

GREENLIGHT TECHNOLOGIES INC.

Real Time Agent (RTA) Design Studio
For
SAP GRC Access Control

Technical Literature

Version No. 003
October, 2009

Objective

The objective of the document is to explain the concept of Real Time Agent (RTA) in the context of SAP GRC Access & Process Control. The document explains the adapter design and deployment framework, the role of the RTAs and non SAP system rules for extending SAP GRC Access Control to non SAP systems.

Overview

SAP GRC Access Control 5.3 platform has four modules:

- Maintain cross enterprise risks and monitor SODs across the IT systems using RAR
- Compliant user provisioning for preventive compliance using CUP
- Role design using ERM (Non SAP systems are not supported)
- Manage super user privileges using SPM. (Native to ERP systems)

Real Time Agent: The Real Time Agent consists of 2 parts.

- Light weight Web Services API's that resides on a web application server which connects to the target system. The connection could be a JDBC connection for database driven applications or APIs for applications which are database independent.
- Data extractor programs which are written in native language (eg. PL'SQL packages for Oracle Applications, Baan 4GL for BaaN, Peoplecode for Peoplesoft Enterprise etc.)

The web services APIs act as a polling agent to collect the information from the backend system and provide real time data to SAP GRC AC for Risk Analysis.

RTA Design Studio: RTA Design Studio (RTA-DS) is a development platform to build and configure real time agents to extend SAP GRC Access Control to non SAP systems. The real time agents are supported for the RAR (Risk Analysis and Remediation) and CUP (Compliant User Provisioning) modules of Access Control 5.3. RTA-DS allows you to configure standard connectors delivered out-of-the box from Greenlight and build custom connectors for any home grown, legacy applications. RTA-DS also acts as a platform to register non SAP connectors to interact with SAP GRC Access Control.

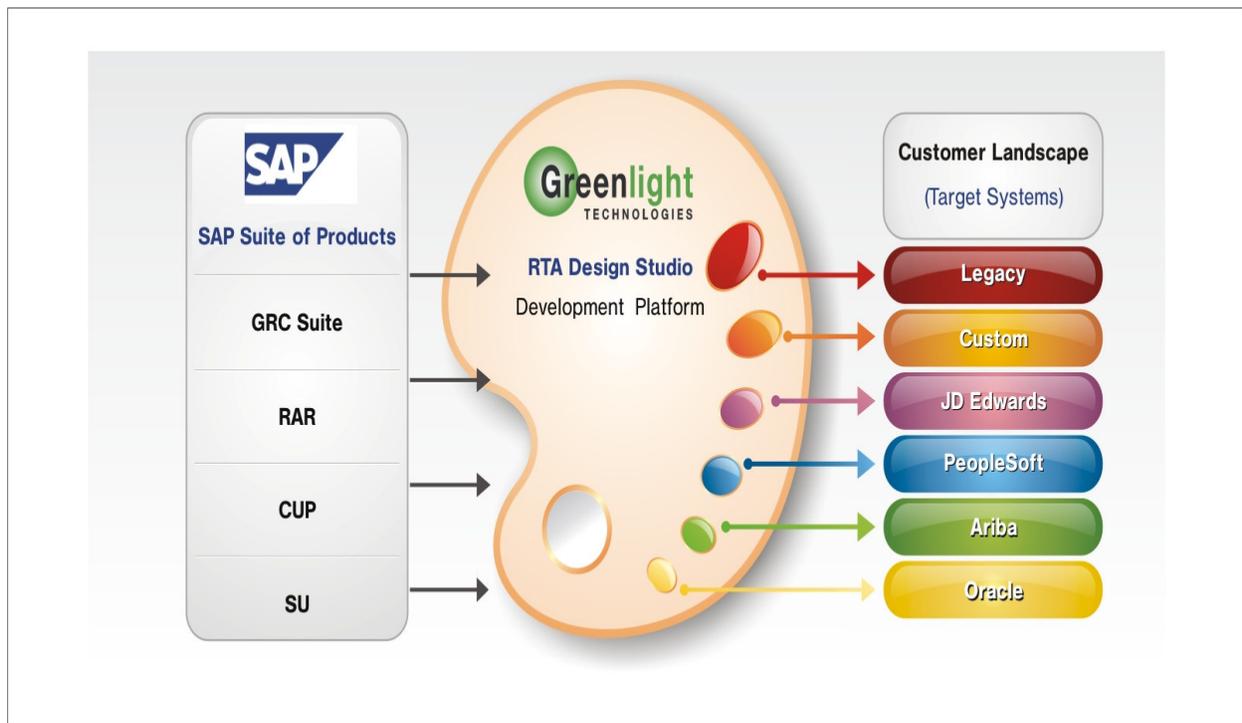
Rule Sets for non SAP Systems

Greenlight connectors are delivered with the rules framework and associated mapping of technical objects for a particular target system. The extraction and format of user authorization data from the backend system match the format of the rules defined for that system. Greenlight connectors leverage the rules framework recommended by SAP and uses Rule Architecture to define non SAP and cross system rules.

RTA Design Studio platform for SAP GRC

Greenlight Technologies' RTA Design Studio is a cross-platform solution complimenting SAP GRC enabling organizations to achieve total, enterprise-wide compliance via real time, preventive access and security controls.

RTA Design Studio provides a deployment platform for out of the box connectors for SAP GRC. It also provides a workbench for power-users to create connectors to extend SAP GRC into custom and legacy systems like Hyperion, Mapics and any business unit specific Oracle or SQL*Server based home grown applications within the IT landscape.



Some of the key components within the RTA Design Studio include:

- **Common Development Environment (CDE)**
The custom connectors can be quickly developed and deployed using a wizard driven interface. The intuitive, pull down menus within the RTA Design Studio, virtually eliminate any direct coding.

This will provide a quick ROI for companies, where there are hundreds of home grown and legacy applications based on Oracle and SQL*Server databases.

➤ **Common Metadata Framework (CMF)**

RTA Design Studio leverages its own schema (which is a part of the GRC database schema) to build and retain security mappings associated with each connector type, as well as information related to ERP customizations associated with each connector. CMF facilitates the “build once, use everywhere” philosophy for custom connectors development. This is achieved by leveraging the common metadata structure across multiple instances.

CMF is very crucial, for supporting multiple instances of the same connector type (e.g. Oracle) from a single repository. It will handle the customization at each individual location and align with the strategic direction of the centralized Rules and Policies.

➤ **Common Deployment Framework (CDF)**

CDF enables execution of multiple instances of the same connector type with instance specific credentials from a single meta-model.

CDF will yield high performance efficiencies during the runtime or execution of multiple instances of the same connector type (e.g. Oracle).

➤ **Supplementary Analysis Development**

The Supplementary Analysis section allows building rules to permanently eliminate occurrences of False Positives for non SAP applications.

If the false positives are not addressed in analysis, it may result in over-reporting of conflicts, causing redundant remediation efforts and prolonged audit cycles.

This will provide consistent and reliable analysis reports in the SAP GRC platform for non SAP applications.

➤ **Automated Batch Extraction (ABE)**

SAP GRC and Greenlight both recommend “real time” as the preferred method of connecting target systems to GRC Access Control. The primary reason is to extract and monitor changes in the user security information from the non-SAP systems so the risk analysis is always using the most current and accurate information available. In some situations, if a specific target system does not provide real time interoperability options, then the RTA Design Studio will provide an automated batch extraction utility. In both cases, analyzing the security model and mapping the objects back to SAP GRC fields will be done by the Greenlight RTAs and the associated technical services.

Greenlight’s RTAs will allow SAP GRC AC to connect to the target system in a real time manner to synchronize users, roles, and the necessary user security information. Greenlight’s Automated Batch Extraction Utility will generate all the necessary files for SAP GRC AC and cover the data mapping rules of the batch extraction. The generated files can be loaded into the GRC AC application using Data Extractors to perform the Risk Analysis.

Current Adapters and supported Systems (As of 9/2009)

Adapters*

1. Oracle Applications 11i, R12
2. PeopleSoft Financials 8.x, 9.0
3. PeopleSoft HCM 8.x, 9.0
4. PeopleSoft CRM 8.x, 9.0
5. JD Edwards One World and Enterprise One
6. Hyperion Enterprise 6.x
7. Hyperion System 9, 10
8. Cognos
9. Siebel CRM (OnPremise) 7.x, 8.x
10. Siebel CRM On Demand
11. Vendavo
12. Deltek
13. Epicor Solutions
 - Financial Management
 - Customer Relationship
 - Human Capital Management
14. Epicor -iScala
15. Macola
16. Mas 200
17. MS Dynamics
18. Stealth
19. Sage Pro
20. Ariba
 - Supply and Demand Chain
 - Procurement P2P and T&E
21. Vanguard System
 - Version 5.0
22. Sabrix
23. Endur
24. Lawson
25. Bookmaster IBS
26. Baan

*Adapters are not limited to the versions stated.

RTA Design Studio - Supported Systems and Data Sources

1. Relational Databases
 - a. Oracle 9i, 10g, 11g
 - b. SQL*Server 2000 and above
 - c. DB2
 - d. Progress
2. Active Directory
3. LDAP
4. iSeries, AS400, DB2/400
5. VSAM, C-D/ISAM
6. Flat, IFS and spool files

Greenlight has leveraged the extensive coverage of the data sources to build Adapters for various applications including portals, Netweaver AS, Trading applications, procurement and order management applications and EBPP applications.

These adapters include creation of technical connector, extraction logic and associated rules for SOD analysis, provisioning and privileged user management.