ALTAIR SLC™ WITH FULLY INTEGRATED SAS LANGUAGE COMPILER

The SAS language compiler built into Altair SLC can run programs written in SAS language syntax without the need to install any third-party products. The software's wide-ranging SAS language support includes core language, macros and output support, graphs and charts, statistical analysis, time series analytics, matrix manipulation, machine learning, communication, and a language software development kit (SDK) for developing custom language terms.

Modernizing Your Analytics

Altair SLC includes SAS language procedures that let users seamlessly utilize Python, R, SQL, and Hadoop code inside a single SAS language program. Users can leverage Altair SLC on laptops, desktops, servers, and mainframes – regardless of operating systems and hardware specifications.

Users can also write data-centric applications that mix syntax from different languages within a single program and build workflows that incorporate code blocks written in different programming languages.

Developing an Analytics Strategy

The development of data and open-source capabilities has placed pressure on organizations to adopt the latest technology to remain competitive. The complexity of identifying a strategy is centered around integration of existing critical processes within a new target architecture. Altair helps organizations address these challenges and enables a full modernization journey by providing answers to these key issues:

- Cloud-readiness
- Legacy program support
- Open-source integration
- Scalable deployment

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SAS language-based tools remain critical for many of our clients, along with the growing use of Python and R, and Altair allows us to integrate all of these technologies on a cost-effective and stable platform.

Paul Matthews, Partner, Vestigo

Moving to the Cloud

Moving to the cloud is one of the major priorities for the C-suite. From an analytics perspective, the cloud must facilitate scalable data access and processing, with more data products serving front office, and access to the latest technologies.

There are a few common obstacles to fully benefiting from a scalable infrastructure including:
- Replicating complex extract-transform-load (ETL) processes in the cloud.
- The risk of business-critical applications failing to run or produce the same outcome
- Changing management for analytics in production environments
- Integrating on-premises analytics with cloud-based analytics

Altair SLC addresses these obstacles by providing a hybrid platform that enables organizations to migrate to the cloud in distinct phases – data, analytics, and people. The ability to maintain business-critical applications on-premises – while testing cloud execution – helps organizations adopt cloud infrastructure faster than ever.

Open-Source Integration

Adopting new data analytics technologies gives organizations an opportunity to maintain competitive advantages. Open-source technologies enable this adoption because it's "free." However, many organizations struggle creating strategies that harness the power of disparate technologies and programming languages so that they can be integrated with existing business critical applications written in the SAS language.

Our Solution

With the ability to combine the SAS language, Python, R, and SQL – and by giving users the latest machine and deep learning capabilities – Altair delivers the most comprehensive analytics solution on the market. The platform offers a comprehensive, integrated development environment (IDE) providing workflow and coding capabilities in our Altair Analytics Workbench™ software. The Altair platform also makes it easy and efficient for data engineers, statisticians, and data scientists to collaborate, and it's all backed up with Git integration to handle code management and version control. Clients can also use Altair SLC to deploy programs as application programming interfaces (APIs) for shared, on-demand use.

An End-to-End Platform

From data engineering to data science, Altair SLC has governance for development and deployment. Pre-canned models, tuned against customer data and predictive analytics, help with all an organization's business needs. With it, teams can handle expanding data volumes with connectivity for big data, cloud, and traditional data sources.

SAS Language Applications

Many organizations have substantial investment in existing business-critical applications written in the SAS language. The cost of running SAS language programs is typically something that organizations are interested in reducing, with the vision of investing in other technologies. Re-coding many years' worth of code libraries into another language is technically difficult, time-consuming, and expensive — and is often impractical.
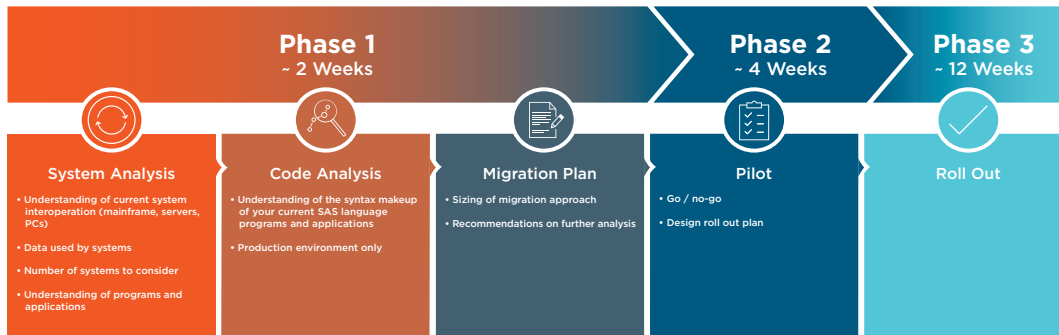
Altair SLC includes a fully integrated SAS language compiler. With it, teams can run existing and new SAS language programs without installing any other third-party SAS language products. "Overall, Altair has provided Vestigo and many of our clients with access to powerful SAS language and other language based capabilities at an annual estimated savings of 75%," said Paul Matthews, Partner, Vestigo.

Deployment Capabilities

Modernization strategies should incorporate plans that accommodate an increasing demand for deployment capabilities. Organizations traditionally push development code to the DevOps team, which often requires hiring new people, or assigned analysts to re-write the code for production use, which is an inefficient use of resources. Altair SLC makes deployment quick and simple, and makes it possible to access deployed analytics through:

- Microsoft® Excel®
- Web browsers
- Custom reporting portals and dashboards
- Programmable calls (C++, C#, Java, JavaScript)

Use Altair SLC's scheduling capabilities to run deployed analytics on specified days and at specified times. Deploy analytics for shared, on-demand use by internal business users or external customers. Deployment services include Git integration, user management, data access governance, and dataset library publishing. Use the software's point-and-click tools to create RESTful APIs that prompt users for inputs like dates, numeric values, and string values to use when executing the deployed analytics.

Phase 1 ~ 2 Weeks			Phase 2 ~ 4 Weeks	Phase 3 ~ 12 Weeks
System Analysis	**Code Analysis**	**Migration Plan**	**Pilot**	**Roll Out**
• Understanding of current system interoperation (mainframe, servers, PCs) • Data used by systems • Number of systems to consider • Understanding of programs and applications	• Understanding of the syntax makeup of your current SAS language programs and applications • Production environment only	• Sizing of migration approach • Recommendations on further analysis	• Go / no-go • Design roll out plan	

Migrate to Altair SLC in Five Simple Steps

Altair also offers services to support migration projects for any customer, whether they're a startup or a global enterprise. Steps one through four typically take around six weeks to complete; the duration of step five depends on the outcome, insights, and sizing of the first four.

Step 1: System Analysis – The team gains an understanding of how all the components in the current system work together, including computing platforms, applications, the number of systems to consider, and the data itself.

Step 2: Code Analysis – We use Altair's code analysis tools to examine the syntax used in existing applications and generate reports without executing your SAS language programs or accessing your data sources. Our tools can analyze thousands of SAS language programs that contain millions of lines of code in just a few minutes.

Step 3: Migration Planning – This includes an inventory of business requirements, known gaps, current documentation, servers, applications, instances, databases, and code. The team may also recommend further analysis at this stage depending on project specifications.

Step 4: Pilot Project – This is a small-scale implementation to prove the migration's viability and develop a rollout timeline.

Step 5: Rollout – The last step puts everything together without interrupting any important processes, including personnel training, the go-live, and retiring assets that are no longer needed.

Summary

Altair SLC is one platform for developers and business users of data analytics, and a collaborative platform that gives users development, deployment, and governance capabilities. Maintain the use of business-critical applications whilst modernizing your infrastructure. Also, protect your investment in existing SAS language programs and reduce the cost. Mix SAS language, Python, R, and SQL in a single program or workflow.

With flexible, tailored solutions, Altair SLC enables analytics on-demand via APIs. Approach impact assessment with code analysis tool, PoC, pilot, and scale. A proven deployment track record with analytics anywhere such as mainframe, in-cloud, on-premises, and even mobile devices/tables (via Altair SLC Hub™).

Altair has a network of programs to help:

Altair Analytics Workbench builds SAS language programs with a versatile development environment. Use integrated development environment (IDE) to create, maintain, and run programs, to explore data, results, and logs. This is ideal for developing models and programs written in SAS language and requires no third-party software or licenses. Additionally, you can embed Python, R, and SQL code blocks in workflows or SAS language programs. Exchange and process data between the Python, R, SQL, and SAS language segments of your program's workflows. With a visual workflow environment, use drag-and-drop development of workflows to retrieve, blend, and prepare data and create predictive models. Enhance workflows with programmable blocks coded in Python, R, SQL, and SAS language.

Altair SLC Hub manages your analytics ecosystem with governance and deployment services for every step in the data analytics lifecycle. The seamless operationalization lets you deploy analytical programs, models, and workflows as scheduled tasks with execution decision rules. Or to internal business users or external customers for shared and on-demand execution. It handles programs and models coded in SAS language, Python, or R. Deploy workflows created with Altair Analytics Workbench. You can expose application as APIs and build APIs with point-and-click wizards. Create input prompts in deployed applications including dates, numeric values, string values, and more. The comprehensive governance allows you to manage all users and control access to data sources and deployed applications. Audit logs for all user actions and synchronize via LDAP with Active Directory Services. Give users single sign-on access.

Altair SLC can run SAS language programs, models, and workflows without any third-party software. Multi-language and multi-platform, it compiles SAS language, SQL, Python, and R code. Working on IBM mainframes, in the cloud, and on servers or workstations while running on a wide range of operating systems. It supports remote job submission and data exchange between mainframe, cloud, and on-premises installations. Altair SLC can access virtually any data source, including cloud services, Hadoop, data warehouses, databases, SAS language, SPSS, Microsoft® Excel®, CSV, and other file-based data formats with no limits on data volumes. Altair's code analysis tools can analyze thousands of programs in minutes. Professional services to support the complete migration process are available, including assessment, proof of concept, and rollout.

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