

Advanced On-Prem SSRS 2017 for Non-AD Users

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 PASS  Power BI
Local & User Group Leader

About me



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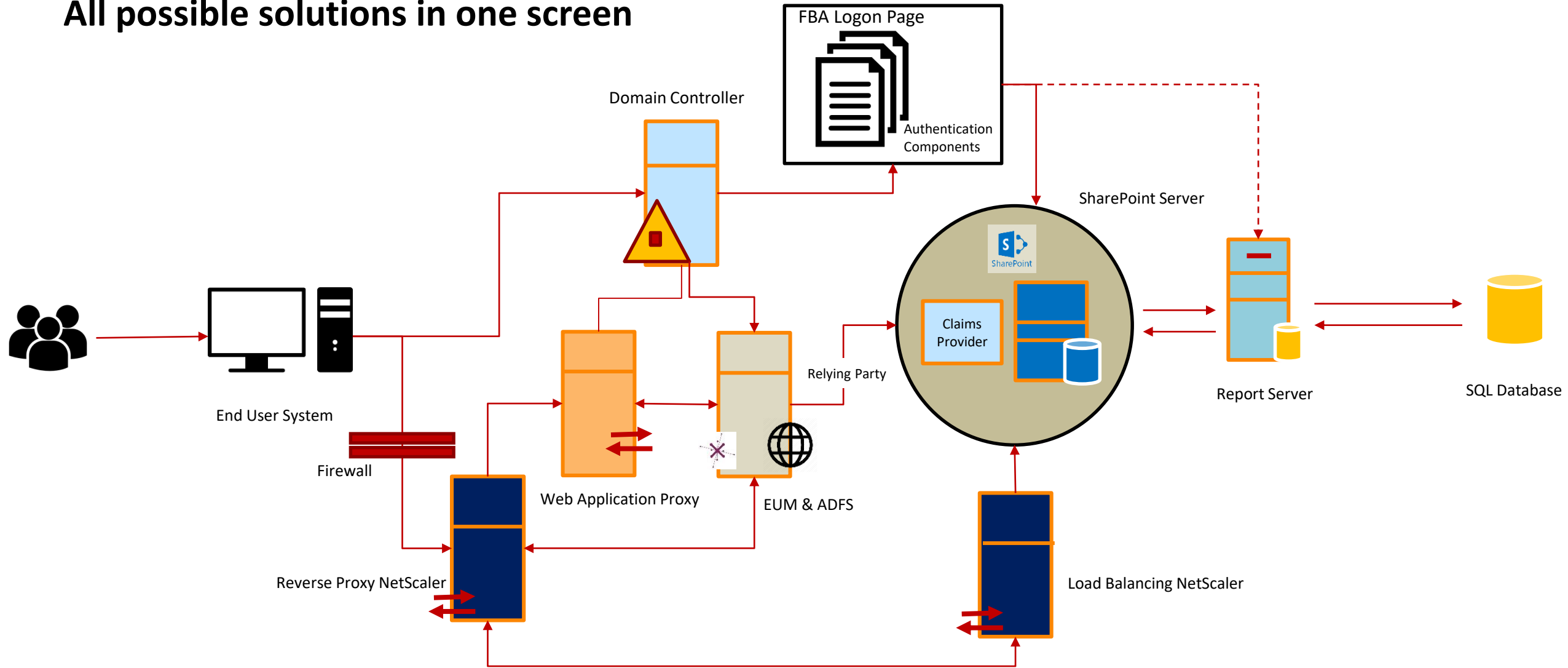
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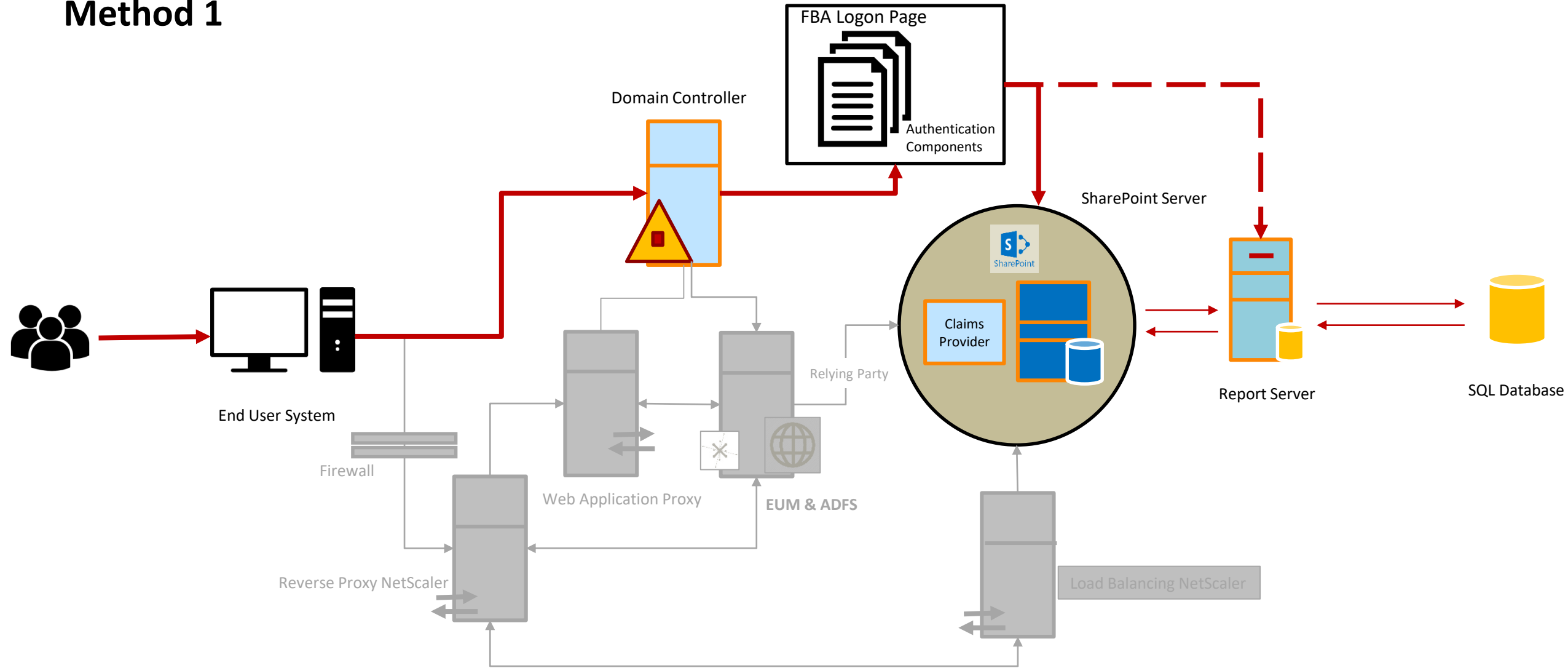
<http://www.youtube.com/user/YourSQLMAN>



All possible solutions in one screen

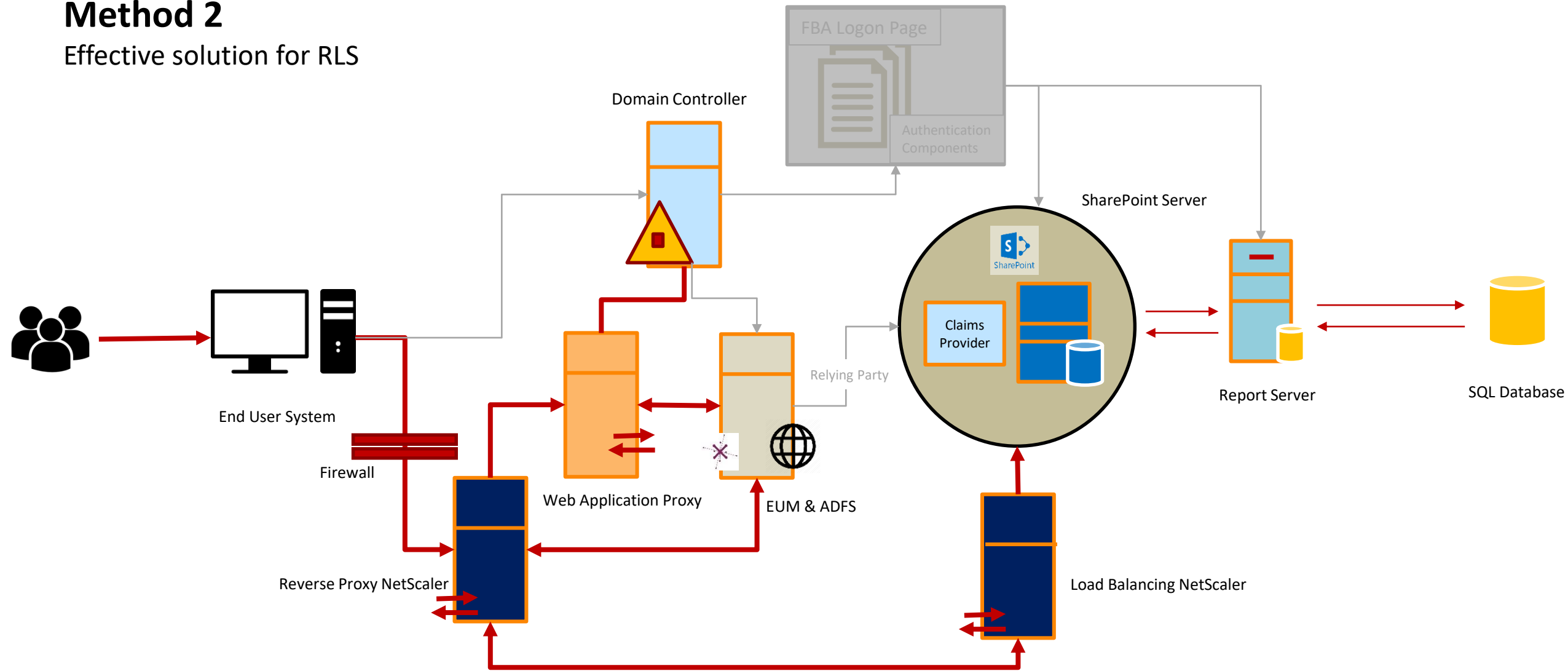


Method 1

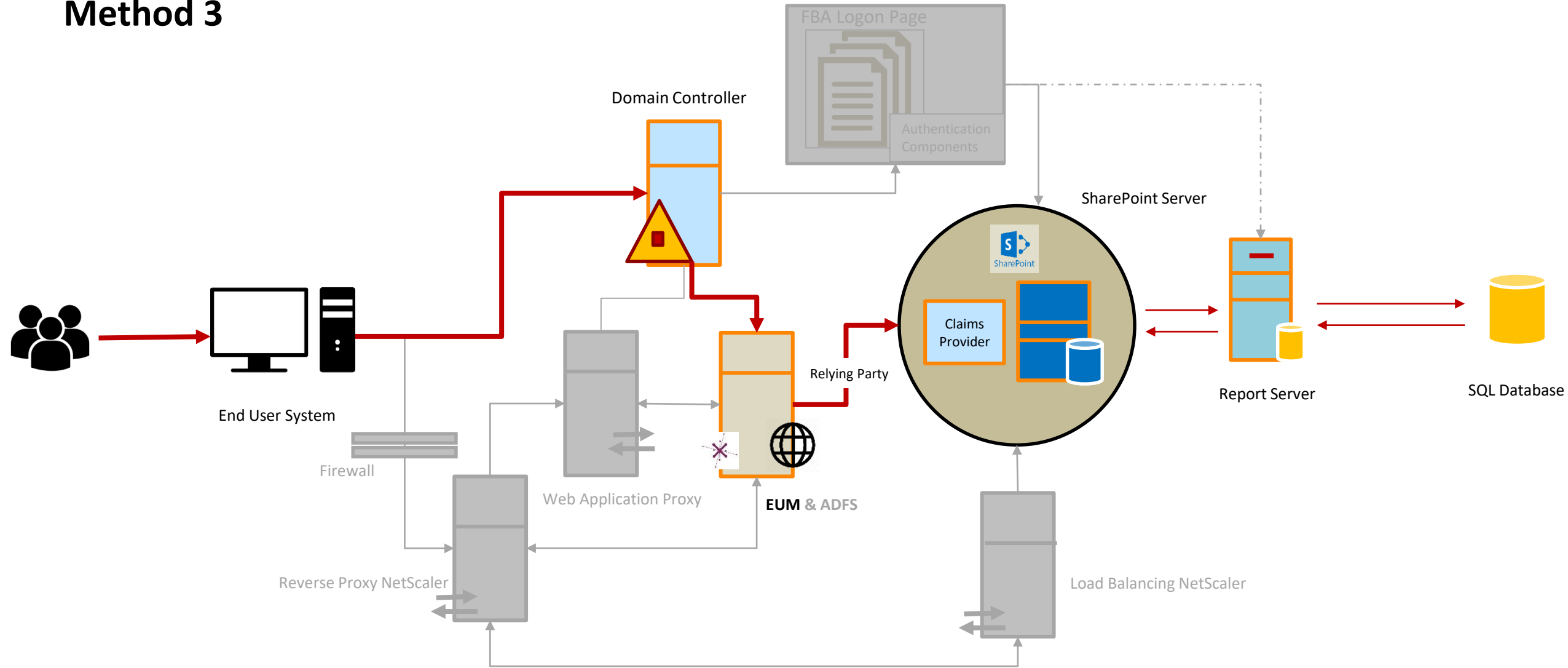


Method 2

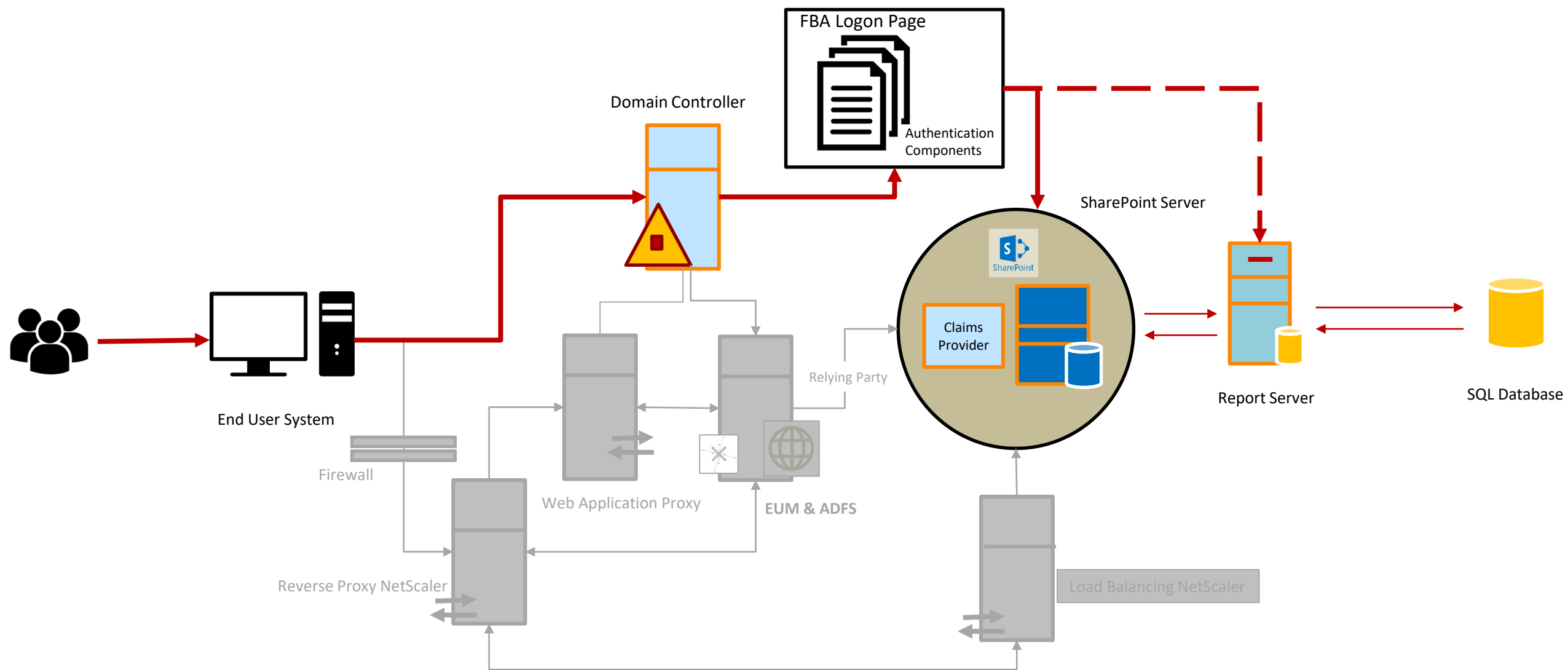
Effective solution for RLS



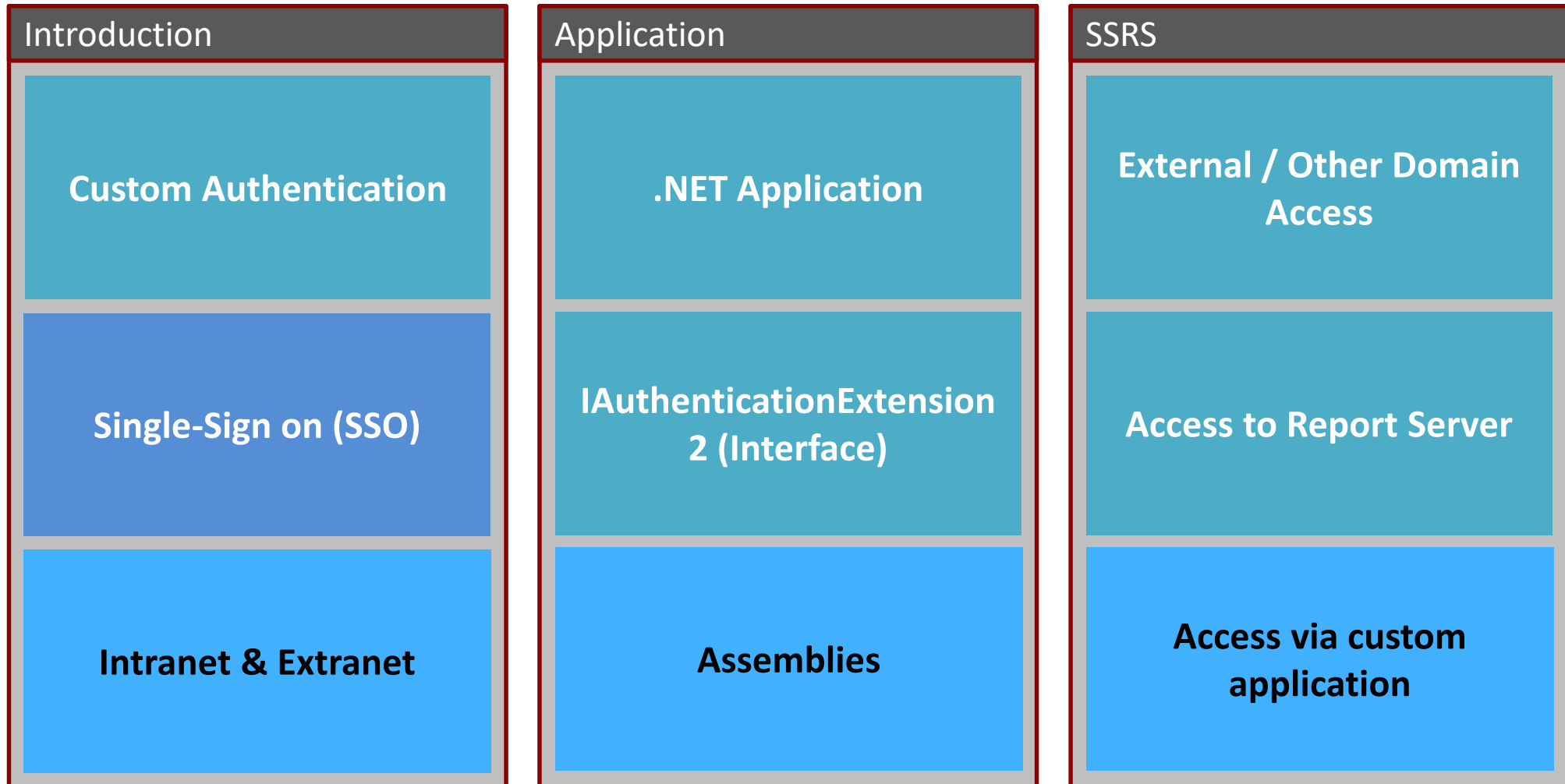
Method 3



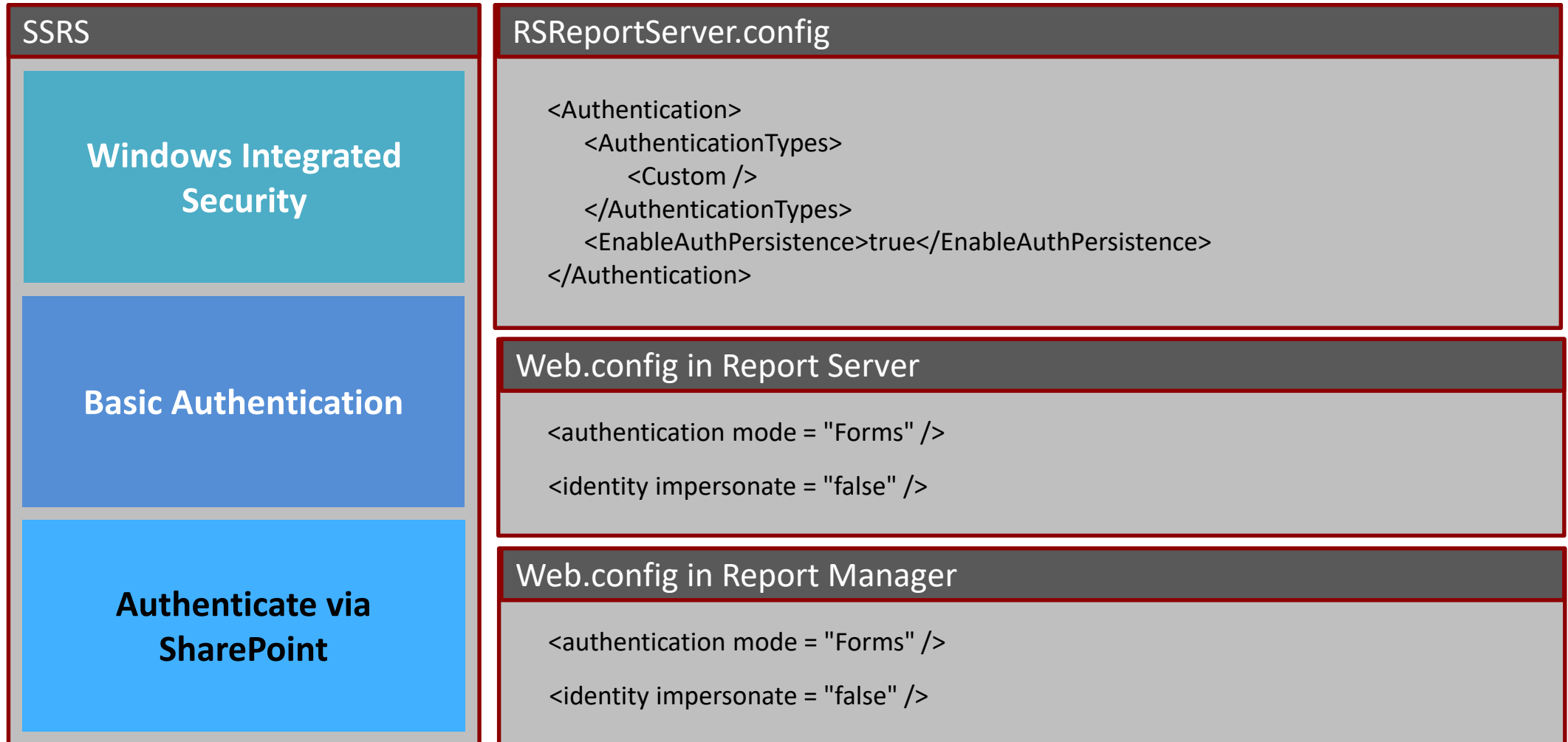
Method 1



Form Based Authentication

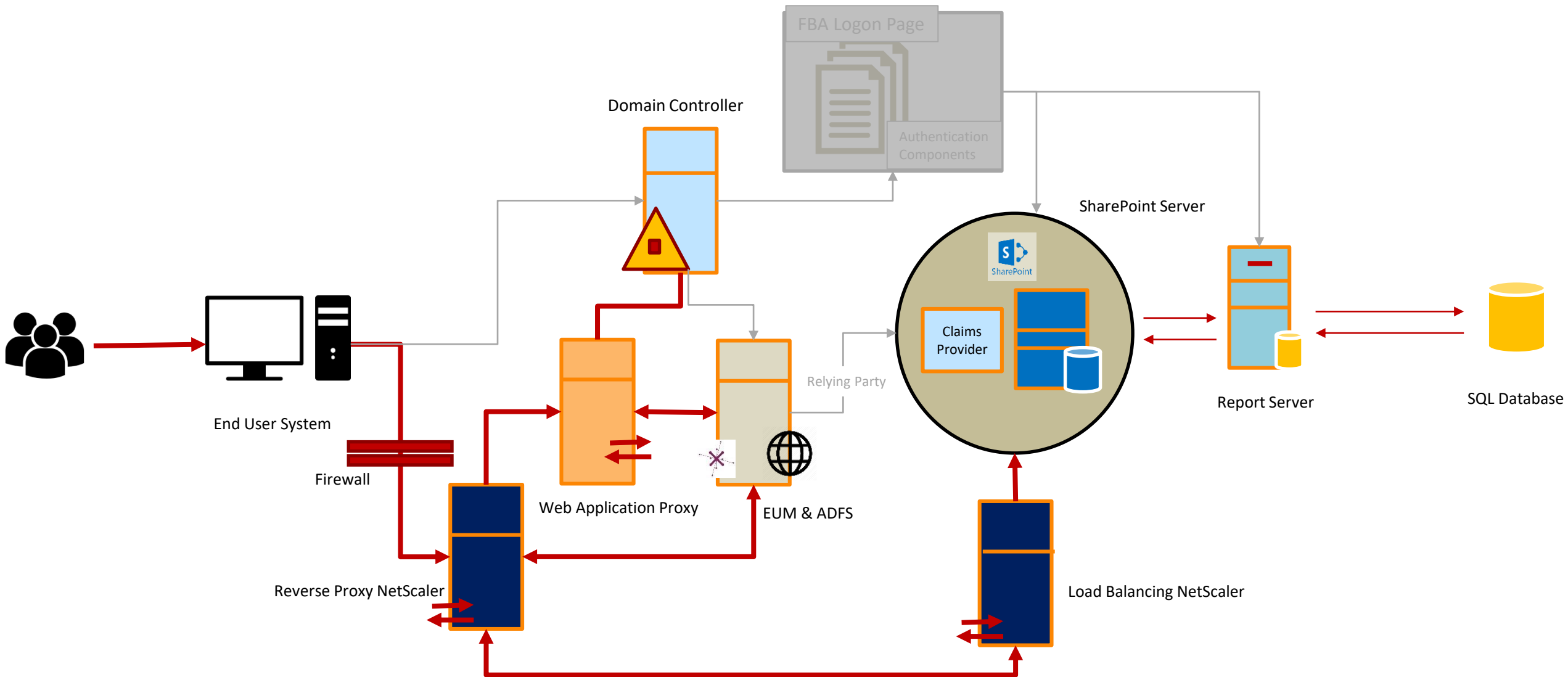


Form Based Authentication



Method 2

Effective for RLS



Entities - WANKE

WAP - Reverse Policy

First introduced in Windows Server 2012, Web Application Proxy (WAP) provides reverse proxy functionality for web applications inside your corporate network to allow users on any device to access them from outside the corporate network

ADFS

AD FS is a standards-based service that allows the secure sharing of identity information between trusted business partners (known as a federation) across an extranet. When a user needs to access a Web application from one of its federation partners, the user's own organization is responsible for authenticating the user and providing identity information in the form of "claims" to the partner that hosts the Web application..

NetScaler

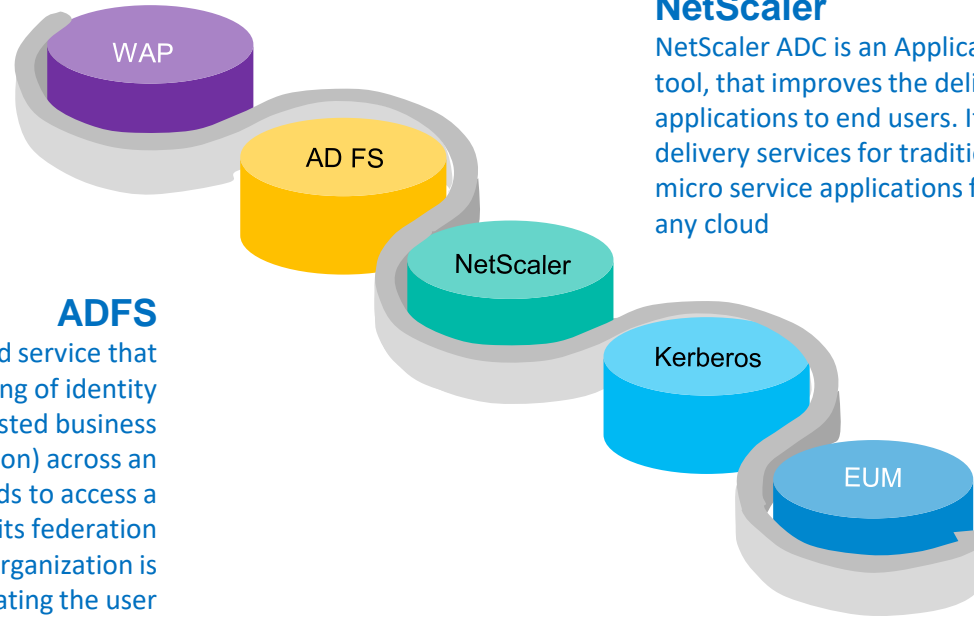
NetScaler ADC is an Application Delivery Controller tool, that improves the delivery speed and quality of applications to end users. It also provides flexible delivery services for traditional, containerized and micro service applications from your data center or any cloud

Kerberos

Kerberos is a secure protocol that grants authentication tickets to the Key Distribution Center (KDC) with valid user credentials and SPN (Service Principal Name). Kerberos is the preferred authentication type for SharePoint because it is faster, more secure, and reduces the number of errors you can get with username and passwords than NTLM.

EUM

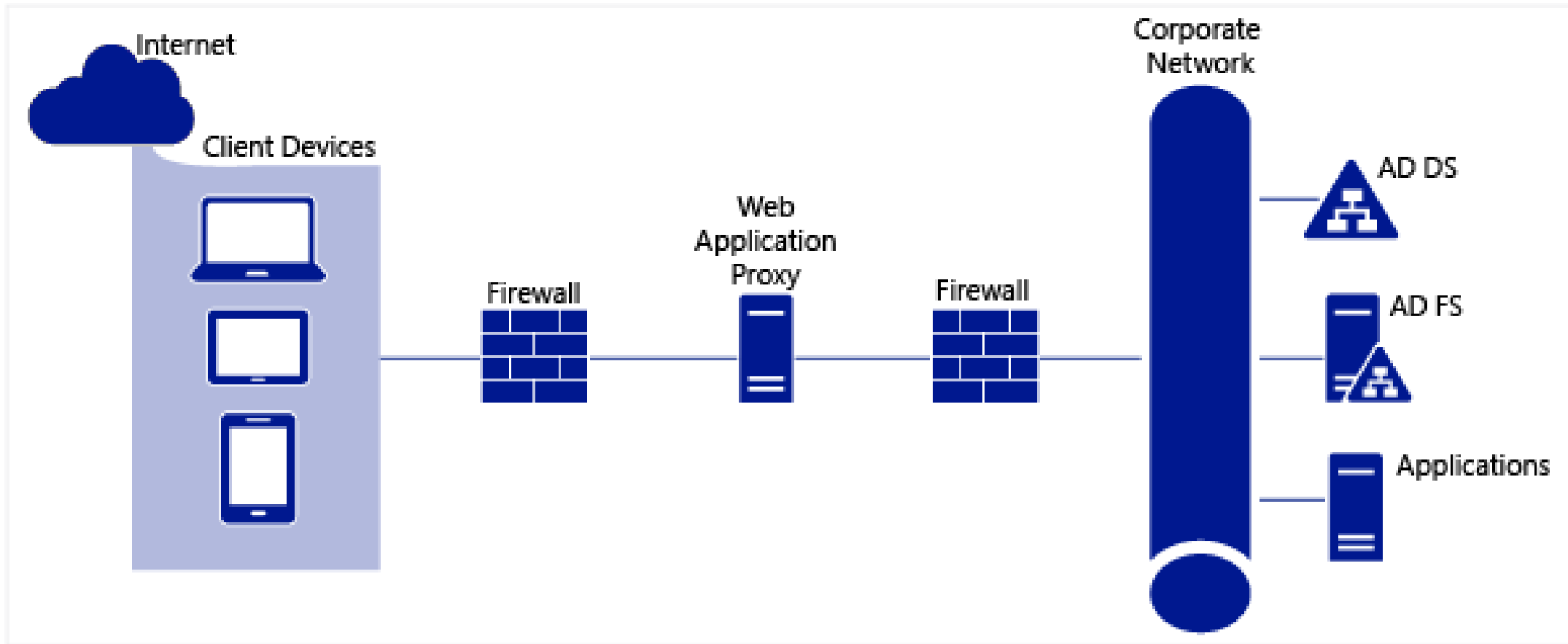
Auto login for corporate users.
Collaborate with external users



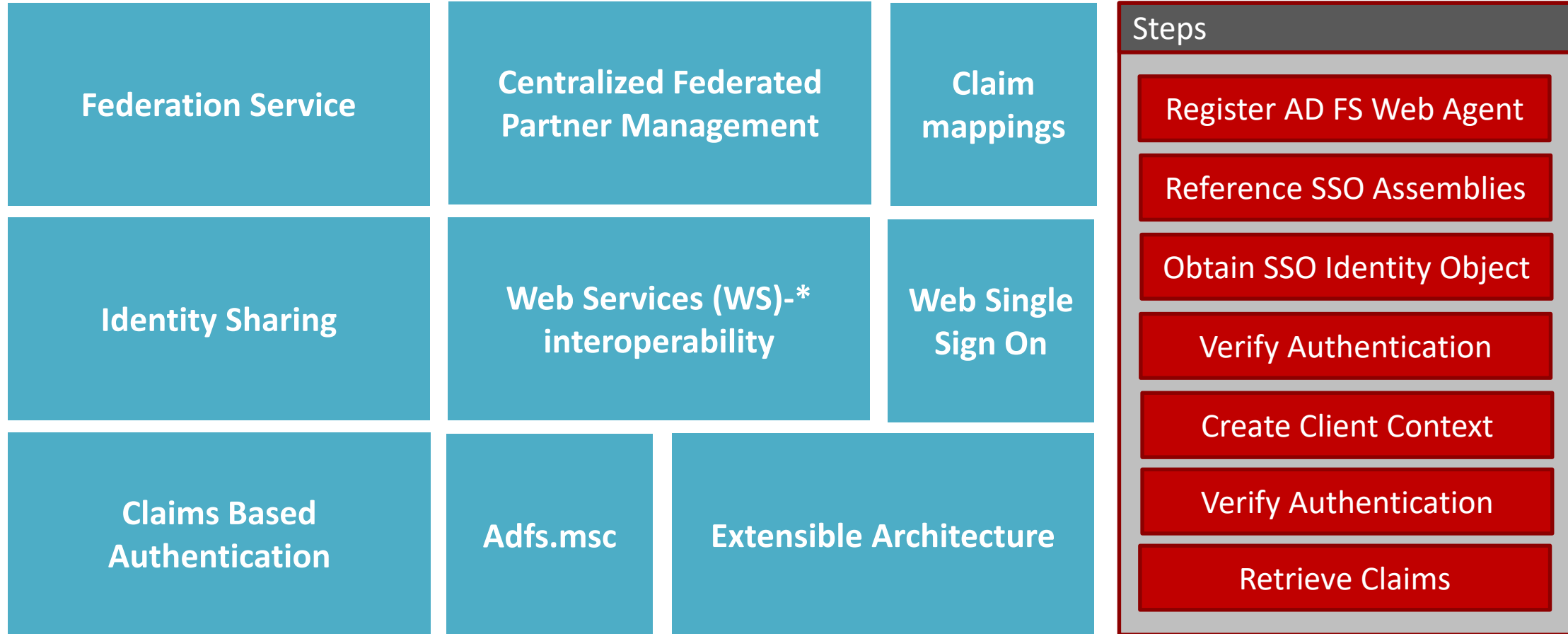
WAP

- First introduced in Windows Server 2012
- Reverse proxy functionality for web applications inside your corporate network to allow users on any device to access them from outside the corporate network.
- WAP pre-authenticates access to web applications using Active Directory Federation Services (ADFS), and also functions as an ADFS proxy.

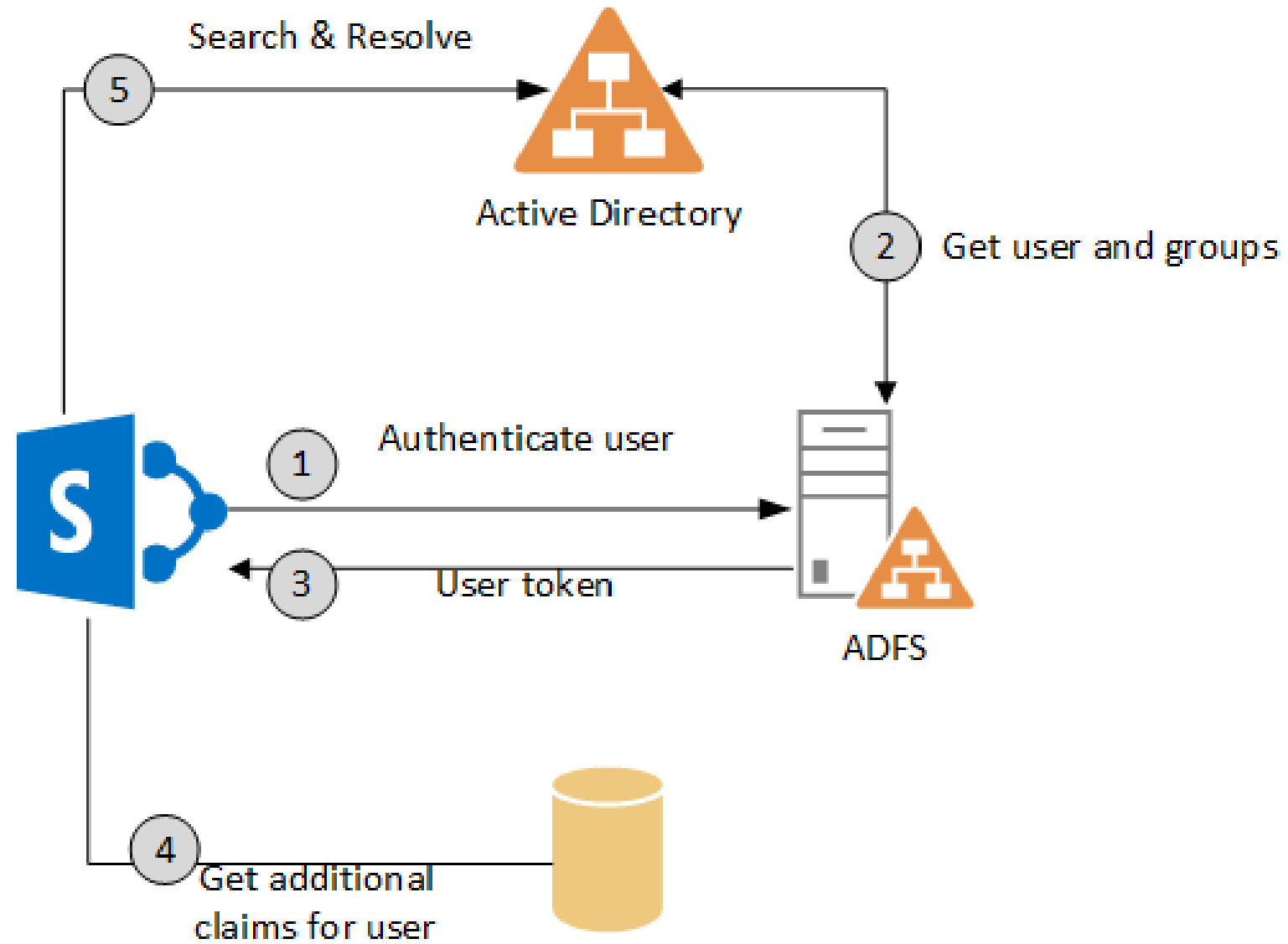
WAP



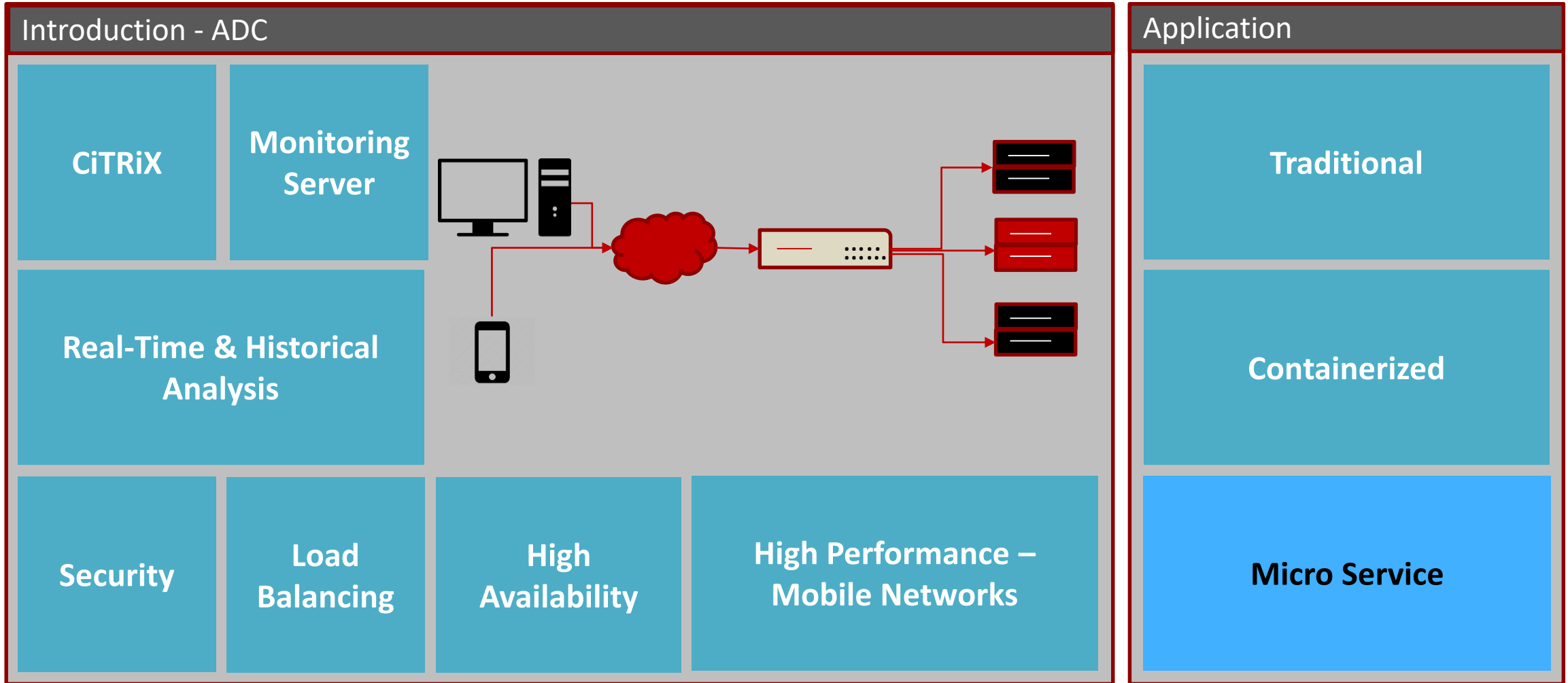
AD FS



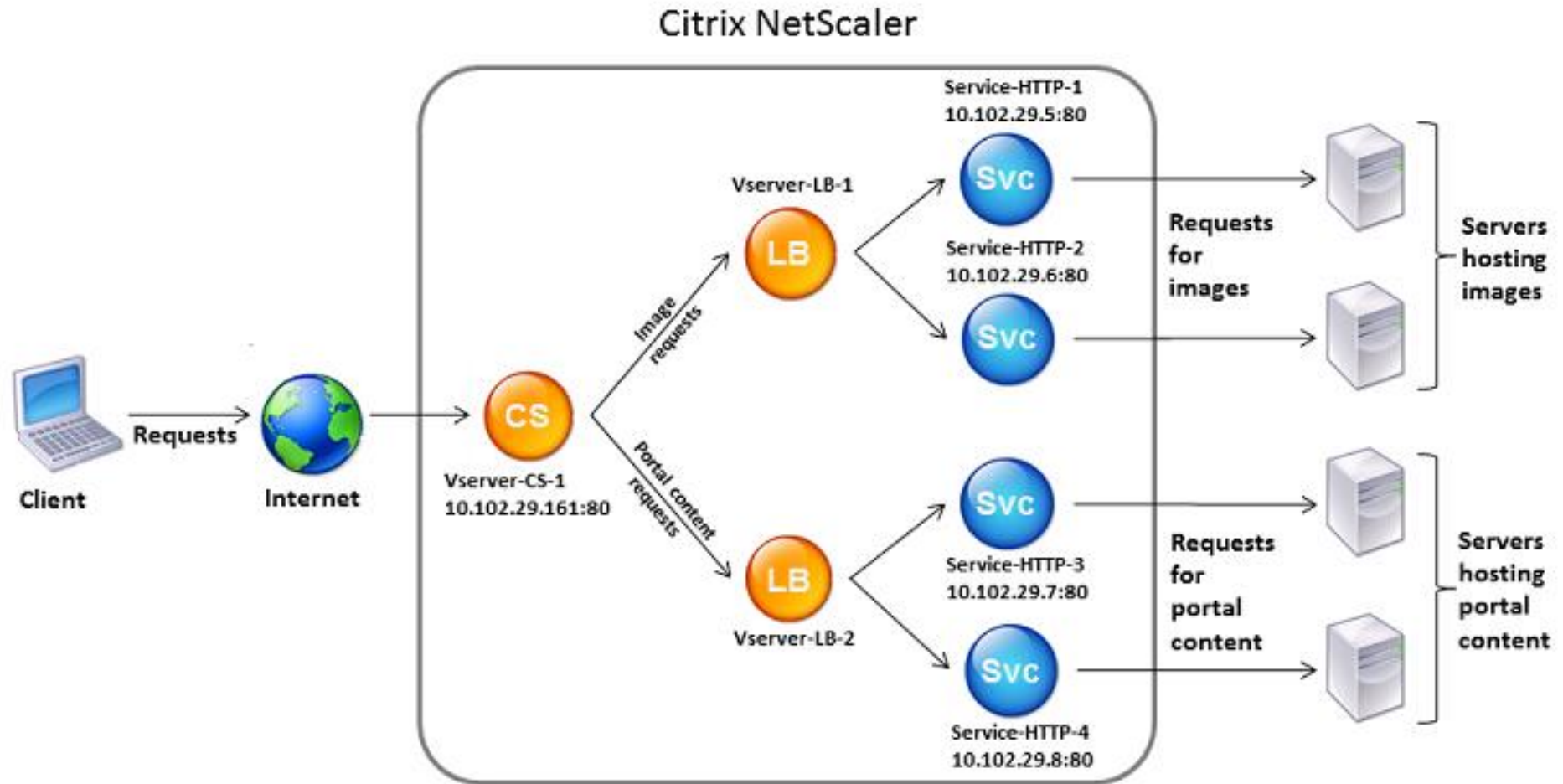
AD FS



NetScaler



NetScaler



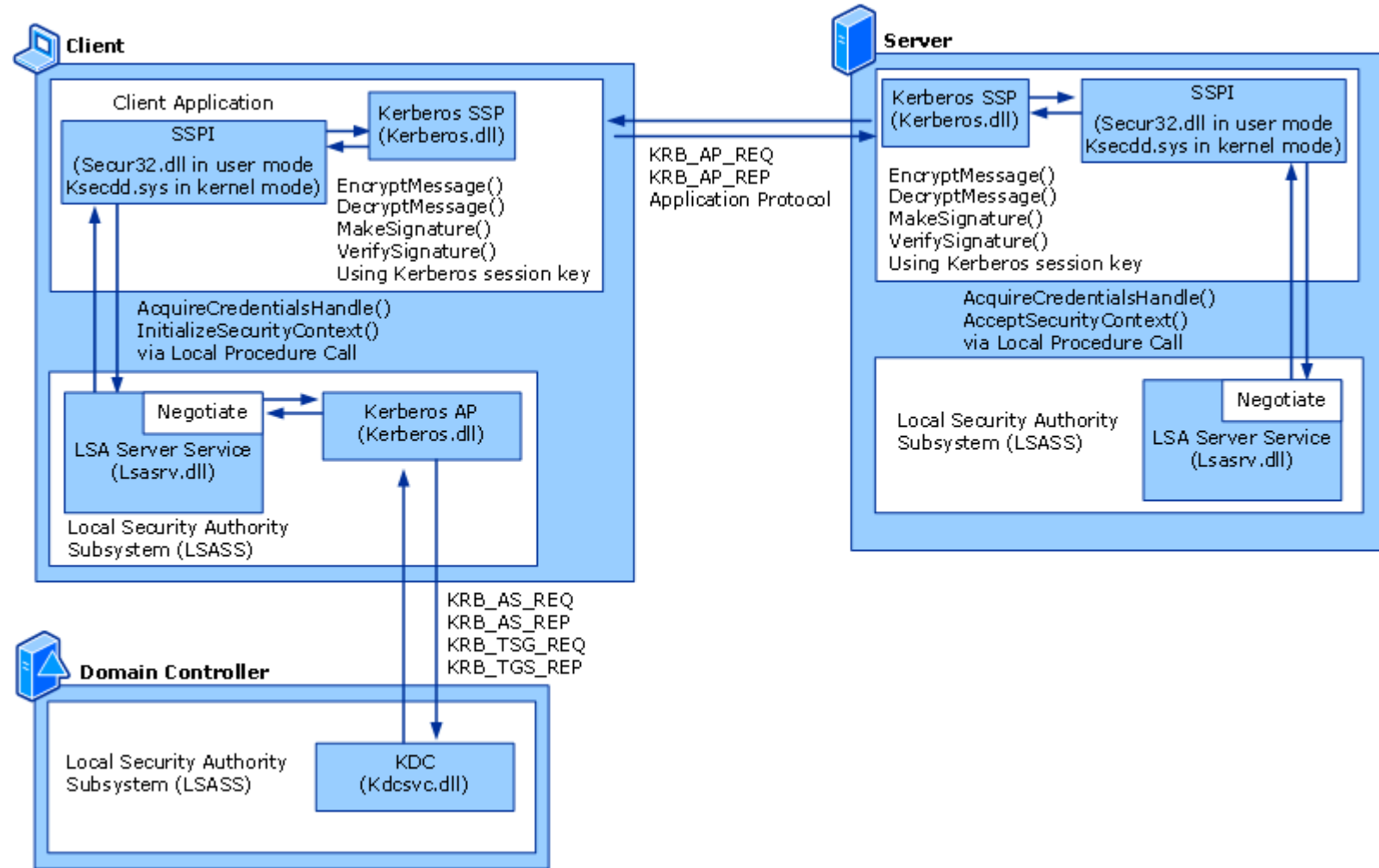
NetScaler

The screenshot shows the Citrix NetScaler VPX Configuration interface. The left sidebar contains a navigation menu with categories like System, AppExpert, Traffic Management, and others. The main content area is titled 'Content Switching Virtual Servers' and displays a table of configured virtual servers. The table includes columns for Name, State, IP Address, Port, Protocol, Traffic Domain, and Target Type. The table shows 12 entries, with some in a 'DOWN' state and others in an 'UP' state.

<input type="checkbox"/>	Name	State	IP Address	Port	Protocol	Traffic Domain	Target Type
<input type="checkbox"/>		DOWN			SSL	0	
<input type="checkbox"/>		UP			HTTP	0	
<input type="checkbox"/>		DOWN			SSL	0	
<input type="checkbox"/>		UP			HTTP	0	
<input type="checkbox"/>		UP		443	SSL	0	NONE
<input type="checkbox"/>		UP		443	SSL	0	NONE
<input type="checkbox"/>		UP		80	HTTP	0	NONE
<input type="checkbox"/>		UP		80	HTTP	0	NONE
<input type="checkbox"/>		UP		80	HTTP	0	NONE
<input type="checkbox"/>		UP		443	SSL	0	NONE
<input type="checkbox"/>		UP		80	HTTP	0	NONE
<input type="checkbox"/>		UP		443	SSL	0	NONE

Kerberos Authentication

- Windows Server 2003 implements the Kerberos V5 protocol as a security support provider (SSP)
- The Kerberos Key Distribution Center (KDC) uses the domain's Active Directory service database as its security account database. Active Directory is required for default NTLM and Kerberos implementations.



Kerberos Authentication

```
    </Application>
  </URLReservations>
  <Authentication>
    <AuthenticationTypes>
      <RSWindowsNTLM/>
    </AuthenticationTypes>
    <RSWindowsExtendedProtectionLevel>Off</RSWindowsExtendedProtecti
    <RSWindowsExtendedProtectionScenario>Proxy</RSWindowsExtendedPr
    <EnableAuthPersistence>true</EnableAuthPersistence>
  </Authentication>
  <Service>
    <IsSchedulingService>True</IsSchedulingService>
    <IsNotificationService>True</IsNotificationService>
    <IsEventService>True</IsEventService>
    <PollingInterval>10</PollingInterval>
    <WindowsServiceUseFileShareStorage>False</WindowsServiceUseFileS
```

```
    </URLs>
  </Application>
  </URLReservations>
  <Authentication>
    <AuthenticationTypes>
      <RSWindowsNegotiate/>
      <RSWindowsKerberos/>
    </AuthenticationTypes>
    <RSWindowsExtendedProtectionLevel>Off</RSWindowsExtendedProtecti
    <RSWindowsExtendedProtectionScenario>Pr
    <EnableAuthPersistence>true</EnableAuth
  </Authentication>
  <Service>
    <IsSchedulingService>True</IsScheduling
    <IsNotificationService>True</IsNotifica
    <IsEventService>True</IsEventService>
```

EUM

Extranet User
Management

Extranet Access

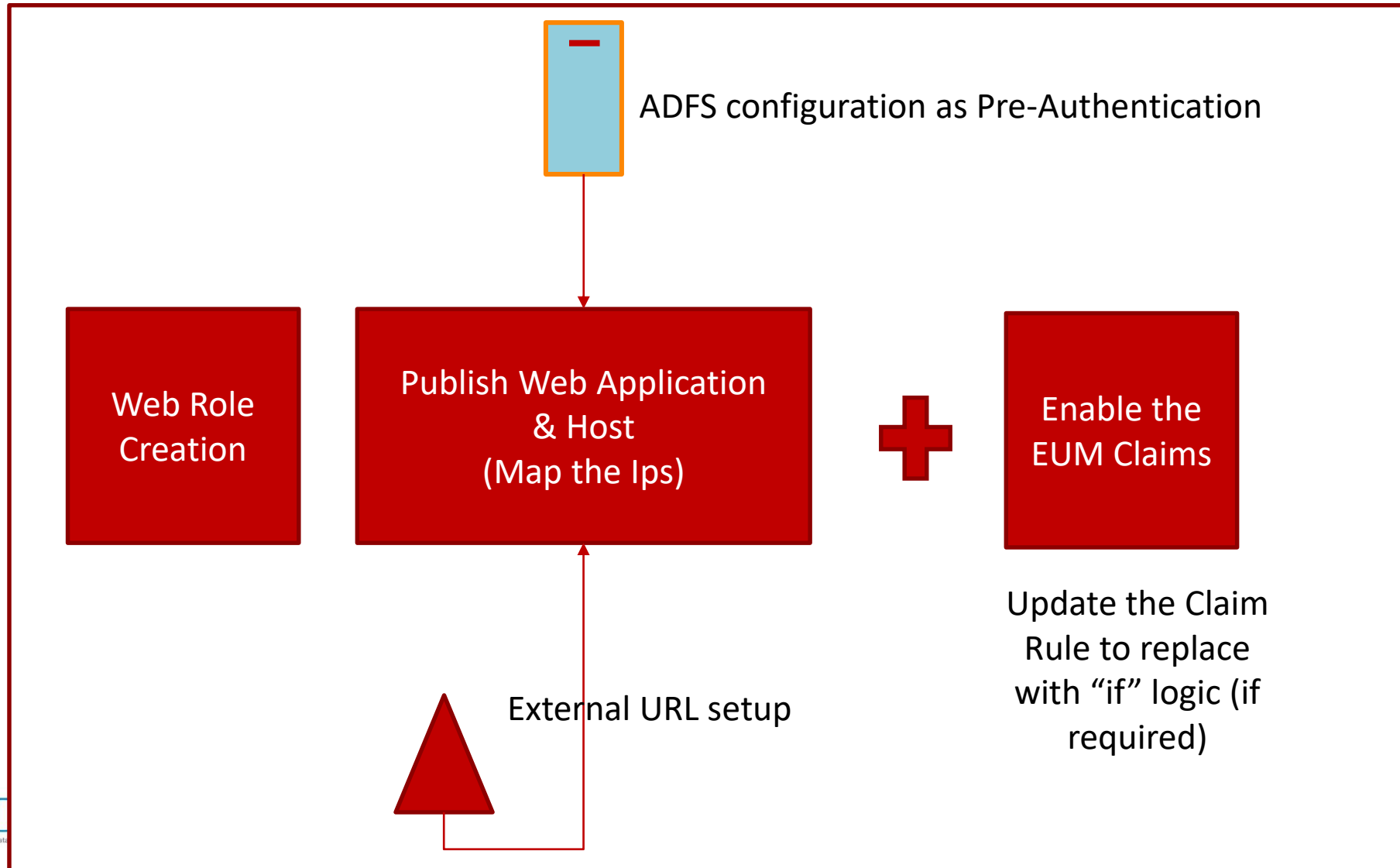
Integrate with SharePoint

The screenshot shows a web browser window displaying the 'Envision IT Extranet User Manager SharePoint' interface. The page has a light blue header with the title and a logo. Below the header is a navigation bar with links: Home, Search, Add, Configure, Help, Sign Out, and a Babcock logo. The main content area is titled 'Search for Users' and contains a search form. The form has fields for First Name, Last Name, Email, Username, Group (a dropdown menu), and Company. Below these fields are status checkboxes: Active (checked), Deactivated (unchecked), Pending Approval (checked), and Imported Pending Approval (checked). At the bottom of the form are four buttons: Search, Reset, Export to Excel, and Set Status. The footer of the page contains the copyright notice: © 2007, 2015 Envision IT Inc.

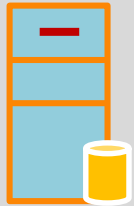
Shadow Account

- Normal user accounts
- It is an identity in secondary forests
- ADFS may be beneficial to use shadow account in some situations

Architecture Explained



SSRS & Netscaler Config



Configure SSRS to use
Installed certificates

Update RSReportserver.config file to use
Windows Kerberos
Windows Negotiate



Content Switching Virtual Server

Content Switching policy

Load Balancing Service

SPN, Kerberos & Delegation

Create domain user Service Principal Name (SPN)

NetBIOS =

setspn -A MSSQLSvc/<SQL Server computer name>:1433 <Domain\Account>

FQDN=

setspn -A MSSQLSvc/<SQL Server FQDN>:1433 <Domain\Account>

Verify the registered SPN

setspn -L <domain\SQL Service Account>

- Mutual Authentication
- Secure Authentication Tickets
- Integrated Authentication

Microsoft® Kerberos Configuration Manager for SQL Server®

Language: English

Download

Microsoft Kerberos Configuration Manager for SQL Server is a diagnostic tool that helps troubleshoot Kerberos related connectivity issues with SQL Server, SQL Server Reporting Services, and SQL Server Analysis Services.

[Details](#)

[System Requirements](#)

[Install Instructions](#)

[Additional information](#)

Microsoft Kerberos Configuration Manager for SQL Server is a diagnostic tool, that helps troubleshoot Kerberos related connectivity issues with

- SQL Server
- SQL Server Reporting Services
- SQL Server Analysis Services

Sharepoint – Identity server

- Trusted Identity Provider
 - SharePoint Relying Party in Identity Server
 - SharePoint Role Claim – Allow Access
-
- Configuration with ADFS
 - Identity Provider
 - Relying Party

Enable the Token Issuer in SharePoint

In Central Admin (Application Management | Manage web Applications) under **Authentication Providers**: Check the box for the new provider. (On the Application that you want to use it).

☒ Trusted Identity provider

Trusted Identity Provider

☐ ADFS

☒ Extranet Identity Server

Relying Party : SharePoint test

Enabled: ☒ ?

Display Name: ?

Realm/Scope Name: ?

Token Type: ?

Token life time (in minutes): ?

Redirect URL: ?

Extra Data 1: ?

Extra Data 2: ?

Extra Data 3: ?

Symmetric Signing Key: ?

Encrypting Certificate: No Certificate ?

Upload:

Encrypting Certificate Thumbprint:

Scenario



HQ Manager	AD Account
alexander@sqlbits.com	SB_HQ_001
martin@sqlbits.com	SB_HQ_001

Division Manager	AD Account
sam@sqlbits.com	SB_DM_001
antony@sqlbits.com	SB_DM_001

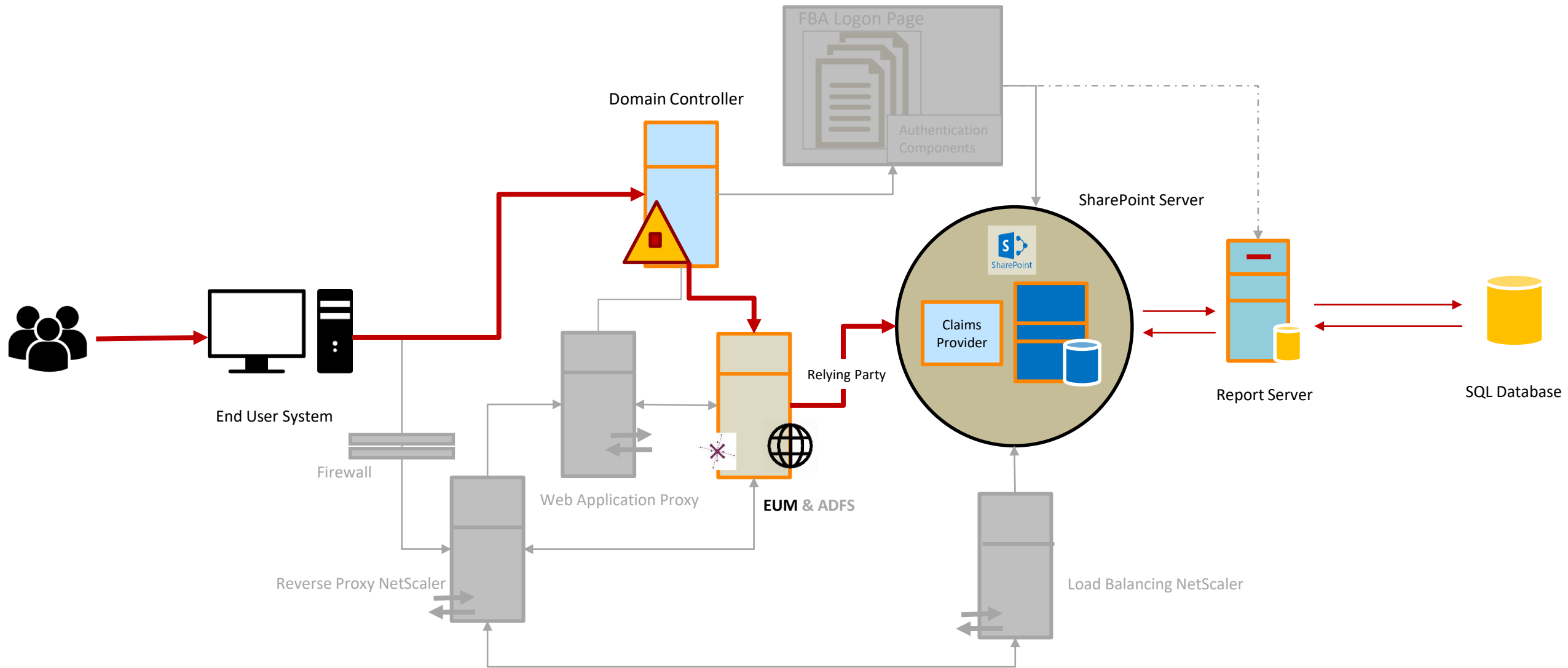
Store Manager	AD Account
alan@sqlbits.com	SB_SM_001

Profile Table



suser_name()

Method 3



Scenario

User Mapping

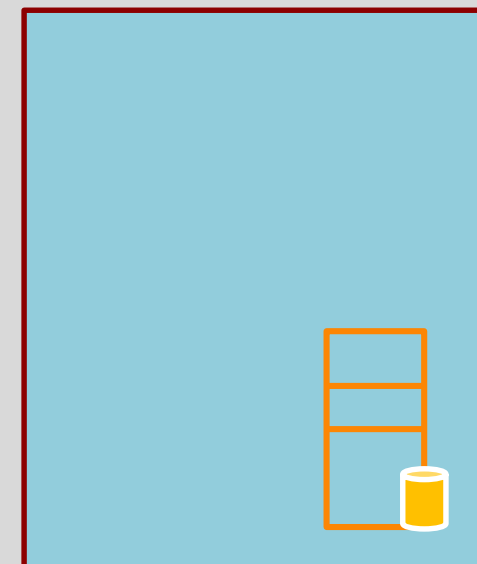
User Name	AD Account
Alex	Alexander@SQLBITS.com
Martin	Martin@SQLBITS.com
Sam	Sam@SQLBITS.com
Antony	Antony@SQLBITS.com
Alan	Alan@SQLBITS.com



Shadow AD Account	Categorization
SB_HQ_001	Head quarters
SB_HQ_001	Head quarters
SB_DM_001	Division Manager
SB_DM_002	Division Manager
SB_SM_001	Store Manager



SharePoint



EUM Alternate



**Extranet Collaboration Manager
(ExCM) for SharePoint – premierpointsolutions**

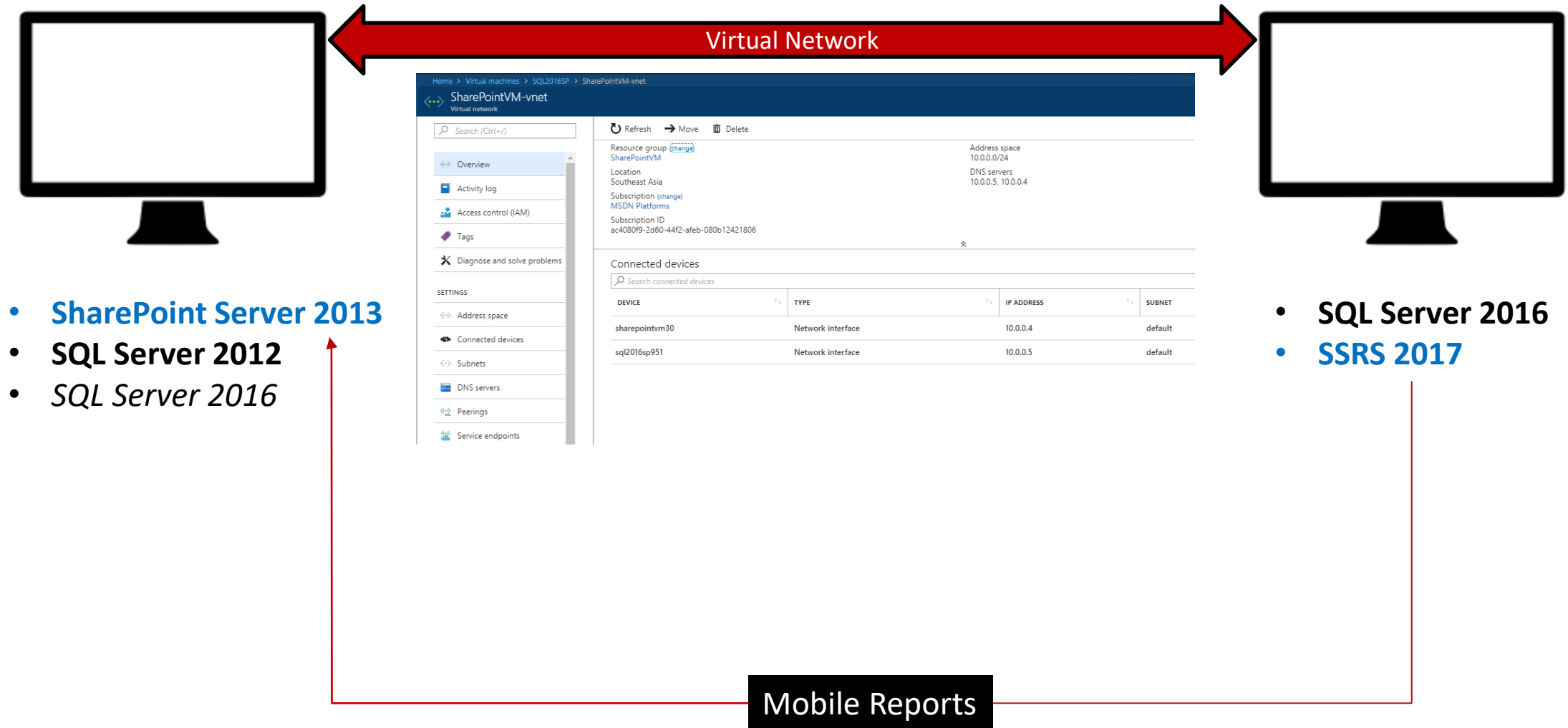


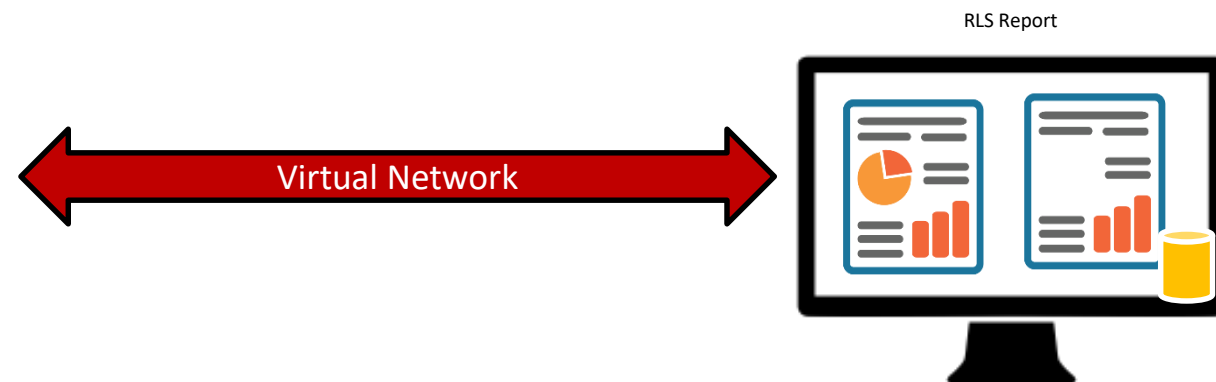
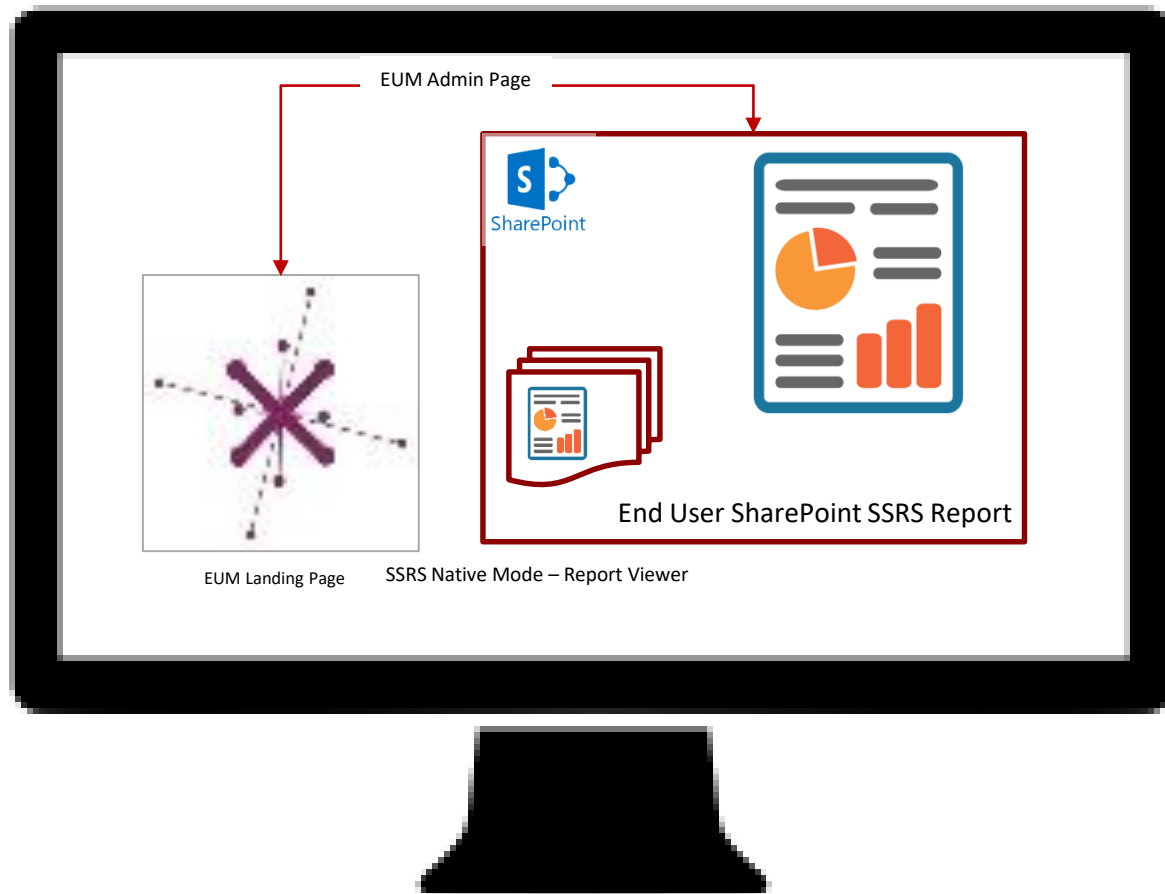
Extradium for SharePoint - riolinx

More info...

Virtual Machine 1 – Domain Controller

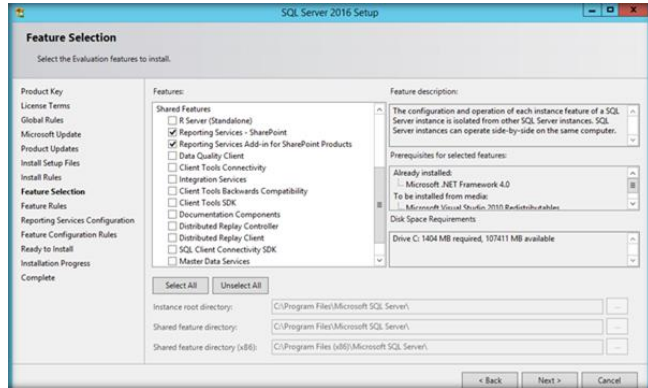
Virtual Machine 2





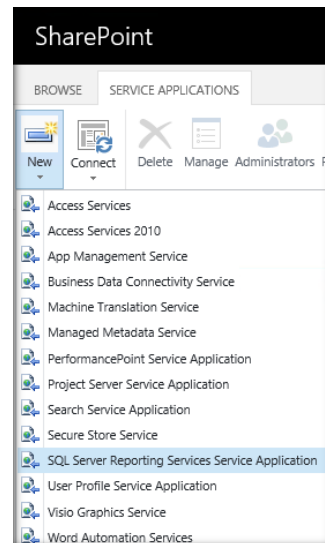
SQL Server Installation

Reporting Services SharePoint Reporting Services Add-in for SharePoint



SharePoint Side

Create SSRS Service Application

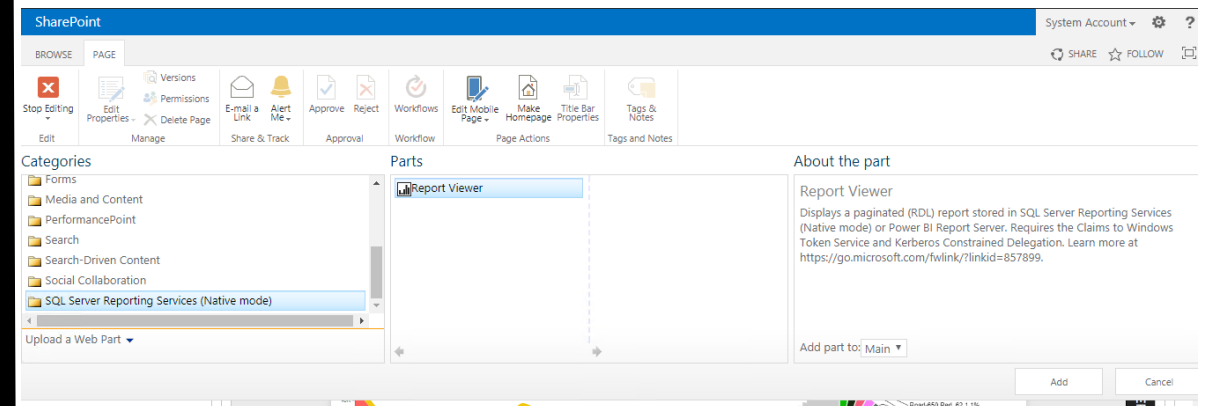


Deploy the webpart to SharePoint using PowerShell Script

Powershell Scripts

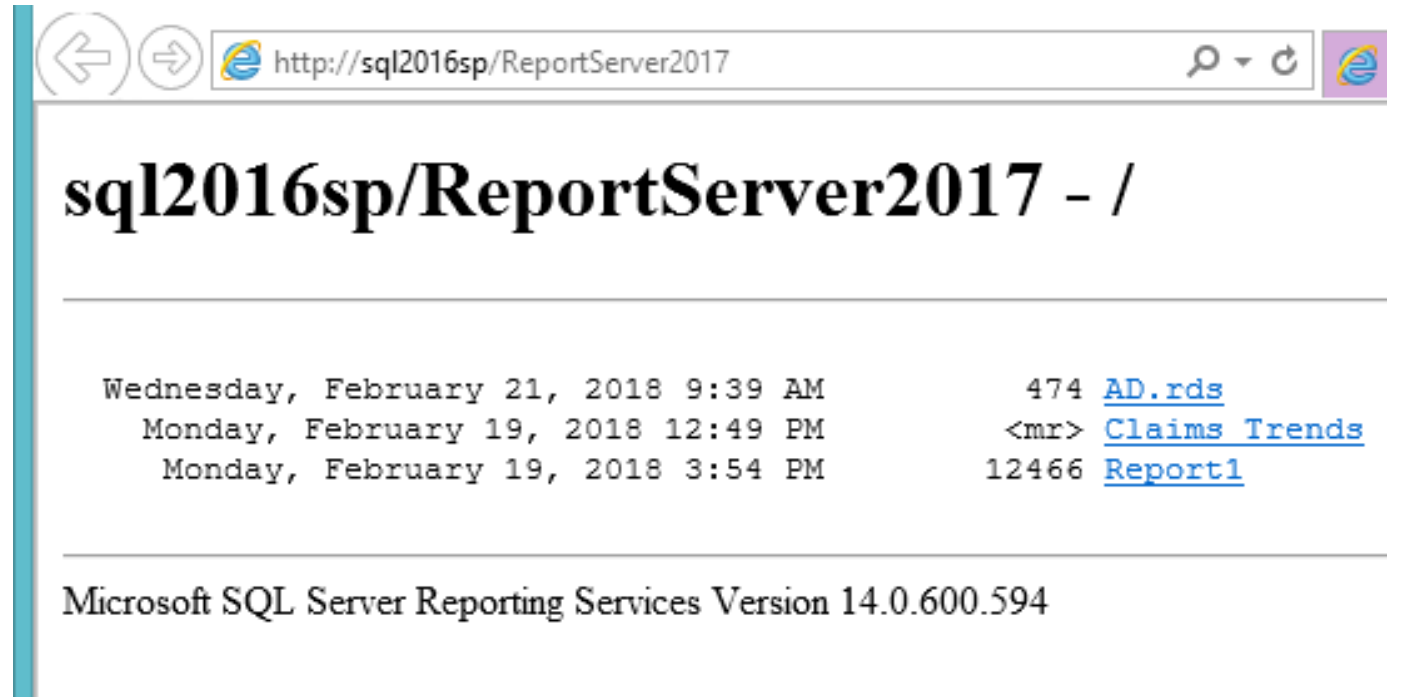
Add-SPSolution –LiteralPath "{path to file}\ReportViewerWebPart.wsp"

Install-SPSolution –Identity ReportViewerWebPart.wsp - CompatibilityLevel "14,15" -GACDeployment - WebApplication {URL to web application}



SSRS 2017

- Now, It is a standalone application as like Power BI Report Server.
- It can't be installed on Domain Controller machine
- Only one instance is possible in a machine.



Demo

- Virtual Network
- End User SharePoint SSRS Report
- EUM Admin Page
- EUM Landing Page
- SQL Server Reporting Service Native Mode – Report Viewer web part
- RLS Report
- RLS Database

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Q & A



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THANK
YOU

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