Rohde & Schwarz Cybersecurity

R&S®TRUSTED GATE – SOLUTION FOR MICROSOFT® 365

R&S®Trusted Gate – Solution for Microsoft® 365 provides secure processing of sensitive data in Microsoft® 365. While in the public cloud just virtual files without content are exposed, the original files are stored encrypted and fragmented in a multi-layer storage system on-premises or in various clouds.

► **Use the benefits of public clouds without losing security and control.**

Collaborate transparently with encrypted files

Microsoft® 365 is the major collaboration platform for office software world-wide. R&S®Trusted Gate – Solution for Microsoft® 365 encrypts sensitive and confidential enterprise data, stores it in SharePoint Online and protects it from external and internal data theft and manipulation. R&S®Trusted Gate integrates transparently in workflows of SharePoint Online. The encryption can be fully transparent for the user and there is no need for additional client software on user devices.

Product Flyer
Version 03.00

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Make ideas real

Virtual file technology

During any upload of files in Microsoft® 365 a virtual copy of each confidential document, without sensitive content is created. It only contains metadata like keywords or other classification data from the original document. SharePoint Online can work transparently with virtual files, without accessing the confidential content. This allows authorized users to keep existing workflows without exposing the content to the public cloud. The confidential content can only be accessed by authorized users and will be transparently decrypted when downloaded.

Secure and distributed storage

The original files get encrypted, fragmented and then stored in a multi-layer storage system on-premises or in various clouds. Due to fragmentation into small chunks, confidential data cannot be compromised even by complex cryptographic attacks. The chunks can be stored and distributed via a configurable software-defined storage module (SDS). The SDS module enables file storage on different hardware and major cloud providers like Azure (Microsoft®), AWS (Amazon) or GCP (Google). Customers are able to choose inexpensive cloud storage providers even for massive amounts of data without limiting collaboration on Microsoft® 365.

Related R&S®Trusted Gate products

R&S®Trusted Gate – Solution for Microsoft® 365 Teams Edition

Provides secure processing of sensitive data in Microsoft® 365 and Teams. While in the public cloud just virtual files without content are exposed, the original files are stored encrypted and fragmented in a multi-layer storage system on-premises or in various clouds.

R&S®Trusted Gate – Mail Control

Provides secure processing of sensitive attachments in emails. Attachments will be extracted, stored encrypted and replaced in the mail by a link. Recipients can access content with defined security rules (full access, read only or no access). This solution contains data exchange and mobile access solutions.

R&S®Trusted Gate – Secure Data Exchange

Provides high secure data exchange functionality between internal and external project groups and teams. Data can either be synchronized automatically or with manually user interaction between different parties. The exchange data target can be configured as a multi-layer storage system either on cloud or on-premises storage systems.

High security in the public cloud

With R&S®Trusted Gate customers comply with data protection laws that require certain data to be stored in specific national jurisdictions. Encrypted and fragmented original files can stay within customer-defined regions while virtual files still can be part of a worldwide workflow in the public cloud. Organizations are getting compliant with regulatory requirements (GDPR requirements for the storage of personal data of EU citizens in the EU). R&S®Trusted Gate enables implementation of corporate requirements for the protection of confidential data. In addition, companies are able to distribute chunks across multiple storage systems using the integrated RAID cloud module. That supports a multi-cloud strategy for achieving resilience against scenarios like a public cloud security breach or a cloud provider going offline.

Flexible and scalable deployment options

The software infrastructure of this solution is based on microservices with great flexibility of deployment. R&S®Trusted Gate can run its services in containers with an orchestration system like Kubernetes or can be deployed as a single server app. That provides a higher grade of control, scalability and elasticity. In hybrid environments, critical core services related to administration and key management can be deployed on-premises while CPU intensive operations like encryption service can be deployed in the cloud. From an operating point of view, this solution is deployed using reverse proxy and therefor provides transparent encryption with existing workflows.

Secure search in encrypted documents

R&S®Trusted Gate – Solution for Microsoft® 365 provides secure search for file names, keywords and full text in encrypted files directly within SharePoint Online – without a security compromise. The search function can be easily accessed by the SharePoint Enterprise Search or via tab. Encrypted files name and content can only be searched by authorized R&S®Trusted Gate users, so no sensitive data is exposed to other SharePoint Online users or admins. This solution is fully supporting file versioning to ensure all document workflows in companies and organizations.

Confidentiality and integrity

This solution encrypts documents using Block Cipher Mode (GCM). This ensures confidentiality and integrity. The symmetric document-centric keys (AES 256) are additionally encrypted with asymmetric keys (RSA or elliptic curves). Access rights can be assigned with high granularity for groups and individual users.

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