TECHNICAL PAPER 02

Same machine, different metal

02

Why our DR copies don’t need driver injection, re-IP or a prayer.

> A server is more than its disks. It is a storage controller its boot loader expects, network cards with MAC addresses that licences and DHCP reservations are tied to, VLANs that firewalls are written around, a clock that Kerberos trusts. Most DR products approximate these details and hope the guest copes. ImmuBDR reproduces them.

The guest should not notice it moved

When a system starts as a DR copy on our capacity, it finds the same virtual hardware it was installed on. Its own drivers simply keep working. Nothing is injected, nothing is converted, and the backup is never touched.

> That sounds obvious. It isn’t. Getting there took engineering down to the firmware level. **That is the level of detail we work at.**

Where a platform’s virtual hardware has no direct equivalent, the copy is prepared before it starts, so it boots cleanly on the first try.

Identity, carried over

- **Every network card keeps its original MAC address,** and lands in its original network or VLAN.
- **Static IPs stay static.** The IP identity comes from the guest’s own configuration, not typed in by someone at 3 a.m.
- **Interface names stay put,** so Linux doesn’t wake up with a different network card name.
- **The clock is right.** Kerberos doesn’t care how good your backup was if the clock is off.
- **Bootability is known before you need it.** Every restore point carries a verdict on whether it will boot.

Back on your LAN, as if nothing happened

A DR copy can run next to your LAN on a local proxy, or in our data centre, presented on your own VLAN with its original MAC address. To the switch, the firewall and every client, it is the same server.

That is a powerful capability, so it is fenced. Independent safety checks must agree before any copy joins your LAN. If one of them disagrees, the copy does not join.

2.17 Gbit/s

Failover traffic over our virtual DC-to-customer switch: an encrypted layer-2 path with full-size frames for the guests. This was the full load in this test setup, not a limit: the speed also depends on the customer's own connection and applications.

ABOUT IMMUBDR

ImmuBDR is Immutec's backup and disaster-recovery platform, delivered as a fully managed service. It protects virtual machines, physical servers, databases and file shares, keeps every restore point verified and immutable, and recovers them on our own infrastructure, even when your own hypervisor or site is gone.

Our engineers run the platform for you. Customers have no access to backup or restore functions; every request runs through a ticket. Your production and your recovery are held by different people, by design.

Need the technical detail? A full version of this paper is available under NDA.

Proven weekly
Every system booted and tested, with evidence.

Immutable
Time-locked restore points nobody can release early.

Own infrastructure
Storage, DR capacity, network and AI, run by us.

Want to see a failover live? Ask us for a demo. www.immutec.eu