



NATIONAL STUDENT CLEARINGHOUSE - ORACLE IDENTITY MANAGEMENT/GOVERNANCE SUITE

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INTRODUCTION

The National Student Clearinghouse (NSC) is the nation's trusted source for student degree and enrollment verification. Clearinghouse maintains more than 110 million student records, provides information to more than 10,000 verifying entities each year and conducts more than half a billion verifications annually. NSC accepts subscriptions to such data worldwide and accordingly has a world-wide user base. NSC has multitude of applications and services that process subscription requests and service the clients by providing them enrollment and verification data as per SLAs of the underlying subscriptions. These applications are built using Java/JEE, .NET, PHP base frameworks that are executed on appropriate runtime environment. To design, implement and manage the overall security, NSC procured Oracle Identity and Access management suite. KPSoft helped with the design, installation, implementation and maintenance of the OIM/OAM suite. We not only implemented robust authentication/authorization flows, we also implemented user identity provisioning and reconciliation processes with their database network, MS AD, MS Exchange servers and Oracle/SQLServer/MySQL databases.

NSC is one of many clients that we helped with achieving their goals for identity and access management. Other clients include OhioHealth, Transaction Network Services, General Services Administration – Public Building Services, and various other non-profit organizations.

DESIGN AND PLANNING

As part of the gather detailed requirements and designing the migration, we performed the following activities:

- Gathered requirements for customer SLAs (early adopters, premium subscribers, regular customers, partners, non-profits etc.)
- Gathered non-functional requirements (up-time, request/response times etc.)
- Gathered workflow requirements for provisioning, reconciliation and overall account management.
- Design annual recertification of user base.
- Highly available fusion middleware clusters.
- Auditioning, monitoring and process management workflows.
- Integration with trusted sources.
- Installation and configuration of connectors.
- Maintenance, patching and upgrades.

- Installation and configuration of KPSoft’s product for configuring authentication, authorization and recertification of application and other resource users

MAPPING

Overview

As in any Enterprise Integrations, maps and transformations are the most important components where most work is performed. All enterprise resources use similar concepts when it comes to protection of underlying resources. Among others these include user accounts, roles, privileges, and policies that govern them. KPSoft staff has extensive expertise in designing such entities and attributes for any identity and access management system.

Please see below for example mapping of employee record in oracle identity and access management suite and Active Directory. Please note that sample attributes provided in the table below are just a sample to demonstrate the concept.

#	OIG/OIM/OAM Name	MS AD (Target) Attribute	Sample Data	Rule
1.	User Id	sAMAccountName	FFlintstone	Key Field
2.	First Name	givenName	Fred	
3.	Last Name	Sn	Flintstone	Key Field
4.	E Mail	Mail	FFlintstone@abccorp.com	Key Field
5.			

Please see below for example rules for matching provisioning and reconciliation systems. Matching rules given below are for MS Active Directory.

#	Target Attribute	Element Operator	Identity Attribute	Case Sensitive?
1.	__UID__	Equals	ObjectGUID	No
2.	sAMAccountName	Equals	User Login	No
3.			

IMPLEMENTATION

Infrastructure Installation

Installation of Metadata Database

Installation and configuration of Oracle Access Management

- Installation of OAM software (fusion middleware).
- Configuration of domain.
- Verification of configuration.

Installation and configuration of Oracle Identity Governance

- Installation of OIG Software
- Configuration of domain.
- Verification of configuration.

Installation and Configuration of Active Directory Connector, Database Connector, Unix Connector

- Creation of relevant application by using the connector.
- Configuring the connector.
- Mapping the attributes.
- Creating provisioning and reconciliation jobs.
- Extension of functionality as needed.
- Creation of process forms, event handlers and jobs.

Activate and Run the Integration

- Initiate the initial executions.
- Test and maintain the connector processes

Directory Server Installation and Configuration

- Configure directory server trees



- Create replication as needed.
- Maintain and patch directory server.

Register back-office application

- Utilize KPSoft's application management system or create your own using SOA.
- Provision users, role management, conduct periodic recertifications.
- Role, Account cleanup processes as needed.

Monitor the Processes, Event handlers, Integrations using auditing information

- Run audit and tracing activities using Fusion middleware control
- Run audit and tracing activities using WLST (weblogic/oracle platform security)
- Monitoring oracle directory server
- Utilize OIDDIAAG tool

CONCLUSION

The installation, configuration, customizations that are described was created and implemented in production for various clients ranging from 3 months to 1 year. Oracle Identity Governance and Management has connection adapters available for most popular cloud and on-premise softwares such as Workday, Taleo, Lawson, ServiceNow and others. Our staff is very well versed with integration patterns and have helped many clients in commercial, federal government and non-profit space. Please contact us at marketing@thekpsoft.com for additional information immediately.