DEPLOY A COMPLETE, HIGH-PERFORMANCE ALTERNATIVE SAS LANGUAGE ENVIRONMENT

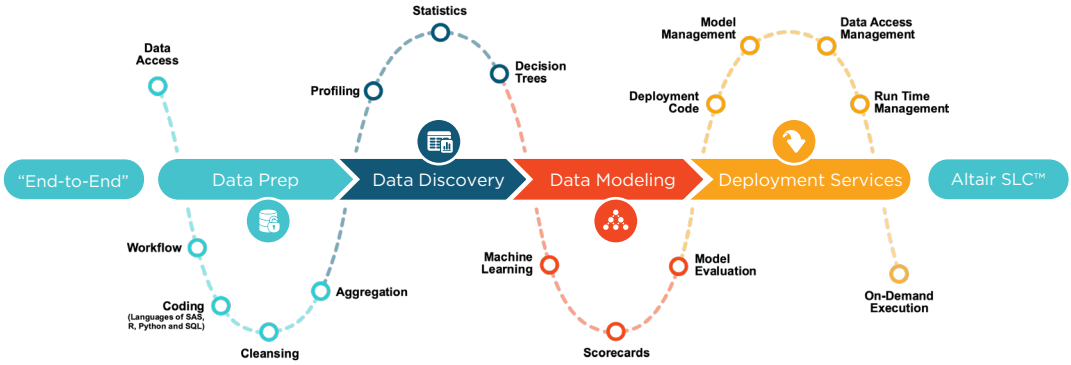
Altair provides the tools you need to bring the SAS language, Python, R, and other modern analytics technologies together into a coherent, future-proof platform.

- Optimize cloud, on-premises, or hybrid infrastructure
- Simplify end-to-end analytics workflows from multiple siloed data processes
- Streamline DevOps bottlenecks with assisted deployment through open web APIs
- Run critical SAS language programs alongside open-source languages within a single framework
- Lock in significant ongoing cost savings by switching to Altair's SAS language compiler
- Benefit from Altair's flexible software licensing model

MOVE TO A FLEXIBLE, MODERN ANALYTICS PLATFORM WITH MINIMAL BUSINESS IMPACT

High-performance data analytics provide robust insights that increase sales, reduce costs, and improve customer experiences. However, unlocking the power of that data often requires developing, maintaining, and licensing multiple platforms, which is costly, complex, and time-consuming.

Use Altair's platform and tools to create, maintain, and operationalize analytics programs written in multiple programming languages, share powerful insights across teams and operations, and drive competitive advantages. Customers can maintain and run analytics programs and models using virtually any data source, with no additional third-party licensing costs.



Altair offers a complete replacement SAS language environment. The platform enables customers to develop and run SAS language programs and models alongside Python, R, and SQL. The low- and no-code tools support advanced analytics features, high productivity, and short development and deployment cycles.

Four Key Challenges

Organizations must address licensing, development, deployment, and governance when operating a SAS language analytics environment.

Licensing - Many organizations have invested years – and often decades – into developing intellectual property using the SAS language. Resulting models and programs remain vital to ongoing operations. Converting or re-writing mission-critical SAS language programs into another language like Python is difficult, time-consuming, and expensive. Testing and risk-control is particularly challenging, especially in a regulated industry.

Altair SLC makes it possible to run existing SAS language programs without modification and without the need to license any third-party products. Customers have reported huge reductions in capital costs and operating expenses combined with modern tooling.

Development - Large organizations need to manage, maintain, develop, and deploy analytics processes involving people with different roles and varying skill levels. Data is stored in a variety of formats and locations in the cloud, and on mainframes, servers, and workstations. Tooling must work for business users looking for point-and-click features, as well as data scientists and engineers with many years of experience writing and debugging code. All these people must be able to collaborate effectively to break down silos, increase productivity, improve outcomes, and drive cost savings.

Altair Analytics Workbench™ is a rich user interface that includes a complete interactive development environment (IDE) for the SAS language, SQL, Python, and R coding as well as visual, drag-and-drop workflow development that lets users build sophisticated analytics programs for large data processes without needing to write any code.

Deployment - The elusive yet significant wall that exists between developers and the DevOps team often requires finished work to be either re-coded or refactored for enterprise deployment, which takes weeks or months. Reducing or removing the need for reworking programs and models reduces time to deployment, risk, and cost.

Use Altair SLC Hub™ to deploy programs developed in R, Python, SQL, the SAS language, or a combination of languages using a simple point-and-click interface. Anyone can then access and use these programs and models through browsers, web APIs, a Microsoft® Excel® plugin, and more.

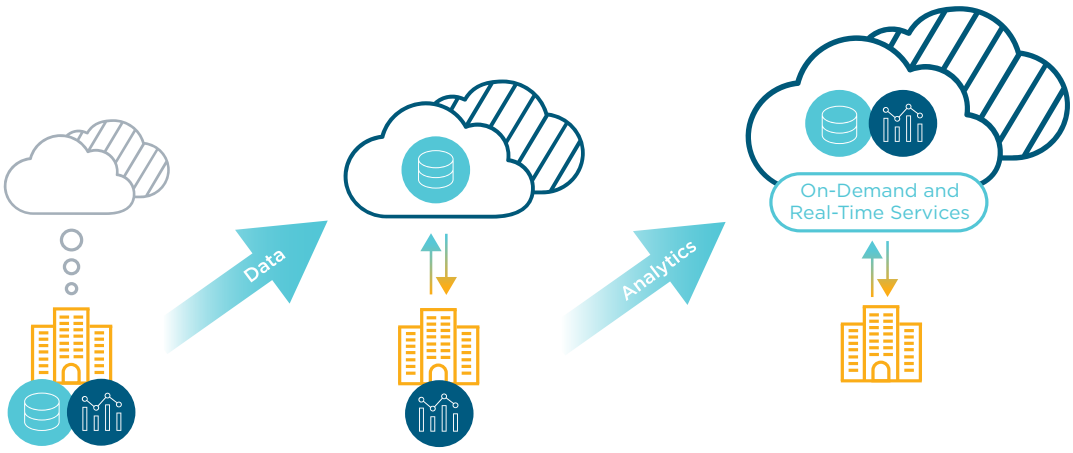
Governance - Controlling access to data and analytics processes is one of the biggest challenges in the analytical landscape. Getting this wrong can be consequential in both business and legal terms. Groups of users have differing roles and needs, and controlling access with version history is key to good governance and security. Altair SLC Hub governs access and controls credentials to define and manage access to data sources and deployed analytics programs and models.

Architecture Options and Requirements

Altair's tools enable you to create, maintain, and run models and programs using the SAS language, SQL, Python, and R on the infrastructure of your choice: cloud, on-premises, and hybrid whether on mainframes, Linux, Windows, and/or AIX servers, or on workstations and laptops. Read this technical document for more details about supported architectures.

Cloud Deployment

Many organizations are looking to deploy at least part of their analytics infrastructure in the cloud. Altair's architecture supports moving complex extract-transform-load (ETL) operations to the cloud, reduces the risk of business-critical applications failing, enhances change management in production environments, and integrates on-premises analytics with cloud analytics.



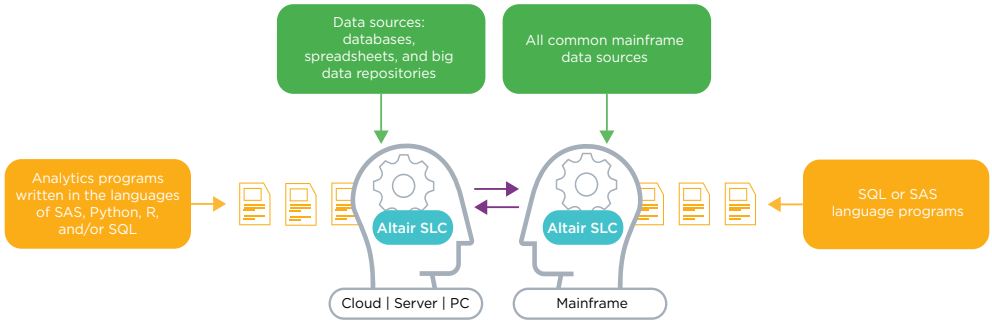
By supporting a hybrid environment, Altair enables organizations to migrate to the cloud in a controlled way, carefully considering data, analytics, and people. It's important to maintain business-critical applications on-premises while testing and moving to cloud platforms, enabling a smooth adoption of cloud infrastructure.

Combine Local and Remote Program Execution

A single host can perform all processing in a simple Altair SLC deployment. The software's Communicate module allows parts of a program to run on different servers synchronously or asynchronously. It can be advantageous to run different parts of a program on different servers. For example, you might have a reporting application that needs to extract and summarize large amounts of data before merging and analyzing the data to generate and distribute reports. Extraction and summarization may run far more efficiently on multiple hosts that store data, and then sent for further processing on another host that combines and further processes data for generation and distribution of results.

This technique is valuable when security, scalability, and manageability are critical requirements. Data remains in the datacenter while analysts utilize the software's advanced programmatic capabilities. Users can upload data and analytics programs to remote servers and then submit those programs for remote execution. Users can then download data and results for further analysis or processing.

Altair SLC operated in this way can be on a different platform. For example, Altair SLC can be installed locally on a Windows workstation operating with remote installations on Linux servers and mainframes. The software can take advantage of Altair SLC instances installed on cloud, server, or mainframe facilities and is perfect for automation, on-demand, and scheduled operations.



Architect systems to run Altair installations and programs centrally and transfer data between environments.

MIGRATION: THREE PHASES

Altair's approach to transforming your SAS language environment protects your investment in your analytics applications while modernizing your analytics infrastructure. Retain existing skillsets while utilizing new talents and, ultimately, reduce the cost of supporting a SAS language environment so you can invest and bring in additional technologies to enhance your analytics facilities.

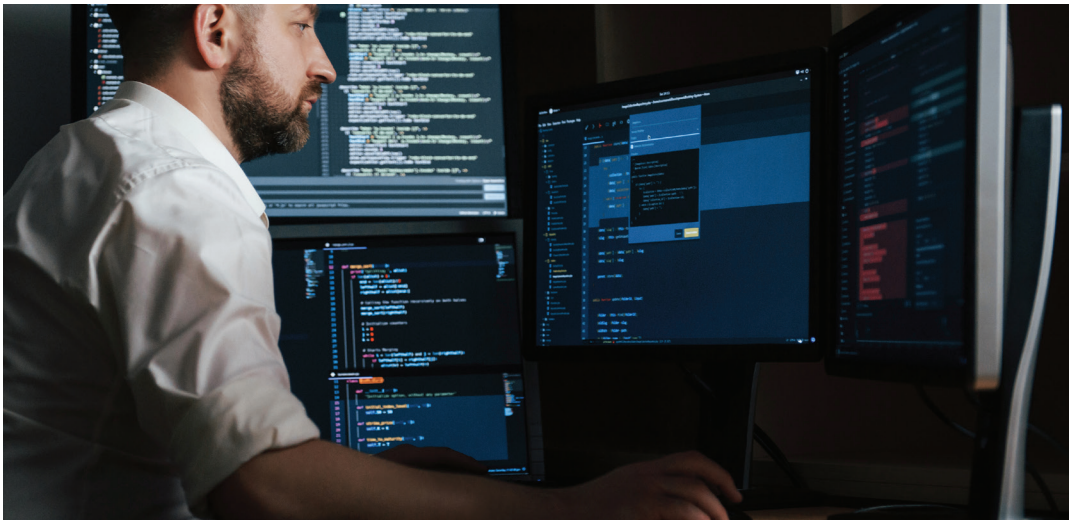
Altair's proven approach to migration enables big organizations to complete migrations in three to six months. Smaller organizations can be quicker still.

Phase One: Code Analysis - Validate the functional fit of Altair SLC deployments for your existing SAS language programs. Altair's code analysis tool will establish the scope of your current use of SAS language. The tool quickly scans through the syntax and language used within each of your existing programs and produces a compatibility report. Watch this video to see how the code analysis process works.

Phase Two: Evaluation - Altair works with you to test and evaluate the function and performance of your library of existing SAS language programs using Altair SLC.

Phase Three: Deployment - Move your programs to run with Altair SLC on your chosen architecture. Altair supports deployment of programs written in languages of SAS, Python, R, and SQL, and as web APIs for scheduled and shared on-demand use.

For most organizations, 95% or more of their SAS language programs will typically require no modifications and they can lift and shift those programs to run in Altair SLC immediately. Using the reports generated by the code analysis, teams can focus on making the small number of changes necessary to complete the migration. Larger organizations may launch an optional pilot phase at this point before final roll out.



ALTAIR'S UNIQUE UNITS LICENSING SYSTEM

Altair Units, Altair's patented units-based licensing system, is scalable and shareable across an organization. It allows customers to maximize their software licenses through the flexibility to run Altair software anywhere, and the freedom to choose from a variety of software tools with unparalleled value.

With Altair Units, customers have full access to Altair software instantly, including more than 150 Altair and partner products, and can run these applications on-demand locally, in the cloud, or in a hybrid setup. Learn more about how Altair units works.

ALTAIR: A COMPREHENSIVE RANGE OF DATA ANALYTICS TOOLS

Altair gives teams the power to use data analytics and AI to gain competitive advantages and drive next-level business results:

Artificial Intelligence and Machine Learning - Altair's industry-leading visual approach to analytics modeling minimizes repetitive tasks, shares knowledge across enterprises, and reuses steps within connected model workflows for faster analysis and shared insight. Altair tools support code written in the SAS language, Python, R, and SQL and offer a unique visual interface for creating machine learning models without requiring any written code

Data Preparation - Access, cleanse, and format data from a wide variety of sources (including Microsoft® Excel®, CSV, PDF, TXT, JSON, XML, HTML, SQL databases, big data sources like Hadoop, and more) without any manual data entry or coding.

Stream Processing and Data Visualization - Connect directly to streamed sensor data from MQTT, Kafka, Solace, and other message queues and build complex stream processing applications with a simple drag-and-drop interface. Build and publish sophisticated real-time dashboards without writing any code.

To learn more, please visit **altair.com/data-analytics**