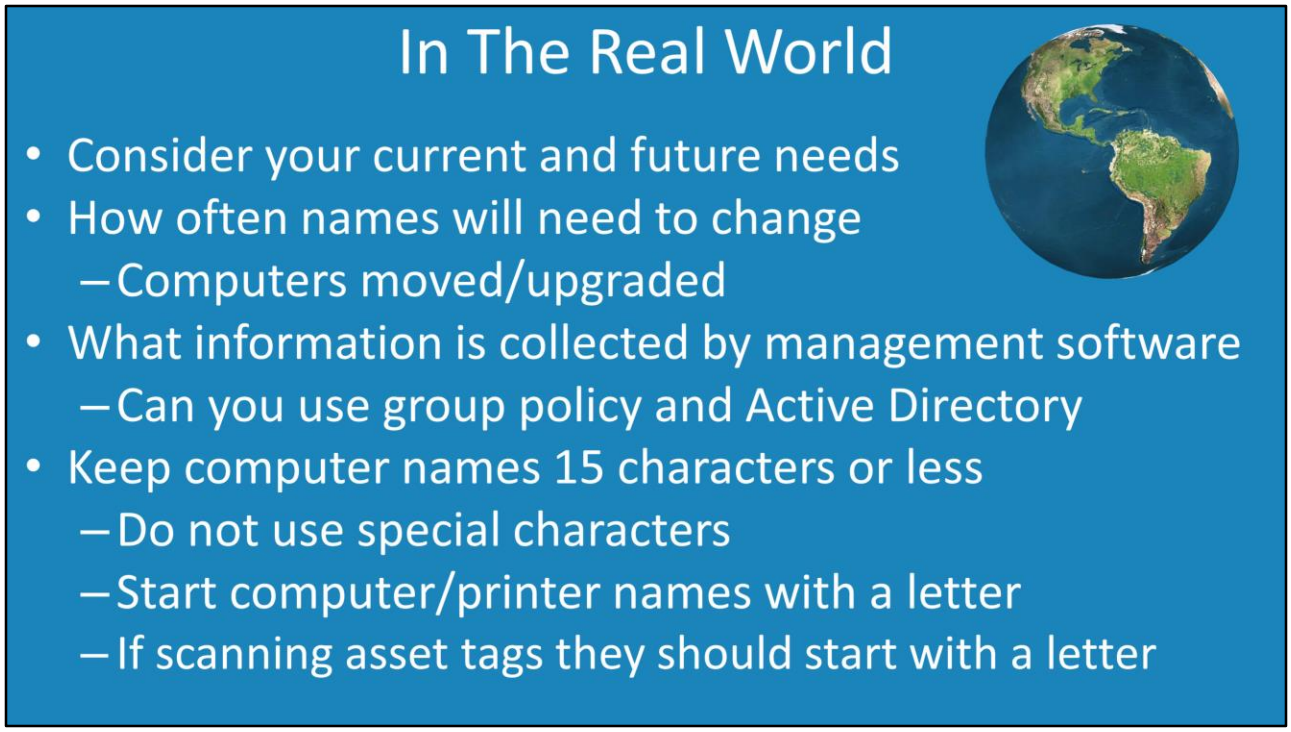
First name last name initial:
JohnD@ITFreeTraining.local
JaneD@ITFreeTraining.local
BobS@ITFreeTraining.local
JohnS@ITFreeTraining.local

When we run the test with 1,000 names being tested with this standard, we get 4% collision rate. This seems to suggest that last names are more unique than first names. The last standard we will examine is first name and last name separated by a period. This standard is very common in many organizations and this resulted in zero collisions. In much larger corporations there is the potential for collisions, but it is rather rare. Some companies will use middle initials in email addresses as well. Though this does reduce possible collisions even further, we personally believe it is not necessary unless the company is very large, such as over 10,000 employees. There is also the potential problem where a staff member does not have a middle name thus no middle initial. This does make things more complicated, especially when attempting to do data linking between different systems. I have seen one company administrator use an X for staff without a middle name where another administrator omitted the middle initial completely. This made writing the necessary code to link systems together quite interesting. To avoid headaches, we suggest not using a middle name nor using an X for those without one, but this is only a suggestion.



File Shares

11:13 – To finish, we will examine how to name the file shares that you'll use in your network. In the old days, if you wanted to hide a share from Windows systems you could end the share name with a dollar sign. This was often used when you had 100's of user shares on one server. Users only required access to their own share and did not need to look at any others. In present day, it is possible to hide the share in multiple ways. For example, using access based enumeration, you could hide folders from users so it will not appear, achieving the same effect. An Administrator could also merely configure the share to be hidden. This was not possible in older versions of Windows. If you are simply creating home shares, you could adopt the method that was used for email addresses. In a lot of cases, the chance of collision is lower since staff are spread out between different servers. For example, a company with thousands of staff would be unlikely to encounter 2 employees working in the same location connecting to the same file server. So administrators may make the choice of using a different naming standard than that used for email addresses. With other shares, there are no real rules but ensuring it is short and descriptive will reduce headaches. For example, a publically available share could be called simply 'Public'. For a department share, you could start it off with Dep and then follow it by the name of the department. Of course this falls to the administrator to ultimately decide.



In The Real World

12:48 – If you are planning to implement your own naming system in the real world, how would you do it? First it is important to consider your current and future needs. If it looks like there will be expansion globally, it may be worth including the country code in the name. However, if they're all in the same country and it doesn't look like it'll become global, then it would not be necessary. Then consider how often the names may change. Do computers get shifted around or are upgraded often? If they are moved often, it may not be worth putting a department name in the computer name. This is also a point when adding the operating system in the name as it may be upgraded in the future. If you were to name it based on a location or operating system, and then they were to change the computer name, it will no longer describe the computer. This makes supporting those computers that much more difficult unless the names are changed as well, but this, of course, creates more administrative work.

Next to consider is the information collected by inventory and management software. The software may end up collecting a lot of the information you were planning on implementing. If it good at managing this, there may not be any point adding that info to the name. You should consider if you can use group policy and active directory to achieve the same result. Printers located closer to the user can typically be installed automatically by using group policy. It is just a matter of dividing them up into different containers in Active Directory and applying a group policy to the

container. In Active Directory, the printer features may have can be recorded. If this is the case, a simpler printer name could be used. Names should be kept under 15 characters in length. DNS supports larger computer names, however the longer names may cause compatibility problems with older systems such as older Windows File shares. It is important not to use special characters in the names. Even if they are allowed, they can cause a great deal of problems with inventory software later on down the line. Start PC and printer names with a letter as starting them with a number can cause issues with inventory software. Names that include all numbers and no letters can be confused in inventory software as numbers and not a name. This can cause a great deal of problems linking data between different programs. If you intend on using asset tags with bar codes, for the reasons stated before, be sure you start the bar code with a letter. Otherwise, when you scan it, it could be considered a number. This may cause issues with linking in the software where one software considers it alphanumeric and another considers it as numeric.
Thanks for watching.

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References
"Installing and Configuring Windows Server 2012 R2 Exam Ref 70-410" pg 72
"Establishing a naming convention for printer locations"
https://technet.microsoft.com/en-us/library/cc782717(WS.10).aspx
"Determining a good naming convention for your network"
http://www.techrepublic.com/article/determining-a-good-naming-convention-for-your-network/
"Wumpus" http://nethack.wikia.com/wiki/Wumpus
"Hunt the Wumpus" http://en.wikipedia.org/wiki/Hunt_the_Wumpus

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