

ZSCALER AND BOX DEPLOYMENT GUIDE

Contents

- Terms and Acronyms** 5
- About This Document** 7
 - Zscaler Overview 7
 - Box Overview 7
 - Audience 7
 - Software Versions 7
 - Request for Comments 7
- Zscaler and Box Introduction** 8
 - ZIA Overview 8
 - ZDX 8
 - Box Intelligent Content Cloud Overview 9
 - Box Resources 9
- Zscaler SaaS Security API for Box** 10
 - What Makes the SaaS Security Unique? 11
 - ZDX for the Box User Experience 12
 - What Makes ZDX Unique? 12
- Configuring Zscaler SaaS for Box** 13
 - Configuring the Zscaler and the Box Tenant 14
 - Configuring the Box Tenant on Zscaler 15
 - SaaS Tenant Configuration wizard 15
 - SaaS Tenant Configuration wizard 16
 - Configuring the Zscaler Tenant on Box 17
 - Authorize the Zscaler Tenant on Box 17
 - Finishing the Zscaler Configuration 19
 - The Active SaaS Security Tenant 20

Configuring Box Policies and Scan Configuration	21
Scoping the Policies and Remediation	21
Creating a DLP Policy	22
Creating a DLP Engine	23
Configure a SaaS DLP Policy	25
SaaS DLP Policy Details	25
Collaboration Scope	26
Action	26
Configure a SaaS DLP Policy	27
Configure a SaaS Malware Policy	28
Action	29
Quarantine Location	29
Configure a SaaS Malware Policy	29
Configure the Scan Schedule Configuration	31
Start the Scan Schedule Configuration	32
The Box Tenant Post Scan	33
Reporting and Visibility	34
SaaS Assets and SaaS Assets Summary Report	35
SaaS Insights	36
ZDX for Box	37
Configure ZDX for Box	38
Onboard the Box App	39
Configure Probes for Box Monitoring	40
Edit the Network Probe	41
The Enabled Box Application	43
Create an Alert for the Box Service	43
Run the Alert Creation wizard	45

The Triggered Alert for the Box Service	47
The Sent Alert Email for the Box Service	48
Using ZDX—The Dashboard	49
Using ZDX—Application Overview	50
Application Detail	51
User Overview	53
Appendix A: Requesting Zscaler Support	56

Terms and Acronyms

The following table defines acronyms used in this deployment guide. When applicable, a Request for Change (RFC) is included in the Definition column for your reference.

Acronym	Definition
CA	Central Authority (Zscaler)
CSV	Comma-Separated Values
DLP	Data Loss Prevention
DNS	Domain Name Service
DPD	Dead Peer Detection (RFC 3706)
GRE	Generic Routing Encapsulation (RFC2890)
ICMP	Internet Control Message Protocol
IdP	Identity Provider
IKE	Internet Key Exchange (RFC2409)
IPS	Intrusion Prevention System
IPSec	Internet Protocol Security (RFC2411)
PFS	Perfect Forward Secrecy
POV	Proof of Value
PSK	Pre-Shared Key
SaaS	Software as a Service
SSL	Secure Socket Layer (RFC6101)
TLS	Transport Layer Security
VDI	Virtual Desktop Infrastructure
XFF	X-Forwarded-For (RFC7239)
ZDX	Zscaler Digital Experience (Zscaler)
ZIA	Zscaler Internet Access (Zscaler)
ZPA	Zscaler Private Access (Zscaler)

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About This Document

The following sections describe the organizations and requirements of this deployment guide.

Zscaler Overview

Zscaler (NASDAQ: [ZS](#)) enables the world's leading organizations to securely transform their networks and applications for a mobile and cloud-first world. Its flagship Zscaler Internet Access (ZIA) and Zscaler Private Access (ZPA) services create fast, secure connections between users and applications, regardless of device, location, or network. Zscaler delivers its services 100% in the cloud and offers the simplicity, enhanced security, and improved user experience that traditional appliances or hybrid solutions can't match. Used in more than 185 countries, Zscaler operates a massive, global cloud security platform that protects thousands of enterprises and government agencies from cyberattacks and data loss. To learn more, see [Zscaler's website](#).

Box Overview

Box (NYSE: [BOX](#)) is a Leader in SaaS Cloud Content Platforms based in Redwood City, California. The company focuses on cloud content management and file sharing services for businesses. Official clients and apps are available for Windows, macOS, and several mobile platforms. Box was founded in 2005. To learn more, refer to [Box's website](#).

Audience

This guide is for network administrators, endpoint and IT administrators, and security analysts responsible for deploying, monitoring, and managing enterprise security systems. For additional product and company resources, see:

- [Zscaler Resources](#)
- [Box Resources](#)
- [Appendix A: Requesting Zscaler Support](#)

Software Versions

This document was authored using the latest version of Zscaler software.

Request for Comments

- **For prospects and customers:** Zscaler values reader opinions and experiences. Contact partner-doc-support@zscaler.com to offer feedback or corrections for this guide.
- **For Zscaler employees:** Contact z-bd-sa@zscaler.com to reach the team that validated and authored the integrations in this document.

Zscaler and Box Introduction

Overviews of the Zscaler and Box applications are described in this section.



If you are using this guide to implement a solution at a government agency, some of the content might be different for your deployment. Efforts are made throughout the guide to note where government agencies might need different parameters or input. If you have questions, contact your Zscaler Account team.

ZIA Overview

ZIA is a secure internet and web gateway delivered as a service from the cloud. Think of ZIA as a secure internet on-ramp—just make Zscaler your next hop to the internet via one of the following methods:

- Setting up a tunnel (GRE or IPSec) to the closest Zscaler data center (for offices).
- Forwarding traffic via our lightweight Zscaler Client Connector or PAC file (for mobile employees).

No matter where users connect—a coffee shop in Milan, a hotel in Hong Kong, or a VDI instance in South Korea—they get identical protection. ZIA sits between your users and the internet and inspects every transaction inline across multiple security techniques (even within SSL).

You get full protection from web and internet threats. The Zscaler cloud platform supports Cloud Firewall, IPS, Sandboxing, DLP, and Isolation, allowing you to start with the services you need now and activate others as your needs grow.

ZDX

Zscaler Digital Experience (ZDX) monitors your users' digital experiences. ZDX provides visibility across the complete user-to-cloud app experience and quickly isolates issues. By combining the Zscaler Client Connector endpoint agent with Zscaler's global cloud footprint, ZDX provides you with innovative and unprecedented end-to-end visibility, regardless of network or location.

Zscaler Resources

The following table contains links to Zscaler resources based on general topic areas.

Name	Definition
ZIA Help Portal	Help articles for ZIA.
ZDX Help Portal	Help articles for ZDX.
Zscaler Tools	Troubleshooting, security and analytics, and browser extensions that help Zscaler determine your security needs.
Zscaler Training and Certification	Training designed to help you maximize Zscaler products.
Submit a Zscaler Support Ticket	Zscaler Support portal for submitting requests and issues.

The following table contains links to Zscaler resources for government agencies.

Name	Definition
ZIA Help Portal	Help articles for ZIA.
ZDX Help Portal	Help articles for ZDX.
Zscaler Tools	Troubleshooting, security and analytics, and browser extensions that help Zscaler determine your security needs.
Zscaler Training and Certification	Training designed to help you maximize Zscaler products.
Submit a Zscaler Support Ticket	Zscaler Support portal for submitting requests and issues.

Box Intelligent Content Cloud Overview

Box is the Intelligent Content Cloud—the only intelligent content management platform that enables you to succeed across the full spectrum of use cases today’s businesses require. Box delivers modern, easy-to-use collaboration and workflow tools, advanced data protection and compliance, and enterprise-grade AI—all built on a flexible, interoperable platform in the cloud. Box is the best place to start your intelligent content management journey.

Box Resources

The following table contains links to Box support resources.

Name	Definition
Box Support	Support services for Box products.
Box Product Guides	Online help for Box products.
Box Guidance Services	Online guidance for Box services and products.

Zscaler SaaS Security API for Box

SaaS applications that provide content management and file sharing services are popular because of the collaboration, ease of use, and sharing they enable. Box.com is one of the industry leaders. But the downside of the ease of access is risk based on the client's environment. It is impossible to train every employee to use best security practices with SaaS applications at all times, which can lead to costly mistakes for the organization. Risks associated with accidental data exposure, malicious intent, and compliance violations can force companies to restrict or prevent use of business tools.

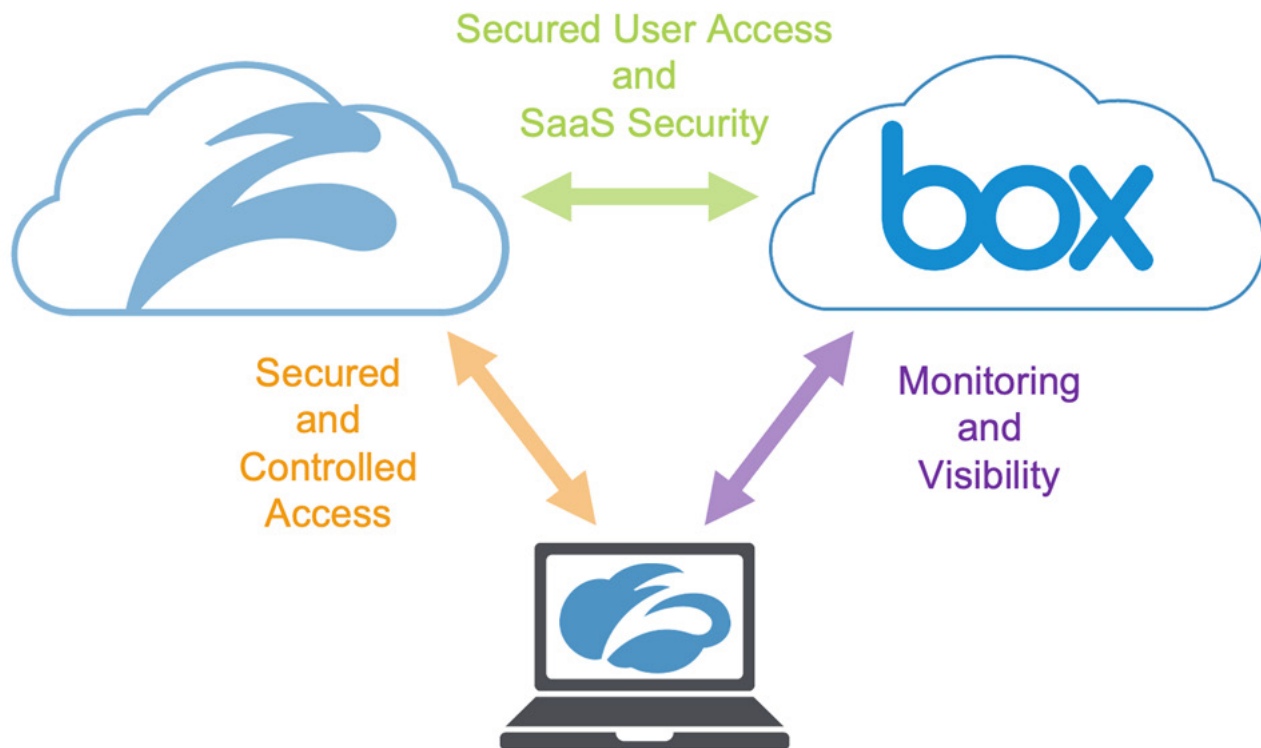


Figure 1. Zscaler Solution for Box

Another challenge organizations face when migrating to Cloud Services in today's environment is monitoring the user experience for the SaaS applications, especially in today's work from anywhere corporate infrastructures. Zscaler provides a complete Box solution using ZIA and ZDX.

ZIA provides SaaS using SaaS Security API to scan the Box data stores for malicious content and data protection. ZIA also provides complete security for clients whether they are in the corporate office or their home office.

The ZDX service provides a user-specific experience monitoring and providing visibility to the Box service to help organizations address any experience concerns or challenges. ZDX has preconfigured monitors that provide performance monitoring and measurements from the user's device running the Zscaler Client Connector. These monitors provide detailed information on the user device, the network path to Box, and the Box SaaS performance itself.

Both ZIA SaaS and ZDX SaaS monitoring operate as separate standalone services and are not dependent on one or the other. However, the two services working together provide a comprehensive solution for both security and operations of our Partners.

The Zscaler SaaS Security API is a feature set that is part of the ZIA security cloud and is designed specifically to help manage the risks of file collaboration between SaaS partners, preventing data exposure, and ensure compliance across the SaaS application.

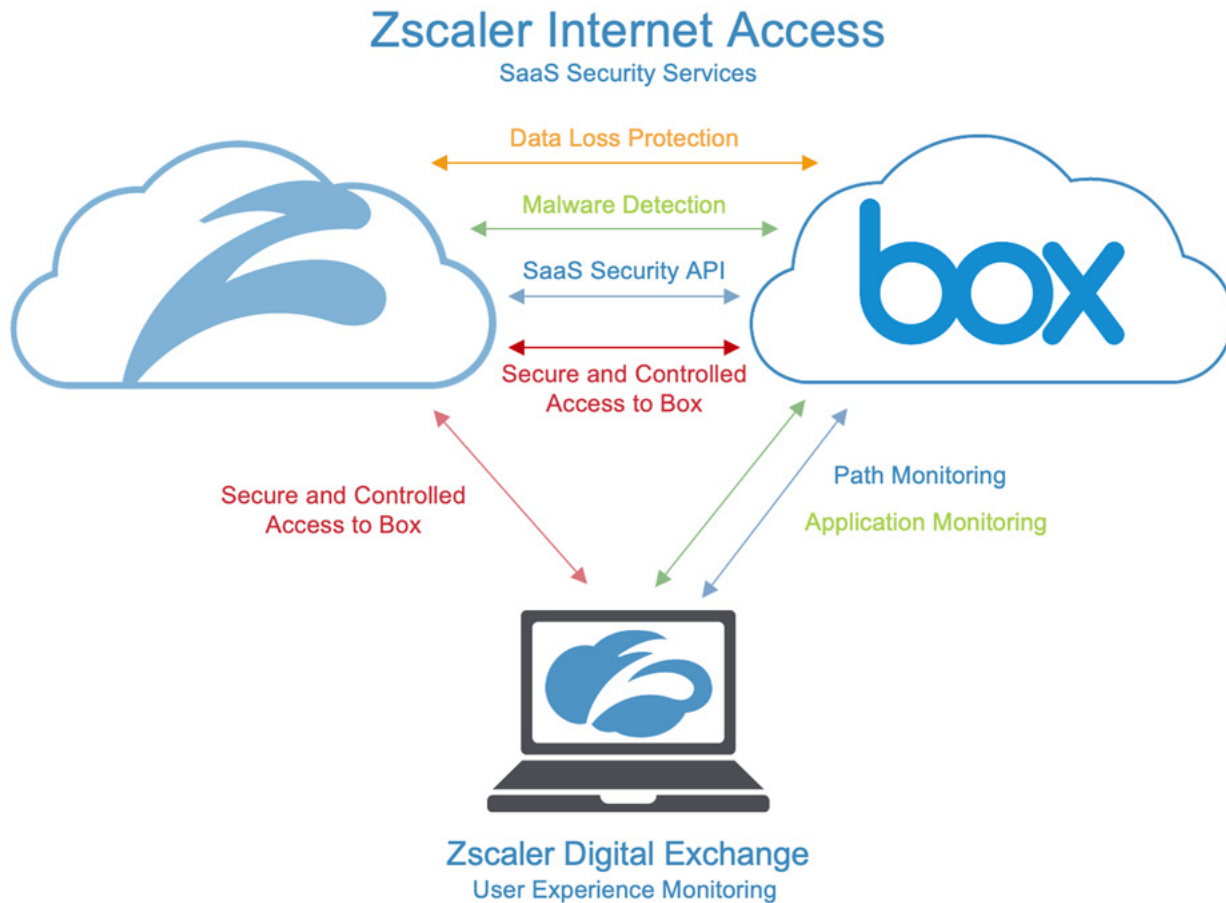


Figure 2. ZIA Cloud SaaS Security API in Use with Box

Zscaler SaaS Security enables organizations to securely adopt and govern the use of multiple SaaS applications. It provides real-time visibility, and controls access and user activity across sanctioned and unsanctioned applications. The fully integrated platform eliminates overlay architectures and simplifies policy creation and administration, ensuring data is protected and compliance is maintained.

What Makes the SaaS Security Unique?

- **Data exposure reporting and remediation:** Zscaler SaaS Security checks SaaS applications and cloud providers' configurations and compares them to industry and organizational benchmarks to report violations and automate remediation.
- **Threat identification and remediation:** Zscaler SaaS Security checks SaaS applications for hidden threats being exchanged and prevents their propagation.
- **Compliance assurance:** Zscaler SaaS Security provides compliance visibility across SaaS and cloud providers and can mitigate violations automatically.
- **Part of a larger data protection platform:** The Zscaler Cloud Security Platform provides unified data protection with DLP, and Malware Scanning capabilities for internet, data center, and SaaS applications, and ensures that public cloud applications are configured to prevent data exposure and maintain compliance. Zscaler also offers Zscaler Private Access for Zero-Trust access to internal applications, Zscaler Digital Experience for active monitoring of a user's experience to SaaS applications, and Zscaler Cloud Protection. Zscaler provides end-to-end connectivity, security, and visibility from any location on-premises or remote.

ZDX for the Box User Experience

With ZDX, you can now easily monitor your users' digital experiences. ZDX provides visibility across the complete user-to-cloud app experience and quickly isolates issues. By combining the Zscaler Client Connector endpoint agent with Zscaler's global cloud footprint, ZDX provides you with innovative and unprecedented end-to-end visibility, regardless of network or location.

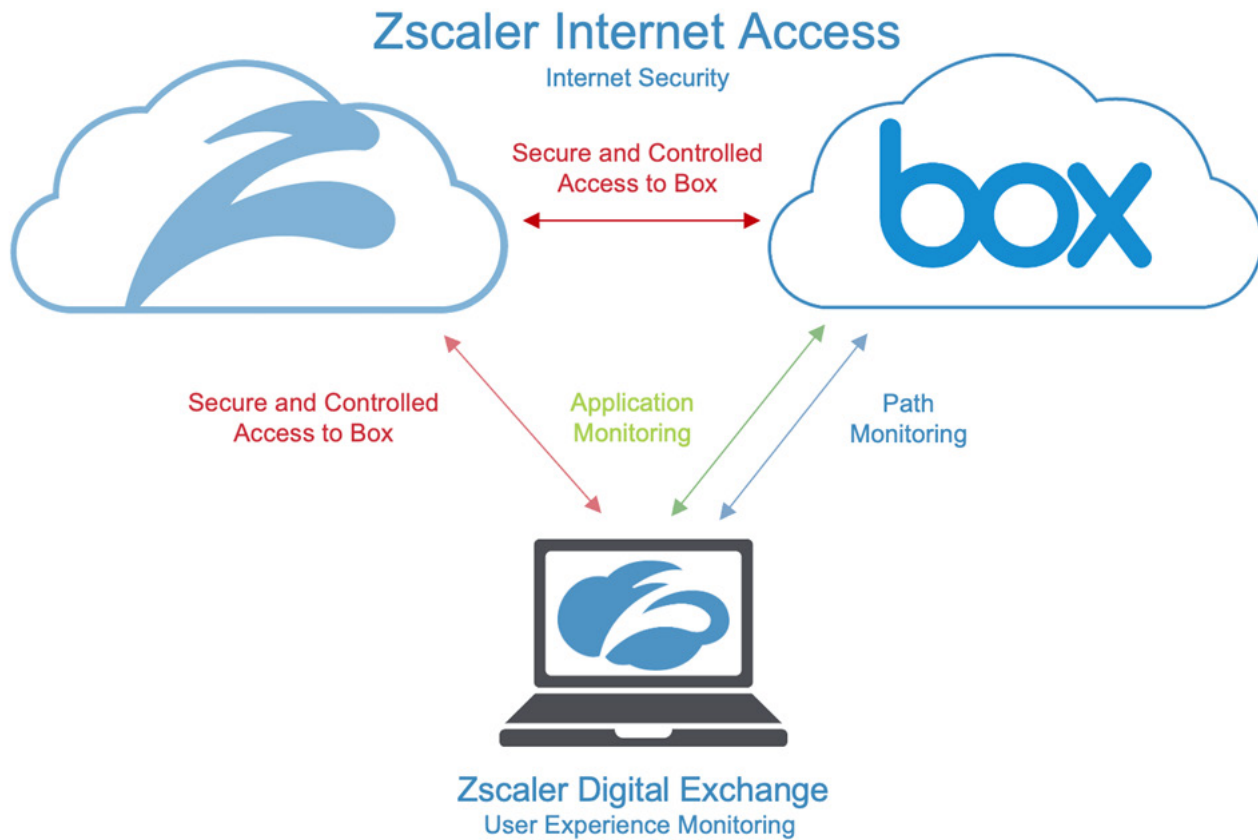


Figure 3. ZDX in Use with Box

What Makes ZDX Unique?

- End user device performance: Continuously gather and analyze data on end user device resources and events, such as CPU, memory usage, and Wi-Fi connectivity issues that impact end user experiences.
- Cloud path performance: Measure and analyze end-to-end and hop-by-hop network path metrics from every user device to the cloud application. With cloud path visibility, you can proactively detect and resolve end user connectivity issues to cloud applications.
- Application performance: Continuously monitor and measure application metrics, such as response time, DNS resolution, and broader availability metrics of the application.
- ZDX scoring: Monitor aggregated user experience performance scores tracked over time at the user, application, location, department, and organizational level.

Configuring Zscaler SaaS for Box

The configuration to enable the SaaS service builds on itself. Log in to the ZIA Admin Portal to start the configuration process.

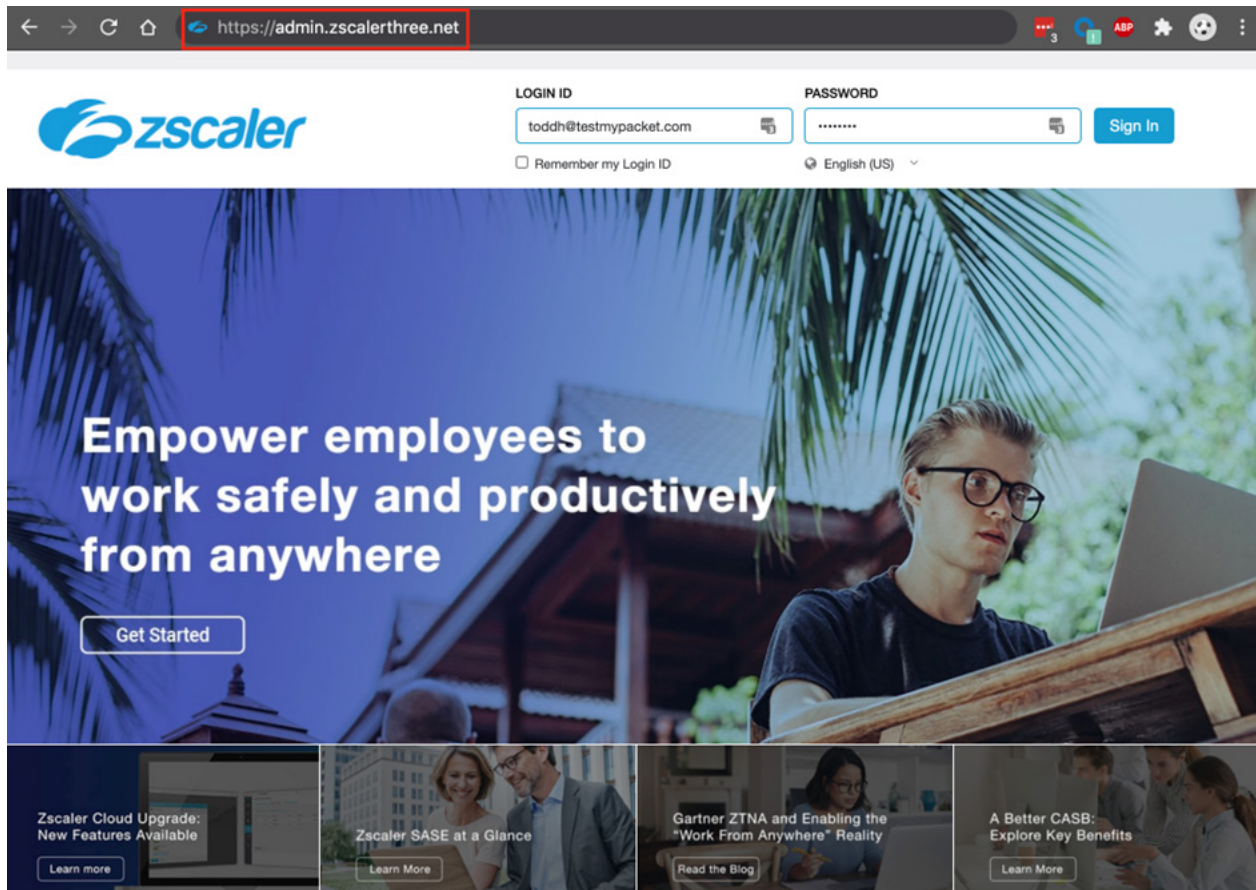


Figure 4. Creating an Azure Active Directory IdP

You must complete the following steps:

- [Configuring the Box Tenant on Zscaler](#)
- [Configuring the Zscaler Tenant on Box](#)
- [Configure a SaaS DLP Policy](#)
- [Configure a SaaS Malware Policy](#)
- [Configure the Scan Schedule Configuration](#)

Configuring the Zscaler and the Box Tenant

Configure the Box SaaS Tenant under Administration in the ZIA Admin Portal.

1. Select **Administration**.
2. Select **SaaS Application Tenants**.

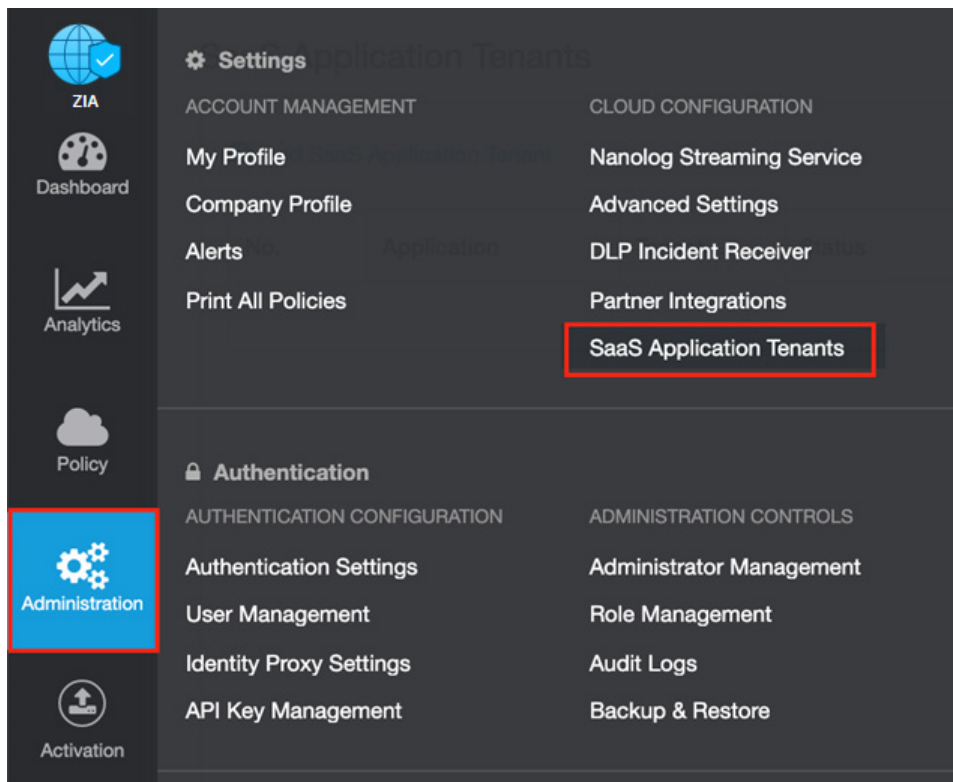


Figure 5. Adding a Box Tenant

Configuring the Box Tenant on Zscaler

Add the SaaS Application Tenant. Select **Add SaaS Application Tenant**.

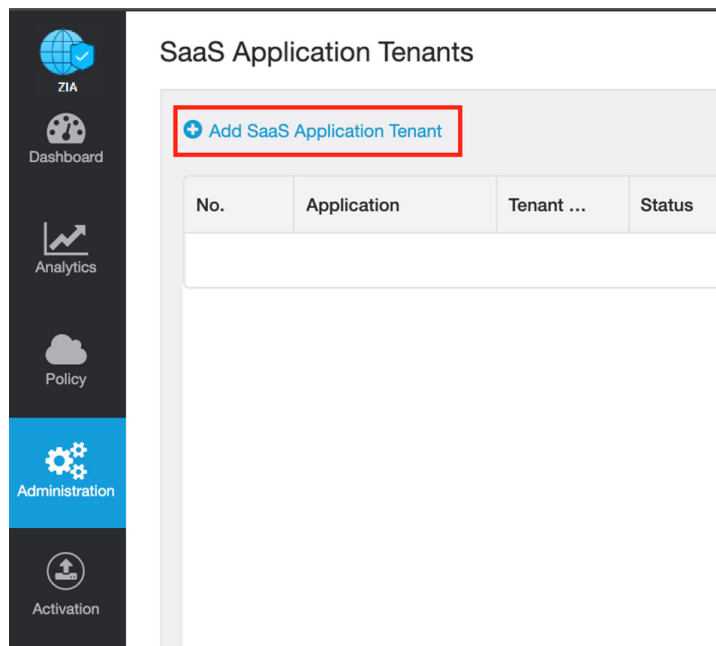


Figure 6. Adding an Application Tenant

SaaS Tenant Configuration wizard

Select the **Box** tile under **Popular Applications** to move to the next step in the wizard.

Add SaaS Application Tenant

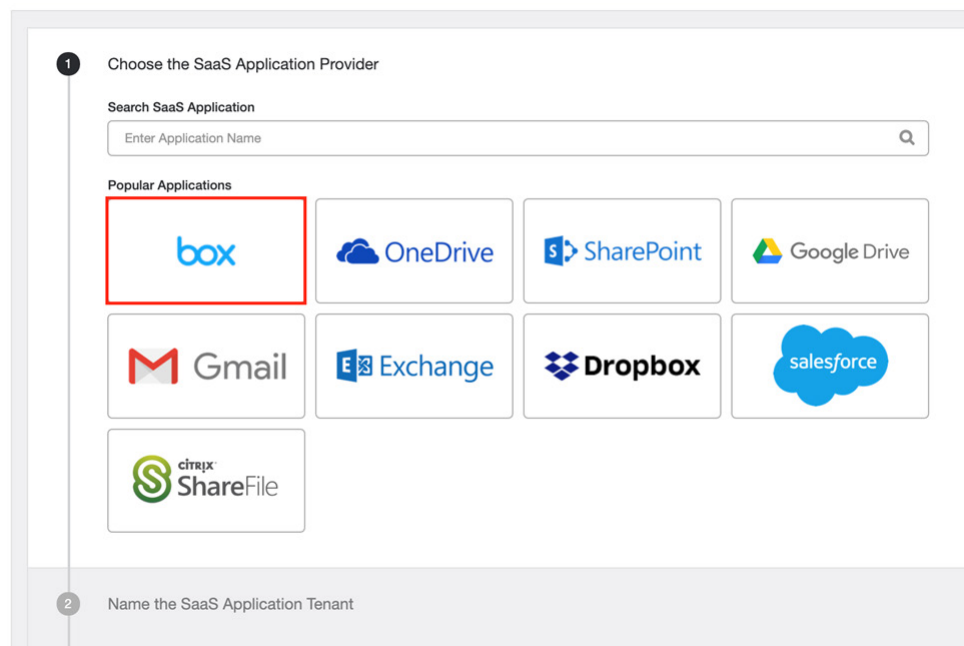


Figure 7. The SaaS Tenant configuration wizard

SaaS Tenant Configuration wizard

Give the Box tenant a name. This is the tenant's name that is selected when assigning a policy for the Zscaler security features.

1. Enter a name for the **Tenant Name**.
2. Copy the **Zscaler SaaS Connector** for next steps.
3. Select **Go to Box Settings** to open your Box portal.

Add SaaS Application Tenant

The screenshot shows a four-step wizard for adding a SaaS application tenant. Step 1, 'Choose the SaaS Application Provider', displays the Box logo. Step 2, 'Name the SaaS Application Tenant', features a text input field with 'Box SaaS Tenant' entered; the field and its label are highlighted with a red box. Below the input is a note: 'The tenant name must be unique'. Step 3, 'Authorize the SaaS Application', provides instructions and a 'Zscaler SaaS Connector' value, 'k7o1cawqpgmjdr4i94v11pt832k0s19', which is highlighted with a red box and a 'Copy' button. Next to it is a 'Go to Box Settings' button with an external link icon, also highlighted with a red box. Step 4, 'Enter the Box Enterprise ID', is currently inactive. At the bottom are 'Save' and 'Cancel' buttons.

Figure 8. Open the Box Tenant

Configuring the Zscaler Tenant on Box

To configure the Zscaler Tenant from your Box Admin account:

1. Select **Apps**.
2. Select **Custom Apps**.
3. Select **Authorize New App**.

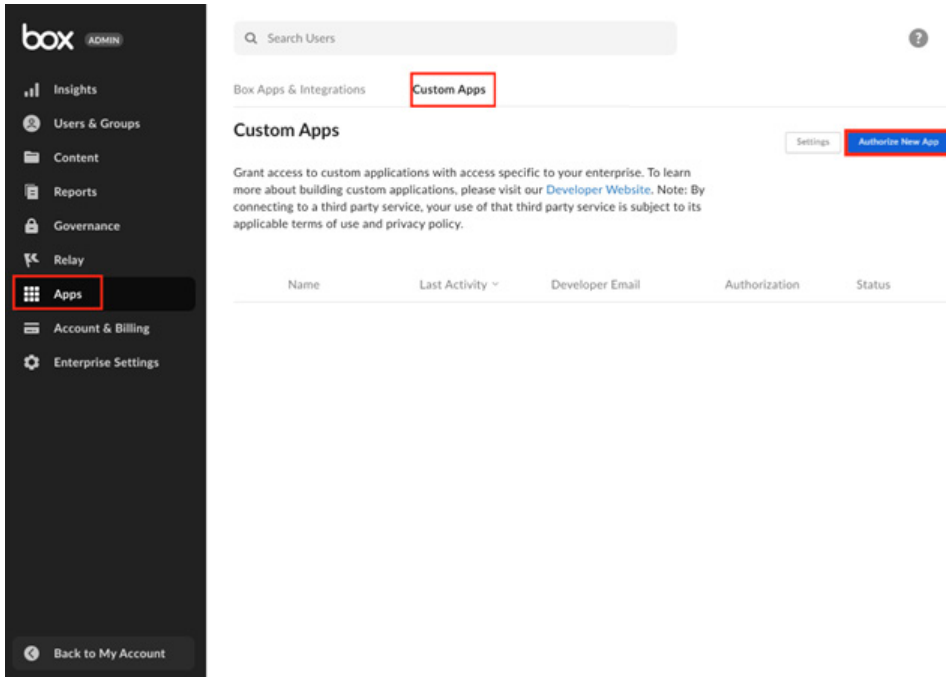


Figure 9. Create a Custom App on the Box Tenant

Authorize the Zscaler Tenant on Box

To authorize the Custom App that is the Zscaler Tenant.

1. Paste the **Zscaler SaaS Connector** that was copied from the Zscaler wizard.
2. Click **Next**.

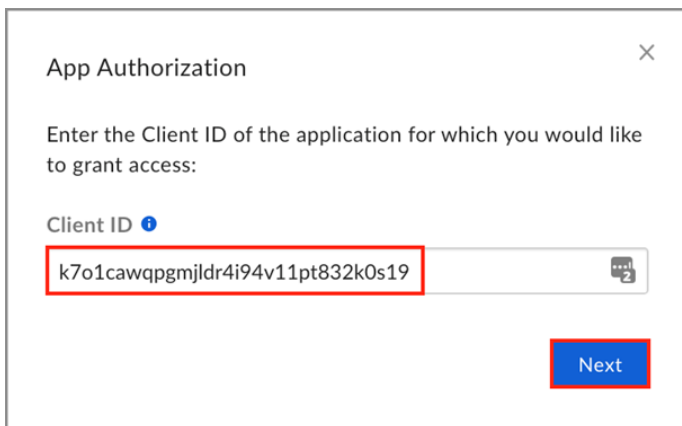
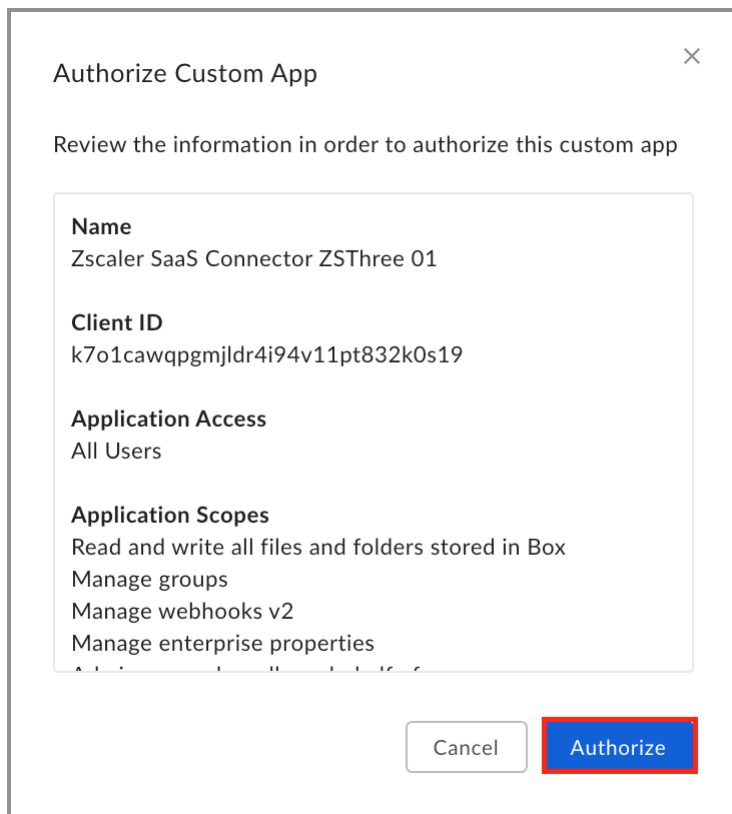


Figure 10. Authorize the Zscaler App on the Box Tenant

- Click **Authorize**. After the new Zscaler tenant is created, you must complete the Zscaler configuration by selecting the Enterprise ID. The Enterprise ID is pasted into the Zscaler configuration wizard later.



Authorize Custom App

Review the information in order to authorize this custom app

Name
Zscaler SaaS Connector ZSThree 01

Client ID
k7o1cawqpgmjldr4i94v11pt832k0s19

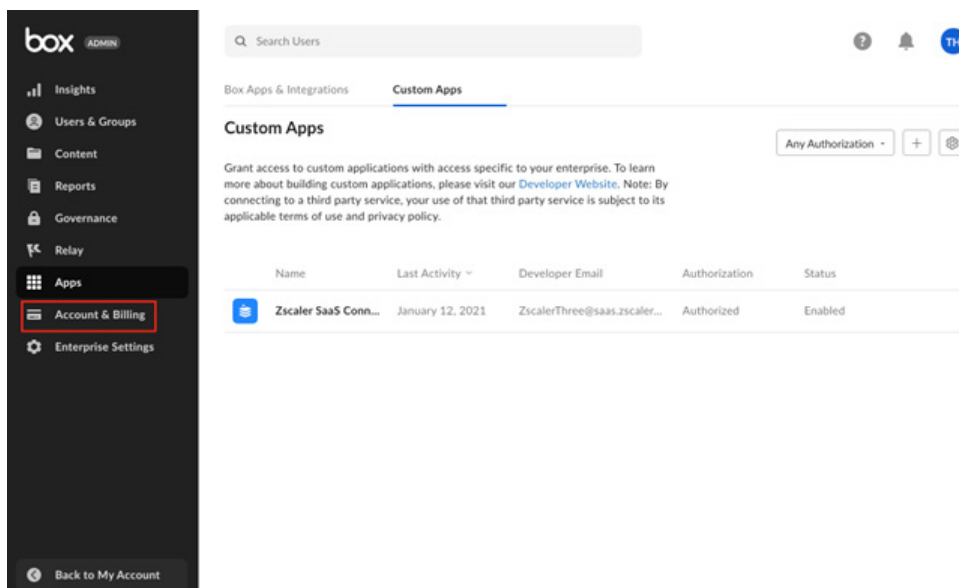
Application Access
All Users

Application Scopes
Read and write all files and folders stored in Box
Manage groups
Manage webhooks v2
Manage enterprise properties

Cancel Authorize

Figure 11. Authorize the Zscaler App on the Box Tenant

- Select **Account & Billing**.



box ADMIN

Search Users

Box Apps & Integrations Custom Apps

Custom Apps

Grant access to custom applications with access specific to your enterprise. To learn more about building custom applications, please visit our [Developer Website](#). Note: By connecting to a third party service, your use of that third party service is subject to its applicable terms of use and privacy policy.

Name	Last Activity	Developer Email	Authorization	Status
Zscaler SaaS Conn...	January 12, 2021	ZscalerThree@saas.zscaler...	Authorized	Enabled

Back to My Account

Figure 12. The created Zscaler Tenant

Under **Account & Billing** of the Box Admin account, select and save the **Enterprise ID**. This ID is pasted into the Zscaler configuration wizard identifying the Box SaaS ID and allows the Zscaler SaaS Security API to provide security services to this Box tenant.

5. Copy and save the **Enterprise ID**.
6. Return to the Zscaler configuration wizard.

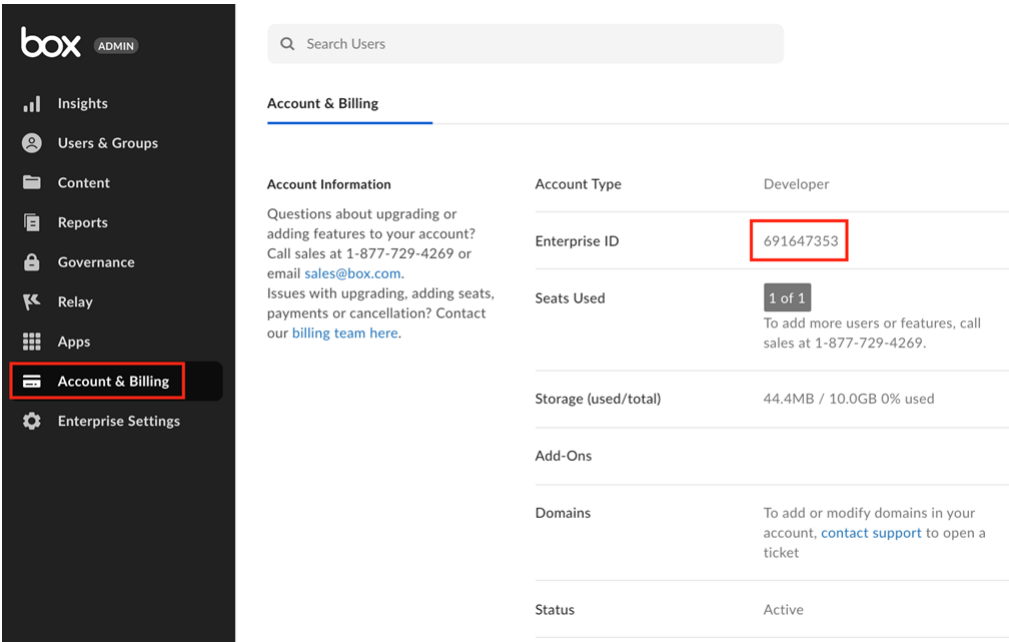


Figure 13. The Enterprise ID

Finishing the Zscaler Configuration

To finish:

1. Paste the **Box Enterprise ID** copied previously.
2. Save the **Zscaler / Box configuration**.
3. Activate your changes.

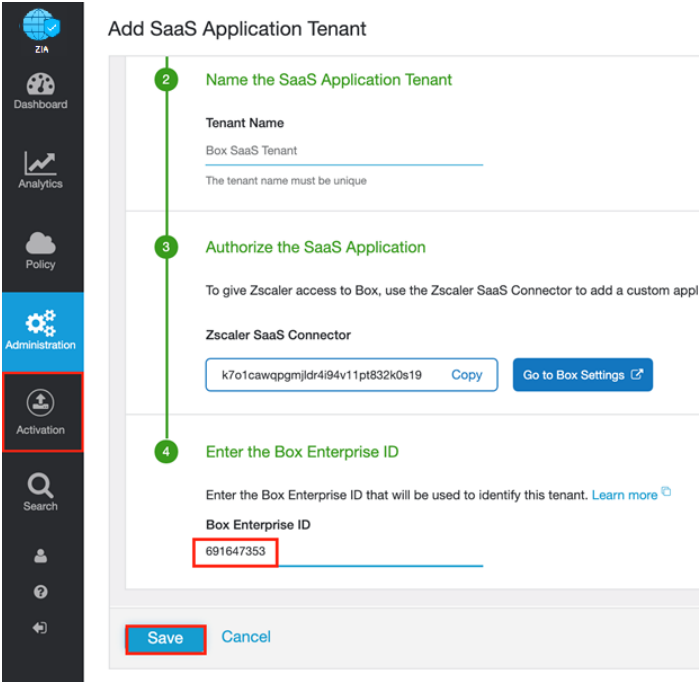




Figure 14. Zscaler configuration wizard

The Active SaaS Security Tenant


The API credentials and connectivity are now validated. Refresh your browser to verify the Box tenant is Active.




ZIA




Dashboard




Analytics



Policy




Administration



Activation

SaaS Application Tenants



No.	Application	Tenant...	Status
1	Box	Box SaaS ...	<div><div></div>Active</div>

Figure 15. Zscaler configuration wizard

You are now ready to set up the Scan Schedule, DLP policies, and Malware policies.

Configuring Box Policies and Scan Configuration

After adding the tenants, you can configure the SaaS Security API DLP policy, malware detection policy, and scan configuration. You can also view reports and data for the tenants in the SaaS report, insights, and logs.

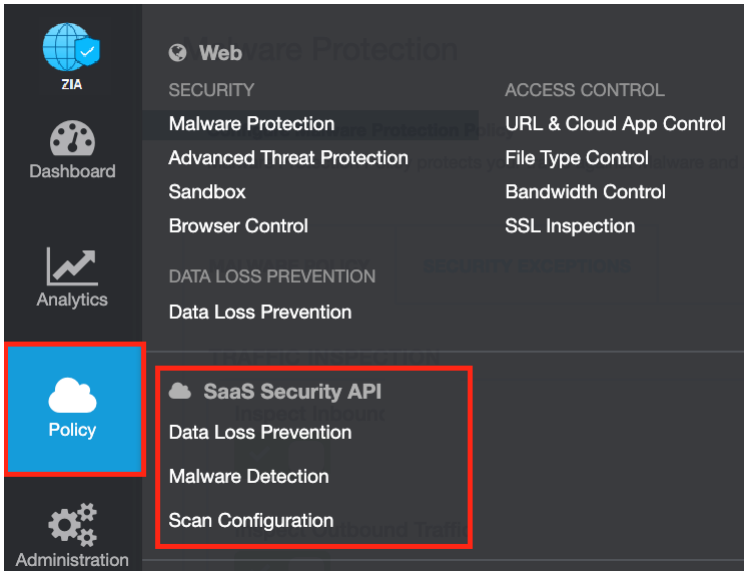


Figure 16. Zscaler SaaS Security API

Scoping the Policies and Remediation

For this deployment guide, you configure a basic DLP policy and a malware policy to scan the Box account files for matching content of the DLP policy, and scan the files for known malware for the malware policy.

Zscaler SaaS out-of-band data protection capabilities look inside the SaaS applications themselves through API integrations to identify accidental or intentional data exposure and compliance violations that would otherwise go unnoticed.

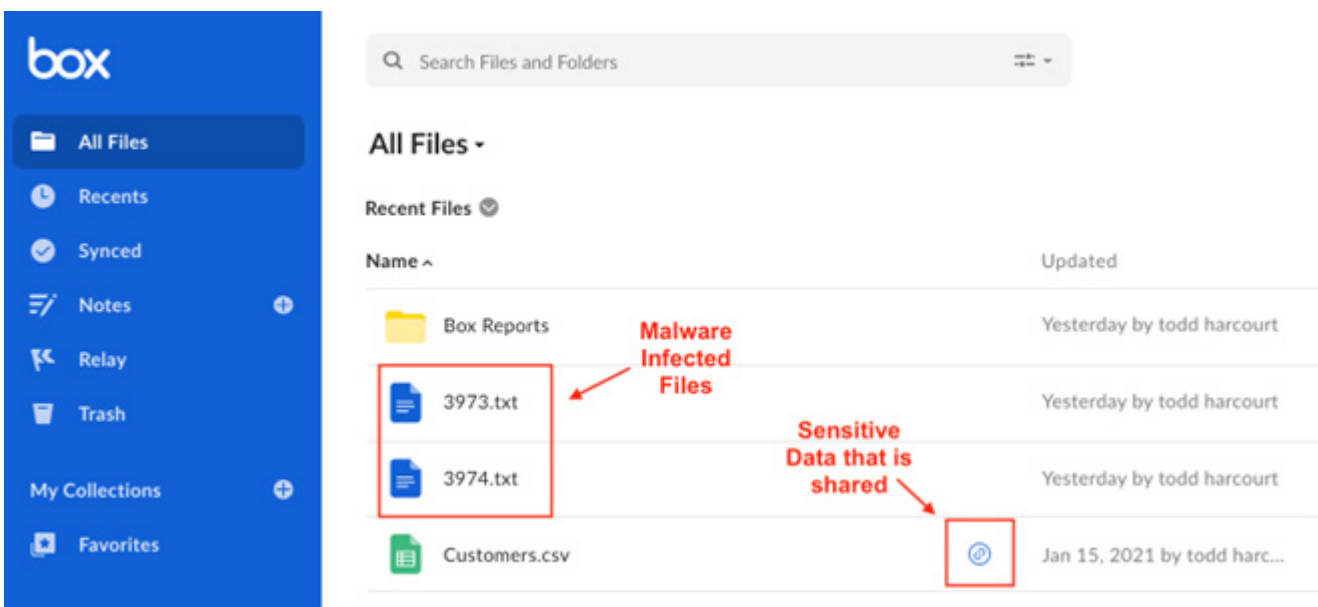


Figure 17. Box user account

For the DLP policy, create a very broad DLP policy to identify a spreadsheet with a list of US Social Security Numbers and remove the shared link to prevent further sharing of the file. DLP is a subject of its own, and this policy is used only for demonstration purposes. A true DLP policy review must be conducted to minimize false positives and false negatives.

Also note that the SaaS DLP protection is only part of the Zscaler DLP solution and is used to scan data-at-rest like the Box files. This deployment does not cover inline data protection or exact data match, although they are integral pieces of a data protection solution.

To test the DLP SaaS functionality, create a basic policy and apply it to the Box tenant.

Creating a DLP Policy

The procedures for creating a DLP policy are pretty straightforward. Create a custom dictionary, or use the available dictionaries, to identify the data the scan is going to look for.

Then an engine is created, which is the logical template for adding expressions and additional data. This is where you would specify US Social Security Numbers and US Names. The engine provides the means to precisely add or remove data to match violations and eliminate false positives.

A SaaS DLP policy is then created, which allows you to specify the detail about where, when, the action taken, and whom to inform about violations. Finally, the DLP policy is then applied to the Box tenant. Now verify the DLP dictionary as next steps. In the ZIA Admin Portal:

1. Select **Administration**.
2. Select **DLP Dictionaries & Engines**.
3. Select **DLP Dictionaries**.
4. Identify the dictionaries to be used. In this case, **Names (US)** and **Social Security Numbers (US)**.

The screenshot shows the ZIA Admin Portal interface. On the left is a sidebar with navigation icons for ZIA, Dashboard, Analytics, Policy, Administration (highlighted), Activation, and Search. The main content area is titled 'DLP Dictionaries & Engines' and has two tabs: 'DLP DICTIONARIES' (selected) and 'DLP ENGINES'. Below the tabs is a table of predefined dictionaries. Two rows are highlighted with red boxes: 'Names (US)' and 'Social Security Numbers (US)'.

No.	Name	Type	Trigger Thresholds	Description
16	Names (US)	Predefined	High	Detect leakage of names from the United States
17	National Health Service Number (UK)	Predefined	Medium	Detect leakage of UK National Health Service Numbers
18	National Identification Card Number (...)	Predefined	Medium	Detect leakage of Taiwanese National Identification Card Numbers
19	National Identification Number (France)	Predefined	Medium	Detect leakage of French National Identification Numbers
20	National Identification Number (Spain)	Predefined	Medium	Detect leakage of Spanish National Identification Numbers
21	National Insurance Numbers (UK)	Predefined	Medium	Detect leakage of UK National Insurance Numbers
22	NRIC Numbers (Singapore)	Predefined	Medium	Detect leakage of Singaporean National Registration Identity Card Number...
23	Resident Registration Number (Korea)	Predefined	Medium	Detect leakage of Korean Resident Registration Numbers
24	Salesforce.com Data	Predefined	High	Detect leakage of Salesforce.com data
25	Social Insurance Numbers (Canada)	Predefined	Medium	Detect leakage of Canadian Social Insurance Numbers
26	Social Security Numbers (US)	Predefined	Medium	Detect leakage of United States Social Security Numbers
27	Source Code	Predefined	Low	Detect leakage of source code

Figure 18. Creating a DLP Dictionary

Creating a DLP Engine

To create the DLP engine.

1. Select the **DLP Engines** tab.
2. Select **Add DLP Engine**.

DLP Dictionaries & Engines

DLP DICTIONARIES **DLP ENGINES** **UPDATED**

+ Add DLP Engine

No.	Name	Dictionaries
1	GLBA	(Financial Statements > 0 AND Social Securit
2	HIPAA	(Medical Information > 0 AND Social Security
3	Offensive Language	(Adult Content > 0)
4	PCI	(Credit Cards > 5 AND Social Security Numb

Figure 19. Creating a DLP Engine

3. Enter a **Name** for the DLP Engine.
4. In the **Engine Builder** under **Expression**, select the first dictionary.
5. Specify the **Match Count**, which is the minimum number of instances the data must occur in the file.
6. Click **Add** to add your dictionary and repeat the process.
7. Click **Save** to save the configuration.
8. Activate the configuration.

Add DLP Engine

DLP ENGINE

Name

Names and SSNs

ENGINE BUILDER

EXPRESSION

ALL

Names (US)

>

5

×

Social Security Numbers (...)

>

5

×

ADD

Expression Preview

((Names (US) > 5) AND (Social Security Numbers (US) > 5))

DESCRIPTION

Test DLP rule to check for a file with 5 Names and 5 US Social Security Numbers

Save

Cancel

Figure 20. The DLP Engine

Configure a SaaS DLP Policy

To launch the DLP Rule wizard.

1. Go to **Policy > SaaS Security API > Data Loss Prevention**.
2. Select **File Sharing**.
3. Select **Add DLP Rule**.

Figure 21. The SaaS DLP Policy configuration wizard

SaaS DLP Policy Details

The SaaS DLP Policy specifies the details to whom and what device this policy applies. You specify the rule order if you have multiple DLP policies that are processed in an ascending manner. The first rule that matches is the applied rule. You specify the DLP Engine you have defined, any particular file Owners, Groups, or Departments, and the file types to inspect. The collaboration scope and the action are unique to the SaaS DLP and are explained in the following section for clarification. For this policy, select Any Collaboration, and an Action of Remove Sharing.

Collaboration Scope

The collaboration scopes and permissions for SaaS tenant files that contain sensitive data. Select Any to apply the rule to files with all collaboration levels, or select any number of the following collaboration scopes and specify the permissions for each scope:

- External Collaborators: Files that are shared with specific collaborators outside your organization.
- External Link: Files with shareable links that allow anyone outside your organization to find the files and have access.
- Internal Collaborators: Files that are shared with specific collaborators or are discoverable within your organization.
- Internal Link: Files with shareable links that allow anyone within your organization to find the files and have access.
- Private: Files that are only accessible to the owner.

Action

- Choose the Action the rule takes upon detecting content that matches the criteria. The number of actions available depends on the selected SaaS Application Tenant.
- Change to Read Only for All Collaborators: The rule reports the incident and changes the file's collaboration scope for all collaborators to read only.
- Change to Read Only for External Collaborators: The rule reports the incident and changes the file's collaboration scope for external collaborators to read only.
- Change to Read Only for Internal Collaborators: The rule reports the incident and changes the file's collaboration scope for internal collaborators to read only.
- Remove All Collaborators: The rule reports the incident and removes all of the file's external and internal collaborators.
- Remove External Collaborators and Shareable Links: The rule reports the incident and removes all of the file's external collaborators and any shareable links.
- Remove Internal Collaborators and Shareable Links: The rule reports the incident and removes all internal collaborators and any shareable links.
- Remove Internal Shareable Link: The rule reports the incident and removes the file's internal shareable link. Existing collaborators are unaffected.
- Remove Public Shareable Link: The rule reports the incident and removes the file's public shareable link. Existing collaborators are unaffected.
- Remove Sharing: The rule reports the incident and removes all of the file's collaborators and any shareable links.
- Report Incident Only: The rule reports the incident only and makes no changes to the file's collaboration scope.
- Update to Not Discoverable Externally: The rule reports the incident and changes the file's collaboration scope to prevent it from being discoverable through public search engines.
- Update to Not Discoverable for All: The rule reports the incident and changes the file's collaboration scope to prevent it from being discoverable through public search engines or within your organization.
- Update to Not Discoverable Internally: The rule reports the incident and changes the file's collaboration scope to prevent it from being discoverable within your organization.

Configure a SaaS DLP Policy

To finish the DLP policy:

1. Specify the **Rule order** for **Processing**.
2. **Name** the rule.
3. **Enable** the rule.
4. Select the **Box SaaS Tenant**.
5. Select the **DLP Engine** created previously.
6. Select **Any-Any** for the **Collaboration Scope**.
7. Select **Remove Sharing** as the **Action**.
8. Select **Medium** as a **Severity** to allow for identification for searches and tracking.
9. **Save** and Activate your configuration.

Add DLP Rule

DLP RULE

Rule Order
1

Admin Rank
7

Rule Name
Box_Names_and_SSNs

Rule Status
Enabled

CRITERIA

SaaS Application Tenant
Box SaaS Tenant

Owners
Any

Groups
Any

Departments
Any

DLP Engines
Names and SSNs

File Type
Any

Collaboration Scope
Any - Any

ACTION

Action
Remove Sharing

Severity
Medium

DESCRIPTION

Save
Cancel

Figure 22. The SaaS DLP Policy configuration wizard

Configure a SaaS Malware Policy

To launch the DLP Rule wizard:

1. Select **Policy** > **SaaS Security API** > **Malware Detection**.
2. Select **File Sharing**.
3. Select **Add Malware Detection Rule**.

The screenshot displays the Zscaler SaaS Security API configuration interface. In the left sidebar, the 'Policy' menu item is highlighted. The main content area shows the 'SaaS Security API' section with three tabs: 'DATA LOSS PREVENTION', 'MALWARE DETECTION', and 'SCAN CONFIGURATION'. The 'MALWARE DETECTION' tab is selected, and within it, the 'POLICY' sub-tab is active. A table lists existing policies, but it is currently empty with the message 'No matching items found'. A modal window titled 'Add Malware Detection Rule' is open, providing fields to configure a new rule. Under the 'CRITERIA' section, the 'Application' is set to 'Box', the 'SaaS Application Tenant' is 'Box SaaS Tenant', and the 'Status' is 'Enabled'. Under the 'ACTION' section, the 'Action' is 'Quarantine Malware' and the 'Quarantine Location' is 'tharcourt@zscaler.com'. 'Save' and 'Cancel' buttons are located at the bottom of the modal.

Figure 23. The Malware Policy configuration wizard

The SaaS Malware Detection Policy is an all-encompassing policy and all files in the Tenant are scanned unless removed from the scope by specifying any exemptions by selecting the Exemption tab under Malware Detection. To add a malware policy, specify the Application, the SaaS Tenant, the Status, the Action, and the Quarantine Location.

The Action and the Quarantine Location are unique to the SaaS Tenants. For the Action, you can select Quarantine, Remove, or report a violation. If you select Quarantine, you must specify the Box ID for the user where the files are quarantined. This would typically be the Security Operations Group.

Action

Select the action for the rule to take when it detects malware.

- Quarantine Malware: The Zscaler service quarantines the suspicious file.
- Remove Malware: The service deletes the suspicious file.
- Report Malware: The Zscaler service reports the incident but doesn't quarantine or remove the malware.

Quarantine Location

This field appears only if you select the Quarantine Malware action.

- This is the location where malicious files are moved for quarantine. The Zscaler service creates a folder or library called Zscaler_Quarantine for the location.
- To specify the quarantine location, enter the Box ID for the user who owns the folder. The service creates the folder on the user's account.

Configure a SaaS Malware Policy

To configure the Malware Rule wizard:

1. Select **Policy > SaaS Security API > Malware Detection**.
2. Select **File Sharing**.
3. Select **Add Malware Detection Rule**.
4. Under **Criteria**, select **Box** as the **Application**.
5. Select the **Box SaaS Tenant** to apply the policy.
6. Select **Enabled** for **Status**.
7. Select **Quarantine Malware** as the **Action**.
8. Select the **User ID** where the **Quarantine** folder is created, and the infected files are stored.
9. Select **Save**.

Add Malware Detection Rule

Application
Box

SaaS Application Tenant
Box SaaS Tenant

Status
Enabled

Action
Quarantine Malware

Quarantine Location
tharcourt@zscaler.com

Save
Cancel

Figure 24. The Malware Policy configuration wizard

The following is the completed SaaS Malware policy for the Box SaaS Tenant. Activate your configuration.

SaaS Security API

DATA LOSS PREVENTION MALWARE DETECTION SCAN CONFIGURATION

File Sharing POLICY EXCEPTIONS

+ Add Malware Detection Rule

No.	SaaS Application Tenant	Application	Action
1	Box SaaS Tenant	Box	Quarantine Malware

Activation

Figure 25. The Completed Malware Policy configuration wizard

Configure the Scan Schedule Configuration

The final configuration step is to create a Scan Configuration. Specify that the Tenant to which the Scan Configuration applies are any policies that are to be included in the scan, and any data to scan relative to a date.

The options for Data to Scan are All Data, Date Created or Modified After, or New Data Only. For this deployment guide, select All Data. However, if this is a POV or a Trial, the only option available is New Data Only.

To add a Scan Schedule:

1. Select **Policy** > **SaaS Security API** > **Scan Configuration** > **Add Scan Schedule**.
2. Select the **Box SaaS Tenant** for the **SaaS Application Tenant**.
3. Select the **Data Loss Prevention** policy and the **Malware Detection** policy created previously.
4. Select **All Data** or **New Data Only** if this is a POV.
5. Select **Save** to save the Scan Schedule.

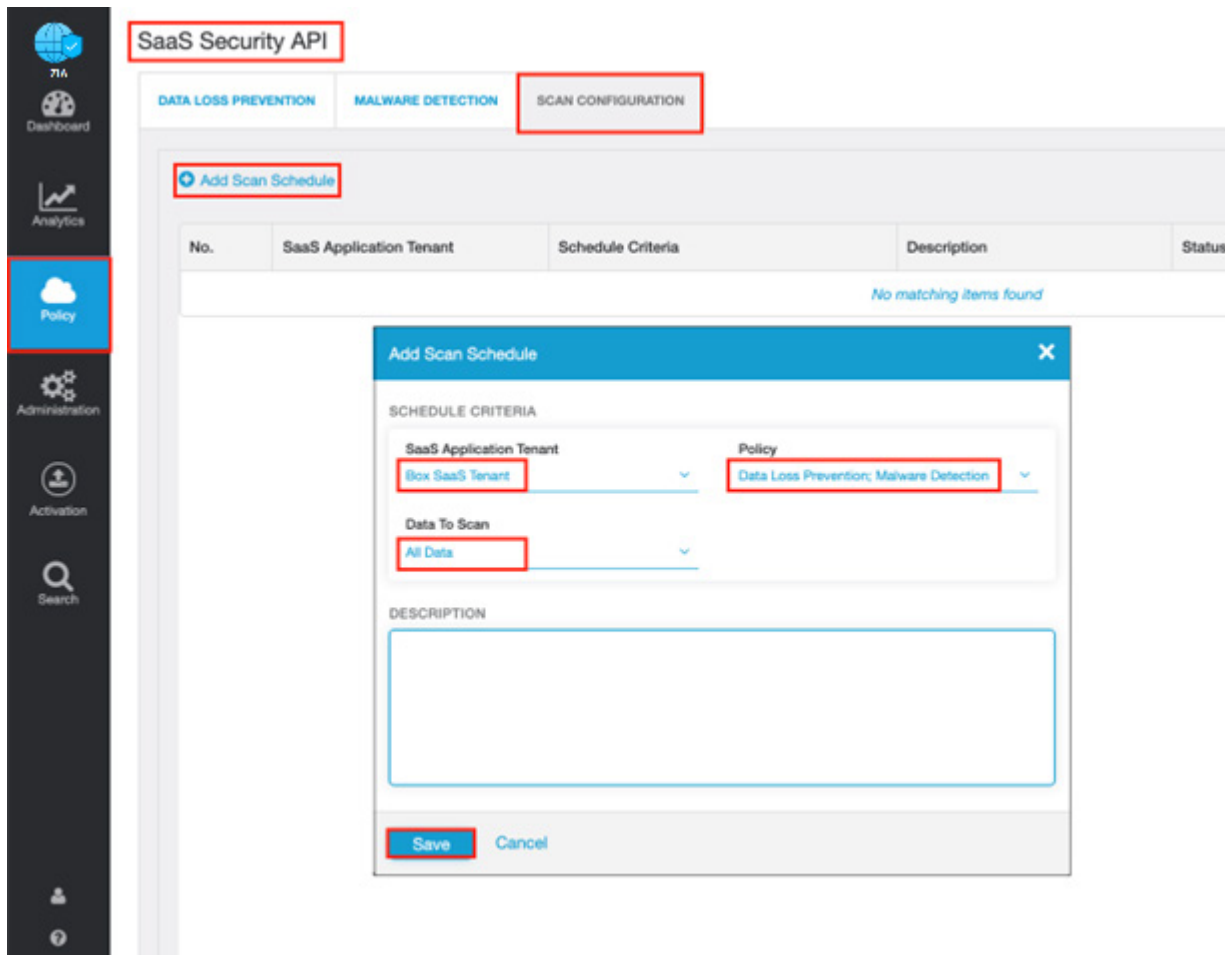


Figure 26. Create and enable a scan for the SaaS Tenant

Start the Scan Schedule Configuration

After the schedule is configured and saved, start the scan for the DLP Policy and Malware policy to be applied.

1. Activate the configuration changes.
2. Select the **Blue Arrow** on the **Scan configuration** to start SaaS Security API on the Box Tenant. The Status displays Active with a **Start Date** and a **Latest Scan Date**.

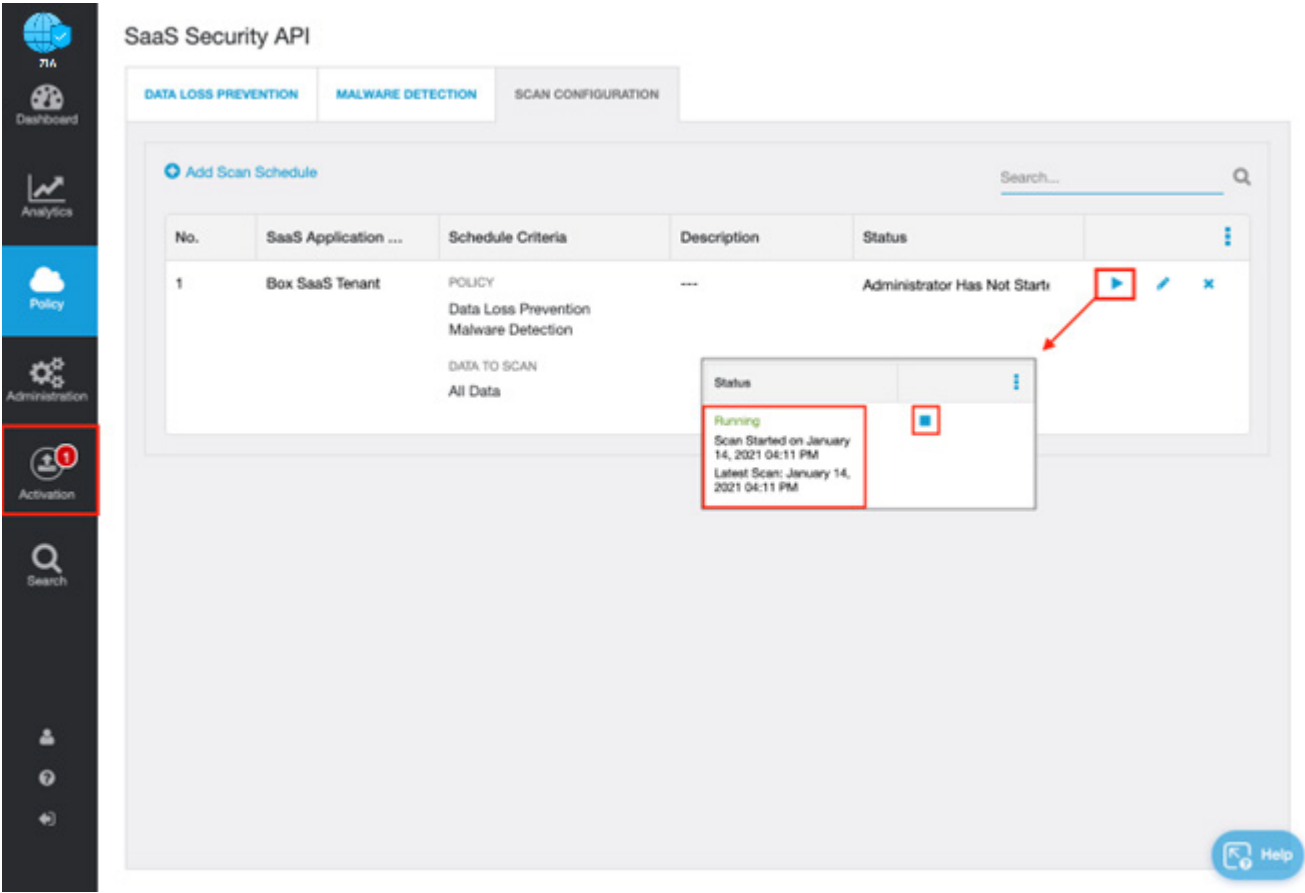


Figure 27. Starting the scan

The Box Tenant Post Scan

The following figure shows the Box Tenant after completing the Scan Schedule. The Malware Policy detected Malware in the two infected files, the SaaS Security API created the Quarantine folder and moved the files into the folder. A file with the same name was created to replace the infected file with a note letting the user know that the file was quarantined.

The DLP Policy also found the configured violation and, after the file containing the sensitive data was identified and the shared link was removed, prevented the file from being distributed.

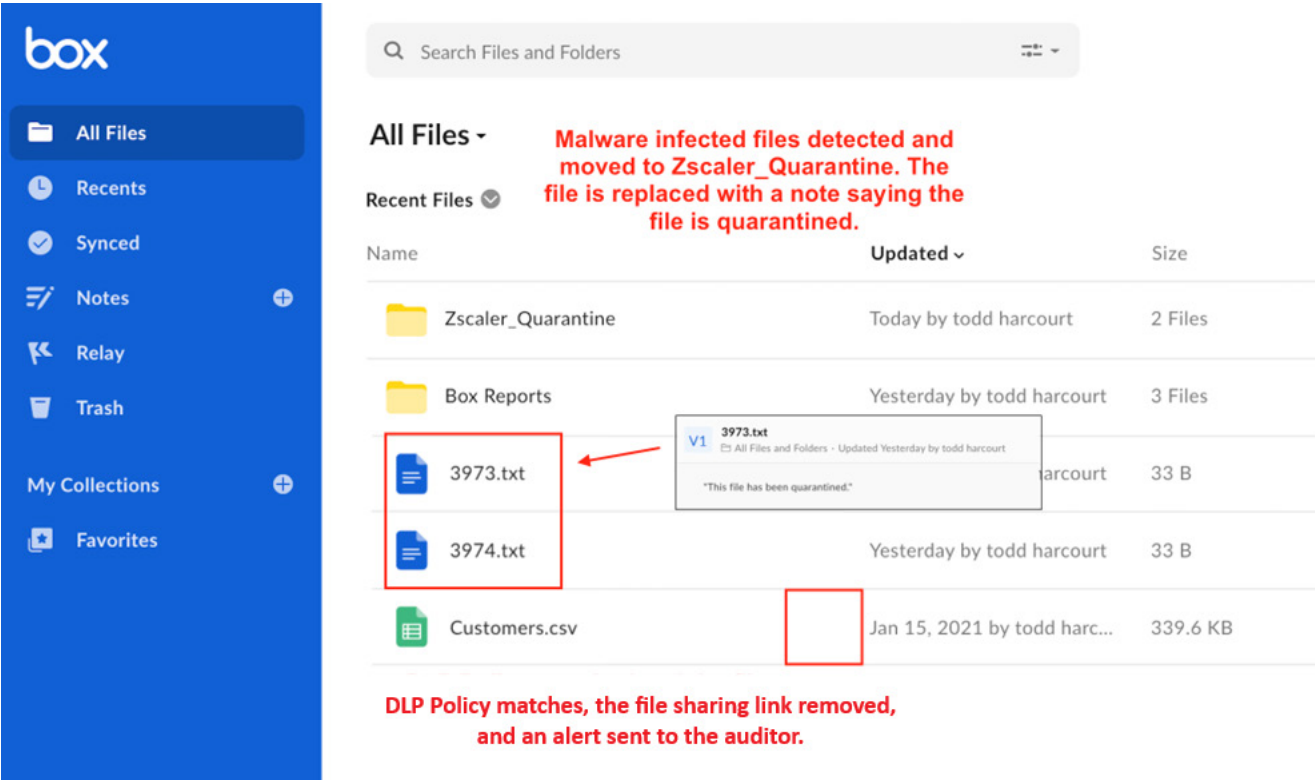


Figure 28. The SaaS results

Reporting and Visibility

Zscaler Analytics provide detailed reporting of all user activity down to each session created by the user when attaching to destination. Zscaler extends that visibility to include reporting of activity, malware incidents, and DLP violations of data at rest associated with the user. For SaaS partners, Zscaler provides Reports and SaaS Insights. This provides visibility from a high-level overview to management of the individual logs and violations.

The following sections review the tools, but for detailed information of the SaaS Analytics tools, visit the [Zscaler Help Portal](#) (government agencies, see [Zscaler Help Portal](#)).

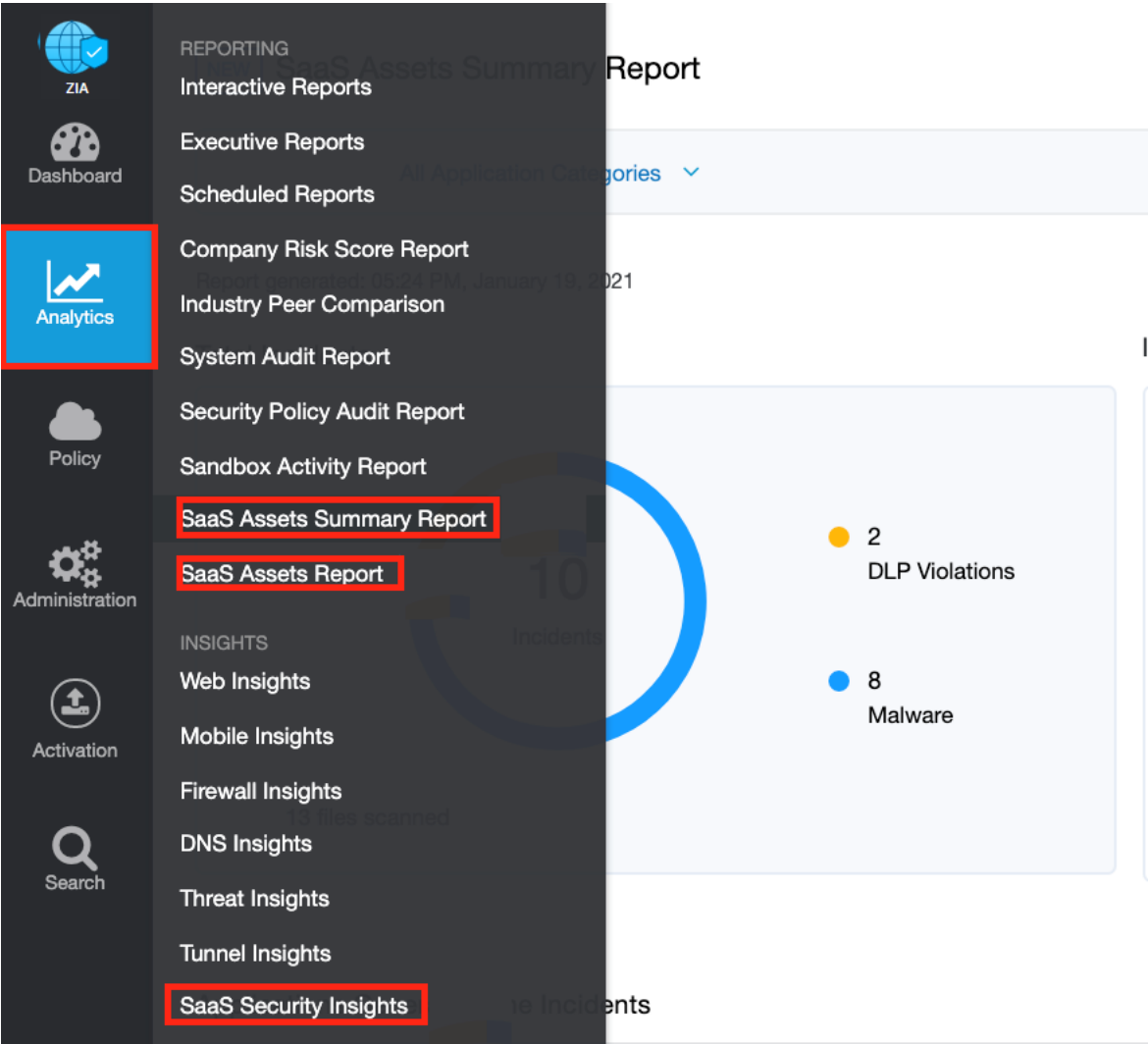


Figure 29. SaaS Visibility

SaaS Assets and SaaS Assets Summary Report

The SaaS Asset Reports provide a summary or customizable reporting to have a quick view of your files and emails. The following figure is the SaaS Assets Summary Report, which provides all activity and violations at a quick glance. The report identifies all SaaS Tenant information from a single screen. The Box activity over the creation of this deployment guide is shown, but any Tenant configured is also displayed on this summary screen. The data is hyperlinked, and you can pivot from a Summary to individual logs and activities provided by SaaS Insights.

Select the 10 Total Violations to pivot to SaaS Insights.

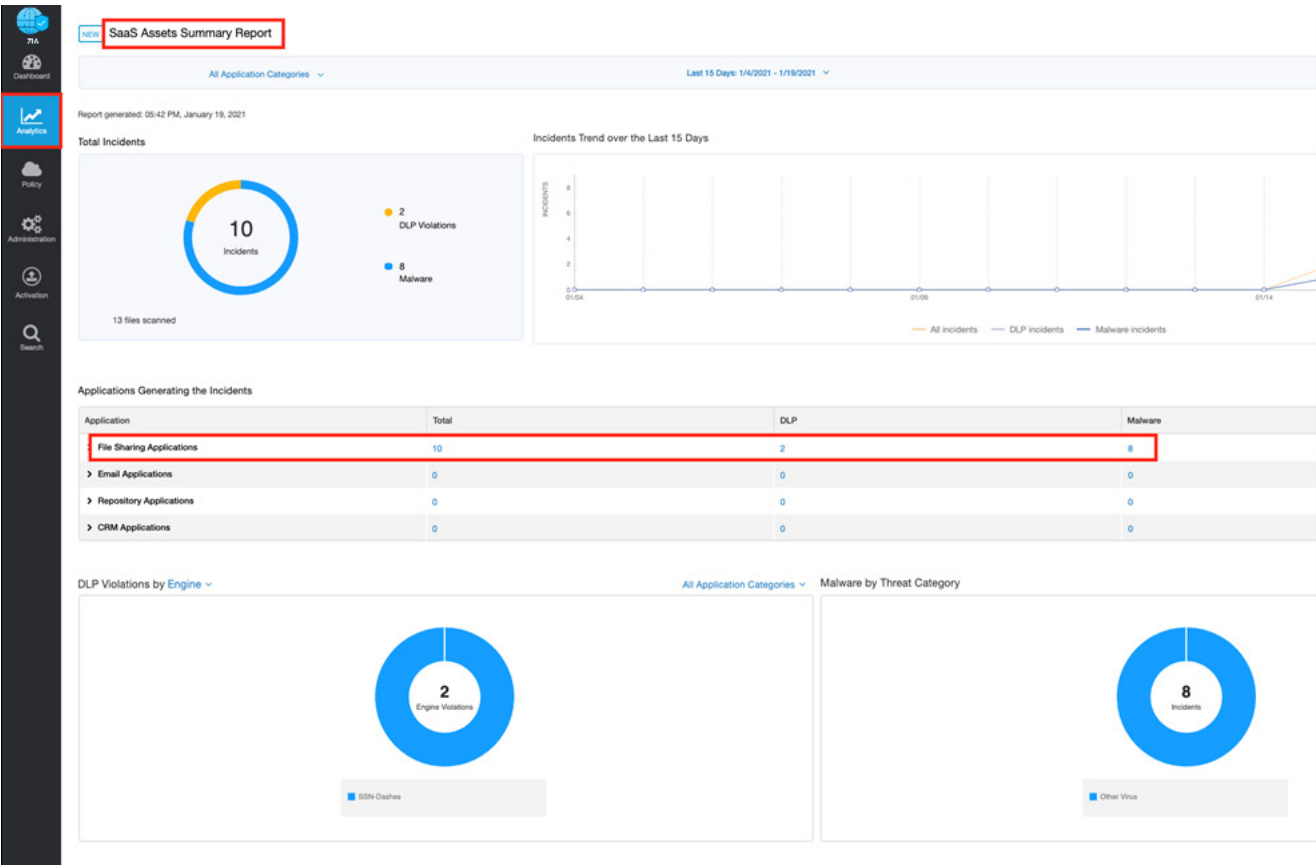


Figure 30. Summary reports

This opens SaaS Insights and the log data for each violation containing over 30 metadata points of information.

SaaS Insights

The SaaS Insights page is where you can view and define information that you want to view when analyzing files scanned through charts. These logs provide the details of the policy that found the violation, the threat name, the owner, and over 30 datapoints for identification and threat hunting.

The following are the SaaS data types and their associated filters:

- Application
- Application Category
- Department
- DLP Dictionary
- DLP Engine
- Incident Type
- Owner Name
- Severity
- Tenant
- Threat Category
- Threat Super Category
- User

Insights Logs

Jan 15, 2021 04:52:21 PM - Jan 18, 2021 10:25:25 AM

10 Log Records Found

Ap...	Logged Time	Policy Type...	Action...	File Size...	File MD5...	Severity...	DLP Diction...	DLP Engin...	Threat Categor...	Threat Name	
Box	Friday, January 15, 2021 4:52:...	Malware Detection	Quarantine ...	68 Bytes	44d88612...	None	None	None	Other Virus	EICAR_Test_File	
Box	Friday, January 15, 2021 4:52:...	DLP	Remove Sha...	69.15 KB	101ab405...	● Medium	Trigger - Last...	SSN-Dashes	None	None	
Box	Monday, January 18, 2021 10:...	Malware Detection	Quarantine ...	68 Bytes	44d88612...	None	None	None	Other Virus	EICAR_Test_File	
Box	Monday, January 18, 2021 10:...	DLP	Remove Sha...	69.15 KB	101ab405...	● Medium	Trigger - Last...	SSN-Dashes	None	None	
Box	Monday, January 18, 2021 10:...	Malware Detection	Quarantine ...	551 Bytes	79449529...	None	None	None	Other Virus	EICAR_Test_File	
Box	Monday, January 18, 2021 10:...	Malware Detection	Quarantine ...	184 Bytes	6ce6f415...	None	None	None	Other Virus	EICAR_Test_File	
Box	Monday, January 18, 2021 10:...	Malware Detection	Quarantine ...	68 Bytes	44d88612...	None	None	None	Other Virus	EICAR_Test_File	
Box	Monday, January 18, 2021 10:...	Malware Detection	Quarantine ...	308 Bytes	e4968ef9...	None	None	None	Other Virus	EICAR_Test_File	
Box	Monday, January 18, 2021 10:...	Malware Detection	Quarantine ...	68 Bytes	44d88612...	None	None	None	Other Virus	EICAR_Test_File	
Box	Monday, January 18, 2021 10:...	Malware Detection	Quarantine ...	68 Bytes	44d88612...	None	None	None	Other Virus	EICAR_Test_File	

Figure 31. SaaS Insights

ZDX for Box

ZDX has become the missing link needed for our customers and their SaaS applications. As applications move to the cloud, the internet becomes your new transport network. And with users working from home and anywhere, IT teams struggle to monitor and isolate issues affecting the user-to-cloud app experience. Box is no exception to this and Zscaler ZDX provides visibility into the client’s experience using Box. ZDX utilizes the Zscaler Client Connector to generate application and network probes, and to gather device health. ZDX is a separate service from ZIA SaaS and can run with or without SaaS enabled.

ZDX allows organizations to continuously gather and analyze data on end user device resources and events, such as CPU, memory usage, and Wi-Fi connectivity issues that impact end user experiences. ZDX measures and analyzes end-to-end and hop-by-hop network path metrics from every user device to the cloud application. With cloud path visibility, you can proactively detect and resolve end user connectivity issues to cloud applications.

Continuously monitor and measure application metrics, such as response time, DNS resolution, and broader availability metrics of the application. Monitor aggregated user experience performance scores tracked over time at the user, application, location, department, and organizational level.

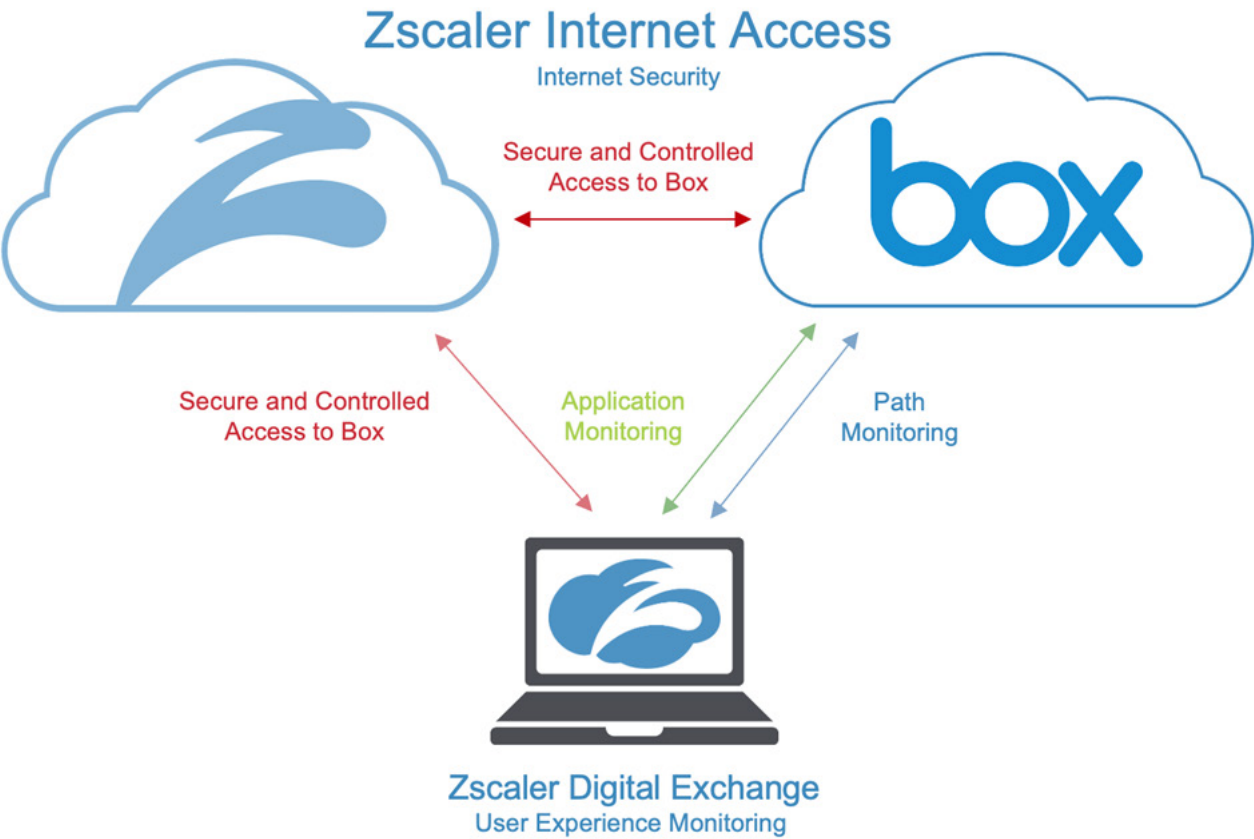


Figure 32. ZDX for User Experience Monitoring for Box

Configure ZDX for Box

Log in to the ZDX Admin Portal with Administrator credentials to begin the configuration process.

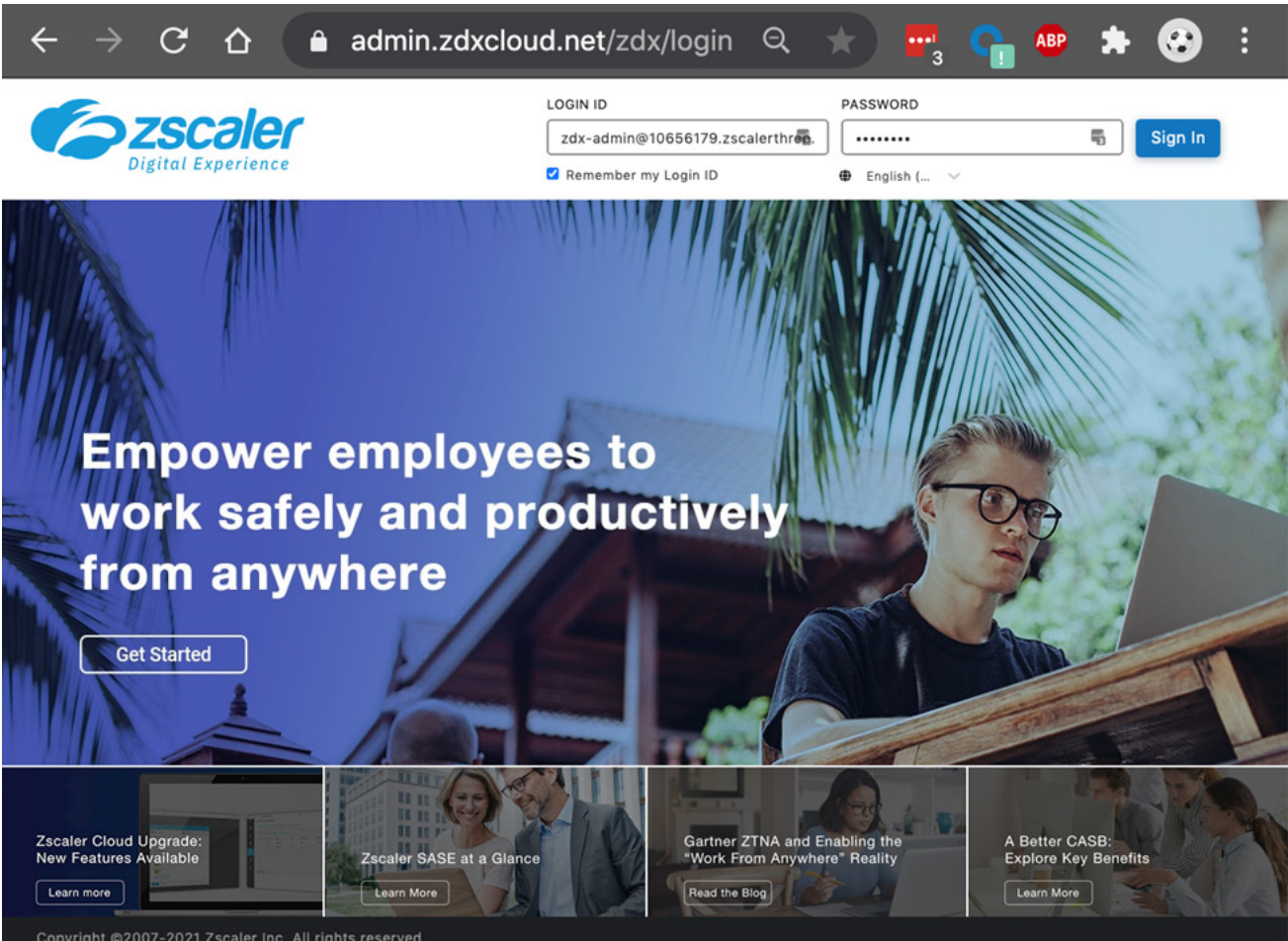


Figure 33. ZDX for User Experience Monitoring for Box

Onboard the Box App

Box is a predefined application in ZDX, and configuration is very simple. To configure the Box application for monitoring:

1. Select **Configuration**.
2. Select **Applications**.
3. Select the blue arrow next to the Box application.
4. Select **Go** under **Onboard Box**.

The screenshot shows the ZDX interface. On the left sidebar, the 'Configuration' menu item is highlighted with a red box. The main content area has two tabs: 'Applications' (highlighted with a red box) and 'Probes'. Below the tabs, there's a section titled 'Predefined Applications (6)' with a table of applications. The first row is 'box Box', which is highlighted with a red box. Below this row, there's a section titled 'Onboard Box' with a 'Go' button highlighted with a red box. Below the 'Onboard Box' section, there's a table of other predefined applications, all of which are 'Disabled'.

Application	Status
box Box	Disabled
Onboard Box	
Go	
> OneDrive for Business	Disabled
> Outlook Online	Disabled
> Salesforce	Disabled
> ServiceNow	Disabled
> SharePoint Online	Disabled

Figure 34. Onboard the Box application

Configure Probes for Box Monitoring

After you click Go, the Box app monitoring and the preconfigured probes are displayed. The probes consist of a Network Probe, which uses an ICMP Trace Route and a Web Page Probe to the account.box.com location to monitor page load times.

Make a change to the Network Probe to have it follow the path of the Webpage Probe so there is no confusion with the results since this is entirely for Box monitoring.

To edit the rule:

1. Activate the changes.
2. Select the blue pencil to edit the probe.

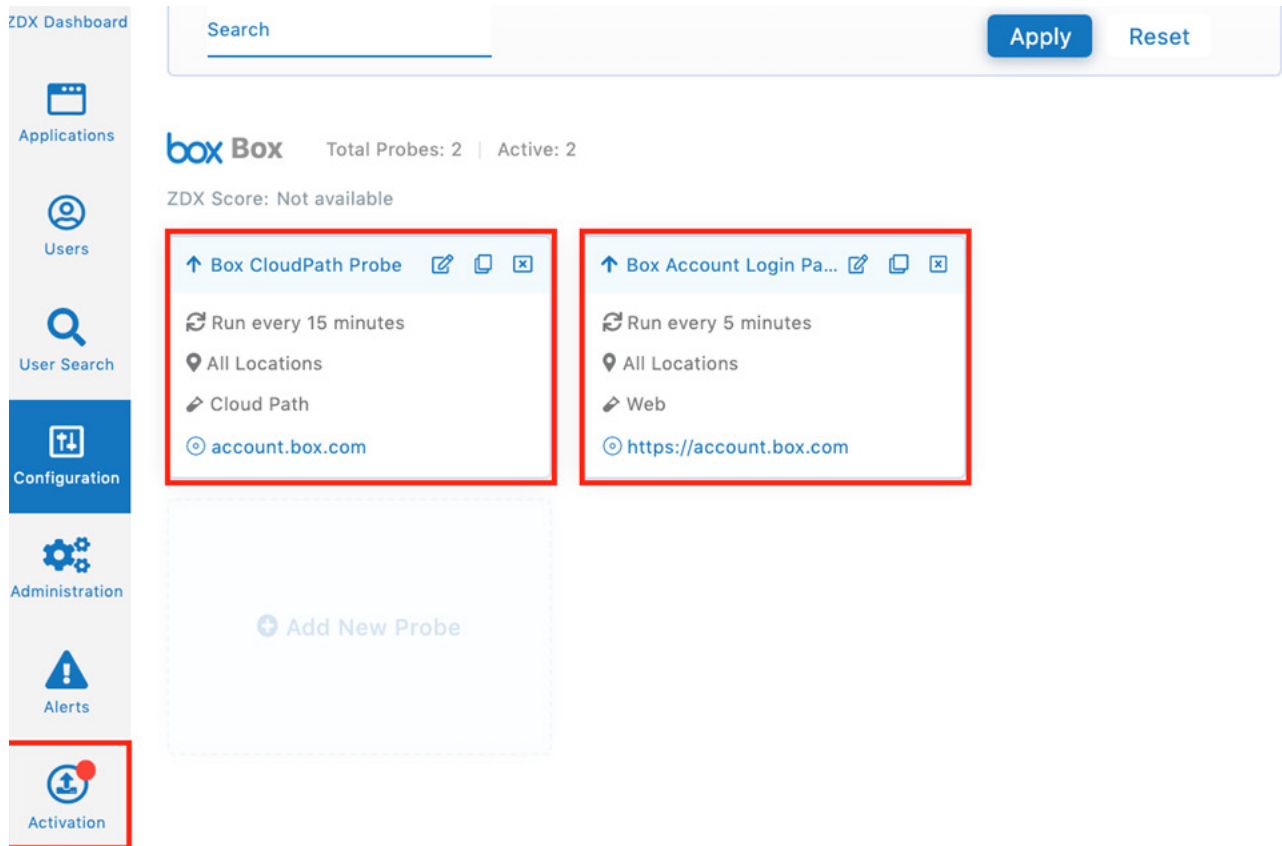


Figure 35. ZDX for User Experience Monitoring for Box

Edit the Network Probe

To edit the network probe:

1. Select **Box Account Login Page Probe** under **Follow Web Probe**.
2. Select **Next**.

Edit Box CloudPath Probe

1 **Configure Probe** 2 Additional Parameters 3 Review

GENERAL

* **Name**
Box CloudPath Probe

* **Status**
☒ Enable ☐ Disable

* **Application**
Box

* **Probe Type**
Cloud Path

Follow Web Probe
Box Account Login Page Probe X

* **Run Frequency (minutes)**
15

* **Probe Class**
☒ Predefined ☐ Custom

PROBING CRITERIA

User Groups
All User Groups

Users
All Users

Next Cancel

Figure 36. Edit the network probe

3. Validate the destination host to monitor (e.g., account.box.com).
4. Select **Next**.
5. Review and activate the changes to the probe.

Edit Box CloudPath Probe

1 Configure Probe

2 Additional Parameters

3 Review

CLOUD PATH PROBE CONFIGURATION

Probe Name Box CloudPath Probe	Application Name Box
* Protocol ICMP	* Packet Count 11
* Interval (ms) 1000	* Timeout (ms) 1000
* Cloud Path Host account .box.com	

Next

Previous

Cancel

Figure 37. Edit the network probe

The Enabled Box Application

The Box application monitoring is now activated and probes begin from all of your users that are using the Zscaler Client Connector. The following figure shows Zscaler Client Connector running Digital Experience and the Service Status is On.

Applications

Probes

+ Add New Cus

Predefined Applications (6)

Application	Status
box Box	Enabled
OneDrive for Business	Disabled
Outlook Online	Disabled
Salesforce	Disabled
ServiceNow	Disabled
SharePoint Online	Disabled

Custom Applications (0)

Application	Status
No data	

Zscaler Client Connector

zscaler

Private Access

Internet Security

Digital Experience

Notifications

More

Connectivity

Username

toddh@hestmypadet.c

Service Status

ON

Authentication Status

Authenticated

Server Address

smres.zdxcloud.net

Time Connected

01/20/2021 12:51PM

ZDX Service Version

1.0.2.7

Troubleshoot

Clear ZDX Data

Restart ZDX Service

Figure 38. Active Box monitoring

Create an Alert for the Box Service

As a final configuration step, create an alert to email Zscaler when there is service degradation of the Box application. You can configure an alert for Network, Application, or Device thresholds. You can create an alert with any of the following information.

- Network Probe: Latency, MTR, Packet Loss, Number of Hops
- Application Probe: DNS Response Time, Page Fetch Time, Server Response Time, Web Request Availability
- Device Monitor: CPU Usage, Bandwidth, Battery, CPU, Disk, Wi-Fi Signal Strength, Memory, Sent and Received Mbps

To create an alert on Page Fetch Times.

- 1. Select **Alerts**.
- 2. Select **Rules**.
- 3. Select **Add New Alert Rule**.

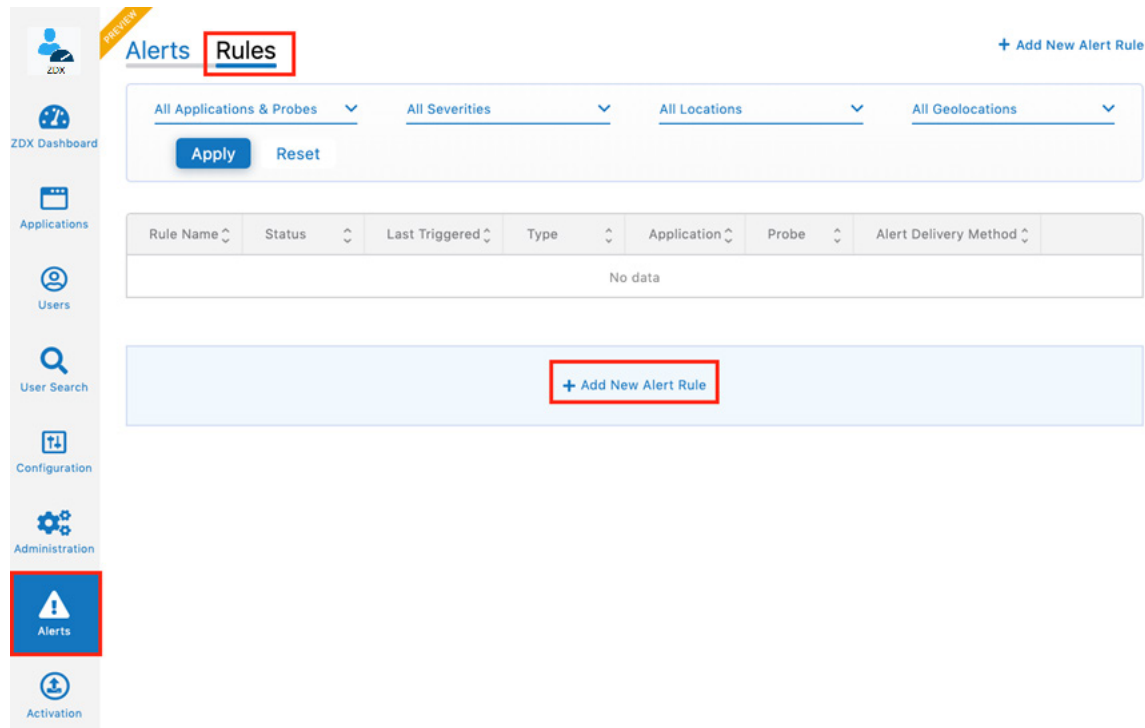


Figure 39. Creating an Alert

Run the Alert Creation wizard

Step One of the rule wizard:

1. **Name** the Rule.
2. Select **Enable** under **Status**.
3. Give the Alert an appropriate **Severity**.
4. Select **Application** as the **Type**.
5. Select **Next**.

Add New Alert Rule [X]

1 **Configure Rule** 2 Filters 3 Criteria 4 Action 5 Review

* **Name**
Box Degradation

* **Status**
☒ Enabled
 ☐ Disabled

* **Severity**
High

* **Type**
Application

Next Cancel

Figure 40. The Alert Creation wizard

Step Two of the rule wizard.

1. Select **Box** as the application.
2. Select **Box Account Login Page Probe** for the **Web Probe**.
3. Select **Next**.

Add New Alert Rule [X]

1 **Configure Rule** 2 **Filters** 3 Criteria 4 Action 5 Review

* **Application**
Box

* **Web Probe**
Box Account Login Page Probe

Locations
All Locations

+ Add Filter

Next Previous Cancel

Figure 41. The Alert Creation wizard (Filters)

Step Three creates the criteria, a threshold, for which the Alert is triggered if exceeded. You can use multiple variables to eliminate false positives.

1. Select **Page Fetch Time**.
2. Select the time to exceed **5000 ms**.
3. Select **Next**.

The screenshot shows the 'Add New Alert Rule' wizard at the 'Criteria' step. The configuration is as follows:

- Scope: ALL
- Variable: Page Fetch Time
- Operator: >=
- Threshold: 5000 ms

The 'Next' button is highlighted in blue.

Figure 42. The Alert Creation wizard (Criteria)

Step Four of the rule wizard adds Throttling to control the scope of the Alert. You then define the Action as Email. You can also define the action as an authenticated Webhook, which you can use to send the Alert to a Slack channel.

1. Enter 10 for the number of **Times in a Row**.
2. Enter 10 percent for the **Minimum Devices Impacted**.
3. Select **Email** as the **Alert Delivery Method**.
4. Enter the **Alert Recipients** email addresses, separated by commas.

The screenshot shows the 'Add New Alert Rule' wizard at the 'Action' step. The configuration is as follows:

THROTTLING

- * Alert Only if Repeated: 10 Times in a Row
- * Minimum Devices Impacted: 10 Percentage
- * In Group: Geolocations

ACTION

- Muted: ☐
- * Alert Delivery Method: Email
- * Alert Recipients: tharcourt@zscaler.com

The 'Next' button is highlighted in blue.

Figure 43. The Alert Creation wizard (Action)

The following figure shows the completed rule set for the Alert.

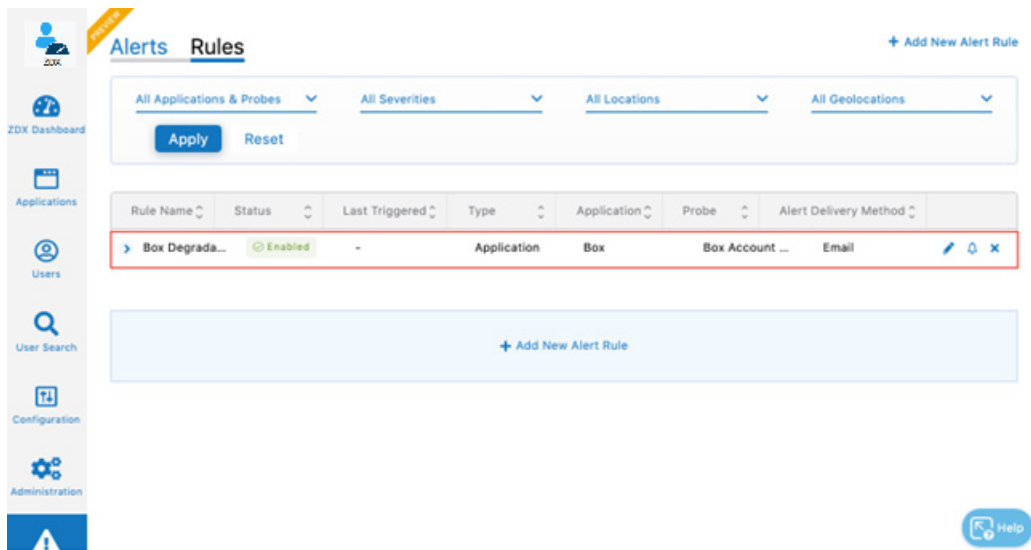


Figure 44. Create an alert for the Box service (completed)

The Triggered Alert for the Box Service

The following image is the triggered alert generated by the threshold settings in the rule set that are exceeded. Click the Rule Name to review the setting or click the View icon to see more detail about the Alert.

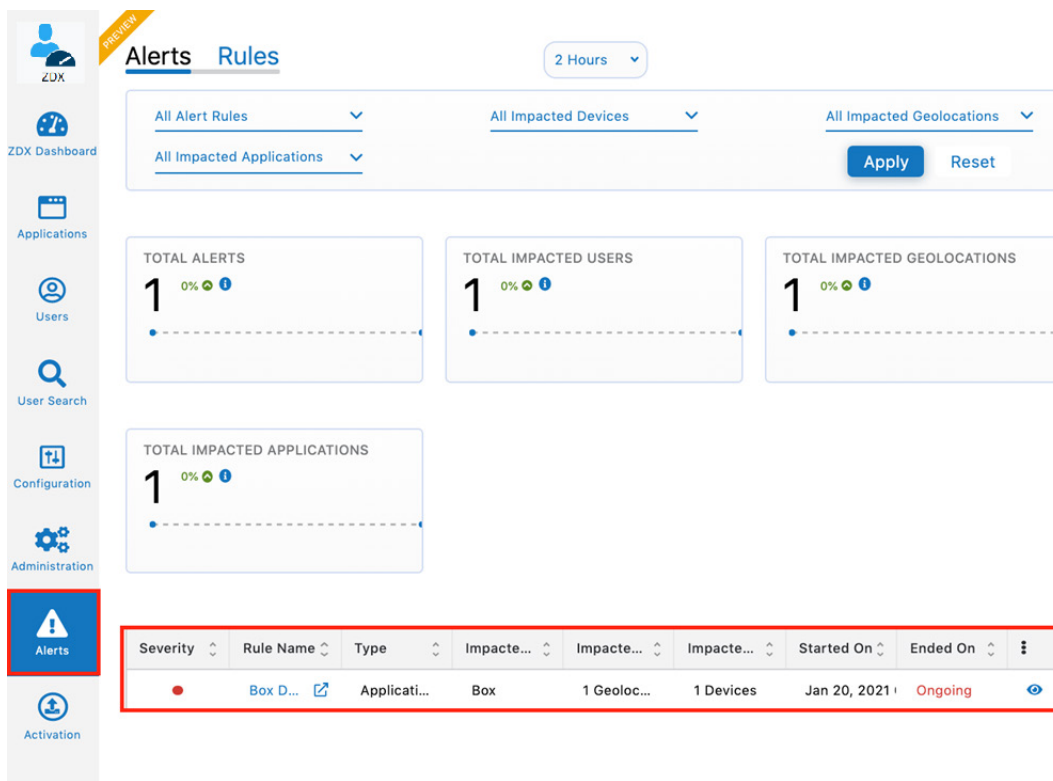


Figure 45. The Alert

The Sent Alert Email for the Box Service

The following image is the Email Alert that was sent to the recipients after the threshold was exceeded. Another email is sent when the threshold returns to normal values if the alert was an ongoing or continuous alert.

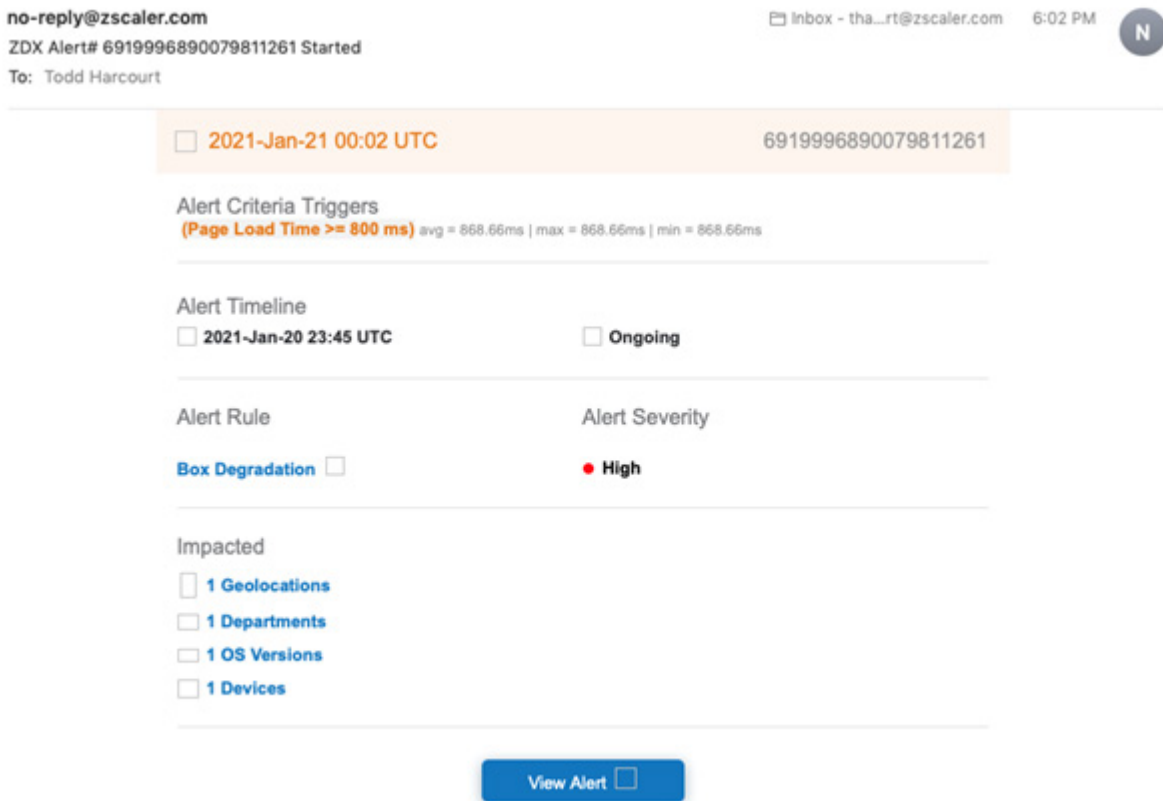


Figure 46. The Alert email

Using ZDX—The Dashboard

The Dashboard provides a single page to monitor the user experience (ZDX Score) of all users and all applications. An active heat map also shows any locations globally that are having issues.

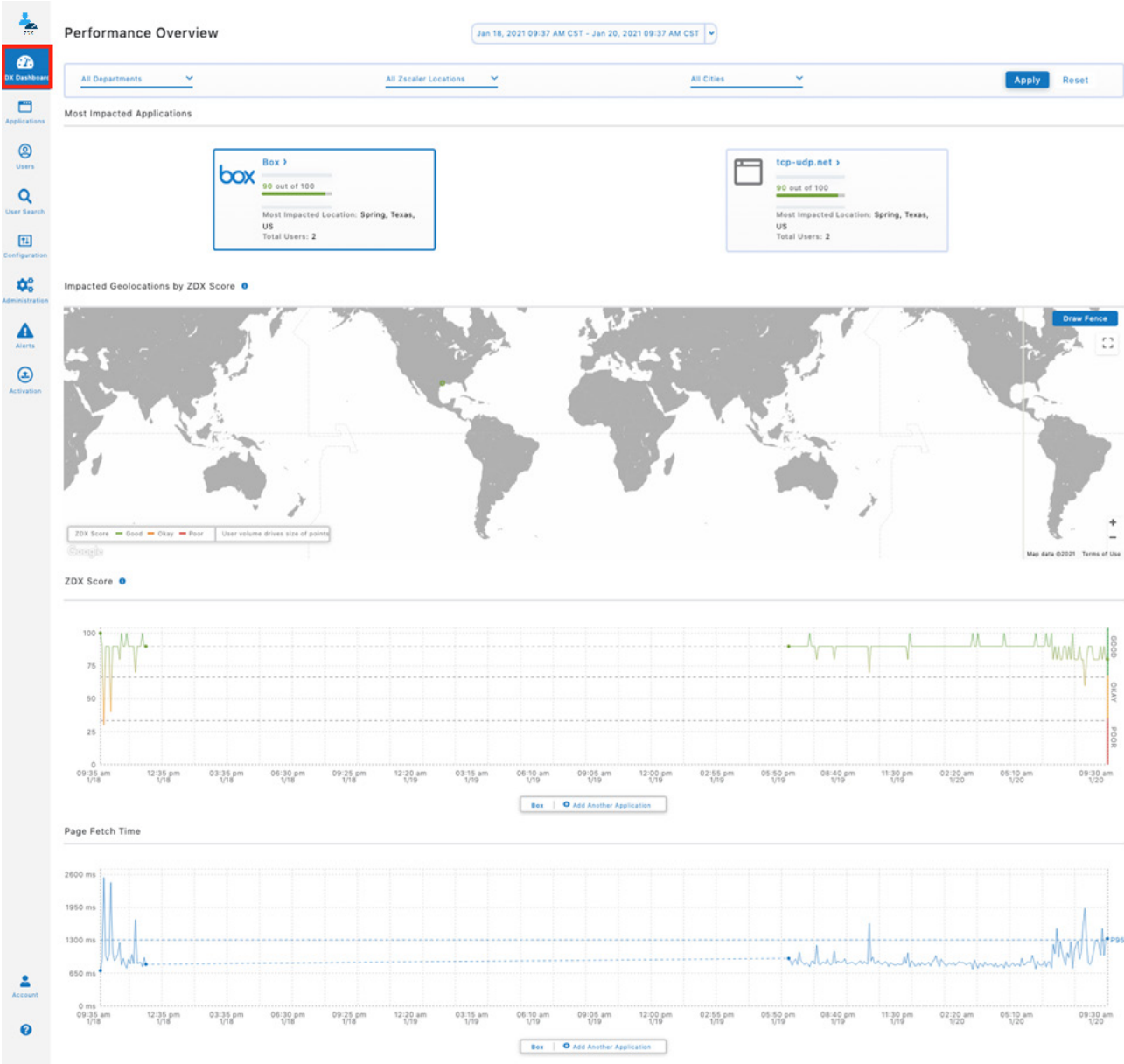


Figure 47. The ZDX Dashboard

Using ZDX—Application Overview

Selecting Applications in the left-side navigation brings up the Applications Overview and shows the configured applications and the individual ZDX score.

To open the details of the Box application:

1. Select **Applications**.
2. Select the **Box App**.

Applications Overview Jan 18, 2021 09:37 AM CST - Jan 20, 2021 09:37 AM CST

All Departments All Zscaler Locations All Cities

Apply Reset

Application	ZDX Score Trend	Most Impacted...	Most Impacted
tcp-udp.net	90 / 100	Road Warrior	Spring, Texas, I
Box	90 / 100	Road Warrior	Spring, Texas, I

Figure 48. Applications Overview

Application Detail

The top portion of the application detail shows a historical view of the ZDX score and the Page Fetch Time. The spike of the page fetch time indicates a possible slowdown of the Box service.

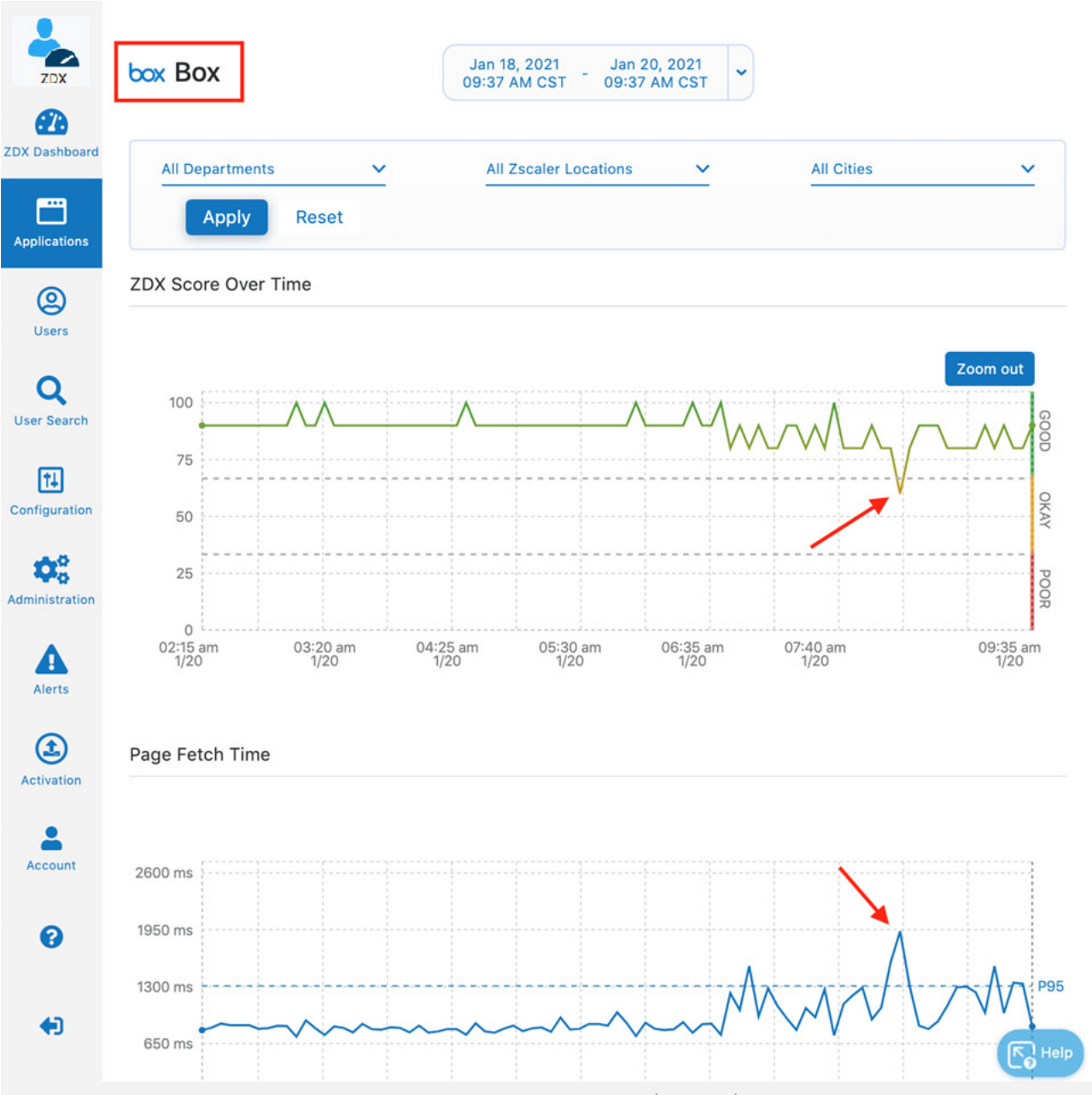


Figure 49. Application Detail

The bottom portion of the Application Detail shows the Top Departments, Top Cities, and Top Zscaler Locations using the Application, and the ZDX Scores at a glance. You can also see the probe data, with minimum, maximum, and average response times.

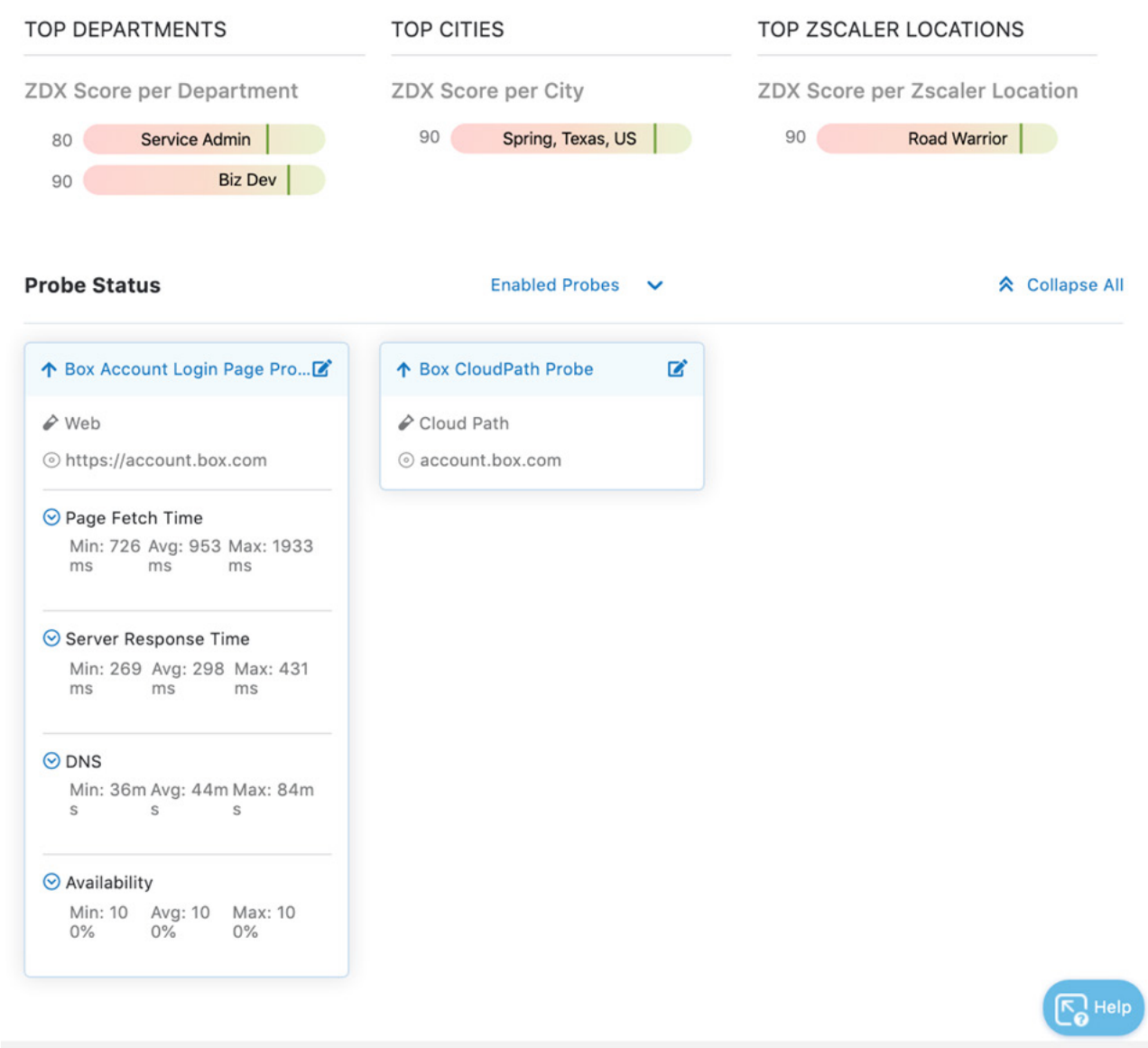


Figure 50. Application Detail

User Overview

The User Overview shows the users of an application. Select Box and then Apply to see all of the Box users. The ZDX score is provided and you can select users by Poor, Okay, or a Good ZDX Score. You can get more details on the user by clicking the name or the View icon on the right. Select a user to display more detail.

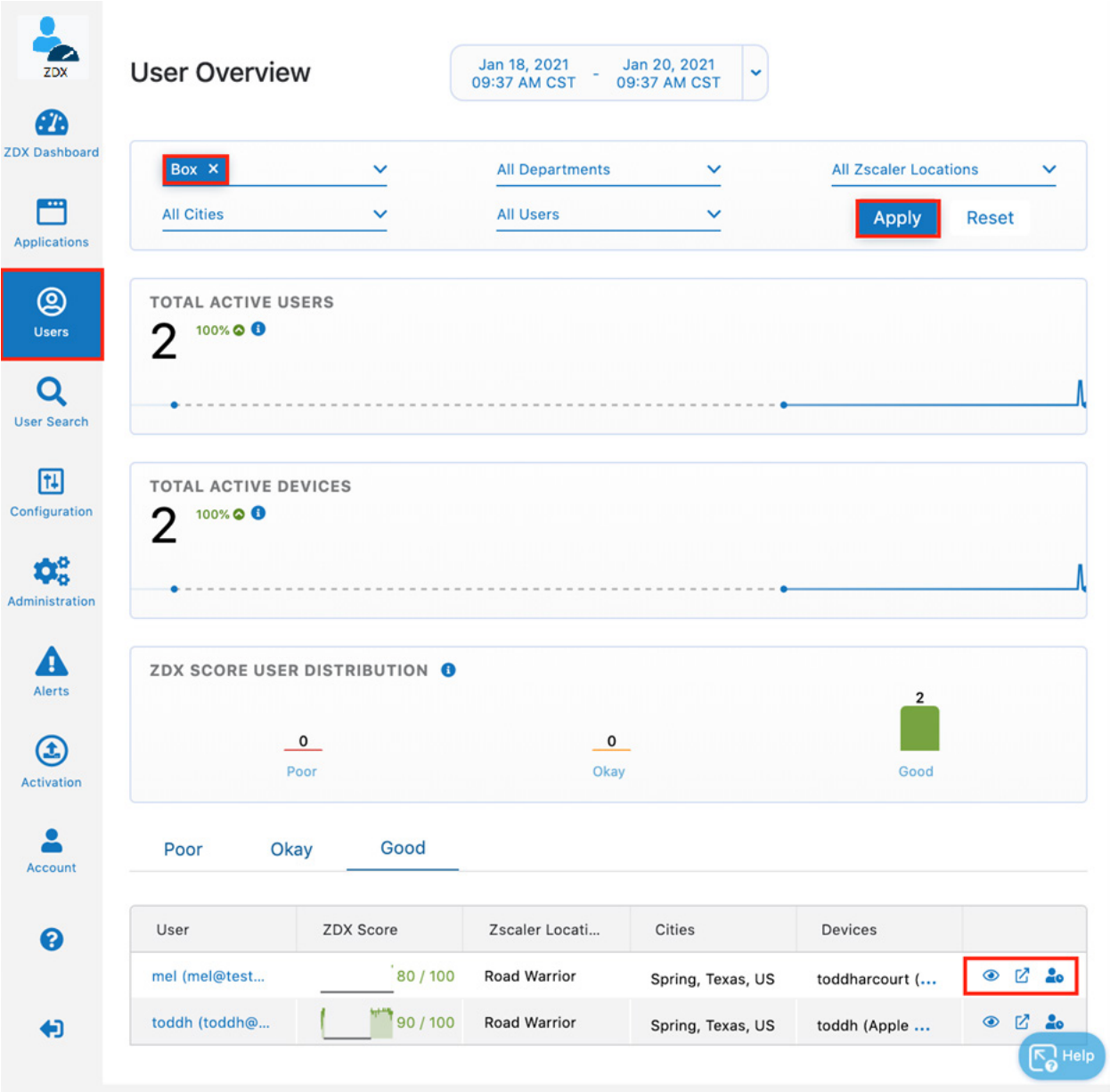


Figure 51. User Overview

The top portion of the User Detail shows very useful data to help isolate any user experience issues. Select and apply the Box application to see the details of the user experience for the Box app. This report provides the User Devices and provides the device-specific details (OS, Device type, Network Information, etc.) by clicking the device. The ZDX Score is also displayed in a timeline, and details of Page Fetch Times, Server Response, DNS Response, Probe Detail, and Device Health are all shown on this page.

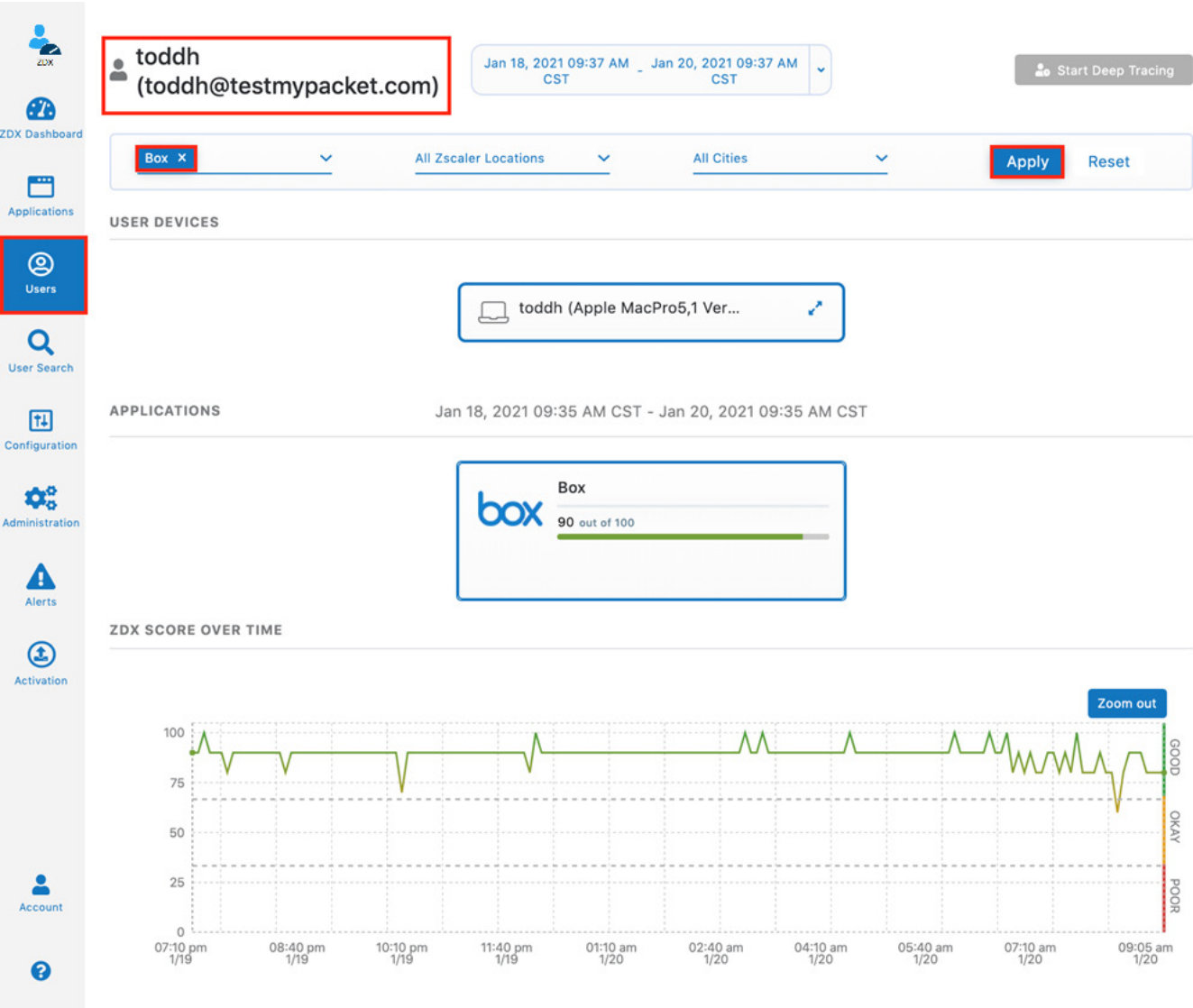


Figure 52. User Detail

The following figure is the end-to-end visibility of the Data Path the user is taking to get to the Box SaaS service. If there is any issue from the user's device health, the network at the home office, any Service Provider in the path, or an issue with the Box SaaS itself, ZDX provides visibility from the cloud to the Zscaler administrators from any of their users' individual environments.

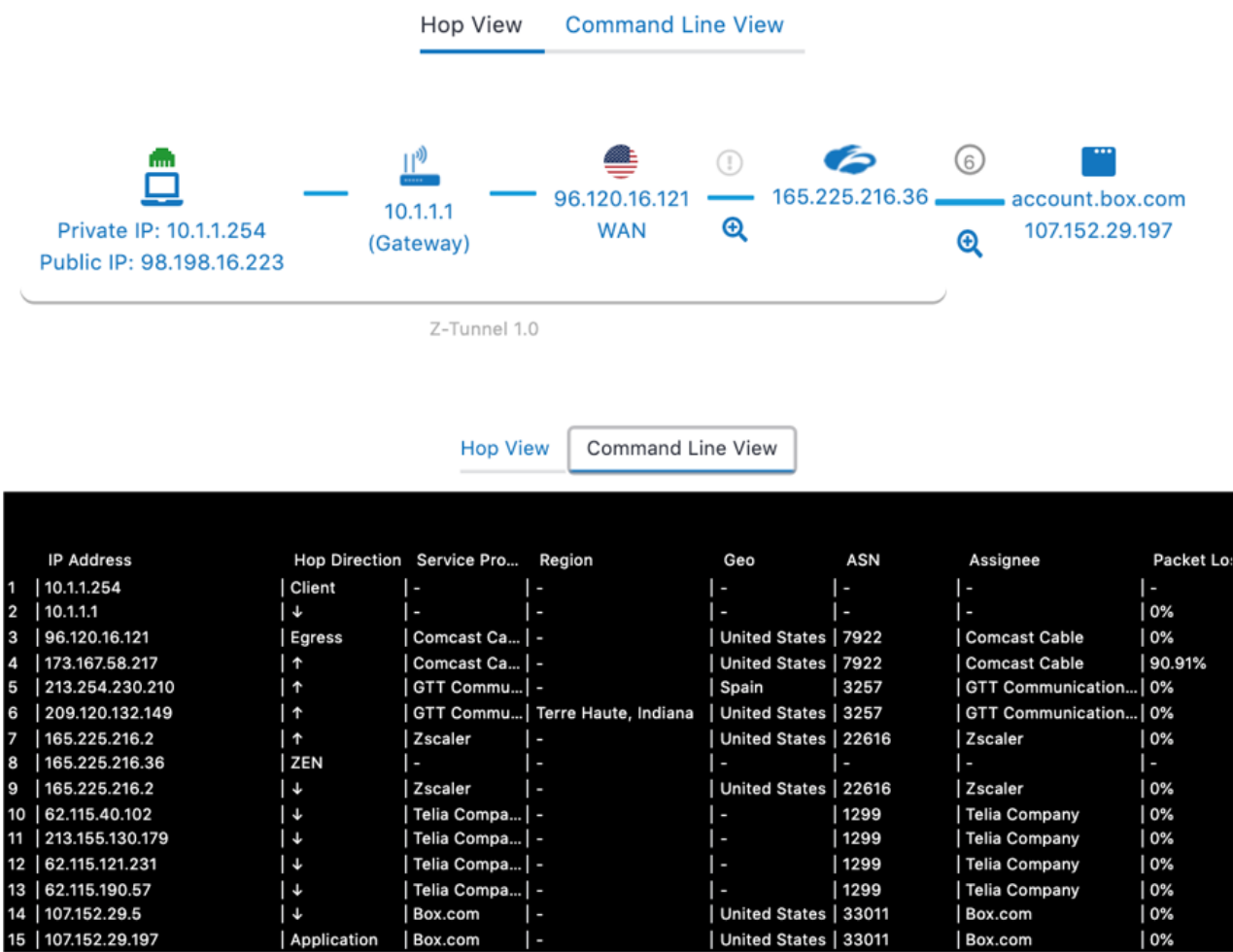


Figure 53. End-to-End connection detail

Appendix A: Requesting Zscaler Support

If you need Zscaler Support to provision certain services or to help troubleshoot configuration and service issues, it is available 24/7/365.

To contact Zscaler Support:

1. Go to **Administration > Settings > Company Profile**.

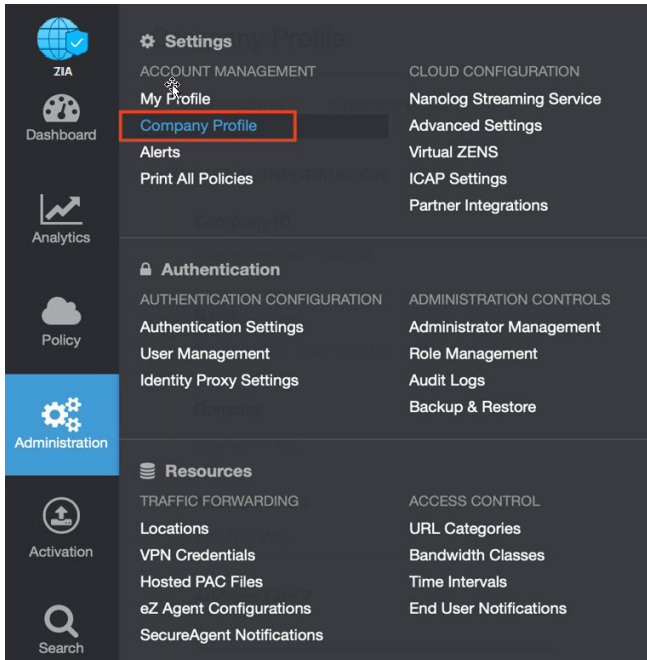


Figure 54. Collecting details to open support case with Zscaler TAC

2. Copy your **Company ID**.

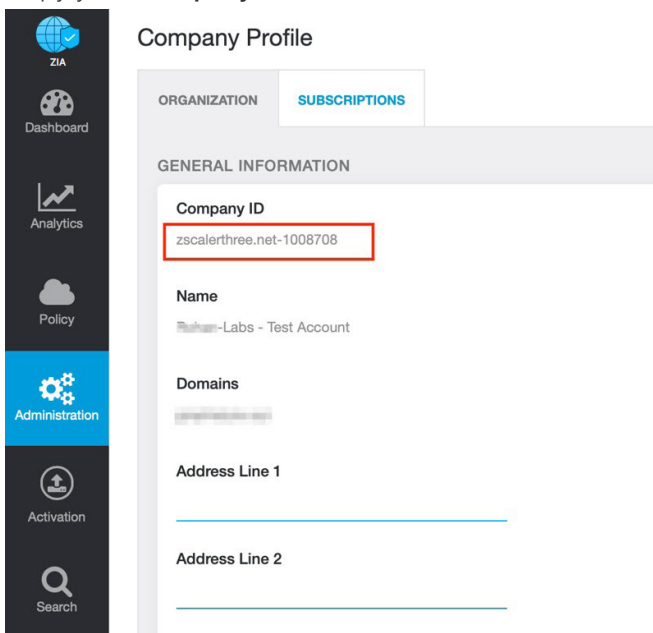


Figure 55. Company ID

3. With your company ID information, you can open a support ticket. Go to **Dashboard** > **Support** > **Submit a Ticket**.

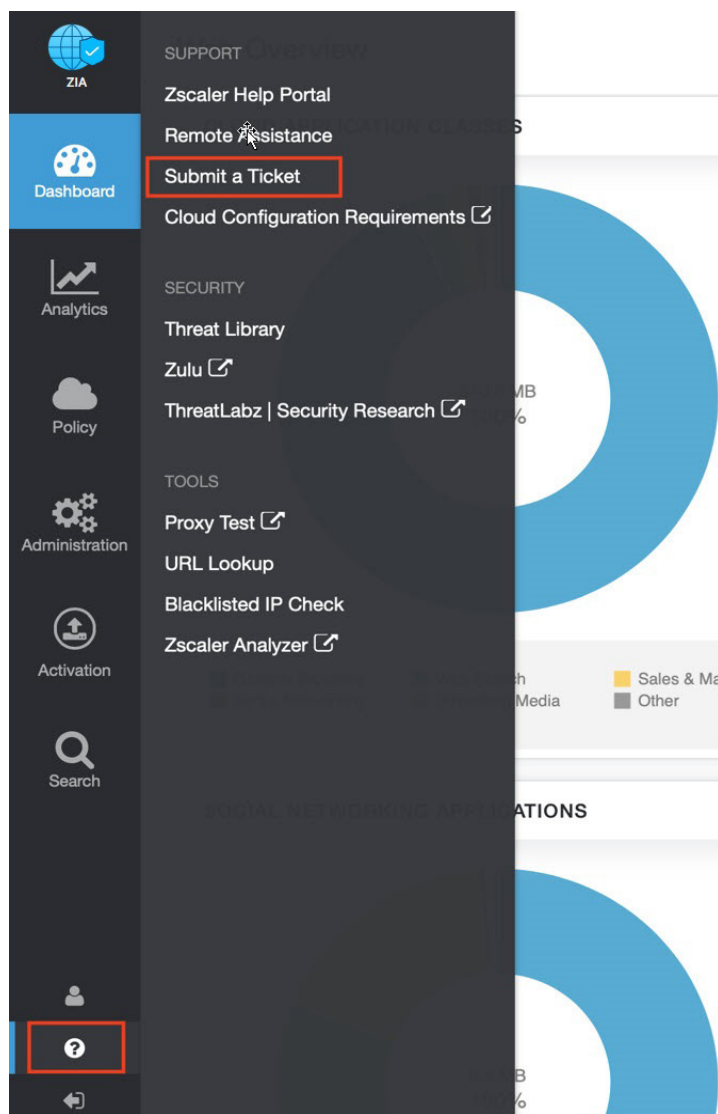


Figure 56. Submit a ticket