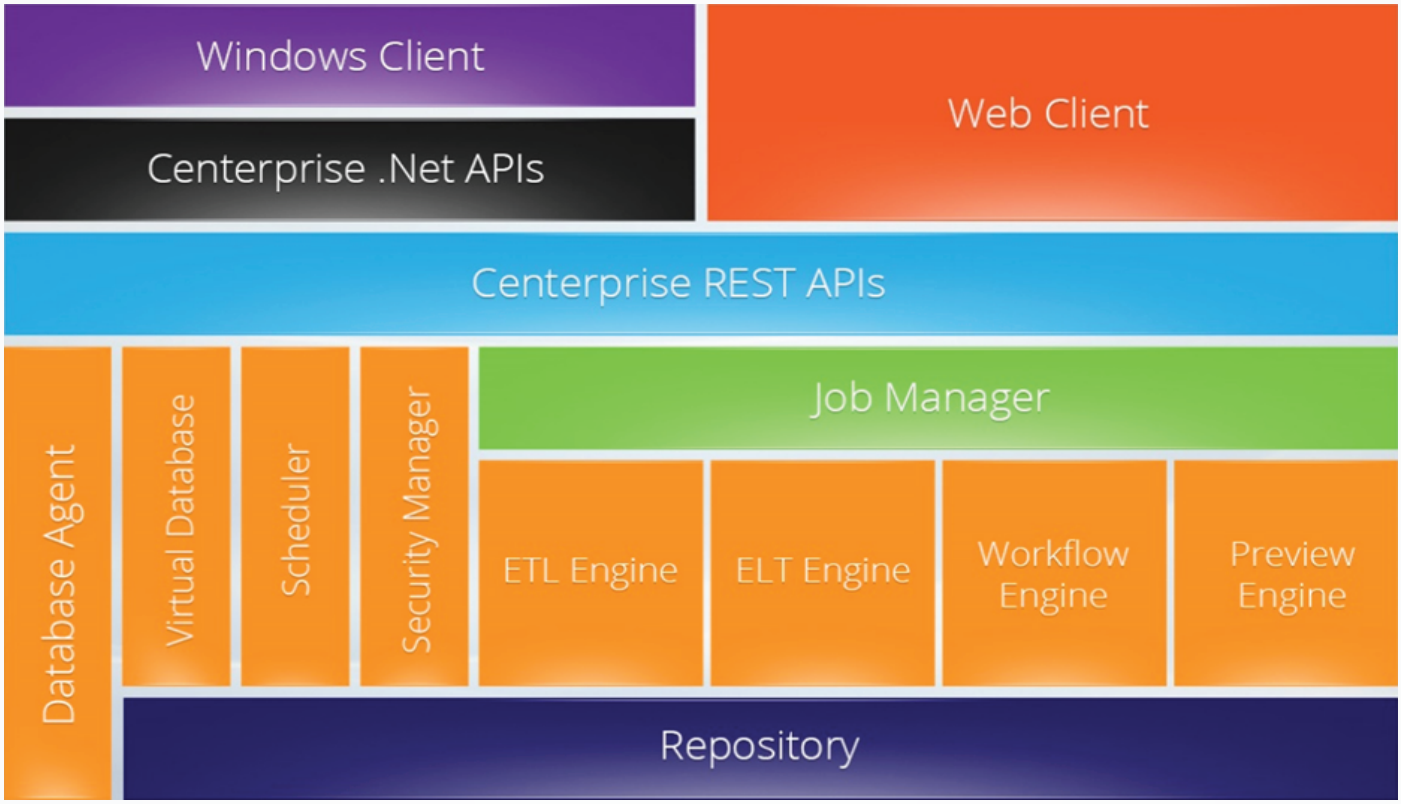
Centerprise Architecture and Deployment Configurations

Centerprise Data Integrator features a robust, well-laid out architecture powered by an intricate framework of advanced technologies, working in unison to deliver unparalleled performance. Each element is designed to facilitate users in building and deploying data management jobs while ensuring flexibility, speed, and ease-of-use. Centerprise supports Windows and Web clients, along with .Net APIs. Businesses have the option to install the server on premise or in the cloud.



Centerprise Client Architecture

Windows Client with On-Premise or Cloud Server

Centerprise offers an intuitive, drag-and-drop environment for Windows-based client installs. The Windows Client relies on REST APIs to interact with various server components, such as the ETL/ELT Engine, Job Manager, and Scheduler. The server components internally connect to the Repository that sits at the bottom of the architecture. The Repository holds current and historical data about the scheduled and completed deployments and server profiles. In this configuration, server could be deployed inside the network or in the cloud.

Whether a user wants to integrate data through a complex ETL flow or a virtualization layer, the Windows Client engages the relevant components, like the ETL/ELT Engine or the Virtual Database, to complete the job. Users can monitor and prioritize jobs through the Job Manager, while execute, stop, recommence, and schedule deployments through the Scheduler.

Web Client with Cloud Server

Astera Cloud is a dedicated Web Client that features a 360-view Admin dashboard to run and view the status of jobs. It is designed to broaden the user access for managing and executing post-configuration deployments. The solution enables users to communicate with the Centerprise server by using the RESTful web services to tap into most of the Windows Client's functionalities.

Users can access Astera Cloud through any web browser to run dataflows and workflows, schedule jobs, and get output directly without installing the Windows Client on their machine. The only prerequisite is that the deployments must be pre-built prior to running on the Web Client.

The Web Client comprises of two components: Customer Portal and Server Monitor.

Customer Portal provides multi-channel file submission and validation features to run jobs based on pre-built workflows and dataflows. The uploaded files are executed on the Centerprise server, which sends the results back to the Web Client using RESTful web services.

Server Monitor allows users to schedule and monitor jobs and view the status of deployments in real-time. It utilizes the Scheduler and Job Manager components that help create new deployments and manipulate queued jobs from the Web Client, like pausing, rescheduling, termination, and recommencing.

For future developments, several new components will be made available on the Astera Web Client, including Job Management, User Management, Security Manager, Virtual Database, and Data Mappings.

Centerprise Architecture Components

Windows Client

Windows Client is the application interface installed on the host machine where users create and monitor jobs based on business logic by utilizing different Centerprise features.

Web and Cloud Client

Astera Web Client provides file submission, tracking, Server Management and many other features, allowing users to process data files on pre-built workflows.

.Net APIs

Centerprise's extensible integration framework offers connectivity to a wide range of .Net APIs, enabling users to manage servers, jobs, schedules and more. APIs are also used to build customized solutions.

Database Agent

Database Agent connects the database server with Centerprise – it executes client-generated SQL query statements at the database server and shows the results on Centerprise.

REST APIs

RESTful APIs enable the Windows and Web Clients to manage connectivity with the underlying server layers, such as ETL/ELT Engines, Workflow and Preview Engines, Job Manager, Scheduler and more.

Job Manager

The Job Manager feature enables users to assign priority to queued jobs based on high, medium, and low levels and takes predefined actions if a job fails or executes partially.

ETL Engine

Enterprise-grade, parallel-processing ETL engine, combined with a cluster-based architecture, enables users to run data transformation jobs concurrently, processing large datasets at an accelerated pace.

Virtual Database

Centerprise optimizes the data integration process by creating a composite view of data from disparate sources through an abstraction layer without moving the data from its original location.

ELT Engine

Centerprise's proprietary ELT engine database pushes down the transformation logic to the database server for execution, speeding up the process significantly.

Security Manager

Security Manager enables assigning user roles and create access levels to manage access to specific resources and operations, like job execution, termination, changes, etc.

Workflow Engine

Centerprise's Workflow Engine orchestrates various tasks including job execution, file management, control flow, and more.

Preview Engine

Preview Engine allows you to get a snapshot of any job's output at any point without executing the entire dataflow.

Scheduler

Scheduler allows users to schedule and manage jobs, specifying frequency, execution time, and triggers for on-premise and cloud deployments.

Repository

The cluster database Repository stores all Centerprise-related data, including job queue, history, scheduled tasks, deployments, server events, server profile, and more.

www.astera.com Contact us for more information or to request a free trial
sales@astera.com 888-77-ASTERA