Use Case: Backup for Research Data

- **Organization**

  A leading applied research organization with tens of thousands of employees.

- **Scenario**

  The organization needs a storage solution that can handle their extensive data backup requirements. Their research projects are long-term, often lasting months or years, involving continuous data collection and analysis. To ensure research continuity and safeguard critical data, maintaining daily backups is essential. The organization uses Veeam software for backups and is seeking a SAN storage solution as the primary backup system.

  The storage solution must be able to handle 10TB of data backups daily during non-working hours and support real-time backups for their most critical data. Additionally, it should offer over 3PB of capacity, be highly reliable to prevent data loss during backups, and be scalable to accommodate the rapid growth of their research data.

- **Configuration**

  1. Model: DS 4024U x 2 + JB 3024B x 8
  2. Drive: 15.36TB NVMe SSD x 48 + 15.36TB SAS SSD x 184
  3. Network: 16 Gb/s FC x 4 per controller

- **Product Advantages**

  1. **High-performance for real-time backup**: Each DS 4024U, equipped with U.2 NVMe SSDs, delivers 100K IOPS and 5GB/s write throughput for prompt backups of the most critical data.
  2. **Efficient daily backup:** JB 3024B, equipped with SAS SSDs, ensures that 10TB of data is backed up within 1 hour.
  3. **Large capacity:** The solution provides over 3PB of raw capacity with 232 drives.
  4. **Reliable operation**: The redundant controller design ensures uninterrupted data backup.
  5. **Capacity expansion**: Each DS 4024U can be expanded with JBODs to accommodate up to 448 drives, providing a total capacity of up to 6.8PB with SSDs.
  6. **Versatility**: The solution supports both NVMe SSDs and SAS SSDs in a single system, enabling optimized storage allocation based on performance and budget needs.