通過與Azure AD整合的SAML SSO配置ISE 3.1 ISE GUI管理員登入流

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簡介

本文檔介紹如何配置Cisco ISE 3.1 SAML SSO與外部身份提供程式(如Azure Active Directory(AD))的整合。

必要條件

需求

思科建議您瞭解以下主題:

- 1. Cisco ISE 3.1
- 2. SAML SSO部署
- 3. Azure AD

採用元件

本文中的資訊係根據以下軟體和硬體版本:

1. Cisco ISE 3.1

2. Azure AD

本文中的資訊是根據特定實驗室環境內的裝置所建立。文中使用到的所有裝置皆從已清除(預設))的組態來啟動。如果您的網路運作中,請確保您瞭解任何指令可能造成的影響。

背景資訊

身份提供程式(IdP)

在此案例中,是Azure AD的授權驗證並宣告使用者身份以及對所請求資源(「服務提供商」)的訪 問許可權。

服務提供商(SP)

使用者想要訪問的託管資源或服務,在本例中為ISE應用伺服器。

SAML

安全斷言標籤語言(SAML)是允許IdP向SP傳遞授權憑據的開放標準。

SAML事務使用可擴展標籤語言(XML)在身份提供者和服務提供商之間進行標準化通訊。

SAML是使用者身份身份驗證與授權之間用於使用服務的連結。

SAML斷言

SAML斷言是身份提供方傳送到包含使用者授權的服務提供方的XML文檔。

有三種不同型別的SAML斷言 — 身份驗證、屬性和授權決策。

• 身份驗證斷言可證明使用者的身份,並提供使用者登入的時間以及他們使用的身份驗證方法

(例如,Kerberos,雙因素)

- 歸屬斷言將SAML屬性(提供有關使用者資訊的特定資料段)傳遞給服務提供商。
- 授權決策斷言宣告使用者是否被授權使用服務,或者如果標識提供者由於密碼失敗或缺少對服務的權利而拒絕他們的請求。

高級流程圖

SAML的工作方式是在身份提供程式、Azure AD和服務提供程式ISE之間傳遞有關使用者、登入和 屬性的資訊。

每個使用者通過身份提供程式登入一次一次單點登入(SSO),然後,當使用者嘗試訪問這些服務時 ,Azure AD提供程式將SAML屬性傳遞給ISE。

ISE從Azure AD請求授權和身份驗證,如下圖所示。



配置與Azure AD的SAML SSO整合

步驟 1.在ISE上配置SAML身份提供程式

1.將Azure AD配置為外部SAML標識源

在ISE上,導航到Administration > Identity Management > External Identity Sources > SAML Id Providers,然後點選Add按鈕。

輸入Id Provider Name,然後按一下Submit儲存它。Id Provider Name僅對ISE有效,如下圖所示。

■ Cisco ISE	Administration - Identity Management
Identities Groups External Ident	ity Sources Identity Source Sequences Settings
External Identity Sources	Identity Provider List > Azure SAML Identity Provider
Certificate Authentication F CActive Directory LDAP DOBC	General Identity Provider Config. Service Provider Into. Groups Attributes Advanced Settings * Id Provider Name Azure Description Azure
RADIUS Token RSA SecurID SAMI Id Providers	
Social Login	

2.配置ISE身份驗證方法

導航到Administration > System > Admin Access > Authentication > Authentication Method,然後 選擇Password Based單選按鈕。

從Identity Source下拉選單中選擇先前建立的所需ID提供程式名稱,如下圖所示。

≡ Cisco	SE							Administration • S	ystem
Deployment	Licensing	Certificates	Logging	Maintenance	Upgrade	Health Checks	Backup & Restore	Admin Access	Settings
Authentication		Authenticatio	n Method	Password Policy	Account Disa	ble Policy Lock/	Suspend Settings		
Authorization	>	Authentica	tion Type (D					
Administrators	>								
Settings	>	Password Olient Con	Based						
		* Identity Sou SAML:Azu	rce re	~					

3.匯出服務提供商資訊

導航到Administration > Identity Management > External Identity Sources > SAML Id Providers > [您的SAML提供程式]。

將頁籤切換到Service Provider Info,然後按一下Export按鈕,如下圖所示。

Identity Provider List > Azure_SAML

SAML Identity Provider

	General	Identity Provider Config.	Service Provider Info.	Groups	Attributes	Advanced Settings
	Service Provider Ir	oformation				
	Load balance	r	0			
	Export Service Pro	wider Info. Export (j				
	Includes the	following portals:				
	Sponsor Portal (de	efault)				
٦	⋝載.xml檔案	並儲存。記下Location	URL和entityID值。			
	?xml version md:EntityDes md:SPSSODesc md:KeyDescri ds:KeyInfo x ds:X509Data>	="1.0" encoding="UTF-8 criptor entityID="http riptor protocolSupport ptor use="signing"> cmlns:ds="http://www.wa	B"?> o://CiscoISE/0049a2f Enumeration="urn:oa B.org/2000/09/xmldsi	d-7047-4d1c sis:names:t g#">	l-8907-5a05a94 cc:SAML:2.0:pr	ff5fd" xmlns:md="urn:oasi otocol" WantAssertionsSig
< M Q M	ds:X509Certi IIFTjCCAzagA U1MX2lzZTMtM CUxIzAhBgNVB	ficate> wIBAgINAg2amS1L6NAE8F ISOxOS5ja3VtYXIyLmNvbT4 AMTG1NBTUxfaXN1MyOxLTE	(+tzANBgkqhkiG9w0BAQ AeFw0yMTA3MTkwMzI4MD 55LmNrdW1hcjIuY29tMI	wFADA1MSMwI BaFw0yNjA3M ICIjANBgkqł	QYDVQQDExpT TgwMzI4MDBa hkiG9w0BAQEF	
A 1 G	AOCAg8AMIICC zdKhpwf/BsJe e1HYdlDtE1LM	GKCAgEAvila4+SOuP3j03 SznXyaPVxFcmMFHbmyt46 EcGg1mCd56GfrDcJdX0cZ	ZyCOXnHAzADupfqcgwcp gQ∕jQQEyt7YhyohGOt1o JmiDzizyjGKDdPf+1VM5	lJQnFxhVfnD p01qDGwtOnW JHCo6UNLF11)dOixGRT8iaQ VZGQ+ccvqXSL EFyPmGvcCXnt	
N 9 n	VqsYvxSzF038 h83gL4WJWMiz GGkH5ROgT7v3	ciQqlmOsqrVrrYZuIUAXDW ETO6Vs/D0p6BSf2MPxKe79 CDrdFtRoNYAT+YvO941KzF	VUNUg9pSGzHOFkSsZRPx OOR5TfxFqJD9DnYgCnHm FCSE0sshykGSjgVn31XQ	rQh+3N5DEFF GooVmnSSnDs 5vgDH1PvqNa	FlMzybvm1FYu SAgWebvF1uhZ NYs/PWiCvmI/	
	VKSTDQ/bD71M	11DaOP1PCEkV/ja5WbycV/ja-	MnnTzNnTci ENzl Eugan		2 n cm T n V C W C]	

wYKSTn9/hn7JM1DqOR1PGEkVjg5WbxcViejMrrIzNrIciFNz1FuggaE8tC7uyuQZa2rcmTrXGWC1 sDU4u0vFpFvrcC/lavr9Fnx7LPwXa0asvJd19SPbD+qYgshz9AI/nIXaZdioHzEQwa8pkoNRBwjZ ef+WFC9dWIy+ctbBT0+EM06Xj1aTI1bV80mN/6LhiS8g7KpFz4RN+ag1iu6pgZ5058Zot9gqkpFw kVS9vT4EOzwNGo7pQI8CAwEAAaN9MHswIAYDVRORBBkwF4IVaXN1My0xLTE5LmNrdW1hcjIuY29t oDAdBgNVHSUEFjAUBggrBgEFBQcDAQYIKwYBBQUHAwIwDQYJKoZIhvcNAQEMBQADggIBAIE6mnBL 206Dkb6fHdgKd9goN8N2bj+34ybwxqvDSwGtn4NA6Hy1q7N6iJzAD/7soZfHq0T2UTqZpRF9FsHn CGchSHqDt3bQ7g+GWlvcgreC7R46qenaonXVrltRw11vVIdCf8JQFFMxya/rIC4mxVeoo0j1Fl9d rvDBH+XVEt67DnQWkuLp8zPJUuqfa4H0vdm6oF3uBte0/pdUtEi6f0bqr0wCyWd9Tjq7KXfd2ITW hMxaFsv8wWcVuOMDPkP9xUwwt6qfH0bE51uT4EYVuuHiwMNGbZqqqb+a4uSkX/EfiDVoLSL6KI31 nf/341cuRTJUmDh9g2mppbBwOcxzoUxDm+HReSe+OJhRCyIJcOvUpdNmYC8cfAZuiV/e3wkOBLZM lgV8FTVQSnra9LwHP/PgeNAPUcRPXSwaKE4rvjvMc0aS/iYdwZhZiJ8zBdIBanMv5mGu1nvTEt9K EEwj9ys1IHmdqoH3Em0F0gnzRORvsMPbJxAoTFjfoITTMdQXNHhg+w1POKXS2GCZ29vAM52d8ZCq UrzOVxNHKWKwER/q1GgaWvh3X/G+z1shUQDrJcBdLcZI1WKUMa6XVDj18byhBM7pFGwg4z9YJZGF /ncHcoxFY759LA+m7Brp7FFPiGCrPW8E0v7bUMSDmmg/53NoktfJ1CckaWE87myhimj0 </ds:X509Certificate> </ds:X509Data> </ds:KeyInfo> </md:KeyDescriptor>

<md:NameIDFormat>urn:oasis:names:tc:SAML:2.0:nameid-format:transient</md:NameIDFormat> <md:NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:emailAddress</md:NameIDFormat> <md:NameIDFormat>urn:oasis:names:tc:SAML:2.0:nameid-format:persistent</md:NameIDFormat> <md:NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:unspecified</md:NameIDFormat> <md:NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:WindowsDomainQualifiedName</md:NameIDFormat> <md:NameIDFormat>urn:oasis:names:tc:SAML:2.0:nameid-format:kerberos</md:NameIDFormat> <md:NameIDFormat>urn:oasis:names:tc:SAML:1.1:nameid-format:X509SubjectName</md:NameIDFormat> <md:AssertionConsumerService index="0" Location="https://10.201.232.19:8443/portal/SSOLoginResponse.act <md:AssertionConsumerService index="1" Location="https://ise3-1-19.onmicrosoft.com:8443/portal/SSOLogin">

</md:SPSSODescriptor> </md:EntityDescriptor>

XML檔案中的相關屬性:

entityID="http://CiscoISE/100d02da-9457-41e8-87d7-0965b0714db2"

AssertionConsumerService Location="https://10.201.232.19:8443/portal/SSOLoginResponse.action"

AssertionConsumerService Location="<u>https://ise3-1-</u> <u>19.onmicrosoft.com:8443/portal/SSOLoginResponse.action</u>"

步驟 2.配置Azure AD IdP設定

1.建立Azure AD使用者

登入到Azure Active Directory管理中心儀表板,然後選擇AD,如下圖所示。

Azure Active Directory admin	center			
≪ ☑ Dashboard ☑ All services ★ FAVORITES	Dashboard > Default Directory Default Directory Azure Active Directory «	Overview Switch tenant 🔋 Delete tenant + Co	Treate a tenant 🛛 🏹 What's new 📗 🖽 Previa	ew features 🛛 🛇 Got feedback?
 Azure Active Directory Users Enterprise applications 	Overview Getting started Preview hub Diagnose and solve problems	Azure Active Directory can help you enable in Default Directory	remote work for your employees and partners. Learn	more
	 Users Groups External Identities Roles and administrators Administrative units (Preview) Enterprise applications Devices App registrations Identity Governance 	 Search your tenant Tenant information Your role Global administrator More info License Azure AD Premium P2 Tenant ID 64ace648-115d-4ad9-a3bf-7660 Primary domain ekorneyccisco.onmicrosoft.com 	Status Not enabled Last sync Sync has never run	
	 Application proxy Licenses Azure AD Connect Custom domain names Mobility (MDM and MAM) Password reset 	Sign-ins 3 2.8 2.6 2.4 2.2 2 2	Aug 23	

選擇Users,按一下New User,根據需要配置User name、Name和Initial Password。按一下「 Create」,如下圖所示。

Identity	
User name * 🛈	mck v @ gdplab2021.onmicrosoft v D The domain name I need isn't shown here
Name * 🛈	mck 🗸
First name	
Last name	
Password	
Initial password	Auto-generate password Let me create the password Show Password

Create

2.建立Azure AD組

選擇組。按一下New Group。	
Dashboard > Default Directory > Groups	;
Groups All groups Default Directory - Azure Active Directory	
»	+ New group 🚽 Download groups 📋 Delete 💍 Refresh 🛛 ☷ Columns
All groups	
Deleted groups	🧭 This page includes previews available for your evaluation. View previews $ ightarrow$
X Diagnose and solve problems	

將組型別保留為Security。設定Group name,如下圖所示。

Azure Active Directory admin center						
~	Dashboard > TAC > Groups >					
📶 Dashboard	New Group					
E All services						
★ FAVORITES	Group type * (i)					
🔶 Azure Active Directory	Security V					
🚨 Users	Group name * (i)					
👯 Enterprise applications	ISE Admin Group					
	Group description ①					
	Enter a description for the group					
	Azure AD roles can be assigned to the group 🛈					
	Yes No					
	Membership type * 🕡					
	Assigned V					
	Owners					
	No owners selected					
	Members					
	No members selected					

3.將Azure AD使用者分配給組

按一下No members selected。選擇使用者並按一下Select。按一下Create以建立已為其分配了 User的組。

Add members

Search 🛈

🔎 mck



mck mck@gdplab2021.onmicrosoft.com

Selected items

No items selected

記下Group Object id,在此螢幕中,ISE管理組的編號為576c60ec-c0b6-4044-a8ecd395b1475d6e,如下圖所示。 \times

 \times

Dashboard >

Groups All groups TAC - Azure Active Directory							
*	+ New group 🞍 Download groups	🗊 Delete 👌 Refresh 🕴 🗮 Columns	💀 Preview features 🛛 🔗 Go	t feedback?			
All groups							
Deleted groups	🔮 This page includes previews available for your evaluation. View previews $ ightarrow$						
✗ Diagnose and solve problems	Search groups	P Search groups [†] √ Add filters					
Settings	Name	Object Id	Group Type	Membership Type			
General	ISE Admin Group	576c60ec-c0b6-4044-a8ec-d395b1475d6e	Security	Assigned			
Expiration							
Naming policy							

4.建立Azure AD Enterprise應用程式

在AD下,選擇Enterprise Applications,然後按一下New application。

Azure Active Directory admin	Azure Active Directory admin center					
*	Dashboard > Default Directory > Enterp	orise applications				
🖾 Dashboard	Enterprise application	ons All applications				
E All services	Default Directory - Azure Active Directory	Default Directory - Azure Active Directory				
* FAVORITES	*	+ New application == Colu	umns 🛛 💀 Preview features	Got feedback?		
Azure Active Directory	Overview					
🚨 Users	() Overview	Iry out the new Enterprise App	s search preview! Click to enable the previ	ew. →		
Enterprise applications	🗙 Diagnose and solve problems	Application type	Applications status	Application visibility		
	Manage	Enterprise Applications \checkmark	Any 🗸	Any 🗸		
	All applications	First 50 shown, to search all of you	ir applications, enter a display name or	the application ID.		

選擇Create your own application。



輸入應用程式的名稱,然後選擇Integrate any other application you not found in the gallery(Non-gallery)單選按鈕,然後按一下Create按鈕,如下圖所示。

Create your own application

What's the name of your app?

ISE_3_1_Admin_SSO
 What are you looking to do with your application?
 Configure Application Proxy for secure remote access to an on-premises application
 Register an application to integrate with Azure AD (App you're developing)
 Integrate any other application you don't find in the gallery (Non-gallery)

Create

5.將組新增到應用程式

選擇Assign users and groups。



按一下Add user/group。

Azure Active Directory admin	Azure Active Directory admin center						?	R
*	C Dashboard > Enterprise applications > ISE_3_1_Admin_SSO							
E Dashboard	ISE 3 1 Admin SSO	Users and groups						
I All services								
* FAVORITES	~	+ Add user/group 🖉 Edit 📋 Remove 🖉 Update Credentials 🎫 Colu	mns 🛛 🖗 Got feedback?					
Azure Active Directory	U Overview	A T						
🚨 Users	Deployment Plan	Une application will appear for assigned users within Ny Apps. Set Visible to users? to no in properties to prevent this. →						
Enterprise applications	Manage D First 200 shown, to search all users & groups, enter a display name.							
	Properties	Display Name	Object Type	Role	assigne	ed		

按一下Users and groups。

Azure Active Directory admin center						
≪ ■ Dashboard ■ All services	Dashboard > Default Directory > Enterprise applications > Add an application > ISE30 > Add Assignment Default Directory					
Azure Active Directory Users	Users and groups >					
Enterprise applications	Select a role >					

選擇先前配置的組,然後按一下選擇。

N註: 選擇獲得所需訪問許可權的正確使用者或組,因為此處提到的使用者和組在設定完成後即可獲得ISE訪問許可權。

Users and groups



選擇組後,按一下Assign。

Azure Active Directory admin c	enter	
×	Dashboard $>$ Default Directory $>$ Enterprise applications $>$ Add an application $>$ ISE30 $>$	
📶 Dashboard	Add Assignment	
E All services	Default Directory	
 ★ FAVORITES ◆ Azure Active Directory 	When you assign a group to an application, only users directly in the group will have access. The assignment does not cascade to nested groups.	×
L Users		
Enterprise applications	Users and groups 1 group selected.	>
	Select a role User	>

因此,已配置應用程式的使用者和組選單會填充所選的組。

Azure Active Directory admin center			
≪ ☑ Dashboard ⅲ All services	Dashboard > ISE_3_1_Admin_SSO ISE_3_1_Admin_SSO Enterprise Application	Users and groups	
FAVORITES Azure Active Directory Users	« Overview Deployment Plan	Add user/group Edit Remove P The application will appear for assigned users with Erict 200 shown to search all users & groups ent	Update Credentials
Enterprise applications	Manage III Properties IV Owners Roles and administrators (Preview) Users and groups	Display Name IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Object Type Group

6.配置Azure AD Enterprise應用程式

導航回您的應用程式,然後單擊「設定單一登入」。



在下一個螢幕上選擇SAML。

Azure Active Directory admin c	enter				
≪ Dashboard Ⅲ All services	Dashboard > Enterprise applications >	ISE_3_1_Admin_SSO Single sign-on …			
Axure Active Directory Azure Active Directory Users Enterprise applications	Coverview Cover	Select a single sign-on method H	Rep me decide SAML Rich and secure authentication to applications using the SAML (Security Assertion Markup Language) protocol.	Password-based Password storage and replay using a web browser extension or mobile app.	
	 Single sign-on Provisioning Application proxy Self-service Security Conditional Access Permissions Token encryption Activity Sign-ins 	Linked Link to an application in My Apps and/or Office 365 application launcher.			
	iai Usage & insights ■ Audit logs ■ Provisioning logs 第 Access reviews				

按一下Basic SAML Configuration旁邊的Edit。

Set up Single Sign-On with SAML

Read the configuration guide 🕫 for help integrating ISE30.

Basic SAML Configuration		0 Б
Identifier (Entity ID)	Required	
Reply URL (Assertion Consumer Service URL)) Required	
Sign on URL	Optional	
Relay State	Optional	
Logout Url	Optional	
User Attributes & Claims		
User Attributes & Claims	user.givenname	0 E
User Attributes & Claims givenname surname	user.givenname user.surname	🖉 E
User Attributes & Claims givenname surname emailaddress	user.givenname user.surname user.mail	0 E
User Attributes & Claims givenname surname emailaddress name	user.givenname user.surname user.mail user.userprincipalname	0 E

在步驟匯出服務提供商資訊中,使用XML檔案中的entityID值填充識別符號(實體ID)。使用 AssertionConsumerService中的Locations值填充Reply URL(Assertion Consumer Service URL)。 按一下「Save」。

Basic SAML Configuration

 \times

Carro
Save

Identifier (Entity ID) * 🗊		
The default identifier will be the audience of the SAML response for IDP-initiated SSO		
	Default	
	Denant	
http://CiscoISE/0049a2fd-7047-4d1d-8907-5a05a94ff5fd	 i 	Û
http://adapplicationregistry.onmicrosoft.com/customappsso/primary	i	Û
Reply URL (Assertion Consumer Service URL) * 🕡		
The default reply URL will be the destination in the SAML response for IDP-initiated SSO		
	Default	
https://10.201.232.19:8443/portal/SSOLoginResponse.action	V (i)	Î
Sign on URL 🕕		
Enter a sign on URL		
Palau State - O		
Enter a relay state		
Logout Url 🕕		

7.配置Active Directory組屬性

要返回先前配置的組屬性值,請點選使用者屬性和宣告旁邊的編輯。

User Attributes & Claims



givenname	user.givenname
surname	user.surname
emailaddress	user.mail
name	user.userprincipalname
Unique User Identifier	user.userprincipalname

按一下Add a group claim。

Azure Active Directory admin center			
« 🛯 Dashboard	Dashboard > Enterprise applications > ISE30 > SAML-based Sign-on > User Attributes & Claims		
All services FAVORITES	+ Add new claim + Add a group claim ≡≡ Columns		
Azure Active Directory Sers	Required claim		
Enterprise applications	Claim name Unique User Identifier (Name ID)	Value user.userprincipalname [nameid-for	•••
	Additional claims Claim name	Value	
	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress	user.mail	
	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname	user.givenname	•••
	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name	user.userprincipalname	•••
	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/surname	user.surname	

選擇Security groups,然後按一下Save。 在Source attribute下拉選單中選擇Group ID。選中此覈 取方塊可自定義組宣告的名稱,並輸入名稱Groups。

Group Claims

Manage the group claims used by Azure AD to populate SAML tokens issued to your app

Which groups associated with the user should be returned in the claim?

O None
All groups
 Security groups
O Directory roles
 Groups assigned to the application
Source attribute *
Group ID 🗸
Advanced options Customize the name of the group claim Name (required)
Groups
Namespace (optional)

記下該組的申請名稱。在本例中,它是組。

Azure Active Directory admin	center		
«	Dashboard > Enterprise applications > ISE_3_1_Admin_SSO > SAML-based Si	gn-on >	
🕮 Dashboard	User Attributes & Claims		
E All services			
* FAVORITES	+ Add new claim + Add a group claim ≡≡ Columns		
🔶 Azure Active Directory			
🚨 Users	Required claim		
Enterprise applications	Claim name	Value	
	Unique User Identifier (Name ID)	user.userprincipalname [nameid-for	
	Additional claims		
	Additional claims		
	Claim name	Value	_
	Groups	user.groups	
	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress	user.mail	
	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname	user.givenname	
	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name	user.userprincipalname	
	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/surname	user.surname	•••

8.下載Azure聯合後設資料XML檔案

在SAML簽名證書中,按一下Download on Federation Metadata XML。

SAML Signing Certificate		🖉 Edit
Status	Active	
Thumbprint	B24F4BB47B350C93DE3D59EC87EE4C815C884462	
Expiration	7/19/2024, 12:16:24 PM	
Notification Email	chandandemo@outlook.com	
App Federation Metadata Url	https://login.microsoftonline.com/182900ec-e960	1
Certificate (Base64)	Download	_
Certificate (Raw)	Download	
Federation Metadata XML	Download	

步驟 3.將後設資料從Azure Active Directory上載到ISE

導航到Administration > Identity Management > External Identity Sources > SAML Id Providers > [您的SAML提供程式]。

將頁籤切換到Identity Provider Config,然後按一下Browse。從下載Azure聯合後設資料XML步驟中 選擇聯合後設資料XML檔案,然後按一下儲存。

E Cisco ISE	Administration · Identity Management
Identities Groups External Ide	ntity Sources Identity Source Sequences Settings
External Identity Sources	Identity Provider List > Azure SAML Identity Provider
> 🛅 Certificate Authentication F	General Identity Provider Config. Service Provider Info. Groups Attributes Advanced Settings
 LDAP ODBC RADIUS Token RSA SecurID 	Import Identity Provider Config File Choose File Provider Id Single Sign On URL https://login.microsoftonline.com/182900ec-e960-4340-bd20-e4522197ecf8/saml2 Single Sign Out URL (Redirect) https://login.microsoftonline.com/182900ec-e960-4340-bd20-e4522197ecf8/saml2 Signing Certificates
SAML Id Providers	Subject 🔿 Issuer Valid From Valid To (Expira Serial Number
🛅 Social Login	CN=Microsoft Azure Federated SSO Certificate CN=Microsoft Azur Mon Jul 19 12:16:2 Fri Jul 19 12:16:24 25 28 CB 30 8B A4 89 8

步驟 4.在ISE上配置SAML組

切換到頁籤Groups,並將Claim name的值從Configure Active Directory Group attribute 貼上到 Group Membership Attribute中。

■ Cisco ISE		Administration • Identity M	anagement		
Identities Groups External Ider	tity Sources Identity Source Sequences	Settings			
External Identity Sources	Identity Provider List > Azure SAML Identity Provider				
> 🗎 Certificate Authentication F	General Identity Provider Config.	Service Provider Info.	Groups	Attributes	Advanced Settings
 Active Directory LDAP ODBC 	Groups Group Membership Attribute groups			Ū	
RADIUS Token RSA SecurID	🕂 Add 🧷 Edit 🛛 🔋 Delete				
> 🛅 SAML Id Providers	Name in Assertion		∧ Name in	ISE	

按一下「Add」。使用將Azure Active Directory使用者分配給組時捕獲的ISE管理組的組對象ID值填 充Assertion中的Name。

使用下拉選單配置ISE中的名稱(Configure Name in ISE),並在ISE上選擇適當的組。在本示例中,使用的組是Super Admin。按一下「OK」(確定)。按一下「Save」。

這將在Azure中的組和ISE上的組名稱之間建立對映。

Add Group		×
*Name in Assertion	576c60ec-c0b6-4044-a8ec-d3	
*Name in ISE	Customization Admin	
	Customization Admin ERS Admin ERS Operator Elevated System Admin Helpdesk Admin Identity Admin	Ļ
	Network Device Admin Policy Admin RBAC Admin SPOG Admin Super Admin System Admin	

(可選)步驟5。配置RBAC策略

在上一步中,可在ISE上配置許多不同型別的使用者訪問級別。

要編輯基於角色的訪問控制策略(RBAC),請導航到Administration > System > Admin Access > Authorization > Permissions > RBAC Policies並根據需要進行配置。

此映像是對示例配置的引用。

✓ RBAC Policies

	Rule Name	A	dmin Groups	Permis	ssions		
~ ~	Customization Admin Policy	lf	Customization Admin +	then	Customization Admin Menu	+	Actions ~
~ ~	Elevated System Admin Poli	lf	Elevated System Admin +	then	System Admin Menu Access	+	Actions \sim
~ ~	ERS Admin Policy	lf	ERS Admin +	then	Super Admin Data Access	+	Actions ~
~ ~	ERS Operator Policy	lf	ERS Operator +	then	Super Admin Data Access	+	Actions $$
~ ~	ERS Trustsec Policy	lf	ERS Trustsec +	then	Super Admin Data Access	+	Actions \sim
~ ~	Helpdesk Admin Policy	lf	Helpdesk Admin +	then	Helpdesk Admin Menu Access	+	Actions $$
~ ~	Identity Admin Policy	lf	Identity Admin +	then	Identity Admin Menu Access	+	Actions $$
~ ~	MnT Admin Policy	lf	MnT Admin +	then	MnT Admin Menu Access	+	Actions $$
~ ~	Network Device Policy	lf	Network Device Admin +	then	Network Device Menu Acce	+	Actions $$
~ ~	Policy Admin Policy	lf	Policy Admin +	then	Policy Admin Menu Access	+	Actions \sim
~ ~	RBAC Admin Policy	lf	RBAC Admin +	then	RBAC Admin Menu Access	+	Actions \checkmark
~ ~	Read Only Admin Policy	lf	Read Only Admin +	then	Super Admin Menu Access	+	Actions $$
~ ~	SPOG Admin Policy	lf	SPOG Admin +	then	Super Admin Data Access	+	Actions \sim
~ ~	Super Admin Policy	lf	Super Admin +	then	Super Admin Menu Access	+	Actions $$
~ ~	Super Admin_Azure	lf	Super Admin +	then	Super Admin Menu Access	+	Actions \sim
~ ~	System Admin Policy	lf	System Admin +	then	System Admin Menu Access	+	Actions $^{\checkmark}$
✓	TACACS+ Admin Policy	lf	TACACS+ Admin +	then	TACACS+ Admin Menu Acc	+	Actions ~

驗證

確認您的組態是否正常運作。

◇ 附註:Azure測試功能中的SAML SSO登入測試無法正常工作。SAML請求必須由ISE啟動 ,Azure SAML SSO才能正常工作。

開啟ISE GUI登入提示螢幕。您將看到一個使用SAML登入的新選項。

1.訪問您的ISE GUI登入頁面,然後按一下使用SAML登入。

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Identity Services Engine

Intuitive network security

Log In With SAML

Log In With ISE

English | 日本語

Problems logging in?

2.系統會將您重新導向至Microsoft登入螢幕。如圖所示,輸入對映到ISE的組內帳戶的使用者名稱憑 證,然後按一下下一步,如圖所示。



Sign in

mck@gdplab2021.onmicrosoft.com

Can't access your account?

Next

3. 輸入使用者的密碼,然後按一下登入。



← mck@gdplab2021.onmicrosoft.com

Enter password

.......

Forgot my password

4.現在您將重定向到ISE應用儀表板,該儀表板具有根據之前配置的ISE組配置的相應許可權,如圖 所示。

Sign in

≡	Cisco ISE		Da	shboard		A Evaluation Mo	de 90 Days Q 💿 🗔 🐵
Su	ummary Endpoints Gu	ests Vulnerability Threat					•
<	Total Endpoints 🕠	Active Endpoints 🕠	Rejected Endpoints 🕠	Anomalous Behavior 🕠	Authenticated Guests 🕕	BYOD Endpoints 🕠	Compliance ()
	0	0	0	0	0	0	0
II II	AUTHENTICATIONS O tentity Store tentry Group Tenteork Device No da	C C	X II NETWORK DEVICES	No data available.	C O X Pretite	POINTS C	2 0 ×

疑難排解

本節提供的資訊可用於對組態進行疑難排解。

常見問題

瞭解在瀏覽器和Azure Active Directory之間處理SAML身份驗證至關重要。因此,您可以直接從身 份提供程式(Azure)獲取與身份驗證相關的錯誤,其中ISE參與尚未啟動。

問題1.輸入憑證後出現「您的帳戶或密碼不正確」錯誤。此時,ISE尚未接收使用者資料,此時進程仍使用IdP(Azure)。

最可能的原因是帳戶資訊不正確或密碼不正確。若要修正:重設密碼或為該帳戶提供正確的密碼 ,如下圖所示。



← mck@gdplab2021.onmicrosoft.com

Enter password

Your account or password is incorrect. If you don't remember your password, reset it now.

Password

Forgot my password

Sign in

問題2.使用者不屬於應該允許訪問SAML SSO的組。與前面的情況類似,ISE尚未收到使用者資料 ,此時進程仍採用IdP(Azure)。

要解決此問題:驗證Add group to the Application 配置步驟是否正確執行,如下圖所示。



Sign in

Sorry, but we're having trouble signing you in.

AADSTS50105: The signed in user 'userwithoutgroup@gdplab2021.onmicrosoft.com' is not assigned to a role for the application '76b82bcb-a918-4016-aad7-b43bc4326254'(ISE_3_1_Admin_SSO).

Troubleshooting details

If you contact your administrator, send this info to them. Copy info to clipboard

Request Id: 1e15cea0-c349-4bee-922d-26299822a101 Correlation Id: 710626e0-45c1-4fad-baa6-ff7584ecf910 Timestamp: 2021-08-04T22:48:02Z Message: AADSTS50105: The signed in user 'userwithoutgroup@gdplab2021.onmicrosoft.com' is not assigned to a role for the application '76b82bcb-a918-4016-aad7b43bc4326254'(ISE_3_1_Admin_SSO).

Flag sign-in errors for review: Enable flagging

If you plan on getting help for this problem, enable flagging and try to reproduce the error within 20 minutes. Flagged events make diagnostics available and are raised to admin attention.

第三期。ISE應用伺服器無法處理SAML登入請求。當從身份提供程式Azure而不是服務提供程式 ISE啟動SAML請求時,會發生此問題。從Azure AD測試SSO登入不起作用,因為ISE不支援身份提 供程式啟動的SAML請求。

 \times



10.201.232.19:8443/portal/SSOLoginResponse.action

This page isn't working

10.201.232.19 is currently unable to handle this request.

HTTP ERROR 500



第四期。ISE在登入嘗試後顯示「訪問被拒絕」錯誤。當早期在Azure企業應用程式中建立的組的宣 告名稱在ISE中不匹配,則會發生此錯誤。

要解決此問題:確保Azure和ISE中「SAML身份提供程式組」頁籤下的組宣告名稱相同。有關詳細 資訊,請參閱本文檔的使用Azure AD配置SAML SSO部分下的步驟2.7和4。

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Identity Services Engine

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8	Access Denied	
		Log In With SAML
		Log In With ISE
		English 日本語 Problems logging in?

排除ISE故障

必須在ISE上更改此處的元件的日誌級別。導覽至Operations > Troubleshoot > Debug Wizard > Debug Log Configuration。

元件名稱	日誌級別	日誌檔名
------	------	------

門戶	偵錯	guest.log
opensaml	偵錯	ise-psc.log
saml	偵錯	ise-psc.log

包含SAML登入名和不匹配的組宣告名稱的日誌

顯示流執行時宣告名稱不匹配故障排除方案的一組調試(ise-psc.log)。

💊 註:注意粗體項目。為了清楚起見,日誌被縮短了。

1.使用者從ISE管理員頁面重定向到IdP URL。

<#root>

2021-07-2913:48:20,709INFO[admin-http-pool46][]api.services.persistance.dao.DistributionDAO-:::2021-07-2913:48:20,712INFO[admin-http-pool46][]cpm.admin.infra.spring.ISEAdminControllerUtils-:::

forwardStr for: https://lo.201.232.19/admin/LoginAction.do

2021-07-29 13:48:20,839 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-7][] cpm.saml.framework.impl.SAM 2021-07-29 13:48:20,839 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-7][] cpm.saml.framework.impl.SAM

IDP URL: https://login.microsoftonline.com/182900ec-e960-4340-bd20-e4522197ecf8/saml2

2021-07-2913:48:20,839DEBUG[https-jsse-nio-10.201.232.19-8443-exec-7][]cpm.saml.framework.impl.SAM2021-07-2913:48:20,839DEBUG[https-jsse-nio-10.201.232.19-8443-exec-7][]cpm.saml.framework.impl.SAM2021-07-2913:48:20,839DEBUG[https-jsse-nio-10.201.232.19-8443-exec-7][]cpm.saml.framework.impl.SAM2021-07-2913:48:20,839DEBUG[https-jsse-nio-10.201.232.19-8443-exec-7][]cpm.saml.framework.impl.SAM2021-07-2913:48:20,839DEBUG[https-jsse-nio-10.201.232.19-8443-exec-7][]cpm.saml.framework.impl.SAM

SAML request - spUrlToReturnTo:https://10.201.232.19:8443/portal/SSOLoginResponse.action

2021-07-29 13:48:20,844 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-7][] cpm.saml.framework.impl.SAM 2021-07-29 13:48:20,851 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-7][] cpm.saml.framework.impl.SAM

2.從瀏覽器接收SAML響應。

<#root>

2021-07-29 13:48:27,172 DEB	JG Lhttps	s-jsse-nio-10.201	.232.19-8443	-exec-10][]	cpm.saml.t	ramework.imp	JI.SA
2021-07-29 13:48:27,172 DEB	JG [http:	s-jsse-nio-10.201	.232.19-8443	-exec-10][]	cpm.saml.f	ramework.imp	ol.SA
2021-07-29 13:48:27,172 DEB	JG [http:	s-jsse-nio-10.201	.232.19-8443	-exec-10][]	cpm.saml.f	ramework.imp	ol.SA
2021-07-29 13:48:27,172 DEB	JG [http:	s-jsse-nio-10.201	.232.19-8443	-exec-10][]	cpm.saml.f	ramework.imp	J.SA

-::::- Decoded SAML relay state of: _0049a2fd-7047-4d1d-8907-5a05a94ff5fd_DELIMITERportalId_EQUALS0049a 2021-07-29 13:48:27,177 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] opensaml.ws.message.decode

-:::- Decoded SAML message

2021-07-29 13:48:27,182 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] opensam].sam]2.binding.dec 2021-07-29 13:48:27,183 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] opensam].ws.message.decode 2021-07-29 13:48:27,183 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] opensam].ws.message.decode 2021-07-29 13:48:27,183 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] opensaml.common.binding.de opensaml.common.binding.decoding.BaseSAMLMessageDecoder -::::- Intended message destination endpoint: h 2021-07-29 13:48:27,183 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] opensaml.common.binding.de 2021-07-29 13:48:27,183 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.sam].framework.imp].SA 2021-07-29 13:48:27,184 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] opensaml.common.binding.de 2021-07-29 13:48:27,184 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SAM

3.屬性(斷言)分析已啟動。

<#root>

```
2021-07-29 13:48:27,184 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29 13:48:27,184 DEBUG
                              [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29 13:48:27,184 DEBUG
                               [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.sam].framework.imp].SA
2021-07-29 13:48:27,184 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29 13:48:27,184 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SAM
2021-07-29 13:48:27,184 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29 13:48:27,184 DEBUG
                              [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29 13:48:27,184 DEBUG
                               [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29 13:48:27,184 DEBUG
                               [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.sam].framework.imp].SA
2021-07-29 13:48:27,184 DEBUG
                               [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.sam].framework.imp].SA
2021-07-29 13:48:27,184 DEBUG
                               [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29 13:48:27,184 DEBUG
                               [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.sam].framework.imp].SA
2021-07-29 13:48:27,184 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
[parseAttributes] Set on IdpResponse object - attribute<<u>http://schemas.xmlsoap.org/ws/2005/05/identity</u>
2021-07-29 13:48:27,184 DEBUG [https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
```

4.收到值為576c60ec-c0b6-4044-a8ec-d395b1475d6e的組屬性,並進行簽名驗證。

2021-07-29	13:48:27,185	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29	13:48:27,185	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29	13:48:27,185	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29	13:48:27,185	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29	13:48:27,185	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29	13:48:27,185	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29	13:48:27,186	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
Idf	P URI: <u>https:</u>	<u>//sts.wi</u>	ndows.net/182900ec-e960-4340-bd20-e4522197ecf8/
SP	URI: http://	<u>CiscoISE</u>	<u>/0049a2fd-7047-4d1d-8907-5a05a94ff5fd</u>
Ass	sertion Consu	mer URL:	<pre>https://10.201.232.19:8443/portal/SSOLoginResponse.action</pre>
Red	quest Id: _004	49a2fd-7	047-4d1d-8907-5a05a94ff5fd_DELIMITERportalId_EQUALS0049a2fd-7047-4d1d-89
C1-	ient Address:	10.24.2	26.171
Loa	ad Balancer: ı	null	
2021-07-29	13:48:27,186	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.validat
2021-07-29	13:48:27,186	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.validat
2021-07-29	13:48:27,186	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.validat
2021-07-29	13:48:27,186	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.validat
2021-07-29	13:48:27,186	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] org.opensam].security.SAML
2021-07-29	13:48:27,186	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] org.opensam].security.SAML
2021-07-29	13:48:27,186	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.validat
2021-07-29	13:48:27,186	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] org.opensaml.xml.signature
2021-07-29	13:48:27,186	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] org.opensaml.xml.signature
2021-07-29	13:48:27,186	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] org.opensaml.xml.signature
2021-07-29	13:48:27,186	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] org.opensaml.xml.signature
2021-07-29	13:48:27,188	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] org.opensam].xm].signature
2021-07-29	13:48:27,188	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.validat
2021-07-29	13:48:27,188	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.validat
2021-07-29	13:48:27,188	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.validat
2021-07-29	13:48:27,188	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.validat
2021-07-29	13:48:27,188	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.validat
2021-07-29	13:48:27,188	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.validat
2021-07-29	13:48:27,188	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.validat
2021-07-29	13:48:27,188	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29	13:48:27,188	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29	13:48:27,189	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29	13:48:27,189	DEBUG	[https-jsse-nio-10.201.232.19-8443-exec-10][] cpm.saml.framework.impl.SA
2021-07-29	13:48:27,358	INFO	[admin-http-pool50][] ise.rbac.evaluator.impl.MenuPermissionEvaluatorImp

5. RBAC授權驗證。

<#root>

java.lang.NullPointerException

2021-07-29 13:48:27,369 INFO [admin-http-pool50][] cpm.admin.infra.action.LoginAction -::::- In Login

2021-07-29 13:48:27,369 INFO [admin-http-pool50][] cpm.admin.infra.action.LoginAction -::::- In Login

2021-07-29 13:48:27,369 ERROR [admin-http-pool50][] cpm.admin.infra.action.LoginAction -::::- Can't save

2021-07-29 13:48:27,369 INFO [admin-http-pool50][] cpm.admin.infra.action.LoginActionResultHandler -::

2021-07-29 13:48:27,369 INFO [admin-http-pool50][] cpm.admin.infra.spring.ISEAdminControllerUtils -:::

關於此翻譯

思科已使用電腦和人工技術翻譯本文件,讓全世界的使用者能夠以自己的語言理解支援內容。請注 意,即使是最佳機器翻譯,也不如專業譯者翻譯的內容準確。Cisco Systems, Inc. 對這些翻譯的準 確度概不負責,並建議一律查看原始英文文件(提供連結)。