Configuring an IBM Domino Web server to use SAML-based single sign-on
Open Mic

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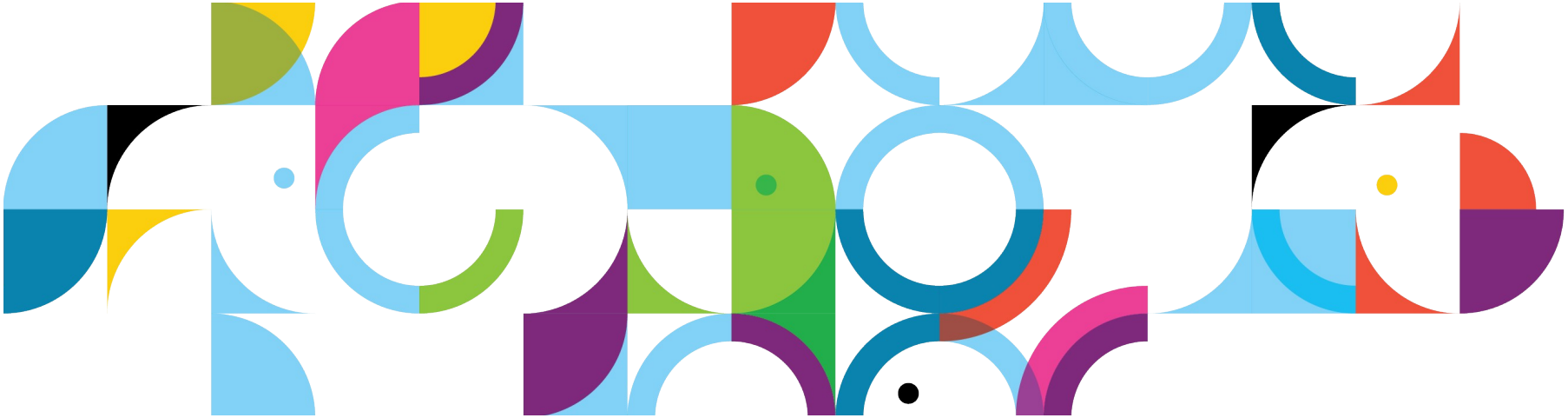
IBM Collaboration Solutions



Agenda

- What is SAML
- SAML Concepts
- Benefits and Restrictions
- SAML Exchange
- Configuring SAML in Domino
- Debugging SAML on Domino
- Resource Links

- Q&A

What is SAML (Secure Assertion Markup Language)

- Method of exchanging authentication and authorization between two parties using an XML based open standard.
- Product of OASIS that began with SAML 1.0 (2002), SAML 1.1 (2003) and SAML 2.0 (2005)
- Key parties of SAML
  - Identity Provider (IdP)
    - Tivoli Federated Identity Manager (TFIM)
    - Active Directory Federation Services (ADFS)
  - Service Provider (SP)
    - Domino
  - Client
    - Browsers
- Link to SAML 2.0 Specifications
  - https://www.oasis-open.org/committees/download.php/27819/

SAML Concepts

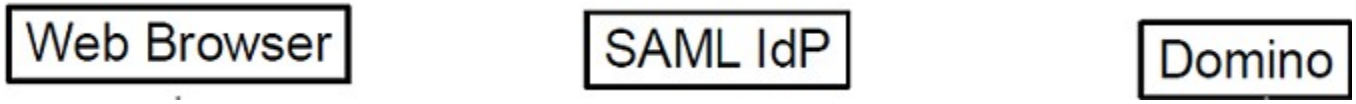
- Identity Provider
  - Performs the authentication with the client
  - Maintain the user's information
  - Maintain the list of relying parties
  - Creates the Assertions
- Assertion
  - User information represented in a XML format
  - Secured by PKI-based encryption pre-exchanged between IdP and SP
- Service Provider
  - Check for validity of the Assertion
  - Process the Assertion to identify the user
  - Provides application service

Benefits and Restriction

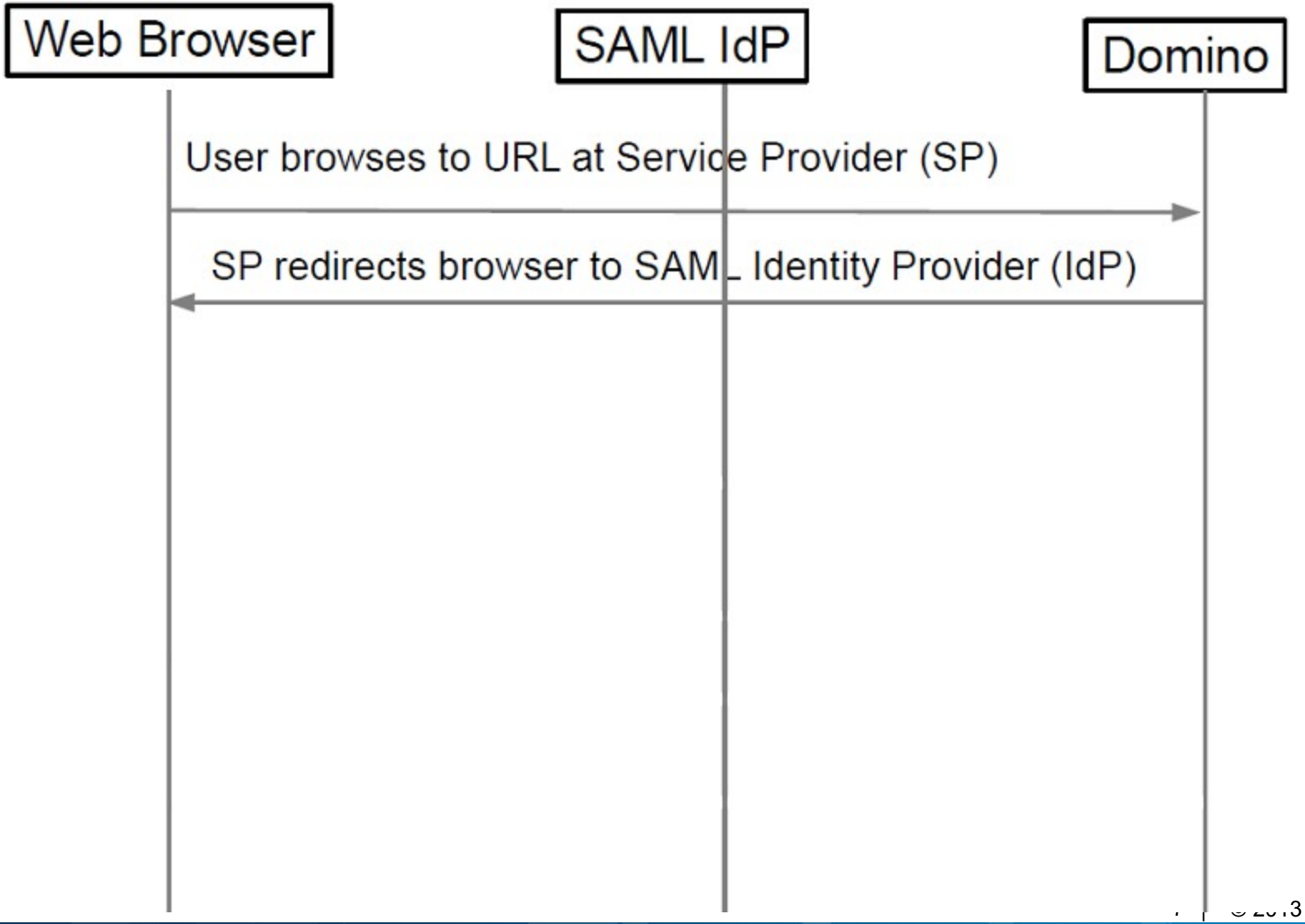
- Benefits
  - Provides a single sign on experience across multiple platforms
  - Reduces the need for users to manage multiple username/password
  - Reduces the administrative cost for maintaining multiple directories
  - Reduces user data redundancy

- Restrictions
  - Notes Domino version 9.0 +
  - SAML 1.1 or SAML 2.0
  - TFIM or ADFS
  - Client devices that can work with SAML exchange

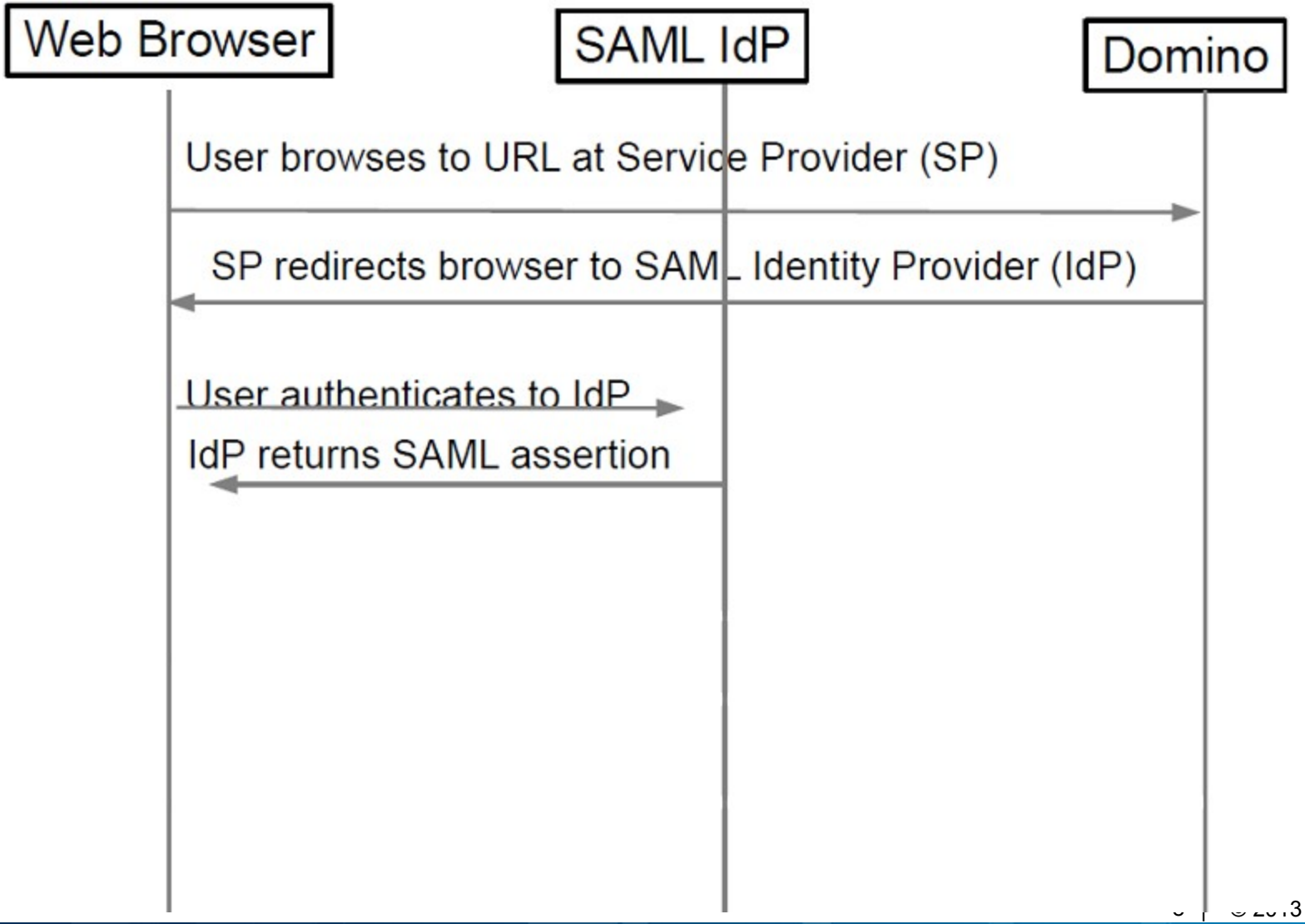
SAML exchange



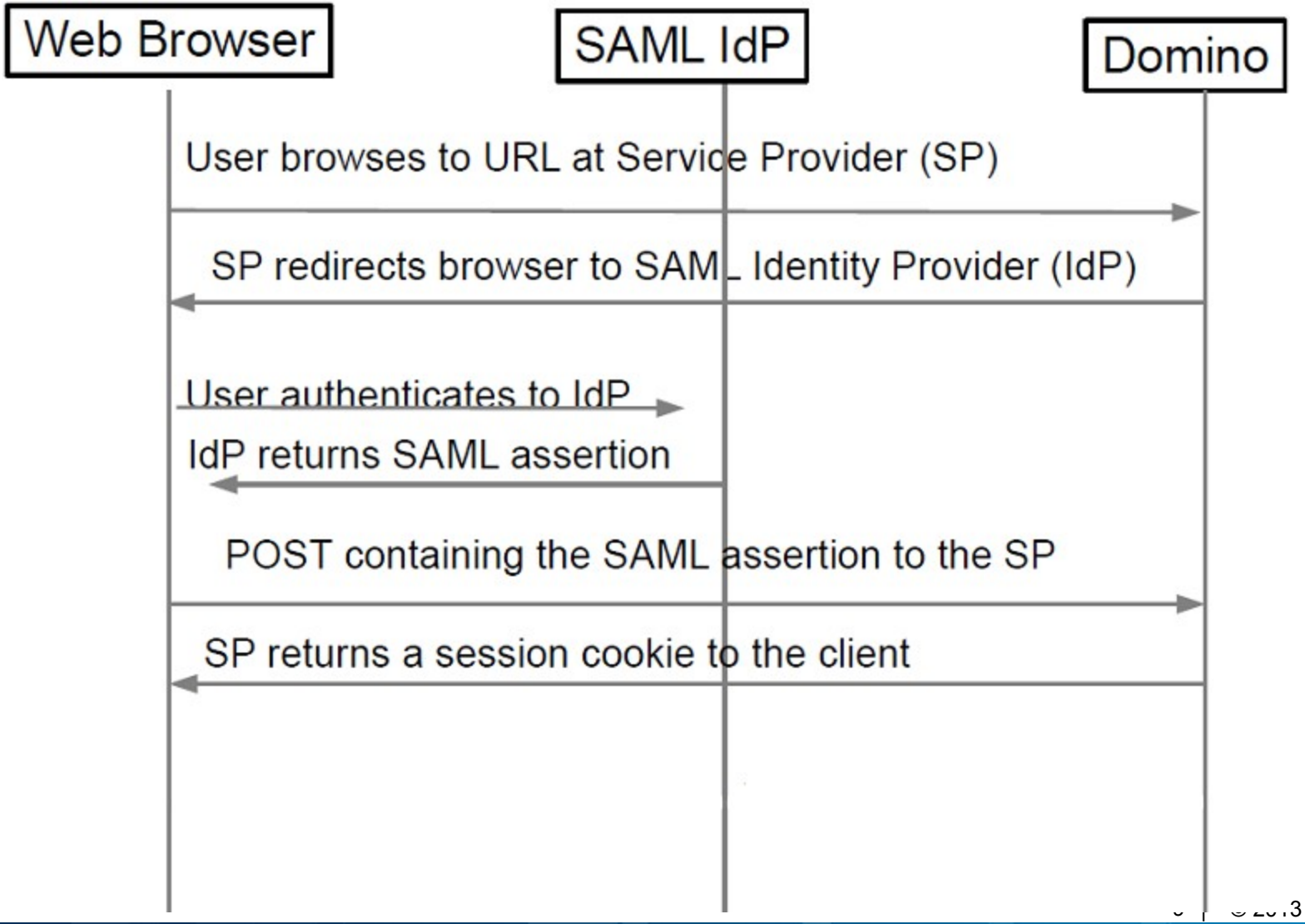
SAML exchange



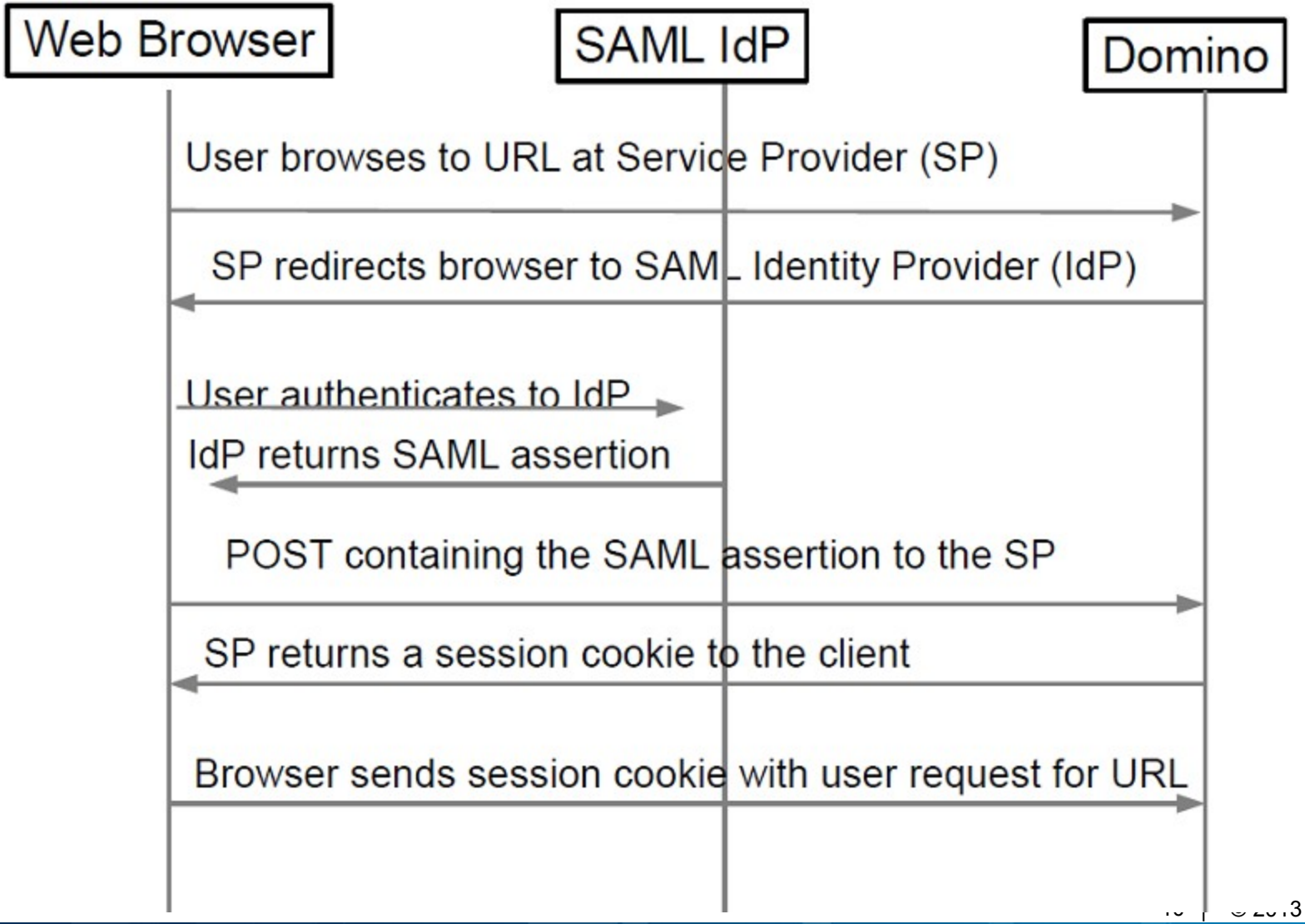
SAML exchange



SAML exchange

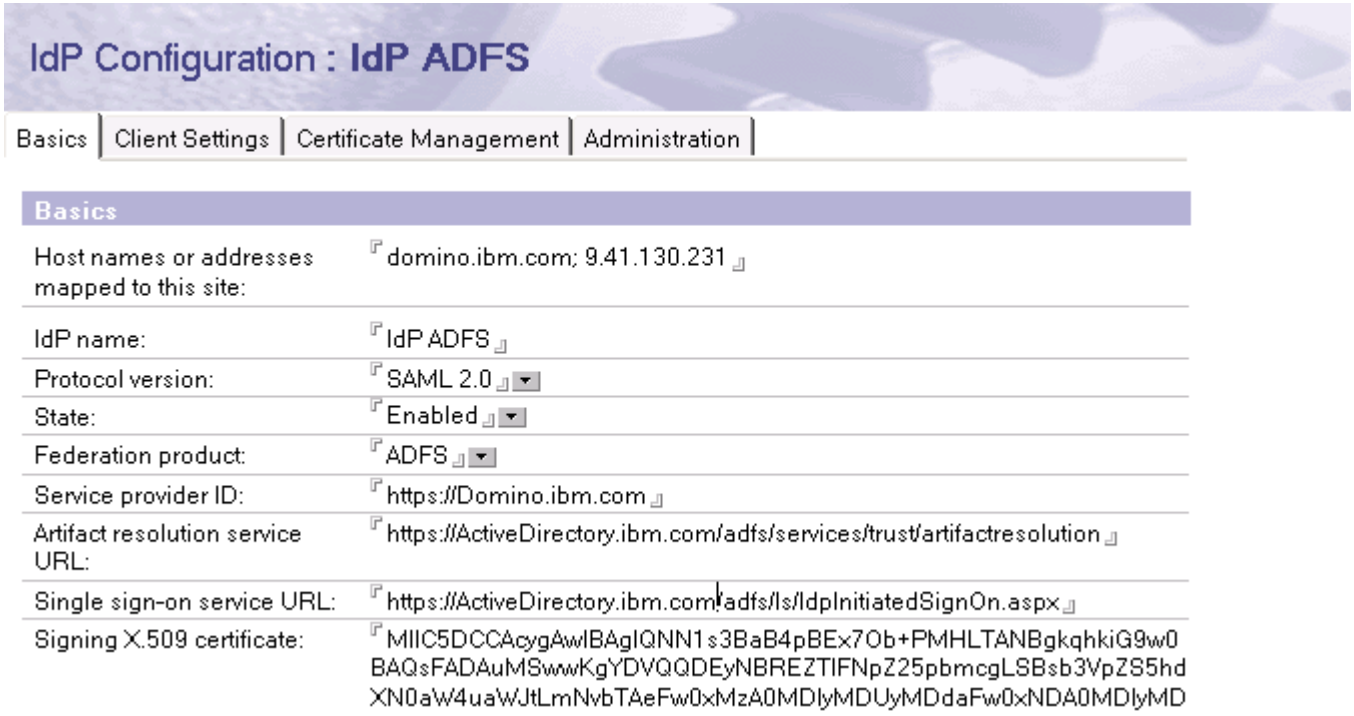


SAML exchange



Configuring SAML on Domino

- Export the IdP's configuration.
- Create and idpcat.nsf based on the IdP Catalog template
- Create the IdP Config document and import the IdP Configuration



IdP Configuration : **IdP ADFS**

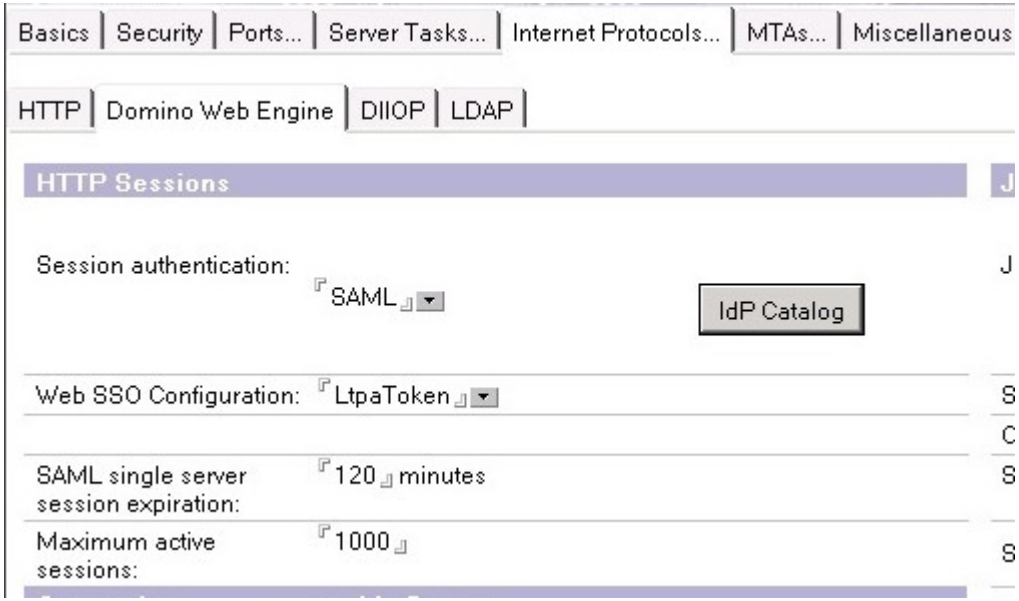
Basics | Client Settings | Certificate Management | Administration

Basics

Host names or addresses mapped to this site:	domino.ibm.com; 9.41.130.231
IdP name:	IdP ADFS
Protocol version:	SAML 2.0
State:	Enabled
Federation product:	ADFS
Service provider ID:	https://Domino.ibm.com
Artifact resolution service URL:	https://ActiveDirectory.ibm.com/adfs/services/trust/artifactresolution
Single sign-on service URL:	https://ActiveDirectory.ibm.com/adfs/ls/IdpInitiatedSignOn.aspx
Signing X.509 certificate:	MIIC5DCCAcygAwIBAgIQNN1s3BaB4pBEx7Ob+PMHLTANBgkqhkiG9w0BAQsFADAuMSwwKgYDVQQDEyNBREZTIFNpZ25pbmcgLSBsb3VpZS5hdXN0aW4uaWJtLmNvbTAeFw0xMzA0MDIyMDUyMDdaFw0xNDA0MDIyMD

Configuring SAML on Domino

- Configure the server to use the new SAML session based authentication
  - You can either populate the Web SSO configuration in a multi server environment or leave it blank for a single server environment



Debugging SAML on Domino

- 0x0001 (1) /* Debug output contains information from http side. */
- 0x0002 (2) /* Debug output contains SAML parse information. */
- 0x0004 (4) /* Debug output only contains errors. */
- 0x0008 (8) /* Debug to dump decoded assertion. */
- 0x0010 (16) /* Debug to trace idpcat activity */
- Example:
  - DEBUG_SAML = 31
- 0x0020 (32) /* Trace replay prevention */
- 0x0080 (128) /* Dump the entire XML tree */
- 0x0100 (256) /* Dump canonicalized buffers */
- 0x0200 (512) /* Debug for the library sort */
- 0x0800 (2048) /* Debug for namespace use */
- 0x2000 (8192) /* Debug output for certificate management */

Debugging SAML on Domino

- Example of Debug_SAML=15

```
[1284:000A-0B78] Decoded SAML assertion:
[1284:000A-0B78] <samlp:Response ID="_5984a166-e4ee-4008-b98f-0ea4e806638b" Version="2.0" IssueInstant="2013-08-0
[1284:000A-0B78] <samlp:Response ID="_5984a166-e4ee-4008-b98f-0ea4e806638b" Version="2.0" IssueInstant="2013-08-0
[1284:000A-0B78] [The previous line was truncated]
[1284:000A-0B78]   <Issuer xmlns="urn:oasis:names:tc:SAML:2.0:assertion">
[1284:000A-0B78]     http://louie.austin.ibm.com/adfs/services/trust
[1284:000A-0B78]   </Issuer>
[1284:000A-0B78]   <samlp:Status>
[1284:000A-0B78]     <samlp:StatusCode Value="urn:oasis:names:tc:SAML:2.0:status:Success" />
[1284:000A-0B78]   </samlp:Status>
[1284:000A-0B78]   <Assertion ID="_313e3a8f-58f4-45d8-9fb9-7f94518ca1c6" IssueInstant="2013-08-09T03:18:22.829Z"
[1284:000A-0B78]     <Issuer>
[1284:000A-0B78]       http://louie.austin.ibm.com/adfs/services/trust
[1284:000A-0B78]     </Issuer>
[1284:000A-0B78]     <ds:Signature xmlns:ds="http://www.w3.org/2000/09/xmldsig#">
[1284:000A-0B78]       <ds:SignedInfo>
[1284:000A-0B78]         <ds:CanonicalizationMethod Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
[1284:000A-0B78]         <ds:SignatureMethod Algorithm="http://www.w3.org/2001/04/xmldsig-more#rsa-sha256" />
[1284:000A-0B78]         <ds:Reference URI="#_313e3a8f-58f4-45d8-9fb9-7f94518ca1c6">
[1284:000A-0B78]           <ds:Transforms>
[1284:000A-0B78]             <ds:Transform Algorithm="http://www.w3.org/2000/09/xmldsig#enveloped-signature" />
[1284:000A-0B78]             <ds:Transform Algorithm="http://www.w3.org/2001/10/xml-exc-c14n#" />
[1284:000A-0B78]           </ds:Transforms>
[1284:000A-0B78]           <ds:DigestMethod Algorithm="http://www.w3.org/2001/04/xmlenc#sha256" />
[1284:000A-0B78]           <ds:DigestValue>
[1284:000A-0B78]             e1qFCBTSmHki0nqu80YI2YyJIOVyxqhOGebeLv0OjSY=
[1284:000A-0B78]           </ds:DigestValue>
[1284:000A-0B78]         </ds:Reference>
[1284:000A-0B78]       </ds:SignedInfo>
[1284:000A-0B78]       <ds:SignatureValue>
[1284:000A-0B78]         SBijvohwQu2g1hAQf+s4DBHcmHfm1YZuCcP/jH+g1dRDlksxhCqX7SzCJU5XIQDt/tmKidftkQtXMCZPBqzF6Nvl
[1284:000A-0B78] [The previous line was truncated]
[1284:000A-0B78]       </ds:SignatureValue>
[1284:000A-0B78]       <KeyInfo xmlns="http://www.w3.org/2000/09/xmldsig#">
[1284:000A-0B78]         <ds:X509Data>
[1284:000A-0B78]           <ds:X509Certificate>
[1284:000A-0B78]             MIIC5DCCAcygAwIBAgIQNN1s3BaB4pBEx7Ob+PMHLTANBgkqhkiG9w0BAQsFADAuMSwwKgYDVQQDEyNBREZT
[1284:000A-0B78] [The previous line was truncated]
```


Resource Links

- OASIS
  - https://www.oasis-open.org/
- Cookbooks
  - http://www-01.ibm.com/support/docview.wss?uid=swg21614543
    - Setting up TFIM (1.1 and 2.0)
    - Configuring Relying parties for TFIM
    - Setting up ADFS
    - Configuring Relying parties for ADFS

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