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Rise of Zero Trust Security in Modern Networks

All the company's work mostly depends on cloud computing and digital systems instead of site work. The zero trust security systems are necessary for the prevention of cyberattacks in the current era.

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Introduction

Today, we also store our data on online servers such as the cloud. The organizations depend on computers and the internet. So cyberattacks are growing rapidly in this digital era. We face cyberthreat these days. As the old security model concepts are failing. They easily accept access request of any person. They only deny the request of someone who does not belong to the company. Now, we want a new secure architecture, which is a zero-trust security. It says that all must be verified.

> ***"Firstly, identify the identity of the user, then accept the request and give limited access to the user."***

Technology Overview

Zero-trust security is a security framework or a technology that always and continuously verifies and validates everyone. The old security model before this was that if you were an employee who was working in the network, it was considered safe and secure because the user and the device were within the same office building, but now this is no longer; people not only work in the office but also from home.

Its real-life example is that we see security systems in airports. It does not matter if you are sitting at home, another place or even one of the employees inside the company networks; every single request to access the data is checked. If he gets any weak point, then he can access all data and resources over the network.

Figure 1: Concept representation of zero trust. Credit: Google

Key Findings & Impact

The zero trust improves the old organization's security systems by securing the resources, data access and sensitive information from cyberthreats. It authorizes and authenticates dynamically each person who wants to access the data. Hence, we can monitor who can access and use the data. So we can see all activities related to that.

It reduces unauthorized access and improves remote work, such as online banking systems, by providing the user with limited access to only the specific resources that they want to use. If we talk about the Pakistan IT industry, the threats are increasing with the rapidly growing digital services. The zero-trust model is very helpful in protecting sensitive or financial data for IT companies in Pakistan's growing digital services, such as e-commerce websites and other digital systems.

What's Next?

As we know, attacks like AI threats are growing with the rise of the internet, the cloud and remote work. We say that all organizations will use the zero trust security in the future. They do not use old security systems in presents era. Most of all organizations are using zero-trust architecture for data security.

But if we see with the adoption of this modern security approach, some companies have faced challenges due to the lack of legacy infrastructure, such as technical complexity, time consumption and cost during the implementation. The zero trust security is necessary due to the rise of remote work and cloud computing in the coming years for the protection of data.

About the Author

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