Data-mirroring over high-performance connections

> For the security of your IT-systems

The challenge for IT today is to keep your IT systems safe and available in an optimal environment. Flexible solutions which nonetheless guarantee the highest levels of security are sought. A combination which can provide exactly this is to secure your data in two highly available data centres and connect the two using a high-performance connection.

Everyone knows that data is the foundation of a successful business nowadays. Our data centres therefore have a huge responsibility as storage locations, which we fulfil with comprehensive security measures. These include and uninterruptible power supply, latest cooling and air circulation systems, 24 hour emergency and operational call centres, video surveillance, electronic access control as well as fire protection and extinguishing systems. And for anyone who needs still more security for their data and must guarantee business continuity even in the event of a disaster, they go one step further: the data in one data centre is mirrored 1:1 at a second centre.

Security in the best of hands

The e-shelter data centres are available in eight locations in total across Germany, Austria and Switzerland. The mirroring of data is possible using a secure connection between locations. Optional redundancy and, if necessary, special encryption methods provide even more security

Data transfer without loss

e-shelter uses synchronous links for distances of up to 100 kilometres between data centres. The LAN/SAN connections are based on a fibre optic infrastructure with flexible filter and transponder models. The wavelength-division multiplexing (WDM) technology ensures that all data are absolutely identical with a slight delay of just a few milliseconds. If a failure should occur then there would be no devastating consequences since data loss simply isn‘t possible. The interface here is typically a fibre channel: fast, standardised and efficient.
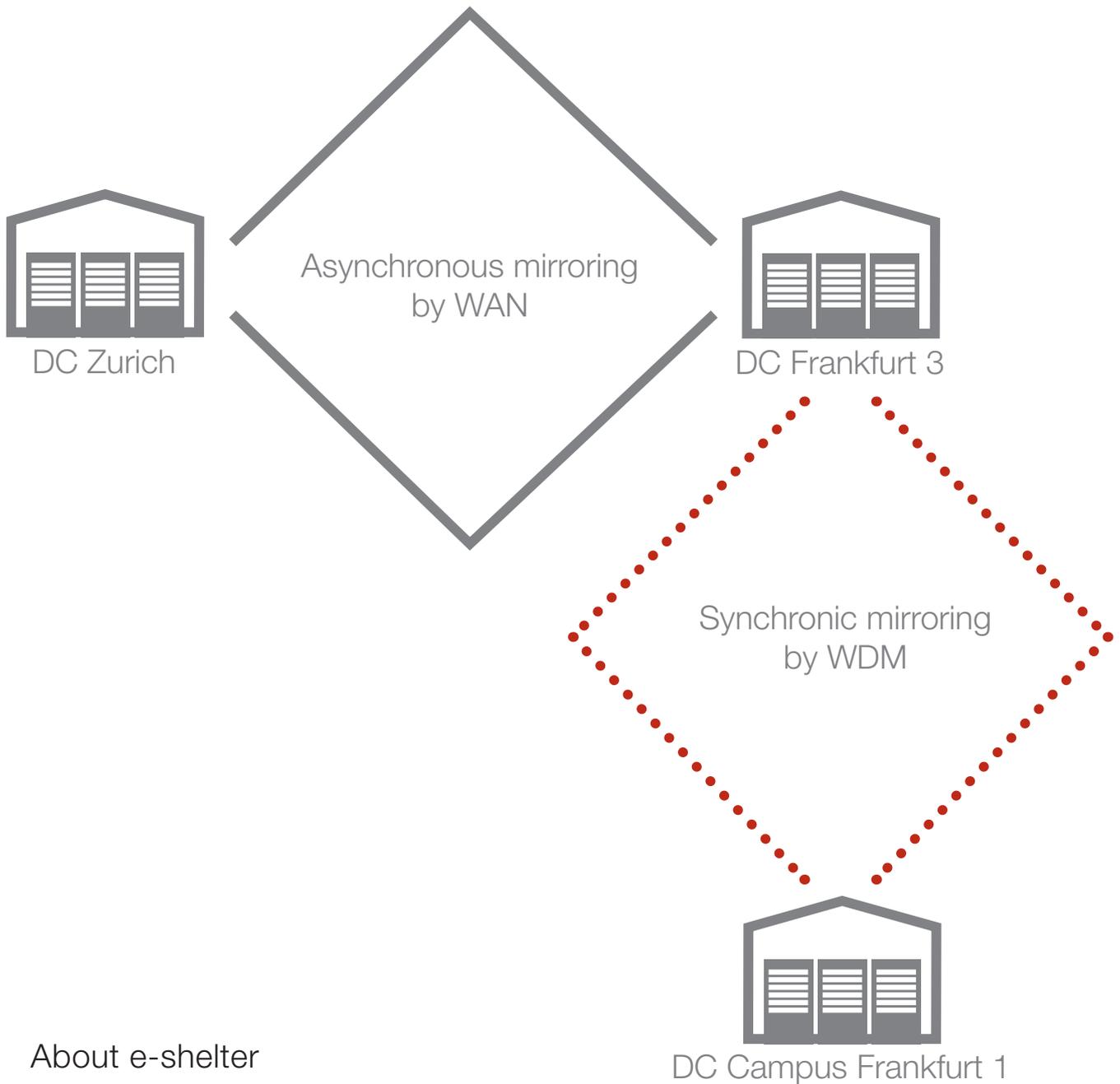
Frankfurt – Zurich?
Use an asynchronous connection

It has previously seemed impossible to bridge distances of more than 100 kilometres between data centres. Nowadays, however, Ethernet has become so well established as the connection technology to use for asynchronous links over long distances that there are hardly any noticeable differences in data transfer.

For asynchronous links, Ethernet is combined with a time-saving technique: the system will not wait for acknowledgement of each sent packet as it does in a synchronous link. Thus, a constant flow of data is maintained. Substitute packets are generally only requested when they are required, i.e. when packets are lost or damaged during transfer. This works reliably and with a minimal time-delay of just a few milliseconds, which is entirely inconsequential for most applications. Asynchronous links are viable using almost all available bandwidths.

e-shelter

DC Zurich

Asynchronous mirroring by WAN

DC Frankfurt 3

Synchronic mirroring by WDM

DC Campus Frankfurt 1

Pic.: Interconnection of data center locations,
Source: e-shelter

About e-shelter

e-shelter is one of the leading data center operators in Europe providing highly secure environments for housing and connectivity of IT and network systems. With a presence in all key city-markets of the DACH-region, e-shelter leverages 300 MW of power capacity and 90,000 sqm of data center space to deliver scalable data center solutions. As a member of the NTT Communications Group of companies e-shelter provides access to a global network of 140 data centers.

Among e-shelter's clients are financial services companies, telecoms operators, IT service and outsourcing providers as well as cloud service providers.