The Three Critical Components of a Total Information Security Strategy

Data needs to be protected in three states: at rest, in use, and in motion. Each state presents unique security challenges, as listed below:

Data at Rest:

Data is at rest when it is stored on a hard drive. In this relatively secure state information is primarily protected by conventional defenses such as firewalls and anti-virus programs. However, these barriers are not impenetrable.

Encrypting hard drives is one of the best ways to ensure the security of data at rest. Other steps can also help, such as storing individual data elements in separate locations to decrease the likelihood of anyone gaining access to enough information.

Data in Use:

Data in use is more vulnerable than data at rest because, by definition, it must be accessible to those who need it. Of course, the more people and devices that have access to the data, the greater the risk that it will end up in the wrong hands at some point. The keys to securing data in use are to control access as tightly as possible and to incorporate some type of authentication to ensure that users aren't hiding behind stolen identities.

The data also needs to be tracked and reported so suspicious activity can be detected, diagnose potential threats, and proactively improve security.

Data in Motion:

Data is at its most vulnerable when it is in motion, and protecting information in this state requires specialized capabilities.

When you send an email, it typically takes a long and winding journey through the electronic infrastructure at universities, government facilities, and other network locations. Anyone with the right tools can intercept your email as it moves along this path. However, there are effective ways to make email more secure.

The best way to ensure that your messages and attachments remain confidential is to transmit them through an encryption platform that integrates with your existing systems and workflows.

Optimally, users should be able to send and receive encrypted messages directly from their standard email service.