Oracle Financial Service Stress Testing and Scenario Analytics

User's Guide

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Oracle Financial Service Stress Testing and Scenario Analytics User's Guide, Release 8.1.2.6.0

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Contents

8 Workflow for STSA Objects

9 Managing STSA Resources

1

About This Guide

Audience

This guide is intended for:

- Technical Analyst: This user ensures that required data is populated in the appropriate tables according to the defined specifications. This user also executes, schedules, and monitors runs and batch jobs to support regular operations and analysis cycles.
- Business Analyst: This user reviews and validates functional requirements, examines reporting outputs, and helps ensure that the system's output aligns with business expectations. This user might work closely with both technical and data analysts to bridge business needs and technical implementations.
- Data Analyst: This user is involved with cleaning, validation, and importing of data into the OFSAA Download Specification Format.
- Administrator: The Administrator maintains user accounts and roles, archives data, loads data feeds, and so on. The administrator controls the access rights of users.
- Stress Testing Analyst: This user sets up and manages stress testing projects within the system. This includes creating stress testing scenarios, defining assumptions, executing runs, and analyzing the results to ensure compliance with regulatory and internal risk assessment requirements.

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Related Resources

See these Oracle resources:

Conventions

The following text conventions are used in this document.

Convention	Meaning
boldface	Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary.
italic	Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.
`monospace`	Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter.

2

Introduction to Stress Testing and Scenario Analytics

Oracle Financial Service Stress Testing and Scenario Analytics (OFSSTSA) empowers banks and financial institutions with an integrated and centralized solution for enterprise-wide stress tests and scenario analysis. Compliance with regulatory requirements is streamlined, while enabling ad-hoc impact assessments and scenario analysis as part of routine business processes and decision-making. Fully integrated with Model Management & Governance (MMG), Process Modelling Framework (PMF), Data Pipelines, and a net new Data Catalog, OFSSTSA allows citizen and business users to effortlessly define variables, metrics, portfolios, scenarios, and stress testing projects. The product is vendor-agnostic and orchestrates centralized scenarios across Oracle and third-party models, providing a comprehensive view of impacts across revenue growth assumptions, credit risk, market risk, operations risk, and capital & liquidity impacts.

Key Capabilities

In today's rapidly evolving financial landscape, regulatory compliance, strategic planning, and risk management are critical for success. OFSSTSA offers a comprehensive solution to empower financial institutions in navigating these challenges successfully.

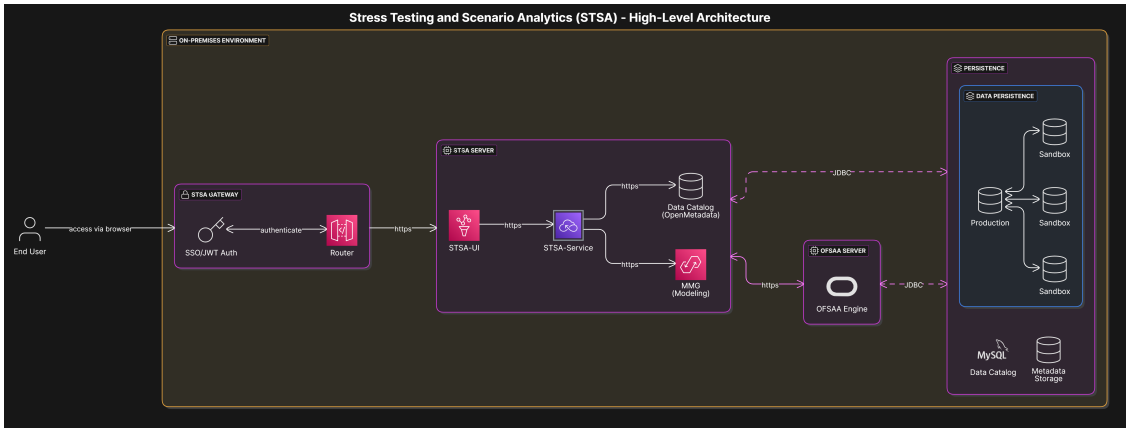
- **Centralized Repository**: A centralized repository facilitates the definition and management of various objects such as variables, models, metrics, datasets, orchestration process flows, and business-relevant scenarios. This repository allows users across the organization to refer to, share, compare, and utilize essential resources effectively.
- **Model Management and Governance**: The platform is embedded with robust model management and governance capabilities, enabling the creation, upload, execution, and management of a suite of in-house, Oracle, and third-party models with ease.
- **Extensible Data Catalog**: Equipped with a versatile data catalog, the system can seamlessly incorporate various datasets, including in-house, Oracle, third-party, or external data. The data catalog ensures logical linking of data elements to data structures, promoting data harmonization and synchronous perturbation of data elements across the enterprise.
- **Intelligent Process Modeling Engine**: The platform features an intelligent process modeling engine that facilitates the sequential scheduling of all processes across the enterprise. This enables seamless orchestration based on a harmonized set of scenarios, data, and methodologies, empowering users to run multiple complex scenarios simultaneously and develop actionable solutions.
- **Intuitive Stress Testing and Scenario Analysis**: A user-friendly interface guides business users through an intuitive step-by-step process for stress testing and scenario analysis. Validation routines and auto-recommendations minimize errors, reduce runtime, and expedite decision-making.
- **Vendor Agnostic Framework**: The product offers a vendor-agnostic framework supporting the registration, scheduling, and usage of existing business-as-usual (BAU) models and engines, whether from Oracle or otherwise, thereby leveraging the existing digital assets for stress testing and scenario analytics.

- **Seamless BAU Integration**: With its intuitive and robust capabilities, coupled with the ability to analyze a holistic view of scenario impacts across various risk domains, the platform enables seamless integration of stress testing and scenario analytics into day-to-day operations. This facilitates ad-hoc, frequent, and routine use of stress testing and scenario analytics, empowering organizations to make informed decisions promptly.
- **Analytical Dashboards**: The product features out of box analytical dashboards across four key reporting areas. These dashboards provide actionable insights based on results, enabling data-driven, informed, and timely decision-making by stakeholders across the enterprise. They integrate stress testing, financial planning, capital planning, liquidity planning, risk appetite planning, strategic business planning and other measures that positively impact business, profitability and return metrics.

Architecture Information

The following figure depicts the various frameworks and capabilities that make up the STSA Infrastructure.

Figure 2-1 STSA Topology



3
User Roles and Privileges

A function code or function name is a basic unit. Each function name can be assigned to a role. Each role can then be assigned to a group. And, then a group is assigned to a user.

After installing STSA, a set of predefined user groups are created. These user groups can be assigned to application users where each user can be assigned certain roles and responsibilities.

Table 3-1 List of predefined user groups

Group Name	Description
IDNTYAUTH	Identity Authorizer group
MDLUSR	Modeling User Group
MDLREV	Modeling Reviewer Group
MDLAPPR	Modeling Approver Group
PMFADMIN	Object migration admin group
WKSPADMIN	Workspace Administrator Group
DSUSRGRP	Datastudio User Group
SIMULATIONUSR	Simulation User Group
AYCFGADMIN AY_CFG	admin group
PORTFOLIOADMIN	Portfolio admin group
PROJECTADMIN	Project admin group
SCENARIOADMIN	Scenario admin group
METRICSADMIN	Metrics admin group
PROCESSADMIN	Process admin group
VARIABLEADMIN	VARIABLE admin group
CONFIGADMIN	Config admin group
HCYUSRGRP	Hierarchy User Group

An application user is mapped to a user group and a user group is mapped to the following roles and internally user roles are mapped to role functions such as view, create, modify approval and so on.

Ensure that you map the application user to one or more of the following user roles.

The basic roles defined in STSA are:

- Regulatory Role - You can create a project with Regulatory role and configurations that are approved.
- Project Manager Role - A project manager in STSA creates or edits and manages a repository of projects.
- Analysis Configuration Manager Role - A Project Configuration Manager in STSA creates or edits or manages all configurations in all the projects.
- Variable Manager Role - Manages all the variables.
- Metric Manager Role - Manages all the metrics defined in STSA or projects.

- Scenario Manager Role - Manages all the scenarios defined in STSA or projects.
- Portfolio Manager Role - Manages all the portfolios and asses them as part of stress testing in STSA.

Table 3-2 List of features and their roles and functions

Feature Name	Role	Function Code	Function Code Description
Metadata Browser	MDB Access	MDBACCESS	The user mapped to this function can access metadata browser.
	MDB Read-only	MDBREAD	The user mapped to this function can view metadata browser.
	MDB Write	MDBWRITE	The user mapped to this function can create metadata browser.
	Publish Metadata	METADMIN	The user mapped to this function can publish the metadata browser.
Object Migration	Obj Migration Access	MIGACC	Object Migration Role
	Obj Migration Advanced	MIGADVND	Object Migration Advanced Role
	Obj Migration Authorize	MIGAUTH	Object Migration Authorize Role
	Obj Migration Phantom	MIGPHTM	Object Migration Phantom Role
	Obj Migration Read	MIGREAD	The user mapped to this function can view the migrated objects.
	Obj Migration Write	MIGWRITE	Object Migration Write Role
	ObjectAdmin advanced	OBJADMADV	ObjectAdmin advanced access
Migration Export Advanced	Migration Export Advanced	OMEXADVND	Migration Export Advanced Role
	Migration Export Phantom	OMEXPHTM	Migration Export Phantom Role
	Migration Export Read	OMEXREAD	Migration Export Read-only Role
	Migration Export Write	OMEXWRITE	Migration Export Write Role
	Migration Import Advanced	OMIMADVND	Migration Import Advanced Role
	Migration Import Phantom	OMIMPHTM	Migration Import Phantom Role
	Migration Import Read	OMIMREAD	Migration Import Read-only Role
	Migration Import Write	OMIMWRITE	Migration Import Write Role
Configuration Manager	CONFIG_READ	EST_CONFIG_VIEW	The user mapped to this function can view the configuration manager.

Table 3-2 (Cont.) List of features and their roles and functions

Feature Name	Role	Function Code	Function Code Description
		EST_CONFIG_SUMM	The user mapped to this function can create configuration manager summary.
	CONFIG_WRITE	EST_CONFIG_VIEW	The user mapped to this function can view configuration manager.
		EST_CONFIG_SUMM	The user mapped to this function can view configuration manager summary.
		EST_CONFIG_MOD	The user mapped to this function can modify configuration manager.
Portfolio	PORTFOLIO_READ	EST_PORTFOLIO_VIEW	The user mapped to this function can view portfolio.
		EST_PORTFOLIO_SUMM	The user mapped to this function can view portfolio summary.
	PORTFOLIO_WRITE	EST_PORTFOLIO_VIEW	The user mapped to this function can view portfolio.
		EST_PORTFOLIO_SUMM	The user mapped to this function can view portfolio summary.
		EST_PORTFOLIO_ADD	The user mapped to this function can create portfolios.
		EST_PORTFOLIO_MOD	The user mapped to this function can modify portfolios.
		EST_PORTFOLIO_COPY	The user mapped to this function can replicate portfolios.
		EST_PORTFOLIO_DEL	The user mapped to this function can delete portfolios.
Metrics	METRICS_READ	EST_METRICS_VIEW	The user mapped to this function can view metrics.
		EST_METRICS_SUMM	The user mapped to this function can view metrics summary.
	METRICS_WRITE	EST_METRICS_VIEW	The user mapped to this function can view metrics.
		EST_METRICS_SUMM	The user mapped to this function can view metrics summary.

Table 3-2 (Cont.) List of features and their roles and functions

Feature Name	Role	Function Code	Function Code Description
		EST_METRICS_ADD	The user mapped to this function can add metrics.
		EST_METRICS_MOD	The user mapped to this function can modify metrics.
		EST_METRICS_COPY	The user mapped to this function can replicate metrics.
		EST_METRICS_DEL	The user mapped to this function can delete metrics.
	METRICS_WF	EST_METRICS_CMT	The user mapped to this function can provide their comments for metrics.
		EST_METRICS_REV	The user mapped to this function can review metrics.
		EST_METRICS_AUTH	The user mapped to this function can approve metrics.
Variable	VARIABLE_READ	EST_VARIABLE_VIEW	The user mapped to this function can view variable.
		EST_VARIABLE_SUMM	The user mapped to this function can view variable summary.
	VARIABLE_WRITE	EST_VARIABLE_VIEW	The user mapped to this function can view variable.
		EST_VARIABLE_SUMM	The user mapped to this function can view variable summary.
		EST_VARIABLE_ADD	The user mapped to this function can create variable.
		EST_VARIABLE_MOD	The user mapped to this function can modify variable.
		EST_VARIABLE_COPY	The user mapped to this function can replicate variable.
		EST_VARIABLE_DEL	The user mapped to this function can delete variable.
	VARIABLE_WF	EST_VARIABLE_CMT	The user mapped to this function can provide their comments for variable.

Table 3-2 (Cont.) List of features and their roles and functions

Feature Name	Role	Function Code	Function Code Description
		EST_VARIABLE_REV	The user mapped to this function can review variable.
		EST_VARIABLE_AUTH	The user mapped to this function can approve variable.
Model	MDLREAD	MDLVIEW	The user mapped to this function can view models.
	MDLACCESS	MDLSUMM	The user mapped to this function can view model summary.
	MDLWRITE	MDLVIEW	The user mapped to this function can view models.
		MDLSUMM	The user mapped to this function can view model summary.
		MDLADD	The user mapped to this function can create models.
		MDLEDIT	The user mapped to this function can modify models.
		MDLCOPY	The user mapped to this function can replicate models.
		MDLDEL	The user mapped to this function can delete models.
Process	PROCESS_READ	EST_PROCESS_VIEW	The user mapped to this function can view processes.
		EST_PROCESS_SUMM	The user mapped to this function can view process summary.
	PROCESS_WRITE	EST_PROCESS_ADD	The user mapped to this function can create processes.
		EST_PROCESS_MOD	The user mapped to this function can modify processes.
		EST_PROCESS_COPY	The user mapped to this function can replicate processes.
		EST_PROCESS_DEL	The user mapped to this function can delete processes.

Table 3-2 (Cont.) List of features and their roles and functions

Feature Name	Role	Function Code	Function Code Description
Scenario	SCENARIO_READ	EST_SCENARIO_VIEW	The user mapped to this function can view scenarios.
		EST_SCENARIO_SUMM	The user mapped to this function can view scenario summary.
	SCENARIO_WRITE	EST_SCENARIO_VIEW	The user mapped to this function can view scenario.
		EST_SCENARIO_SUMM	The user mapped to this function can view scenario summary.
		EST_SCENARIO_ADD	The user mapped to this function can add scenario.
		EST_SCENARIO_MOD	The user mapped to this function can modify scenario.
		EST_SCENARIO_COPY	The user mapped to this function can replicate scenario.
		EST_SCENARIO_DEL	The user mapped to this function can delete scenario.
	SCENARIO_WF	EST_SCENARIO_CMT	The user mapped to this function can provide their comments on scenario.
		EST_SCENARIO_REV	The user mapped to this function can review scenario.
		EST_SCENARIO_AUTH	The user mapped to this function can approve scenario.
Analysis Configuration	AY_CFG_READ	EST_AY_CFG_VIEW	The user mapped to this function can view analysis configuration.
		EST_AY_CFG_SUMM	The user mapped to this function can view analysis configuration summary.
	AY_CFG_WRITE	EST_AY_CFG_VIEW	The user mapped to this function can create analysis configuration.
		EST_AY_CFG_SUMM	The user mapped to this function can view analysis configuration summary.
		EST_AY_CFG_ADD	The user mapped to this function can add analysis configuration.

Table 3-2 (Cont.) List of features and their roles and functions

Feature Name	Role	Function Code	Function Code Description
		EST_AY_CFG_MOD	The user mapped to this function can modify analysis configuration.
		EST_AY_CFG_COPY	The user mapped to this function can replicate analysis configuration.
		EST_AY_CFG_DEL	The user mapped to this function can delete analysis configuration.
	AY_CFG_WF	EST_AY_CFG_CMT	The user mapped to this function can provide their comments on analysis configuration.
		EST_AY_CFG_REV	The user mapped to this function can review analysis configuration.
		EST_AY_CFG_AUTH	The user mapped to this function can approve analysis configuration.
Hierarchy	BUHCY_AUTH	HCYATH	The user mapped to this function can authorize hierarchies
	BUHCY_ACSS	HCYSUMM	Business Hierarchy Summary
	BUHCY_ROLY	HCYVIW	The user mapped to this function can view hierarchies
	BUHCY_WRIT	HCYADD	The user mapped to this function can add hierarchies
		HCYMOD	The user mapped to this function can modify hierarchies
		HCYDEL	The user mapped to this function will have rights to delete hierarchies
	BUHCY_BRVIEW	HCYBRVIEW	The user mapped to this function can view hierarchy browser

Table 3-3 List of STSA screens and their associated access codes

Screen	Functionality	Function Code	Description
Project	Summary	EST_PROJECT_SUMM	Access to view project summary
	Add	EST_PROJECT_ADD	Access to create new project

Table 3-3 (Cont.) List of STSA screens and their associated access codes

Screen	Functionality	Function Code	Description
	Delete	EST_PROJECT_DEL	Access to create delete project
	Edit	EST_PROJECT_MOD	Access to edit a project
	Copy	EST_PROJECT_COPY	Access to copy a project
	View	EST_PROJECT_VIEW	Access to view a project
	Comment	EST_PROJECT_CMT	Access to comment on a project
	Review	EST_PROJECT_REV	Access to review a project
	Approve	EST_PROJECT_AUTH	Access to approve a project
	Execute	EST_PROJECT_EXEC	Access to run a project
	View Run Results	EST_PROJECT_VIEW_RES	Access to view results
	Make execution parameter latest	EST_PROJECT_RUN_LAT	For an execution, provide execution parameter
Analysis Configuration	Summary	EST_AY_CFG_SUMM	Access to view analysis configuration summary
	Add	EST_AY_CFG_ADD	Access to create new an analysis configuration
	Delete	EST_AY_CFG_DEL	Access to create delete an analysis configuration
	Edit	EST_AY_CFG_MOD	Access to edit an analysis configuration
	Copy	EST_AY_CFG_COPY	Access to copy an analysis configuration
	View	EST_AY_CFG_VIEW	Access to view an analysis configuration
	Comment	EST_AY_CFG_CMT	Access to comment on analysis configuration
	Review	EST_AY_CFG_REV	Access to review an analysis configuration
	Approve	EST_AY_CFG_APPR	Access to approve a analysis configuration
Scope and Portfolio	Summary	EST_PORTFOLIO_SUMM	Access to view portfolio summary
	Add	EST_PORTFOLIO_ADD	Access to create new a portfolio
	Delete	EST_PORTFOLIO_DEL	Access to create delete a portfolio
	Edit	EST_PORTFOLIO_MOD	Access to edit a portfolio
	Copy	EST_PORTFOLIO_COPY	Access to copy a portfolio
	View	EST_PORTFOLIO_VIEW	Access to view a portfolio
Metrics	Summary	EST_METRICS_SUMM	Access to view metrics summary

Table 3-3 (Cont.) List of STSA screens and their associated access codes

Screen	Functionality	Function Code	Description
	Add	EST_METRICS_ADD	Access to add a new metrics
	Delete	EST_METRICS_DEL	Access to delete a metrics
	Edit	EST_METRICS_MOD	Access to edit a metrics
	Copy	EST_METRICS_COPY	Access to copy a metrics
	View	EST_METRICS_VIEW	Access to view the created metrics
	Review	EST_METRICS_REV	Access to review the metrics
	Approve	EST_METRICS_APPR	Access to approve a metrics
Model	Summary	EST_MODEL_SUMM	Access to view Models summary
	Add	EST_MODEL_ADD	Access to add a model
	Delete	EST_MODEL_DEL	Access to delete a model
	Edit	EST_MODEL_MOD	Access to modify a model
	Copy	EST_MODEL_COPY	Access to copy a model
	View	EST_MODEL_VIEW	Access to view a model
	Review	EST_MODEL_REV	Access to review a model
	Approve	EST_MODEL_APPR	Access to approve a model
Variable	Summary	EST_VARIABLE_SUMM	Access to view a variable summary
	Add	EST_VARIABLE_ADD	Access to add a variable
	Delete	EST_VARIABLE_DEL	Access to delete a variable
	Edit	EST_VARIABLE_EDIT	Access to edit a variable
	Copy	EST_VARIABLE_COPY	Access to copy a variable
	View	EST_VARIABLE_VIEW	Access to view a variable
	Review	EST_VARIABLE_REV	Access to review a variable
	Approve	EST_VARIABLE_APPR	Access to approve a variable
Process Flow	View	EST_PROCESS_VIEW	Access to view a workflow
	Summary	EST_PROCESS_SUMM	Access to view a workflow summary
	Add	EST_PROCESS_ADD	Access to add a workflow
	Modify	EST_PROCESS_MOD	Access to modify a workflow
	Copy	EST_PROCESS_COPY	Access to copy a workflow

Table 3-3 (Cont.) List of STSA screens and their associated access codes

Screen	Functionality	Function Code	Description
	Delete	EST_PROCESS_DEL	Access to delete a workflow
Configuration Summary	Summary	EST_CONFIG_SUMMARY	Access to view a workflow summary
	View	EST_CONFIG_VIEW	Access to view a configuration
	Add	EST_CONFIG_ADD	Access to add a configuration
	Modify	EST_CONFIG_MOD	Access to modify a configuration
	Copy	EST_CONFIG_DIM_HRCHY_MAP	Dimension and hierarchy mapping
	Search	EST_CONFIG_DIM_SEARCH	Access to search a configuration
	Edit	EST_CONFIG_DIM_SAVE	Access to save a configuration
Scenario Management	Scenario Summary	EST_SCENARIO_SUMM	Access to view Scenario Summary screen
	Add	EST_SCENARIO_ADD	Access to Add new Scenario Definition
	Delete	EST_SCENARIO_DEL	Access to Delete Scenario Definition
	Edit	EST_SCENARIO_MOD	Access to Edit Scenario Definition
	Copy	EST_SCENARIO_COPY	Access to Copy Scenario Definition
	View	EST_SCENARIO_VIEW	Access to View Scenario Definition
	Review	EST_SCENARIO_REV	Access to Review Scenario Definition
	Approve	EST_SCENARIO_APPR	Access to Approve Scenario Definition
	Export	EST_SCENARIO_EXP	Access to Export Scenario Definition
Document Management	View	EST_DOCUMENT_VIEW	Access to view the document
	Modify	EST_DOCUMENT_MOD	Access to modify the document
	Delete	EST_DOCUMENT_DEL	Access to delete the document
	Add	EST_DOCUMENT_ADD	Access to add the document
Hierarchy	Authorize	HCYATH	
	Summary	HCYSUMM	
	View	HCYVIW	
	Add	HCYADD	
	Edit	HCYMOD	
	Delete	HCYDEL	

Table 3-3 (Cont.) List of STSA screens and their associated access codes

Screen	Functionality	Function Code	Description
	Hierarchy Browser View	HCYBRVIEW	

After installing STSA, predefined groups are created where OFSAA users can be tagged to these predefined groups and these predefined groups are mapped to STSA roles and functions internally.

Table 3-4 List of predefined groups in STSA

Predefined Group	Description
IDNTYAUTH	Identity Authorizer group
MDLUSR	Modeling User Group
MDLREV	Modeling Reviewer Group
MDLAPPR	Modeling Approver Group
PMFADMIN	Object migration administrator group
WKSPADMIN	Workspace administrator Group
DSUSRGRP	Datastudio User Group
SIMULATIONUSR	Simulation User Group
AYCFGADMIN AY_CFG	Analysis Configuration administrator group
PORTFOLIOADMIN	Portfolio administrator group
PROJECTADMIN	Project administrator group
SCENARIOADMIN	Scenario administrator group
METRICSADMIN	Metrics administrator group
PROCESSADMIN	Process administrator group
VARIABLEADMIN	Variable administrator group
CONFIGADMIN	Configuration administrator group
HCYUSRGRP	Hierarchy User Group

4

High level work flow for STSA

Before starting with stress testing:

1. Create sandbox.

   Set up a new workspace to isolate and manage configurations, data, and metadata specific to your analysis.

2. Migrate production metadata to sandbox.

   Migrate production metadata components including:

   - Data Models
   - Process Pipelines
   - Model Pipelines

3. Set Up Data Catalog (DC)
   - Register database services
   - Ingest schema metadata
   - Map metadata to physical sources
4. Ensure Master Data (MD) Availability

   Verify that relevant master data is ingested and published in the Data Catalog.

5. Create Business Glossary and Glossary Terms.

   Add relevant terms under the EST Global Glossary for logical-physical data mapping.

6. Establish Metadata Relationships in DC
   - Configure mappings and relationships
   - Handle configuration elements such as:
     - Glossary Term to Table/Column mapping
     - Metadata rule dependencies
7. Create STSA-Specific Metadata.

   Define and register metadata needed for STSA including variables, models, metrics, and portfolios.

8. Manage Dimensions

   Configure dimensions for both:

   - Portfolios
   - Results reporting
9. Onboard Metrics
   - Define new metrics or import existing ones
   - Validate and approve metric definitions
10. Map Metrics to Processes and Models

Link metrics to corresponding processes and/or model pipelines to facilitate accurate computation.

11. Create Variables

    Define required variables including input, derived, and time series variables.

12. Set Up Additional Configurations

    Include any configuration elements necessary for workflow execution such as analysis configurations and scenario associations.

13. Create a Stress Testing Project.

    Combine portfolios, variables, metrics, models, and scenarios into a cohesive project and define execution logic.

5
Prerequisites for STSA

> **Note**
>
> Ensure that all the objects are created on the same workspace.

5.1 Creating Sandbox

Introduction

A sandbox in STSA is an isolated workspace used for modeling, testing, and validating stress testing configurations, without affecting the live production environment. It acts as a controlled environment where analysts can ingest metadata, configure variables, simulate models, and preview outcomes.

A Sandbox is used for the following:

- To safely test new configurations and modeling scenarios.
- To perform impact analysis without influencing production data.
- To validate metadata and data catalog setups before actual stress testing execution.
- To manage project-specific data and metadata in a structured and independent context.

The uses of Sandbox in STSA are as follows:

- Hosts a cloned or migrated version of production metadata.
- Serves as the foundation for defining portfolios, metrics, models, variables, and process pipelines.
- Allows users to perform dry runs, trial configurations, or simulate project executions with custom data.
- Facilitates consistent, reproducible project setups across different teams.

For general queries such as purpose, frequency, and lifecycle of sandbox usage, see the following sections:

- FAQ A.3 – Workspaces and Data Management
- FAQ A.4 – Stress Testing and Scenario Analysis

To create a sandbox:

Prerequisites

1. Create a new empty DB schema.
   ```
   CREATE USER schemaname IDENTIFIED BY password DEFAULT TABLESPACE USERS
   TEMPORARY TABLESPACE TEMP QUOTA UNLIMITED ON USERS;
   ```

> **Note**
>
> Ensure that the new database schema is created on the same database server as the OFSAA application database server.

2. Ensure that you use the database name to create the workspace name.
3. To enable the object migration, in **CONFIGURATION** table present in the AAI OFSAA setup, update the `PMF_OM_SANDBOX_ENABLED` parameter value from `N` to `Y`.
4. Provide the required **SELECT** privileges to the target schema (atomic user) from the OFSAA application configuration schema.
   These privileges are predefined in the script config_table_privileges_for_atomic_user.sql, available at the following path on the OFSAA server:

   ```
   <FIC_HOME>/config_table_privileges_for_atomic_user.sql
   ```

   Run this script to assign all the necessary configuration table privileges to the specified schema.

   ```
   grant create SESSION to schemaname;
   grant create PROCEDURE to schemaname;
   grant create SEQUENCE to schemaname;
   grant create TABLE to schemaname;
   grant create TRIGGER to schemaname;
   grant create VIEW to schemaname;
   grant create MATERIALIZED VIEW to schemaname;
   grant create SYNONYM to schemaname;
   grant create TYPE to schemaname;
   grant SELECT ON DBA_TABLES TO schemaname;
   grant SELECT ON DBA_MVIEWS TO schemaname;
   grant SELECT ON DBA_TAB_IDENTITY_COLS TO schemaname;
   grant SELECT ON DBA_TAB_COLS TO schemaname;
   grant SELECT ON DBA_TAB_COMMENTS TO schemaname;
   grant SELECT ON DBA_VIEWS TO schemaname;
   grant SELECT ON DBA_SOURCE TO schemaname;
   ```

5. Provide **select** grant to the AAI application configuration schema, configured during the installation of the application that you want to do stress testing on:

   ```
   grant select on CSSMS_USR_PROFILE to schemaname;
   grant select on CSSMS_ROLE_MAST to schemaname;
   grant select on CSSMS_GROUP_MAST to schemaname;
   grant select on CSSMS_FUNCTION_MAST to schemaname;
   grant select on CSSMS_USR_GROUP_MAP to schemaname;
   grant select on CSSMS_USR_GROUP_DSN_SEG_MAP to schemaname;
   grant select on CSSMS_ROLE_FUNCTION_MAP to schemaname;
   grant select on cssms_usr_attrib to schemaname;
   grant select on AAI_DB_DETAIL to schemaname;
   grant select on CSSMS_GROUP_ROLE_MAP to schemaname;
   grant select on CSSMS_SEGMENT_MAST to schemaname;
   grant select on BATCH_TASK to schemaname;
   grant select on CSSMS_USR_DSN_SEG_MAP to schemaname;
   ```

```
grant select on CSSMS_USR_ROLE_MAP to schemaname;
grant select on CSSMS_METADATA_SEGMENT_MAP to schemaname;
grant select on BATCH_RUN to schemaname;
grant select on PR2_FILTERS to schemaname;
grant select on PR2_TASK_FILTER_DETAIL to schemaname;
grant select on ST_STRESS_MASTER to schemaname;
grant select on BATCH_MASTER to schemaname;
grant select on ICC_MESSAGELOG to schemaname;
grant select on MF_MODEL_SCRIPT_MASTER to schemaname;
grant select on MF_INPUT_VALUES to schemaname;
grant select on MF_MODEL_OUTPUT_VALUES to schemaname;
grant select on DB_MASTER to schemaname;
grant select on DSNMASTER to schemaname;
grant select on pr2_rule_map to schemaname;
grant select on FORMS_LOCALE_MASTER to schemaname;
grant ALL PRIVILEGES on pr2_rule_map_pr to schemaname;
grant ALL PRIVILEGES on pr2_rule_map_pr_tmp to schemaname;
grant select on pr2_rule_map_exclude to schemaname;
grant ALL PRIVILEGES on pr2_rule_map_exclude_pr to schemaname;
grant ALL PRIVILEGES on pr2_rule_map_exclude_pr_tmp to schemaname;
grant select on pr2_run_object to schemaname;
grant select on pr2_run_object_member to schemaname;
grant select on pr2_run_map to schemaname;
grant select on pr2_run_execution_b to schemaname;
grant select on AAI_BACKDATED_EXEC_INFO to schemaname;
grant select on pr2_run_execution_filter to schemaname;
grant select on pr2_firerun_filter to schemaname;
grant select on pr2_filters to schemaname;
grant select on configuration to schemaname;
grant select on batch_parameter to schemaname;
grant select on component_master to schemaname;
grant select on MDB_OBJECT_TYPE_ATT_LAYOUT to schemaname;
grant select on REV_OBJECT_ATTRIBUTE_DTL to schemaname;
grant select on mdb_object_dependencies to schemaname;
grant select on REV_STAT_DATA to schemaname;
grant select on REV_OBJECT_REPOSITORY_B to schemaname;
grant select on REV_OBJECT_REPOSITORY_TL to schemaname;
grant select on REV_OBJECT_ATTRIBUTE_DTL_MLS to schemaname;
grant select on REV_OBJECT_APPLICATION_MAP to schemaname;
grant select on MDB_OBJ_EXPR_DETAILS to schemaname;
grant select on MDB_EXECUTION_DETAILS to schemaname;
grant select on REV_OBJECT_TYPES_CD to schemaname;
grant select on REV_OBJECT_TYPES_MLS to schemaname;
grant select on REV_APPLICATIONS_CD to schemaname;
grant select on REV_APPLICATIONS_MLS to schemaname;
grant select on METADATA_BROWSER_LOCALE to schemaname;
grant select on MDB_STAT_DATA to schemaname;
grant select on MDB_OBJECT_TYPE_LAYOUT to schemaname;
grant select on ofsa_md_id_ref to schemaname;
grant select on MDB_ETL_MAPPING to schemaname;
grant select on setupinfo to schemaname;
grant select on LOCALEREPOSITORY to schemaname;
grant select on MF_MODEL_MASTER to schemaname;
grant select on MF_SANDBOX_MASTER to schemaname;
grant select on MF_VARIABLE_MASTER to schemaname;
grant select on MF_TECHNIQUE_MASTER to schemaname;
```

```
grant select on MDB_RULE_SOURCE_HEADER to schemaname;
grant select on MDB_RULE_TARGET_HEADER to schemaname;
grant select on MDB_RULE_TARGET_MEMBER_HEADER to schemaname;
grant select on MDB_RULE_GRID_DATA to schemaname;
grant select on MDB_MODEL_MAPPING to schemaname;
grant delete on AAI_MAP_MAPPER to schemaname;
grant insert on AAI_MAP_MAPPER to schemaname;
grant update on AAI_MAP_MAPPER to schemaname;
grant select on AAI_MAP_MAPPER to schemaname;
grant select on infodom_patches to schemaname;
grant select on MDB_OBJECTS_GROUP_MASTER to schemaname;
grant select on MDB_OBJECTS_GROUPING to schemaname;
grant select on aai_wf_filter_exec_map to schemaname;
grant select,insert,update on aai_wf_request_queue to schemaname;
grant select,insert,update on aai_wf_request_queue_hist to schemaname;
grant select,insert,update on aai_wf_request_parameter to schemaname;
grant select,insert,update on aai_wf_request_parameter_hist to schemaname;
grant select,insert,update on AAI_WF_APP_REGISTRATION to schemaname;
--------------Attribution Analaysis-----------------------------------

grant select on AAI_WF_ATTR_ANALYSIS_DETAILS to schemaname;
grant select on AAI_WF_ATTR_COMPONENT to schemaname;
grant select on AAI_WF_RUNSKEY_MAPPING to schemaname;
grant select on AAI_WF_ATTR_VAR_MAPPING to schemaname;
grant select on AAI_WF_ATTR_COMP_VAR_MAPPING to schemaname;
grant select on AAI_WF_ATTR_EXECUTION to schemaname;
grant select on AAI_WF_ATTR_VAR_EXEC_INST to schemaname;
grant select on AAI_WF_RUN_EXEC_PARAMS to schemaname;
--------------Attribution Analaysis-----------------------------------

grant select on cssms_usr_group_map_view to schemaname;
grant execute on checkEnvForDataRedaction to schemaname;

-----  Begin ABC 8.1 grant Scripts----------

grant select,references on AAI_ABC_DIM_PURPOSE to schemaname;
grant select,references on AAI_ABC_DIM_SB_EFFECTIVE to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_TYPE to schemaname;
grant select,references on AAI_ABC_DIM_STATUS_QTNR to schemaname;
grant select,references on AAI_ABC_DIM_STATUS_QTNR_MLS to schemaname;
grant select,references on AAI_ABC_DIM_SIGNOFF_TYPES to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_APP_TYPES to schemaname;
grant select,references on AAI_ABC_DIM_QTN_SEL_TYPE to schemaname;
grant select,references on AAI_ABC_DIM_QTN_TYPE to schemaname;
grant select,insert,update,delete,references on AAI_ABC_DIM_QTN_CATEGORY
to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_RESP_TYPE to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_DEPUTE_TYPE to schemaname;
grant select,references on AAI_ABC_DIM_RESULT_SET_CAT_OPT to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_CRITICALITY to schemaname;
grant select,references on AAI_ABC_SETUP_COMPONENTS to schemaname;
grant select,references on AAI_ABC_SETUP_QTN_CONF_TYP to schemaname;
grant select,references on AAI_ABC_SETUP_QTN_CONF_TYP_MLS to schemaname;
grant select,references on AAI_ABC_FCT_QTNR_CONF to schemaname;
grant select,references on AAI_ABC_DIM_PURPOSE_MLS to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_TYPE_MLS to schemaname;
```

```
grant select,references on AAI_ABC_DIM_EMPLOYEE to schemaname;
grant select,insert,update,delete,references on
AAI_ABC_DIM_QTN_CATEGORY_MLS to schemaname;
grant select,references on AAI_ABC_DIM_QTN_SEL_TYPE_MLS to schemaname;
grant select,references on AAI_ABC_DIM_QTN_TYPE_MLS to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_APP_TYPES_MLS to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_CRITICAL_MLS to schemaname;
grant select,references on AAI_ABC_DIM_QTN_DEPUT_TYPE_MLS to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_RESP_TYPE_MLS to schemaname;
grant select,references on AAI_ABC_DIM_RESSET_CAT_OPT_MLS to schemaname;
grant select,references on AAI_ABC_DIM_SB_EFFECTIVE_MLS to schemaname;
grant select,references on AAI_ABC_DIM_SIGNOFF_TYPES_MLS to schemaname;
grant select,references on AAI_ABC_FCT_QTNR_ENTITY_MAP to schemaname;
grant select,references on AAI_ABC_SETUP_COMPONENTS_MLS to schemaname;
grant select,references on AAI_ABC_ENTITY_DOCUMENT_MAP to schemaname;
grant select,references on AAI_ABC_DIM_OR_STATUS_MLS to schemaname;
grant select,references on MESSAGES_EN_US to schemaname;
grant select,references on AAI_ABC_DIM_FREQUENCY to schemaname;
grant select,references on AAI_ABC_SETUP_PURPOSE_PROC_MAP to schemaname;
grant select,references on AAI_ABC_DIM_FREQUENCY_MLS to schemaname;
grant select,references on AAI_ABC_SETUP_DOCUMENT_CLASS to schemaname;
grant select,references on AAI_ABC_SETUP_DOC_CLASS_MLS to schemaname;
grant select,references on AAI_ABC_DIM_OR_STATUS to schemaname;
grant select,references on DOCUMENT_MASTER to schemaname;
grant select,references on AAI_ABC_DIM_COND_OPERATORS to schemaname;
grant select,references on AAI_ABC_DIM_COND_OPERATORS_MLS to schemaname;
grant select,references on AAI_ABC_DIM_OPT_COND_SCOPE to schemaname;
grant select,references on AAI_ABC_DIM_OPT_COND_SCOPE_MLS to schemaname;
grant select,references on AAI_ABC_DIM_QTN_OPT_TYPES to schemaname;
grant select,references on AAI_ABC_DIM_QTN_OPT_TYPES_MLS to schemaname;
grant select,references on AAI_APP_TL to schemaname;
grant select,references on AAI_ABC_DIM_QTN_DT_RST_CAT to schemaname;
grant select,references on AAI_ABC_DIM_QTN_DT_RST_CAT_MLS to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_AUDIT_STATUS to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_AUDIT_STS_MLS to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_ERROR_CODE to schemaname;
grant select,references on AAI_ABC_DIM_QTNR_ERROR_COD_MLS to schemaname;
grant select on AAI_WF_APP_REGISTRATION to schemaname;
grant select on CSSMS_PROFILE_HOLIDAY_MAP to schemaname;
grant select on CSSMS_PROFILE_MAST to schemaname;
grant select on WEB_SERVER_INFO to schemaname;
grant select,references on AAI_APP_B to schemaname;
grant select,references on AAI_USR_PREFERENCE_DETAIL to schemaname;
grant select on RTI_UI_EXCLUDE_PDM_LIST  to schemaname;
grant select on RTI_VIR_PHY_TBL_NAME  to schemaname;
grant select on RTI_DOMAIN  to schemaname;
----  End ABC 8.1 grant Scripts----------
grant select on aai_wf_process_b to schemaname;
grant select on aai_wf_process_tl to schemaname;
```

6. Create a wallet alias for the newly created schema in the STSA server wallet.
   For more information, see the Setup the Password Stores for Database User Accounts.
7. Create a data store object for the newly created data schema and the OFSAA production information domain schema from the **Add Data Store** pane in the Create Workspace wizard.
   Ensure that:

- A wallet alias is created for the OFSAA production information domain schema.
- All additional properties for the data store are completed if you are using **single-click workspace provisioning**.

For more information about creating a **Data Store**, see the Adding a Data Store in the Oracle Financial Services Model Management and Governance User Guide.

8. Register the simulation and production environment details in the OFSAA Environment.

> **Note**
>
> To access the **Register Environment** menu link, the **ENVSUMM** function must be mapped to the user.

To register the environments:

a. Click the context menu representing the user name and click **OFSAA Environment**.

b. Click **Register Environment** and provide the name, description and select the type of environment from the **Type** drop-dowm menu.

Provide the following metadata for the production environment:

- PROD_infodom - provide the production workspace name. For example, OFSAA_PROD.
- PROD_instanceName - provide the production instance name.
- PROD_instanceAccessToken - generate and provide the instance access token from the production workspace.
- PROD_baseUrl - provide the production base URL.

Provide the following metadata for the simulation (sandbox) environment:

- SIM_instanceName - provide the simulation workspace name. For example, SANDBOX1.
- SIM_instanceAccessToken - generate and provide the instance access token.
- SIM_baseUrl - provide the simulation or sandbox base url.
- SIM_sys_auth_user - provide the simulation or sandbox user details.
- SIM_sys_admin_user - provide the admin user details.
- SIM_ftpshare_path - provide the ftpshare path details.

> **Note**
>
> Generate the instance name and instance access token from the application's OFSAA Environment. For more information, see the **Creating the Instance Access Token** section in the Oracle Financial Services Analytical Applications Infrastructure User Guide.

Procedure

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. Click **Add Workspace**.

The **Create Workspace** wizard is displayed.

3. (Optional) To create a workspace from a template, click **Use Template** option.

   The zip files stored in the path: `<STSA Installation path>/scratch/ofsaadb/ftpshare/mmg/seeded/workspace-templates` is displayed in the **Library** drop-down menu. On selecting the template, any pre-filled values are overridden with the template provided values.

4. In the **Basic Details** pane, provide the following details and click **Next**:

   a. (Optional) If there is an imported file for the basic details, import the basic details using the **Import Archive File** option. Select the archived file or drag the file from its directory and drop it in the box.

      If you use this feature, the other fields described in the preceding rows are auto populated.

   b. In the **Workspace Code** field, enter the workspace ID.

      > **Note**
      >
      > Ensure that you provide a maximum of 12 characters for the workspace code and you can provide alphanumeric characters.

      > **Note**
      >
      > Ensure that you do not use the word "ALL" as a workspace code.

   c. In the **Purpose** field, provide a description for the workspace.

   d. In the **User-group** field, select the user groups who require access to this workspace.

      > **Note**
      >
      > In the **User-group** field, you must select the user-groups that are part of the OFSAA application (production environment).

   e. In the **Production** field, select the production OFSAA environment.

   f. In the **Simulation** field, select the sandbox OFSAA environment.

      The **Simulation Infodom** is auto-populated after you enter the same value in the **Workspace Code** field.

      Provide a **Simulation Segment Code**. This code specifies a unique segment or folder where you want to import objects. The code must meet the following requirements:

      - Maximum of 10 characters
      - No special characters (except underscore)
      - No extra spaces

   g. In the **Application Server IP/Hostname** field, provide the IP address or host name of the OFSAA application.

> **Note**
>
> In the **Application Server IP/Hostname** field, the IP/hostname must match the production environment's host/IP address. Refer to the **V_DB_Server** column in the **AAI_DB_Details** table in the OFSAA Configuration schema.

h. Click **More Options**.

i. In the **Type** field, select the either of the following options:

- **Modeling**

  > **Note**
  >
  > Select this option to create the MMG workspace.

- **Simulation**
- **STSA**

  > **Note**
  >
  > This option is selected by default

  Select this option to provision the workspace. All data model objects from the production schema are copied to the sandbox schema.

  > **Note**
  >
  > If you want to proceed with selecting specific objects instead of replicating all objects, use the **More Option**s feature.

j. In the **Simulation DB Schema Name** field, provide the name of the newly created schema.

k. In the **Simulation DB Password** field, provide the password of the schema.

l. In the **Simulation Jdbc Connection String** field, provide the JDBC URL.

   The format is: `jdbc:oracle:thin:@host_name:port_number/service_name`

5. Click **Next**.
6. In the **Workspace Schema** section, select schema (sandbox) name or add a data schema in the **Data Schema** field and click **Next**.

   For more information about creating a **Data Store**, see the Adding a Data Store in the Oracle Financial Services Model Management and Governance User Guide.

7. To copy all the database objects from production to sandbox, provide the following details in the **Data Sourcing** section:

   a. In the **Source Data Schema** drop-down menu, select the atomic schema of the production environment.

   b. In the **Target Data Schema** drop-down menu, select the sandbox or newly created workspace.

c. In the **Object Type** drop-down menu, select each object type and the database objects under each object type.

> **Note**
>
> If you select the child tables for import, the parent table is automatically selected.

8. Click the **Data Pipeline** tab. In the **Pipeline** field, select the pipeline you want to add and click **Next**
9. Skip the **Metadata Sourcing** step for this release. and click **Next**.

> **Note**
>
> Metadata migration is performed using the OFSA Object Migration option, not through the UI.

Import the metadata of the application, using the OFSA migration option.
For information about OFSAA metadata required for metadata migration see the Migrating Production Metadata to Sandbox from OFSAA Instance section.

For more information about the migration, see the *Object Migration* section in the Oracle Financial Services Analytical Applications Infrastructure User Guide.

10. In the **Validate** pane review all the selections and click **Finish** and then click **Physicalise Workspace**.

    The status of the workspace creation is displayed in the **Summary** screen.
    If the workspace is created sucessfully, the following message is displayed:

    ```
    Workspace creation successful.
    ```

    (Optional) To download the current configurations, click **Finish** and then click **Download Configuration Archive**.

    You can use this downloaded configuration for the **Import Archive File** option that is available in the **Create Workspace** wizard the next time you are creating a sandbox with similar configurations.
    If the sandbox creation fails, then check the mmg-ui.log and mmg-service.log, fix the errors, and then restart the sandbox creation process.
11. To return to the **Workspace Summary** page, click the **Close** button.

After the sandbox is created:

> **Note**
>
> - The model upload or object registration process must be manually triggered in the OFSAA Application (production environment) for newly created workspace infodom.
> - Ensure that the `tnsnames.ora` file in the OFSAA production environment contains the correct entry for the workspace schema.
> - The connection pooling for the newly created JNDI name must be available in the web layer.

- A default **EST** (Display Name: EST - Global Glossary of STSA) glossary is created. For more information about mapping the global glossary to glossary terms, see the Uploading Glossary Terms Mapping to Table Columns and Tags section.
- A database service job is created internally and triggered automatically. For more information, see the Adding Database Service in STSA section.
- When **EST_ENABLED** attribute is enabled in the configuration file, the modelling and simulation type workspaces are listed along with STSA workspace.
- A background database service job is triggered post-sandbox creation for indexing and synchronization.
- If the **EST_ENABLED** attribute is set to **Y**, you will see STSA workspaces alongside modeling and simulation workspaces.

5.1.1 Adding data in sandbox

Introduction

After creating the sandbox workspace, users must populate it with relevant data from the production schema. This data population step ensures that the sandbox contains representative and consistent data needed for configuring and executing stress testing projects.

The data added typically includes source data from the atomic schema such as instrument-level exposures, reference dimensions, time series variables, lookup tables, and any other information required to compute metrics, run models, and analyze portfolios. Populating the sandbox with accurate and complete data is essential for meaningful simulations and valid output results.

Although the system provides a default data ingestion pipeline as part of sandbox creation, user intervention is still required to initiate the population process. Users can define whether to overwrite existing data (truncate and insert) or append to it. They can also apply global or table-level filters, specify SQL conditions (for example, based on MISDATE), and optimize performance using JDBC properties and rejection thresholds.

This activity is not fully automated and is not triggered automatically when a stress testing project is initiated. It must be explicitly executed by the user. However, once a sandbox is populated, it can be reused for multiple stress testing cycles, as long as the data remains relevant. If fresh data is required for a new reporting period or simulation scenario, users must manually re-populate the sandbox with the updated dataset.

Performing this step ensures that the sandbox environment mirrors the necessary production data landscape, enabling accurate testing, validation, and analysis.

After creating the sandbox workspace, migrate the data from the production schema to sandbox schema.

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. To populate (or add) data in the workspace, click action next to the corresponding workspace and select **Populate** .

   The **Populate Workspace** page is displayed.
   The first section displays the Workspace name, purpose, data and time when the workspace was created and the source of the data.

3. Depending on the type of data loading job, select one of the following options:

   You can either overwrite the existing data (truncate and insert) or to append to the existing data.

   - **Overwrite:** In this mode, the underlying tables are truncated (overwritten on existing data) followed by an insert operation.
   - **Append:** In this mode, the underlying tables will be populated (added to the existing data) in the append mode.

4. Depending on what data you want to copy to the sandbox, select one of the following options:

   - **SELECTIVE**: In this mode, only the filtered tables (selected in the Table level Data Filters) are populated.
   - **ALL**: In this mode, all the underlying tables mapped to the workspace are populated along with the specified filters for specific tables.

5. In the **Data Filters - Global level**, enter the data filter that you want to apply on all the tables selected for data sourcing.

   For example: If MISDATE is equal to Today, then it is applied to all tables (wherever it is available) for selected Data Sources during population. If this field is not found (MISDATE) in the tables, it is not updated.

   Else, click **Use Template** to select a json file.
   After selecting the template, any pre-filled values is overridden with the template provided values.

   For more information, see the *Populate a Workspace* section in the Oracle Financial Services Model Management and Governance User Guide .

6. In the **Data Filters - Table level**, provide the data filters individually on the tables. Select the table and then enter the SQL filter.

   > **Note**
   >
   > You can provide multiple table names for the same SQL filter.

   > **Note**
   >
   > Global filters are not applicable for those tables on which filters have been applied individually.

7. In the **Data Filter - Hint**, you can provide database Hints at table-level and SQL prescripts at schema level for data load performance improvement during workspace population.

8. To filter data from a large database, you can provide additional parameters in the **Additional Parameters** section.

   Provide a source and target prescript mentioning the fetch size of JDBC properties and the batch commit size of JDBC properties for data upload.

9. In the **Select Unlimited or Customize the Rejection Threshold** section, select one of the following options:

   - **Unlimited** - All the errors will be ignored during the data population.
   - **Custom Rejection Threshold** - Enter the maximum of number of inserts that may fail any of the selected tables. You can provide the maximum number of inserts that can fail while loading data to a given table from all the sources. In the case of threshold breach, all the inserts into the particular target schema will be rolled back. However, it will continue populating the next target schema.

10. To load the data from production to sandbox schema, click **Populate Workspace** and then click **Create and Execute batch**.

    The status of the job is displayed in the Execution History of the sandbox.

5.1.2 Viewing status of Data Population in Sandbox

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. Click **Action** next to the corresponding workspace and select **Details**.

   The **Workspace Details** page is displayed.

3. To view the status of data population in this sandbox, click the **Execution History** tab.

   The status of the job is displayed.

4. If there are any errors, click on the job to view the log messages.

   The **Task Details** tab is displayed.
   To view detailed error report, click **Log Details** tab and view the log file.

5.1.3 Migrating Production Metadata to Sandbox from OFSAA Instance

Object migration is the process of migrating or moving objects from one workspace to another workspace. In STSA, the production environment metadata is cloned and migrated to the provisioned workspace for performing stress testing.
Here is a list of OFSAA metadata required for metadata migration:

1. Alias
2. Dataset
3. Derived entity
4. Business measure
5. Business Hierarchy
6. Business Processor Rule
7. Icc Batch
8. Rule
9. ETL

10. SCD
11. PMF Process

For information about metadata migration, see the *Object Migration* section in the Oracle Financial Services Analytical Applications Infrastructure User Guide.

Postrequisite:

To view the migrated rule object in the sandbox, after migrating the data successfully, update the rule page with the required **APP_ID** that is part of the sandbox mapping in **ofsa_object_application** map.

5.2 Adding Dimensions

Use this configuration to add the required business dimensions from production to the STSA workspace. These dimensions are consumed from the Advanced Analytical Infrastructure (AAI) and must contain at least one associated hierarchy to be visible in the list. The added dimensions are used in lower-level configurations such as Portfolio and Variable definitions. This metadata is exported while creating the sandbox.

Prerequisites

- Ensure that you configure other OFSAA products on the same information domain (or workspace).
- Ensure that you have replicated and migrated the hierarchy metadata from production to sandbox. For more information, see the *Creating Sandbox* section in the *Oracle Financial Service Stress Testing and Scenario Analytics User Guide*.

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click the Context Menu representing the user name and then click **Configuration Manager**.
4. Click **Configure** in the **Dimension Hierarchy** section.

   The **Dimension Configuration Summary** page is displayed.
5. Click **Create New**.
6. Select the required dimensions and click **Save**.

   Only dimensions that contain at least one hierarchy are displayed in the list.
7. On the Dimension Configuration Summary page, click a dimension hyperlink in the **Edit** column to view or modify the configuration details of that dimension.

   In **Edit** mode, you cannot completely unmap or remove a hierarchy that is already associated with a dimension. For example, if Dimension A is mapped to Hierarchy H1, H1 cannot be unmapped.

5.3 Configuring Data Catalog

Data Catalog (DC) serves as a central repository or logical layer within the STSA ecosystem.

DC allows registering of various data assets, which are essential components for conducting stress testing and scenario analytics within financial services. Data assets include various types of data such as tables, files, and databases that are registered within the Data Catalog.

This registration process involves providing metadata and other relevant information about each data asset.

DC serves as a logical layer on top of the physical and logical layers for STSA application. It provides a unified and organized view of the underlying data assets, regardless of their location or format. Within DC, logical metadata is mapped to the physical metadata across different applications or data sources. This mapping ensures that you can easily understand and access the data assets as and when required, regardless of their underlying structure or origin.

DC plays a crucial role in managing and organizing data assets within STSA by providing a centralized repository, logical layer, and metadata mapping capabilities. This enables you to effectively utilize and analyze data for stress testing and scenario analytics while ensuring data consistency and quality.

For seamless functioning of DC with STSA ensure to:

1. Adding Database Service in STSA.
2. Adding Sandbox Schema Data Model Details through Data Ingestion.
3. Glossary.

5.3.1 Adding Database Service in STSA

After creating the sandbox, the workspace details are displayed in the **Database Services** screen.

Optionally, to add an existing database service in STSA if there are any unprovisioned workspace:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click the **Data Catalog**, and in the **Data Sources** tile click the preview button.

   The **Database Services** page is displayed.
4. To add the database service, click **Add**.

   The **Save View** page is displayed.
5. Select the schema name of the workspace from the **Workspace** drop-down menu and provide a description.

   > **Note**
   >
   > As part of the workspace creation the database schema is listed in the **Workspace** drop-down menu.
6. To create a database service for metadata ingestion, click **Apply**.

   The newly added database is listed in the **Database Services** summary page.

5.3.2 Deleting Database Service in STSA

After creating the sandbox, the workspace details are displayed in the **Database Services** screen.

To delete an existing database service in STSA if there are any unprovisioned workspace:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click the **Data Catalog**, and in the **Data Sources** tile click the preview button.

   The **Database Services** page is displayed.
4. To delete the Database Service, in the **Database Services** page, click **Actions** and then click **Delete** against the Database Service you want to delete.

5.3.3 Adding Sandbox Schema Data Model Details through Data Ingestion

Data asset ingestion is the process of adding or copying metadata from an external database.

To create another data ingestion job for existing database service:

Prerequisites
After creating the sandbox, the data ingestion pipeline is created and listed in the **Data Ingestion** screen. To trigger the data ingestion job, ensure that you click the **Run Pipeline** option.

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. To ingest the metadata, click the **Data Catalog**, and in the **Data Asset Ingestion** section click the preview button.

   The **Data Asset Ingestion** summary page is displayed.
4. Click **Add**.

   The **Data Asset Ingestion** page is displayed.
5. Select a **Database Service** name, and provide a name and a description for the run.
6. To add data periodically or incrementally, schedule a recurring run by selecting the frequency and time depending on your requirement.
7. To run the pipeline for metadata ingestion, click **Apply**.

   The job details are displayed with its status on the **Data Asset Ingestion** summary screen.

5.3.4 Glossary

A glossary is a collection of business terms with the detailed description such as usage, sample values, and usage of a business term.

In STSA, a global glossary (EST) is created after the installation. Hence, create all the glossary terms required for stress testing under the EST glossary.

To add and map glossary terms to physical tables:

1. Create glossary terms under the EST glossary using the Uploading Glossary Terms.
2. Uploading Glossary Terms Mapping to Table Columns and Tags the glossary terms (logical name) to the table and table columns (physical name) or tags using the template.

3. Download the mapping template provided in the UI. Fill in logical glossary terms and map them to the corresponding physical table and column names.
4. Upload this completed template under **Glossary** > **Mapping**.

5.3.5 Adding a Glossary

To add a glossary:

1. Login to STSA.

   The Workspace Summary page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Data Catalog**, and in the **Glossary** section, click the preview button.

   The glossary summary page is displayed.
4. In the **Glossary Summary** page, click **Add**.
5. In the **Add Glossaries** page that opens, do the following:
   a. In the **Name** field, provide a name.
   b. In the **Display Name** field, provide a display name for the glossary.
   c. In the **Description** field, provide a description of the glossary
6. Click **Apply**.

   The Glossary details are displayed with its status on the Glossary summary screen.

5.3.6 Preseeded Glossaries

After creating the sandbox a default glossary named EST, DL, and DIMENSION is created.

> **Note**
>
> Ensure that you create all the glossary terms related to STSA under the respective glossary because STSA does not support any user-created glossaries.

The following list of glossary terms are created under the EST and DIMENSION global glossary.

Table 5-1 List of glossary terms created in STSA

Name	Display Name	Description
DATEMANAGEMENT	Date Management	Map all required date columns
DIMENSION	Dimension	Create Dimension Glossary Terms
CREDIT_RATING	Credit Rating Dimension	This is credit rating dimension sample glossary term
DATE	Date Dimension	Map Date Columns
PRODUCT	Product Dimension	This is product dimension sample glossary term
CURRENCY	Currency Dimension	This is currency dimension sample glossary term

Table 5-1 (Cont.) List of glossary terms created in STSA

Name	Display Name	Description
PDTS_VARIABLE_NAME	PDTS Variable Name	Map PDTS Variable Name Column
PDTS_VARIABLE_DESCRIPTION	PDTS Variable Description	Map PDTS Variable Description Column
PDST_SCENARIO_CODE	PDST Scenario Code	Map PDST Scenario Code Column
PDTS_DATA_SOURCE	PDTS Data Source	Map PDTS Data Source Column
PDTS_DEFAULT_PROBABILITY_TYPE	PDTS Default Probability Type	Map PDTS Default_Probability Type Column
PDTS_DETAIL_ID	PDTS Detail Id	Map PDTS Detail Id Column
PDTS_FICMISDATE	PDTS FICMISDATE	Map PDTS FICMISDATE Column
PDTS_FREQUENCY	PDTS Frequency Frequency	Map PDTS Frequency Frequency Column
PDTS_FREQUENCY_UNIT	PDTS Frequency Unit	Map PDTS Frequency Unit Column
PDTS_ID	PDTS Id	Map PDTS Id Column
PDTS_TERM_POINTS	PDTS Term Points	Map PDTS Term Points Column
PDTS_TYPE	PDTS Type Type	Map PDTS Type Type Column
PDTS_TYPE_HIERARCHY	PDTS Type Hierarchy	Map PDTS Type Hierarchy Column
PDTS_PERCENT	PDTS Percent	Map PDTS Percent Column
CCFTS_VARIABLE_NAME	CCFTS Variable Name	Map CCFTS Variable Name Column
CCFTS_VARIABLE_DESCRIPTION	CCFTS Variable Description	Map CCFTS Variable Description Column
CCFTS_CATEGORY	CCFTS Category	Map CCFTS Category Column
CCFTS_SCENARIO_CODE	CCFTS Scenario Code	Map CCFTS Scenario Code Column
CCFTS_DATA_SOURCE	CCFTS Data Source	Map CCFTS Data Source Column
CCFTS_DEFAULT_PROBABILITY_TYPE	CCFTS Default Probability Type	Map CCFTS Default Probability Type Column
CCFTS_DETAIL_ID	CCFTS Detail Id	Map CCFTS Detail Id Column
CCFTS_FICMISDATE	CCFTS FICMISDATE	Map CCFTS FICMISDATE Column
CCFTS_FREQUENCY_UNIT	CCFTS Frequency Unit	Map CCFTS Frequency Unit Column
CCFTS_ID	CCFTS Id	Map CCFTS Id Column
CCFTS_TERM_POINTS	CCFTS Term Points	Map CCFTS Term Points Column
CCFTS_TERM_VALUE	CCFTS Term Value	Map CCFTS Term Value Column
CCFTS_TYPE	CCFTS Type Type	Map CCFTS Type Type Column
CCFTS_TYPE_HIERARCHY	CCFTS Type Hierarchy	Map CCFTS Type Hierarchy Column
LGDTS_VARIABLE_NAME	LGDTS Variable Name	Map LGDTS Variable Name Column
LGDTS_VARIABLE_DESCRIPTION	LGDTS Variable Description	Map LGDTS Variable Description Column
LGDTS_CATEGORY	LGDTS Category	Map LGDTS Category Column

Table 5-1 (Cont.) List of glossary terms created in STSA

Name	Display Name	Description
LGDTS_SCENARIO_CODE	LGDTS Scenario Code	Map LGDTS Scenario Code Column
LGDTS_DATA_SOURCE	LGDTS Data Source	Map LGDTS Data Source Column
LGDTS_DEFAULT_PROBABILITY_TYPE	LGDTS Default Probability Type	Map LGDTS Default_Probability Type Column
LGDTS_DETAIL_ID	LGDTS Detail Id	Map LGDTS Detail Id Column
LGDTS_FICMISDATE	LGDTS FICMISDATE	Map LGDTS FICMISDATE Column
LGDTS_FREQUENCY_UNIT	LGDTS Frequency Unit	Map LGDTS Frequency Unit Column
LGDTS_ID	LGDTS Id	Map LGDTS Id Column
LGDTS_TERM_POINTS	LGDTS Term Points	Map LGDTS Term Points Column
LGDTS_TERM_VALUE	LGDTS Term Value	Map LGDTS Term Value Column
LGDTS_TYPE	LGDTS Type Type	Map LGDTS Type Type Column
LGDTS_TYPE_HIERARCHY	LGDTS Type Hierarchy	Map LGDTS Type Hierarchy Column
TM_VARIABLE_NAME	TM Variable Name	Map TM Variable Name Column
TM_VARIABLE_DESCRIPTION	TM Variable Description	Map TM Variable Description Column
TM_COMPUTATION_BASIS	TM Computation Basis	Map TM Computation Basis Column
TM_COMPUTATION_INDICATOR	TM Computation Indicator	Map TM Computation Indicator Column
TM_DETAIL_ID	TM Detail Id	Map TM Detail Id Column
TM_DIM_SEGMENT_ID	TM Dim Segment Id	Map TM Dim Segment Id Column
TM_FICMISDATE	TM FICMISDATE	Map TM FICMISDATE Column
TM_FREQUENCY	TM Frequency	Map TM Frequency Column
TM_ID	TM Id	Map TM Id Column
TM_NSEGMENT_ID	TM Nsegment Id	Map TM Nsegment Id Column
TM_ROLL_RATE_APPLICABILITY_INDICATOR	TM Roll Rate Applicability Indicator	Map TM Roll Rate Applicability Indicator Column
TM_TYPE	TM Type Type	Map TM Type Type Column
TM_DIM_VSEGMENT_ID	TM Dim Vsegment Id	Map TM Dim Vsegment Id Column
TM_DIM_NSEGMENT_ID	TM Dim Nsegment Id	Map TM Dim Nsegment Id Column
TM_SOURCE_CREDIT_RISK_BASIS_CODE	TM Source Credit Risk Basis Code	Map TM Source Credit Risk Basis Code Column
TM_TARGET_CREDIT_RISK_BASIS_CODE	TM Target Credit Risk Basis Code	Map TM Target Credit Risk Basis Code Column
TM_TRANSITION_RATE	TM Transition Rate	Map Transition Rate Column
ER_FICMISDATE	ER FICMISDATE	Map ER FICMISDATE Column
ER_FROM_CURRENCY	ER FROM CURRENCY	Map ER FROM CURRENCY Column
ER_TO_CURRENCY	ER TO CURRENCY	Map ER TO CURRENCY Column
ER_RATE_DATA_SORUCE_CODE	ER RATE DATASOURCE CODE	Map ER RATE DATASOURCE CODE Column

Table 5-1 (Cont.) List of glossary terms created in STSA

Name	Display Name	Description
ER_TENOR	ER TENOR	Map ER TENOR Column

Here is a list of all the predefined glossary terms and their details:

- **DIMENSION** Glossary Term - create all your STSA dimension glossary terms for example currency, date, product under this glossary term.
  The **DIMENSION** glossary is used in variable, portfolios and scenario objects of STSA to map various glossary terms to dimensions.

  For example, you have a dimension table known as **DIM_CURRENCY** and a column inside that known as **V_ISO_CURRENCY_CD**.

  You have a stage table called **STG_INVESTMENTS** and a column inside that known as **V_CCY_CODE**.

  Another stage table called **STG_MM_CONTRACTS** and a column inside that known as **V_CCY_CODE**.

  A glossary term named DIMENSION is associated with dimension tables. This term must be tagged at the dimension table level.

  The following table provides the table and column names along with the dimension tags.

  Table 5-2 Dimension Glossary Term Mapping

Table Name	Column Name	Tag
DIM_CURRENCY	V_ISO_CURRENCY_CD	DIMNESION
STG_INVESTMENTS	V_CCY_CODE	
STG_MM_CONTRACTS	V_CCY_CODE	

  You can now map all these tables and columns to the **Currency** glossary term created under **DIMENSION** glossary using the Glossary term mapping to table and columns.

  When the **Currency** glossary term is mapped to both the tables and columns, the currency term points to both **STG_INVESTMENTS** table, **V_CCY_CODE** column and **STG_MM_CONTRACTS** table and **V_CCY_CODE** column where, `Currency=DIM_CURRENCY.V_ISO_CURRENCY_CD=STG_INVESTMENTS.V_CCY_CODE=STG_MM_CONTRACTS.V_CCY_CODE`

  The following table shows the result of the tables after mapping the currency glossary term.

  Table 5-3 Results of Dimension Glossary Term Mapping

Source Table	Source Column	Dimension Table	Dimension Column
STG_INVESTMENTS	V_CCY_CODE	DIM_CURRENCY	V_ISO_CURRENCY_CD
STG_MM_CONTRACTS	V_CCY_CODE	DIM_CURRENCY	V_ISO_CURRENCY_CD

- **DATEMANAGEMENT** glossary term- use this glossary term to map the date columns of all the tables in the Data Catalog that are required for stress testing.

To compute stress testing or identify the risks in future, the data is replicated from the base reference date along with futuristic dates. And since some of the other dates and calculations like renewal date, maturity date, expiry date also have to be calculated with respect to the future dates and cannot be the same as of the base reference date. If the dates are not updated, this would result to exposures with positive current outstanding whose maturity date has been passed or facility has been expired. Since the production data is of a past date, the stress testing results date is calculated for a future date. And, this calculation can be done in two ways:

- Default Date Management - This is the standard method to move the date from the past to a future date. This is calculated as, `STG_INVESTMENTS.D_MATURITY_DATE + (Day difference between Reference Date and Pseudo Date)`

  > **Note**
  >
  > You can define a pseudo future date in the configuration file.

- STSA Date Management - This is additional calculation to move the date from past to future date with combination of default date management.
  If the day difference between STG_INVESTMENTS.D_MATURITY_DATE and Reference Date > 0, then, `STSA Date Management = Default Date Management + Months between Pseduo Date and Reference Date`.

  If the day difference between STG_INVESTMENTS.D_MATURITY_DATE and Reference Date < 0, then, `STSA Date Management = Default Date Management + Day difference between Pseudo Date and Projected MIS Date`.

The **DATEMANAGEMENT** glossary is used in analysis configuration, scenario and project objects of STSA.

For example, a **STG_INVESTMENTS** table has a **D_MATURITY_DATE** column.

A **STG_LOAN_CONTRACTS** table has a **D_MATURITY_DATE**column.

And, we have a **DIM** tag to identify the tags.

The following information is represented in a tabular format.

Table 5-4 DATEMANAGEMENT glossary term mapping

Table Name	Column Name
DIM_DATE	D_CALENDAR_DATE
STG_INVESTMENTS	FIC_MIS_DATE

You can map all these tables and columns to the **DATEMANAGEMENT** glossary term using the Glossary term mapping to table and columns.

After mapping the **DATE** glossary term, the table is updated as `DATE=DIM_DATE.D_CALENDAR_DATE=STG_INVESTMENTS.FIC_MIS_DATE`

Table 5-5 Result for DATEMANAGEMENT glossary term mapping

Table Name	Column Name	Tag	Glossary Term
DIM_DATE	D_CALENDAR_DATE	DIM	DATE

- **DL** glossary term - this glossary term represents the download specification or expectation for the given process. This is where you can map all the tables required for a process on

Data Catalog at the table level. For example, you have a STG_PD_TERM_STRUCTURE table, then you can map the DL glossary to this table using the pipeline id such as {Pipeline_ID}_DL.
For example, we have two tables known as **STG_PD_TERM_STRUCTURE** and **STG_PD_TERM_STRUCTURE_DTL**. Assuming we want to link a process for these two tables, we can do this using the DL glossary term using the process or model id in the following format: `{Pipeline_ID}_DL`.

> **Note**
>
> You can get the process or model id from OpenMetadata.

The following table represents the DL glossary term mapping.

Table 5-6 Result of DL glossary term mapping

Table Name	Glossary Term
STG_PD_TERM_STRUCTURE	{Pipeline_ID}_DL
STG_PD_TERM_STRUCTURE_DTL	{Pipeline_ID}_DL

After creating the DL glossary terms, the sub-glossary terms with INPUT_<GLOSSARYTERM> and the OUTPUT_<GLOSSARYTERM> sub-glossary terms are created.

For example, after creating a DL glossary term, INPUT_DIMESNION and OUTPUT_DIMENSION sub-glossary terms are created.

The **DL** glossary is used in metrics and auto-sequencing of process and model objects.

- **IRC** glossary term - this glossary term also known as a yield curve, is a graphical representation of the relationship between interest rates (or yields) and different maturities (time periods).
The following table lists the glossary terms that are created for IRC.

Table 5-7 IRC Glossary terms and their descriptions

Name	DisplayName	Description
IRC_CODE	IRC Code	Map IRC Code
IRC_CURRENCY_CODE	IRC Currency	Map IRC Currency
IRC_DESCRIPTION	IRC Description	Map IRC Description
IRC_FR_DI_FIC_MIS_DATE	IRC FIC MIS Date	Map IRC FIC MIS Date
IRC_FR_DI_RATE	Interest Rate	Map Interest Rate
IRC_FR_DI_RATE_CODE	Interest Rate Code	Map Interest Rate Code
IRC_FR_DI_RATE_MULT	Interest Rate Multiplier	Map Interest Rate Multiplier
IRC_FR_DI_RATE_TERM	Interest Rate Term	Map Interest Rate Term
IRC_MULT	IRC Multiplier	Map IRC Multiplier
IRC_NAME	IRC Name	Map IRC Name
IRC_TERM	IRC Term	Map IRC Term
IRC_TERM_CODE	IRC Term Code	Map IRC Term Code

For example, consider three IRC tables, **EST_IRC_IRCS**, **EST_IRC_RATE_TERMS** and **EST_IRC_DIRECT_INPUT** with the following columns.

Table 5-8 Details about the EST_IRC_IRCS table

COLUMN_NAME	DATA_TYPE	NULLABLE
N_INTEREST_RATE_CD	NUMBER(10,0)	No
V_IRC_NAME	VARCHAR2(100 CHAR)	No
V_IRC_DESC	VARCHAR2(1000 CHAR)	Yes
ISO_CURRENCY_CD	VARCHAR2(30 CHAR)	Yes

Table 5-9 Details about EST_IRC_RATE_TERMS table

COLUMN_NAME	DATA_TYPE	NULLABLE
N_INTEREST_RATE_CD	NUMBER(10,0)	No
N_INTEREST_RATE_TERM	NUMBER(5,0)	No
C_INTEREST_RATE_TERM_MULT	CHAR(1 CHAR)	No

Table 5-10 Details about EST_IRC_DIRECT_INPUT table

COLUMN_NAME	DATA_TYPE	NULLABLE
D_FIC_MIS_DATE	DATE	No
N_INTEREST_RATE_CD	NUMBER(10,0)	No
N_INTEREST_RATE_TERM	NUMBER(5,0)	No
C_INTEREST_RATE_TERM_MULT	CHAR(1 CHAR)	No
N_INTEREST_RATE	NUMBER(10,6)	No

Then, map the following table column values to the IRC glossary terms this way:

Table 5-11 Mapping table and column to IRC variables

TABLE_NAME	COLUMN_NAME	GLOSSARY_TERM
EST_IRC_DIRECT_INPUT	D_FIC_MIS_DATE	IRC_FR_DI_FIC_MIS_DATE
EST_IRC_DIRECT_INPUT	N_INTEREST_RATE_CD	IRC_FR_DI_RATE_CODE
EST_IRC_DIRECT_INPUT	N_INTEREST_RATE_TERM	IRC_FR_DI_RATE_TERM
EST_IRC_DIRECT_INPUT	C_INTEREST_RATE_TERM_MULT	IRC_FR_DI_RATE_MULT
EST_IRC_DIRECT_INPUT	N_INTEREST_RATE	IRC_FR_DI_RATE
EST_IRC_IRCS	N_INTEREST_RATE_CD	IRC_CODE
EST_IRC_IRCS	V_IRC_NAME	IRC_NAME
EST_IRC_IRCS	V_IRC_DESC	IRC_DESCRIPTION
EST_IRC_IRCS	ISO_CURRENCY_CD	IRC_CURRENCY_CODE
EST_IRC_RATE_TERMS	N_INTEREST_RATE_CD	IRC_TERM_CODE
EST_IRC_RATE_TERMS	N_INTEREST_RATE_TERM	IRC_TERM
EST_IRC_RATE_TERMS	C_INTEREST_RATE_TERM_MULT	IRC_MULT

Also, you can link different tables in different workspace to the same glossary term.

For example, you have two different workspaces, **SANDBOX1** and **SANDBOX2** with different tables.

SANDBOX1 workspace has two tables:

- TABLE1.COLUMN1
- TABLE1.COLUMN2

SANDBOX2 workspace has two tables:

- TABLE2.COLUMN1
- TABLE2.COLUMN2

You can map a single glossary term to both workspaces and to all four tables. In the analysis configuration and project creation, the tables and columns are picked up using the workspace linked to the glossary.

Map the physical tables and its columns to the preseeded glossary terms mentioned in the above table. For more information, see the Uploading Glossary Terms Mapping to Table Columns and Tags section.

5.3.6.1 Uploading Glossary Terms

To upload multiple glossary terms within one or multiple glossary categories:

Ensure that you create the glossary terms under the `EST` category.

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click the **Data Catalog**, and in the **Data Sources** tile click the preview button.

   The **Database Services** page is displayed.
4. In the Glossary summary page, click the drop-down and select **Glossary Term Upload**.

   The **Glossary Term Upload** page is displayed.
5. To create multiple glossary terms, click **Add** and download the template.
6. Using this template add all the required information such as parent name, display name, description, synonyms, related terms, references, tags, reviewers, owner and status for all the terms in the `.CSV` file.
7. Select one or multiple glossary categories from the **Select Glossary** drop-down menu.
8. Browse for the `.CSV` file created in the earlier step and select this file for upload or drag and drop the file in the **Drag and Drop** field.
9. Click **Upload**.

   The file is verified and the status of the upload is displayed in the **Glossary Term Upload** summary screen.

5.3.6.2 Uploading Glossary Terms Mapping to Table Columns and Tags

To upload mapping of table columns and tags to glossary terms:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.

3. On the bottom, click **Data Catalog**, preview button on the **Glossary** section.

   The **Glossary Summary** page is displayed.

4. In the Glossary Summary page, click the drop-down and select **Glossary Term / Tag To Column Mapping (CSV)**.

5. Click **Add**.

6. Select the **Database Service** from the drop-down menu.

7. Download the template and fill in the details for the mapping such as table and column names, source of the glossary term and the Fully Qualified Name (FQN).

   > **Note**
   >
   > - If you are mapping the column name to a glossary term then mark the source as glossary and if the glossary term is a tag then mark the source as classification.
   > - Example for FQDN:<glossary.glossaryterm> STSA.TESTGLOSSARY

8. Upload the CSV file and click **Upload**.

   If the upload is successful, the uploaded status is displayed as **COMPLETED**. And, details like number of rows created, number of successful uploads, number of failed entries in the excel sheet is displayed along with when the excel sheet was created and by which user.

   If there are any errors, the status shows as **FAILED** and you can download the error report by clicking actions and then select **Download Error Report**. The excel file is appended with an error column that explains the error for the failure. Fix the errors and reupload the excel sheet.

5.3.6.3 Downloading Glossary Term / Tag To Column Mapping (CSV)

To download mapping of table columns and tags to glossary terms:

1. Login to STSA.

2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.

3. On the bottom, click **Data Catalog**, preview button on the **Glossary** section.

   The **Glossary Summary** page is displayed.

4. In the Glossary Summary page, click the drop-down and select **Glossary Term / Tag To Column Mapping (CSV)**.

5. In the Glossary Term / Tag To Column Mapping (CSV). Summary page, click **Actions** and then click **Download** against the Glossary Term / Tag To Column Mapping you want to download.

   > **Note**
   >
   > If the Upload fails, you can download the error report. To do so, in the summary screen, click **Action**s and then click **Download Error Report** against the Glossary Term / Tag To Column Mapping you want to download.

5.3.6.4 Uploading Glossary Term/Tag To Table Mapping

To upload glossary of table term and tags to table mapping:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, preview button on the **Glossary** section.

   The **Glossary Summary** page is displayed.
4. In the Glossary Summary page, click the drop-down and select **Glossary Term/Tag To Table Mapping**.
5. Click **Add**.
6. In the **Add Mappings – Tables** page that opens, do the following:
   a. Select the **Table Name** from the drop-down list.
   b. Select the **Column Name** from the drop-down list.
   c. Select the **Type** (either **Glossary** or **Classification**) from the drop-down list.
   d. Based on your selection, select the **Glossary/Classification** from the drop-down list.
   e. Select the **Tags** associated with the glossary.
7. Click **Upload**.

   The file is verified and the status of the upload is displayed in the **Glossary Term/Tag To Table Mapping** summary screen.

   If the upload is successful, the uploaded status is displayed as **COMPLETED**.

5.3.6.5 Downloading Glossary Term/Tag To Table Mapping

To download glossary of table term and tags to table mapping:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, preview button on the **Glossary** section.

   The **Glossary Summary** page is displayed.
4. In the Glossary Summary page, click the drop-down and select **Glossary Term/Tag To Table Mapping**.
5. In the **Glossary Term/Tag To Table Mapping** Summary page, click **Actions** and then click **Download** against the Glossary Term/Tag To Table Mapping you want to download.

> **Note**
>
> If the upload fails, you can download the error report. To do so, in the summary screen, click **Action**s and then click **Download Error Report** against the Glossary Term/Tag To Table Mapping you want to download.

5.3.6.6 Uploading Glossary Term/Tag To Pipeline Mapping

To upload glossary of table term and tags to pipeline mapping:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, preview button on the **Glossary** section.

   The **Glossary Summary** page is displayed.
4. In the Glossary Summary page, click the drop-down and select **Glossary Term/Tag To Pipeline Mapping**.
5. Click **Add**.
6. In the **Add Mappings - Pipeline** page that opens, do the following:
   a. Select the **Pipeline Type** from the drop-down list.
   b. Select the **Pipeline Name** from the drop-down list.
   c. Select the **Type** (either **Glossary** or **Classification**) from the drop-down list.
   d. Based on your selection, select the **Glossary/Classification** from the drop-down list.
   e. Select the **Tags** associated with the glossary.
   f. Click **Add Row**.
7. Click **Upload**.

   The file is verified and the status of the upload is displayed in the **Glossary Term/Tag To Pipeline Mapping** summary screen.

   If the upload is successful, the uploaded status is displayed as **COMPLETED**.

5.3.6.7 Downloading Glossary Term/Tag To Pipeline Mapping

To download glossary of table term and tags to pipeline mapping:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, preview button on the **Glossary** section.

   The **Glossary Summary** page is displayed.
4. In the Glossary Summary page, click the drop-down and select **Glossary Term/Tag To Pipeline Mapping**.
5. In the **Glossary Term/Tag To Pipeline Mapping** Summary page, click **Actions** and then click **Download** against the Glossary Term/Tag To Pipeline Mapping you want to download.

> **Note**
>
> If the upload fails, you can download the error report. To do so, in the summary screen, click **Action**s and then click **Download Error Report** against the Glossary Term/Tag To Table Mapping you want to download.

5.3.6.8 Uploading Glossary Term/Tag To Model Mapping

To upload glossary of table term and tags to model mapping:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.

3. On the bottom, click **Data Catalog**, preview button on the **Glossary** section.

   The **Glossary Summary** page is displayed.

4. In the Glossary Summary page, click the drop-down and select **Glossary Term/Tag To Model Mapping**.
5. Click **Add**.
6. In the **Add Mappings - Model** page that opens, do the following:
   a. Select the **Model Type** from the drop-down list.
   b. Select the **Model Name** from the drop-down list.
   c. Select the **Type** (either **Glossary** or **Classification**) from the drop-down list.
   d. Based on your selection, select the **Glossary/Classification** from the drop-down list.
   e. Select the **Tags** associated with the glossary.
   f. Click **Add Row**.
7. Click **Upload**.

   The file is verified and the status of the upload is displayed in the **Glossary Term/Tag To Model Mapping** summary screen.

   If the upload is successful, the uploaded status is displayed as **COMPLETED**.

5.3.6.9 Downloading Glossary Term/Tag To Model Mapping

To download glossary of table term and tags to model mapping:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, preview button on the **Glossary** section.

   The **Glossary Summary** page is displayed.

4. In the Glossary Summary page, click the drop-down and select **Glossary Term/Tag To Model Mapping**.
5. In the **Glossary Term/Tag To Model Mapping** Summary page, click **Actions** and then click **Download** against the Glossary Term/Tag To Model Mapping you want to download.

> **Note**
>
> If the upload fails, you can download the error report. To do so, in the summary screen, click **Action**s and then click **Download Error Report** against the Glossary Term/Tag To Table Mapping you want to download.

5.3.7 Adding Lineage

STSA tracks data lineage, showing how data moves through the organization's systems. Users can visualize how data is transformed and where it is used, helping with data traceability and impact analysis. STSA supports lineage for Database, Dashboard, and Pipelines.

To add a lineage:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.

3. On the bottom, click **Data Catalog**, click the preview button on the **Lineage** section.

   The **Lineage Screen summary** page is displayed.

4. In the Lineage Screen summary, click **Add**.

5. In the **Lineage CSV Upload File** screen that opens, browse for the .CSV file created in the earlier step and select this file for upload or drag and drop the file in the **Drag and Drop** field.

   Download the template and fill in the details such as Type, Entity Name, Additional Attributes, and so on.

6. Click **Upload**.

   The file is verified and the status of the upload is displayed in the **Lineage Screen** summary screen.

   If the upload is successful, the uploaded status is displayed as **COMPLETED**.The details like number of rows created, number of successful uploads, number of failed entries in the excel sheet is displayed along with when the excel sheet was created and by which user.

   To download the lineage, in the **Lineage Screen** summary screen, click **Actions** and then click **View CSV** against the lineage report you want to download

   If there are any errors, the status shows as **FAILED** and you can download the error report by clicking actions and then select **Download Error Report**. The excel file is appended with an error column that explains the error for the failure. Fix the errors and reupload the excel sheet.

5.3.8 Managing Dashboards

To manage the STSA Dashboards:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Dashboard** section.
4. Enter your **Username** and **Password**.
5. Click **Login**.

   In the page that opens, you can view the pipelines, glossary and the tables that were added/imported.

5.3.9 Managing Glossaries Management

You can use the Glossaries Management screen to add, rename, delete, change the style, import, and export the glossary terms. To manage the glossary terms:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Glossaries Management** section.
4. Enter your **Username** and **Password**.

   Ensure that you enter the username and password of the Open MetaData account.

5. Click **Login**.

In the **EST - Global Glossary of STSA** page that opens, you can view the glossary terms that were added.

5.3.9.1 Adding Glossary Terms

To add a glossary term:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Glossaries Management** section.
4. Enter your **Username** and **Password**.
5. Click **Login**.

   In the **EST - Global Glossary of STSA** page that opens, you can view the glossary terms that were added.
6. To add a glossary term, click **Add Term**.
7. In the **Add Glossary Term** page that opens, do the following:
   a. In the **Name** field, add a glssary term name.
   b. In the **Display Name** field, enter a display name for the glossary term.
   c. In the **Description** field, enter a description for the glossary term.
   d. (Optional): In the **Tags** field, select the tags associated with the glossary term.
   e. (Optional): In the **Synonyms** field, enter a synonym associated with the glossary term.
   f. (Optional): Provide the **Icon URL**.
   g. (Optional): Click the **Add** icon to add the **References**, **Owner**, **Reviewers** for the glossary term.
8. Click **Save**.

   The newly added glossary terms are displayed in the **EST - Global Glossary of STSA** page.

5.3.9.2 Editing Glossary Terms

To edit a glossary term:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Glossaries Management** section.
4. Enter your **Username** and **Password**.
5. Click **Login**.

   In the **EST - Global Glossary of STSA** page that opens, you can view the glossary terms that were added.
6. Click the glossary term you want to edit.
7. In the page that opens, click the **three dots** icon and select **Rename**.
8. In the **Edit Name** page that opens, update the **Name** and **Display Name** as required

9. Click **Save**.

   The updated glossary term is displayed in the **EST - Global Glossary of STSA** page.

5.3.9.3 Deleting Glossary Terms

To delete a glossary term:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Glossaries Management** section.
4. Enter your **Username** and **Password**.
5. Click **Login**.

   In the **EST - Global Glossary of STSA** page that opens, you can view the glossary terms that were added.
6. Click the glossary term you want to edit.
7. In the page that opens, click the **three dots** icon and select **Delete**.
8. In the dailog box that opens, enter **DELETE** and click **Confirm** to delete the glossary term.

5.3.9.4 Editing the Style of Glossary Terms

To edit the style of the glossary term:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Glossaries Management** section.
4. Enter your **Username** and **Password**.
5. Click **Login**.

   In the **EST - Global Glossary of STSA** page that opens, you can view the glossary terms that were added.
6. Click the glossary term you want to edit.
7. In the page that opens, click the **three dots** icon and select **Style**.
8. In the **Edit Style** page that opens, update the **Icon URL** and **Color** as required.
9. Click **Save**.

   The updated glossary term is displayed in the **EST - Global Glossary of STSA** page.

5.3.9.5 Exporting Glossary Terms

You can use the **Export** option to download all your glossary terms as a CSV file. To do so:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Glossaries Management** section.
4. Enter your **Username** and **Password**.

5. Click **Login**.

   In the **EST - Global Glossary of STSA** page that opens, you can view the glossary terms that were added.

6. Click the **three dots** icon and select **Export** to export the glossary terms as a CSV file.

5.3.9.6 Importing Glossary Terms

You can use the **Import** option to upload a CSV file with multiple glossary terms. To do so:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Glossaries Management** section.
4. Enter your **Username** and **Password**.
5. Click **Login**.

   In the **EST - Global Glossary of STSA** page that opens, you can view the glossary terms that were added.

6. Click the **three dots** icon and select **Import** to import the glossary terms.

5.3.10 Managing Classifications Management

You can use the Classifications Management screen to add, edit, and delete tags in a INFODOM. To manage the classifications mangement:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Classifications Management** section.
4. Enter your **Username** and **Password**.
5. Click **Login**.

   In the **EST - Global Glossary of STSA** page that opens, you can view the INFODOM tags that were added.

5.3.10.1 Adding tags to INFODOM

To add tags to INFODOM

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Classifications Management** section.
4. Enter your **Username** and **Password**.
5. Click **Login**.

   In the page that opens, you can view the INFODOM tags that were added.

6. To add a tag, click **Add Tag**.
7. In the **Adding new tag on INFODOM** page that opens, do the following:

a. In the **Name** field, add a INFODOM tag name.
b. In the **Display Name** field, enter a display name for the INFODOM tag.
c. In the **Description** field, enter a description for the INFODOM tag.

8. Click **Save**.

   The newly added INFODOM tag is displayed in the summary page.

5.3.10.2 Editing tags Added to INFODOM

To edit the tags added to INFODOM:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Classifications Management** section.
4. Enter your **Username** and **Password**.
5. Click **Login**.

   In the page that opens, you can view the INFODOM tags that were added.
6. To edit a tag, click the **Edit** icon.
7. In the page that opens, make the required updates.
8. Click **Save**.

   The updated INFODOM tag is displayed in the summary page.

5.3.10.3 Deleting the tags Added to INFODOM

To delete the tags added to INFODOM:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Classifications Management** section.
4. Enter your **Username** and **Password**.
5. Click **Login**.

   In the page that opens, you can view the INFODOM tags that were added.
6. To edit a tag, click the **Delete** icon.
7. In the dailog box that opens, enter **DELETE** and click **Confirm** to delete the INFODOM tag.
8. Click **Save**.

   The updated INFODOM tag is displayed in the summary page.

5.3.11 Managing Pipelines Management

You can use the Pipelines Management screen to add a new pipeline service. To manage the classifications mangement:

1. Login to STSA.

2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Classifications Management** section.
4. Enter your **Username** and **Password**.
5. Click **Login**.

   OIM creates a pipeline type when you publish a pipeline which is displayed on this page.

5.3.11.1 Adding a Pipeline Service

To add a new pipeline service:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. On the bottom, click **Data Catalog**, click the preview button on the **Classifications Management** section.
4. Enter your **Username** and **Password**.
5. Click **Login**.

   OIM creates a pipeline type when you publish a pipeline which is displayed on this page.
6. To add a new pipeline service, click **Add New Service**.
7. In the page that opens, do the following:
   a. In the **Name** field, enter a name for the pipeline service.
   b. In the **Description** field, enter a description for the pipeline service.
   c. Select the **Type** from the drop-down list.
   d. Add the **Owner**.
8. Click **Save**.

6
Stress Testing

To perform stress testing create all the following STSA objects:

6.1 Portfolios

A portfolio serves as a structured collection of financial assets or liabilities held by a bank or financial institution. These portfolios are subjected to various analysis and stress tests to assess their performance under different scenarios and to manage risks effectively.

Portfolio definitions can vary widely based on a user's preferences and the specific objectives of stress testing. You can define portfolios broadly, encompassing a diverse range of assets or liabilities, or opt for more granular definitions focusing on specific sectors, industries, regions, or types of financial products.

The primary purpose of subjecting portfolios to stress tests is to evaluate their resilience and performance under adverse economic conditions or unexpected events. This helps banks and financial institutions identify potential vulnerabilities and develop strategies to mitigate risks.

6.1.1 Creating New Portfolios

To create a portfolio, perform the following steps:

Ensure that you configure the required dimensions in **Configuration Manager**.

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and click **View** in the Portfolio section.

   The Portfolio Summary section is displayed.
4. Click **Create New**.
5. Provide a portfolio name and description in the **Basic Details** section and click **Next**.
6. Select the required hierarchies from the dimensions in the **Select Dimensions** section and click **Next**.

   The dimensions and hierarchies that are listed here are the OFSAA hierarchies and these are maintained in the OFSAA environment. These are imported to STSA when creating the sandbox and migrating the metadata from production to sandbox. Configure or add the list of dimensions required only for stress testing from the **Configuration Manager** section)

> **Note**
>
> You can add only one hierarchy from the selected dimension. If you select another hierarchy from the same dimension the previously selected hierarchy gets replaced with the latest selection.

7. Select the heirearchy nodes for the dimensions that you selected in the previous step and click **Next**.
8. All the selections made are displayed in the **Review** section.
9. To add a tag, click **Tag** tab in the **Audit Log** pane and provide a tag and click **Add Tag**.
10. To add a comment, click **Comments** tab in the **Audit Log** pane and provide the comment and click **Add Comment**.

Cloning or Creating Portfolios from Existing Portfolios

To create a new portfolio from an existing portfolio, perform the following steps:

11. Login to STSA.
12. Click **Building Blocks** and click **View** in the Portfolio section.

    The Portfolio Summary section is displayed.
13. To replicate and modify an existing portfolio with minor changes, select an existing portfolio, click **More Actions** and then click **Copy**.
14. Provide a name and update the description and click **Next**.
15. Update (add or remove) the hierarchies from the dimensions and click **Next**.
16. Review the details in the **Review** section and click **Save**.
17. Review the entries and click **Save**.

    The **Audit** tab in the **Audit Log** section is populated after the Portfolio is created.

> **Note**
>
> Portfolio components are auto-approved.

6.1.2 Cloning or Creating Portfolios from Existing Portfolios

To create a new portfolio from an existing portfolio, perform the following steps:

1. Login to STSA.
2. Click **Building Blocks** and click **View** in the Portfolio section.

   The Portfolio Summary section is displayed.
3. To replicate and modify an existing portfolio with minor changes, select an existing portfolio, click **More Actions** and then click **Copy**.
4. Provide a name and update the description and click **Next**.
5. Update (add or remove) the hierarchies from the dimensions and click **Next**.
6. Review the details in the **Review** section and click **Save**.
7. Review the entries and click **Save**.

   The **Audit** tab in the **Audit Log** section is populated after the Portfolio is created.

> **Note**
>
> Portfolio components are auto-approved.

6.2 Models

Models consist of a broad range of calculations or algorithms designed to output metrics based on specific inputs or variables. They play a vital role in decision-making, scientific research, and problem-solving by providing a structured framework for analyzing complex systems and phenomena. Models range from simple equations to complex simulations, serving to simplify real-world phenomena for better understanding and prediction.

In the banking domain, stress testing models are crucial for assessing the resilience of financial institutions to adverse scenarios. These models simulate potential economic downturns or crises to evaluate how banks' assets, liabilities, and overall financial health would be affected. The complexity of models can vary significantly depending on the nature of the problem they are designed to address. Some models may involve straightforward mathematical formulas, while others may require advanced computational techniques, algorithms, or simulations to accurately represent intricate systems or processes.

6.2.1 Creating Models

To create a new model:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **Models**.

   The **Models Summary** page is displayed, listing the available models with details such as **Name**, **Version**, **Scope**, **Purpose**, **Object Champion & Status**, **Tags**, and **Onboarding Status**.
4. Click **Create New**.

   The Model Definition page is displayed.
5. Select an existing or create a new objective (is a folder within which you can create the models) from the **Objective** drop-down menu.

   To create a new objective:

   a. Click the **Add in new objective** button.

   b. In the **Objective Details** pane:

      i. Provide a name, description and tag for the objective.

> **Note**
>
> The objective tag is listed as scope in the model summary page.

6. In the **Draft Details** pane, provide a name, description and tag for the model.

> **Note**
>
> The model description is displayed as purpose in the model summary page.

7. (Optional) In the **Add Comments** field, specify any additional notes or administrative comments related to the model draft.
8. (Optional) To prepopulate the draft details for a model, click the **Use Templates** option.

   The **Use Template** page is displayed.

   > **Note**
   >
   > If you have saved the details in the ftpshare path, these files are available for selection.

   Select the file from the **Templates** drop-down menu.
9. (Optional) To automatically prepopulate the draft details using components that already exist in the workspace, click the **Pull from Workspace** option.

   The **Pull from Workspace** page is displayed.

   This option retrieves available model-related definitions (such as instruments, assumptions, calculation rules, or other relevant artifacts) from the currently active workspace.

   Select the required items from the list to populate the corresponding fields in the model draft.
10. Click **Submit**.

    A draft record is created in the database and the model is set to draft state with version number as zero.
    Then, the pipeline designer page is displayed where you can build the model.

    For more information, see the Oracle Financial Services Model Management and Governance User Guide.
11. To save the model with the current status and build it later, click the save icon on the pipeline designer page.
12. After building or creating the model, click **Publish**.

    In the publish pipeline:

    a. Provide a description and the model technique name and a run version.
    b. (Optional) To attach any parameters, enable the toggle button and select parameters from the drop-down menu.
    c. Click **Publish**.
       The pipeline is published successfully.

       After publishing a model, a version number of the model is incremented to one from zero and the status of the model is changed to **Published**. And, this model is published to Data Catalog.

       However, the draft version of the model is still intact and the version number remain zero.

       > **Note**
       >
       > You cannot edit the published versions.

    d. To view the published version, return to the **Models Summary** screen.

> **Note**
>
> You can send only the published models for **Model Acceptance** (for approval). For more information, see the Workflows for Models section.

6.2.2 Importing existing models from other domain or third-party product

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **Models**.

   The Models Summary page is displayed.
4. Click **Create New**.

   The Model Definition page is displayed.
5. Click the **Import** toggle button.

   The import file page is displayed.
6. Click **Import Archive File** and select the file for import.
7. Click **Submit**.

   The file is imported successfully and you are redirected to the pipeline designer page.

Postrequisite:
After importing the model, remap or reconfigure all the resources used in this model to the current workspace.

6.2.3 Cloning or Creating Models from Existing Models

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **Models**.

   The Models Summary page is displayed.
4. Select the model, click Actions and then select **Copy**.

   The model definition page is displayed with all the details.
5. Select another objective and provide a name, description and tag if required, and click **Submit**.

6.2.4 Onboarding Models

The models onboarding process depends on the data ingestion and mapping activities performed in the workspace. Models available for onboarding are driven by the source pipelines and processes configured during workspace preparation.

To onboard models:

> **Note**
>
> You cannot onboard the models in Draft state.

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and under the **Models** tile, click **View**.

   The **Models Summary** page is displayed.
4. To onboard a model, click **Actions** and then click **Onboard** against the model.

   > **Note**
   >
   > If mappings already exist in the Data Catalog (DC), they are automatically shown when you onboard for the first time.
5. In the **Source Data Selection** page that opens, select the input data tables or files the model requires to execute its calculations and click **Continue**.
6. In the **Date Management** page, do either of the following:
   - To create a new logical reference, do either of the following:
     - Click **Add New** and do the following:
       a. In the page that opens, select the logical references to add.
       b. Click **Select**.
     - Click **Create New** and in the **Create Date Logical Reference** page that opens, do the following:
       a. In the **Name** field, enter a name.
       b. In the **Display Name** field, enter a display name.
       c. In the **Description** field, enter a description.

       > **Note**
       >
       > * The Reporting Date is always present by default in the summary, as it is mandatory.
       > * If the source tables contain a `FIC_MIS_DATE` column, the mapping for Reporting Date is pre-suggested automatically.
       > * For any other date-related logical references, you must manually select the table and column.
       > * To delete the logical reference, you must click **Unmap Logical Reference** > **Yes**.
       > * After you create a logical reference, the newly created logical reference is automatically selected in the Add Logical Reference screen.
   - To map the assests:

a. In the **Actions** column, select **Map Assests**.
b. In the **Coulmn Name** field, select the desired value from the drop-down list.
c. In the **Date Format** field, select the desired date format from the drop-down list.
d. Click **Continue**.

> **Note**
>
> After completing the mapping, ensure that the logical reference is mapped to the corresponding table and column in OpenMetadata (OM).

7. If you click **Continue**, the **Input Variable Mapping** page opens..
   - To create a new Input Variable Mapping:
     a. Click **Add New**
     b. In the **Add Logical Reference For Input** page that opens, do either of the following:
        – Select logical references to add and click **Select**.
        – Click **Create New** and do the following:
          i. In the **Create Input Logical Reference** page that opens, add a name display name, and description in the respective fields.
          ii. Click **Save**.

> **Note**
>
> After you create a logical reference, the newly created logical reference is automatically selected in the Add Logical Reference screen.

     c. Click **Continue**.
   - To map the assests:
     a. In the **Actions** column, select **Map Assests**.
     b. In the **Assest** field, select the desired table name from the drop-down list.
     c. In the **Coulmn Name** field, select the desired column name from the drop-down list.
     d. Click **Add** to add the entry.
     e. Click **Save**.

> **Note**
>
> After completing the mapping, ensure that the logical reference is mapped to the corresponding table and column in OpenMetadata (OM).

> **Note**
>
> To unmap the logical reference, you must click **Unmap Logical Reference** > **Yes**.

8. In the **Output Table Selection** page, select the target output table and click Continue., select the target output table for the pipeline results and click **Continue**.
9. In the **Output Metric Mapping** page that opens, do the following.
   - To create a new Output Metric Mapping:
     a. Click **Add New**
     b. In the **Add Logical Reference** page that opens, do either of the following:
        – Select logical references to add and click **Select**.
        – Click **Create New** and do the following:
          i. In the **Add Glossary** page that opens, add a name, display name, and description in the respective fields.
          ii. Click **Save**.

     > **Note**
     >
     > After you create a logical reference, the newly created logical reference is automatically selected in the Add Logical Reference screen.

     c. Click **Continue**.
   - To map the assests:
     a. In the **Actions** column, select **Map Assests**.
     b. In the **Assest Name** field, select the desired table name from the drop-down list.
     c. In the **Coulmn Name** field, select the desired column name from the drop-down list.
     d. Click **Add** to add the entry.
     e. Click **Save**.

     > **Note**
     >
     > After completing the mapping, ensure that the logical reference is mapped to the corresponding table and column in OpenMetadata (OM).

> **Note**
>
> To unmap the logical reference, you must click **Unmap Logical Reference** > **Yes**.

10. In the **Portfolio Mapping** page that opens, do the following.
    - To create a new Portfolio:
      a. Click **Create New**

b. In the **Are you sure to create a new Portfolio? Changes will be saved as Draft and you will be redirected to portfolio definition page** dailog box that appears, select **Yes**.

c. Provide a portfolio name and description in the **Basic Details** section and click **Next**.

d. Select the required hierarchies from the dimensions in the **Select Dimensions** section and click **Next**.

e. Select the heirearchy nodes for the dimensions that you selected in the previous step and click **Next**.

f. Review the entries and click **Save**.

> **Note**
>
> The portfolios created during Pipeline Onboarding are automatically saved and displayed in the **Portfolio Summary** screen.

- To use an existing Portfolio:

  a. Select the required portfolio.

  b. Click **Continue**.

11. In the **Review & Submit** page that opens, verify all defined configurations and finalize the model onboarding process. Do the following:

    a. Review the **Alert** section to identify any configuration issues.

    b. If Critical alerts are displayed, click the corresponding **Actions** icon.

    c. Complete the required mappings on the relevant configuration pages.

    d. Return to the **Review & Submit** page and verify that all alerts are resolved.

12. Do either of the following:

    - Click **Save** or **Save and Close** to save and continue later.
    - Click **Submit** to complete the onboarding process.

6.2.4.1 Editing Model Onboarding

To edit model onboarding:

> **Note**
>
> You can select Edit Onboarding only if the model is in the **Approved** state.

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and under the **Models** tile, click **View**.

   The **Models Summary** page is displayed.
4. To onboard a model, click **Actions** and then click **Edit Onboarding** against the model.

> **Note**
>
> If mappings already exist in the Data Catalog (DC), they are automatically shown when you onboard for the first time.

5. Navigate through the onboarding pages and update the required configurations:
   - **Source Data Selection**
   - **Date Management**
   - **Input Variable Mapping**
   - **Output Table Selection**
   - **Output Metric Mapping**
   - **Portfolio Mapping**
6. In the **Date Management**, **Input Variable Mapping**, and **Output Metric Mapping** pages, multiple selection and bulk deletion of mappings are supported in the Map Assets configuration screen. To do so:
   a. In the **Actions** column, select **Map Assests**.
   b. In the **Configure mapping for the selected input table/column** page that opens, select multiple mapping entries using the check boxes and click **Delete** to remove the selected mappings.
   c. Click **Save** to update the entries.
7. In the Portfolio Mapping page, do either of the following:
   - Select the required portfolios.
   - Select **Bank-Wide** if the model must be applicable across all portfolios.

   If you select the **Bank-Wide** check box:
   - Individual portfolio selection is not required.
   - The portfolio mapping step is automatically considered complete.
   - The model scope is treated as Bank-Wide.
8. In the **Review & Submit** page that opens, verify all defined configurations and finalize the model onboarding process. Do the following:
   a. Review the **Alert** section to identify any configuration issues.
   b. If Critical alerts are displayed, click the corresponding **Actions** icon.
   c. Complete the required mappings on the relevant configuration pages.
   d. Return to the **Review & Submit** page and verify that all alerts are resolved.

   If Bank-Wide was selected in the Portfolio Mapping page, the Review and Submit summary displays the following:
   - Model Scope Type: Bank-Wide
   - Number of Associated Portfolios: N/A
9. Do either of the following:
   - Click **Save** or **Save and Close** to save and continue later.
   - Click **Submit** to complete the onboarding process.

6.2.4.2 Viewing Model Onboarding

To view model onboarding:

> **Note**
>
> You can select View Onboarding only if the model is in the **Approved** state.

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and under the **Models** tile, click **View**.

   The **Models Summary** page is displayed.
4. To onboard a model, click **Actions** and then click **View Onboarding** against the model.
5. Navigate through the onboarding pages and review the configurations:
   - **Source Data Selection**
   - **Date Management**
   - **Input Variable Mapping**
   - **Output Table Selection**
   - **Output Metric Mapping**
   - **Portfolio Mapping**
   - **Review & Submit**

   > **Note**
   >
   > You cannot modify configurations in View Onboarding mode.
6. Click **Cancel**.
7. In the **Leave Pipeline Onboarding? Unsaved changes may be lost. Do you want to go back to the summary page?** dailog box that appears, click **Yes** to return to the summary screen.

6.3 Process

Process flow is a structured sequence of tasks, data pipelines, models and applications organised to ensure smooth, error-free, and efficient scenario analysis orchestration.

6.3.1 Onboarding Process Pipeline

The process onboarding process depends on the data ingestion and mapping activities performed in the workspace. Process available for onboarding are driven by the source pipelines and processes configured during workspace preparation.

To onboard the process pipeline:

1. Login to STSA.

2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and under the **Process** tile, click **View**.

   The **Process Summary** page is displayed.
4. To onboard a process pipeline, click **Actions** and then click **Onboard** against the model.

> **Note**
>
> - For composite pipelines, onboarding is disabled.
> - If mappings already exist in the Data Catalog (DC), they are automatically shown when you onboard for the first time.

5. In the **Source Data Selection** page that opens, select the input data tables or files the model requires to execute its calculations and click **Continue**.
6. In the **Date Management** page, do either of the following:
   - To create a new logical reference, do either of the following:
     - Click **Add New** and do the following:
       a. In the page that opens, select the logical references to add.
       b. Click **Select**.
     - Click **Create New** and in the **Create Date Logical Reference** page that opens, do the following:
       a. In the **Name** field, enter a name.
       b. In the **Display Name** field, enter a display name.
       c. In the **Description** field, enter a description.

> **Note**
>
> * The Reporting Date is always present by default in the summary, as it is mandatory.
> * If the source tables contain a `FIC_MIS_DATE` column, the mapping for Reporting Date is pre-suggested automatically.
> * For any other date-related logical references, you must manually select the table and column.
> * To delete the logical reference, you must click **Unmap Logical Reference** > **Yes**.
> * After you create a logical reference, the newly created logical reference is automatically selected in the Add Logical Reference screen.

   - To map the assests:
     a. In the **Actions** column, select **Map Assests**.
     b. In the **Coulmn Name** field, select the desired value from the drop-down list.
     c. In the **Date Format** field, select the desired date format from the drop-down list.
     d. Do either of the following:

- To save the configuration and work on it later, click **Save** or **Save and Close**.

> **Note**
>
> After completing the mapping, ensure that the logical reference is mapped to the corresponding table and column in OpenMetadata (OM).

- Click **Continue**.

7. If you click **Continue**, the **Input Variable Mapping** page opens..
   - To create a new Input Variable Mapping:
     a. Click **Add New**
     b. In the **Add Logical Reference For Input** page that opens, do either of the following:
        - Select logical references to add and click **Select**.
        - Click **Create New** and do the following:
          i. In the **Create Input Logical Reference** page that opens, add a name display name, and description in the respective fields.
          ii. Click **Save**.

> **Note**
>
> After you create a logical reference, the newly created logical reference is automatically selected in the Add Logical Reference screen.

     c. Do either of the following:
        - To save the configuration and work on it later, click **Save** or **Save and Close**.
        - Click **Continue**.
   - To map the assests:
     a. In the **Actions** column, select **Map Assests**.
     b. In the **Assest** field, select the desired table name from the drop-down list.
     c. In the **Coulmn Name** field, select the desired column name from the drop-down list.
     d. Click **Add** to add the entry.
     e. Click **Save**.

> **Note**
>
> After completing the mapping, ensure that the logical reference is mapped to the corresponding table and column in OpenMetadata (OM).

> **Note**
>
> To delete the logical reference, you must click **Unmap Logical Reference** > **Yes**.

8. In the **Output Table Selection** page, select the target output table and click Continue., select the target output table for the pipeline results and click **Continue**.
9. In the **Output Metric Mapping** page that opens, do the following.
   - To create a new Output Metric Mapping:
     a. Click **Add New**
     b. In the **Add Logical Reference** page that opens, do either of the following:
        – Select logical references to add and click **Select**.
        – Click **Create New** and do the following:
          i. In the **Add Glossary** page that opens, add a name, display name, and description in the respective fields.
          ii. Click **Save**.

> **Note**
>
> After you create a logical reference, the newly created logical reference is automatically selected in the Add Logical Reference screen.

     c. Do either of the following:
        – To save the configuration and work on it later, click **Save** or **Save and Close**.
        – Click **Continue**.
   - To map the assests:
     a. In the **Actions** column, select **Map Assests**.
     b. In the **Assest Name** field, select the desired table name from the drop-down list.
     c. In the **Coulmn Name** field, select the desired column name from the drop-down list.
     d. Click **Add** to add the entry.
     e. Click **Save**.

> **Note**
>
> After completing the mapping, ensure that the logical reference is mapped to the corresponding table and column in OpenMetadata (OM).

> **Note**
>
> To delete the logical reference, you must click **Unmap Logical Reference** > **Yes**.

10. In the **Portfolio Mapping** page that opens, do the following.

- To create a new Portfolio:
  a. Click **Create New**
  b. In the **Are you sure to create a new Portfolio? Changes will be saved as Draft and you will be redirected to portfolio definition page** dailog box that appears, select **Yes**.
  c. Provide a portfolio name and description in the **Basic Details** section and click **Next**.
  d. Select the required hierarchies from the dimensions in the **Select Dimensions** section and click **Next**.
  e. Select the heirearchy nodes for the dimensions that you selected in the previous step and click **Next**.
  f. Review the entries and click **Save**.
- To use an existing Portfolio:
  a. Select the required portfolio.
  b. Click **Continue**.

11. In the **Review & Submit** page that opens, verify all defined configurations and finalize the model onboarding process. Do the following:
    a. Review the **Alert** section to identify any configuration issues.
    b. If Critical alerts are displayed, click the corresponding **Actions** icon.
    c. Complete the required mappings on the relevant configuration pages.
    d. Return to the **Review & Submit** page and verify that all alerts are resolved.
12. Do either of the following:
    - Click **Save** or **Save and Close** to save and continue later.
    - Click **Submit** to complete the onboarding process..

> **Note**
>
> When you submit the onboarding process, the model is published to Data Catalog or OpenMetadata.

6.3.1.1 Editing Process Onboarding

To edit process onboarding:

> **Note**
>
> - You can select Edit Onboarding only if the process is in the **Approved** state.
> - Pipeline onboarding is supported only for the following process types:
>   – RRF Process
>   – RRF Run Process
> - Pipeline onboarding is not applicable for Composite processes.

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and under the **Process** tile, click **View**.

   The **Process Summary** page is displayed.
4. To onboard a model, click **Actions** and then click **Edit Onboarding** against the model.
5. Navigate through the onboarding pages and update the required configurations:
   - **Source Data Selection**
   - **Date Management**
   - **Input Variable Mapping**
   - **Output Table Selection**
   - **Output Metric Mapping**
   - **Portfolio Mapping**

   > **Note**
   >
   > when you click **Map Assets**, the **Configure mapping for the selected input table/column** page is displayed. To do so:
   >
   > a. In the **Actions** column, select **Map Assests**.
   >
   > b. In the **Configure mapping for the selected input table/column** page that opens, select multiple mapping entries using the check boxes and click **Delete** to remove the selected mappings.
   >
   > c. Click **Save** to update the entries.
6. In the **Date Management**, **Input Variable Mapping**, and **Output Metric Mapping** pages, multiple selection and bulk deletion of mappings are supported in the Map Assets configuration screen. To do so:
   a. In the **Actions** column, select **Map Assests**.
   b. In the **Configure mapping for the selected input table/column** page that opens, select multiple mapping entries using the check boxes and click **Delete** to remove the selected mappings.
   c. Click **Save** to update the entries.
7. In the Portfolio Mapping page, do either of the following:
   - Select the required portfolios.
   - Select **Bank-Wide** if the model must be applicable across all portfolios.

   If you select the **Bank-Wide** check box:
   - Individual portfolio selection is not required.
   - The portfolio mapping step is automatically considered complete.
8. In the **Review & Submit** page that opens, verify all defined configurations and finalize the model onboarding process. Do the following:
   a. Review the **Alert** section to identify any configuration issues.
   b. If Critical alerts are displayed, click the corresponding **Actions** icon.

c. Complete the required mappings on the relevant configuration pages.

d. Return to the **Review & Submit** page and verify that all alerts are resolved.

If Bank-Wide was selected in the Portfolio Mapping page, the Review and Submit summary displays the following:

- Model Scope Type: Bank-Wide
- Number of Associated Portfolios: N/A

9. Do either of the following:
   - Click **Save** or **Save and Close** to save and continue later.
   - Click **Submit** to complete the onboarding process.

6.3.1.2 Viewing Process Onboarding

To view process onboarding:

> **Note**
>
> You can select View Onboarding only if the model is in the **Approved** state.

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and under the **Process** tile, click **View**.

   The **Process Summary** page is displayed.
4. To onboard a model, click **Actions** and then click **View Onboarding** against the model.
5. Navigate through the onboarding pages and review the configurations:
   - **Source Data Selection**
   - **Date Management**
   - **Input Variable Mapping**
   - **Output Table Selection**
   - **Output Metric Mapping**
   - **Portfolio Mapping**
   - **Review & Submit**

   > **Note**
   >
   > You cannot modify configurations in View Onboarding mode.
6. Click **Cancel**.
7. In the **Leave Pipeline Onboarding? Unsaved changes may be lost. Do you want to go back to the summary page?** dailog box that appears, click **Yes** to return to the summary screen.

6.4 Variables

A variable is a user-defined term that links the logical definition in the Data Catalog (DC) to physical definitions in the database referenced by applications. In stress testing, variables act as data inputs that you can modify in a scenario to assess the impact on one or more metrics.

There are different types of variables supported by STSA based on the type of values you want to change. The various types of variables are:

- Categorical Variables - are mostly idiosyncratic variables. These variables may or may not have a pre-determined hierarchy with a fixed set of values. When a variable has a pre-defined set of values, it can be any of the two types:
  - Ordinal Variables- An ordinal variable is a type of categorical variable that can save ordered or ranked values. Examples are rating, asset classification, stage classification and so on.
  - Nominal Variables- A nominal variable is a type of categorical variable that does not have any ordering or ranking among them.
- Numeric Variables-The numeric variables can comprise of general macro-economic variables, micro-economic variables, interest rates, commodity derivatives, other derivatives, idiosyncratic variables and so on. The numeric variables can be broadly categorized as:
  - Term Structure Variables - These variables have a term structure attached to them. They are defined along a term structure with an as of date value for each point in the term structure. You can define the variable as numeric – term structure variable and add a term structure to it. Examples are Interest Rates yield curves, Swap rates, Other Derivatives (Commodity, Currency) and so on.
  - Matrix Variables - These variables are represented in the form of a matrix to showcase movement across a certain ordinal pre-determined hierarchy. Examples are rating transition matrix, credit score transition matrix and so on. While rating and credit score bands are categorical – ordinal variables. A transition matrix represents movement of obligors across the ratings or credit score bands during two time points as a matrix variable. You can define the variable as numeric – matrix variable, and then add a hierarchy to form the metric and also give a value type being a number, percentage and so on.
  - Entity Based Variables - There are numeric variables which are stored in a specific data-entity and are computed or calculated at a relatively lower level of granularity. These variables include Probability of Default (PD), Loss Given Default (LGD), Exposure At Default (EAD) and so on. In case of these variables the level of granularity can be as granular as an account, obligor, or portfolio. The values are stressed and then computed and persisted dynamically during the run execution as a function of the current values (value as of the reference date) and the shock type selected in the scenario.
  - Exchange Rate Variable - These are numeric variable where a currency value is represented in another currency value. For example, US dollar is represented in Indian Rupee (INR). You can give the ‘from currency’ being currency which is measured say USD and the ‘to currency’ being the current which is to represent another currency say INR. So, the variable here is USD – INR with from currency as USD and to currency as INR.
  - Interest Rate Curve - The interest rate curve, also known as the yield curve, is a graphical representation of the relationship between interest rates (or yields) and the

time to maturity of debt instruments, typically government bonds. It provides insights into how investors perceive future interest rates, inflation, and economic growth.

- Computed and Indirect Variables- These variables are variables computed as a function of other variables. They are defined using other variables through an expression or formula.
- Other Variables:
  - Macro-Economic Variables - These are variables that signal the general trend of the macro-economy. A few examples of these variables are GDP, unemployment, inflation, industrial production and so on.
  - Micro-Economic Variables - These are variables that are industry specific variables such as occupancy rates, air traffic, toll road traffic and so on.

The various types of variable groups are:

- Macro-Economic Variables - These are variables that signal the general trend of the macro-economy. A few examples of these variables are GDP, unemployment, inflation, industrial production and so on.
- Micro-Economic Variables - These are variables that are industry specific variables such as occupancy rates, air traffic, toll road traffic and so on.
- Idiosyncratic Variables - These are variables that can negatively impact individual securities or a very specific group of assets.

6.4.1 Creating Variables

Prerequisites:

- Ensure that Pipeline Onboarding is completed before creating a variable.
- Ensure that you configure the dimensions and connect other OFSAA application with STSA.
- To configure variable metadata, populate the corresponding values in the **EST_VAR_DEF_LOGICAL_MAP** table.
  - V_WORKSPACE_ID - this represents the workspace id or information domain (infodom) name.
  - V_SERVICE_ID - this represents the service id.
  - V_TENANT_ID - this represents the tenant id.
  - V_VAR_TYPE - this represents the variable type. The supported values are:

Table 6-1 Codes for different variables

Code	Variable Type	Description
N	Numeric	Supports numeric values.
C	Categorical	Supports non-numeric values.

> **Note**
>
> When populating this value, enter only the code representing the variable type.

- V_VAR_SUB_TYPE - this represents the variable sub-type. The supported variable sub-types are:

Table 6-2 Codes for Numeric variable sub-types

Code	Variable Sub-Type
MS	Matrix
PD	PD Term Structure
LGD	LGD Term Structure
CCF	CCF Term Structure
C	Exchange Rate
O	Other Dependent Granular Variable
M	Micro/Macro Variable

Table 6-3 Codes for Categorical variable sub-types

Code	Variable Sub-Type
N	Nominal
O	Ordinal

- V_VAR_METADATA_KEY - this represents the physical metadata key used internally.
- V_VAR_METADATA_LOGICAL_REF - this represents the glossary term name.
- V_LINKED_LOGICAL_REF_CONDITION - this represents the join condition, if multiple tables are involved. This can contain the below place holders:
  * Dynamic value - any dynamic value can be populated using braces, {metadata_key}. At runtime, this placeholder value is taken from the metadata key Id.
  * Reserved words - $MISDATE is a dynamic placeholder where the value is updated during scenario execution.
- F_DISPLAY - this represents if the filed name should be displayed on the UI.
  * If the value is set to Yes, then the field value is fetched from the database and is displayed on the UI.
  * If the value is set to No, then the field value is not displayed on the UI.
- F_PRIMARY_KEY - this represents the primary key.

> **Note**
>
> Ensure that there is at least one primary key for a given variable sub-type. Otherwise, existing IDs will not be fetched.

- V_DEFAULT_VALUE - this represents the default value, if any. This column can contain below place holders.
  * Static value - any static value can be added.
  * Dynamic value - any dynamic value can be populated using braces, {metadata_key}. At runtime, this placeholder value is taken from the metadata key Id.

    - Reserved words - $MISDATE is a dynamic placeholder where the value is updated during scenario execution.
- V_VALUE_TRANSFORM_FUNCTION - this represents the transformation of a value to a different format. Use this field to configure aggregate function or any other function which can be applied to this column to transform the data from one format to another.
    - Functions - it can contain any sql function. If it is an aggregate function, then mentioning the condition in **V_LINKED_LOGICAL_REF_CONDITION** field is mandatory to fetch a unique value.
    - Dynamic value - any dynamic value can be populated using braces, {metadata_key}. At runtime, this placeholder value is taken from the metadata key Id.
    - Reserved words - $MISDATE is a dynamic placeholder where the value is updated during scenario execution.
- F_FIC_MIS_DATE - this represents the FIC MIS date.

  > **Note**
  >
  > Ensure that there is at least one FIC MIS date column.

- F_EXCLUDE - this represents if the column value should be considered for execution.
    - If the value is set to Yes, then this field is ignored during execution. However, this field is required by other metadata.
    - If the value is set to No, then the value in this field is displayed on UI and used in dynamic placeholder.
- The matrix, term structure, currency and ordinal variable types are mapped to the EST_DIM_TYPE_HIERARCHY_TABLE_MAP table. Hence, ensure that you map the physical table and columns to the following variable types in the EST_DIM_TYPE_HIERARCHY_TABLE_MAP table.
- Map the physical table column names to the glossary terms mentioned in this EST_VAR_DEF_LOGICAL_MAP table since all the values that are prepopulated for the variable definition are fetched from this table.

To create a variable:

> **Note**
>
> For this release, adding dimensions is not supported for matrix, currency, and term structure sub type variables.

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **View** in the **Variables** section.

   The Variables Summary page is displayed.
4. Click **Create New**.

   The Create a New Variable page is displayed.

5. Provide a name and description of the variable.
6. Select a default or custom variable group from the **Variable Groups** drop-down menu.
7. Based on the type of value you want to save in the variable, select the type of a variable.
   - If the variables are numbers, select a **Numeric** type of variable else select **Categorical**.

   If you select **Numeric** type of variable, you have the following sub-type of variables:
   - Interest Rate Curve
   - Direct Ingestion
   - Matrix
   - PD Term Structure
   - CCF Term Structure
   - LGD Term Structure
   - Exchange Rate
   - Other Dependent Granular Variables
   - Micro/Macro Economic Variables

   For more information to create a **Direct Ingestion** type variable, see Interest Rate Curve.

   For more information to create a **Direct Ingestion** type variable, see Direct Ingestion Type Variable.

   For more information to create a **Matrix** type variable, see Matrix Type Variable.

   For more information to create a **PD Term Structure** type of variable, see, PD Term Structure Type Variable.

   For more information to create a **CCF Term Structure** type of variable, see, CCF Term Structure Variable Type.

   For more information to create a **LGD Term Structure** type of variable, see LGD Term Structure Type Variable.

   For more information to create a **Exchange Rate** type of variable, see Exchange Rate Variable Type.

   For more information to create a **Other Dependent Granular** type of variable, see Other Dependent Granular Type Variable.

   For more information to create a **Micro/Macro Economic** type of variable, see Micro/Macro Economic Type Variable.

   If you select **Categorical** type of variable, you have the following sub-type of variables:
   - Direct Ingestion
   - Nominal
   - Ordinal

   For more information to create a **Nominal** type of variable, see Nominal Type Variable.

   For more information to create a **Ordinal** type of variable, see Ordinal Type Variable.
8. In the **Variable Sub Type** field, select the Variable Sub-type from the drop down menu.
9. In the **Variable Type** field, select the Variable Type from the drop down menu.
10. In the **Input Logical Reference** field, select the required logical reference.

> **Note**
>
> Ensure that the input variable mapping aligns exactly with the selections made during the onboarding process.

11. Click **Continue**.

    The Map Data Sources screen is displayed.

12. The system displays logical references and the corresponding stage table mappings. Do the following:

    To map or modify data sources:

    a. In the **Action** column, click **Map**.

    b. In the mapping window that opens, do the following:

       i. Select the **Table**.

       ii. Select the corresponding **Column**.

       iii. Click the **Add** icon to add additional mappings.

       iv. (Optional) Click the **Delete** icon to remove an existing mapping.

    c. Click **Save**.

    To remove a mapping, in the **Action** column, click **UnMap**.

13. Click **Continue**.

14. (If Enabled) In the **Add Source Filters** screen, add any required filters to restrict source data and click **Continue**.

15. (If Enabled) In the **Add Dimensions** screen, configure the required dimensions for the variable. and click **Continue**.

16. In the **Advanced Set up** screen that opens, complete the required fields and click **Continue**.

> **Note**
>
> The **Advanced Setup** screen is available only for specific variable types. When enabled, you must provide the required configuration details based on the fields displayed for the selected variable type. Click **Continue** after completing the applicable fields.

17. The **Review and Validate** screen that opens, review all the details of the variable, including profile information, data source mappings, filters, dimensions, and advanced setup configurations.

    - Variable Profile details
    - Data Source mappings
    - Filters Dimensions
    - Advanced setup configurations

18. (Optional) To add any comments, click the **Comments** tab and provide your comments and click **Add Comment**.

19. (Optional) To add this variable to a tag, click **Tags** tab and provide the tag name and click **Add Tag**.

20. Do either of the following:
    - To save the variable and continue later, click **Save**.
    - To submit the variable for review, click **Submit for Review**. and do the following:
        a. Review the **Alert** section to identify any configuration issues.
        b. If Critical alerts are displayed, click the corresponding **Actions** icon.
        c. Complete the required mappings on the relevant configuration pages.
        d. Return to the **Review & Submit** page and verify that all alerts are resolved.

> **Note**
>
> For more information about sending objects for review and approval, see the Workflow for STSA Objects section.

> **Note**
>
> When you are trying to create a new variable that has the same variable sub-type and metadata of an existing variable, then the system detects this and provides a notification about the creation of a duplicate variable. However, you can still continue with creation of this new variable by clicking yes in the confirmation screen.

6.4.1.1 Cloning or Creating Variables from Existing Variables

To create a new variable from an existing variable, perform the following:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and then click **View** in the **Variables** section.

   The Variables Summary page is displayed.
4. To replicate and modify an existing variable with minor changes, select an existing variable, click **More Actions** and then click **Copy**.
5. Provide a name and update the definition and click **Next**.
6. Review the changes and click **Save**.
7. To submit the variable for review, click **Submit for Review**.

   For more information about sending objects for review and approval, see the Workflow for STSA Objects section.

> **Note**
>
> When you are trying to create a new variable that has the same variable sub-type and metadata of an existing variable, then the system detects this and provides a notification about the creation of a duplicate variable. However, you can still continue with creation of this new variable by clicking yes in the confirmation screen.

6.4.1.2 Direct Ingestion Type Variable

To define a **Direct Ingestion** type variable:

1. Select **Direct Ingestion** from the variable sub-type drop-down menu.
2. Select the glossary terms or logical references from the **Select References** field.
3. Select the physical references from the **Select Table** field.
4. To add values at attribute level, select **Yes** in the **Do you want to Ingest at Attribute Level?** option. Else, click **No**.

> **Note**
>
> If you select **No**, all the columns are selected by default for Data Ingestion.

To add values at attribute level:

a. Click **Select Attributes**.
The Select Attributes page is displayed.

b. Select the required columns.

> **Note**
>
> By default, the columns that are Primary Keys (PK) are selected.

These columns are populated based on the selected physical reference tables. If you have selected multiple tables, each table is displayed one after the other. Scroll through each table and select the columns.

The number of columns selected in each table is displayed.

You can search for any column name using the search box.

The table displays the list of physical reference tables selected and the number of columns selected in this table.

> **Note**
>
> Dimensions are not applicable for Direct Ingestion variables.

6.4.1.3 Matrix Type Variable

To define a **Matrix** type variable:

1. Select the variable sub type as **Matrix** from the **Variable Sub Type** drop-down menu.
2. Select one of the value type listed in the **Value Type** drop-down menu.

   Select one of the following options:

   - Count

- Percentage
- Ratio
- Value

3. Import or add a new definition of the variable.

   To import an existing definition click **Yes**. Else, click **No**.

   If you select **Yes**:

   a. Select a transition table from the **Select Transition Matrix Table** drop-down menu.

   b. Select a transition ID from the **Transition Matrix ID** drop-down menu.
   A import success message with the selected transition ID is displayed.

      i. Click **OK**.
      The transition matrix type value is prepopulated and is displayed as a read-only value.

      ii. Select the hierarchy type from the **Select Type Hierarchy** drop-down menu.
      The transition matrix frequency, segment ID, roll rate applicability indicator, computation basis and computation indicator values are prepopulated and are displayed as a read-only values.

      iii. Select a logical reference from the **Logical Reference** drop-down menu.

   If you select **No** in the import definition, create a new definition.

   To create a new definition:

      i. Select a transition table from the **Select Transition Matrix Table** drop-down menu.

      ii. Select the transition matrix type from the **Transition Matrix Type** drop-down menu.

      iii. Select a hierarchy from the **Select Type Hierarchy** drop-down menu.

      iv. Select a frequency from the **Transition Matrix Frequency** drop-down menu.

      v. Select a segment id from the **Select Segment ID** drop-down menu.

      vi. Select a roll rate applicability indicator from the **Roll Rate Applicability Indicator** drop-down menu.

      vii. Select a computation basis definition from the **Computation Basis** drop-down menu.
      The available values are:

         - Count Movement: This works on count of account number.
         - Value Movement: This works on outstanding balance of the account number.

      viii. Select a computation indicator from the **Computation Indicator** drop-down menu.

      > **Note**
      >
      > By default, this is set to **No**.

      ix. Select a logical reference from the **Logical Reference** drop-down menu.

6.4.1.4 PD Term Structure Type Variable

To define a PD Term Structure type variable:

1. Select the variable sub type as **PD Term Structure** from the **Variable Sub Type**.
2. Select one of the value types listed.

   Select one of the following options:

   - Percentage
   - Ratio
3. Import or add a new definition to the variable.

   To import an existing definition click **Yes**. Else, click **No**.

   If you select **Yes**:

   a. Select a transition table from the **Select PDTS Table** drop-down menu.

   b. Select a PDTS ID from the **Linked PDTS ID** drop-down menu.
   A import success message with the selected transition ID is displayed.

      i. Click **OK**.
      The PDTS frequency unit, default probability type, frequency, and type values are prepopulated and are displayed as a read-only value.

      ii. Select the hierarchy type from the **Select PDTS Type Hierarchy** drop-down menu.

      iii. Provide a term point value from the **PDTS Term Points** field.
      The PDTS data source value is prepopulated and is displayed as a read-only value.

      iv. Select a logical reference from the **Select Reference** drop-down menu.

   If you have selected **No** in the import definition, create a new definition.

   To create a new definition:

      i. Select a PDTS table from the **Select PDTS Table** drop-down menu.

      ii. Select the PDTS frequency unit from the **PDTS Frequency Unit** drop-down menu.

      iii. Select probability type from the **PDTS Default Probability Type** drop-down menu.

      iv. Provide a frequency in the **PDTS Frequency** field.

      v. Select a type from the **PDTS Type** drop-down menu.

      vi. Select the hierarchy type from the **Select PDTS Type Hierarchy** drop-down menu.

      vii. Provide a term point in the **PDTS Term Points** field.

      viii. Provide a data source name in the **PDTS Data Source** field.

      ix. Select a logical reference from the **Select Reference** drop-down menu.

6.4.1.5 CCF Term Structure Variable Type

To define a **CCF Term Structure** type of variable:

1. Select the variable sub type as **CCF Term Structure** in the **Variable Sub Type** drop-down menu.
2. Select one of the value types listed.

Select one of the following options:

- Percentage
- Ratio

3. Import or add a new definition to the variable.

   To import an existing definition click **Yes**. Else, click **No**.

   If you select **Yes**:

   a. Select a CCFTS table from the **Select CCF Table** drop-down menu.

   b. Select a CCFTS ID from the **Linked CCFTS ID** drop-down menu.
   A import success message with the selected transition ID is displayed.

   c. Click **OK**.
   The CCFTS Frequency Unit, CCFTS Default Probability Type, CCFTS Frequency, and CCFTS Type values are prepopulated and displayed as read-only values.

   d. Select a type hierarchy from the **Select CCFTS Type Hierarchy** drop-down menu.

   e. Provide a value in the **CCFTS Term Points** field.
   The CCFTS data source is also displayed as a read-only value.

   If you have selected **No** in the import definition, create a new definition.

   To create a new definition:

   a. Select a CCFTS table from the **Select CCFTS Table** drop-down menu.

   b. Select frequency unit from the **CCFTS Frequency Unit** drop-down menu.

   c. Select a default probability type from the **CCFTS Default Probability Type** drop-down menu.

   d. Provide a frequency in the **CCFTS Frequency** field.

   e. Select a type from the **CCFTS Type** drop-down menu.
   The CCFTS type hierarchy value is prepopulated and displayed as a read-only value.

   f. Provide a term point value in the **CCFTS Term Points** field.

   g. Provide a data source in the **CCFTS Data Source** field.

   h. Select a logical reference from the **Select Reference** drop-down menu.

6.4.1.6 LGD Term Structure Type Variable

To define a **LGD Term Structure** type of variable:

1. Select the variable sub type as **PD Term Structure** in the **Variable Sub Type** drop-down menu.
2. Select one of the value types listed.

   Select one of the following options:

   - Percentage
   - Ratio

3. Import or add a new definition to the variable.

   To import an existing definition click **Yes**. Else, click **No**.

   If you select **Yes**:

   a. Select a PDTS table from the **Select PDTS Table** drop-down menu.

b. Select a PDTS ID from the **Linked PDTS ID** drop-down menu.
A import success message with the selected transition ID is displayed.

c. Click **OK**.
LGDTS frequency unit, default probability, frequency and type values are prepopulated and displayed as read-only values.

d. Select a PDTS type hierarchy from the **Select PDTS Type Hierarchy** drop-down menu.

e. Provide a value in the **PDTS Term Points** field.
The PDTS data source is also displayed as a read-only value.

If you have selected **No** in the import definition, create a new definition.

To create a new definition:

a. Select a LGDTS table from the **Select LGTDS Table** drop-down menu.

b. Select a frequency unit from the **LGTDS Frequency Unit** drop-down menu.

c. Select probability type from the **LGTDS Default Probability Type** drop-down menu.

d. Provide a frequency in the **LGTDS Frequency** field.

e. Select a type from the **LGTDS Type** drop-down menu.
The LGTDS type hierarchy value is prepopulated and displayed as a read-only value.

f. Provide a term point in the **LGTDS Term Points** field.

g. Provide a data source name in the **LGTDS Data Source** field.

h. Select a logical reference from the **Select Reference** drop-down menu.

6.4.1.7 Exchange Rate Variable Type

To define a **Exchange Rate** type of variable:

1. Select the variable sub type as **Exchange Rate** in the **Variable Sub Type** drop-down menu.
2. Select value from the **Value Type** drop-down menu.
3. In the **Currency Particulars** section:
   a. Select a dimension from the **Select list of values for the currency** drop-down menu.
   b. Select a currency from the **From Currency** drop-down menu.
   c. Select a currency from the **To Currency** drop-down menu.
4. Select a logical reference from the **Logical Reference** drop-down menu.

6.4.1.8 Other Dependent Granular Type Variable

To define a **Other Dependent Granular** type of variable:

1. Select the variable sub type as **Other Dependent Granular Variable** in the **Variable Sub Type** drop-down menu.
2. Select value from the **Value Type** drop-down menu.

   Select one of the following options:

   - Count
   - Percentage

- Ratio
- Value
- Date

3. Select a logical reference from the **Logical Reference** drop-down menu.
4. To add dimensions, select **Yes**. Else select **No**.

   If you select **Yes**:

   a. Select a dimension from the **Select Dimensions** drop-down menu.
   b. To save the variable and continue later, click **Save**.

6.4.1.9 Micro/Macro Economic Type Variable

To define a **Micro/Macro Economic** type of variable:

1. Select the variable sub type as **Micro/Macro Economic Variable** in the **Variable Sub Type** drop-down menu.
2. Select a value from the **Value Type** drop-down menu.

   Select one of the following options:

   - Count
   - Percentage
   - Ratio
   - Value

3. In the Is it based on the Term Structure? field, select either of the following options:
   - **Yes**
   - **No**
4. If you select **Yes**, do the following:
   a. In the **Frequency** field, select one of the following options:
      - Daily
      - Monthly
      - Quaterly
      - Weekly
      - Yearly
      - 5 Yearly
   b. In the **Choose when observations should start** field, select either of the following options:
      - **Beginning of the period**
      - **End of the period**
5. In the **Time Frame** field, enter a value between 1 and 100.
6. Select a logical reference from the **Logical Reference** drop-down menu.
7. In the **Do you want to add dimensions?** field, select either of the following options:
   - **Yes**

- **No**

8. If you select **Yes**, then in the **Dimensions** field, select the dimension from the drop-down list.
9. To save the variable and continue later, click **Save**.

6.4.1.10 Interest Rate Curve

To define a **Interest Rate Curve** type variable:

Prerequisites:
Ensure that you have mapped the table and columns to the glossary terms using Data Catalog using the Uploading Glossary Terms Mapping to Table Columns and Tags feature.

1. Select **Interest Rate Curve** from the variable sub-type drop-down menu.
2. Based on the type of value, select percentage or ratio from the **Value Type** drop-down menu.
3. Provide an IRC code for the variable.

   You can select an IRC code or filter an IRC code from an existing list, or you can generate the IRC code by clicking on the **Generate Code** button on the UI.

   If you generate the IRC code, click **Ok** and continue with providing the remaining details.

   > **Note**
   >
   > If you have mapped to AML, then the IRC codes are already mapped in STSA and all the values are pre-populated such as the currency and term and multipliers. Ensure that you select the required IRC code.

4. Select the currency type from the **IRC Currency** drop-down menu.
5. Provide a number in the **Term** field.
6. Select the required option from the **Multiplier** drop-down menu.

   If you have selected an existing IRC definition, the term and multipliers are already populated. However, you can add or delete or edit these values.

   - Add multiple term and multiplier inputs using the add icon.
   - Delete an entry using the delete icon against the row.
   - Edit an existing term or multiplier and save the changes.
7. Select the logical reference from the **Logical Reference** drop-down menu.

6.4.1.11 Nominal Type Variable

To define a **Nominal** type of variable:

1. Select **Nominal** in the **Variable Sub Type** drop-down menu.
2. Select a hierarchy from the **Select list of values** drop-down menu.
3. Select a logical reference from the **Logical Reference** drop-down menu.
4. To add dimensions, select **Yes**. Else select **No**.

   If you select **Yes**:

a. Select a dimension from the **Select Dimensions** drop-down menu.

To save the variable and continue later, click **Save**.

6.4.1.12 Ordinal Type Variable

To define a **Ordinal** sub type of variable:

Prerequisites:

- All the transition matrix tables, transition matrix type, transition matrix frequency, segment ID, roll rate applicability indicator, computation basis and computation indicator values are populated from the logical reference mapping done in Data Catalog.

1. Select **Ordinal** in the **Variable Sub Type** drop-down menu.
2. Select a hierarchy from the **Select list of values** drop-down menu.
3. Select a logical reference from the **Logical Reference** drop-down menu.
4. To add dimensions, select **Yes**. Else select **No**.

   If you select **Yes**:

   a. Select a dimension from the **Select Dimensions** drop-down menu.

   If you select **No**, then continue with saving the settings.

> **Note**
>
> For this release, adding dimensions is not supported for matrix, currency, and term structure sub type variables.

6.5 Metrics

Metrics is one of the basic components in STSA that stores the outcomes of the processes run in Configuration Analysis.

Metrics are the outcomes that the user would like to assess as part of a scenario analysis. The user would like to assess the impact of a particular scenario on the metric or also compare the metrics across different scenarios to understand how their portfolio fares under different scenarios. Placing the metrics under different scenarios against internal, regulatory or market benchmarks will help drive decision insights for planning, strategy, and policy. Metrics are linked to their computation engines or models. Choosing a metric as part of the project will schedule the course process/model as part of the project.

6.5.1 Creating New Metrics

To create a new metric:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and under the **Metrics** tile, click **View**.

   The **Metrics Summary** page is displayed.
4. Click **Create a new Metric**.

The Metrics Definition page is displayed.

5. In the **Name** field, provide a name for the metric.
6. In the **Description** field, provide a description for the metric.
7. In the **Metrics Output** section:
   a. Select the mapped output glossary term (created in Data Catalog) from the **Logical Reference** drop-down menu. After you select the output glossary term, the system retrieves the pipelines mapped to that term.
   b. Select an aggregation rule (to map various metrics outputs to a common scale) for the metrics output from the **Aggregation rule** drop-down menu.

      To aggregate the results, you can select one of the following options:

      - Minimum - computes and shows the Minimum of average values across time periods value of the all the metric.
      - Maximum - computes and shows the Maximum of average values across time periods value of the metric.
      - Sum - computes and shows the sum of the metric.
      - Average - computes and shows the average value of the metric.

      The Pipeline mappings for the metric (which shows the process/model associated) are displayed in the **Metrics Details** page.
8. To save the metric and continue later, click **Save**.
9. To submit the metric for review, click **Submit for Review**.

   For more information about sending objects for review and approval, see the Workflow for STSA Objects section.

6.5.2 Viewing the Details of the Existing Metrics

To view the details of the existing metrics, perform the following steps:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and under the **Metrics** tile, click **View**.

   The **Metrics Summary** page is displayed.
4. Select the metric, click **Actions** and then select **View** to view the metrics details.

   The metric's details is displayed with the name, selected process or model, and selected logical and physical references.
5. To return to the summary screen, click **Metrics Summary** or click **Cancel**.

6.5.3 Modifying the Details of the Existing Metrics

To modify the details of the existing metrics, perform the following steps:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and under the **Metrics** tile, click **View**.

   The **Metrics Summary** page is displayed.

4. Select the metric, click **Actions** and then select **Edit**.

   The metric definition page is displayed with all the details.

> **Note**
>
> You can only modify the metrics that are in **Approved** or **Draft** State. You cannot edit the metrics in **In Review** state.

5. Modify the selections if required and then click **Update**.
6. To submit the metric for review, click **Submit for Review**.

6.5.4 Cloning or Creating Metrics from Existing Metrics

To create a new metric from an existing metric, perform the following steps:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and under the **Metrics** tile, click **View**.

   The **Metrics Summary** page is displayed.
4. Select the metric, click **Actions** and then select **Copy**.

   The metric definition page is displayed with all the details.
5. Provide a name and modify the selections if required and then click **Save**.
6. To submit the metric for review, click **Submit for Review**.

6.5.5 Submitting the Existing Metrics for Comments

To submit an existing metric for comments, perform the following steps:

> **Note**
>
> You can submit an existing metric in **Draft** state for comments.

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and under the **Metrics** tile, click **View**.

   The **Metrics Summary** page is displayed.
4. Select the metric, click **Actions** and then select **Submit for Comments**.

   The **Send for Comments** page is displayed with all the details.
5. Select the Metrics from the list and to submit the metric for review, click **Send**.

6.5.6 Deleting the Details of the Existing Metrics

To delete the details of the existing metrics, perform the following steps:

1. Login to STSA.

2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and under the **Metrics** tile, click **View**.

   The **Metrics Summary** page is displayed.
4. Select the metric details you want to delete and click **Delete**.

   The **Confirm Delete** dialog box opens
5. Click **Yes** to confirm the deletion.

6.5.7 Onboarding Metrics

The metrics onboarding process depends on the data ingestion and mapping activities performed in the workspace. Metrics available for onboarding are driven by the source pipelines and processes configured during workspace preparation.

Prerequisites
To onboard a metric, you must map a Output Glossary on the respective process or model. To do so:

1. In the STSA Screen, go to **Data Catalog** > **Glossary tile** and click the **Glossary Sumamry** icon.
2. In the page that opens, go to **Glossary** drop-down and select **Glossary Term Upload** and click **Add**.
3. Select **Select Glossary**.
4. Click **Download template** and create a glossary.
5. Click **Upload** to upload the glossary.
   The system creates a glossary with two child glossaries: `INPUT_GLOSSARY` and `OUTPUT_GLOSSARY`. To create metrics, map the `OUTPUT_GLOSSARY` to a pipeline (process or model) from the **Pipeline Mapping** screen in STSA.

To onboard the existing metrics, perform the following steps:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and under the **Metrics** tile, click **View**.

   The **Metrics Summary** page is displayed.
4. Click **Onboard Metrics**.
5. Optional: In the page that opens, click the **Edit** icon to edit the metric details.

   Metrics are displayed in categories for each pipeline during onboarding. The categories now include New and Existing metrics.
6. Optional: Uncheck the required metrics to unmap the logical reference (glossary term) from the pipeline.

   Unchecking a metric ensures the metric is not created as part of the specific process/ model.
7. Click **Continue**.

   The **Review and Validate** page becomes accessible only after visiting and completing all the preceding onboarding steps.
8. In the **Review and Validate** page, review the selected metrics and click **Submit** to onboard the metrics.

6.6 Scenario

Scenarios are structured narratives that describe potential future states in a coherent and believable manner. These narratives help stakeholders understand the implications of different possible outcomes.

Scenarios explore a range of possible futures by considering various factors and their potential interactions by considering a multitude of variables, such as economic, social, technological, and political factors, and how these variables might evolve over time and explore different pathways these variables could take, leading to diverse future conditions.

Scenarios can take on various forms, such as baseline scenarios (reflecting current trends), stressed scenarios (examining extreme or adverse conditions), historical scenarios (exploring past trends and their potential continuation), hypothetical scenarios (imagining alternative realities), and more.

You can tailor scenarios for specific purposes and contexts, such as strategic planning, risk management, or policy development by creating them based on the needs and objectives of the project or organization. Evaluate multiple scenarios for a single project to better understand the range of possibilities and their implications leading to informed decision-making by providing a more comprehensive view of the potential future. Hence, scenarios offer a valuable tool for exploring uncertainty and complexity, allowing organizations to anticipate and prepare for a range of possible futures rather than relying solely on a single forecast enhancing organizational resilience and agility in dynamic environments.

6.6.1 Creating a Scenario

To create a scenario:

Ensure that you have defined a variable.

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Scenario**.

   The Scenario summary page is displayed.
4. Click **Create New**.

   The Scenario Details wizard is displayed.
5. Provide a name and description for the scenario you are creating.
6. In source details section:
   a. To classify the source of the scenario based on its origin (by market requirements or internally in the bank), select the source as external or internal from the **Source** drop-down menu.
   b. Provide the source links or the details of the source in **Source Details**.

> **Note**
>
> You can source a scenario from a wide variety of market sources or generate it internally (by the bank).

c. Select a theme (the subjects that are covered by the scenario) for the scenario you are creating from the **Theme** drop-down menu.

   The following list of themes are available for a scenario:

   - Climate
   - Industry Specific
   - Macro Economic
   - Market

7. In the **Time Horizon Details** section:

> **Note**
>
> For more information about instantaneous frequency behavior, see the Time Horizon Detailed Behavior section.

a. Provide the number of times you want to calculate the scenario in the **Time Frame** field.

b. Select the frequency for how frequently you want to run this scenario and click the **Add** icon.

   You can select from one of the following frequencies:

   - Daily
   - Instantaneous
   - Monthly
   - Quarterly
   - Weekly
   - Yearly
   - 5 Yearly

   You can now specify multiple combinations of frequency and timeframe to generate scenario dates. Previously, only one combination was allowed. This enhancement enables more flexible scenario timelines—for example, applying monthly shocks at first, then switching to yearly intervals.

   Frequency refers to the interval between scenario dates. Supported values include:

   - **Daily** – Generate dates every day
   - **Monthly** – Generate dates every month
   - **Quarterly** – Generate dates every quarter
   - **Yearly** – Generate dates once per year
   - **Instantaneous** – Generate a single event on the current value date
   - **5 years** – Generate dates every five years

   Timefrrame specifies the number of dates to generate for the selected frequency.

> **Note**
>
> - The system processes frequency entries in the order they are added. After selecting a frequency (for example, Monthly), you cannot add the same or a lower frequency (such as Daily) later. To change the order, delete the entry and re-add it.
> - If you select **Instantaneous**:
>   - The timeframe is fixed at 1.
>   - The start date is automatically set to the reference date.
>   - You can define multiple combinations of timeframes and frequencies instead of a single timeframe. Each combination is stored in the **Variable Frequency** field as an array of JSON objects, where each object specifies a frequency and its corresponding timeframe.
>   - The system generates scenario dates sequentially based on the combinations you add.
>   - These generated dates are used to populate the variable grid for the scenario.

c. Select a base reference date (or the date from which the data is available) from the **Base Reference Date** field.

d. Select a current value date to start the calculations or predictions on in the **Current Value Date** field.

e. Select the scenario start date in the **Scenario Start Date** field.

f. Select the first forecast date in the **First Forecast Date** field.

8. Select the required configurations for this scenario using the **Reference Configuration Details** field and click **Continue**. Do either of the following:

   If you select **Configuration Analysis**, do the following:

   a. In the **Select Configuration Analysis** page that opens, select the analysis for your configuration.

   b. Click **Select**.

   If you select Project, do the following:

   a. In the **Select Project** page that opens, select the project for your configuration. The base reference date is automatically populated from the reference date in the selected project. You can update the base reference date later, if required.

   b. Click **Select**.

   > **Note**
   >
   > If the scenario references a configuration, the variables and dimension mappings are automatically populated according to the analysis configuration. You can update the selection on the Variable Selection page.

9. In the Variables section, all the variables that are created and approved in this workspace are listed.

If you have selected an analysis configuration or project, then the variables are preselected. Review the selection and click **Continue**.

> **Note**
>
> In the Variables section, review the auto-populated variables (if a project or analysis configuration is referenced). You can add or remove variables as needed. If no project or analysis configuration is referenced, you can select variables freely.

> **Note**
>
> Selecting a variable for a scenario is a mandatory step.

10. In the Map Dimensions section, if dimensions are not applicable for the selected variables, then the **Map Status** is listed as **NA**. Click **Continue**.

    If dimensions are applicable for the selected variables, then the **Map Status** is listed as **NOT MAPPED**. Map the dimensions and then click **Continue**.
    To map the dimensions,:

    a. Click More Actions and select **Map Dimensions**.

       The **Variable Dimension Mapping** page is displayed.

    b. Do either of the following:and so.

       i. To create a new mapping:

          i. Select **Create New**.

          ii. In the **Variable Dimension Mapping** page, select the dimension in the **Dimensions Selection** field and click **Next**.

          iii. Select the desired values in the **Members Selections** field and click **Next**.

          iv. Select the desired values in the **Dimension Mapping Combinations** field and click **Save**.

       ii. To copy a dimension from an existing scenario:

          i. Select **Copy From Scenario**.

          ii. On the **Copy Dimension Mapping from Scenario** page, select the associated scenario, and click **Next**.

       iii. To copy a dimension from an existing analysis configuration:

          i. Select **Copy From Analysis Configuration**.

          ii. In the **Copy Dimension Mapping from Analysis Configuration** field, select the analysis configuration, and click **Next**.

          > **Note**
          >
          > The dimensions, bands, and combinations are automatically selected. You can manually select additional items, and then click **Next**.

    c. To save this selection, click **Save**.

    d. Click **Continue**.

11. In **Variable Pathways** section, add the variable values, and then click **Continue**.

    You can add variable values from any one of the two methods:

    - .From the user interface click **Actions** against each variable, select the shock type and provide the stress values
    - Export the excel sheet by selecting the variables, fill the values and import that excel sheet.

    > **Note**
    >
    > For **Direct Ingestion** type of variable, you do not need to provide shock types because the data is expected to already include the perturbed values.

    The status remains **Pending** until you complete entering the shock values for a variable and all validations pass. After completion, the status changes to **Completed**.

12. (Optional) Click the variable to view the graphical representation for the shock values provided in the previous step.

    The graph is displayed which indicate the variations caused due to each shock value introduced in the scenario. Each variable offers filters tailored to its type:

Table 6-4 Graph Types, Filters, and Display Behavior by Variable Type

Variable Type	Graph Type	X-axis	Y-axis	Display Behavior	Filters	Default Filters
Numerical Variables						
Micro-Macro and Exchange Variables	Line graph	Periods	Values	Shows a single line with one row of data if no dimensions are added. With dimensions, multiple lines appear for each dimension combination.	Periods and dimensions	First dimension combination
CCF, LGD, and PD Term Structure Variables	Curve graph	Term points	Values		Hierarchy data and periods	First hierarchy and period
IRC Term Structure Variable	Curve graph	Term points	Values		Periods	First period

Table 6-4 (Cont.) Graph Types, Filters, and Display Behavior by Variable Type

Variable Type	Graph Type	X-axis	Y-axis	Display Behavior	Filters	Default Filters
Other Granular Variables	Line graph	Periods	Values	Shows a single line with one row of data if no dimensions are added. With dimensions, multiple lines appear for each dimension combination.	Periods and dimensions	First dimension combination
Categorical Variables:						
Ordinal Variables	Curve graph	Periods	Computed ratings		Source Code, Short/ Long Term, rating + dimension combination, and periods	First source code, first short/long term, and first rating

Now, when users enter shock values and request a graph, the system dynamically generates the computed grid. A default current value of 100 is assumed for each dimension to illustrate how the data shifts in response to the shocks

For categorical variables, ratings are computed based on source code and short or long term combinations. As a result, you cannot view all ratings simultaneously. Instead, select a specific combination of source code and short or long term to display the relevant ratings.

For **Change of Class** shock types, the graph is unavailable, and the source code and short or long term filters are not applicable during data input, so these options are also not displayed in the graph.

> **Note**
>
> Graphs are unavailable for categorical variables with the **Change of Class** shock type and for metrics variables.

13. In the **Scenario Narrative** page that opens, provide the details about the scenario you are creating. and click **Continue**.

> **Note**
>
> - Select **Auto-Generate Narrative** to add detailed description of the scenario.
> - For more information, see the Document Management section.

14. Review the inputs on this page and address any validation messages displayed.
    - Critical validations must be resolved before you can submit the scenario.

- Non-critical validations can be left unresolved, but they may impact results.

When ready, do one of the following:

- Click **Save** to save the scenario as a draft.
- Click **Submit For Review** to send the scenario for review and approval. Submission is allowed only when no critical validations remain.

For more information about sending objects for review and approval, see the Workflow for STSA Objects section.

> **Note**
>
> STSA notifies users when underlying metadata changes. These alerts help ensure that scenarios and configurations remain valid.

6.6.1.1 Multiple Frequency and Duration Combinations

You can now specify multiple combinations of frequency and timeframe to generate scenario dates. Previously, only one combination was allowed. This enhancement enables more flexible scenario timelines—for example, applying monthly shocks at first, then switching to yearly intervals.

Frequency refers to the interval between scenario dates. Supported values include:

- **Daily** – Generate dates every day
- **Monthly** – Generate dates every month
- **Quarterly** – Generate dates every quarter
- **Yearly** – Generate dates once per year
- **Instantaneous** – Generate a single event on the reference date
- **5 years** – Generate dates every five years

Timefrrame specifies the number of dates to generate for the selected frequency.

> **Note**
>
> - The system processes frequency entries in the order they are added. After selecting a frequency (for example, Monthly), you cannot add the same or a lower frequency (such as Daily) later. To change the order, delete the entry and re-add it.
> - If you select **Instantaneous**:
>   - The timeframe is fixed at 1.
>   - The start date is automatically set to the reference date.
>   - You cannot modify the timeframe or the start date.

6.6.1.2 Providing Shock Values from User Interface

To provide shock values for variables from the user interface:

1. In **Variable Pathways** section, click Actions against a variable.

The **Variable Shock Detail** page is displayed.

2. Select a shock type for the variable from the **Shock Type** drop-down menu.

   On selection of the shock type, all the combination values for this variable (based on the hierarchies selected while creating this variable) are listed as per the frequency mentioned in the earlier screen.

   For more information, see Shock Types for Variables.

   When providing shock type details for macro and currency variables, you have an option to check for the existing current values (from the database) using the **Browse Current Value** option.

3. (Optional) To view the computed values on the UI after providing the input values for the variables, click the **Compute input values** button.

   The **Computed Values** table is populated with the results.

   > **Note**
   >
   > This option is available for all the shock types except for Absolute Value and Change of Class type.

6.6.1.3 Providing Shock Values in Excel

To provide shock values for variables from an excel sheet:

1. In **Variable Pathways** section, to download the excel file, click **Export**.

   The **Select Variables** page is displayed.

2. Select the variables you want to import to excel sheet and click **Export**.

   The file is downloaded in an .XLSM format and the file is named after the scenario name followed by the keyword **EST_SCENARIO** and followed by the scenario object id: `<scenario_name>_<scenario code>_<scenario version>_<timestamp>.XLSM`

   > **Note**
   >
   > Ensure you have macros enabled to make changes in the excel sheet.

   The first tab in the excel sheet has two sections. The first section **Stress Testing and Scenario Analytics** has details about the scenario like the scenario name, scenario id, version number, and the source and time horizon details. The second section, **Variable Pathways** lists all the exported variables.

   Each variable imported to the excel sheet is listed in a separate tab.

3. Fill the shock type values for a variable in an excel sheet based on the variable type.

   To add the variable values in the excel sheet:

   a. Click the variable name from the **Scenario Details** tab or the variable tab.

   b. Based on the selected variable type and sub-type, select the shock type from the drop-down menu.

   c. To see the hierarchy code in the display name (default selection) click **Yes** in the Display Name drop-down menu. Else, click **No**.

d. Based on the selected shock type and frequency, columns are generated where you can provide the variable values in the **Actual Value** section.

> **Note**
>
> Checks are in place to validate the inputs.

The **Computed Value** section displays the computed values based on actual values entered.

e. Click **Save** to save your changes.

For more information, see Shock Types for Variables.

4. Upload the updated excel sheet with all the variable details.

a. Click **Import**.

b. Browse and select the file.

The **Excel Data Import Report** page is displayed.
The list of variables in the excel is displayed along with details like version number, shock type, status of the information saved for the variable and details about the status is displayed.

c. To continue with the upload, click **OK**.

If there are any missing values, these are listed as empty in the status. Ensure to add these values before proceeding to the next step.
If only a few variable values are uploaded and successful, then this partial status is also displayed in the **Status** column.

6.6.1.4 Updating Time Horizon Details While Preserving Variable Pathways

6.6.1.4.1 Overview

In previous releases, updating any scenario time horizon parameter—such as timeframe, frequency, base reference date, or start date—reset the entire variable pathway. This action cleared all previously entered shock values and current values, requiring users to re-enter all pathway data after each change.

6.6.1.4.2 Base Reference Date Update

When the Base Reference Date is updated in a scenario, variable pathways behave differently based on their type, subtype, and shock type. The table below summarizes how each type of variable responds. Labels are now used in place of internal codes. The Reset Value column indicates how the Computed Grid is treated during recalculation.

Pathways are updated differently depending on the type of variable.

- **If the current value date changes** and the variable has a computed grid whose formula depends on this date, the computation will be performed again.
- **If the first forecast date changes** and any grid contains future dates, those dates will be regenerated.
- Actual Grids (with user-entered shock/current values) are preserved.

- Computed Grids are regenerated only for shock types that rely on the difference between the reference and forecast dates.
- For Absolute Shock Types, the derived shock is internally stored as a reference grid. These are recalculated using the new current values and previously stored shock differentials when the reference date changes.
- A new UI grid view is introduced that displays the Reference Grid for Absolute Shock Types.
- Categorical Variables are unaffected.

Start Date Change:

If the start date is updated within a scenario:

All rules applied for reference date changes will also apply here.

Additionally, the dates in both the actual and computed grids must be updated to reflect the new future dates.

6.6.1.4.3 Time Horizon Detailed Behavior

If Frequency is set to Instantaneous, the Start Date is automatically aligned to the updated Base Reference Date.

This enhancement introduces improved handling of scenario date parameters for cases where stress tests are intended to occur at a single point in time—a use case known as “instantaneous frequency.” This change is designed to offer the flexibility needed for both standard periodic stress testing (such as monthly or quarterly regulatory cycles) and for ad hoc or event-driven “as-of-date” scenarios, while maintaining data integrity and strict user control.

To support these workflows, the system now incorporates four scenario date parameters, each with a precise function:

Table 6-5 Four-Date Framework

Date Parameter	Description
Base Reference Date	The source date from which unstressed (historical) data is extracted. Typically, this is a cut-off date for audited figures.
Current Value Date	The date up to which actual, unstressed figures are known and valid, before scenario shocks are applied. In many standard cases, this matches the base reference date.
Scenario Start Date	The date when the stress test horizon begins; shocks to portfolio values commence from this date.
First Forecast Date	The first date on which the system expects to produce a forecasted (stressed) output. Always greater than or equal to the scenario start date, and typically driven by the scenario’s frequency (e.g., month-end, quarter-end).

Table 6-6 Scenario Date Entry Behavior by Frequency

Frequency Type	Editable Fields	Auto-filled/Locked Fields	Validation Rule
Non-instantaneous	Base Reference Date, Current Value Date, Scenario Start Date, First Forecast Date	None (all must be entered)	`Current Value Date < Scenario Start Date First Forecast Date`
Instantaneous	Base Reference Date, Current Value Date	Scenario Start Date, First Forecast Date (locked to Current Value Date)	`Current Value Date = Scenario Start Date = First Forecast Date`

6.6.2 Document Management

The **Scenario Narrative** screen includes a Document Management feature that allows users to attach supporting documents directly to a scenario during creation.

This feature enables users to provide additional context, evidence, or reference material that supports the scenario definition. Uploaded documents are stored securely in the STSA database and remain linked to the scenario.

The following are the supported features in **Attachments** option in the **Scenario Narrative** screen

- **Upload from local machine:** Use the drag-and-drop area or select files manually to upload documents.
- **Multiple document upload:** Upload several documents at once.
- **Download on demand:** Click the document name hyperlink to download any previously uploaded file.
- **Commenting:** Add an optional comment (up to 200 characters) for each document to provide context or notes.
- **Delete support:** Remove any document before saving by clicking the Delete icon.

For more information about the Document Management feature, see the following sections:

- Attaching Documents in Scenario Narrative
- Viewing Documents in Scenario Narrative
- Deleting Documents in Scenario Narrative
- Downloading Documents in Scenario Narrative

6.6.2.1 Attaching Documents in Scenario Narrative

You can use the **Drag and Drop** option in the **Document Manager** screen to upload supporting documents to a scenario during its creation or update.

To attach the documents in **Scenario Narrative** screen:

1. Login to STSA.

   The Workspace Summary page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Scenario**.

   The **Scenario** summary page is displayed.
4. Click **Create New**.

   The Scenario Details wizard is displayed.
5. Complete steps **5** through **11** as described in the Creating a Scenario section.
6. In the **Scenatio Narrative** screen, click **Attachments**.
7. In the **Document Manager** page that opens, click **Drag and Drop** to either select or drag and drop the file you want to attach.

   > **Note**
   >
   > - The following file types are supported:
   >   - PDF files
   >   - Word documents
   >   - Excel spreadsheets
   >   - .CSV
   >   - Image files (PNG, JPEG)
   > - The Maximum file size to attach the file is 5 MB per file.
   > - Only one document with the same name can exist at a time. Uploading a document with an existing name will replace the older version.
8. Click **Save** to save your changes.
9. In the **Successfully Added Documents** dailog box that opens, click **OK**.

> **Note**
>
> You can also add the attachments, using the **Edit** option in the **Scenario Summary** page. To do so:
>
> a. Click the scenario or click actions against the scenario and then click either **View**or **Edit**.
>
> b. In the page that opens, click **Scenario Narrative**.
>
> c. Click **Attachments**.
>
> d. In the **Document Manager** page that opens, click **Drag and Drop** to either select or drag and drop the file you want to attach.

6.6.2.2 Viewing Documents in Scenario Narrative

You can view all documents attached to a scenario directly from the Scenario Narrative screen.

To view the documents attached in **Scenario Narrative** screen:

1. Login to STSA.

   The Workspace Summary page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Scenario**.

   The **Scenario summary** page is displayed with details about the scenario such as scenario name, version, source, time frame, frequency, theme, status, start date, and first forecast date. If there are multiple versions of an object, the latest version of the object is listed at the top of the hierarchy.
4. To view the attachments:
   a. Click the scenario or click actions against the scenario and then click **View**.
   b. In the page that opens, click **Scenario Narrative**.
   c. Click **Attachments**.
   d. In the **Document Manager** page that open, you can view the list of attachments

6.6.2.3 Deleting Documents in Scenario Narrative

You can delete all documents attached to a scenario directly from the **Scenario Narrative** screen.

To delete the documents attached in **Scenario Narrative** screen:

1. Login to STSA.

   The Workspace Summary page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Scenario**.

   The **Scenario Summary** page is displayed with details about the scenario such as scenario name, version, source, the time frame, frequency, theme, status, the reference and the start date information. If there are multiple versions of an object, the latest version of the object is listed at the top of the hierarchy.

4. To delete the attachments:
    a. Click the scenario or click actions against the scenario and then click **Edit**.
    b. In the page that opens, click **Scenario Narrative**.
    c. Click **Attachments**.
    d. In the **Document Manager** page that open, click the **Delete** icon next to the attachment.
    e. Click **Save** to save your changes.

6.6.2.4 Downloading Documents in Scenario Narrative

You can download all documents attached to a scenario directly from the **Scenario Narrative** screen.

To download the documents attached in **Scenario Narrative** screen:

1. Login to STSA.

   The Workspace Summary page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Scenario**.

   The **Scenario Summary** page is displayed with details about the scenario such as scenario name, version, source, the time frame, frequency, theme, status, the reference and the start date information. If there are multiple versions of an object, the latest version of the object is listed at the top of the hierarchy.
4. To dowmload the attachments:
    a. Click the scenario or click actions against the scenario and then click **Edit**.
    b. In the page that opens, click **Scenario Narrative**.
    c. Click **Attachments**.
    d. In the **Document Manager** page that opens, click the document name hyperlink to download any previously uploaded file.
    e. Click **Keep** to download the document

6.6.3 Date Management

The system now uses a day-based method to adjust financial dates during stress testing. This change ensures accurate results, even when date shifts include partial months or end-of-month scenarios.

Depending on the Maintain Constant Maturity/Date Profile setting, the number of days added to each date is calculated as follows:

- If set to **No:**
  The date is adjusted by the difference in days between the **Pseudo Date** and the **Projected FIC MIS Date**.
- If set to **Yes:**
  The date adjustment depends on whether the original date is after the Reference Date:

This logic applies to all relevant financial dates, such as **Maturity Date**, **Cashflow Date**, and **Observation Date**, as defined under the DATEMANAGEMENT glossary term.

It improves accuracy and consistency across different scenario types by eliminating rounding errors from older month-based calculations.

6.6.4 Shock Types for Variables

Shock Type for numeric variables

If you have selected numeric type of variable select from one of the shock type and provide your inputs.

> **Note**
>
> For MEVTS variables, only the following shock types are applicable:
>
> - Absolute Values
> - Constant Absolute Growth per Annum
> - Constant Growth in Percentage per Annum

- **Absolute Value** - the formula to calculate this is:

$$Absolute\ Value = Input\ Value$$

Where,

Input Value is the value entered on the User Interface (UI).

- **Absolute Growth on Current value (AGC)** - the formula to calculate this is:

$$Absolute\ Growth\ on\ Current\ Value = Current\ Value + Input\_Grid\_Value$$

Where,

Current Value - is the reference value entered on the UI

Input Grid Value - percentage or absolute value you enter by which you want to increase or decrease the current value of reference date.

- **Absolute Growth on Future value (AGF)** - the formula to calculate this is:

$$Absolute\ Growth\ on\ Future\ Value = Current\ Value + Input\_Grid\_Value$$

Where,

*For each iteration the Current Value is updated based on the previous calculation.

Current Value - is the reference value entered on the UI

Input Grid Value - is the percentage or absolute value you enter by which you want to increase or decrease the current value of reference date.

- **Constant Absolute Growth Per Annum (CAGPA)** - the formula to calculate this is:

$$Constant\ Absolute\ Growth\ Per\ Annum = Current\ Value + (Input\ Percentage * (\frac{Date\ Difference}{Calendar\ Days}))$$

Where,

Current Value - is the reference value entered on the UI

Input Percentage - is the percentage value of growth or deprecation

Date Difference - is the frequency selected.

- **Constant Growth in Percentage Per Annum (CGPPA)** - the formula to calculate this is:

$$Constant\ Growth\ in\ Percentage\ Per\ Annum = Current\ Value * \left(1 + \frac{Input\ Percentage}{100}\right)^{Date\ Difference/Calander\_Days}$$

Where,

Current Value - is the value entered on the UI.

Input Percentage - is the percentage value of growth or deprecation

Date Difference - is the frequency for the calculations

- **Percentage Growth Per Annum over Current Value (PGPAC)** - the formula to calculate this is:

$$Percentage\ Growth\ Per\ Annum\ over\ Current\ Value = Current\ Value * (1 + (\frac{Input\ Grid\ Percentage}{100}))$$

Where,

Current Value - is the value entered on the UI.

Input Grid Percentage - is the percentage you enter by which you want to increase or decrease the current value of reference date.

- **Percentage Growth Per Annum over Future value (PGPAF)** - the formula to calculate this is:

$$Percentage\ Growth\ Per\ Annum\ over\ Future\ Value = Current\ Value\left(1 + \frac{Input\ Grid\ Percentage}{100}\right)^{Date\ Difference/Calendar\_Days}$$

Where,

*For each iteration the Current Value is updated based on the previous calculation

Input Grid Percentage - is the change per annum

Data Difference - is the difference between the frequency of dates mentioned

Examples of Shock Types

Below is a list of examples for all the shock types with details:

For example, you enter the following values in the **Time Horizon Details** section of the scenario wizard:

```
Frequency: monthly

Time Frame: 2

Reference Date: 21/May/2024

Start Date: 31/May/2024
```

For **Absolute Value** shock type, the calculations are as follows:

1. The start date is displayed as part of the first sequence that is `31/May/2024` and the next date is calculated based on the frequency type (in this case, monthly or 30 days difference). Hence, the next date is `30/June/2024`.
2. In this case, you can define the current value and the absolute values for the variables on 31st may and 30th June as `10, 50` and `10`.

For **Absolute growth on Current value** shock type, the calculations are as follows:

1. The start date is displayed as part of the first sequence that is `31/May/2024` and the next date is calculated based on the frequency type (in this case, monthly or 30 days difference). Hence, the next date is `30/June/2024`.
2. In this case, you can define the current value and the absolute values for the variables on 31st may and 30th June as `10, 50` and `10`.
3. When you click **Compute input values**, then the growth on the absolute values for 31st may and 30th June are `60` and `20`.
   Since,
   - Absolute Growth on Current value on `31/May/2024` (60) = Current Value (10) + Input Value on `31/May/2024` (50)
   - Absolute Growth on Current value on `30/June/2024` (20) = Current Value (10) + Input Value on `30/June/2024` (10)

For **Absolute growth on future value** shock type, the calculations are as follows:

1. The start date is displayed as part of the first sequence that is `31/May/2024` and the next date is calculated based on the frequency type (in this case, monthly or 30 days difference). Hence, the next date is `30/June/2024`.
2. In this case, you can define the current value and the absolute values for the variables on 31st May and 30th June as `10, 50` and `10`.
3. When you click **Compute input values**, then the growth on the absolute values for 31st May and 30th June are `60` and `70`.
   Since,
   - Absolute Growth on future value on `31/May/2024` (60) = Current Value (10) + Absolute Value (or Input Value) on `31/May/2024` (50)
   - Absolute Growth on future value on `30/June/2024` (70) = Current Value (60) + Absolute Value (or Input Value) on `30/June/2024` (10)

For **Constant absolute growth per annum** shock type, the calculations are as follows:

1. The start date is displayed as part of the first sequence that is 31/May/2024 and the next date is calculated based on the frequency type (in this case, monthly or 30 days difference). Hence, the next date is 30/June/2024.
2. In this case, you can define the **Absolute** value or Constant Absolute Value(FOR ALL DATES) percentage as 50% and the **Current Value** as 10.
3. When you click **Compute input values**, then the absolute growth for 31st May and 30th June are 11.3889 and 15.5556.
   Since,
   - DDC1: Date Difference From Current Value (D1-D0)=10
     DDC2: Date Difference From Current Value(D2-D0)=40
   - Constant Absolute Growth Per Annum on 31/May/2024 (11.3889) = 10 +(50*(10/360))
   - Constant Absolute Growth Per Annum on 30/June/2024 (15.5556) = 10+(50*(40/360))

For **Constant growth in percentage per annum** shock type, the calculations are as follows:

1. The start date is displayed as part of the first sequence that is 31/May/2024 and the next date is calculated based on the frequency type (in this case, monthly or 30 days difference). Hence, the next date is 30/June/2024.
2. In this case, you can define the percentage or the Constant Percentage Value as 50% and current value as 10.
3. When you click **Compute input values**, then the growth rate on 31st May and 30th June are 10.1133 and 10.4608.
   Since,
   - DDC1: Date Difference From Current Value (D1-D0)=10
     DDC2: Date Difference From Current Value(D2-D0)=40
   - Constant growth in percentage per annum on 31/May/2024 (10.1133) = $10*(1+(50/100))^{(10/360)}$
   - Constant growth in percentage per annum on 30/June/2024 (10.4608) = $10*(1+(50/100))^{(40/360)}$

For **Overall Percentage Growth over current value** shock type, the calculations are as follows:

1. The start date is displayed as part of the first sequence that is 31/May/2024 and the next date is calculated based on the frequency type (in this case, monthly or 30 days difference). Hence, the next date is 30/June/2024.
2. In this case, you can define the current value and the growth over current value percentages on 31st may and 30th June as 10, 50% and 10%.
3. When you click **Compute input values**, then the growth rate on 31st May and 30th June are 10.1133 and 10.1065.
   Since,
   - DDC1: Date Difference From Current Value (D1-D0)=10
     DDC2: Date Difference From Current Value(D2-D0)=40
   - Percentage Growth per annum over future value on 31/May/2024 = 10*(1+50/100) (10/360)
   - Percentage Growth per annum over future value on 30/June/2024 = 10*(1+10/100) (40/360)

For **Percentage Growth per annum over future value** shock type, the calculations are as follows:

1. The start date is displayed as part of the first sequence that is `31/May/2024` and the next date is calculated based on the frequency type (in this case, monthly or 30 days difference). Hence, the next date is `30/June/2024`.
2. In this case, you can define the current and the growth over future percentages on 31st may and 30th June as `10, 50%` and `10%`.
3. When you click **Compute input values**, then the growth rate on 31st May and 30th June are `10.1133` and `10.1939`.
   Since,
   - Overall Percentage Growth over current value on `31/May/2024` = 10*(1+(50/100))
   - Overall Percentage Growth over current value on `30/June/2024` = 10*(1+(10/100))

Categorical Shock Type

If you have selected categorical type of variable select from one of the shock type and provide your inputs:

- **Change of Class** - based on the frequency entered you can select the value for this variable from the existing values
- **Constant Notch Up/Down on Current Value** - based on the current value, the variable value is increased or decreased by a notch.
- **Constant Notch Up/Down on Future Value** - based on the value entered, the next value that is the future value is calculated by increasing or decreasing the value by a notch (or by one value).
- **Notch Up/Notch Down on Current Value** - based on the current value, the variable value is increased or decreased by a notch (or by one value).
- **Notch Up/Notch Down on Future Value** - based on the value entered, the next value that is the future value is calculated by increasing or decreasing the value by a notch (or by one value).
- **Universal**
  - When dimension is added to the selected variable- the grid maps each node in the dimension. Your input for each dimension node impacts all variable hierarchy nodes within that specific dimension node.
  - When there are no dimensions in the selected variable - there is a single row of mapping for each variable hierarchy. Your input for that row affects all the nodes within the variable hierarchy.
- **Local**
  - When dimension is added to the selected variable- the grid maps each node in the variable hierarchy to every node in the dimension.
  - When there are no dimensions in the selected variable - the grid maps each node within the variable hierarchy individually.

Shock Type for MEVTS variable

This is a numerical variable with either a Micro or Macro subtype. Additionally, the *tsBased* flag is enabled, which allows the variable to capture its frequency, timeframe, and the start/end of the period during its creation.

Table 6-7 Scenario Grid Generation

Country	Observation Date	CV	03-06-2025	03-07-2025	03-08-2025
India	30-04-2025	5%	4.75%	4.75%	4.75%
India	31-07-2025	5%	4.50%	4.50%	4.50%
India	31-10-2025	5%	4.25%	4.25%	4.25%
India	31-01-2026	5%	4.00%	4.00%	4.00%
India	30-04-2026	5%	3.75%	3.75%	3.75%
India	31-07-2026	5%	3.50%	3.50%	3.50%
US	30-04-2025	5%	4.75%	4.75%	4.75%
US	31-07-2025	5%	4.50%	4.50%	4.50%
US	31-10-2025	5%	4.25%	4.25%	4.25%
US	31-01-2026	5%	4.00%	4.00%	4.00%
US	30-04-2026	5%	3.75%	3.75%	3.75%
US	31-07-2026	5%	3.50%	3.50%	3.50%

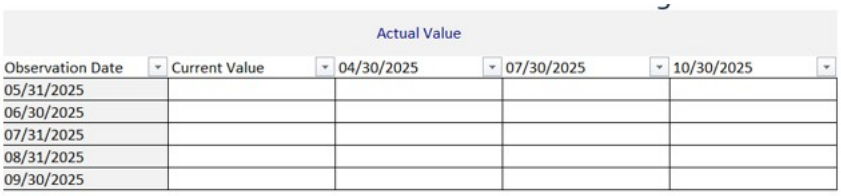
- **Observation Date Calculation**
  The Observation Date column is unique to MEVTS variables and is calculated as follows:
  - The **first observation date** is set as the scenario reference date.
  - The **total number of observation dates** is equal to the variable's timeframe.
  - The interval between observation dates is determined by the variable's frequency.
  - The **Start-of-Period / End-of-Period** setting determines whether the observation dates align with the beginning or end of each period.

Shock Types for MEVTS Variables

Three types of shocks are supported:

- **Absolute Values**: Users manually input absolute values in the scenario grid.

Figure 6-1 MVETS Absolute Values

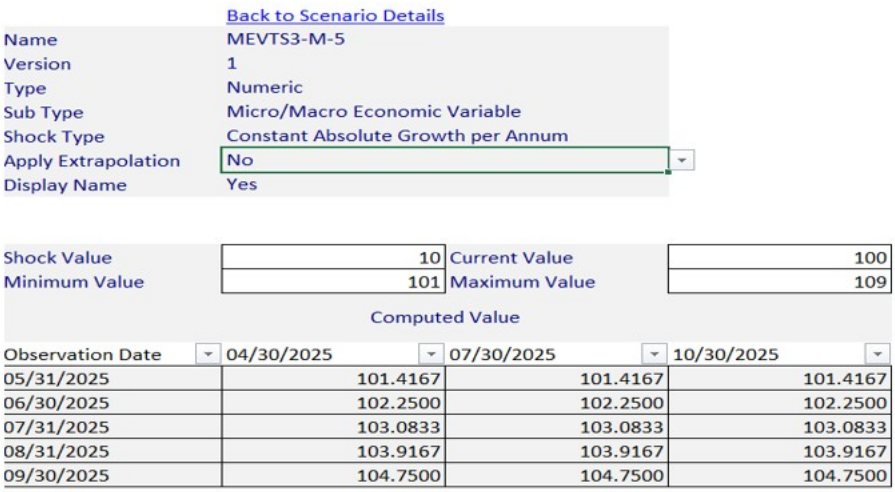


- **Constant Absolute Growth per Annum:**
  The formula and other configurations remain unchanged. However, in this case, the values are calculated based on observation dates corresponding to future periods. Minimum and maximum bounds are also applied for time series (TS)-based variables.

  For example, if the user provides a current value of 5%, the calculation for the first future date (for example, 03/06/2025) will be based on the observation period from 30/04/2025 to 31/05/2025.

For the next future date (03/07/2025), the value from 03/06/2025 will be carried forward through interpolation, which, in this case, remains unchanged. As a result, the values across all future dates remain consistent, as shown in the scenario grid.

Figure 6-2 Constant Absolute Growth per Annum



Back to Scenario Details

Name	MEVTS3-M-5
Version	1
Type	Numeric
Sub Type	Micro/Macro Economic Variable
Shock Type	Constant Absolute Growth per Annum
Apply Extrapolation	No
Display Name	Yes

Shock Value	10	Current Value	100
Minimum Value	101	Maximum Value	109

Computed Value

Observation Date	04/30/2025	07/30/2025	10/30/2025
05/31/2025	101.4167	101.4167	101.4167
06/30/2025	102.2500	102.2500	102.2500
07/31/2025	103.0833	103.0833	103.0833
08/31/2025	103.9167	103.9167	103.9167
09/30/2025	104.7500	104.7500	104.7500

Extrapolation Support

Users can enable extrapolation to extend observation dates beyond the current timeframe.

- A new grid appears with extended future dates.
- The number of extra dates depends on the frequencies of the scenario and the variable.

Frequency Base Days:

- Yearly (Y): 360 days
- Quarterly (Q): 90 days
- Monthly (M): 30 days
- Weekly (W): 7 days
- Daily (D): 1 day

The formula to calculate this is:

Figure 6-3 MVETS Variable formula

$$\text{Scenario Frequency (in days)} \div \text{Variable Frequency (in days)} = \text{Number of extrapolated dates}$$

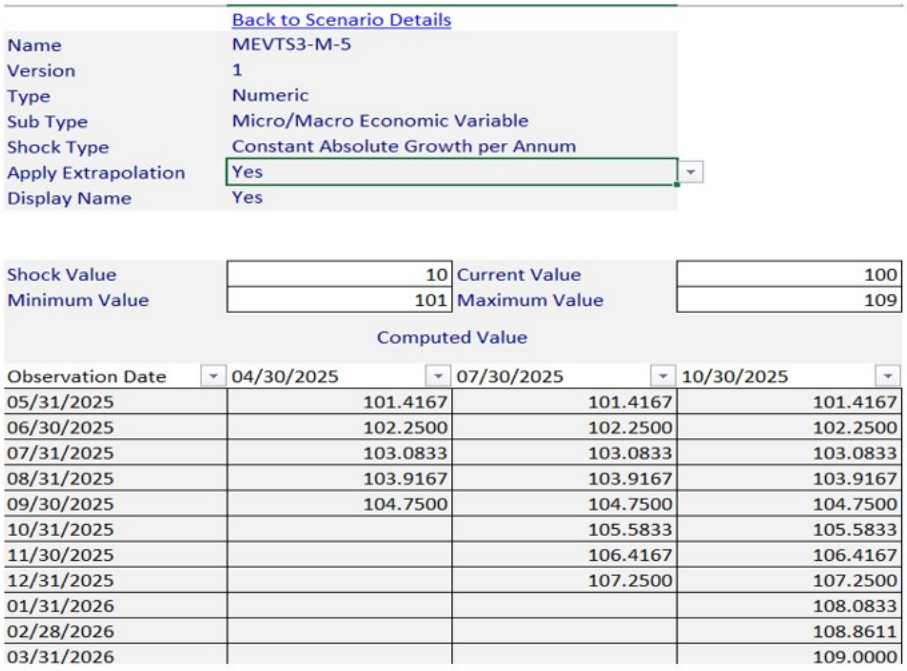
Example:

If the scenario frequency is Quarterly (90 days) and the variable frequency is Monthly (30 days):

Q/M = 90/30 = 3, therefore, 3 new dates are added per extrapolation step.

Extrapolated values are calculated using the same formula as defined for the selected shock type.

Figure 6-4 MVETS Variable Example



Back to Scenario Details

Name	MEVTS3-M-5
Version	1
Type	Numeric
Sub Type	Micro/Macro Economic Variable
Shock Type	Constant Absolute Growth per Annum
Apply Extrapolation	Yes
Display Name	Yes

Shock Value	10	Current Value	100
Minimum Value	101	Maximum Value	109

Computed Value

Observation Date	04/30/2025	07/30/2025	10/30/2025
05/31/2025	101.4167	101.4167	101.4167
06/30/2025	102.2500	102.2500	102.2500
07/31/2025	103.0833	103.0833	103.0833
08/31/2025	103.9167	103.9167	103.9167
09/30/2025	104.7500	104.7500	104.7500
10/31/2025		105.5833	105.5833
11/30/2025		106.4167	106.4167
12/31/2025		107.2500	107.2500
01/31/2026			108.0833
02/28/2026			108.8611
03/31/2026			109.0000

- **Constant Growth in Percentage per Annum:**
  This type follows the same rules as the Constant Absolute Growth per Annum shock type, but uses a percentage-based growth formula.

Additional Information

- **Interpolation (in Finance)**
  Used to estimate values within the range of known data points.

  Example:

  If a bond yields 4% for a 1-year maturity and 6% for a 3-year maturity, interpolation can estimate the 2-year yield.

- **Extrapolation (in Finance)**
  Used to estimate values beyond the range of known data points based on trends.

  Example:

  If a stock grows 10% per year over 3 years, extrapolation can estimate its price in the next year, assuming the trend continues.

Shock Types for IRC Variables

If you have selected numeric type of variable select from one of the shock type and provide your inputs.

- **Absolute Value** - the formula to calculate this is:

$$Absolute\ Value = Input\ Value$$

Where,

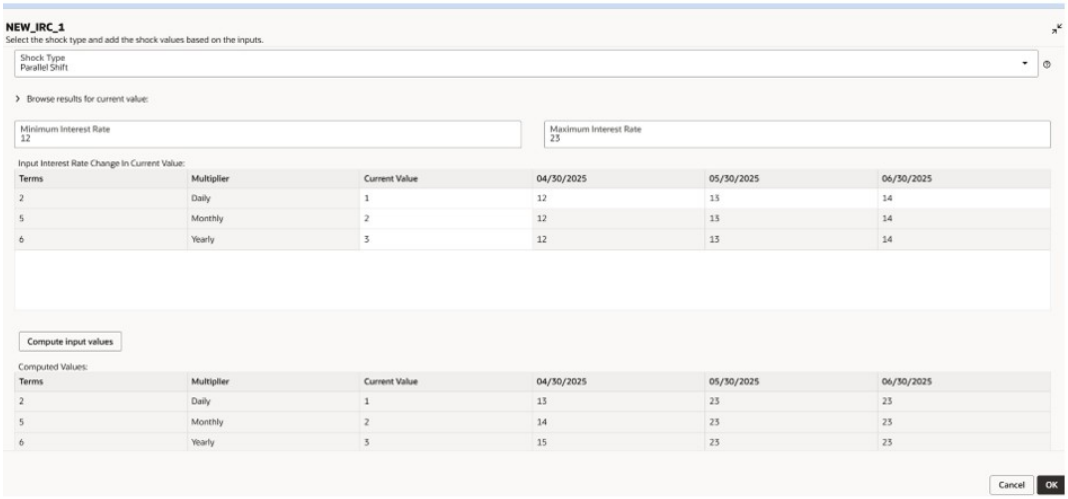
Input Value is the value entered on the User Interface (UI).

- **IRC Variable Grid Formation**
  During the variable creation process, terms and multipliers are defined for the IRC variable.

  Users can then enter current values, and the system will calculate corresponding future date values.

  The resulting grid appears as follows:

Figure 6-5 IRC Variable Grid Formation



IRC variable also has absolute value shocktype.

- **Flat:**: the formula to claculate this is as follows:

Figure 6-6 IRC Variable Grid Formation

```
CV + input_grid_value
```

In this shock type, the user provides input only for the current value.

All future values remain unchanged, resulting in a flat curve with no variation across time.

- **Parallel Shift:** the formula to claculate this is as follows:

Figure 6-7 Parallel Shift formula

```
max(min_value, min(CV + input_grid_value, max_value))
```

The user may optionally specify minimum and maximum bound values.

A single delta value is entered for all future dates and is uniformly applied to the current values.

This results in a parallel shift of the entire curve.

6.6.5 Cloning or Creating Scenario from Existing Scenario

To create a new scenario from an existing scenario, perform the following steps:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Scenario**.

   The **Scenario Summary** page is displayed.
4. To replicate and modify an existing portfolio with minor changes, select an existing portfolio, click **More Actions** and then click **Copy**.
5. Provide a name and update the description and click **Continue**.
6. Review or update the selections and then click **Continue**.
7. To save your changes, click **Save**.
8. To save your changes and close the wizard, click **Save and Close**.
9. To share it for review, click **Save and Submit**.

6.7 Analysis Configuration

Analysis configuration serves as a foundational framework for conducting stress tests or scenario analysis within a project. It specifies the results or insights that the analysis aims to produce. These may include quantitative metrics, qualitative assessments, risk evaluations, or strategic recommendations. Defining clear outcomes helps align the analysis with the project's goals and stakeholders' needs. An analysis configuration is reusable across multiple projects, particularly when the same analytical approach or scenario framework is applicable. By linking a single configuration to multiple projects, organizations can streamline their analytical efforts, ensure consistency, and leverage past learnings and best practices. It provides a road map for researchers, analysts, and stakeholder, outlining the steps to be followed and the parameters to be considered. This ensures rigor and consistency in the analysis methodology. An analysis configuration consists of a scope, metrics, models, variables and an auto-created composite pipeline.

Scope - Outlines the boundaries and objectives of the analysis. It defines what aspects of the project or system are examined and what specific outcomes are sought. This ensures clarity and focus throughout the analysis process.

Metrics - The outcomes that users want to assess as part of a scenario analysis. Users can evaluate the impact of a particular scenario on metrics or compare metrics across scenarios to understand how their portfolio performs under different conditions.

Models and Processes - Defines the analytical models, methodologies, and computational processes used in the analysis. These may include mathematical models, statistical techniques, simulation methods, or scenario-building frameworks. Transparency in this section enhances the credibility and reproducibility of the analysis.

Variables - The factors or parameters that can be changed or observed during the analysis. They act as inputs to scenarios or conditions under which the analysis is conducted.

Map Dimensions - Defines how variable dimensions are aligned and mapped within the configuration. All dimensions that are part of the selected variables are displayed in the **Variable Dimension Mapping** screen. Only the dimensions common to the selected metrics and variables are available for mapping.

Composite Pipelines - Generated automatically based on the selected metrics within the configuration. These pipelines facilitate execution of analytical processes, enhancing efficiency and automation.

6.7.1 Creating Analysis Configuration

Prerequisites:

- Ensure that all the objects (metrics, models, and variables) that you require for creating an analysis configuration are approved.

> **Note**
>
> Based on the metrics (process) and models you select, the variables are auto-populated. For this auto-population, you must map the `INPUT_GLOSSARY` of each variable to the pipeline (process or model).

To create an analysis configuration:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Analysis Configuration**.

   The analysis configuration summary page is displayed.
4. Click **Create New** and then provide a configuration name, a description and select a analysis purpose type from the drop-down list.
   - **Ad hoc** - select to generate a general configuration
   - **Regulatory** - select to generate a configuration aligned to a geographic area or governmental jurisdiction which is governed by specific laws and regulations enforced by governments and regulators.
     If you select the **Regulatory** option, then perform the following:
     a. Select the governing jurisdiction from the **Jurisdiction** drop-down menu.
     b. Based on the selected jurisdiction, a list of the supported regulators are displayed. Select the required regulator from the **Regulator** drop-down menu.
     c. Based on the selected regulator, the regulation processes are listed. Select the required regulation from the **Regulation** drop-down menu.
     d. Select the run type as **Official** or **Nonofficial** based on the purpose of the run from the **Run Type** drop-down menu.

     > **Note**
     >
     > To submit the results to a regulatory board and compute results for defined governance rules, select the **Official** run.

5. In the Scope page that opens, do either of the following:
   - Review and select the scope and click **Continue**.
   - Click **Create New** to create a scope.

   > **Note**
   >
   > To select the entire portfolio, select the **bank-wide stress testing** option.

   > **Note**
   >
   > For information about creating a portfolio, see Creating New Portfolios

6. In the Metrics page that opens, do either of the following:
   - Review and select the metrics and click **Continue**.
   - Click **Create New** to create a new portfolio.
     Based on the selected scope and metrics, the variables, models, and processes are automatically populated. You can also select them manually if needed.

   > **Note**
   >
   > For information about creating metrics, see Creating New Metrics

7. In the Models page that opens, do either of the following:
   - Select the models for your analysis configuration and click **Continue**.
   - Click **Create New** to create a new models.

   > **Note**
   >
   > – For information about creating the models, see Creating Models.
   > – Based on the metrics you select, the models are auto-populated.

8. In the Variables page that opens, do either of the following:
   - Select the variable for your analysis configuration and click **Continue**.
   - If no scenario is referenced, select the variables for your analysis configuration, or click **Create New** to define new variables.

   > **Note**
   >
   > – For information about creating the models, see Creating Variables.
   > – Based on the process you select, the variables are auto-populated. However, However, auto-population of the Direct Ingestion variable is not currently supported.
   > – Based on the models and process you select, the variables are auto-populated.

9. Select the required variables and click **Continue**.

   All the dimensions that are part of the selected variables are displayed in the **Variable Dimension Mapping**.

   > **Note**
   >
   > Only the dimensions that are common to the selected metrics and variables are displayed for selection in the Map Dimensions for Variables screen.

   To map the dimensions for the required variables using the **Variable Dimension Mapping** screen.

   a. Click More Actions and select **Map Dimensions**.
   The **Variable Dimension Mapping** page is displayed.

   b. Do either of the following:

      i. To create a new mapping:

         i. Select **Create New**.

         ii. In the **Variable Dimension Mapping** page, select the dimension in the **Dimensions Selection** field and click **Next**.

         iii. Select the desired values in the **Members Selections** field and click **Next**.

         iv. Select the desired values in the **Dimension Mapping Combinations** field and click **Save**.

      ii. To copy a dimension from an existing scenario:

         i. Select **Copy From Scenario**.

         ii. On the **Copy Dimension Mapping from Scenario** page, select the associated scenario, and click **Next**.

      iii. To copy a dimension from an existing analysis configuration:

         i. Select **Copy From Analysis Configuration**.

         ii. In the **Copy Dimension Mapping from Analysis Configuration** field, select the analysis configuration, and click **Next**.

      > **Note**
      >
      > The dimensions, bands, and combinations are automatically selected. You can manually select additional items, and then click **Next**.

10. In the Process screen that opens, select the process for your analysis configuration and click **Continue**.

    The system creates a new composite pipeline named after the analysis configuration, with "_version" appended.

6.7.2 Cloning or Creating Analysis Configuration from Existing Analysis Configuration

To create a new analysis configuration from an existing analysis configuration, perform the following steps:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Analysis Configuration**.

   The analysis configuration summary page is displayed.
4. Select an analysis configuration, click Actions and then select **Copy**.

   The analysis configuration definition page is displayed with all the details.
5. Modify the name and the selections if required and then click **Save**.
6. To save and close the wizard, click **Save and Close**.

6.7.3 Adding Additional Run Processes, Runs, and Models in Composite Pipeline

To add additional run processes, runs, and models in a composite pipeline:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Analysis Configuration**.

   The **Analysis Configuration summary** page is displayed.
4. Open the required analysis configuration in edit mode.

   The **Review & Validate** screen is displayed, where you can add additional processes or models as needed.
5. Click **Process** on the right-hand side.

   The **Process** page and the selected composite pipeline is displayed.
6. Click actions against the pipeline and click **View**.

   The **Process Pipeline** page is displayed.
7. To add new processes, click the **Add New Processes** tab.

   Based on your previous selection, all the applicable processes are listed.
8. Select the required processes and click **Add**.

   A pop-up message is displayed for auto-sequencing option.

   - If you want to continue with auto-sequencing, click **Yes**.
     If you select the auto-sequencing option, a confirmation message is displayed. Click **OK** and proceed to the **Process Pipeline** page.
   - If you want to continue with manual sequence, click **No**.
     For more information on sequencing the runs, see the Sequencing Runs.
9. To save the changes, click **OK** and then click **Save and Close**.

6.7.4 Sequencing Runs

To sequence the runs using auto-sequencing or manual sequencing:

1. Login to STSA.

The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Analysis Configuration**.

   The **Analysis Configuration summary** page is displayed.
4. Click the required analysis configuration.

   The **Review & Validate** screen is displayed.
5. Click **Process** on the right-hand side.

   The **Process** page and the selected composite pipeline is displayed.
6. Click actions against the pipeline and click **View**.

   The **Process Pipeline** page is displayed.
7. By default, the **Auto Sequence** option is selected and the runs are listed as per the default sequence.
8. (Optional) To sequence the runs manually, click **Manual Sequence**.
9. Under **Reorder** column, drag and drop the processes as per your requirement.
10. (Optional) To reset the order to the default auto-sequence mode, after changing the sequence manually, click the **Auto Sequence** option.
11. To save your selection, click **Save and Close**.

    A successful message is displayed.
12. (Optional) After rearranging the sequence manually, if you want to switch back to the auto-sequence mode, click the **Reset** option.

> **Note**
>
> In case of PMF mode, the auto-sequencing mode works only for the processes that are part of the composite pipeline that was created automatically. If you have added new processes through the **Add New Processes** screen, then these process are listed at the end of the list.

> **Note**
>
> In case of Data Catalog (DC) mode, the processes are run in sequence as mapped in DC.

A glossary term on the data catalog has an input and output sub-glossary term. These sub-glossary terms are tagged to processes and models.
For example, Glossary terms A, B and C have input sub-glossary terms as Input_A, Input_B, Input_C and Output_A, Output_B and Output_C respectively.

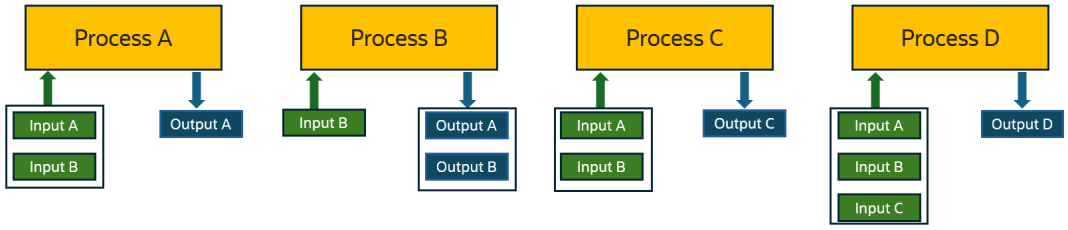
These sub-glossary terms can be tagged to processes and models on the data catalog.

```
Assuming input_A is tagged to process A, process C and process D and
output_A is tagged to process B.
Input_B is tagged to process C, and output_B is tagged to process B.
Input_C is tagged to process A and process D and output_C is tagged to
process C.
```

```
Input_D is tagged to proceed D and output_D is tagged to process A.
```

This is represented in the below image.

Figure 6-8 Glossary terms example



Then, the processes are sequenced as below:

First process B is executed and then process C is executed followed by process A and finally process D is executed. The auto-sequencing is in this particular order since process B is not dependent on any inputs (or process) and can start immediately. However, process C has a dependency on process B (since the output of process B is an input to process C). Similarly, process A cannot run independently as it requires inputs from process C and process A's outputs are an input to process D.

The sequence of process is as per the below image:

Figure 6-9 Process sequence example

To configure the component value (PMF or DC mode), refer to the **EST_CONFIGURATION** table mentioned in the Populating tables for Composite Pipeline components section.

13. To save the changes made, click **Save and Close**.

    A successful message is displayed. Click **OK**. The process section is displayed.

> **Note**
>
> Ensure that you save your changes and then exit the screen if you are changing the sequences manually.

6.8 Project

Project refers to any analysis the user proposes to undertake on the application through a scenario analysis, sensitivity analysis and so on. A project comprises of multiple objects such

as an analysis configuration, one or more scenarios, datasets, and business rules per scenario.

6.8.1 Creating a Project

Prerequisite:
STSA supports delayed parallel execution but, ensure that the application you are working with also supports parallel execution model.

To create a project:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Project**.

   The project summary page is displayed.
4. To create a project, click **Create New**.

   The project creation wizard is displayed.
5. Provide a name and description for the project.
6. Select a reference date (base production run date or when the data is available in sandbox for stress testing) for the project.

   > **Note**
   >
   > Ensure that you provide the same reference date as provided in the scenario which you are planning to select for this project.
7. In the **Date Projection Mode** field, determine how the system handles time-sensitive dates (like maturity or payment dates) as the forecast moves forward in time. To do so, select either of the following options

   - **Rolling**: This option maintains the original time-to-event
     For Example,

     If an account is 6 months from maturity at the start, it will remain 6 months from maturity in every period of the forecast. Assume a Base Date of Jan 1st and a loan maturing on July 1st (6 months away). The maturity date shifts to Dec 1st (still 6 months away).
   - **Static**: This option original date as the base date.
     For Example,

     The maturity date stays July 1st (only 1 month away).
8. In the **Baseline Data & Results Source** field, choose how the system establishes the starting balances and metrics for your stress test. To do so, select either of the following options:

   - **Use Official Base from Production**: Imports the final, audited figures directly from the Production environment. This ensures your stress test starts from the 'official' numbers from the production run.
   - **Re-run Base in Sandbox**: Triggers a fresh calculation of the base date within this environment.

9. In the **Stress Impact View** field, select either of the following options to determine if the results should reflect the entire bank's position or just the specific area being tested.
   - **Show impact on Total Bank**: The system applies stress to portfolios you choose but generates the results for the entire bank.
   - **Show impact on Selected Portfolio only**: The report will ignore the rest of the bank and generates the results only for the portfolios you choose to stress.
10. Select an option for the **Maintain Constant Maturity/Date Profile**.

    This represents the date intervals in stress testing.
    - To maintain the same date interval throughout the stress testing period, click **Yes**. If you have added **Direct Ingestion** variables, then only the default date management calculation is applied for deriving the dates.

      If you have not added **Direct Ingestion** variables, then, STSA Date Management + Default Date Management calculation is applied for deriving the dates.
    - To use the default date calculation, click **No**.

    For more information about the Date Management logic, see the Preseeded Glossaries section.
11. Select one of the following options for base run details.
    - **Copy From Production**- the base run details are copied from production to sandbox before execution of stress testings.
    - **Execute in Sandbox**- the base run details with the stage data available on the selected reference date is used for execution of stress testing.
12. Select the **Analysis Type** as **Scenario**.

    > **Note**
    >
    > Only the **Scenario** component is supported for this release.

13. Select the analysis purpose from the **Analysis Purpose** drop-down menu.

    > **Note**
    >
    > For more information, see the *Analysis Configuration* section

14. In the **How would you like to continue with project creation?** field, select either of the following options and do the following:
    - (Optional) If you select **Configure Analysis Configuration**:
      a. (Optional) Click **Refer Scenario**.
      b. (Optional) In the **Select Scenario Configuration** page that opens, select the scenario and click **Select**.
    - If you select, **Continue with Scenario Setup**:
      a. (Optional) Click **Refer Analysis Configuration**.
      b. (Optional) In the **Select Analysis Configuration** page that opens, select the scenario and click **Select**.

> **Note**
>
> When creating a project, you can begin with either an analysis configuration or a scenario.
>
> - If a scenario is referenced from an analysis configuration, its variables are prepopulated.
> - If an analysis configuration is referenced from a scenario, variables in the scenario can now be a subset of the variables defined in the analysis configuration. STSA enforces validation to ensure that referenced scenario variables exist in the analysis configuration, but a full match of all analysis variables is no longer required.

15. Add an analysis configuration and click **Continue**.

    To add an analysis configuration, select from one of the available options:

    - Create a new analysis configuration - select the **Create New Configuration** option and provide a name and description. For more information, see create a new configuration section.

      > **Note**
      >
      > – Ensure that you select at least one metric while creating the configuration.
      > – When creating a project, you may get two sets of variables:
      > * Variables from the referenced scenario
      > * Variables from the metric/model selection
      > – If scenario variables are excluded from the configuration due to the selected scope, an **Alert** dialog is displayed listing the excluded variables. You can review each variable and choose whether to **Add** it to the configuration or **Remove** it from the scope.
      > – This validation ensures that scenario variables can be a subset of the analysis configuration variables, and any excluded variables must be explicitly confirmed by the user before proceeding.

    - Select from an existing analysis configuration - select the **Add an Existing Configuration** and do the following:
      a. In the **Select Analysis Configuration** screen that opens, select one of the configuration from the list.
      b. Review the selected portfolio, metrics, variables, mapped dimensions, and processes.
      c. Click **Add to Project**.
    - Clone an existing analysis configuration - select the **Copy an Existing Configuration**, click **Select**, and then select one of the configuration from the list. Then provide a name and description and then review the selected portfolio, metrics, variables, mapped dimensions, and processes or make changes to the selections.
      a. In the **Select Analysis Configuration** screen that opens, select one of the configuration from the list.
      b. Click **Copy and Add to Project**.

16. In the **Configuration Added to Project** dailog box that opens, click **OK**.
17. In the Portfolio page that opens, do either of the following:
    - Review the porfolios and click **Continue**.
    - Click **Create New** to create a new portfolio.

    > **Note**
    >
    > For information about creating a portfolio, see Creating New Portfolios

18. In the Metrics page that opens, do either of the following:
    - Review the metrics and click **Continue**.
    - Click **Create New** to create a new portfolio.

    > **Note**
    >
    > For information about creating metrics, see Creating New Metrics

19. In the Models page that opens, do either of the following:
    - Select the models for your analysis configuration and click **Continue**.
    - Click **Create New** to create a new models.

    > **Note**
    >
    > For information about creating the models, see Creating Models

20. In the Variables page that opens, do either of the following:
    - Select the variable for your analysis configuration and click **Continue**.
    - Click **Create New** to create a new variable

    > **Note**
    >
    > For information about creating the models, see Creating Variables

21. In the Map dimensions for Variables page that opens, do the following:
    a. In the Actions section, select **Map Dimensions**.
    b. Click **Continue**.
22. In the Process page that opens, review the process for your analysis configuration and click **Continue**.
23. In the **Review & Validate** page that opens, complete adding the analysis configuration, click **Save**.

    The **Alert** section displays the pending action. Click the relevant action item to complete the task before submitting the configuration for review.

    You can bulk select the metrics from the **Review and Validate** screen. To do so:

    a. In the **Alert** section, click the **Action** icon against the alert you want to modify.

b. In the **Review Metrics** screen that opens, do either of the following:

- Under the **Edit metrics selection** column, do either of the following:
  - Select **Include All** to select all available metrics.
  - Select **Choose Specific Metrics** to manually select metrics from the list.

> **Note**
>
> When you select this option, a new screen opens where you can choose individual metrics.

> **Note**
>
> You must click **Save** on that screen to return to the **Review Metrics** screen.

- Click **Reset** to revert the selection to its initial state.
- Click **Select All** to include all available metrics in bulk.

c. Click **Save** on the Review Metrics screen to apply the changes.

After adding the analysis configuration, the **Project Activity** pane is displayed on the right hand side listing the various stages of project creation.

The status of the analysis configuration is displayed under the **Definition Ready** title.

a. If there are any errors in the analysis configuration they are shown as alerts. Fix then using the **Edit Analysis Configuration** after the **In-Progress** entry.
If the configuration is not complete, the status is displayed as **In-Progress**.

- To modify the selected analysis configuration, click the **Edit Analysis Configuration** link.
- To remove the analysis configuration, click the **Analysis Configuration** tab and then click **Remove Configuration**.

> **Note**
>
> Ensure to fix the errors before requesting for project approval.

> **Note**
>
> You can edit a configuration only if it is in a draft state.

b. After selecting a valid configuration or fixing the alerts in the selected configuration, the status is updated to **Completed**.

c. Add a scenario using the **Add Scenarios** link.

24. Create a pipeline.

To create a pipeline:

a. In the **Project Activity** pane, under the **Pipeline Reviewed** title, click **Create Pipeline**.

This activity to create the composite pipeline with a requisite data pipeline, analysis configuration, scenarios along with results pipeline to move the results from the production to sandbox.
After the composite pipeline is created, the canvas is loaded and the pipeline is displayed with all the components.

After the pipeline is created, the **Pipeline Reviewed** shows as **Completed**.

b. To view or edit the pipeline, click Actions against the **Pipeline Reviewed** and then click **View Pipeline** or **Edit Pipeline**.

To edit the pipeline, see the Oracle Financial Services Analytical Applications Infrastructure Process Modeling Framework Orchestration Guide

25. Create a result dimension.

To create a result dimension:

a. In the **Project Activity** pane, under the **Result Setup** tab, click **Add Result Dimension** to open the dimension configuration screen.

This option is available only if the analysis configuration contains metrics.

b. In the **Choose the dimensions** screen, select the required dimension names from the drop-down list.

c. Click **Next**.

d. In the **Map Dimensions to Results** table, for each selected metric, choose the appropriate value from the **Foreign Key Reference** drop-down.

e. Click **Save** to confirm the result dimension mapping.

After it is configured, the result dimensions are listed under the **Result Setup** tab. These dimensions will be used in the results pipeline for mapping and analysis.

26. Submit the project for review and approval process.

For more information about sending objects for review and approval, see the Workflow for STSA Objects section.

27. After the project is approved, open the project in view mode.

The project page is displayed.
The status of the project is updated to 100 percent complete at this stage.

28. When creating a project, you must define how its runs are executed: **Parallel** or **Sequential**. This selection determines whether multiple runs under a project execute at the same time or one after the other.

> **Note**
>
> STSA supports delayed parallel execution. Ensure that the application you are working with also supports the parallel execution model.

- **Parallel** (default): Multiple runs are executed simultaneously. This is the default selection for all new projects.
- **Sequential:** Runs are executed one after the other, based on their defined order.

To select the execution mode:

a. In the Project creation or edit screen, scroll to the **Execution Setup** section.

b. Click **Select Execution Mode**.

c. In the **Preview Execution Flow** dialog, select one of the following:

- **Parallel**
- **Sequential**

> **Note**
>
> If the project includes a Base Run, it will always execute first regardless of the selected execution mode. The base run acts as a foundational execution before subsequent runs in either flow mode.

29. Add the run parameters to capture the execution parameter values required for process or model execution.

    To add **Run Parameters**:

    a. Open the project in **View** mode.

    b. In **Project Activity** under **Run Parameters Added** click More Actions and then click **Add Run Parameters**.

       The **Add Run Parameters** screen is displayed.

    c. To add a parameter, click the add icon.

    d. Provide a name and description and the **FIC MIS Date**.

       For this release provide the **FIC MIS Date** as the project start date.

    e. Click **Next**.

    f. Select the required run parameters for the selected process.

    g. Click **OK** and then click the save icon.

    h. To save the parameter, click **Save**.

    In the **Run Parameters** tab, all the added run parameters are listed.

30. Make one of the execution run time parameter as the latest.

> **Note**
>
> If only one run parameter is added, this is automatically set to **Make Latest**.

    To make an execution run parameter the latest:

    a. Click more actions against one of the run parameter

    b. Click **Make Latest**.

31. To run the project, click **Run Project**.

32. In the confirmation, click **Yes**.

33. Click **Ok** after the project is run successfully.

> **Note**
>
> - A project can have multiple scenarios, and pause components in the scenarios. So,ensure that you resume the run, if the pause component is present, after doing the required changes.
> - The system generates email notifications at the following stages of project execution:
>   - **Run initiation**: Indicates that project execution has started.
>   - **Completion**: Indicates that project execution completed successfully.
>   - **Error state**: Indicates that execution failed or was aborted.
>   - **Pause**: Indicates that project execution has paused.
>
>   These notifications enable users to track project execution status without actively monitoring the interface.

In the **Project Activity** pane under the **Results Ready** title the status is displayed as run completed.

During project execution, when scenario execution reaches the pause component, execution status will be Paused.

- To resume a run, click More Options against a run and click **Resume**.

34. To view the reports:
    a. Click the **Execution And Results** tab.
    b. Click actions and select **View Results**.
    c. (Optional)To refresh the page at specific intervals, provide the interval in the **Refresh Interval In Minutes** and click **Start Auto-Refresh**.
    d. (Optional) To refresh the page after the execution, click **Refresh**.
    e. To hide or view columns in the **Execution And Results** page,
        i. Click the column icon and rearrange the column names as per your preference.
        ii. To hide the column, move the column name below to the Hide section.
35.
36. (Optional) To abort an approved project execution:
    a. In the Project Summary page, click the **Actions** button next to the entry and select **Edit**.
    b. In the **Project** screen that opens, go to the **Execution & Results** tab.
    c. In the **Latest Execution** section, click the **Actions** button next to the required entry and select **Edit**.
    d. Navigate to the **Results and Summary** screen.
    e. Click the **Actions** button and select **Abort Execution** to abort the project.

> **Note**
>
> Aborting the execution will stop further processing for the current run. Use this action only when it is safe to terminate the process.

37. (Optional) To resume a paused project execution:

    When a project is paused, you will receive an email notification indicating the scenario status and required action.

    To resume execution:

    a. In the Project Summary page, click the **Actions** button next to the entry and select **Edit**.

    b. In the **Project** screen that opens, go to the **Execution & Results** tab.

    c. In the **Latest Execution** section, click the **Actions** button next to the required entry and select **Edit**.

    d. Navigate to the **Results and Summary** screen.

    e. Click the **Actions** button and select **Resume Execution** to abort the project.

> **Note**
>
> Resuming the execution will continue processing the scenario from where it was paused. Ensure all required tasks are completed before resuming.

38. After the project is approved, you can publish scenario results and view the publish results. To do so:

    a. In the Project Summary screen, click **View** under **Actions**.

    b. In the page that opens, click the **Execution And Results** tab.

    c. Locate an execution with the status **COMPLETED** and click the **Actions** menu.

    d. To publish scenario results, click **Publish Results**.
    The **Publish Results** window opens, allowing you to select the scenarios to be included in the official results.

    e. In the **Publish Results** page that opens, do the following:

        i. Use the search bar to find specific scenarios, if required.

        ii. Select the required scenarios or click **Select All**.

        iii. Review the scenario names and versions.

        iv. Click **Publish**.

    f. To view the published results, click the **Actions** menu for the same execution and select **View Publish**
    The system displays the results for the scenarios that were selected during publishing.

    .

6.8.2 Cloning or Creating Project from Existing Project

When you clone an existing project, the system retains the original project's flow—including whether it started with a scenario or an analysis configuration. You can modify this flow after cloning if required.

> **Note**
>
> Referenced scenarios or analysis configurations in the original project are not automatically linked in the cloned project.
>
> You can choose to reference different objects or reconfigure the flow when editing the cloned project.
>
> Variables will auto-populate based on the referenced object, and validations are applied to ensure consistency.

To create a new project from an existing project:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Project**.

   The project summary page is displayed.
4. To replicate and modify an existing project with minor changes, select an existing project, click **More Actions** and then click **Copy**.
5. Provide a name, update the description, review the selections made and click **Save**.

   The project summary page is displayed.
6. Review the selected analysis configuration and project or select new configuration and project or create new configuration and project.

   For more information about creating an analysis configuration, see the Creating Analysis Configuration section.
   For more information about creating a project, see the Creating a Project section.
7. Submit the project for review and approval process.

   For more information about sending objects for review and approval, see the Workflow for STSA Objects section.
8. After the project is approved, add the run parameters by clicking the **Add Run Parameters** (if required), else make one of the existing run parameters as the latest and then run the project.

7

Post requisites for STSA

7.1 Populating tables for Composite Pipeline components

EST_OBJECT_REQUISITE table

A process or a model can have any number of prerequisites operations to run before running the process or model and any number of post-requisites after running the process or model. Hence, STSA provides a `EST_OBJECT_REQUISTE` table where you can maintain this list of prerequisites and post-requisites of all the selected processes and models for the composite pipeline that will be created while creating the analysis configuration.

This table has the following columns listed. Ensure that you enter the values of the prerequisites and post-requistes based on which the composite pipeline is created.

Table 7-1 Details about EST_OBJECT_REQUISITE table

Column Name	Description	Example	Comments
V_OBJECT_INFODOM	Provide the workspace name where this object is present in.	STSAINFODOM	**Note:** Ensure that all the objects are created on the same workspace or workspace.
V_OBJECT_APP_PACKAGE_ID	Provide the application package ID of the process.	OFS_STSA	
V_OBJECT_TYPE	Provide the type of object for which prerequisite or postrequisite requisite is being configured. There are the following types of PMF and RRF objects: • RUNPROCESS • EMFNOTEBOOK • RN	RUNPROCESS	
V_OBJECT_ID	Provide an id or code for the following objects: • RUNPROCESS - id • RN - code • EMFNOTEBOOK - ID_version	PR_1865839290	
V_REQUISITE_TYPE	This represents if the required object has to run before or after the object. Provide one of the values: • PRE • POST	POST	

Table 7-1 (Cont.) Details about EST_OBJECT_REQUISITE table

Column Name	Description	Example	Comments
V_REQUISTE_OBJECT_TYPE	This is the type of the object configured for prerequisite or postrequisite. • BATCH • DATAPIPELINE • RN • RUNPROCESS • T2T • PAUSE • EMFNOTEBOOK	BATCH	
V_REQUISTE_OBJECT_ID	This represents the unique id of the prerequisite or post requisite object.	OFSAAIINFO_Data	**Note:** If you are providing the value in the V_REQUISITE_OBJECT_TYPE column as: • T2T, then mention the source details in the V_REQUISTE_OBJECT_ID column as <source_id>.<t2t_id> • RRF (RN), then mention the source details in the V_REQUISTE_OBJECT_ID column as <RRF_subtype>.<RRF_id> • PMF (RUNPROCESS), then mention the source details in the V_REQUISTE_OBJECT_ID column as <App_package_id>.<process_id> **Note**: The sub-types of RRF are BR, SR and IR.
V_REQUISTE_OBJECT_SEQUENCE	Provide the sequence of order to run these prerequisites and post-requisites. **Note:** If same preference is given to two or more objects, they are run in parallel.	1	

EST_CONFIGURATION table

While building an analysis configuration, after selecting the metrics (process or model as a source) and additional models a composite pipeline is created.

If there is a similar composite pipeline created for an analysis configuration created earlier and it is approved, the existing pipelines are listed for selection.

Based on the models and processes selected the values in the `EST_CONFIGURATION` table is populated. And, this sequence is executed when the composite pipeline is executed. This is the auto sequencing mode.

Table 7-2 Details about EST_CONFIGURATION table

Column Name	Description	Example	Comments
V_COMPONENT_CODE	This represents the code of the component selected for the object. This value is prepopulated.	PROCESS_AUTOSEQUENCE_MODE	
V_COMPONENT_NAME	This represents the name of the object. This value is prepopulated.	EST_PROCESS	
V_COMPONENT_VALUE	This represents the configuration of operation. For auto-sequencing mode two options are available for selection: • PMF - select this option to auto-sequence based on an already existing composite pipeline where the models and pipelines are already defined. • DC- select this option to auto-sequence based on execution as per the glossary term mapped to published pipelines in DC. **Note:**By default, the value is set to PMF. If required, you can change the value to DC. If you are changing the source to DC then ensure that all the glossary terms are linked to the pipelines.	DC	
V_COMMENTS	This represents the description of the configuration.	Mode for autosequence of composite pipeline components	

7.2 Configuring STSA tables for Reports

After installing the application some STSA tables are created. To view the reports in BI, ensure that you fill the following tables:

1. **EST_RESULTS_DIM_MAP**
2. **EST_RESULTS_DIM_VIEW_DETAILS**

> **Note**
>
> You can add maximum of ten dimensions to view the stress reports in BI.

1. Fill the details in the **EST_RESULTS_DIM_MAP** table.

Table 7-3 Details about EST_RESULTS_DIM_MAP table

Column Name	Description	Example	Comments
V_EST_RESULTS_DIM_KEY	List the dimensions that you want to view in the reports.	N_DIM1_SKEY	You can list a maximum of 10 dimensions in this column. Ensure that the first five dimensions are simple dimensions and their format is: N_DIM1_SKEY, N_DIM2_SKEY to N_DIM5_SKEY. The next five dimensions are level-based dimensions. And their format is: N_DIM6_SKEY, N_DIM2_SKEY to N_DIM10_SKEY.
V_DIM_TABLE_NAME	List the dimension table names that are required for viewing in reports.	DIM_INDUSTRY	
V_DIM_COLUMN_NAME	List the specific column names of the dimension table for viewing in reports.	N_D_CUST_INDUSTRY_SKEY	
V_LOGICAL_NAME	List the logical name of the dimension that will be displayed as a dimension filter in the BI.	Industry	

2. Fill various details of each dimension in the **EST_RESULTS_DIM_VIEW_DETAILS** table.

Table 7-4 Details about EST_RESULTS_DIM_VIEW_DETAILS table

Column Name	Column Description	Example Value	Comments
V_EST_RESULTS_DIM_COLUMN	This is the dimension column name.	N_DIM4_SKEY	
V_VIEW_NAME	This is a parameter for reports.	DIM_BI_PH_04	

Table 7-4 (Cont.) Details about EST_RESULTS_DIM_VIEW_DETAILS table

Column Name	Column Description	Example Value	Comments
V_VIEW_COLUMN_NAME	Each value represents an unique identifier for the dimension. For report generation, the skey, description, name, code and LRI is required. Hence the table is populated by defining these parameters for each dimension.	DIM_BI_PH_04_SKEY	Provide these values: DIM_BI_PLC_09_DIM_HCY_LEVEL_NAME_1, DIM_BI_PLC_09_DIM_HCY_LEVEL_CD_1, and DIM_BI_PLC_09_DIM_HCY_LEVEL_DISPLAY_ORDER_1
V_VIEW_COLUMN_VALUES	Provide the unique value for each dimension.	N_PROD_TYPE_SKEY	
V_LOGICAL_COLUMN_NAMES	Provide the logical name for the column.	(null)	

3. To initiate the table view creation after this configuration or any change in the configuration, run the following command:

```
EXECUTE VIEW_CREATION_PROCEDURE;
```

8

Workflow for STSA Objects

A workflow is a defined sequence of stages or steps that an STSA object goes through from its creation to completion. Each stage in the workflow represents a specific point in the life cycle of the object, and each object progresses through these stages, and incrementally by changing its status as it moves along the workflow.

The following is the list of status for each object in STSA:

- Draft - Once you create an object, it is automatically assigned to the Draft stage. At this stage, you can continue to work on it.
- Sending for Comments - Before the object undergoes formal review, you can send it to the relevant stakeholders or team members for comments and feedback. This stage allows for collaborative input to improve the object's quality before formal review.
- Submit for Review - After you have created the object and completed the initial drafting phase, you can move it to the Under Review stage. Here, they undergo assessment and evaluation by relevant stakeholders for accuracy, quality, compliance, or any other criteria.
- Reject - If during the review process an object is found to be unsatisfactory or requires revisions, it may be rejected. This means that the object needs further refinement or correction before it can progress. Once an object is rejected it is moved back to Draft state and you have to initiate the review cycle again.
- Sending for Approval - After an object successfully passes the review stage, it enters the Approval stage. At this point, it has met all the required criteria and is acceptable and used in stress testing.

8.1 Sending Objects for Worlflow Process

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click the object, and then click **View** option from the object tile.
4. To send an object for comments for other users or stakeholders, click More Actions and click **Submit for Comments**.

   The **Send for comments** page is displayed.
5. Select the users from whom you require the comments and click **Send**.
6. (Optional) If there are many users listed, use the search bar to filter the users and then select the required user.

8.2 Providing Comments for Objects

1. Login to OFSSTSA using the user credentials with posting comments privileges.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. In the **ToDo** tab, all the requests for comments and approvals are listed.

> **Note**
>
> - The **ToDo** tab now also displays entries for paused projects, listed alongside other actionable items.
> - Use the **More Actions** option next to a paused project to resume execution or review its status.
> - The **ToDo** page allows users to take action on paused projects. After the action is taken, the project canvas opens for execution. After the user resumes and closes the project, the system automatically navigates back to the **ToDo** page.

4. To provide your comments, search for the object with **Pending for Comments**, and click More Actions and then click **Comment**.

   The **Comments** page is displayed.

5. Provide your comments in the **Add Comments Here** text box and click **Add**.

> **Note**
>
> You can add any number of comments for a single object till it is moved to the next stage (Review Stage).

8.3 Submitting Objects for Review

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click the object, and then click **View** option from the object tile.

   The object's summary page is displayed.

4. To send an object for review, in **Actions** column, click **View**, **Edit**, or **Copy** and then review the definition of the object and click **Submit for Review**.

   OR

   After creating the object, click **Submit for Review**.

   After a successful submission, a **Successfully Submitted** popup is displayed.

   After this, the state of the object is changed from **Draft** state to **Under Review**.

5. To return to the main page, click **Ok**.

8.4 Reviewing or Rejecting Objects Sent for Review

1. Login to OFSSTSA using the user credentials with review privileges.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click the **ToDo** tab.

   All the objects that require an action item from your end are listed.

4. Search for the object sent for review.

The status of the object is listed as **Under Review**.

5. To review the object, click More Actions and click **Review**.

   The object page is listed with all the comments received so far for the object.

6. Review the comments and if required add your comments and click **Add**.

> **Note**
>
> You can add multiple comments for a single object at this stage.

7. To review the object, click **Mark Reviewed**.

   The status of the object is moved from **Under Review** to **Reviewed** state in the object summary page.

8. To reject the object, click More Actions and click **Reject**.

   After the object is rejected, the object is moved back to **Draft** status.

8.5 Sending Objects for Approval

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.

3. To send the object for approval, click the object, and then click **View** option from the object tile.

   The object's summary page is displayed.

4. Open the reviewed object in view mode and then click **Submit for Approval**.

   After the object is sent for approval, a successful message is displayed.
   The status of the object is moved from **Reviewed** to **Pending for Authorization** state in the object summary page.

5. To return to the main page, click **Ok**.

> **Note**
>
> Only the users who have review privileges for that type of object can see the object for approval in their **ToDo** tab.

8.6 Approving or Rejecting Objects Sent for Approval

1. Login to OFSSTSA using the user credentials with approval privileges.

2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.

3. Click the **ToDo** tab.

   All the objects that require an action item from your end are listed. The objects sent for approval are in **Under Approval** status.

4. To approve the object, click More Actions and click **Approve**.

   The object page is listed with all the comments received so far for the object.

5. Review the comments and if required add your comments and click **Approve**.

> **Note**
>
> You can enter your comments only once during this stage.

The status of the object is moved from **Under Approval** to **Approved** state on the object summary page.

> **Note**
>
> After the object is approved if you want to further update the definition of the object, then the version number of the object is reved up incrementally and the status of the new version of the object is updated as **Draft**.

6. To reject the object, click More Actions and click **Reject**.

   If required you can provide your comments.

   After the object is rejected, the object is moved back to **Draft** status and then follow the complete workflow for approval.

8.7 Workflows for Models

8.7.1 Sending Models for Model Acceptance

To send the models for model acceptance:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and then click **Models**.

   The **Models Summary** page is displayed.
4. Select the model you want to send for acceptance and click Actions and then **Edit**.

   The Model Definition pipeline page is displayed.
5. To send the model for a review, click the **Deployment Overview** tab and provide the following information:
   a. Provide a reviewer and level 1 approver for the model.
   b. Provide the comments for this review cycle.
   c. Click **Request** and then select **Model Acceptance**.

      The model is sent for approval.

8.7.2 Reviewing Models

1. Login to OFSSTSA using the user credentials with review privileges.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.

3. Click **Building Blocks** and then click **Models**.

   The **Models Summary** page is displayed.

4. Select the model you want to review and click Actions and then **Edit**.

> **Note**
>
> If you have the approval privileges, then the status for all the models sent for approval is displayed as **Pending for Approval**.

5. Review the model, and then click the **Deployment Overview** tab.
6. To approve the model, provide the comments for review and click **Approve**.
7. To approve the model, provide the comments for review and click **Approve**.

8.7.3 Making Models as Champion (Global or Local)

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.

   The **Models Summary** page is displayed.

4. Select the model you want to send for approval and click Actions and then **Edit**.

   Select the model you want to send for approval and click Actions and then **Edit**.

5. To send the model for approval, click the **Deployment Overview** tab and provide the following information:
   a. Provide a reviewer and level 1 approver for the model.
   b. Provide the comments for this review cycle.
   c. Click **Request** and then click **Make Champion - Global** or **Make Champion - Local**.

      The model is sent to the approver.

8.7.4 Retiring a Champion Model

1. Login to OFSSTSA using the user credentials with approval privileges.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Building Blocks** and then click **Models**.

   The **Models Summary** page is displayed.

4. Select the model you want to retire and click Actions and then **Edit**.
5. Review the model, and then click the **Deployment Overview** tab.
6. Click **Request**, provide the reasons for model retirement and then click **Retire Champion**.

9
Managing STSA Resources

This chapter explains the process of managing the Stress Testing and Scenario Analytics (STSA) resources.

9.1 Checking Log Files

Check the STSA log file present in the following location for detailed debugging:

```
export LOG_HOME=<EST Installation Directory>/logs
```

> **Note**
>
> During installation, you must export this log path in the configuration file (configforest.sh). For more information, see the Oracle Financial Services Stress Testing and Scenario Analytics Installation Guide.

and

```
<EST Installation Directory>/
OFS_EST/est-service/bin/nohup.ou
```

Check the MMG log file present in the following location for detailed debugging related to models:

```
$LOG_HOME/services
```

9.2 Managing Metrics

This section details the procedures for managing the metric components.

9.2.1 Viewing Metrics

To view the metrics, perform the following steps:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **Metrics**.

   The Metrics Summary page is displayed with details about the metric such as metrics name, version, metric source, logical and physical reference, and status information.

When there are multiple versions of a metric, the latest version of the metric is listed at the top of the hierarchy and expand the metric to view the previous versions.

4. To search a metric with a keyword, select from the options displayed under the search bar or type the word.
5. To sort the metrics listed on the page as per the available preferences, click the **Sort By** drop-down menu.

   You can sort the list based on the following options:

   - Selected - sorts the list of objects that are selected.
   - Recently Created - sorts the list of objects that are created recently and places them at the beginning.
   - Recently Modified - sorts the list of objects that are modified or updated recently.
   - Reset - sorts the list of objects as per the default view (alphabetically).
6. To view details about a single metric, click the metric or click **Actions** and then click **View**.

   To view details about the previous version of a metric, expand the metric, select the required version, click Actions and then click **View**.

   The metric's details is displayed with the name, selected process or model, and selected logical and physical references.
   The **Audit Logs** section displays the user who created the metric and the user who modified the definition at the latest.

   To view any comments associated to the metric, click the **Comments** tab.

   To view any tags associated to the metric, click the **Tags** tab.

   The Tags column is now available and displays the tags associated with each metric.

   The **Disabled** checkbox column has been removed from the indirect summary screen. Only selected records are displayed in **View** mode.

   The Name column is now left-aligned in **View** mode.
7. To return to the summary screen, click the **Metrics Summary** or click **Cancel**.

9.2.2 Editing Metrics

You can edit an object based on the following criteria:

- If you edit an approved object, then a new version of the object is created and the changes are reflected on the new version.
- You cannot edit an object if it is in any other state other than draft state.

> **Note**
>
> However, editing an object that is approved creates a new version of the object.

To edit a metric:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **Metrics**.

The metrics summary page is displayed with the metric details.

4. To edit or modify a metric, click Actions and then click **Edit** against the metric.

   The metric's details is displayed with the name, selected process or model, and selected logical and physical references.
   You can edit the name of an object only for the first version and if it is in draft state.

   The **Audit Logs** section displays the user who created the metrics and the user who modified the metrics at the latest.

   To edit any comments associated to the metric, click the **Comments** tab.

   To edit any tags associated to the metric, click the **Tags** tab.

5. To save the changes, click **Update**.
6. To submit the metric for review and approval process, click **Submit for Review**.

   For more information, see the Workflow for STSA Objects.

9.2.3 Deleting Metrics

To delete a metric:

- Ensure that the object is not referenced anywhere.
- Ensure that the object is in draft state since you cannot delete an object if it is in any other state.
  For example, an object version is three and it is in draft state, then you can delete the version three of the object and not the object itself.

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **Metrics**.

   The Metrics Summary page is displayed.

4. Select the metric or multiple metrics you want to delete and click **Delete**.
5. Click **Yes** in the confirmation page.

   A status message is displayed. Click **OK**.

9.3 Managing Variables

This section details the procedures for managing the variable components.

9.3.1 Viewing Variables

To view a variable:

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **View** in the **Variables** section.

   The variables summary page is displayed.

4. To view the details of a particular variable, click the variable or select the check-box against the variable and click more options and then click **View**.

   When there are multiple versions of a variable, the latest version of the variable is listed at the top of the hierarchy and expand the variable to view the previous versions.

5. To search a variable with a keyword, select from the options displayed under the search bar or type the word.

6. To sort the metrics listed on the page as per the available preferences, click the **Sort By** drop-down menu.

   You can sort the list based on the following options:

   - Selected - sorts the list of objects that are selected.
   - Recently Created - sorts the list of objects that are created recently and places them at the beginning.
   - Recently Modified - sorts the list of objects that are modified or updated recently.
   - Reset - sorts the list of objects as per the default view (alphabetically).

7. To view details about a variable, click the variable or click more options and then click **View**.

   All the details of the variables are displayed such as the name, description, variable group, variable type, sub-type, dimensions if they are included and the logical references.

   The **Audit Logs** section displays the user who created the variable definition and the last user who modified the variable definition.

   To view any comments associated to the variable definition, click the **Comments** tab.

   To view any tags associated to the variable definition, click the **Tags** tab.

   The Tags column is now available and displays the tags associated with each model.

   The **Disabled** checkbox column has been removed from the indirect summary screen. Only selected records are displayed in **View** mode.

   The **Name** column is in View mode.

8. To return to the summary page, click **Variable Summary** or click the **Cancel** button.

9.3.2 Editing Variables

> **Note**
>
> After creating a variable, you cannot change the type and subtype of the variable.

You can edit an object based on the following criteria:

- If you edit an approved object, then a new version of the object is created and the changes are reflected on the new version.
- You cannot edit an object if it is in any other state other than draft state.

> **Note**
>
> However, editing an object that is approved creates a new version of the object.

To edit a variable:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **View** in the **Variables** section.

   The variables summary page is displayed.
4. To modify the variable, click more options and then click **Edit** against the variable.

   The variable definition screen is displayed.
5. You can modify or change the description, variable group, logical reference, dimensions and hierarchies if applicable.

   You can edit the name of an object only for the first version and if it is in draft state.
6. To save the modifications, click **Update**.
7. To submit the variable for review and approval process, click **Submit for Review**.

   For more information, see the Workflow for STSA Objects.
8. To return to the summary screen, click the **Variable Summary** or click **Cancel**.

9.3.3 Deleting Variables

To delete a variable:

- Ensure that the object is not referenced anywhere.
- Ensure that the object is in draft state since you cannot delete an object if it is in any other state.
  For example, an object version is three and it is in draft state, then you can delete the version three of the object and not the object itself.

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **View** in the **Variables** section.

   The variables summary page is displayed.
4. Search and select the variable you want to delete.
5. Click **Delete**.
6. Click **Yes** in the confirmation screen.

   A status message is displayed. Click **OK**.

9.4 Managing Portfolios

This section details the procedures for managing the portfolio components.

9.4.1 Viewing Portfolios

To view a portfolio:

1. Login to STSA.

The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and click **View** in the **Portfolio** section.

   The portfolio summary page is displayed.
   All the details of the portfolio are displayed such as portfolio name, version, and dimensions.

   If there are multiple versions of a portfolio, the latest version of the portfolio is listed at the top of the hierarchy.
4. To view the details of a particular portfolio, click the portfolio or select the check-box against the portfolio and click more options and then click **View**.

   All the details of the portfolio are displayed such as portfolio name, description, dimensions and selected hierarchical members.

   The **Audit Logs** section displays the user who created the portfolio definition and the last user who modified the portfolio definition.

   To view any comments associated to the portfolio definition, click the **Comments** tab.

   To view any tags associated to the portfolio definition, click the **Tags** tab.

   The Tags column is now available and displays the tags associated with each portfolio.

   When a bank-wide portfolio is selected in View mode, the following message is displayed: **“Bank-wide portfolio is enabled. Individual portfolios are not shown."** This replaces the earlier message **“No Data Available.”**
5. To search a portfolio with a keyword, select from the options displayed under the search bar or type the word.
6. To sort the portfolio listed on the page as per the available preferences, click the **Sort By** drop-down menu.

   You can sort the list based on the following options:

   - Selected - sorts the list of objects that are selected.
   - Recently Created - sorts the list of objects that are created recently and places them at the beginning.
   - Recently Modified - sorts the list of objects that are modified or updated recently.
   - Reset - sorts the list of objects as per the default view (alphabetically).
7. To return to the summary page, click **Portfolio Summary** or the **Cancel** button.

9.4.2 Editing Portfolios

You can edit an object based on the following criteria:

- If you edit an approved object, then a new version of the object is created and the changes are reflected on the new version.
- You cannot edit an object if it is in any other state other than draft state.

> **Note**
>
> However, editing an object that is approved creates a new version of the object.

> **Note**
>
> You cannot change the name of a portfolio after it is created.

To edit a portfolio:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and click **View** in the **Portfolio** section.

   The Portfolio summary page is displayed.
4. To modify a portfolio, click Actions and then click **Edit** against the portfolio.

   The portfolio definition screen is displayed.
5. You can update the description, add or remove dimensions and the hierarchies.

   You can edit the name of an object only for the first version and if it is in **Draft** state.

   To add any comments associated to the portfolio, click the **Comments** tab.

   To add any tags associated to the portfolio, click the **Tags** tab.

   Review the changes and click **Save**.

   This action automatically creates an incremental version of the portfolio and the changes made to the existing portfolio is saved in the incremented version.
6. To return to the summary page, click **Portfolio Summary** or the **Cancel** button.

9.4.3 Deleting Portfolios

> **Note**
>
> Since portfolio is auto-approved, you cannot delete a portfolio.

9.5 Managing Models

This section details the procedures for managing the model components.

9.5.1 Viewing Models

To view a model:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **Models**.

   The models summary page is displayed with details about the model such as model name, version, scope, purpose, champion status, and the status of the model.

When there are multiple versions of a model, the latest version of the model is listed at the top of the hierarchy and expand the model to view the previous versions.

4. To search a model with a keyword, select from the options displayed under the search bar or type the word.
5. To sort the model listed on the page as per the available preferences, click the **Sort By** drop-down menu.

   You can sort the list based on the following options:

   - Selected - sorts the list of objects that are selected.
   - Recently Created - sorts the list of objects that are created recently and places them at the beginning.
   - Recently Modified - sorts the list of objects that are modified or updated recently.
   - Reset - sorts the list of objects as per the default view (alphabetically).
6. To view details about a single model, click the model or click Actions and then click **View**.

   To view details about the previous version of a model, expand the model, select the required version, click Actions and then click **View**.

   The model pipeline is displayed. Click other tabs to view more details about the model. For more information, see the Oracle Financial Services Model Management and Governance User Guide.

   The **Audit Logs** section displays the user who created the model and the user who modified the definition at the latest.

   To view any comments associated to the model, click the **Comments** tab.

   To view any tags associated to the model, click the **Tags** tab.

   The **Tags** column is now available and displays the tags associated with each model.

   The **Disabled** checkbox column has been removed from the indirect summary screen. Only selected records are displayed in **View** mode.

   The **Name** column is in View mode.
7. To return to the summary screen, click the **Model Summary** or click **Cancel**.

9.5.2 Editing Models

> **Note**
>
> You cannot edit a approved or published model.

To edit a model:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **Models**.

   The **Models Summary** page is displayed.
4. Select the model you want to edit and click Actions and then **Edit**.

   The models summary page is displayed.

5. To modify a model, click Actions and then click **Edit** against the model.

   The model definition screen is displayed.

6. You can edit the model name, description or tags, and add or delete the components in the model from the model design pipeline screen and save the changes. For more information about modification on the model design pipeline screen, see the Oracle Financial Services Model Management and Governance User Guide.

   You can edit the name of an object only for the first version and if it is in draft state.

   To modify the model name, click the edit icon against the name and save the changes.

   To add any comments associated to the model, click the **Comments** tab.

   To add any tags associated to the model, click the **Tags** tab.

   Review the changes and click **Save**.

7. To return to the summary page, click **Model Summary** or the **Cancel** button.

9.5.3 Viewing Model Metrics

To view a model metrics

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.

3. Click **Building Blocks** and then click **Models**.

   The models summary page is displayed with details about the model such as model name, version, scope, purpose, champion status, and the status of the model.
   When there are multiple versions of a model, the latest version of the model is listed at the top of the hierarchy and expand the model to view the previous versions.

4. To search a model with a keyword, select from the options displayed under the search bar or type the word.

5. To sort the model listed on the page as per the available preferences, click the **Sort By** drop-down menu.

   You can sort the list based on the following options:

   - Selected - sorts the list of objects that are selected.
   - Recently Created - sorts the list of objects that are created recently and places them at the beginning.
   - Recently Modified - sorts the list of objects that are modified or updated recently.
   - Reset - sorts the list of objects as per the default view (alphabetically).

6. To view details about a single model, click the model or click **Actions** and then click **View Metrics**.

7. In the **Selected Metrics** page that opens, review the output metric mappings.

> **Note**
>
> This page displays the logical references and corresponding physical table and column mappings configured in the Output Metric Mapping stage during onboarding.

8. To return to the summary screen, click the **Model Summary** or click **OK**.

9.5.4 Viewing Model Variables

To view model variables:

(Optional) <Describe the context.>

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.

3. Click **Building Blocks** and then click **Models**.

   The models summary page is displayed with details about the model such as model name, version, scope, purpose, champion status, and the status of the model.
   When there are multiple versions of a model, the latest version of the model is listed at the top of the hierarchy and expand the model to view the previous versions.

4. To search a model with a keyword, select from the options displayed under the search bar or type the word.

5. To sort the model listed on the page as per the available preferences, click the **Sort By** drop-down menu.

   You can sort the list based on the following options:

   - Selected - sorts the list of objects that are selected.
   - Recently Created - sorts the list of objects that are created recently and places them at the beginning.
   - Recently Modified - sorts the list of objects that are modified or updated recently.
   - Reset - sorts the list of objects as per the default view (alphabetically).

6. To view details about a single model, click the model or click **Actions** and then click **View Variables**.

7. In the **Selected Variables** page that opens, review the input logical references and asset mappings configured in the Input Variable Mapping stage.

   > **Note**
   >
   > This is a read-only view of the input configurations defined during onboarding.

8. To return to the summary screen, click the **Model Summary** or click **OK**.

9.6 Managing Process

This section details the procedures for managing the process components.

9.6.1 Viewing Processes

A composite pipeline consists of many processes. All the composite pipelines created in STSA are displayed here.
To view the processes in the new composite pipeline:

1. Login to STSA.

The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and click **View** in the **Process** section.

   The process summary page is displayed with details about the process such as name, package, category, last used by, and status information.
4. To search a process with a keyword, select from the options displayed under the search bar or type the word.
5. To sort the process listed on the page as per the available preferences, click the **Sort By** drop-down menu.

   You can sort the list based on the following options:

   - Selected - sorts the list of objects that are selected.
   - Recently Created - sorts the list of objects that are created recently and places them at the beginning.
   - Recently Modified - sorts the list of objects that are modified or updated recently.
   - Reset - sorts the list of objects as per the default view (alphabetically).
6. To view details about a process, click the process or click Actions and then click **View**.

   The process pipeline or the canvas is displayed.
7. To return to the summary screen, click **Cancel**.

9.6.2 Viewing Process Metrics

To view a process metrics

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **Models**.

   The models summary page is displayed with details about the model such as model name, version, scope, purpose, champion status, and the status of the model.
   When there are multiple versions of a model, the latest version of the model is listed at the top of the hierarchy and expand the model to view the previous versions.
4. To search a model with a keyword, select from the options displayed under the search bar or type the word.
5. To sort the model listed on the page as per the available preferences, click the **Sort By** drop-down menu.

   You can sort the list based on the following options:

   - Selected - sorts the list of objects that are selected.
   - Recently Created - sorts the list of objects that are created recently and places them at the beginning.
   - Recently Modified - sorts the list of objects that are modified or updated recently.
   - Reset - sorts the list of objects as per the default view (alphabetically).
6. To view details about a single process, click **Actions** and then click **View Metrics**.
7. In the **Selected Metrics** page that opens, review the output metric mappings.

> **Note**
>
> The system displays the output metric mappings configured in the Output Metric Mapping stage during onboarding.
> This is a read-only view of the configured output logical references and their corresponding physical table and column mappings.

8. To return to the summary screen, click the **Process Summary** or click **OK**.

9.6.3 Viewing Process Variables

To view process variables:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and then click **Process**.
4. To view details about a single process, click **Actions** and then click **View Variables**.
5. In the **Selected Variables** page that opens, review the input logical references and asset mappings configured in the Input Variable Mapping stage.

> **Note**
>
> This is a read-only view of the input configurations defined during onboarding.

6. To return to the summary screen, click the **Process Summary** or click **OK**.

9.6.4 Editing Additionally Added Processes and Models in Composite Pipeline

You can edit (add or remove) only the newly added processes and models from the composite pipeline. You cannot edit the process or models that are added automatically through the selected variables and models in the previous steps of analysis configuration creation wizard. Also, you cannot modify anything in the runs, subruns, and scenarios that are part of the composite pipeline.

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Analysis Configuration**.

   The **Analysis Configuration summary** page is displayed.
4. To open the specific analysis configuration, click the analysis configuration or click **More Actions** on the required configuration and click **View**.

   The **Review & Validate** screen is displayed.
5. Click **Process** on the right-hand side.

   The **Process** page and the selected composite pipeline is displayed.

6. Click actions against the pipeline and click **Edit**.

   The **Process Pipeline** page is displayed.

7. To add new processes, click the **Add New Processes** tab.

   Based on your previous selection, all the applicable processes are listed.

8. Select the required processes and click **Add**.

   A pop-up message is displayed for auto-sequencing option.

   - If you want to continue with auto-sequencing, click **Yes**.
     If you select the auto-sequencing option, a confirmation message is displayed. Click **OK** and proceed to the **Process Pipeline** page.
   - If you want to continue with manual sequence, click **No**.
     For more information on sequencing the runs, see the Sequencing Runs.

9. To save the changes, click **OK** and then click **Save and Close**.

9.6.5 Deleting Additionally Added Processes and Models in Composite Pipeline

You cannot delete a composite pipeline or the runs, subruns, and scenarios that are part of the composite pipeline. However, you can delete only the newly added processes or models in process section of analysis configuration:

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.

3. Click **Analysis Configuration**.

   The **Analysis Configuration summary** page is displayed.

4. To open the specific analysis configuration, click the analysis configuration or click **More Actions** on the required configuration and click **View**.

   The **Review & Validate** screen is displayed.

5. Click **Process** on the right-hand side.

   The **Process** page and the selected composite pipeline is displayed.

6. Click actions against the pipeline and click **Edit**.

   The **Process Pipeline** page is displayed.

7. To delete the additionally added process or models, click the delete button against the process or model.

8. To save the changes, click **Save and Close**.

9. To save the configuration and work on it later, click **Save** or **Save and Close**.

10. Review the selections made and click **Submit for Review**.

    For more information, see the Workflow for STSA Objects.

9.7 Managing Pipeline Mapping

This section details the procedures for managing the process to map pipelines to metrics and portfolio.

9.7.1 Mapping Metrics

To map pipelines to metrics:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and click **View** in the **Pipeline Mapping** section.

   The Pipeline summary page will display the pipelines, metrics, variables, and portfolio.
4. Select the pipeline, click **Actions** and then select **Map Metrics**.

   The **Select Metrics** page is displayed with the name, version, metric source, logical reference, physical reference, and status information.
5. Select the metrics you want to map.
6. Click **Save** to save your changes.
7. Click **Cancel** to return to the summary screen.

9.7.2 Unmapping a Metric from a Pipeline

To unmap a metric from a pipeline:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and click **View** in the **Pipeline Mapping** section.

   The Pipeline summary page will display the pipelines, metrics, variables, and portfolio.
4. Select the pipeline, click **Actions** and then select **Map Metrics**.

   The **Select Metrics** page is displayed with the name, version, metric source, logical reference, physical reference, and status information.
5. Uncheck the metric(s) you want to unmap.
6. If the pipeline is no longer associated with any metrics, a confirmation message is displayed and do either of the following:

   “Metric will no longer have any pipeline associated to it. Do you want to proceed?

   - Click **Yes** to confirm and unmap the metric.
   - Click **No** to cancel the action and retain the mapping.
7. Click **Save** to save your changes.
8. Click **Cancel** to return to the summary screen.

9.7.3 Mapping Portfolio

To map pipelines to portfolio:

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and click **View** in the **Pipeline Mapping** section.

   The Pipeline summary page will display the pipelines, metrics, variables and portfolio.
4. Select the pipeline, click **Actions** and then select **Map Portfolio**.

   The **Select Portfolio** page is displayed with the name, version, and dimension information.
5. Select the porfolio you want to map.
6. Click **Save** to save your changes.
7. Click **Cancel** to return to the summary screen.

9.7.4 Auto-Mapping Variables

Auto-mapping of variables to a pipeline is triggered when the Pipeline Mapping UI loads.To access it:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Building Blocks** and click **View** in the **Pipeline Mapping** section.

   The Pipeline summary page will display the pipelines, metrics, variables, and portfolio.

   The mapping is derived from the glossary term mappings of variables and pipelines defined in OpenMetadata. For more information, see the Uploading Glossary Term/Tag to Pipeline Mapping and Creating Variables sections.

9.8 Managing Scenarios

This section details the procedures for managing the scenario components.

9.8.1 Viewing Scenario

To view a scenario:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Scenario**.

   The **Scenario summary** page is displayed with details about the scenario such as scenario name, version, source, time frame, frequency, theme, status, start date, and first forecast date. If there are multiple versions of an object, the latest version of the object is listed at the top of the hierarchy.

   If there are multiple versions of an object, the latest version of the object is listed at the top of the hierarchy.
4. To search a scenario with a keyword, select from the options displayed under the search bar or type the word.
5. To sort the scenario listed on the page as per the available preferences, click the **Sort By** drop-down menu.

You can sort the list based on the following options:

- Selected - sorts the list of objects that are selected.
- Recently Created - sorts the list of objects that are created recently and places them at the beginning.
- Recently Modified - sorts the list of objects that are modified or updated recently.
- Reset - sorts the list of objects as per the default view (alphabetically).

6. To view details about a scenario, click the scenario or click actions against the scenario and then click **View**.

   To view an older version of the object, expand the object and select the required version.

   The scenario's details is displayed with details such as name, description, frequency details, dimensions, variables, and shock values.
   The **Audit Logs** section displays the user who created the scenario and the last user who modified the scenario.

   To view any comments associated to the scenario, click the **Comments** tab.

   To view any tags associated to the scenario, click the **Tags** tab.

   The **Tags** column is now available and displays the tags associated with the analysis configuration.

7. To save the wizard, click **Save**.
8. To save and close the wizard, click **Save and Close**.
9. To return to the summary screen, click the **Scenario Summary** or click **Cancel**.

9.8.2 Editing a Scenario

You can edit an object only in the draft state. Editing an approved object creates a new version with the changes.

When you open an existing scenario in edit mode, STSA checks whether any associated objects—such as variables, metrics, or portfolios—have newer versions.

If updates are available, the system displays a notification with the latest version and a summary of changes.

This helps ensure the scenario remains aligned with the most recent object definitions.

To edit a scenario, perform the following steps:

1. Login to STSA.

   The **Workspace Summary** page is displayed.

2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Scenario**.

   The **Scenario summary** page is displayed with details about the scenario such as scenario name, version, source, time frame, frequency, theme, status, start date, and first forecast date. If there are multiple versions of an object, the latest version of the object is listed at the top of the hierarchy.

4. To edit a scenario, click actions against the scenario and then click **Edit**.

   The scenario definition page is displayed.

5. Modify the details and click **Save** and then click **Submit for Review**.

You can edit the name of an object only for the first version and if it is in draft state.

For more information, see the Sending Objects for Worlflow Process section.

6. To save and close the wizard, click **Save and Close**.

> **Note**
>
> - If a scenario uses the **Variable Frequency** field to define multiple frequency–timeframe combinations, you can update the values directly in the scenario definition. Any changes to the **Variable Frequency** array will automatically recalculate the corresponding scenario dates in the variable grid.
> - Editing the time horizon parameters in a draft scenario will no longer reset all variable pathways. Refer to Updating Time Horizon Details While Preserving Variable Pathways section for information about how grids are preserved and updated.

9.8.3 Deleting Scenario

To delete a scenario:

- Ensure that the object is not referenced anywhere.
- Ensure that the object is in draft state since you cannot delete an object if it is in any other state.
  For example, an object version is three and it is in draft state, then you can delete the version three of the object and not the object itself.

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Scenario**.

   The **Scenario Summary** page is displayed with details about the scenario.
   If there are multiple versions of an object, the latest version of the object is listed at the top of the hierarchy.
4. Select the scenario or scenarios and click **Delete**.
5. Click **Yes** in the confirmation screen.

   Status of the delete action is displayed in the delete summary pop-up window.
6. Click **OK**.

9.9 Managing Analysis Configuration

9.9.1 Viewing Analysis Configuration

To view the analysis configuration:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.

3. Click **Analysis Configuration**.

   The analysis configuration summary page is displayed with details about the configuration such as the configuration name, version, analysis purpose, jurisdiction, regulation, regulator, run type and status.

   When there are multiple versions of an analysis configuration, the latest version of the configuration is listed at the top of the hierarchy and expand the configuration to view the previous versions.

4. To search a configuration with a keyword, select from the options displayed under the search bar or type the word.

5. To sort the configuration listed on the page as per the available preferences, click the **Sort By** drop-down menu.

   You can sort the list based on the following options:

   - Selected - sorts the list of objects that are selected.
   - Recently Created - sorts the list of objects that are created recently and places them at the beginning.
   - Recently Modified - sorts the list of objects that are modified or updated recently.
   - Reset - sorts the list of objects as per the default view (alphabetically).

6. To view details about a configuration, click the configuration or click Actions and then click **View**.

   To view details about the previous version of a configuration, expand the configuration, select the required version, click Actions and then click **View**.

   The configuration's **Review & Validate** section of the analysis configuration wizard is displayed. The **Audit Logs** section displays the user who created the configuration and the user who modified the definition at the latest.
   To view any comments associated to the configuration, click the **Comments** tab.

   To view any tags associated to the configuration, click the **Tags** tab.

   The **Tags** column is now available and displays the tags associated with the analysis configuration.

7. To return to the summary screen, click **Close**.

9.9.2 Editing Analysis Configuration

You can edit an object based on the following criteria:

- If you edit an approved object, then a new version of the object is created and the changes are reflected on the new version.
- You cannot edit an object if it is in any other state other than draft state.

> **Note**
>
> However, editing an object that is approved creates a new version of the object.

> **Note**
>
> STSA displays a notification alert when you open an existing analysis configuration in edit mode, if any associated objects—such as portfolios, metrics, or variables—have newer versions available.
>
> The alert includes a summary of changes in the updated version, helping ensure that the configuration stays aligned with the latest definitions.

To edit an analysis configuration:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Analysis Configuration**.

   The analysis configuration summary page is displayed.
4. To modify a configuration, click Actions and then click **Edit** against the configuration.

   The **Basic Details** section of the analysis configuration wizard is displayed.
   You can edit the name of an object only for the first version and if it is in draft state.
5. Update the required components and click **Continue** and then click **Submit for Review**.

   For more information, see the Workflow for STSA Objects.

   To save the configuration and work on it later, click **Save** or **Save and Close**.
6.

9.9.3 Deleting Analysis Configuration

To delete an analysis configuration:

- Ensure that the object is not referenced anywhere.
- Ensure that the object is in draft state since you cannot delete an object if it is in any other state.
  For example, an object version is three and it is in draft state, then you can delete the version three of the object and not the object itself.

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Analysis Configuration**.

   The analysis configuration summary page is displayed.
4. Search and select the analysis configuration you want to delete.
5. Click **Delete**.
6. Click **Yes** in the confirmation screen.

   A status message is displayed. Click **OK**.

9.10 Managing Project

This section details the procedures for managing the project components.

9.10.1 Viewing Project

To view a project:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Project**.

   The project summary page is displayed.
4. To view details about a project, click **Actions** and then click **View**.

   The project summary page is displayed with details like completion percentage, version of the project, status of the project, components of the selected analysis configuration and scenario, run parameters and execution status of the project.
   For a quick view of the status of the project at each stage is displayed in the right side of the **Status** tab.

> **Note**
>
> - The execution id mentioned in the **Execution and Results** tab is required to filter reports in the analytics section.
> - The Tags column is now available and displays the tags associated with the project.

9.10.2 Editing Project

You can edit an object based on the following criteria:
You can edit an object based on the following criteria:

- If you edit an approved object, then a new version of the object is created and the changes are reflected on the new version.
- You cannot edit an object if it is in any other state other than draft state.

> **Note**
>
> However, editing an object that is approved creates a new version of the object.

To edit a project:

Ensure that the project is not approved.

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Project**.

The project summary page is displayed.

4. To edit details about a project, click Actions and then click **Edit**.

   The project summary page is displayed with details like completion percentage, version of the project, status of the project, components of the selected analysis configuration and scenario, run parameters and execution status of the project.

5. Click **Actions** and then click **Edit Project Details**.

   The project details page is displayed.

6. Update the values and click **Save**.

   You can edit the name of an object only for the first version and if it is in draft state.

7. To change the selected analysis configuration and then click **Scenario** tab.

   a. Click the **Analysis Configuration** tab and click **Remove Configuration**.

   b. Add another new or existing configuration by clicking the **Select** option.

8. To change or add scenarios select the **Scenario** tab.

   a. To remove the selected scenario, click the **Scenario** tab and click **Remove Configuration**.

   b. To add another new or existing scenario, click the **Select** option from **Create New Scenario** or **Add Existing Scenario**.

      Repeat this step to add more scenarios.

   c. To remove an existing scenario, click the **Delete** icon and confirm your choice in the pop-up window.

9. Create the pipeline, add run parameters and then run the project.

9.10.3 Deleting Project

To delete a project, perform the following:

1. Login to STSA.
2. In the **Workspace Summary**, **Sandbox** tab, select the required workspace.
3. Click **Project**.

   The project summary page is displayed.

4. To delete one or more projects, select the check box against the projects and then click **Delete**.
5. Click **Yes** in the pop-up window.

   The project is deleted successfully.

9.11 Managing Result Dimensions

9.11.1 Editing Result Dimensions

To edit result dimensions:

1. Open the project in **View** mode.
2. In **Project Activity** under **Result Setup** click **Edit Result Dimension**.

3. In the **Choose the dimensions** screen, select the dimension names to update from the drop-down list.
4. Click **Next**.
5. In the **Map dimensions to results** table for the selected metrics screen, select the updated value from the drop-down list in the **Foreignkey Reference** field.
6. Click **Save** to update the Result Dimensions.

   In the **Result Setup** tab, all the added result dimensions are listed.

9.11.2 Viewing Result Dimensions

To view the result dimensions:

1. Open the project in **View** mode.
2. In **Project Activity** under **Result Setup** click **View Result Dimension**.
3. In the **Choose the dimensions** screen, you can view the dimension names that are seelcted.
4. Click **Map dimensions to results table for the selected metrics screen** to view the table name and **Foreignkey Reference** details
5. In the **Map dimensions to results** table for the selected metrics screen, select the updated value from the drop-down list in the **Foreignkey Reference** field.
6. Click **Cancel** to go back to the **Result Setup** screen

9.12 Managing Sandbox

This section details the procedures for managing the sandbox.

9.12.1 Viewing Sandbox

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. Click more options in the workspace you want to view and select **View**. The view workspace page is displayed.

   The creation date and data store type is listed along with basic, schema, execution, data and metadata sourcing details are displayed in different tabs. Click each tab for more information.

9.12.2 Editing Sandbox

N

> **Note**
>
> While updating a workspace, if any of the DMM operations such as Procedures, Functions, Packages, and so on fails, DMM operations alone will be rolled back and workspace will not be rolled back. You can verify the details in MMG_SANDBOX_DETAILS, MMG_SANDBOX_MASTER, MMG_SANDBOX_SCHEMA tables.

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. Click more options in the workspace you want to edit and select **Edit**.

   The workspace wizard is displayed.
3. Update the selections and click **Next**.
4. To save the changes made, click **Update**.

   The sandbox is updated successfully.

9.12.3 Deleting Sandbox

> **Note**
>
> When you delete a Workspace, all the underlying objects such as Dataset, Scheduler service metadata and so on from the associated tables are deleted.

Ensure that you de-link the Sandbox workspaces from Production Workspace before deleting the Production Workspace.

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. Select the workspace you want to delete and click **Delete**.
3. Click **Yes** in the confirmation screen.

   The workspace is deleted successfully.

10

Managing OpenMetadata

This chapter details some of the consolidated views in OpenMetadata.

10.1 Viewing Databases added in OpenMetadata

To view all the databases added in OpenMetadata, perform the following:

1. Login to OpenMetadata.
2. Click **Settings** and in the **Services** section, click **Databases**.

   The Databases page is displayed.

10.2 Viewing Pipelines

To view all the pipelines added in OpenMetadata, perform the following:

1. Login to OpenMetadata.
2. Click **Settings** and in the **Services** section, click **Pipelines**.
   The Pipelines page is displayed.

10.3 Viewing ML Models

To view all the MMG models used in OpenMetadata, perform the following:

1. Login to OpenMetadata.
2. Click **Settings** and in the **Services** section, click **ML Models**.

   The ML Models page is displayed.

11 Reports and Analysis

Reports are a structured presentation that summarizes the findings from the stress runs. It provides a clear and comprehensive view of the system's performance under stress and presents this data in a visual format. Using this data you can identify potential risks, their impact on the organization and take informed decisions.

11.1 Viewing Reports

To view the stress reports:

1. Login to STSA.

   The **Workspace Summary** page is displayed.
2. In the **Workspace Summary**, **Sandbox** tab, launch the required workspace.
3. Click **Project**.

   The project summary page is displayed.
4. Open the project in view mode, by clicking actions and then click **View**.
5. Click the **Execution And Results** tab, click actions and then click **View Results**.

   The analytics login page is displayed.
6. Provide your credentials and login to the BI application.

   The analytics home page is displayed.
7. Click more options and then click **Catalog**.

   The **Catalog** page is displayed.
8. Click **Shared Folders** tab.

   All the STSA reports are listed.
9. Right-click on the report you want to view and open the report.

   Each report in STSA has the following filters. To view granular reports, select or apply the following filters:

   - Project Name - filters the reports based on projects.
   - Run Date - filters the reports based on date when the project was run if a project has multiple results.
   - Project Execution ID - filters the reports based on a project id since each run of the same project is associated with a unique id.
   - MIS Date - filters the reports based on the Management Information System (MIS) date selected for a single or multiple projects.
   - Scenario Name - filters the reports based on a selected scenario or scenarios when multiple scenarios are selected for running a project.

> **Note**
>
> The dimensions are also listed as filters so that you can view reports at dimension level.

- Measure - filters the reports based on measures you have defined in the result table to view the granular data in a stress run.

> **Note**
>
> By default, the first available measure listed in the filters is applied on all the reports.

10. To apply a filter, click on a filter and select one or more parameters.
11. To remove a filter, click a filter and click on the selected parameter. The filter is removed.

    OR
    Click on filter icon and select **Remove All Filters**.
12. To drill-down on the composition of a value in the trend or variance report, right-click on a report, and select **Composition Report for Dimension Set 1** or **Composition Report for Dimension Set 2**.
13. To view the variance reports for secondary measures, select a secondary measure from the **Secondary Measure** drop-down menu.

11.2 List of Reports

Trend and Composition Reports

Table 11-1 Details about Trend and Composition Reports

Parameters	Description
Analysis Name	Trend and Composition Reports
Report Level Filters	• Project Name • Run Date • Project Execution ID • MIS Date • Scenario Name **Note** The dimensions are also listed as filters so that you can view reports at dimension level. • Measure

Table 11-1 (Cont.) Details about Trend and Composition Reports

Parameters	Description
Analysis Description	These reports analyze the changes and patterns over time, as well as the composition of certain variables or elements within a dataset. They look at long-term changes and structural composition. For example, in business, a trend report might analyze sales growth over several years, while a composition report might break down sales by product categories or regions. It involves longitudinal studies, time-series analysis, and demographic segmentation to highlight how certain trends develop and what elements constitute a larger picture.
Reports Covered	This analysis is presented through a combination of the following reports: • **Trend of Actuals report** - This analysis presents the actual numbers of how a selected measure varies across incremental MIS dates. • **Trend of Variance % report** - This analysis presents the change in percentage of how a selected measure varies across incremental MIS dates.
Composition Reports	• **Composition of Primary Measure** - these reports analyze the changes and patterns over time, as well as the composition of certain variables or elements within a dataset. They look at long-term changes and structural composition. It represents the composition of the trend report at a dimension level. • **Concentration Analysis of Primary Measure/ Secondary Measure**- this analysis represents the composition of the trend report between the primary (option selected in the measure filter) and secondary measures.

Variance Between Scenarios

Table 11-2 Details about Variance Between Scenarios

Parameters	Description
Analysis Name	Variance Between Scenarios
Report Level Filters	• Project Name • Run Date • Project Execution ID • MIS Date • Scenario 1 • Scenario 2 **Note** The dimensions are also listed as filters so that you can view reports at dimension level. • Measure

Table 11-2 (Cont.) Details about Variance Between Scenarios

Parameters	Description
Analysis Description	This type of report is used to compare two different scenarios to understand how varying conditions or decisions affect outcomes. It shows the difference between two scenarios in value and in percentage. Also, you can view the variance reports for the secondary measure using the **Secondary Measure** drop-down menu.
Reports Covered	• Primary Measure Change Analysis - these reports show a graphical representation of the scenarios and the variance between these two scenarios. You can view the reports for each dimension of a scenario. • Scenario 1 - these reports show the granular data of a scenario by each dimension. You can view granular data up to six dimensions. • Concerning Variance - these reports show the data for each dimension against the secondary measure.

Variance Between Two Dates for a Given Scenario

Table 11-3 Details about Variance Between Two Dates for a Given Scenario

Parameters	Description
Analysis Name	Variance Between Two Dates for a Given Scenario
Report Level Filters	• Project Name • Run Date • Project Execution ID • Measure • MIS Date • Comparison MIS Date • Scenario Name **Note:** The dimensions are also listed as filters so that you can view reports at dimension level.
Analysis Description	This type of report is used to analyze the changes that occur within a specific scenario over two distinct points in time. This report shows the actual and percentage difference between two dates in the same scenario across six dimensions. Also, you can view the variance reports for the secondary measure using the **Secondary Measure** drop-down menu.
Reports Covered	• Primary Measure Change Analysis - this report shows a graphical representation of the difference between the dates in the same scenario and the variance between these two dates in the same scenario. • MIS Date 1 EOP Balance - this report shows the values of each dimension against a defined measure. • Variance - this report shows the value of each dimension against a defined measure. • Variance % - this report shows the percentage value of each dimension against a defined measure. • MIS Date 2 EOP Balance - this report shows the values of each dimension against a defined measure. • Concerning Variance - these reports show the data for each dimension against the secondary measure.

Variance from Base Reference Date

Table 11-4 Details about Variance from Base Reference Date

Parameters	Description
Analysis Name	Variance from Base Reference Date
Report Level Filters	• Project Name • Run Date • Project Execution ID • Base Date • MIS Date • Scenario Name • Measure • Comparison MIS Date • Scenario Name **Note:** The dimensions are also listed as filters so that you can view reports at dimension level.
Analysis Description	This type of report is used to measure how much a variable has deviated from a specific starting point or baseline. This report shows the actual and percentage difference between the base date and MIS date. The **Primary Measure Change Analysis** report shows a graphical representation of the difference between the base date and MIS date and the variance between these two dates. Also, you can view the reports for each dimension of a scenario. You can view the variance reports for the secondary measure using the **Secondary Measure** drop-down menu.
Reports Covered	• Primary Measure Change Analysis - this report shows a graphical representation of the difference between the dates in the same scenario and the variance between these two dates in the same scenario. • Base EOP Balance • Variance • Variance - this report shows the value of each dimension against a defined measure. • Variance % - this report shows the percentage value of each dimension against a defined measure. • MIS Date - these reports show the values between MIS date dimension against a measure. • Concerning Variance - these reports show the data for each dimension against the secondary measure.

12

Template Builder Framework

This chapter describes the Template Builder Framework, a configuration-driven UI generation mechanism that enables rapid creation of dynamic, reusable, and dependency-aware input templates through database mappings without requiring manual UI development.

12.1 Introduction

The Template Builder is a dynamic UI generation framework designed to accelerate the deployment of input screens without manual coding. Primarily used for regulatory calculators (such as RWA and other financial metrics), it allows developers and business users to define complex, form-based interfaces through database configurations.

By aligning with the latest RAPID components, the framework ensures that generated UIs are fast, responsive, and compliant. This "config-over-code" approach empowers users to build custom forms that interact directly with financial models, significantly reducing development cycles and enabling rapid responses to evolving regulatory requirements.

The following table summarizes the core capabilities of the Template Builder Framework and the benefits it provides in enabling configuration-driven UI generation and model integration.

Table 12-1 Core Capabilities of the Template Builder Framework

Capability	Description
Config-over-Code	UI generated through DB configuration
Rapid Deployment	No manual UI coding required
Reusable Architecture	Combinations and groups are reusable
Regulatory Agility	Quick adaptation to evolving regulatory rules
Model Integration	Direct interaction with financial models

12.1.1 Framework Architecture Overview

The Template Builder framework is composed of the following logical entities:

Table 12-2 Template Builder framework

Entity	Description	Reusability
Component	UI control (Input, Dropdown, Table, and so on.)	Reusable
Combination	One component mapped with its properties	Reusable across groups
Group	Logical section containing combinations	Reusable across templates
Template	Collection of groups rendered as UI	Contains multiple groups
Dependency Mapping	Controls execution/visibility logic	Template-level

12.1.2 Supported UI Components in the Template Builder Framework

The following table lists the UI components supported by the Template Builder Framework and describes their functional purpose within dynamically generated templates.

Table 12-3 Supported UI Components in the Template Builder Framework

Component Name	Description
Gbu Input Text	Captures the text input
Gbu Input Number	Captures numeric input
Gbu Radio Button	Displays two selectable options
Gbu Input Date	Captures date input
Gbu Single Select	Select one option
Gbu Multi Select	Select multiple options
Gbu Table	Displays predefined tabular data
Cartesian Table	Dynamic table supporting SQL/API/hierarchy-driven columns

12.1.3 Component Properties

The following table describes the configurable properties available in the Template Builder Framework, the components to which they apply, and their functional behavior within dynamically generated templates.

> **Note**
>
> The following component and properties are available in the `AF_TB_COMPONENT_CATALOG` and `AF_TB_PROPERTY_CATALOG` table.

Table 12-4 Component Properties

Property	Applicable Components	Description
SQL Query	Radio Button, Single Select, Multi Select	SQL must return JSON objects with label and value.
SQL Query with Placeholder	Radio Button, Single Select, Multi Select, Cartesian Table	SQL contains a placeholder referencing another component's JSON key. Executes after parent value is available.
API Data with Placeholder	Radio Button, Single Select, Multi Select, Cartesian Table	API returns JSON with label and value. Placeholder is replaced with parent component value before execution.
Min Number	Input Number	Defines minimum allowed numeric value.
Max Number	Input Number	Defines maximum allowed numeric value.

Table 12-4 (Cont.) Component Properties

Property	Applicable Components	Description
JSON Key	All Components	Unique identifier used for data storage, placeholder substitution, and dependency mapping. Final output is stored as JSON using these keys.
Styling CSS	All Components	Supports external or custom CSS styling.
Table Column Headers	Gbu Table	Defines column headers.
Required Flag	All Components	When set to **Y**, the field becomes mandatory. Template cannot be saved unless populated.
Options for Selection	Radio Button, Single Select, Multi Select	Static JSON list of label and value. Used when options are not fetched dynamically.
Cartesian Custom Column Name	Cartesian Table	Display name for dynamically created column.
Cartesian Custom Column Type	Cartesian Table	Defines data type such as string or number.

12.1.4 Combinations

12.1.4.1 Overview

A Combination represents a single component mapped with its associated properties. It defines how the component behaves and how its data is stored in the final JSON output.

Each combination:

- Contains one component.
- Can have multiple mapped properties
- Is unique.

The following are the governing rules for defining combinations within the Template Builder Framework to ensure consistency, reusability, and proper configuration.

- Each combination represents a single component along with its associated mapped properties.
- Combinations are reusable.
- The same combination can be mapped to multiple groups.

12.1.5 Groups

12.1.5.1 Purpose

Groups logically organize related combinations under a common section heading in the UI. When multiple combinations represent related inputs, they can be grouped together for better usability and readability.

12.1.5.2 Structure

The following describes the structural characteristics and reusability principles of groups within the Template Builder Framework.

- A group contains multiple combinations.
- Groups define logical sections in the UI.
- Groups are reusable
- The same group can be mapped to multiple templates.

The following table illustrates the reusability relationships between core entities in the Template Builder Framework.

Table 12-5 Entity Reusability Matrix

Entity	Reusability Rule
Combination	Can be mapped to multiple groups
Group	Can be mapped to multiple templates
Template	Can contain multiple groups

12.1.6 Dependent Components

12.1.6.1 Overview

Templates can contain dependent combinations where one combination's visibility or availability depends on another combination's value.

Dependencies are defined at the combination level and are fully data-driven.

12.1.6.2 Dependency Configuration

Dependencies are configured using the AF_TB_COMBINATION_DEP_MAPPING table.

Each dependency includes:

- Template Name
- Parent Combination
- Child Combination
- Condition

The following table outlines the supported dependency conditions in the Template Builder Framework and describes how each condition controls the activation behavior of child combinations.

Table 12-6 Supported Dependency Conditions

Condition Type	Behavior
Not Null or Has Value	The child combination becomes active when the parent combination contains any value.

Table 12-6 (Cont.) Supported Dependency Conditions

Condition Type	Behavior
Specific Value Match	The child combination becomes active only when the parent combination equals a specified value.

The following rules define how dependency relationships are structured and enforced within a template in the Template Builder Framework.

- Dependencies apply within the same template.
- One parent can control multiple children.
- A child can depend on multiple parents, if supported.
- All dependency logic is configured through database mapping.

12.2 Creating a Template

The following section outlines the high-level process for creating and registering a template within the Template Builder Framework, from defining combinations to completing system-level registration.

12.2.1 Template Creation Process

This section provides a high-level overview of the template creation process:

To create a template:

1. Create combinations by mapping a component with required properties in AF_TB_COMBINATION_MAPPING_DETAIL.
2. 2. Map combinations to groups using AF_TB_COMBINATION_GROUP_MAPPING.
3. Create the template entry in AF_TB_TEMPLATE_MASTER.
4. Register the template in the COM tables (AAICL_OBJ_TYPE_B and AAICL_OBJ_TYPE_TL).

   The Object Type value must correspond to the template code defined during template creation. Specify a high sequence number to avoid potential clashes with existing object type entries in the system.
5. Map groups to the template using AF_TB_TEMPLATE_GROUP_MAPPING.
6. Configure combination dependencies in AF_TB_COMBINATION_DEP_MAPPING, if required.

> **Note**
>
> This configuration-driven process ensures that once database entries are completed, the UI is automatically rendered.

12.2.2 Creating a Template – Scenario Weightage Template

This section provides a conceptual overview of configuring the Scenario Weightage template using the Template Builder framework.

The configuration includes:

- One Cartesian Table
- Two Single-Select Dropdowns
- Dependency sequencing between components

For information about DML scripts for this example, see Appendix A – Scenario Weightage Template: Complete DML Configuration Example.

1. Create the required combinations. To do so, map each component with its corresponding properties in the `AF_TB_COMBINATION_MAPPING_DETAIL` table.

   In this example, define the following combinations:

   - `CARTESIAN_TABLE`
   - `VERSION_DROPDOWN`
   - `SQL_PROJECT_DROPDOWN`

   > **Note**
   >
   > For each combination, ensure that you specify the following details in the mapping table: Component Type, Combination Code, Property Code, and Property Value.

2. Map the defined combinations to logical groups. To do so, configure the mappings in the `AF_TB_COMBINATION_GROUP_MAPPING` table.

   In this example, create and use the following groups:

   - `GROUP_DROPDOWN`
   - `GROUP_CARTESIAN_TABLE`

   > **Note**
   >
   > Ensure that the relevant combinations are associated with each group and that the display order within the group is defined appropriately.

3. Create the template entry. To do so, insert the template metadata into the `AF_TB_TEMPLATE_MASTER` table.

   For this example, use the following details:

   - Template Name: `Scenario Weightage`
   - Template Code: `TEMP_SCEN`

> **Note**
>
> Ensure that all required metadata fields are populated as per your environment configuration.

4. Register the template in the COM object type tables. To do so, insert the corresponding entries into the `AAICL_OBJ_TYPE_B` and `AAICL_OBJ_TYPE_TL` tables.

> **Note**
>
> Ensure that the `Object Type Code` matches the template code (`TEMP_SCEN`) and that a sufficiently high sequence number (if applicable in your environment) is assigned to avoid conflicts with existing object type entries.

5. Map the group templates to the template. To do so, configure the mappings in the `AF_TB_TEMPLATE_GROUP_MAPPING` table.

> **Note**
>
> This defines the layout and rendering order.

6. Configure the combination dependencies. To do so, define the dependency mappings in the `AF_TB_COMBINATION_DEP_MAPPING` table.

> **Note**
>
> Dependencies define the execution sequence within the template in the following order:
>
> - Project Dropdown
> - Version Dropdown
> - Cartesian Table

12.3 Template Usage in STSA

Templates in STSA support two primary usage models, enabling both dynamic model execution and sandbox-based scenario processing.

12.3.1 Templates as Lookup Data for Model Execution

Templates serve as dynamic reference data sources that models use during execution. Instead of embedding static or hardcoded values, models retrieve required inputs directly from configured templates.

During execution, models:

- Read sandbox data
- Perform calculations
- Store results in sandbox tables

By externalizing reference values into templates, model logic remains flexible, reusable, and configuration-driven.

Example:

- Rating is sourced from a maintained hierarchy
- Risk Weight is defined as a custom Cartesian column within the template

Rather than hardcoding these values, the model dynamically queries the template at runtime. Templates can also store scalar parameters, execution flags, and other configurable inputs required for processing.

The template name acts as a logical placeholder within the model. Multiple templates may share the same structural design but contain different data values. At runtime, users select the appropriate template, allowing the same model to execute with different configurations without any code changes.

12.3.2 Templates as a Base for Sandbox Table Creation

Templates can be physicalized into sandbox tables to enable scenario-based and time-based execution.

When a template is saved, users are prompted to confirm whether the template should be physicalized. If confirmed, the system performs the following actions:

- Creates the required sandbox tables
- Registers the tables in the Data Catalog with a Template tag
- Applies glossary mappings

> **Note**
>
> - The Micro or Macro variables must be created on the physicalized table and associated with the scenario.
> - You can physicalize the tables with custom column.

Each Cartesian table defined in the template generates a corresponding sandbox table.

An additional `fic_mis_date` column is automatically added to support time-based execution.

> **Note**
>
> Base reference data is stored using `fic_mis_date = 01/01/1990`.

During execution, scenario-specific data is written to the sandbox table for each applicable fic_mis_date, enabling structured scenario and temporal analysis.

12.3.3 Sandbox Table Naming Convention

Sandbox tables generated from templates follow a standardized naming convention to ensure consistency and traceability.

The naming format is:

```
STSA_<TemplateCode>_<TemplateTableKey>
```

Example:

```
STSA_TEMP_LOAN_1767957194770_RWDATA
```

This structured naming approach ensures clear identification of the template source and associated table key, enabling flexible, configuration-driven execution while maintaining alignment with stress testing and scenario analysis requirements.

A

Appendix A – Scenario Weightage Template: Complete DML Configuration Example

A.1 Overview

This appendix provides the complete Data Manipulation Language (DML) scripts required to configure the Scenario Weightage template end-to-end using the Template Builder framework.

The configuration includes:

- Creation of combinations
- Mapping combinations to groups
- Template creation
- COM table registration
- Group-to-template mapping
- Dependency configuration

> **Note**
>
> Template Code used in this example: `TEMP_SCEN`.

A.2 Create Combinations

Combinations are defined by mapping component types and their associated properties in the `AF_TB_COMBINATION_MAPPING_DETAIL` table.

For this template, three combinations are created:

- `CARTESIAN_TABLE VERSION`
- `VERSION_DROPDOWN`
- `SQL_PROJECT_DROPDOWN`

The following properties are configured in `AF_TB_COMBINATION_MAPPING_DETAIL`:

A.2.1 Cartesian Table Combination

The following CARTESIAN_TABLE combination defines the configuration for the Cartesian table component used in the template.

- **Combination Code:** `CARTESIAN_TABLE`
- **Component Type:** `COMP_CARTESIAN_TABLE`

> **Note**
>
> This combination maps the required component properties in AF_TB_COMBINATION_MAPPING_DETAIL to control column structure, JSON key mapping, and dependent API behavior.

The following properties are configured in AF_TB_COMBINATION_MAPPING_DETAIL:

```
INSERT INTO AF_TB_COMBINATION_MAPPING_DETAIL
(V_COMPONENT_TYPE_CODE, V_COMBINATION_CODE, V_PROPERTY_CODE, V_VALUE)
VALUES
('COMP_CARTESIAN_TABLE','CARTESIAN_TABLE','PROP_CART_COLUMN_NAME','Scenario
List');

INSERT INTO AF_TB_COMBINATION_MAPPING_DETAIL
(V_COMPONENT_TYPE_CODE, V_COMBINATION_CODE, V_PROPERTY_CODE, V_VALUE)
VALUES
('COMP_CARTESIAN_TABLE','CARTESIAN_TABLE','PROP_CART_COLUMN_TYPE','scenario');

INSERT INTO AF_TB_COMBINATION_MAPPING_DETAIL
(V_COMPONENT_TYPE_CODE, V_COMBINATION_CODE, V_PROPERTY_CODE, V_VALUE)
VALUES
('COMP_CARTESIAN_TABLE','CARTESIAN_TABLE','PROP_FINAL_JSON_KEY','subclass');

INSERT INTO AF_TB_COMBINATION_MAPPING_DETAIL
(V_COMPONENT_TYPE_CODE, V_COMBINATION_CODE, V_PROPERTY_CODE, V_VALUE)
VALUES (
  'COMP_CARTESIAN_TABLE',
  'CARTESIAN_TABLE',
  'PROP_DEPENDENT_API',
  'template-config/project/dependency-list?
projectCode={{queryProject}}&version={{version}}&objTypeCode=EST_SCENARIO'
);
```

A.2.2 Version Dropdown Combination

The VERSION_DROPDOWN combination defines the configuration for the version selection drop down within the template.

- **Combination Code:** VERSION_DROPDOWN
- **Component Type:** COMP_SINGLE_SELECT_DROPDOWN

The following properties are configured:

```
INSERT INTO AF_TB_COMBINATION_MAPPING_DETAIL
VALUES ('COMP_SINGLE_SELECT_DROPDOWN','VERSION_DROPDOWN','PROP_REQUIRED','N');

INSERT INTO AF_TB_COMBINATION_MAPPING_DETAIL
VALUES (
  'COMP_SINGLE_SELECT_DROPDOWN',
  'VERSION_DROPDOWN',
  'PROP_DEPENDENT_SQL',
  '"SELECT AAICL_OBJECT_B.N_VERSION AS ""label"",
```

```
          AAICL_OBJECT_B.N_VERSION AS ""value""
     FROM AAICL_OBJECT_B
    WHERE AAICL_OBJECT_B.V_OBJ_CODE = {{queryProject}}"'
);

INSERT INTO AF_TB_COMBINATION_MAPPING_DETAIL
VALUES
('COMP_SINGLE_SELECT_DROPDOWN','VERSION_DROPDOWN','PROP_FINAL_JSON_KEY','versi
on');
```

A.2.3 Project Dropdown Combination

The `SQL_PROJECT_DROPDOWN` combination defines the configuration for the project selection drop down within the template.

- **Combination Code:** `SQL_PROJECT_DROPDOWN`
- **Component Type:** `COMP_SINGLE_SELECT_DROPDOWN`

The following properties are configured:

```
INSERT INTO AF_TB_COMBINATION_MAPPING_DETAIL
VALUES (
  'COMP_SINGLE_SELECT_DROPDOWN',
  'SQL_PROJECT_DROPDOWN',
  'PROP_FINAL_JSON_KEY',
  '"SELECT DISTINCT
        s.V_OBJ_NAME AS ""label"",
        v.V_OBJ_CODE AS ""value""
     FROM AAICL_OBJECT_B v
     LEFT JOIN AAICL_OBJECT_TL s
       ON v.V_OBJ_ID = s.V_OBJ_ID
    WHERE v.V_OBJ_TYPE_CODE = ''EST_PROJECT''"'
);

INSERT INTO AF_TB_COMBINATION_MAPPING_DETAIL
VALUES
('COMP_SINGLE_SELECT_DROPDOWN','SQL_PROJECT_DROPDOWN','PROP_SQL','queryProject
');
```

A.3 Map Combinations to Groups

After defining the combinations, they must be organized into logical groups to control layout structure and component ordering within the template. This grouping is configured in the `AF_TB_COMBINATION_GROUP_MAPPING` table.

Two groups are created:

- `GROUP_CARTESIAN_TABLE`
- `GROUP_DROPDOWN`

The mappings are defined as follows:

```
INSERT INTO AF_TB_COMBINATION_GROUP_MAPPING
(V_GROUP_CODE, V_COMBINATION_CODE, N_COMPONENT_ORDER, F_SUMMARY_CHECK)
```

```
VALUES ('GROUP_CARTESIAN_TABLE','CARTESIAN_TABLE',1,'N');

INSERT INTO AF_TB_COMBINATION_GROUP_MAPPING
VALUES ('GROUP_DROPDOWN','SQL_PROJECT_DROPDOWN',1,'Y');

INSERT INTO AF_TB_COMBINATION_GROUP_MAPPING
VALUES ('GROUP_DROPDOWN','VERSION_DROPDOWN',2,'N');
```

These mappings determine:

- Which combinations belong to each group
- The display order of components within the group
- Whether summary behavior is enabled for specific components

A.4 Create the Template

Once combinations and groups are configured, the template must be created by inserting its metadata into the `AF_TB_TEMPLATE_MASTER` table.

The template details are as follows:

- **Template Name:** Scenario Weightage
- **Template Code:** TEMP_SCEN

The template is created as follows:

```
INSERT INTO AF_TB_TEMPLATE_MASTER
(F_WORKFLOW, V_TEMPLATE_CODE, V_TEMPLATE_NAME, V_TEMPLATE_DESCRIPTION,
 D_CREATED_DATE, D_MODIFIED_DATE,
 V_WORKSPACE_ID, V_TENANT_ID, V_SERVICE_ID, V_CUSTOM_OBJ_CODE)
VALUES (
  'N',
  'TEMP_SCEN',
  'Scenario Weightage',
  'Scenario Weightage',
  NULL, NULL,
  '##workspaceId','##tenantId','##serviceId',NULL
);
```

> **Note**
>
> - This step establishes the template definition and associates it with the required workspace, tenant, and service context.
> - If an **ID** column is present in the scripts and requires manual numeric input, provide a sufficiently large and unique value to avoid conflicts with existing records.

A.5 Register Template in COM Tables

After creating the template, it must be registered in the COM object type tables to enable system-level recognition and execution.

> **Note**
>
> - The **Object Type Code** must match the template code **(TEMP_SCEN)**.
> - Use a sufficiently high sequence number (if applicable in your environment) to avoid conflicts with existing object types.

A.5.1 Register in AAICL_OBJ_TYPE_B

This step registers the template as a technical object type in the base COM object table.

Insert the following record into AAICL_OBJ_TYPE_B.

```
INSERT INTO AAICL_OBJ_TYPE_B
(V_OBJ_TYPE_CODE, V_CLASSNAME, F_VERSIONING, V_WORKFLOW_MODE)
VALUES (
  'TEMP_SCEN',
  'com.ofs.aai.service.common.CommonObjectService',
  'Y',
  'COM'
);
```

A.5.2 Register in AAICL_OBJ_TYPE_TL

This step registers the localized name and description of the template in the COM translation table.

Insert the following record into `AAICL_OBJ_TYPE_TL`

```
INSERT INTO AAICL_OBJ_TYPE_TL
(V_OBJ_TYPE_CODE, V_LOCALE_CODE, V_OBJ_TYPE_NAME, V_OBJ_TYPE_DESC)
VALUES ('TEMP_SCEN','en-US','Scenario Weightage','Scenario Weightage');
```

A.6 Map Groups to Template

Map the defined groups to the template using the `AF_TB_TEMPLATE_GROUP_MAPPING` table.

Insert the following records:

```
INSERT INTO AF_TB_TEMPLATE_GROUP_MAPPING
(V_TEMPLATE_CODE, N_GROUP_ORDER, V_GROUP_CODE, V_GROUP_TITLE_CODE,
 V_WORKSPACE_ID, V_TENANT_ID, V_SERVICE_ID)
VALUES (
  'TEMP_SCEN',
  1,
  'GROUP_DROPDOWN',
  'GROUP_PROJECT_DROPDOWN',
  '##workspaceId','##tenantId','##serviceId'
);

INSERT INTO AF_TB_TEMPLATE_GROUP_MAPPING
VALUES (
```

```
  'TEMP_SCEN',
  2,
  'GROUP_CARTESIAN_TABLE',
  'GROUP_CARTESIAN_TABLE',
  '##workspaceId','##tenantId','##serviceId'
);
```

A.7 Configure Combination Dependencies

Configure the combination dependencies for the template using the AF_TB_COMBINATION_DEP_MAPPING table.

Insert the following records:

```
INSERT INTO AF_TB_COMBINATION_DEP_MAPPING
(V_TEMPLATE_CODE, V_PARENT_COMBINATION_CODE, V_CHILD_COMBINATION_CODE,
F_ACTIVE)
VALUES ('TEMP_SCEN','SQL_PROJECT_DROPDOWN','VERSION_DROPDOWN','Y');

INSERT INTO AF_TB_COMBINATION_DEP_MAPPING
VALUES ('TEMP_SCEN','VERSION_DROPDOWN','CARTESIAN_TABLE','Y');
```

A.8 Final Dependency Flow

The execution sequence of components within the template is as follows:

- Project Dropdown
- Version Dropdown
- Cartesian Table

This completes the end-to-end configuration of the Scenario Weightage template.

B

Frequently Asked Questions (FAQs)

B.1 General Overview

1. **What is the purpose of STSA?**
   STSA is a financial analytics tool to conduct enterprise-wide stress testing and scenario analysis for regulatory compliance, risk management, and decision-making.
2. **How does STSA help with financial risk assessment?**
   STSA allows users to define scenarios, create stress testing models, and analyze credit, market, liquidity, and operational risks to simulate downturns and take preventive actions.
3. **Is STSA only for regulatory stress testing?**
   No. It also supports internal planning, capital allocation, and broader risk assessment beyond regulatory exercises.

B.2 Getting Started

1. **How do I access STSA for the first time?**
   You need a valid user account provided by your system administrator. Log in using your credentials through the STSA application interface.
2. **What are the system requirements for using STSA?**
   STSA requires a compatible web browser and access to an authorized database. Ensure that you have proper network permissions to connect to the system.
3. **How do I reset my password if I forget it?**
   You can reset your password either by using the **Forgot Password** option on the login page or by contacting your system administrator.
4. **What are the different types of users in STSA?**
   STSA supports various user roles such as Business Analyst, Data Analyst, Administrator, and Technical Analyst, each with specific privileges.
5. **How do I request access to a specific role in STSA?**
   Contact your system administrator to request a role change. The administrator can assign new roles based on your responsibilities.

B.3 Workspaces and Data Management

1. **What does it mean to create a new workspace?**
   Creating a new workspace in STSA means setting up an isolated environment where you can perform stress testing and scenario analysis without affecting the production data. This workspace includes a sandbox, metadata, and configurations that allow users to experiment with different financial risk models safely.
2. **What does it mean to create a new workspace?**
   Creating a new workspace in STSA means setting up an isolated environment where you can perform stress testing and scenario analysis without affecting the production data. This workspace includes a sandbox, metadata, and configurations that allow users to experiment with different financial risk models safely.

3. **Does it mean I have to create another equivalent to production?**
   Not necessarily. While a workspace is based on production data, it is not a full replica of the production environment. You can migrate selected data and metadata to the workspace, ensuring it contains only the necessary components for testing. This process helps maintain efficiency while avoiding the complexities of duplicating everything from production.
4. **I have taken a lot of time to set this up and perfect this over the year, so how simple is the new creation going to be?**
   Because you have already perfected your setup, creating a new workspace should be relatively simple. You can:
   - **Use templates** from previous setups to quickly configure a new workspace.
   - **Migrate metadata** and configurations instead of manually recreating them.
   - **Leverage automation** features within STSA to speed up the setup process.
5. **What is the time taken for me to create a workspace?**
   The time required depends on the complexity of your environment, but typically:
   - **Basic workspace setup –** A few minutes if using templates or cloning from an existing workspace.
   - **Data migration and sandbox population –** Can take a few hours if large datasets are involved.
   - **Custom configurations and validation –** Depends on specific requirements but can take additional time.
6. **Why can't we handle stress testing and scenario analytics in the production environment itself?**
   Running stress tests in production is not recommended because:
   - **Performance Impact –** Stress testing can consume high computational resources, slowing down production systems.
   - **Data Integrity Risks –** Scenario shocks and stress tests modify data, which could lead to unintended changes in live production data.
   - **Regulatory Compliance –** Most financial institutions require a controlled environment for risk simulations separate from live operations.
   - **Flexibility for Testing –** A sandbox allows multiple iterations of stress tests without impacting real transactions.
7. **How do I know if the sandbox is ready for me to perform stress testing?**
   You can check the Execution History and Workspace Status in STSA:
   - If the data population status is complete, your sandbox is ready.
   - Ensure that all required models, variables, and portfolios are available in the sandbox.
   - Run a small test scenario to verify that everything is functioning correctly.
8. **How easy and how often do I have to sync it up?**
   - **Ease of Syncing –** Syncing is relatively straightforward using automated object migration and sandbox updates in STSA.
   - **Frequency of Syncing** – The best practice is to sync:
     - Whenever new models or changes are introduced in production
     - Before major stress testing cycles (quarterly or annually)
     - Before regulatory reporting deadlines

9. **How do I create a new workspace?**
   Navigate to the **Workspace Summary** page, click **Add Workspace**, and follow the setup wizard to configure a new workspace.
10. **What is a sandbox, and why is it needed?**
    A sandbox is a testing environment where users can work with cloned data from production without affecting live operations.
11. **How do I migrate production data to a sandbox?**
    Use the **Object Migration** feature to copy production metadata into a sandbox for stress testing.
12. **What is the difference between a sandbox and production data?**
    The sandbox contains test data and configurations, while the production environment holds live, operational data.
13. **Can I create multiple sandboxes for different tests?**
    Yes, STSA allows multiple sandboxes to be created for separate testing scenarios.
14. **How do I add and manage data in a sandbox?**
    Use the **Populate Workspace** feature to add data from production to your sandbox.
15. **What happens if I delete a sandbox?**
    All associated data, configurations, and test results will be permanently removed.
16. **How do I check the status of data population in a sandbox?**
    In the **Workspace Summary** section, go to **Execution History** to view the population progress.
17. **What types of data can I add to a sandbox?**
    You can add dimensions, portfolios, risk models, scenario variables, and financial data.
18. **Does the creation of a workspace entail movement of data?**
    Yes, creating a workspace involves migrating metadata and selected datasets from production. However, the movement of data depends on your setup:
    - For historical data, you may choose to move large datasets.
    - If only metadata (models, variables, and configurations) is required, data movement can be minimal.
19. **How much data is required for us to perform stress testing?**
    - **Minimum Data** – Only key financial metrics, risk factors, and necessary variables are required.
    - **Full-Scale Testing** – If you're running detailed portfolio-level stress tests, you may need complete transaction-level data.
    - **Regulatory Compliance** – Depending on compliance requirements, you may need at least several years' worth of data.
20. **How and when is data moved into the workspace for stress testing?**
    - **Data Movement Process**:
      a. During workspace creation, select the production datasets to migrate.
      b. The data is copied into the sandbox through the **Populate Workspace** process.
      c. The system might apply filters and transformations to select relevant data.
    - **When Data Moves**:
      a. Initially when the workspace is created
      b. Whenever the sandbox is refreshed with updated production data

21. **What is the level of user engagement required in this process?**
    - **Initial Setup** – Requires manual selection of data sources and configuration.
    - **Data Syncing** – Can be scheduled or automated, requiring minimal user intervention.
    - **Monitoring** – Users should validate that the correct data has been migrated before running tests.
22. **Because I have already performed executions in the data in production and may have already used this for reporting, I would like to ensure that the same base data is used for stress testing. How do I ensure that the data in the ST workspace is consistent with the data in production?**
    To ensure data consistency:
    - Use the same source tables from production.
    - Enable automated data syncs before each stress test execution.
    - Perform validation checks by comparing sample records from production and ST workspace.
23. **Is there a possibility that the data doesn't match or there will be inconsistencies?**
    Yes, possible inconsistencies can occur due to:
    - **Timing differences** – If production data updates after migration, there may be differences.
    - **Partial data movement** – If not all relevant tables are copied, results may vary.
    - **Incorrect filters applied** – Ensure that the filters used during migration match those used in production reporting.
24. **How can I ensure that all data required for stress testing is available before commencing the stress test?**
    To ensure that all data required for stress testing is available before commencing the stress test:
    - Use the **Data Validation Reports** in STSA to confirm the presence of all necessary data.
    - Run a sample execution before the full stress test to check for missing data.
    - Compare sandbox data with reference production datasets.
25. **How many times does the data move from production to the sandbox?**
    - Data movement depends on your setup:
      - Initial migration during workspace creation
      - Periodic updates when syncing with production
      - Before each major stress test cycle, if required
    - Few institutions refresh their sandbox monthly, quarterly, or yearly, depending on regulatory and internal needs.

B.4 Stress Testing and Scenario Analysis

1. **What is a scenario in STSA?**
   A scenario represents a set of assumptions about financial conditions used for stress testing.
2. **How do I create a new stress test scenario?**

Navigate to **Scenarios**, click **Create Scenario**, and define shock values and other parameters.

3. **Can I clone an existing scenario for modifications?**
   Yes, STSA allows users to duplicate and modify existing scenarios.
4. **What types of variables can be used in scenario analysis?**
   Variables include exchange rates, macroeconomic indicators, credit ratings, interest rates, and liquidity factors.
5. **How do I input shock values into a scenario?**
   Shock values can be added manually through the UI or uploaded through a Microsoft Excel file.
6. **What is the purpose of portfolios in stress testing?**
   Portfolios help group financial assets and assess their exposure to risk.
7. **How do I create a portfolio in STSA?**
   Navigate to **Portfolios**, click **Create Portfolio**, and define relevant parameters.
8. **What are the different ways to define and manage risk metrics?**
   Risk metrics can be created using predefined templates or manually customized.
9. **Can I compare different stress test results in STSA?**
   Yes, STSA allows users to compare multiple scenarios and analyze their impact.
10. **How do I configure analysis settings for a test?**
    Use the **Analysis Configuration** section to define key parameters.
11. **What if there are multiple scenarios?**
    - STSA allows running multiple scenarios within the same workspace.
    - Each scenario can have different shock values, economic assumptions, and variables.
    - You can compare scenario results side-by-side in reports.
12. **What if there are multiple scenarios, and each scenario has multiple executions with different dates in the future?**
    - STSA allows you to define multiple execution runs for each scenario.
    - Each execution can have a specific future date for analysis.
    - You can schedule runs to simulate different economic conditions over time.
13. **How do you manage multiple executions for the same date?**
    - STSA supports versioning of executions, allowing different runs to be saved and compared.
    - You can tag executions with unique identifiers to differentiate them.
    - The Execution History tab allows users to review and analyze multiple runs for the same date.

B.5 Model and Data Governance

1. **What is the role of model management in STSA?**
   It allows users to register, validate, and approve risk models for stress testing.
2. **How do I import external models into STSA?**
   Use the **Model Management** feature to upload third-party models.
3. **How do I manage variables in STSA?**
   Navigate to **Variables**, to create, edit, and delete variables.

4. **How do I approve or reject models in STSA?**
   Models must be reviewed and approved by users with appropriate roles.
5. **What are pre-seeded glossaries, and how are they used?**
   Pre-seeded glossaries contain predefined financial terms used for standardization.
6. **How do I link a glossary term to a data table?**
   Use the **Glossary Mapping** feature in the Data Catalog.
7. **What is the Data Catalog, and why is it important?**
   The Data Catalog organizes and standardizes financial data for easy retrieval.
8. **How do I register a new database service in STSA?**
   Navigate to **Data Catalog** > **Database Services** and click **Add Service**.
9. **How do I ensure my stress testing data is accurate?**
   Use the built-in validation and audit features to check data quality.
10. **How can I ensure that the same models and processes used in production are used in stress testing as well?**
    To ensure that the same models and processes from production are available in stress testing:
    - **Migrate Metadata –** Use the Object Migration feature to move models, rules, and configurations from production to the ST workspace.
    - **Use Version Control –** Maintain a version-controlled repository of models to track updates and apply consistent versions across environments.
    - **Perform Regular Syncing –** Periodically sync models and processes between production and the ST workspace to ensure alignment.

B.6 Analysis, Reporting, and Execution

1. **How do I run a stress test in STSA?**
   To run a stress test:
   a. Create a project by selecting relevant **Analysis Configuration** and **Scenarios**.
   b. Review for any validation alerts present in **Project Canvas**.
   c. Continue with creation of project pipeline if there are no validation alerts.
   d. Review the pipeline and send the project for review and approval.
   e. After the project is approved, open the project in view mode and add relevant run parameters.
   f. Click **Run Project for execution**.
      The **Execution status** is displayed under **Latest Execution** section in the **Execution & Results** tab of project.
   g. From the **Action** menu against project name in **Latest Execution** section of **Execution & Results tab**, click **View Results** to view the reports.
2. **What is a composite pipeline, and how does it work?**
   A composite pipeline is a structured workflow in STSA that sequences multiple processes, runs, and models for a stress test. It ensures that different risk factors, models, and scenarios are executed in a logical order to get a comprehensive stress test result.
3. **How do I sequence runs in an analysis?**
   To sequence runs in an analysis:
   a. Go to the **Analysis Configuration** module and create a new or edit an existing analysis configuration.

b. Select required portfolios and metrics.

> **Note**
>
> Based on selected metrics, corresponding models and process will be auto selected.

c. Add additional models, if required in model step.

d. Navigate to the **Process** screen, where the composite pipeline will be automatically created or modified.

e. To rearrange the sequence, click the **View** option from the **Action Menu** next to the selected Composite Pipeline.

f. Open the drawer, click **Manual Sequence** to adjust the process order manually, and then click **Save**.

g. Alternatively, the user can click the **Edit Canvas** option from the **Action Menu** next to the Composite Pipeline and rearrange the order directly in the canvas.

4. **What types of reports are available in STSA?**
STSA provides various pre-configured reports, including:
   - **Trend & Composition Reports**
   - **Variance from Base Reference Date**
   - **Variance Between Scenarios**
   - **Variance Between Two Dates for a Given Scenario**

5. **How do I view and interpret reports?**
To view and interpret reports:
   a. Open the required project in **View** mode.
   b. Navigate to **Latest Execution** under **Execution & Results** tab.
   c. Click **View Results** from the **Action Menu**.
   You will be redirected to the **Trends & Composition Reports** screen for the selected project execution.
   d. Apply relevant filters for period, portfolios, and scenarios as needed.
   The results will be displayed in a graphical format.
   e. Use the **drill-down** feature to analyze specific metrics and navigate to different reports.

6. **Can I export reports for external review?**
Yes, STSA allows you to export reports in various formats such as **Excel**, **PDF**, and **CSV** for sharing with regulators or internal stakeholders.

7. **How do I configure custom reports?**
To configure custom reports:

> **Note**
>
> The user must have the necessary privileges to create a workbook.

a. On the Home page, click **Create**, then select **Workbook**.

b. In the **Add Data** dialog box that opens, select a dataset and click **Add to Workbook**.

c. In the **Data Panel**, locate the required data columns and drag them onto the Visualize canvas to start building visualizations.

d. Click **Save**.

> **Note**
>
> For more details, refer to the following link:Create a Workbook and Add Visualizations

8. **How do I track the execution history of a test?**

   a. Navigate to the **Execution & Results** tab within the project.

   b. In the **Execution History** section, select the required execution details.

9. **What happens if a test fails to execute?**
   If a test fails:

   - You can view the execution status in the **Execution & Results** tab of the project.
   - Under the **Latest Execution** section, the execution status for each scenario is displayed.
   - Ensure that all the necessary permissions are granted.
   - Click **View Execution** from the **Action** Menu next to the failed task to open the monitor and check where the execution failed.
   - Analyze the failure details, review logs, fix the issue, and Run Project again.

B.7 User Management and Permissions

1. **How do I add a new user to STSA?**
   To add a new user to STSA:

   a. Navigate to **User Management** in the admin panel.

   b. Click **Add User** and enter the required details (username, email, and so on.).

   c. Assign appropriate **roles and user groups**.

   d. Click **Save** to create the user profile.

2. **How do I assign roles and privileges to a user?**
   To assign roles and privileges to a user:

   a. Go to **User Management** > **Roles & Permissions**.

   b. Select the user and choose a predefined role (for example, Analyst, Administrator).

   c. Assign **custom privileges** if needed.

   d. Click **Save** to apply the changes.

3. **What are the predefined user groups in STSA?**
   STSA has several predefined user groups, including:

   - **Modeling User Group (MDLUSR)** – For users working on financial models.
   - **Scenario Admin Group (SCENARIOADMIN)** – Manages stress testing scenarios.
   - **Portfolio Admin Group (PORTFOLIOADMIN)** – Handles portfolio configurations.

- **Metrics Admin Group (METRICSADMIN)** – Manages financial risk metrics.
- **Workspace Admin Group (WKSPADMIN)** – Handles user access and data management.

4. **Can I customize user permissions?**
   Yes, administrators can modify user roles by assigning custom permissions for specific features like **data access**, **report generation**, and **model execution**.
5. **How do I change my user role?**
   Your role is assigned by the administrator. To request a role change:
   a. Contact your STSA administrator and specify the role you need.
   b. The admin will update your access in the **User Management** section.
6. **How do I remove a user from STSA?**
   To remove a user from STSA:
   a. Navigate to **User Management**.
   b. Select the user you want to remove.
   c. Click **Deactivate or Delete User**.
   d. Confirm the action to remove the user permanently.
7. **How do I check my access rights in STSA?**
   To check the access rights in STSA:
   a. Go to **Profile Settings** > **Access Rights**.
   b. Review the list of permissions assigned to your account.
   c. If you need additional access, contact your administrator.

B.8 Troubleshooting and Support

1. **What should I do if I encounter an error message?**
   Check the logs and error messages or contact support.
2. **Where can I check system logs for troubleshooting?**
   Logs can be accessed through the **Execution History** section.
3. **How do I rollback a failed test or scenario?**
   Manually delete the failed scenario and recreate it.
4. **Who do I contact for technical support?**
   Reach out to your system administrator or Oracle Support.
5. **Where can I find additional STSA documentation?**
   Oracle provides detailed user guides and online help resources.

C

OFSAA Support

Raise a Service Request (SR) in My Oracle Support (MOS) for queries related to the OFSAA Applications.

C.1 Send Us Your Comments

Oracle welcomes your comments and suggestions on the quality and usefulness of this publication. Your input is an important part of the information used for revision.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most about this manual?

If you find any errors or have any other suggestions for improvement, indicate the title and part number of the documentation along with the chapter/section/page number (if available) and contact the Oracle Support.

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Glossary

Index