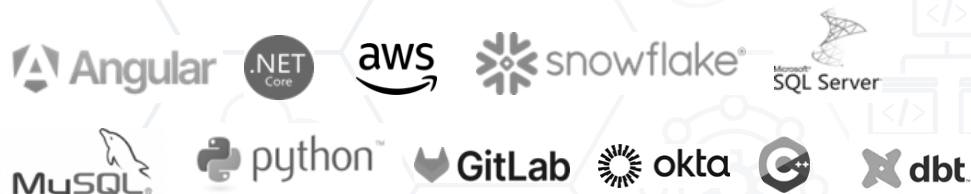


MODERNIZING DATA INFRASTRUCTURE FOR CANADA'S LARGEST DSO

TECH STACKS:



THE CLIENT

The client is the largest Dental Service Organisation (DSO) in Canada, operating over 1,000 clinics across the country. Historically, they relied on a third-party software agent called Sikka, installed on clinic machines, to extract critical data, including patient details, appointments, and treatments. This data was sent to a central SQL Server-based data warehouse, where it was processed and transformed into business reports to support operational and strategic decisions. As the organisation grew, so did the need for greater control, flexibility, and cost efficiency in its data infrastructure.

THE CHALLENGE

Despite serving its purpose, Sikka introduced several limitations. It incurred substantial licensing fees per clinic, creating a significant financial burden. The existing SQL Server warehouse struggled with scalability, and managing backups upon backups became a complex, time-consuming task. Additionally, the client was dependent on a vendor-controlled system that lacked transparency and adaptability. Recognising these challenges, the organisation sought to transition to a more cost-effective, scalable, and self-managed architecture. The dual objectives were to retire the Sikka agent and migrate their data infrastructure to Snowflake, a modern cloud-based data platform.

THE SOLUTION

Veltris developed a comprehensive in-house solution consisting of a custom-built PMS Agent and an Administrative Web Portal. The PMS Agent, designed as a Windows service, enables automated data extraction from multiple PMS systems, including ABELDent, Dentrix, PowerPractice, and Tracker. The Admin Portal allows centralised management of clinics, users, and data load schedules, providing complete operational visibility and control. Extracted data is securely uploaded to Snowflake using Snowpipe, where it is processed through multiple cleansing and aggregation layers. The system also incorporates AES encryption, PHI protection, version-controlled data archiving in AWS S3, and a proprietary C++ based licensing mechanism to ensure secure and efficient operations.

