ComponentSpace
SAML for ASP.NET
Office 365
Integration Guide

www.componentspace.com

Contents

Introduction

This document describes integration with Office 365.

For information on configuring Office 365 for SAML SSO, refer to the following articles.

https://www.microsoft.com/en-us/download/details.aspx?id=42041

https://msdn.microsoft.com/en-us/library/azure/dn641269.aspx

Office 365 is configured using Windows PowerShell cmdlets.

To download the cmdlets and for further information, refer to the following articles.

https://docs.microsoft.com/en-au/powershell/module/MSOnline

https://docs.microsoft.com/en-us/powershell/module/msonline/set-msoldomainauthentication

Configuring a Domain for SAML SSO

Office 365 supports one or more domains that may be added through the administration portal.

Once added, run the Set-MsolDomainAuthentication PowerShell cmdlet to configure single sign on for the domain.

The following example demonstrates using this cmdlet.

For convenience, it's recommended this is included in a PowerShell .ps1 script file.

```
# Configure Office 365 SSO

# Prompt for the administrator's credentials
$cred=Get-Credential
Connect-MsolService -Credential $cred

$domain = "componentspace.com"
$issuer = "https://ExampleIdentityProvider"
$ssoUrl = "https://localhost:44313/SAML/SingleSignOnService"
$logoffUrl = "https://localhost:44313/SAML/SingleLogoutService"
$cert =
"MIIDATCCAemgAwIBAgIQdPDr/iI1jbhDMTj5VYya+TANBgkqhkiG9w0BAQsFADAWMRQwEgYDVQ
QDEwt3d3cuaWRwLmNvbTAeFw0xMzExMjIwODIwNTJaFw00OTEyMzExNDAwMDBaMBYxFDASBg
NVBAMTC3d3dy5pZHAuY29tMIIBIjANBgkqhkiG9w0BAQEFAAOCAQ8AMIIBCgKCAQEAi0XJRLDrcbS
yqUd8XG4BgxObQMYLAkENlmJOsAEpl1xMabUiq1X4v0Fc8ZaCpUE3fFGENMEWgBjnQUUE0WtVUh
5JPMsukolf9qljbJkCkvHXH3O4Uen7vA2oNQWt4bK96SpXADpZKFvpk4D7btKOgU/NamjiqwHI4fI8kF
JKwKBJchRPUQdC4ljRRmGIrSnpY+t25/d3KGXwbe9Z2MGGy2hyA0tgOWuchIK+1vAKKBUh9nDEXfr8
0+xW680w5TqHyDcqbWvQsXXhH0yZLfINKNS6/IojHPsBy7tf36Ck9H5Pw+1PPu6NzBFSz5ZkC8KzrS6
vuZXc/ImYrnheMQsqqQIDAQABo0swSTBHBgNVHQEEQDA+gBD4dY4MCPEmG4sxZrcni8vtoRgwFjE
UMBIGA1UEAxMLd3d3LmlkcC5jb22CEHTw6/4iNY24QzE4+VWMmvkwDQYJKoZIhvcNAQELBQADgg
EBABhak2aR84MCdyXO4AKOQvZybsCMdhRq2i1i0WhD4/xe7Ry5haC6TeXIp8Q4cC3MzsrDal74xHI7
14BW0loafpHAsXfd9EvkKTVaJ+1Zpe16+SsTL4upS1cGydigqwUzsdpGck4wI1moJ9477O+46lf2gF27u
9Cdk7Onxe/5dwLIxWmkVRdbQIH5GsKUeAjOdRQmy+X1MX6KyRoaCwWGYwxi5Sa+r+3AtDvD4BX0
EJGKFZeeM3J/yMpYh/75aN0cFQfDEdJ7C5NE0vonidE0QtIFvsoWtZUtur2fiW7yBxse38TPQsi2r6A6c
/TZsZ5bq31yh3gr3kSN62H8iVKLQLA="
```

```
Set-MsolDomainAuthentication -FederationBrandName $domain -DomainName $domain -
Authentication federated -PreferredAuthenticationProtocol SAMLP -IssuerUri $issuer -
SigningCertificate $cert -PassiveLogOnUri $ssoUrl -LogOffUri $logoffUrl –Verbose
```

The Set-MsolDomainAuthentication cmdlet configures authentication for the domain.

The "-Authentication federated" parameter specifies to use single sign on.

The "-PreferredAuthenticationProtocol SAMLP" parameter specifies to use the SAML protocol rather than WS-Federation.

$domain

The $domain is a domain name configured in Office 365.

$issuer

The $issuer is the identity provider's name. This name must match with the local identity provider name. For example, if the LocalIdentityProviderConfiguration Name is https://ExampleIdentityProvider, then the $issuer must be set to the same value.

Office 365 restricts the issuer to a single domain. If the issuer is already defined for a domain, an "Unable to convert the domain. The settings you selected are already in use." error occurs.

$ssoUrl

The $ssoUrl is the identity provider's SSO service URL. In browser-based SP-initiated SSO, Office 365 will send an authentication request to this endpoint.

$logoffUrl

The $logoffUrl is the identity provider's SLO service URL.

$cert

The $cert is the identity provider's base-64 encoded certificate. Office 365 will use this certificate to verify signed SAML assertions from the identity provider.

Confirming a Domain's SSO Settings

Run the Get-MsolDomainFederationSettings cmdlet to confirm a domain's SSO settings.

```
$domain = "componentspace.com"
Get-MsolDomainFederationSettings -DomainName $domain
```

Run the Get-MsolDomainFederationSettings cmdlet to list the domains and their authentication methods.

```
Get-MsolDomain
```

Updating a Domain's SSO Settings

If the federation settings are to be updated, the authentication method must first be reset to managed.

The following example cmdlet resets the domain to managed.

```
$domain = "componentspace.com"
Set-MsolDomainAuthentication -DomainName $domain -Authentication Managed
```

Once reset, run the Set-MsolDomainAuthentication cmdlet to configure single sign on for the domain.

Adding a User

Run the New-MsolUser cmdlet to add a user to the domain.

Refer to the Microsoft document for instructions on bulk provisioning.

```
New-MsolUser -UserPrincipalName test@componentspace.com -ImmutableId 12345678 -
FirstName Test -LastName User -DisplayName "Test User" -LicenseAssignment
"componentspaceau:ENTERPRISEPACK" -usageLocation US
```

UserPrincipalName

The UserPrincipalName is the primary user identity.

ImmutableId

The ImmutableId is uniquely identifies the user.

LicenseAgreement

The LicenseAssignment assigns licenses to the user. Use the Get-MsolAccountSku cmdlet to select a value for the license assignment.

Immutable Identifier

The immutable identifier uniquely and permanently identifies a user.

The SAML response sent by the identity provider includes the immutable identifier as the subject name identifier in the SAML assertion. The user principal name is included as the IDPEmail SAML attribute. Both these values must match with the Office 365 configuration for single sign on to be successful.

For user information stored in Active Directory, the user's object GUID (objectGUID attribute) may be used as the immutable identifier.

For user information stored in a database or some other user registry, a unique identifier must be assigned as the immutable identifier.

In the example identity provider, a fixed immutable identifier is used.

Confirming a User's Settings

Run the Get-MsolUser to confirm a user's settings.

```
Get-MsolUser -UserPrincipalName test@componentspace.com
```

Additional details, including the immutable identifier, may be retrieved using a PowerShell select.

```
Get-MsolUser -UserPrincipalName test@componentspace.com | select UserPrincipalName,
ImmutableId, FirstName, LastName
```

Updating a User

Users may be updated by using the PowerShell Set-MsolUser cmdlet.

```
Set-MsolUser -UserPrincipalName test@componentspace.com -ImmutableId 12345678
```

Deleting a User

During testing, it may be necessary to delete and reconfigure users in Office 365.

Users may be deleted using the Office 365 administration portal or by using the PowerShell Remove-MsolUser cmdlet.

```
Remove-MsolUser -UserPrincipalName test@componentspace.com
```

Deleting a user moves the user to the Office 365 recycle bin. To create a user with the same name, the user first must be removed from the recycle bin. This requires the object identifier associated with the user.

The Get-MsolUser cmdlet is used to retrieve the object identifier.

```
Get-MsolUser -ReturnDeletedUsers -SearchString test@componentspace.com | select
UserPrincipalName, ObjectId
```

The Remove-MsolUser cmdlet is used to delete the user from the recycle bin.

```
Remove-MsolUser -RemoveFromRecycleBin –ObjectId 67d6bdaa-b312-41b9-b8d0-8311dabc07ed
```

Office 365 SAML Metadata

Metadata may be downloaded from:

https://nexus.microsoftonline-p.com/federationmetadata/saml20/federationmetadata.xml

Identity Provider Configuration

The following partner service provider configuration is included in the example identity provider's SAML configuration.

```
<PartnerServiceProvider
  Name="urn:federation:MicrosoftOnline"
  Description="Office 365"
  SignAssertion="true"
  NameIDFormat="urn:oasis:names:tc:SAML:2.0:nameid-format:persistent"
  AuthnContext="urn:oasis:names:tc:SAML:2.0:ac:classes:PasswordProtectedTransport"
  AssertionConsumerServiceUrl="https://login.microsoftonline.com/login.srf"
  SingleLogoutServiceUrl="https://login.microsoftonline.com/login.srf">
  <PartnerCertificates>
    <Certificate FileName="Certificates\office365.cer"/>
  </PartnerCertificates>
</PartnerServiceProvider>
```

Some of this information was extracted from the Office 365 SAML metadata.

The two partner certificate files correspond to the two signing certificates included in the metadata.

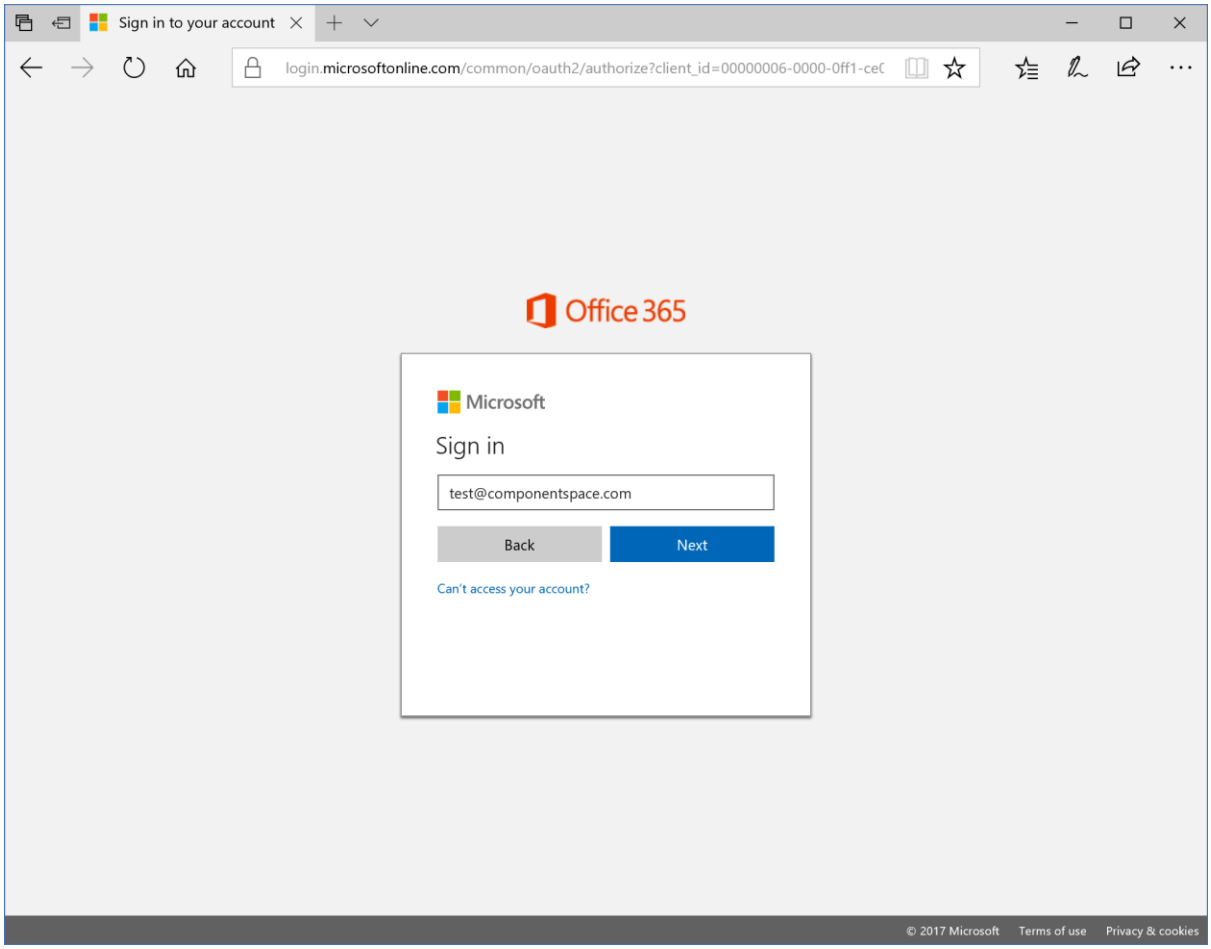
Ensure the PartnerName specifies the correct partner identity provider.

```
<add key="PartnerName" value="urn:federation:MicrosoftOnline"/>
```

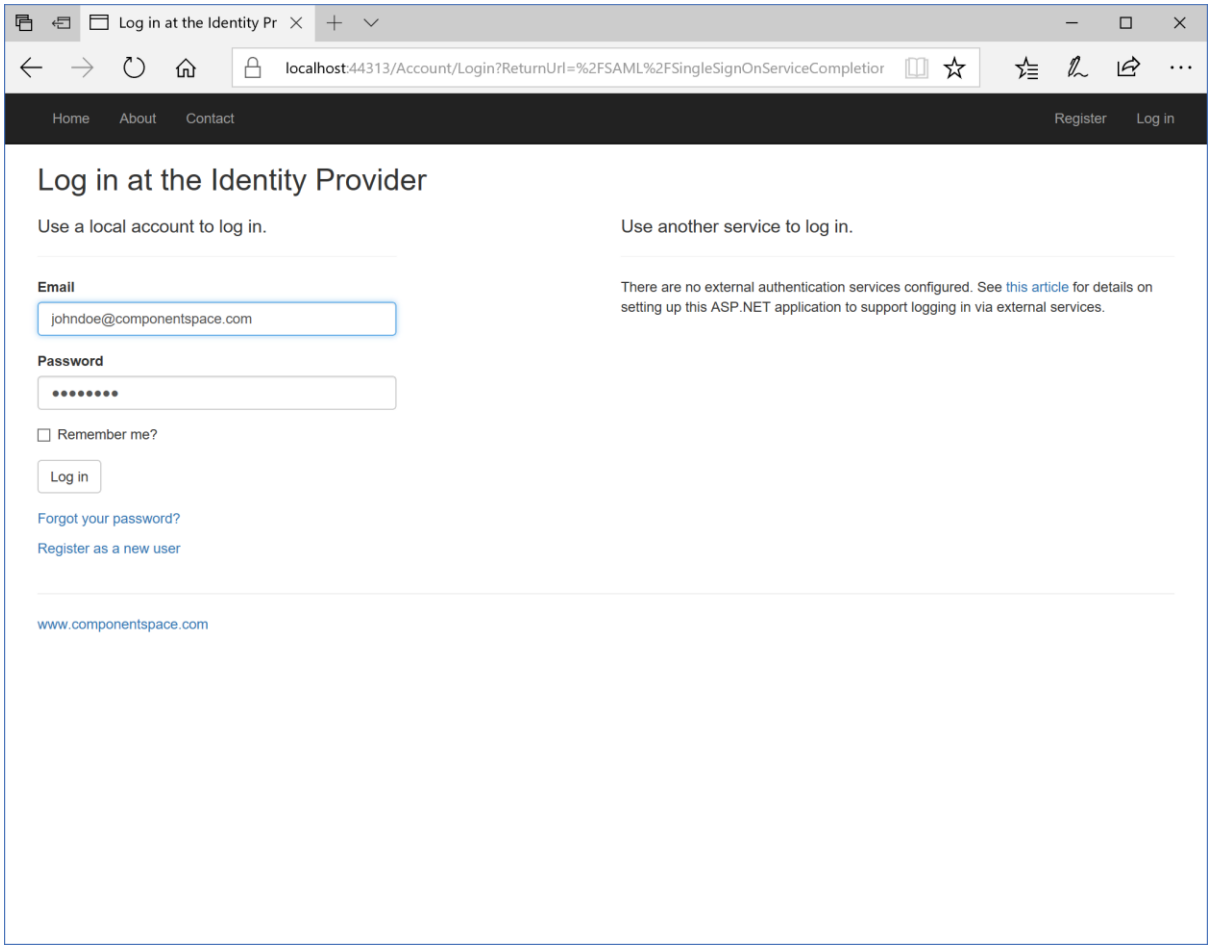
SP-Initiated SSO

Browse to https://portal.microsoftonline.com.

Specify a user with a federated domain name (e.g. test@componentspace.com).

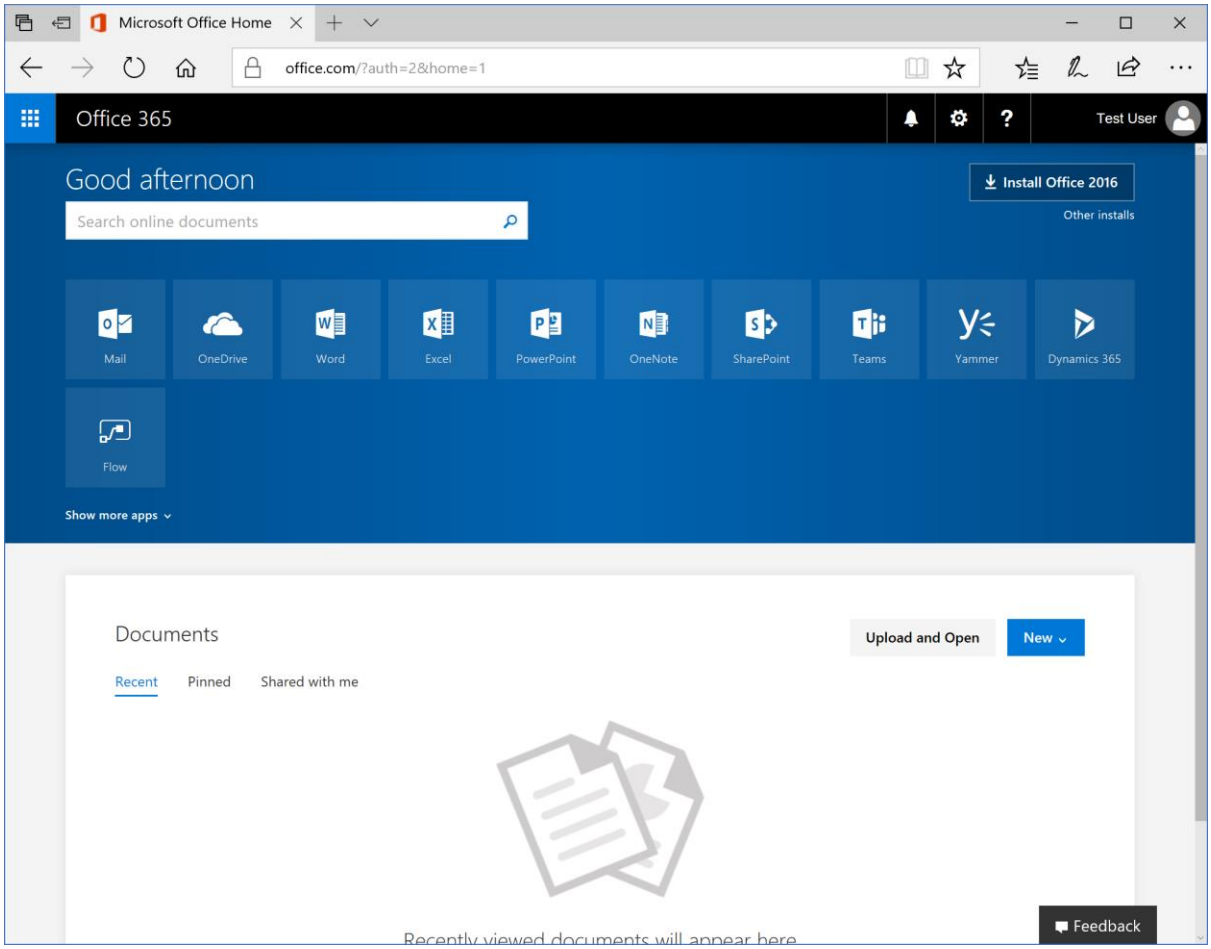


Office 365 passes control to the identity provider.



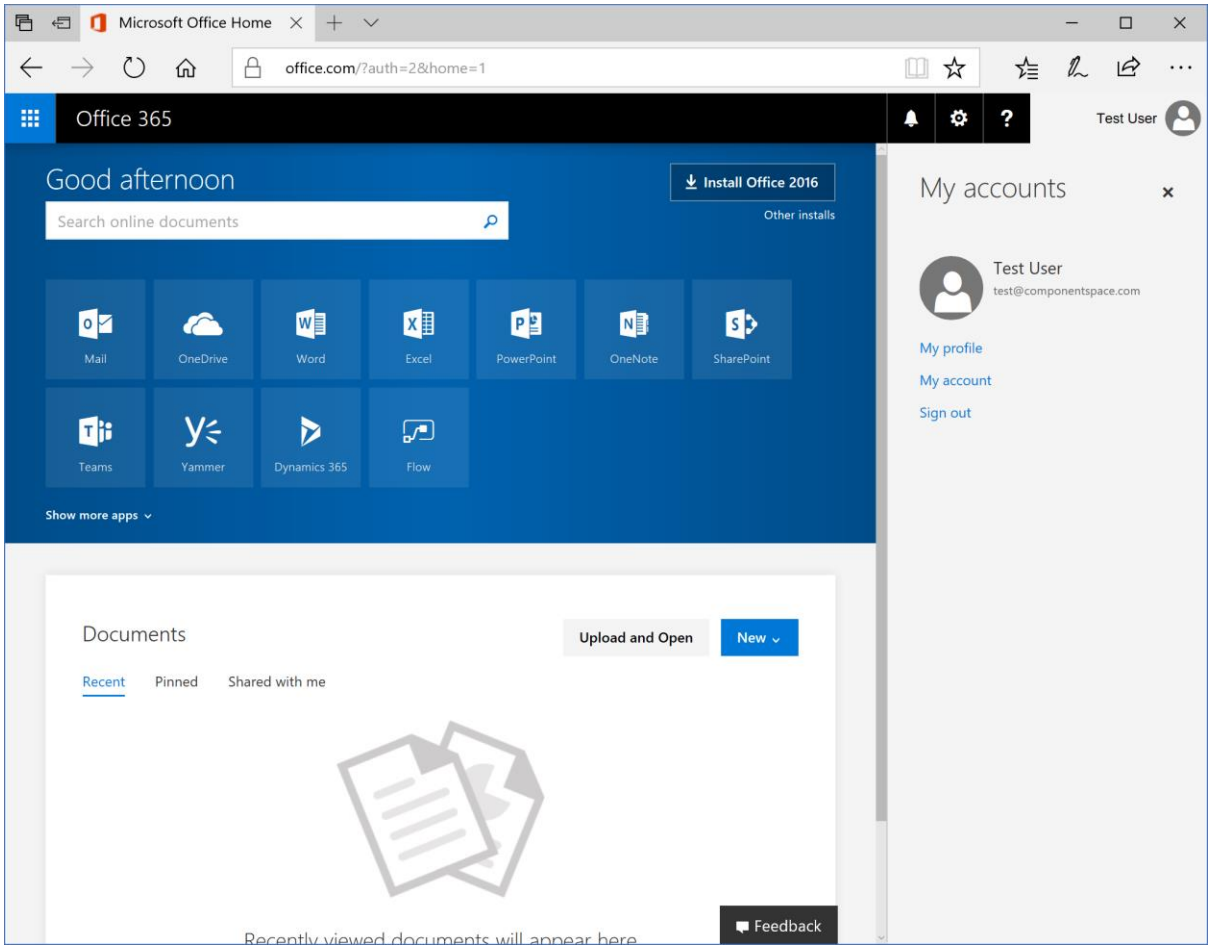
Login at the identity provider.

The identity provider returns control to Office 365 where the user is automatically logged in.



SP-Initiated SLO

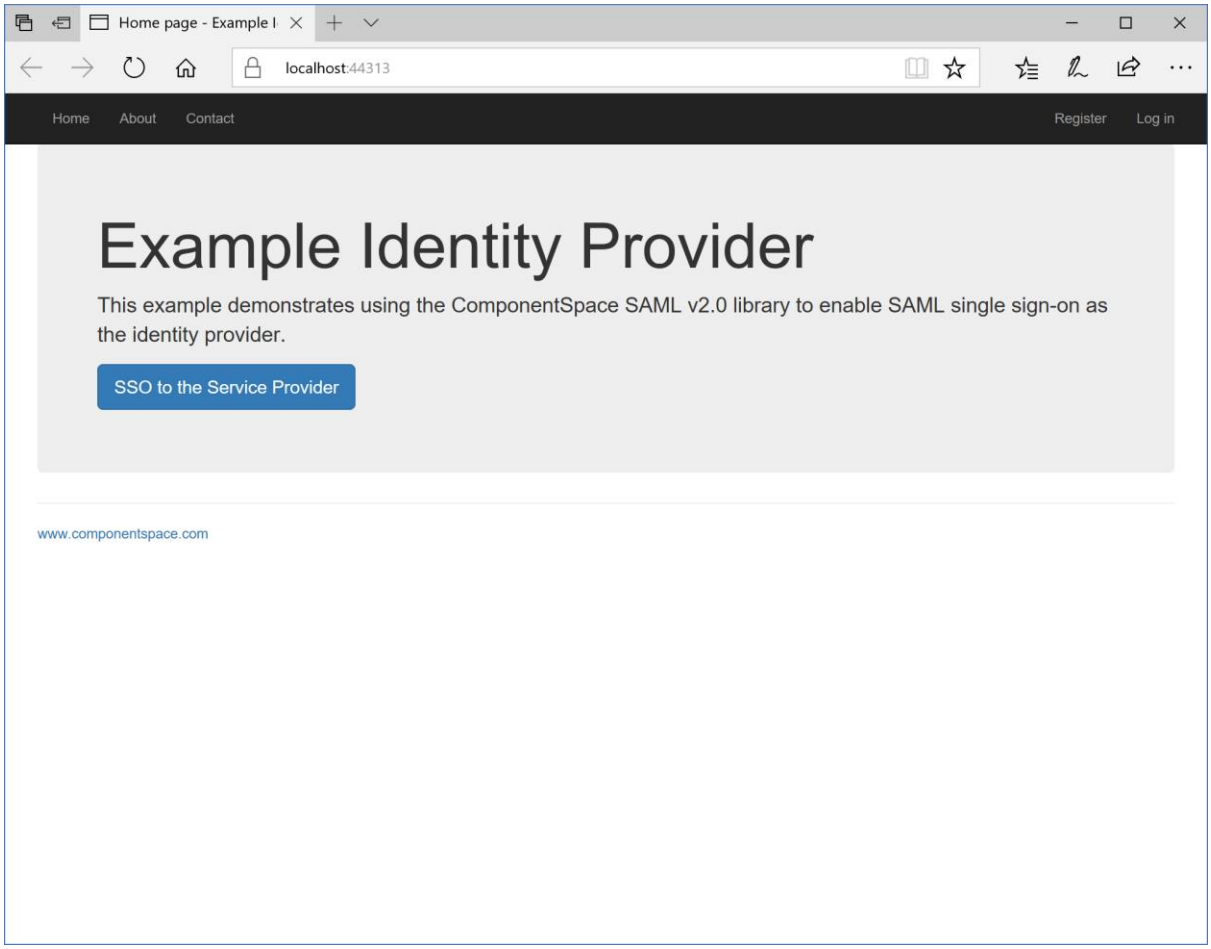
Logout from Office 365.



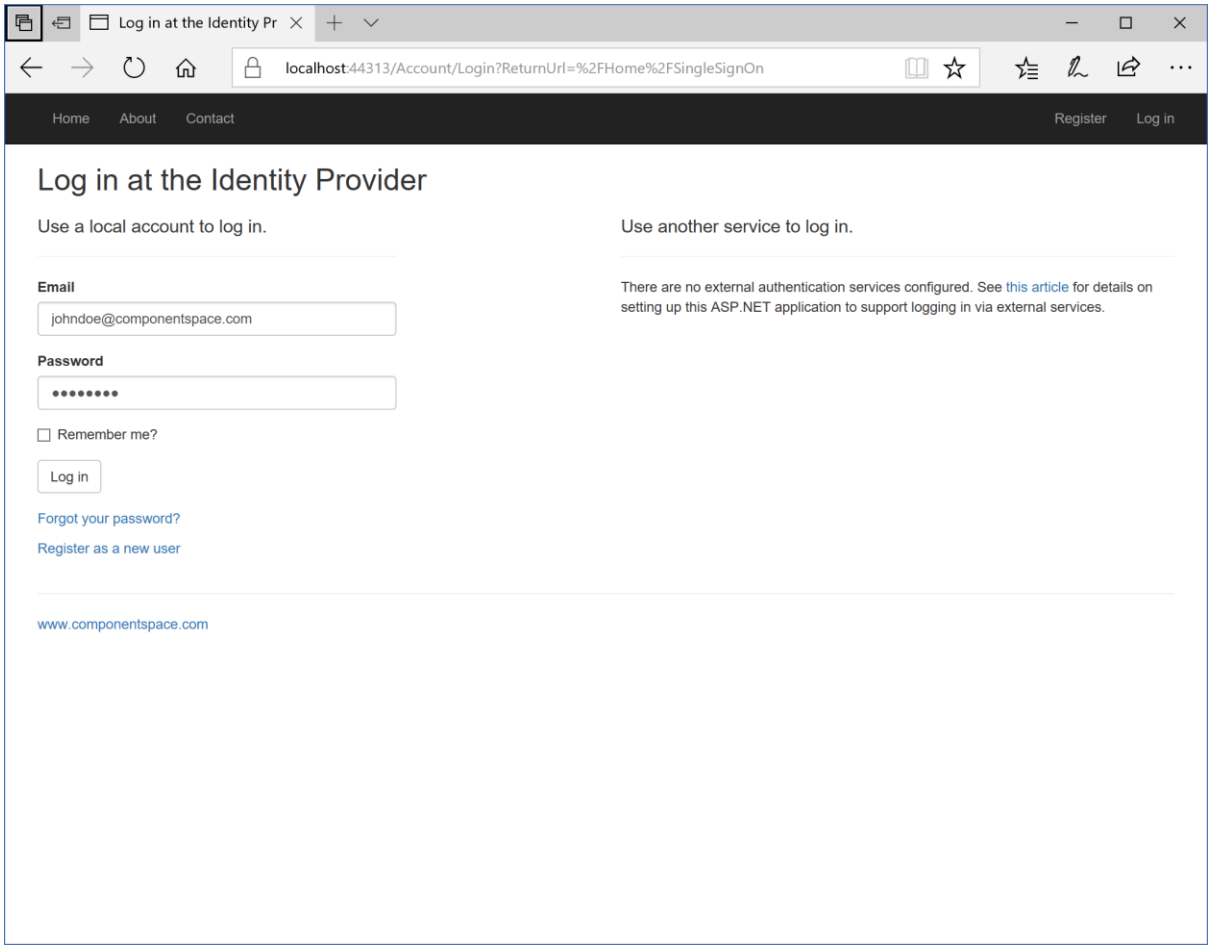
The user is also logged out from the identity provider.

IdP-Initiated SSO

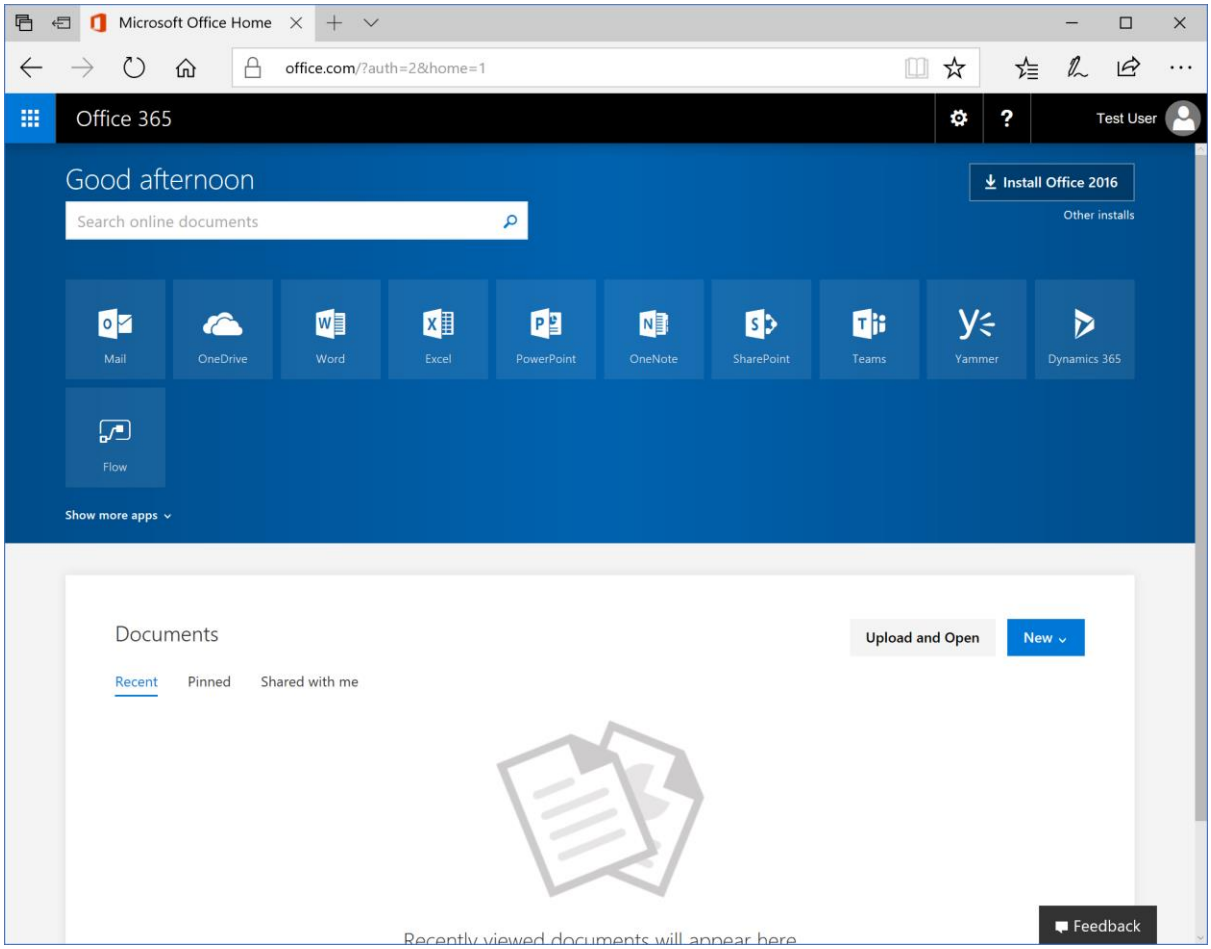
Browse to the identity provider.



Click the button to SSO.

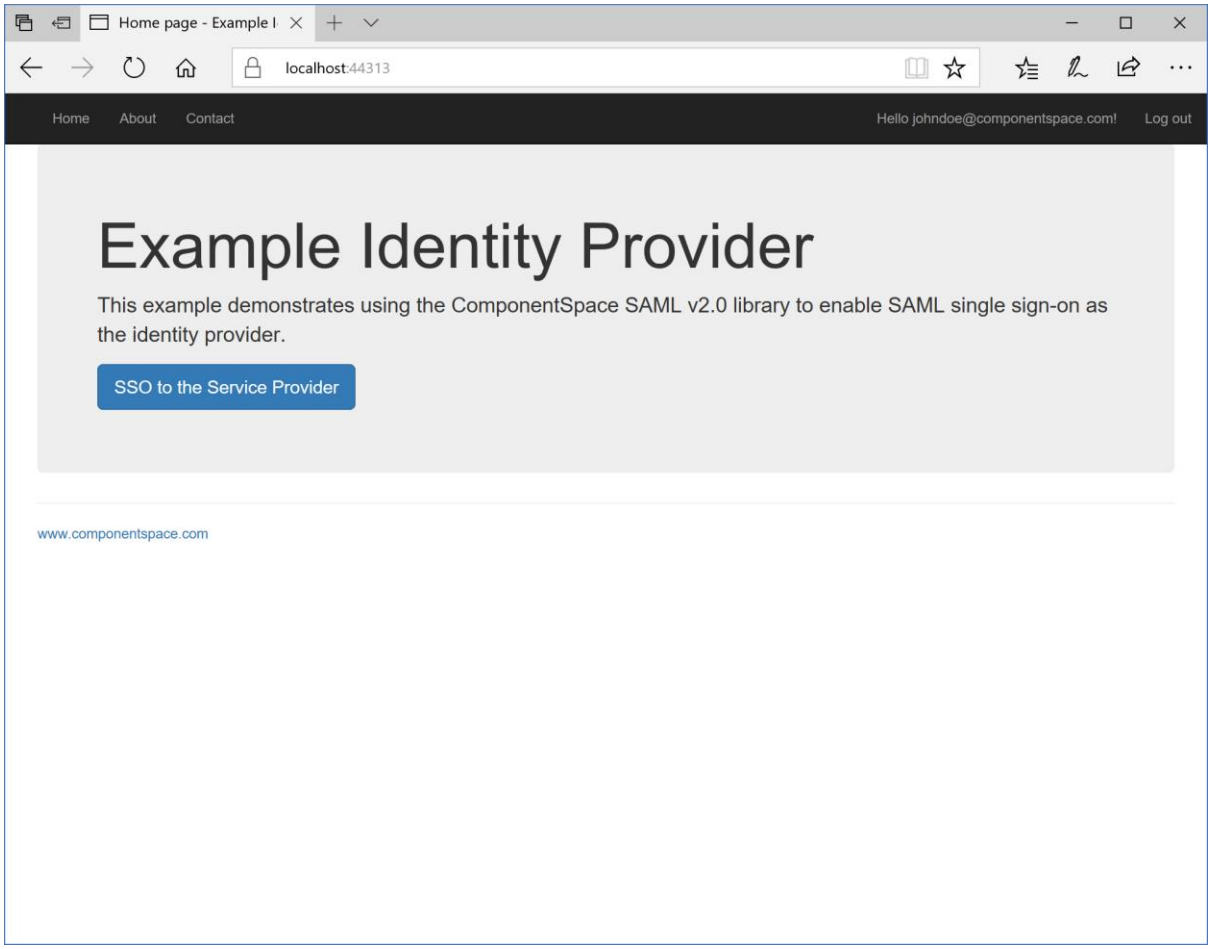


Login and control passes to Office 365 where the user is automatically logged in.



IdP-Initiated SLO

Browse to the identity provider and logout.



Control passes to Office 365 but the user is not logged out.

This is a limitation in Office 365 of a less frequently used scenario.

The user should close the browser to ensure successful logout.