



SOFTWARE SOLUTIONS DIAMS iQ hosting

Our server infrastructure is housed in two Tier 4 datacenters in Luxembourg (LuxConnect in Bissen, EBRC in Kayl). The infrastructure is redundant to ensure maximum availability, and is based on IBM and VMware technology.

The offices are connected to the data centers via VPN technology with the headquarters in Luxembourg connecting through redundant high-speed Internet lines. Customers can connect to DIAMS iQ servers via HTTPS and VPN, the latter only if explicitly requested.

General data center overview

Both data centers are permanently online; real time data synchronization ensures full availability on both sites. A device called Quorum permanently checks interconnection availability between data centers.

If a problem is detected, Quorum decides which site will continue to be online and switches automatically. The infrastructure on both sites is capable of running all production systems.

Virtual servers are online – online, meaning the switch to the surviving site in case of a problem is immediate and without user disconnection. We use Stretched IBM SAN Volume Controller Clusters for data storage, which ensures a high number of hosts (virtual servers) and data availability in both data centers.

With volume mirroring, a volume has two physical copies of data in different storage locations. When a server writes data to a volume, the SAN Volume Controller writes the data to both copies. When a server reads data from the volume, the SAN Volume Controller picks a copy of the volume data to read from. If a copy is temporarily unavailable, the volume remains accessible to servers from the remaining copy.

Security

A Cisco ASA firewall cluster, including a Cisco intrusion detection system (IDS) manages access security. By default, centrally managed antivirus software is installed

on servers. We use Trend Micro Deep Security. Antivirus and IDS are updated multiple times per day. Physical access to either data centers is strictly monitored and follows the principles of Tier 4 ISO standards.

In addition, we are ISO:27001 certified for provision and operation of central IT services. Internal security policies govern the tasks of the Dennemeyer IT infrastructure team which reports directly to the management. Our infrastructure has been subjected to penetration testing by an independent third party. No vulnerability was found.

DIAMS iQ Hosting Services are certified as Hosted in Luxembourg, providing a very high level of data protection security.

Monitoring

Our servers are under constant monitoring (OpManager). If the system detects a problem the infrastructure team is immediately informed and can quickly initiate the necessary activities to solve the problem. The monitoring system regularly tests the following:

- Server up and running
- Available hard disk space
- DIAMS iQ services
- Accessibility of servers through external DNS
- SQL server up and running

Tests are run every 5 minutes. If a problem is detected, the infrastructure team is immediately notified.

Backup

Our backup strategy includes a daily incremental backup and a weekly full backup with 4 weeks retention time. We have an IBM ProtectTIER system in place running Veeam backup software. Daily and weekly backups are stored on ProtecTIER hardware in both data centers. Monthly full backups for our hosting customers are kept for one year

and stored on a dedicated IBM Hard drive enclosure.

Tier 4 data center access restriction is applied, and only authorized persons can access backup locations.

Connection and server information

DIAMS iQ's hosting is fully managed and stored on Dennemeyer hardware, without third-party involvement.

Dedicated server specifications

- 4GB RAM
- Windows Server 2012 R2
- 80GB drive space (OS, application and client data)
- Daily backup
- Full redundancy on 2 different data centers with online synchronization
- Full monitoring (OS and application services)

Shared server specifications

- 8GB RAM
- Windows Server 2012 R2



Tier 1 Single non-redundant distribution path serving the IT equipment. Non-redundant capacity components. Basic site infrastructure with expected availability of 99.671%.

Tier 2 Meets or exceeds all Tier 1 requirements. Redundant site infrastructure capacity components with expected availability of 99.741%.

Tier 3 Meets or exceeds all Tier 2 requirements. Multiple independent distribution paths serving the IT equipment All IT equipment must be dual-powered and fully compatible with the topology of a site's architecture Concurrently maintainable site infrastructure with expected availability of 99.982%.

Tier 4 Meets or exceeds all Tier 3 requirements. All cooling equipment is independently dual-powered, including chillers and heating, ventilating and air-conditioning (HVAC) systems. Fault-tolerant site infrastructure with electrical power storage and distribution facilities with expected availability of 99.995%.

- 100GB drive space (OS, application and client data)
- Daily backup
- Full redundancy on 2 different data centers with online synchronization
- Full monitoring (OS and application services)

Our internet line is redundant on both data centers with automatic fallback.

On the first Saturday of each month we update the operating system (Windows update, security patches). If additional tasks are required (e.g. urgent security patches) we inform our clients in advance.

We guarantee a 98% up and running time for hosted installations. SLA reporting is available if required by the customer, but may incur additional costs.

Data center interconnection

