



Secure Remote Access for On-Premises Apps with Microsoft Entra App Proxy



Microsoft Entra Lab Series
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What Is Microsoft Entra Application Proxy?



Microsoft Entra App Proxy lets you securely publish on-prem web apps — without exposing your network.



- ✓ No need for external VPNs or DMZ proxies
 - ✓ Supports Conditional Access + SSO
 - ✓ Access from anywhere via Entra ID authentication
 - ✓ Seamlessly connects hybrid users to internal apps



This is modern, secure hybrid access architecture.



The Old Way: DMZ-Based App Access





IN TRADITIONAL ENVIRONMENTS,
PUBLISHING INTERNAL WEB APPS
REQUIRED:



 A DMZ ZONE

 REVERSE PROXY SERVERS EXPOSED TO
THE INTERNET









 COMPLEX NETWORK ROUTING

 HIGH RISK IF DMZ PROXY GOES DOWN
 NO BUILT-IN INTEGRATION WITH ENTRA
ID, CONDITIONAL ACCESS, OR SSO

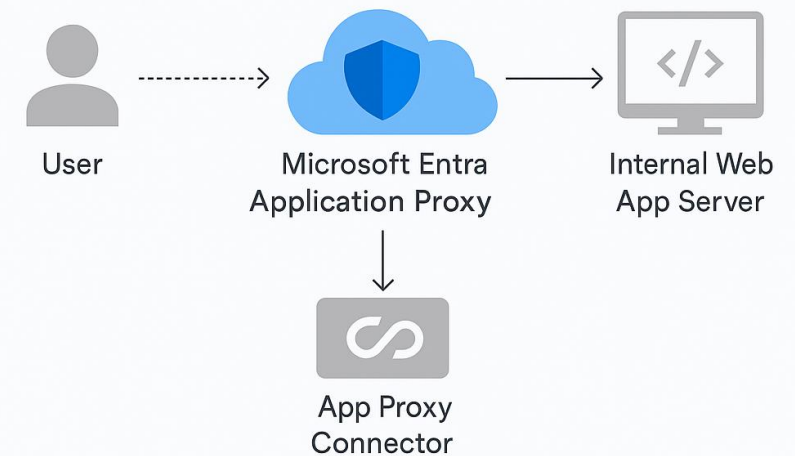


THIS SETUP WAS COSTLY,
FRAGILE, AND NOT CLOUD-
AWARE.

The Modern Approach with Entra App Proxy

- Microsoft Entra Application Proxy simplifies secure remote access:
-  No need to expose internal apps to the internet
-  Users authenticate via Entra ID
-  The App Proxy Connector (installed on-prem) securely fetches content
-  Web pages are served from Microsoft's cloud — not your internal web server
- This eliminates the need for legacy DMZ and enables full integration with:
-  Conditional Access
-  MFA
-  SSO
-  Hybrid Identity

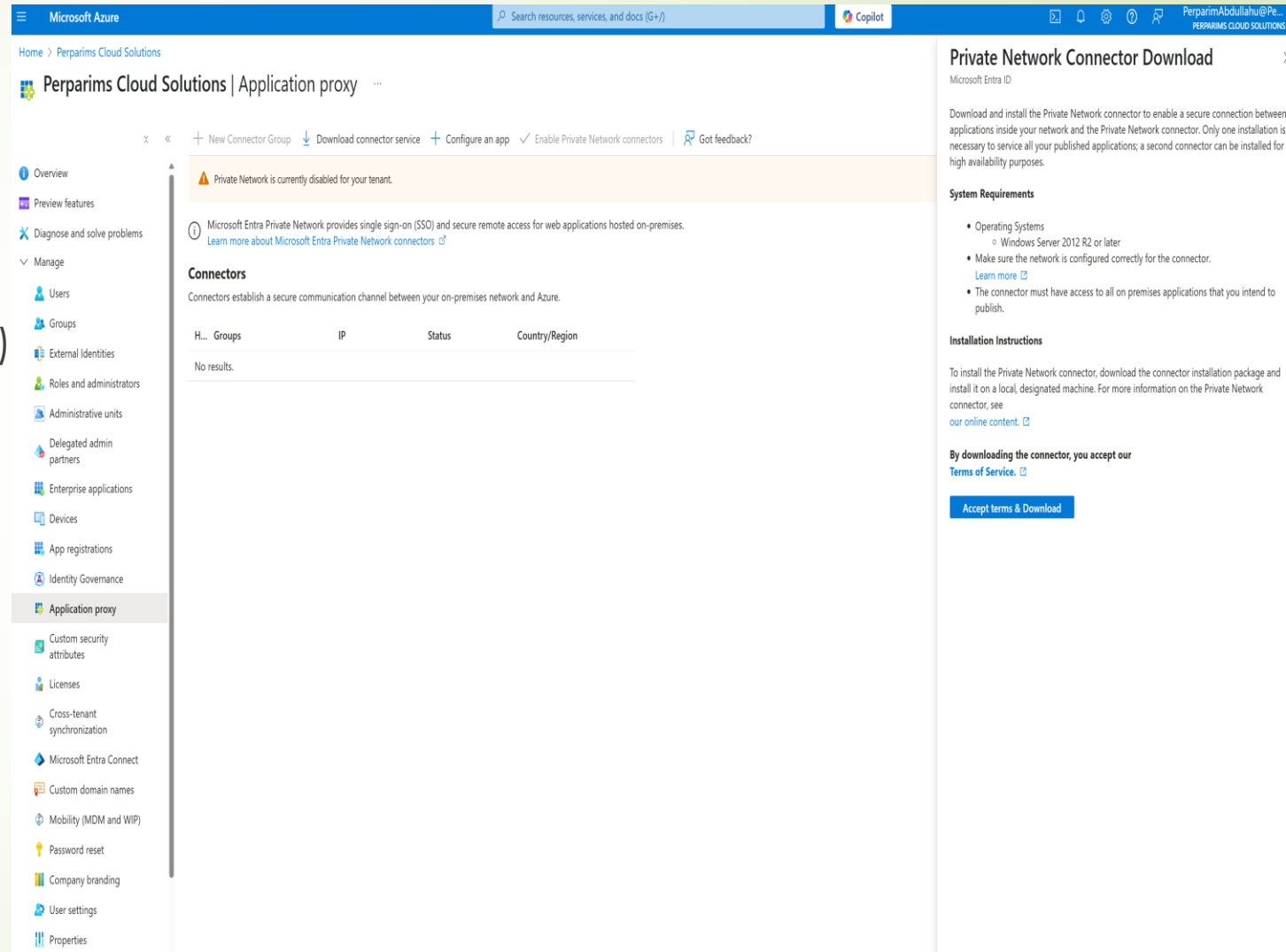
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How to Deploy Microsoft Entra Application Proxy

- ➔ To enable secure access to on-prem apps:
- ➔ Go to **Microsoft Entra ID** → **Application Proxy**
- ➔ Click **Download Connector Service**
- ➔ Install on a **Windows Server 2012 R2+** (on-prem)
- ➔ Configure firewall to allow outbound traffic
- ➔ Register connector in Entra portal
- ➔ Publish internal app & assign users
- ➔ Requires:
- ➔ Entra ID Premium P1 or P2
- ➔ Hybrid identity (Azure AD Connect)



The screenshot shows the Microsoft Entra ID portal interface for the 'Perparims Cloud Solutions' tenant. The left-hand navigation pane lists various management options, with 'Application proxy' selected. The main content area displays the 'Application proxy' settings, including a warning that 'Private Network is currently disabled for your tenant.' Below this, there is a section for 'Connectors' with a table that currently shows 'No results.' The right-hand sidebar provides information about the 'Private Network Connector Download', including system requirements (Windows Server 2012 R2 or later) and installation instructions. At the bottom of the sidebar, there is a button to 'Accept terms & Download'.

Microsoft Azure

Home > Perparims Cloud Solutions

Perparims Cloud Solutions | Application proxy

Overview

Preview features

Diagnose and solve problems

Manage

- Users
- Groups
- External Identities
- Roles and administrators
- Administrative units
- Delegated admin partners
- Enterprise applications
- Devices
- App registrations
- Identity Governance
- Application proxy**
- Custom security attributes
- Licenses
- Cross-tenant synchronization
- Microsoft Entra Connect
- Custom domain names
- Mobility (MDM and WiP)
- Password reset
- Company branding
- User settings
- Properties

+ New Connector Group | Download connector service | Configure an app | Enable Private Network connectors | Got feedback?

Private Network is currently disabled for your tenant.

Microsoft Entra Private Network provides single sign-on (SSO) and secure remote access for web applications hosted on-premises. [Learn more about Microsoft Entra Private Network connectors](#)

Connectors

Connectors establish a secure communication channel between your on-premises network and Azure.

H...	Groups	IP	Status	Country/Region
No results.				

Private Network Connector Download

Microsoft Entra ID

Download and install the Private Network connector to enable a secure connection between applications inside your network and the Private Network connector. Only one installation is necessary to service all your published applications; a second connector can be installed for high availability purposes.

System Requirements

- Operating Systems
 - Windows Server 2012 R2 or later
- Make sure the network is configured correctly for the connector. [Learn more](#)
- The connector must have access to all on premises applications that you intend to publish.

Installation Instructions








To install the Private Network connector, download the connector installation package and install it on a local, designated machine. For more information on the Private Network connector, see [our online content](#).

By downloading the connector, you accept our [Terms of Service](#).

[Accept terms & Download](#)



Why Use Microsoft Entra App Proxy?

-  **Zero Trust Access** for on-prem apps — no VPN required
-  Works seamlessly with Conditional Access & MFA
-  **No need to expose internal servers** or manage DMZ proxies
-  Easy to deploy and scales with Azure
-  **SSO support** for hybrid environments
-  Protects legacy apps with modern cloud security
-  A modern bridge between cloud identity and on-prem applications.



Seamlessly Extend Cloud Security to On-Prem Apps

- ✓ Microsoft Entra Application Proxy makes it easy to publish internal apps without exposing your network
 - ✓ Employees can securely access legacy apps from anywhere using their Entra ID credentials
 - ✓ Built-in support for Conditional Access, SSO, and MFA – aligned with Zero Trust architecture
 - ✓ Lightweight connector installation – no DMZ setup needed
- 💬 **Have you tried securing on-prem apps with Entra App Proxy yet?**
Let's discuss real-world challenges and tips in the comments! 🙋



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