Schemus CloudBase

Knowledge integration – Controlled sharing of data with Cloud services

In order to be effective, Cloud-based services require access to knowledge that defines the network and user community of each customer. Such knowledge may include information on user identities, their email addresses and the network groups to which they belong. Typically the required information resides in customer directories and is constantly evolving as staff join, leave or change roles. Schemus CloudBase provides an acceptable means by which customers can share this sensitive information with an external service without jeopardising security or requiring changes to systems that are critical to the enterprise.

Key benefits

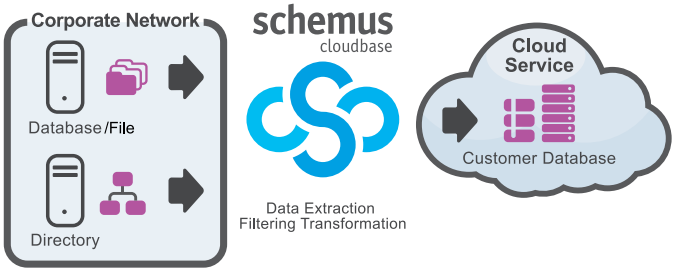
- Unify and enhance data from multiple sources
- Filter and transform poor quality data
- Efficient incremental updates from change calculation
- Simple stepwise wizards and configuration templates
- Safe configuration with verification checking and update simulation mode
- Protection against excessive update steps
- Easy automation and integration into existing processes e.g. staff leaver/joiner processes
- Built-in or external scheduling of synchronization
- Full reporting on synchronization operations
- Multi platform - Windows, Linux, Solaris and Mac OS

Schemus CloudBase allows customers of a Cloud-based service to easily synchronise user identity and account data between their directory systems and the external services to which they subscribe. Customers retain full control of the information sharing and can avoid the complexities and threats that would otherwise arise from opening critical systems to direct interrogation from outside their network boundary.

Schemus CloudBase can be provided as a generic tool for data integration purposes or is more commonly tailored for use with a specific Cloud service and then supplied by that service provider to their customers.

Installed within the customer's network, Schemus CloudBase simplifies the task of accessing local directories and data stores and minimizing security risks by ensuring that no direct access is required to customer directories from outside the firewall.

Features



- **Wizard-based configuration**
  Stepwise wizards guide the user through each configuration step.
- **Configuration testing**
  Each wizard step in the configuration process is checked for validity and each configuration can be fully verified.
- **Multiple data sources**
  If information is not held in a single location then the required data can be combined from multiple sources of different types. Data sources include LDAP directories, CSV and LDIF formatted files.
- **Templates for common directory systems**
  Templates are provided to further simplify setup for the most common directory systems, including MS Active Directory and Lotus Domino
- **Filtering and Transformation**
  Where the source data is not clean or complete, then further filtering and transformation can be performed. Allows specific or "wild-carded" data to be excluded or converted. New data items may be constructed by combining multiple attributes.
- **Incremental updates**
  Optimised to perform incremental updates of the target data in order to minimise the load on participating systems.
- **Safety thresholds**
  Live updates can be policed against threshold limits in order to detect and prevent anomalous synchronisation attempts
- **Reporting**
  Comprehensive logging and optional alerting via email notifications
- **Safe test mode**
  A "safe test" mode allows updates to be simulated without modifying live data
- **Custom configuration**
  Advanced settings allow fine-tuning of the LDAP operations

- **Full control of automation**
  An open approach to automation allows customers to use built-in scheduling of synchronisation tasks or invocation from task schedulers and other applications, for example to invoke Schemus CloudBase as part of existing staff leaver/joiner processes.

- **Network agility**
  Operates across network proxies and capable of using secured, encrypted connections.

- **Multi-platform operation**
  Java application portability offers a wide choice of platforms supported by the Sun Java Runtime Environment (JRE).

For the Cloud service provider

Schemus CloudBase adds value to the Cloud service experience for provider and customer alike.

- **Efficient** - optimised to perform incremental updates of the customer data held in your systems in order to minimise the load on your service

- **Complementary** - can operate alongside other manual methods for upload and manipulation of customer data, such as might already be supported via the customer portal of your service.

- **Controllable** - license keys control functions of Schemus CloudBase so that only relevant features need be exposed to customers. We provide a license key management service that can be fully integrated with your customer provisioning systems

- **Proven** - successfully deployed by some of the largest Cloud providers, with end customers ranging from small businesses to multi-national organisations with over 500,000 employees.

How Schemus CloudBase works

The Schemus CloudBase tool operates either in an interactive mode through a wizard-based user interface or as a command line application suitable for invocation by scheduling services (e.g. Windows Scheduler, Unix cron, etc) or other third-party applications. When run from the command line, the tool will calculate the incremental changes in the source data since the last run and pass only these changes to the Cloud provider

From a network perspective, Schemus CloudBase synchronization exports data to the external Cloud service using a secure synchronisation interface – usually accomplished via HTTPS or other suitable method tailored to the Cloud service

The basic steps in the workflow performed by Schemus CloudBase during a synchronisation task are as follows:

- **Access data sources**
  LDAP compatible directories, or formatted files, are interrogated

- **Select data**
  Relevant data objects are searched. Filters are applied in order to extract only the required attributes

- **Transform data**
  Any new data types required are constructed from extracted attributes

- **Filter data**
  Unwanted data is excluded or replaced

- **Calculate changes**
  Incremental changes are identified. Changes are checked to ensure they are within permitted threshold limits

- **Update external service**
  Data is organised for export. Export of data to external service or to local file. Change tracking is updated

- **Reporting**
  Activity reports are generated. Logging is completed

System Requirements

- Schemus CloudBase is available on Windows, Linux, Solaris and Mac OS X platforms, using Java Runtime Environment (JRE) 6 or higherReporting Comprehensive logging and optional alerting via email notifications

About Us

Schemus CloudBase was developed by the expert software team at Schemus Ltd, drawing upon their extensive experience in producing high-assurance software trusted by governmental and defence clients. Schemus CloudBase has been successfully deployed by some of the largest Cloud security providers, with end customers ranging from small businesses to multi-national organisations handling over 500,000 user identities.

Schemus Limited is the product arm of the UK software consultancy Metanate. Schemus specialises in the development of tools for advanced data management in corporate and cloud environments.