Tuned Global

Tuned Global DATABASE Modernisation PROPOSAL

Prepared By

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</SOURCEFUSE>

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Welcome to SourceFuse Proposal

Helping businesses evolve through technology.

Strategic Digital Transformation through cloud-native technologies.

SourceFuse is transforming the way today's most successful companies develop breakthrough roadmaps leveraging cloud-based technologies.

A leading AWS Premier Consulting Partner & Microsoft modernisation Competency champion, SourceFuse is recognized by AWS for its deep technical expertise and proven customer success in modernizing Microsoft workloads. Encompassing modernisation of legacy applications, & databases, our end-to-end modernisation services incorporate the very latest in cloud technology to improve flexibility, security, and scalability for our customers.

We do it through our highly proficient AWS-certified experts placing a strong emphasis on prioritizing customer collaboration. This approach enables us to systematically discover, develop, and iterate for change leaders.

At SourceFuse, we uphold a culture defined by our core values, including high standards, a solid work ethic, accountability, humility, agility, and a commitment to being a team player—all of which collectively contribute to our unwavering dedication to customer success.

By choosing SourceFuse, you are selecting a trusted & experienced strategic technology partner, driving
innovation and success for your organisation

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aws PARTNER SaaS Services Competency

aws PARTNER AWS Microsoft Workloads Services Competency

aws PARTNER Healthcare Services Competency

aws PARTNER AWS Control Tower Delivery

aws PARTNER Migration Services Competency

aws PARTNER DevOps Services Competency

March 31, 2025

Dear Con Raso,

Thank you for the opportunity to respond to the Database modernisation proposal. We are excited to work with Tuned Global as a strategic partner to meet and exceed your expectations.

We work with organisations to develop their strategic plan & implement the same to successfully deliver the desired digital solution. By partnering with SourceFuse on this project, Tuned Global will benefit from SourceFuse's 18+ years of industry-leading experience supported by 100+ AWS certified team and a proven track record in successful application modernisations.

The enclosed SOW summarizes all the necessary details to proceed with this engagement. We are excited to offer our expertise for the perfect execution of this project and look forward to working as your strategic partner in achieving success together.

Please let us know of any clarifications or questions you may have about SourceFuse or any of the presented solution approaches described in this proposal.

Vikram Rai
Architect Database Migrations

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Section 1

Executive Summary

This Proposal ("Agreement") serves as SourceFuse's formal bid to act as a **Tuned Global** ("Client") technology and business partner in Modernizing the existing **Database Infrastructure.**

All information contained in this proposal is furnished solely for the Client and is considered confidential and proprietary.

1.1 Background

Tuned Global is a leading B2B streaming technology provider that specializes in building innovative and customizable music, audio, and video streaming solutions. By providing turnkey platforms and APIs, the company enables startups and corporations to quickly develop and grow streaming services. They offer music service APIs, white-label streaming apps, and all-inclusive content management tools that are simple to use and integrate.

Tuned Global enhances user experiences with features like offline listening, curated playlists, and analytics-driven suggestions. Their expertise in music licensing and partnerships with brands like Sony and UFC support sectors like gaming, telecom, and fitness, offering customizable solutions that reduce development time and costs.

This document proposes to implement the identified solution to modernize the Database Infrastructure.

1.2 Project Objective

SourceFuse will work on the modernisation of Tuned Global's database in scope:

- **Database Infrastructure**
  - **Customer-facing (Store) DB:**
    - **Instance:** R5.2xlarge
    - **Storage:** 4.38TB (438,090GB)
    - **Setup:** Multi-AZ for high availability
    - **Lease**: On-Demand
    - **License**: SQL Server Standard Edition
    - No additional IOPS provisioned beyond default storage settings
  - **Internal Music Master DB:**
    - **Instance**: db.m6i.2xlarge
    - **Storage**: 16TB
    - **Setup**: Single-AZ
    - **Lease**: On-Demand
    - SQL Server Web Edition
    - No additional IOPS provisioned beyond default storage settings
  - **ETL Process**
    - **ETL Tool:** SQL Server agent jobs using linked server functionality
    - **Frequency:** Runs every minute to sync data from the master DB to the customer-facing DB

- 100% SQL Server based, with potential scalability concerns

1.3 Term & Duration

The term of this agreement will commence on a **mutually agreed upon date ("Effective Date")** and will continue for a period of **3.75** months ("Original Term") from the effective date.

Section 2

Scope Of Work

2.1 Scope Inclusions

The Scope of Work defined below is based on business priorities and goals shared by the Client, consisting of the following activities/items.

Modernisation Scope of Work	
Epic(s)	**Feature(s)**

Database Modernisation and Data Migration	• Migration of Master and Store SQL Server to Aurora PostgreSQL for the databases
	  ○ Metadata/Schema conversion from SQL Server to Aurora PostgreSQL
	  ○ Data migration from SQL Server to Aurora PostgreSQL
	• The data layer in different applications will be updated to use Postgres instead of SQL Server

Re-Architect ETL Process	• ETL process from Master to Store database will be updated to use Store DB as Postgres • The data transfer process from the Store database to Elastic/Redis/Dynamo will be updated to use the Store DB as Postgres • The underlying ETL engine for Master to Store will be updated from SQL Server Agent to use AWS Glue • Unit Testing of the migrated database
Update API and console application's Data Layer	• Update the data layer for API, lambdas, and console applications to use Postgres for the Master/Store databases using Npgsql as the engine with Dapper. • Update the inline queries (Approximately 1000) in the data layer from SQL Server syntax to PostGres syntax.

Quality Assurance	• Ensure data integrity and completeness post-migration. • Verify schema consistency between the source and target databases, ensuring all tables, columns, and data types are migrated correctly. • Verify the response time of the ETL jobs to migrate data from Master to Store DB. • Execute API regression test cases provided by the client to ensure data is correctly retrieved and updated, and that CRUD (Create, Read, Update, Delete) operations function properly with the new PostgreSQL database. • Measure API response times before and after migration to PostgreSQL using Postman to evaluate performance impact. • Support the client during User Acceptance Testing (UAT), including defect resolution, test data preparation, UAT issue reporting, and verification of functional and regression defects.
DevOps	• Setup Postgres instances for the Dev, Stage, and Production environments using the CloudFormation template • Setup DMS for data synchronization for the Dev, Stage, and Production environments

2.1.1 Repository

SourceFuse has picked the below repos which will be part of the modernisation:

- https://tunedglobal.visualstudio.com/Tuned%20Connect API and ETL via console applications
- https://tunedglobal.visualstudio.com/AWS%20CloudFormation IaC for updating the Postgres instance
- https://tunedglobal.visualstudio.com/Tuned%20Connect/_git/TunedLambda Lambda projects interacting with databases and DynamoDB
- https://tunedglobal.visualstudio.com/Ingestation/_git/TunedProcessing-v3 Ingestion projects taking music information from label providers and updating in the master database

2.2 Scope Exclusions

The following artifacts/Items are considered Out of Scope

- Any features not mentioned in Section 2.1 are considered out of scope.
- .NET modernisation, application modernisation, and refactoring activities are considered Out of the scope of this engagement.
- ASP.NET is not part of the scope of this engagement.
- There are only 4 databases associated with the application, no additional database will be considered in the current proposed phase.
- Only SQL Server databases will be migrated to PostgreSQL.
- Disaster Recovery is out of scope
- Quality Assurance.
    - The client will provide API regression test cases, which define the scope of testing. Writing new test cases or executing API scripts not provided by the client is excluded.
    - Performance and Stress Testing of the API's, Vulnerability Assessment & Penetration Testing (VAPT), Accessibility Testing, Usability Testing, Disaster Recovery Testing, and other non-functional testing are not included.

- Any new UI Automation and Automation of test cases beyond the existing set are excluded from this engagement.
- Integration Testing with other applications/3rd party applications is not included in the scope of testing.
- Regression Testing on modules or features outside the agreed scope is excluded.
- Any functionality not covered in the shared test cases or provided information is considered out of scope.
- Data Migration Testing from sources not included in the scope is excluded.
- Compatibility Testing on devices not included in the designated test environment is excluded.
- UAT activity is not included in the scope of the SF Team. The client will perform UAT post-modernisation, with the SF team providing support for the resolution and testing of UAT defects.

Section 3

SourceFuse Deliverables

SourceFuse shall generate the following deliverables to delineate further steps of project implementation

- Modernisation of Master and Store databases from SQL Server to Aurora PostgreSQL.
- Updated API and Console ETL applications to have their data layer using Postgres as the engine instead of SQL Server.
- Re-architect ETL Processes from SQL Agent to AWS Glue
- In the course of implementation, the following deliverables shall be shared at timely intervals for client review.
    - Architecture Document
    - Project Plan
    - Sprint Reports
    - QA Deliverables
        - Master Test Plan
        - Final Test Outcome Report
        - Bug Report
    - Release notes for UAT
- Warranty Support - valid for 30 days post delivery and limited to In Scope items only.

Section 4

Proposed Team Configuration

For this engagement, SourceFuse proposes a blended team of shared resources. The total duration of this project is **3.75 Months (75 working days)** for the modernisation of the Master and Store Database from MSSQL to Aurora PostgreSQL.

The table below shows the committed team allocation for the **Project duration** period, which shall cover all aspects of the project lifecycle and ensure the timely completion of work products and deliverables as per Section 3.

Allocations below are based on FTEs equal to a not-to-exceed amount of 160 hours per month per resource.

Role	Allocation	Responsibilities
Database Developer	2.0	Responsible for monitoring, data management, and ensuring consistency, quality, and security of the databases.
.NET Developer	1.5	Responsible for developing and implementing applications using .NET Technologies.
DevOps Engineer	0.5	Responsible for deploying the architecture designed by the Senior Architect, & Implementing integrations.
Project Manager	0.5	Responsible for client communication, requirements gathering, and planning upcoming sprints.
Quality Analyst	1.0	Responsible for running the manual test cases once the developer verifies the API automation
Total allocation	**5.5 FTE**	

Section 5

Solution Architecture & Approach

5.1 Solution Approach

- The Master and Store database query migration will be done using the AWS Schema Conversion Tool (SCT) and manual changes for compatibility issues.
- The data transfer from the current SQL Server to Postgres will be done using AWS Data Migration Service (DMS).
- ETL scripts from the Master to Store database will be re-platformed to use AWS Glue
- Application code for API, Lambda, and ETL Console apps will be updated to use NPGSQL as the ORM behind Dapper to communicate with the Master and Store database on PostgreSQL.

5.1.1 Reasons

- AWS SCT allows for automatic conversion of SQL-based procedures to the equivalent in Postgres where possible. For cases where SCT reports compatibility issues or is otherwise unable to convert, the procedures will be migrated manually.
- AWS DMS allows synchronized transfer from one database to another, whether it's heterogeneous or homogeneous engines. It uses Change Data Check (CDC) technology on the source database to identify if the source and destination databases match (for the initial load) and then again if anything has been changed in the source (add/update/delete) to perform the same operation at the destination side.
- As Tuned Global is already using Glue for log management to the Data lake, there's very little learning curve associated. Also, it has a serverless nature, native AWS integrations, and support for complex transformations using PySpark.
- Since the application already uses Dapper with the NpgSQL layer for a few procedures, the same API will be used for all interactions with the Store database, replacing ADO as the engine.

5.1.2 Tech Stack

- AWS SCT
- AWS DMS
- ETL via AWS Glue

5.2 High-Level Architecture

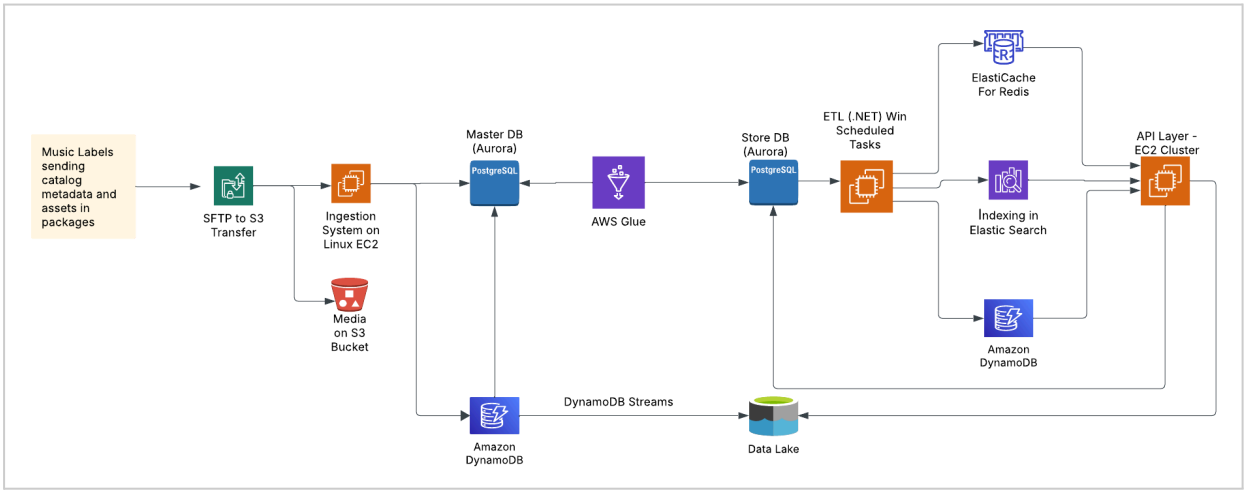


Figure 5.2.1 - Recommended Architecture Diagram

- The current architecture will be retained except for the Master and Store database instances being moved to Aurora PostgreSQL RDS.
- The ETL processes will be updated to execute with Postgres.
    - The first set will be updated to Postgres as a target. ETL engine will be updated from the current SQL Server Agent to AWS Glue.
    - The second set will be updated to PostgreSQL as the source. The existing projects for Elastic will have the data layer updated.

5.3 Recommended CI/CD Process

The existing CI/CD process will be retained as it is.

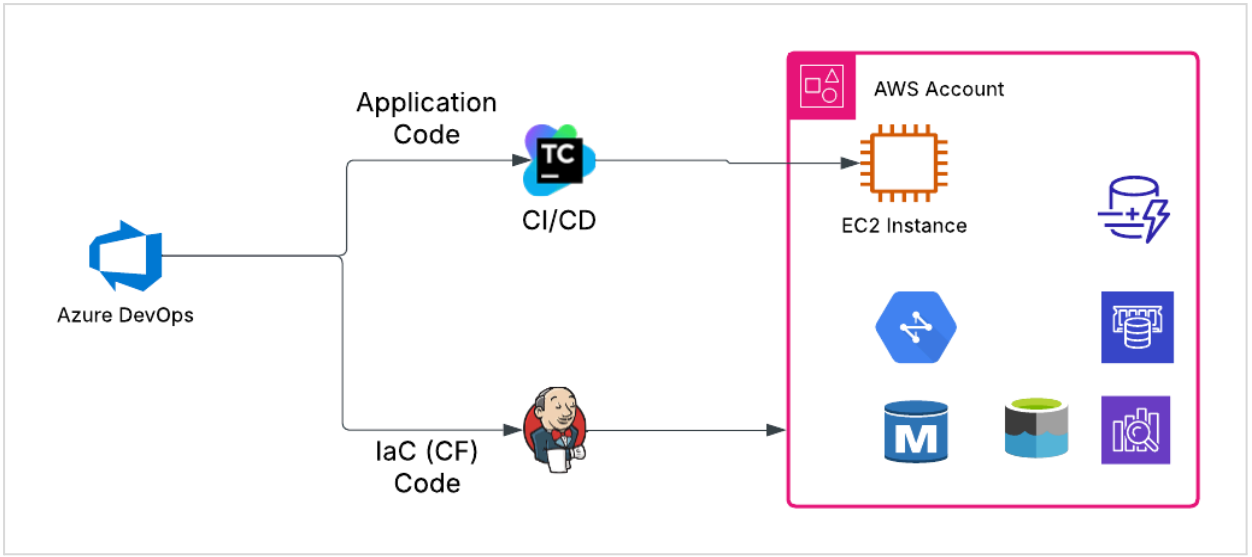
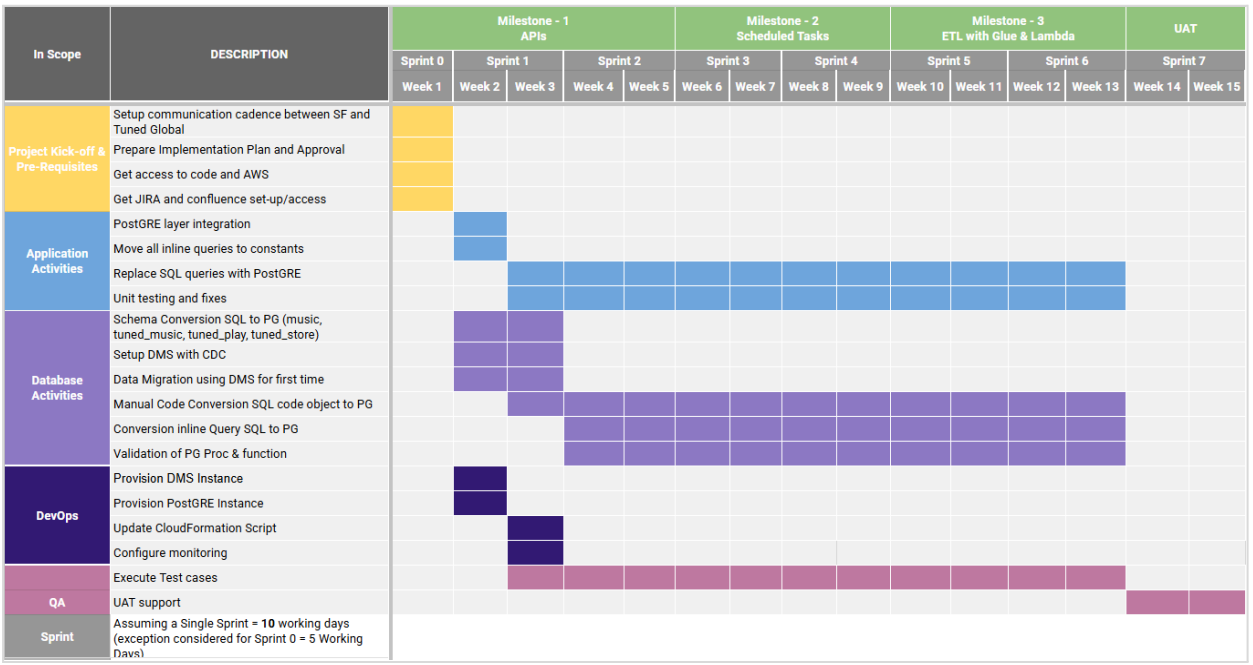


Figure 5.3.1 - Recommended CI/CD Diagram

Section 6

Roadmap

Considering the recommendations above, the SourceFuse team aims to deliver the modernized Tuned Global Databases covering scope items as embodied in Section 2.1 following the tentative project plan as furnished below



Roadmap Link

Section 7

Core Responsibilities

7.1 SourceFuse's Responsibilities

- Provide the qualified resource(s) as outlined in Section 4 to be available for the Duration of Services whose skills meet the requirements defined in Section 2, including -
    - Finding alternative resource(s) if the Services cannot be delivered due to sickness, absence, or changes in employment status
    - Supply of suitably skilled resource(s) to cover arranged leave periods
- Ensure the resources participate in scheduled meetings as required
- Respond to client communications in a timely manner
- Ensure UI/UX Designs, test plans, and other documents created are duly signed by the client

7.2 Client's Responsibilities

- Designate a point of contact(s) to act as the primary product interface to SourceFuse.
- Ensure SourceFuse resource(s) have access to documentation, information, or systems as necessary to complete work as requested by the client.
- Respond to SourceFuse communications and confirm requirements for development in a timely manner
- Access and Control mechanism specs will be provided by the client team.
- Client team to provide a detailed requirements document
- Setting up the development environment.
- Participate & Provide complete requirements/documents required for sprint planning, and timely mutual consent is to be achieved for the revision of the sprint plan and roadmap.
- Design finalization
- Provide application APIs and complete API documentation before beginning development,t and create new APIs if required.
- Provide API endpoints for different environments (dev/qa/stage) when required.
- Provide all access required for the development/execution of the project
- Provide test cases for execution to ensure that the APIs are interacting with the PostgreSQL database after migration. Provide access to the existing environment to measure the API response time of these test cases with the existing SQL Database.
- To ensure the timely delivery of the project, the client acknowledges their responsibility to
    - Take ownership of User Acceptance Testing (UAT), for both applications and allocate the required resources for the same.
    - UAT test cases will be discussed jointly with Tuned Global and SourceFuse, and a mutual agreement will be reached for the execution of functional and regression test cases.
    - Complete UAT in accordance with the agreed timeline and testing plan.
    - Provide feedback within **2 calendar weeks** of receiving UAT deliverables.
- Failure to meet these responsibilities, including timely provision of UAT feedback, may impact the project timeline and SourceFuse's ability to meet agreed deadlines, deliverables, and success criteria. If feedback is not received within the stipulated timeline, UAT will be deemed completed, and the deliverables will be considered accepted as-is by the Client.

Section 8

Assumptions & Prerequisites

The client will provide SourceFuse with the following prerequisites.

- Share all related AWS account access and be able to set up the required AWS components/services.
- The client agrees to manage the downtime required for the final sync. SourceFuse will communicate details about the downtime required at the end of the planning phase.
- SourceFuse Team will be responsible for completing the items in Scope (as per Section 2).
- The Client team will provide the required access to the codebase, documentation, databases, environments, etc. as and when required for this engagement.
- The Client team is responsible for adhering to the timelines for providing the required access, licenses, and conducting the review and load tests on the delivered environment, and any delay in the same will impact the overall timelines and cost.
- The agreement has been prepared based on the subsequent meetings and the scope items shared & signed off by the Client Team.
- The unit test cases for the Master and Store database will be shared by the client
- Any changes in instance sizes or family based on right-sizing will update the AWS estimates.
- Tuned Global will provide the volume of data needed for performance testing of the ETL jobs

Section 9

AWS Service Estimates

Based on the sizing considerations, the approximate cost estimations of AWS services are as follows:

Estimate Type	Term	Total Estimated Cost	Calculator Link
Current State(On Demand)	Annual	**AUD** 223,487.55 / **USD** 135,447.00	AWS Calculator link
Post modernisation(1 Year No-Upfront Reserved)	Annual	**AUD** 150,532.47 / **USD** 91,231.80	AWS Calculator link

*Conversion Rate **1 USD = 1.65 AUD***

Please Note:

- *SourceFuse shall share the Final AWS calculator during the execution of the project.*

Section 10

Payment Terms

The total engagement cost as per the Proposed Team Configuration (as furnished in Section 4) is **AUD 116,700** which will be **borne partially by Tuned Global and AWS** with a total duration of **3.75 months**. SourceFuse shall provide the required deliverables to the client as per the agreed-upon scope mentioned in Section 2.1.

Commercials	Amount(AUD)
Total Engagement Cost	**116,700.00**
AWS Funding Contribution	**(37,633.12)**
Tuned Global Contribution	**79,066.88**

Payment Schedule

Contribution	Milestone	Amount (AUD)
Tuned Global	Agreement execution (22%)	**26,355.33**
Tuned Global	Completion of Milestone 1 (22%)	**26,355.33**
Tuned Global	Completion of Milestone 2 (22%)	**26,355.33**
AWS	AWS Funding at Completion of Milestone 3 (33%)	**37,633.12**
	Total Engagement Cost	**AUD 116,700.00**

Please note:

- *This SOW is made based on information shared by the client and assumptions related to scope items.*
- *If additional requirements exceed the mentioned scope and deliverables, the cost will vary in tune with revised requirements.*
- *The AWS funding milestone is tied to project completion and requires client approval (sign-off on the AWS-provided template) before AWS releases the funds to SourceFuse.*

Section 11

Terms & Conditions

This Statement of Work (SOW) is issued under the agreed terms and conditions of the updated Master Service Agreement (MSA) between “SourceFuse” and “Tuned Global” executed on the same date as this SOW.

Section 12

Acceptance

The Client representative named below verifies that the terms of this Proposal are acceptable.
The parties hereto are each acting with proper authority by their respective companies.

SourceFuse Australia Pty

Kamal Singh, Managing Director

Date

Principal Business Address:

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Level 17 Collins Square
Tower 4, 727 Collins St,
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Tuned Global

Tuned Global

Date

Principal Business Address:

Address 1

Address 2

City, State, Zip Code

Section 13

Appendix A

Recommended Architecture Diagram

Recommended CI/CD Diagram

AWS Pre-modernisation Calculator

AWS Post-modernisation Calculator

SCT Database Migration Assessment Report - Music

SCT Database Migration Assessment Report - Tuned_Music

SCT Database Migration Assessment Report - Tuned_Play

SCT Database Migration Assessment Report - Tuned_Store