**ASSESSMENT 53**

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| **Date:** | 21-07-2020 | **Name:** | Sheela Golasangi |
| **Course:** | Coursera | **USN:** | 4AL16EC068 |
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| **Github Repository:** | Sheela-Course |  |  |

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| **FORENOON SESSION DETAILS** |
| **REPORT C:\Users\india\Pictures\Screenshots\Screenshot (2156).png**  **C:\Users\india\Pictures\Screenshots\Screenshot (2174).png**  **C:\Users\india\Pictures\Screenshots\Screenshot (2221).png**  **C:\Users\india\Pictures\Screenshots\Screenshot (2228).png**  **C:\Users\india\Pictures\Screenshots\Screenshot (2282).png**  **C:\Users\india\Pictures\Screenshots\Screenshot (2287).png** Introduction to OSI model and TCP/IP for Testers Most applications out there run on the HTTP protocol, so having a solid understanding of this protocol will make your testing work much more manageable. We explored this in a previous post: [**What is HTTP protocol – introduction to HTTP for Testers**](https://scalac.io/what-is-http-protocol-introduction-to-http-for-testers/). But there’s more to networks than just HTTP. In this post, we are going to dive deeper into networks by exploring the OSI model.  My main goal in this article is to show you the OSI model and explain how data flows in a network. Then I will go through the differences between the OSI model and TCP/IP. At the end of the article, I will also mention a few protocols used in networks.  But before we get into the details, I should explain some basic terminology. TerminologyLAN (Local Area Network) and WLAN (Wireless Local Area Network) Networking basics LAN WLAN  LAN is a local network that consists of a group of computers and devices connected via a single physical network (cables). It is limited to a specific geographic area/location.  An excellent example of this kind of network would be a library, office, or home. I don’t think most of us use a LAN in our homes these days, because a LAN connects devices via cables.  Nowadays, our devices are connected wirelessly via WIFI, so we’re talking about WLAN. WAN (Wide Area Network) WAN combines numerous sites and covers large geographic regions (connecting physically distant locations). The best example of this is the internet itself – that is, thousands of local networks (LAN / WLAN) connected.  Another example would be connecting three company offices in different cities. Each office has its LAN. By combining them, we could create the company’s own internal network – WAN.  Networking basics WAN Differences between IP and MAC address You have probably already heard of and know something about what an IP is. However, you may not have met the concept of a MAC address. So, let me explain in a few words what an IP is, and then a MAC address, to illustrate the key differences between them. IP (internet protocol) We use IP for communication between different networks (to address and transport data from one network to another). It performs the role of routing, i.e., searches for the fastest route to pass a data packet. An IP address is a logical address – this means that it is allocated depending on which network the device has been connected to. If a device is in two networks, it will have two IP addresses. MAC address (Media Access Control) MAC is a physical address with a unique identifier burned out on the network card. It identifies specific devices and is assigned by the manufacturer. MAC addresses are used for communication within one network, e.g., in a home network, if you want to connect a computer to a printer or other devices, it will use MAC addresses to do that. Key differences to remember  |  |  | | --- | --- | | **IP** | **MAC** | | Logical address | Physical address | | Identifies connection with a device in the network | Identifies device in the network | | Assigned by the network administrator or ISP (internet service provider) | Assigned by the manufacturer | | Used in WAN communication | Used in LAN/WLAN communication |  OSI model The OSI model has never been directly implemented as it’s mostly a reference architecture on how data should flow from one application to another through a network. TCP/IP is used, and these days it’s the most popular. After the OSI model, I will say more about TCP/IP. But it’s good to start with the OSI because it’s easier to understand some of the concepts.  Networking basics OSI model  **The OSI model consists of 7 layers divided into two groups:**   * Host layers (happening on the computer side. Responsible for accurate data delivery between devices) * Media layers (happening on the network side. Responsible for making sure that the data has arrived at its destination)  7. Application layer In this layer, the user directly interacts with applications. Here is decided which interfaces are used to interact with the network through the corresponding protocols in this layer.  Examples of such applications are chrome or Gmail:   * Chrome uses the HTTP / HTTPS protocol * Gmail uses email protocols like SMTP, IMAP.   The applications themselves are not in the application layer – in this layer, there are only the protocols or services that the applications use. 6. Presentation layer The task of this layer is proper data representation, compression/decompression, encryption/decryption. This ensures that the data sent from the X system application layer can be read by the Y system application layer. 5. Session layer This layer is responsible for creating, managing, and then closing sessions between two applications that want to communicate with each other. 4. Transport layer The task of this layer is to make sure that the data has arrived safely from the sender to the recipient. When it sends data, it breaks it into segments. When it accepts data, it puts it back into a stream of data.  In this layer  two protocols are used: TCP and UDP (later on in the article I’ll be saying more about these) 3. Network layer Provides addressing and routing services. It defines which routes connect individual computers and decides how much information to send using one connection or another. Data transferred through this layer are called packets.  Places two addresses in the packet sent:   * Source address * Destination address   This layer is based on IP (internet protocol). 2. Data-link layer This layer deals with packing data into frames and sending them to the physical layer. It also oversees the quality of the information provided by the physical layer. It recognizes errors related to losing packages and damaging frames and deals with their repair. 1. Physical layer This is the physical aspect of the network. This applies to cables, network cards, WIFI, etc. It is only used to send logical zeros and ones (bits). It determines how fast the data flows. When this layer receives frames from the data link layer, it changes them to a bitstream. |

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| **Course:** | Sales force | **USN:** | 4AL16EC068 |
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| **AFTERNOON SESSION DETAILS** | | | |
| C:\Users\User\Pictures\Screenshots\Screenshot (355).pngLearning Objectives After completing this unit, you’ll be able to:   * Define the Salesforce platform. * Describe the DreamHouse scenario. * Create a Trailhead Playground. * Explain the difference between declarative and programmatic development.  A Quick Introduction to Salesforce You might think that Salesforce is just a CRM. It stores your customer data, gives you processes to nurture prospective customers, and provides ways to collaborate with people you work with. And it does all those things. But saying that Salesforce is “just a CRM” is like saying a house is just a kitchen. There’s a lot more to it than that.  Salesforce comes with a lot of **standard functionality**, or out-of-the-box products and features that you can use to run your business. Here are some common things businesses want to do with Salesforce and the features we give you that support those activities.   | **You need to:** | **So we give you:** | | --- | --- | | Sell to prospects and customers | Leads and Opportunities to manage sales | | Help customers after the sale | Cases and Communities for customer engagement | | Work on the go | The customizable Salesforce mobile app | | Collaborate with coworkers, partners, and customers | Chatter and Communities to connect your company | | Market to your audience | Marketing Cloud to manage your customer journeys |   Depending on what your company purchases, you can get these features and more without lifting a finger. But you can almost think of these features as a model house that a real estate agent shows off. You could certainly live there, but it wouldn’t be your home. It wouldn’t have your art on the wall or that unusual coat rack your Aunt Tilda gave you as a housewarming gift.  That’s where the Salesforce platform comes in. With the platform, you can customize and build whatever it is that makes your company unique. And when you have a business application that’s unique to you, everyone is more successful. Discover Use Cases for the PlatformLearning Objectives After completing this unit, you’ll be able to:   * Describe sample use cases for the platform. * Discover reasons for using the platform across multiple departments.  High Impact, Low Effort The platform helps you move fast. Part of that speed comes from replacing tasks you’re used to doing by hand with more streamlined processes. So let’s pause for a moment to talk about some ways the Salesforce platform can accelerate your business.  When you’re learning to build on the platform, the first things you want to tackle are projects that have big impact but are easy to implement. While that sounds idealistic, the platform gives you lots of opportunities to make big changes with minimal effort.  Let’s think about an example from DreamHouse. Michelle and her fellow brokers often use email to discuss particular properties. Sometimes, Michelle participates in multiple threads discussing the same property and that can get confusing. Between all the emails, details get lost. And when brokers overlook a detail, they can miss out on a sale or make a mistake that impacts the buyer. | | | |