dt digitaltrack®
If The Data Matters The Partner Matters

DISASTER RECOVERY

Prepared For :
SANeForce

Prepared By :
DigitalTrack Solutions Pvt Ltd

www.digitaltrack.in

ABOUT CUSTOMER:

SANeForce strive to transform businesses by delivering smart and intuitive Pharma CRM Solutions that drive growth, foster collaboration, and promote sustainability and they recognized as one of the top pharma CRM solution providers in India, with a global footprint and a reputation for excellence. We have around more than 1000 clients and 100 thousand users globally

EXECUTIVE SUMMARY:

SANeForce, a pharmaceutical CRM software provider, faced challenges in ensuring business continuity, disaster recovery, and compliance while hosting their application on AWS. To address these issues, Digital Track Solutions implemented a cost-effective, active/passive disaster recovery solution using AWS services like EC2, EBS, Elastic Disaster Recovery, and IAM. The solution included cross-region data replication, real-time monitoring, and robust security measures such as AES-256 encryption, resulting in significant cost savings (70%) and reduced downtime from 8 hours to 30 minutes. With sub-second RPO and an RTO of 40 minutes, SANeForce improved data protection, operational efficiency, and compliance, ensuring minimal disruption and rapid recovery during incidents.

WHY CHOSEN AWS:

AWS was chosen for SANeForce's disaster recovery solution due to its scalability, reliability, and global infrastructure, which are critical for maintaining business continuity in the event of disruptions. AWS offers a wide range of services such as EC2, EBS, Elastic Disaster Recovery, and IAM that allow for real-time data replication, automated failover, and seamless recovery with minimal downtime. Additionally, AWS's robust security features, including AES-256 encryption and fine-grained access control, ensured that SANeForce could protect sensitive pharmaceutical data from cyber-attacks while maintaining compliance with regulatory standards. The cost-effectiveness and flexibility of AWS also made it an ideal choice, enabling SANeForce to optimize their infrastructure while reducing disaster recovery costs by 70%.

Enhancing Business Continuity and Disaster Recovery for a Pharmaceutical CRM Provider through AWS Solutions.

CUSTOMER CHALLENGE:

SANeForce provides pharma-based CRM software to pharmaceutical companies. They hosted their application on AWS (Mumbai region) using two EC2 instances: one for the application (publicly accessible) and one for the database (privately accessible). The company faced several challenges in ensuring seamless disaster recovery, business continuity, and application maintenance.

WHY CHOSEN DT:

Digital Track is an AWS Advance Consulting Partner – Service Path and we had certified Solution Architect Professionals to support customer base account as well they had Dedicated Service Delivery Management & Project Management team.

CHALLENGES:

1. **Unknown Deletion:** Preventing data loss due to accidental or malicious deletions.
2. **Application Crashes**: Mitigating the impact of unexpected application crashes.
3. **Cyber Attacks:** Protecting against security breaches and cyber attacks.
4. **OS Corruption:** Addressing server OS corruptions which lead to significant downtime.
5. **Compliance and Regulatory**: Ensuring compliance with industry standards and regulatory requirements.

OVERVIEW:

SANeForce engaged with Digital Track Solutions to address these challenges. Digital Track proposed a comprehensive solution focused on cost optimization and robust disaster recovery:

DISASTER RECOVERY STRATEGY:

- Active/Passive Disaster Recovery:
  - **Cost Optimization:** Proposed an active/passive DR solution to reduce costs.
  - **Data Replication**: Data replicated and stored in a different region to protect against data loss.

- AWS Elastic Disaster Recovery:
  - **Storage:** Data stored in different EBS volumes in the disaster recovery location.
  - **EBS and EC2:** Created a block storage (EBS) automatically attached to a replication server to minimize costs. Replication EC2 instances were lightweight machines on a Linux platform.
  - **Replication:** Replication began from the source server to the replication server over TCP port 1500. The replication server created disks to store incoming data, based on the size of the replicated data.

- Security and Access Management:
  - **IAM Policies:** Configured appropriate access policies using AWS Identity and Access Management (IAM).
  - **Data Encryption:** Used 256-bit AES encryption to secure data in transit.

- Monitoring and Performance:
  - **Replication Monitoring:** The replication agent monitored disk I/O activity and replicated all WRITE operations to the replication server.
  - **RPO and RTO:** Achieved sub-second Recovery Point Objectives (RPO) and Recovery Time Objectives (RTO) of 7 to 15 minutes.

- Recovery Process:
  - **Initial Drill:** Selected updated replication data for the initial drill activity.
  - **Conversion Server:** Converted the replication server to a conversion server to create a recovery instance in the target subnet.
  - **Data Access:** Ensured that the application was accessible from the target region rapidly.

AWS RESOURCES USED:

- EC2
- EBS
- Elastic Disaster Recovery
- IAM
- S3
- VPC

OUTCOMES AND BENEFITS:

- **Minimized Disruptions:**
  - **Outcome:** Enabled rapid recovery of applications and data in another AWS region.
  - **Details:** This approach minimized the impact of disruptions, ensuring business operations continued with minimal interruption even during significant disruptions.

- **Reduced Data Loss:**
  - **Outcome:** Prevented data loss from accidental deletions and application crashes.
  - **Details:** By replicating changes in near real-time, the solution ensured data integrity and availability, significantly reducing the risk of data loss.

- Enhanced Security:
  - **Outcome:** Improved protection against cyber-attacks.
  - **Details:** Implemented strong security measures to safeguard data and applications, enhancing overall security posture and protecting against potential cyber threats.

- **Accelerated Recovery:**
  - **Outcome:** Faster recovery of operations after a disruption.
  - **Details:** Streamlined recovery processes allowed organizations to resume normal operations more quickly, reducing downtime and operational impact following disruptions.

- **Compliance and Reliability:**
  - **Outcome:** Achieved a highly scalable, secure, and reliable backup solution.
  - **Details:** Ensured compliance with industry standards and regulatory requirements while providing a dependable backup and recovery framework.

- **Cost Savings:**
  - **Outcome:** Reduced costs by 70% compared to the previous solution.
  - **Details:** The new DR solution delivered significant cost savings, optimizing expenditure compared to the prior backup and recovery infrastructure.

- **Operational Efficiency:**
  - **Outcome:** Enhanced data management and regulatory compliance.
  - **Details:** Improved operational efficiency in data management processes and ensured adherence to regulatory norms, streamlining operations and reducing administrative overhead.

- **Reduced Downtime:**
  - **Outcome:** Decreased downtime from 8 hours to 30 minutes during patch and application updates.
  - **Details:** The robust DR solution effectively minimized downtime, ensuring quicker and more efficient patching and application updates, thus maintaining business continuity.

- **RTO:** The maximum amount of time a business can tolerate before services are restored after a disaster. -- 40 min
- **RPO:** The maximum amount of time that can pass between the last backup window and a disaster. -- 10 min

CONCLUSION:

By implementing the AWS-based disaster recovery solution, SANeForce successfully enhanced their business continuity and disaster recovery capabilities.
The solution provided a cost-effective, scalable, and secure way to protect data and applications, ensuring minimal disruption and rapid recovery.
This robust strategy positioned SANeForce for future growth and stability in the competitive pharmaceutical CRM industry, safeguarding their operations, maintaining compliance with industry standards, and drastically reducing downtime during critical updates.

ARCHITECTURE DIAGRAM: