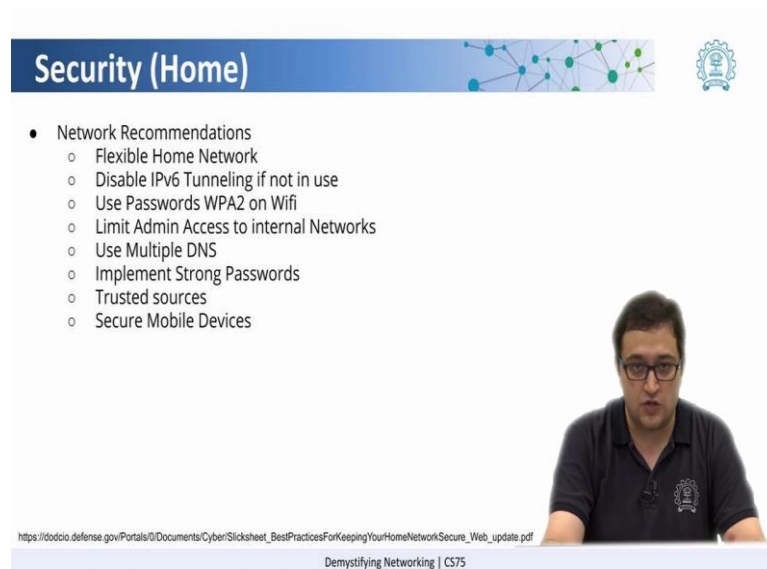


Demystifying networking
Prof. Sridhar Iyer
Department of Computer Science and Engineering
Indian Institute of Technology, Bombay

Lecture – 85
Best practices for home Network and Media Devices

So, in network recommendations there are certain things that you must do like use passwords on your Wi-Fi so, that people cannot connect to your home Wi-Fi network, limit admin access of the network. You should always have changed their default passwords of your Wi-Fi routers then use multiple DNS.

(Refer Slide Time: 00:05)



The slide is titled "Security (Home)" and features a blue header with a network diagram and the IIT Bombay logo. The main content is a bulleted list of network recommendations. A video inset in the bottom right shows Prof. Sridhar Iyer speaking. At the bottom, there is a URL and the text "Demystifying Networking | CS75".

- Network Recommendations
 - Flexible Home Network
 - Disable IPv6 Tunneling if not in use
 - Use Passwords WPA2 on Wifi
 - Limit Admin Access to internal Networks
 - Use Multiple DNS
 - Implement Strong Passwords
 - Trusted sources
 - Secure Mobile Devices

https://odocio.defense.gov/Portals/0/Documents/Cyber/Slideshow_BestPracticesForKeepingYourHomeNetworkSecure_Web_update.pdf

Demystifying Networking | CS75

So, DNS allows you to contact the actual website server because it translates the web address to the IP address. So, there have been cases where people have poisoned the DNS servers and you thought you were being taken to your banks website whereas, you were taken to a malicious website.

So it is very important to have multiple DNS servers in case one of those fails, so, you have the other server which can, which you can use and reach the websites. There are a lot of public DNS servers which are managed by big companies so, you can go ahead and have a look at them.

Then you should also use strong passwords, passwords that are not easily guessable for example, like just using your date of birth or something the best idea is to have certain sentences with certain information that you are aware of. Then you should always download software from trusted sources and use secure mobile devices.

(Refer Slide Time: 01:17)



The slide features a blue header with the text "Security (Home)" and a network diagram. Below the header is a bulleted list of security tips for home entertainment. A video inset shows a man with glasses speaking. At the bottom, there is a URL and the text "Demystifying Networking | CS75".

- Home Entertainment
 - Keep devices in LAN
 - Strong passwords for accounts
 - Disconnect when not in use
 - Switch off when not in use
 - Keep track of account sharing
 - Restrict admin privileges

https://odocio.defense.gov/Portals/0/Documents/Cyber/Slicsheet_BestPracticesForKeepingYourHomeNetworkSecure_Web_update.pdf
Demystifying Networking | CS75

When we come into the home entertainment system, these days we have a lot of systems which are connected to the internet and most of our TVs are getting connected to the internet. So, one thing that you should ensure is keep your devices in the LAN. So, your LAN is limited by your Wi-Fi router which you have at your home or say a modem and you have secured it using the Wi-Fi password. So, it is advisable that you just keep it over the LAN, then it becomes difficult to access that particular entertainment device from the internet by some malicious user.

Then again you have internet accounts, for example, you have a Netflix account and Amazon prime account on which you use to watch videos. Now, here you should use some strong passwords which others cannot guess as we talked about in strong password policy before. Then if there are certain devices which you are not using it is always advisable you disconnect it, because you might forget in some time that yes this is a device and it has been connected to the network. And, say it if it does not receive any updates as you have not been using it, it might become a point of failure for your

network as people could gain access by coming to know that this device is available on your network and it has these vulnerabilities.

Then also keep a track of the accounts that you have. For example, we tend to share the home entertainment accounts with a lot of people and sometimes you might go to different places and tend to use our accounts there. So, you should be aware of where all have you used your account. Now, what you can do here is, in a given say month, go to your account and see where all your account is being used. And, if you feel that there are certain accesses or say certain logins that you do not remember, it is always a good practice to deactivate it.

So, these are certain things that you can take care to secure your home network, now we talked about a lot in network security, but we have just seen the tip of the iceberg and to get into the depth of each and every topic we will have to take an entire course on security. And, there are certain things that we have not talked about like the IT laws of our country and there are a lot of countries that have implemented IT laws. Now, we do not have the time to explore all of that, but after this video you have a learning extension trajectory which helps you to go and look at what the current IT laws of our country are and there will be a small quiz on that too. So, you should be aware of what the laws are.

Thank you.