Introduction

Data distribution can be seen applied in a multitude of companies and organizations that provide services. Amazon has become a household name for e-commerce and online shopping. Owing to its efficient use of data distribution and use of network protocols, Amazon has established flawless communication of data between its clients, servers, and employees. Therefore, in this essay, we will explore some of the operations that typically take place in Amazon's operational routine.

Amazon is heavily dependent on data distribution and communication protocols. Encountering the smallest of obstacles in data communication can result in a loss of millions. Amazon's top priority is always customer satisfaction. To guarantee that they ensure that all of the customer data they receive is communicated to its servers and workers. This data includes what the customer purchased, what kind of products they are interested in usually, etc. After this data is transferred to Amazon's employees, they handle their customer's requests.

Main Body

One of the operations carried out by a common Amazon employee is updating the inventory of stock or products in an Amazon warehouse. For example, when a customer residing in New York City orders an item on Amazon, the information of that request is sent to the warehouse associated with that area. Now, the warehouse employee will update their assigned warehouse's inventory accordingly. If the item requested is not found in this particular warehouse, then a shipment request is sent by the employee to the specific retailer that is selling the item on Amazon. The data flow of this operation requires data relevant to the request only. Once the data from a client is received, the operation is triggered by the warehouse employee. First, the data is searched in the warehouse system. Here, the relevant data is the particular item and the area of the delivery. So, the data is first communicated to the Amazon warehouse server. If the data is not found, then it is sent to the retailer. The retailer then responds with the new data that describes the availability of the requested goods. The communication protocols used are SSL (Secure Socket Layer) since the customer data being transferred is sensitive, therefore it is important to use a communication protocol that can ensure safe encryption of the data being transferred. This particular network protocol is applied when the warehouse worker is sending information to relevant retailers. Other than that, to transfer the data within the warehouse and to retailers, both TCP (Transmission Control Protocol) and IP (Internet Protocol) protocols are used together since these protocols are required to send data over the internet or to different machines. In some cases, customer data can be in the form of files so in that case, FTP (File transfer protocol) is used.

Another important operation carried out by a typical Amazon employee is customer complaint management. For example, a customer orders a product from Amazon and turns out that it was either not what they ordered or perhaps it has some defect in it. The customer calls Amazon helpline or emails it. Regardless, the employee that receives this complaint and

triggers an operation to cater to the customer's complaint. The employee contacts the warehouse or fulfillment center that is nearest to the complainant's residence. The warehouse employee then sends a fresh piece of product to the complainant. On the other hand, the complainant could be provided with monetary compensation via refund or a gift card. Nonetheless, the correct flow of data with the appropriate communication protocols is crucial to resolve the process. Once again, this request requires data that is relevant to the complaint only. This means, the complainant's requested product, their location, the nature of their complaint, and etc. When the customer care representative receives data from the customer, it is sent to the warehouse or fulfillment center. This data is again communicated either within the Amazon warehouse or to the retailer selling that particular product. The retailer then responds with the new data that describes the availability of the requested goods. In case the customer is not entitled to a replacement, the data is sent to the relevant department of Amazon that deals with customer reimbursements or compensations. The communication protocols used are SSL (Secure Socket Layer) since the customer data being transferred is sensitive, therefore it is important to use a communication protocol that can ensure safe encryption of the data being transferred. This particular network protocol is applied when the warehouse worker is sending information to relevant retailers. Other than that, to transfer the data within the warehouse and to retailers, both TCP (Transmission Control Protocol) and IP (Internet Protocol) protocols are used together since these protocols are required to send data over the internet or to different machines. In some cases, customer data can be in the form of files so in that case, FTP (File transfer protocol) is used.

Also known as Secure Sockets Layer, SSL has become one of the musts of the internet. It is used by ecommerce companies like Amazon. Its purpose is to protect your data transactions between a website (provider) and its visitors (recipients). However, there is a more evolved form of a security protocol i.e., TLS (Transport Layer Socket). The TLS or Transport Layer Security certificate is an evolution of the aforementioned SSL. Its objective is to provide secure connections by encrypting data sent between two parties. Netscape created the SSL protocol, and later the IETF (Internet Engineering Task Force) developed the TLS. As you may have noticed, both certificates work in a similar way, but they are not the same: the algorithms of the TSL certificate are more solid and versatile than those of its predecessor. Since customer data is highly sensitive information, it is important for Amazon to use TLS since it is more secure than SSL, by offering additional security features like data encryption which makes it difficult to access sensitive customer information.

Conclusion

In order for a company to function properly, it needs to have a secure, efficient, and reliable data distribution system. Moreover, that data distribution network has to be backed up by reliable, secure, and efficient network protocols. E-commerce companies like Amazon and Amazon require movement data in large quantities. And their business runs on using data efficiently and securely. Loss of data can result in losses of millions for companies like these.