INTERNSHIP SUMMARY REPORT

Project Title: Activants SAML Service Provider

Company Name: Activants Pte Ltd -

Presentation Date: _____ Feb 2020

Presentation Time: _____ : _____ am/pm

OBJECTIVES OF ACTIVANTS SAML SERVICE PROVIDER

- Activants Secured Assertions Mark-up Language (SAML) Service Provider provide an Interface for Identity Providers (IdP), like SingPass/CorpPass, to pass authentication, authorization and related information using SAML 2.0 to Service Providers (SP) helping users to use one set of credentials to log into many different sites securely.

- The main benefit is that it helps administrators centralize user management by controlling which sites users have access to with their SAML identity provider credentials.

PROJECT BACKGROUND

SAML

SAML is an XML standard that facilitates the exchange of user authentication and authorization data across secure domains.

- Communication between web application is subject to a variety of threats, and these threats carry some level of associated risk. The nature of the risk depends on a host of factors, including the nature of the communications, the communication environment, and so on.

- SAML is intended to aid deployers in establishing security contexts between security domains.

- SAML-based SSO services involve communications between the user, an identity (IdP) and a service provider (SP)

- SAML allows identity providers (IdP) to pass authorization credentials to service providers (SP).

- The service providers (SP) in this case is the website the user wants to access.

- The IdP holds the database of those people who are authorized to access the website.

- In this project, the SP is the website that I designed and developed, and the IdP used for trial is miniOrange. Later the project will be integrated with the actual IdP i.e. SingPass/CorpPass.

PROJECT DETAILS

Nature of SAML Service Provider.

- **Improved User Experience**: Users can access multiple service providers by signing in just once, without additional authentication, allowing for a faster and better experience at each service provider. This eliminates password issues such as reset and recovery.

- **Increased Security**: SAML provides a single point of authentication, which happens at a secure identity provider. Authentication information is exchanged through digitally signed XML documents. Then, SAML transfers the identity to service providers. This form of authentication ensures that credentials don't leave the firewall boundary.

- **Loose Coupling of Directories**: SAML doesn't require user information to be maintained and synchronized between directories.

- **Reduced Costs for Service Providers:** With SAML, you don't have to maintain account information across multiple services. The identity provider bears this burden.

Nature of job responsibilities.

- Analysis, designing, implementing of SAML Service Provider.
- Testing.
- Identifying areas for modification in existing programs and subsequently developing these modifications
- Writing and implementing efficient code

Software used.

- **Programming language** - C#.Net
- **Database** - MSSQL
- **Framework** – ASP.NET MVC, Bootstrap
- **Web Script technologies** – HTML, CSS
- **Library**: Component Space 3.5

Project Statistics.

Project Name	Phases	Status
Activants SAML Service Provider	Requirements gathering and Documentation.	Completed
	Analysis and Design	Completed
	Implementation	Completed
	Testing	Completed

DELIVERABLES.

- Activants SAML Service Provider requirement definition (functional and non-functional)
- Software Model (Use case)
- Analysis of technical requirements
- Sequence Diagrams
- System prototype
- Activants SAML Software (**Final Product**)

ACCOMPLISHMENTS.

- Successfully implemented Service Provider based on SAML technology by Component Space.
- Successfully deployed in test environment and tested using trail IdP (MiniOrange).

INNOVATIONS.

- Converting a simple SAML Service Provider to Multi Tenancy Service Provider Web Application.

- Converting Web database application to standalone application by making use of Access Tokens.

CHALLENGES.

- Understanding SAML integration.

- SAML Bindings to use (Redirect bindings or HTTP Artifact bindings)

- Conflicting requirements

- Change in requirements

BUSINESS VALUES YOU PRODUCED FOR THE ORGANISATION

- **Save Resources** - Having their own Service Provider will definitely add up to saving resources.

- **Bring in more money**- Acting as a Service Providers for several companies will bring more money.

- **Multi-Service Application -** Added value to the company by successfully developing two Service Providers. They are SAML Based Multi-Tenant Standalone Service Provider (HTTP-Redirect) and SAML Based Multi-Tenant Standalone Service Provider (HTTP-Artifact).