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Remote Browser Isolation

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Agenda

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Agenda

- Problem to solve
- Versa RBI solution
  - Overview
  - How it works
- Demo
- Conclusion

RBI – Problem to Solve

Challenge

- Browser is the first medium between attackers and enterprises under attack
- Common attacks prevalent in recent years-
  - ***Drive-by-downloads*** where malicious content is automatically downloaded to an endpoint
  - ***Drive-by-compromise*** attacks, a common tactic where a victim visits regular websites that are seeded with malicious content
  - ***Squatted domains*** leading to malicious web pages

Why Current Solutions don't work

- Firewalls, VPNs and other security solutions use *Allow* or *Block* rules which are *all or nothing*
- There is no intermediate solution to provide access in a secure manner
- Issues propagated due to 'all or nothing' access-
  - Initial access through compromised web sites, vulnerable browsers
  - Credential theft, exploitation
  - Data exfiltration

48%

Threats entered the organization by drive-by-downloads, SANS whitepaper

Versa RBI solution

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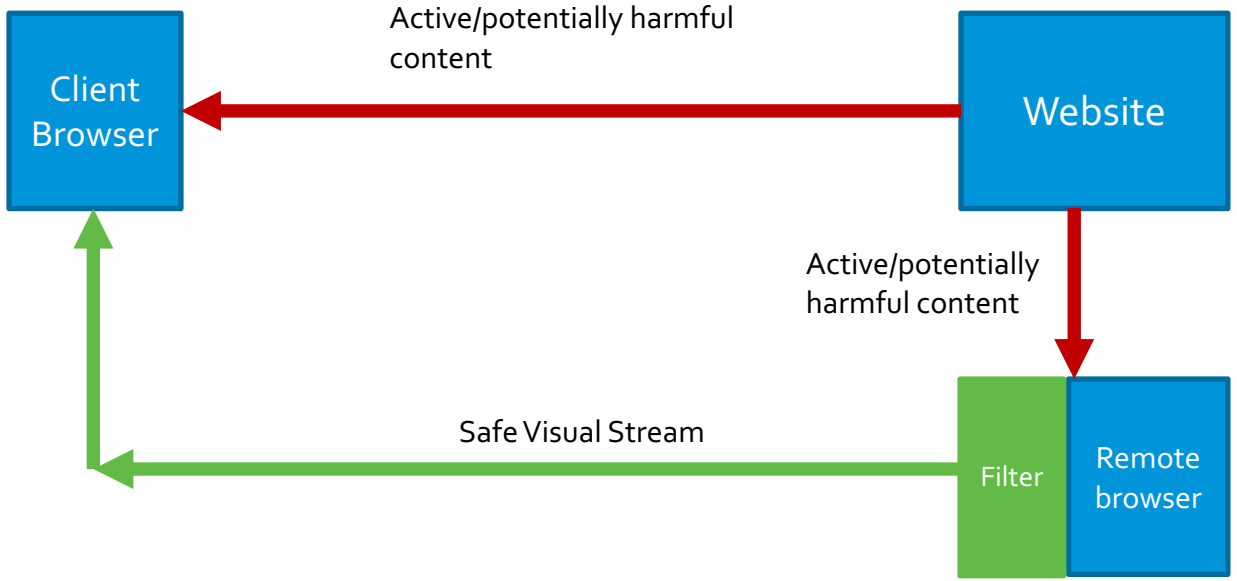
Versa RBI solution

- Isolate browsing activity from internal network.
- Browsing activity is executed in a remote, sandboxed environment
- Active content only executes in remote browser
- Only a safe visual stream is relayed to the client browser



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Versa's RBI solution

Functionality

- Render a visual stream of websites
- Filters harmful content
- Part of the Versa SSE platform
- Tightly integrates with rest of Versa ASC
- Scans client to server and server to client traffic

Actions supported

- Allow/Block uploads and downloads
- Preview downloads: Convert documents to pdf for preview
- Scan uploads and downloads for malware
- Persist first party cookies, block third party ones
- Allow/deny clipboard access

Powered by:

Technology: DOM mirroring

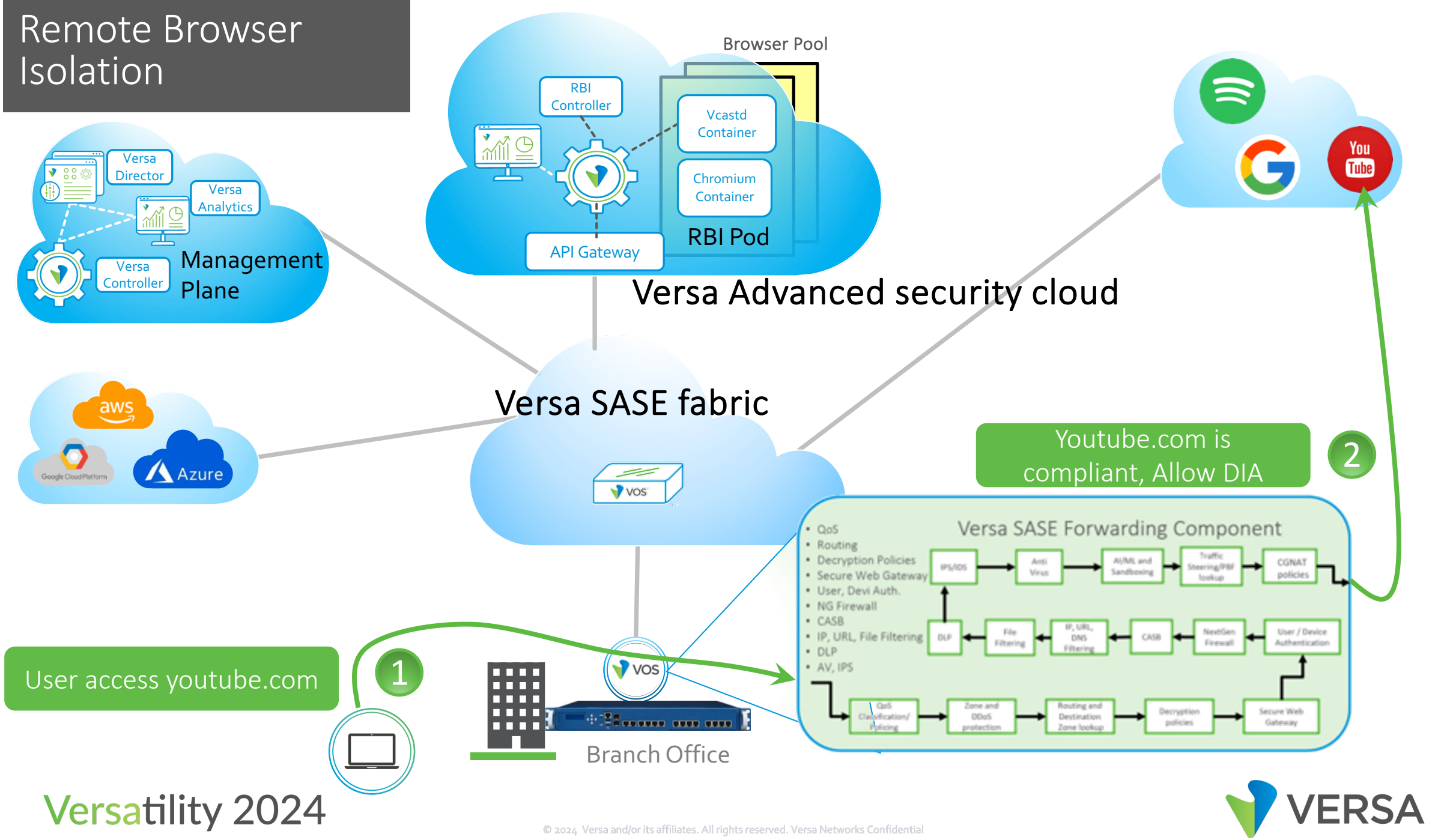
- Remote Browser
- Filters active DOM content
- Streams safe DOM elements to client browser
- Streams audio/video as pixels
- Works with any HTML5 compliant client browser -- Chrome, Edge, Firefox, Safari

Versa RBI: Highly responsive, native experience – the *next best thing* to browsing in real time

Versa RBI - how it works

- Configure real time protection policy on SWG
  - Redirects matching uses browsing sessions to the RBI cluster for secure, isolated access.
  - Same rich policy language used by other security Versa security features.
    - Match based on URL category, reputation
    - Match based on geolocation
    - Match based on user
    - Match based on user and device posture
- Configure RBI data protection rules in Advanced Security Cloud
  - DLP and ATP for files transferred by remote browsers (downloads as well as uploads)

Remote Browser Isolation



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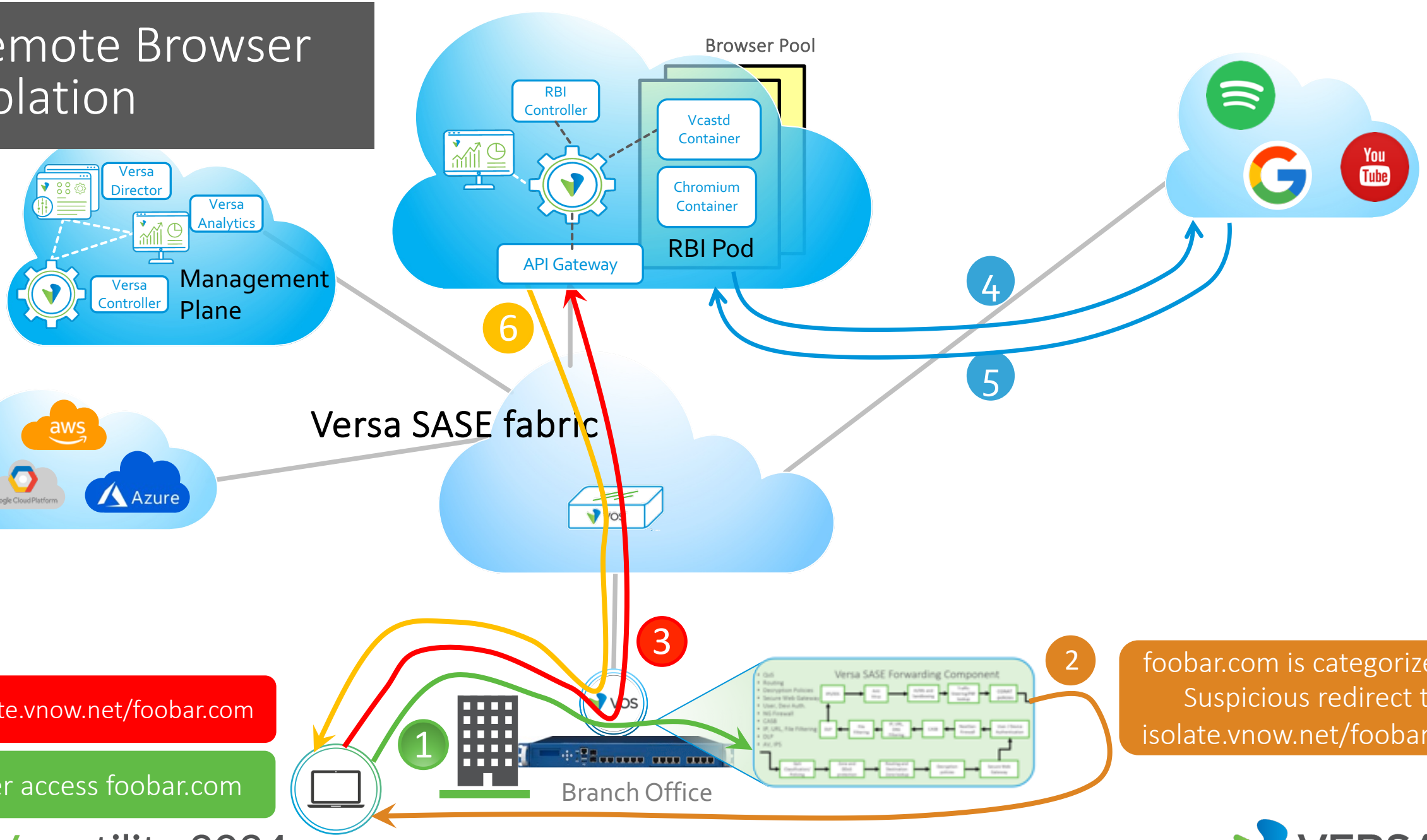
Remote Browser Isolation



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Demo

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Versa RBI - Conclusion

- Improve overall security posture with RBI as a mitigation technique
- Improve productivity with isolation as an intermediate action instead of blocking access.
- Provide differential access to employees and contractors.
- Protect against ransomware attacks.
- Prevent data exfiltration.

Questions

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API-Based Data Protection & Email Protection

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Agenda

- Why API-Based Data Protection (API-DP)?
- Connectors, SaaS Authorization – Grant Access
- API-DP Policy Rules, Retroactive and Scheduled Scans
- Email Protection – SMTP Proxy
- Monitoring
- Demo

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Why API-Based Data Protection?

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Why API-Based Data Protection (API-DP)?

Challenges

- Inline CASB breaks open TLS and inspect content as a reverse proxy
- However, enterprise SaaS applications are often “certificate pinned”
- Users can access public cloud apps using BYOD or without being behind VPN/corporate firewall
- Need an “out-of-band” mechanism that works directly with SaaS applications through authorized “connectors”

Solution

- Versa’s API-DP, part of the Advanced Security Cloud (ASC) in Secure Service Edge (SSE) platform, secures access from user to application
- Also known as API-Based CASB, out-of-band CASB, offline CASB, etc.

Overview

- Protection for File, Email, Instant Messaging, Cloud Infra services
  - Webhooks, Poll Based and Hybrid
  - Retroactive, Scheduled and On-Demand Scan
- Provides policy and access control.
- Run DLP, CASB, Sandbox (Static, Dynamic, AI/ML). Fine-grained control compared to inline CASB
- Encrypt, Redact and other DLP actions
- Quarantine and Legal Hold
- Expire, delete shared links/collaborators. Restrict shared access
- Support for different categories of application like cloud storage, collaboration, email, messaging and source code repositories, CRM, etc.

API-DP Use Cases

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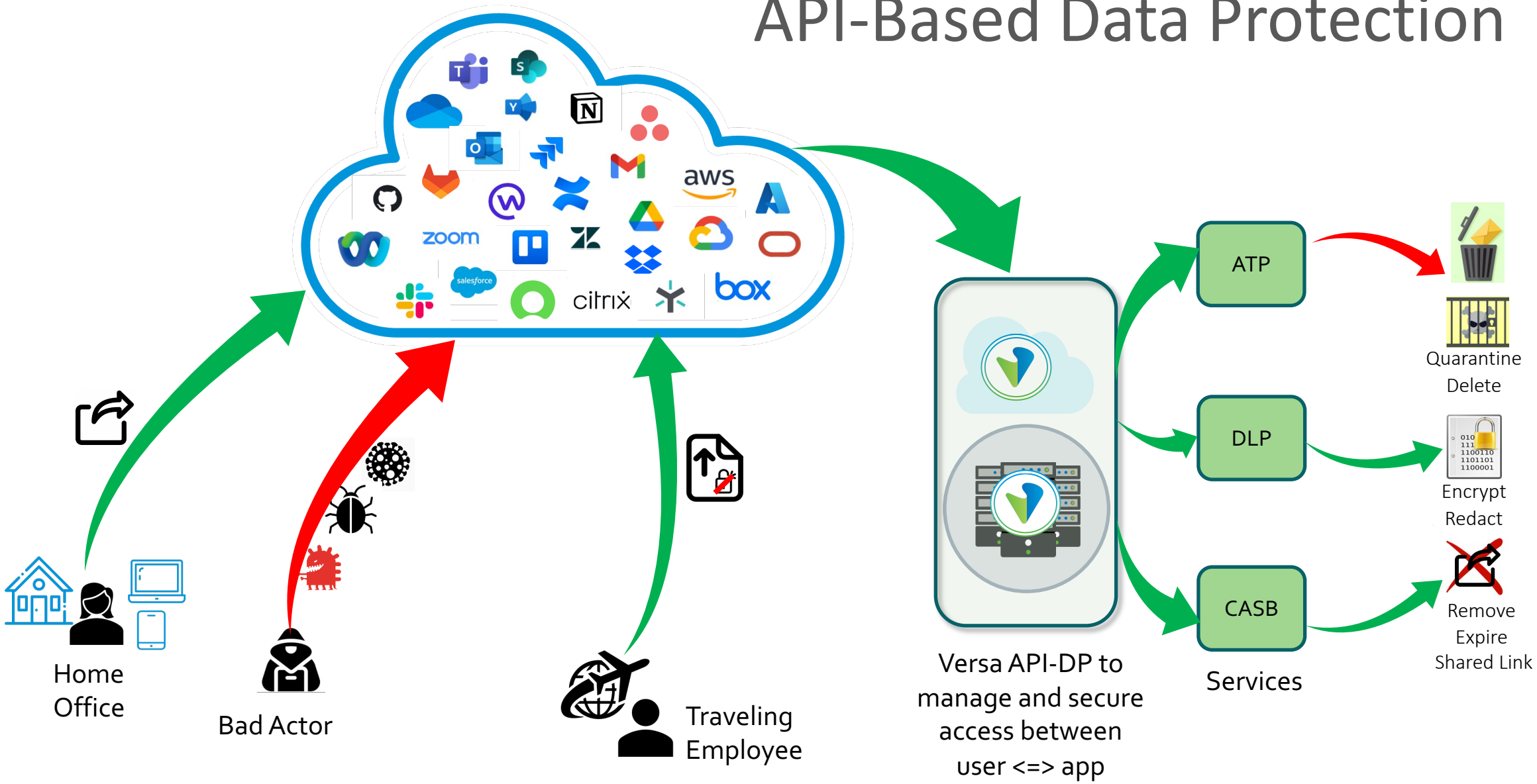
API-Based Data Protection



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Connectors

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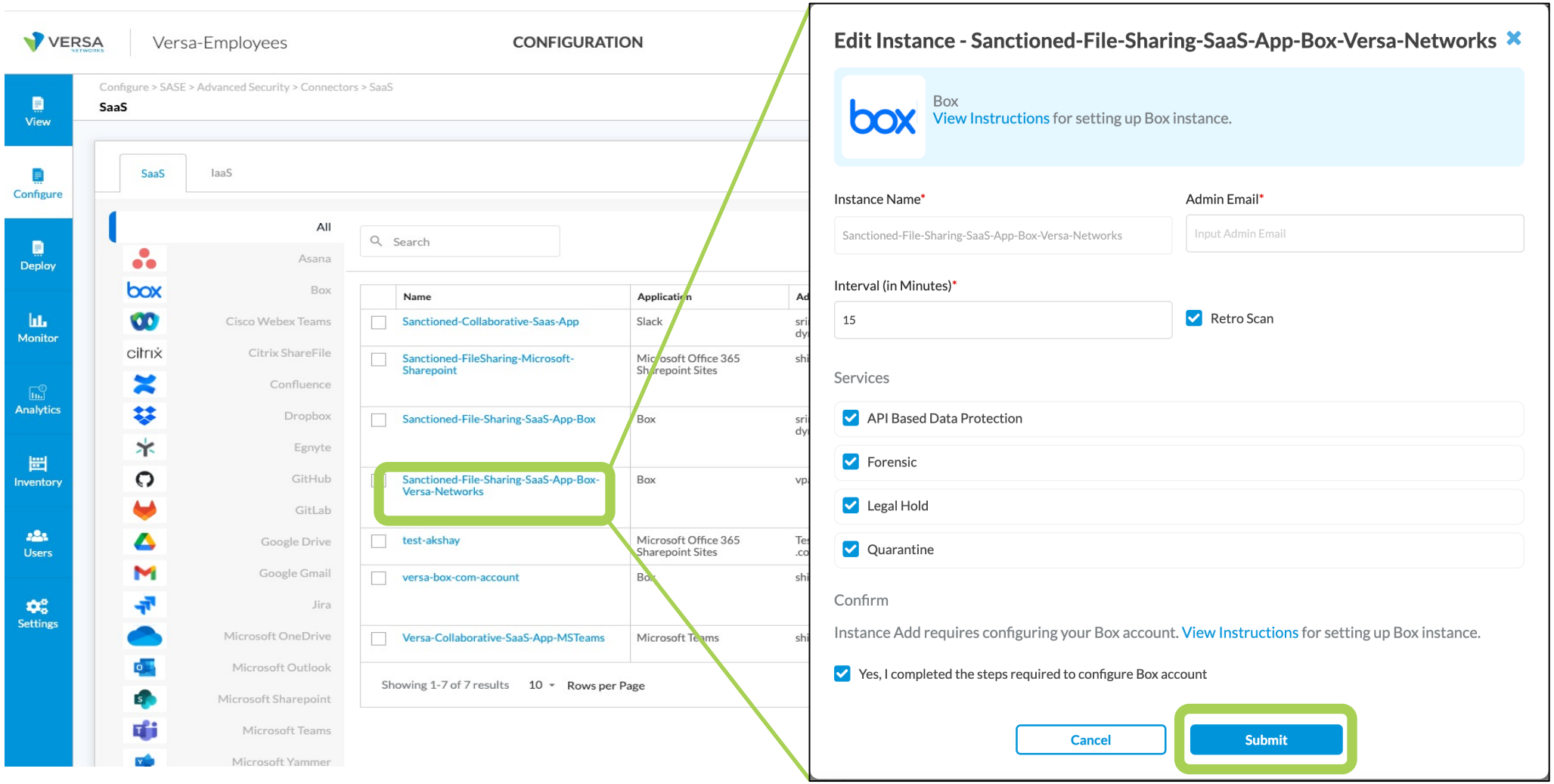
SaaS Connectors



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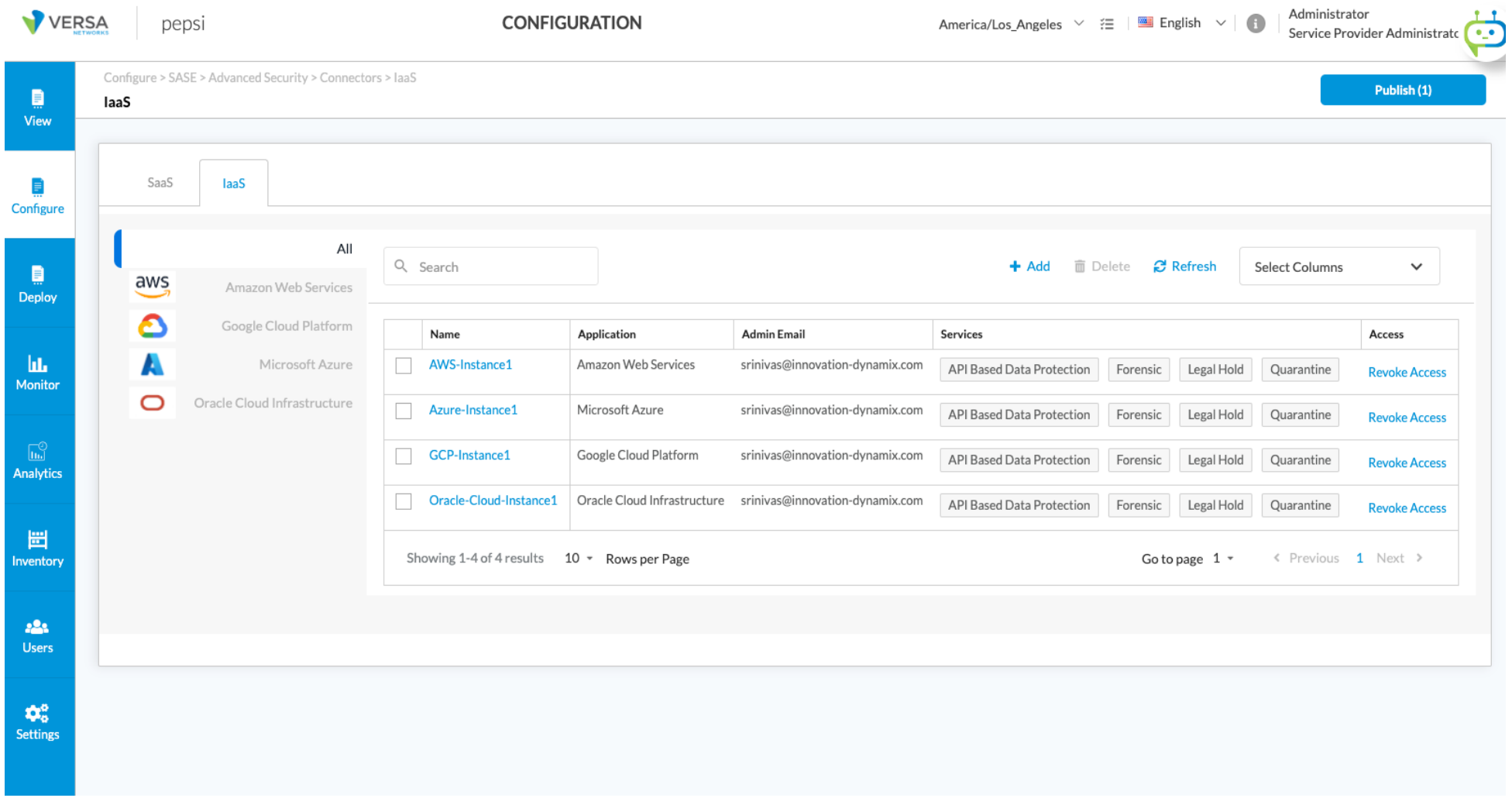
IaaS Connectors



SaaS Authorization

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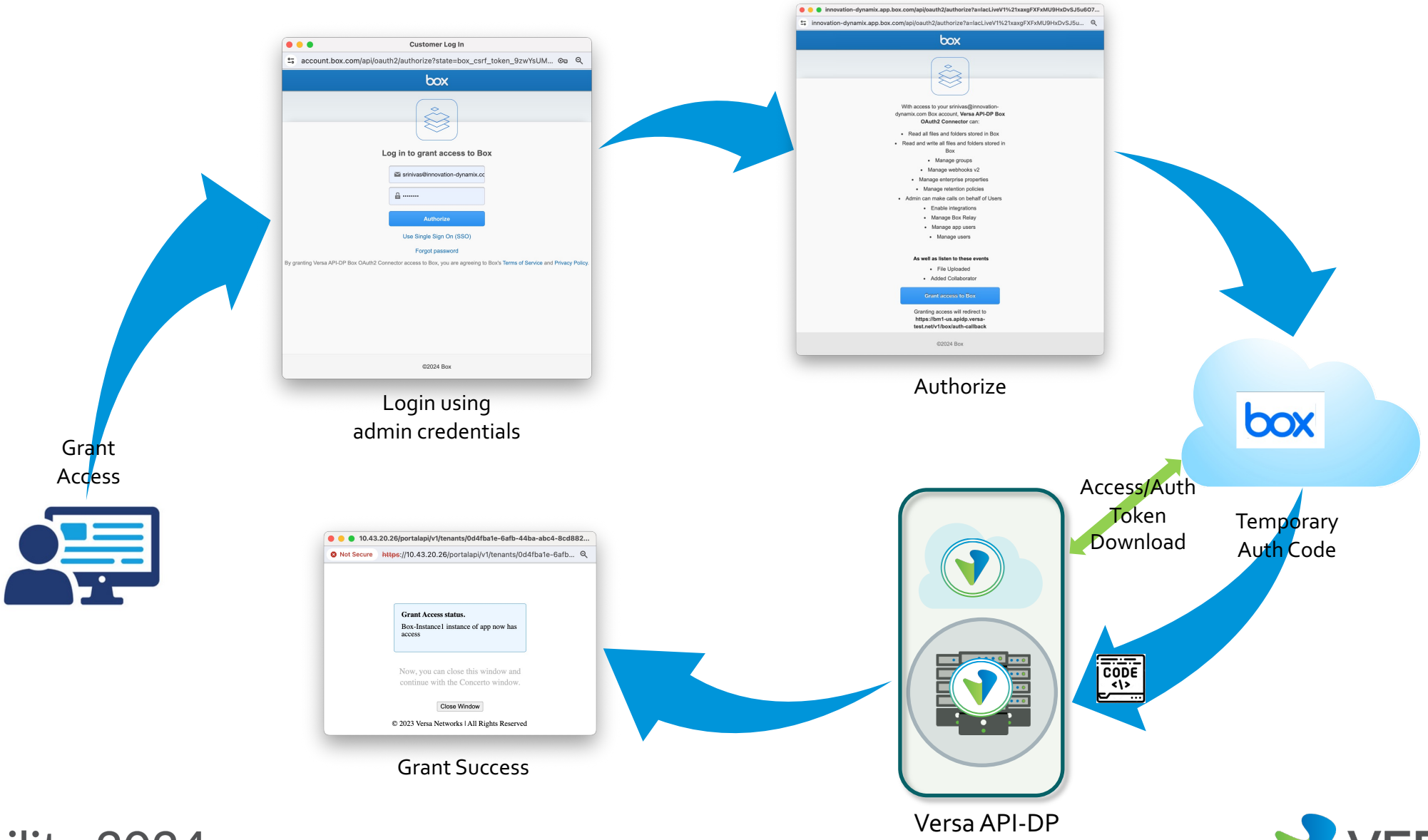
SaaS OAuth2.0 based Grant Access



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Policy Rules

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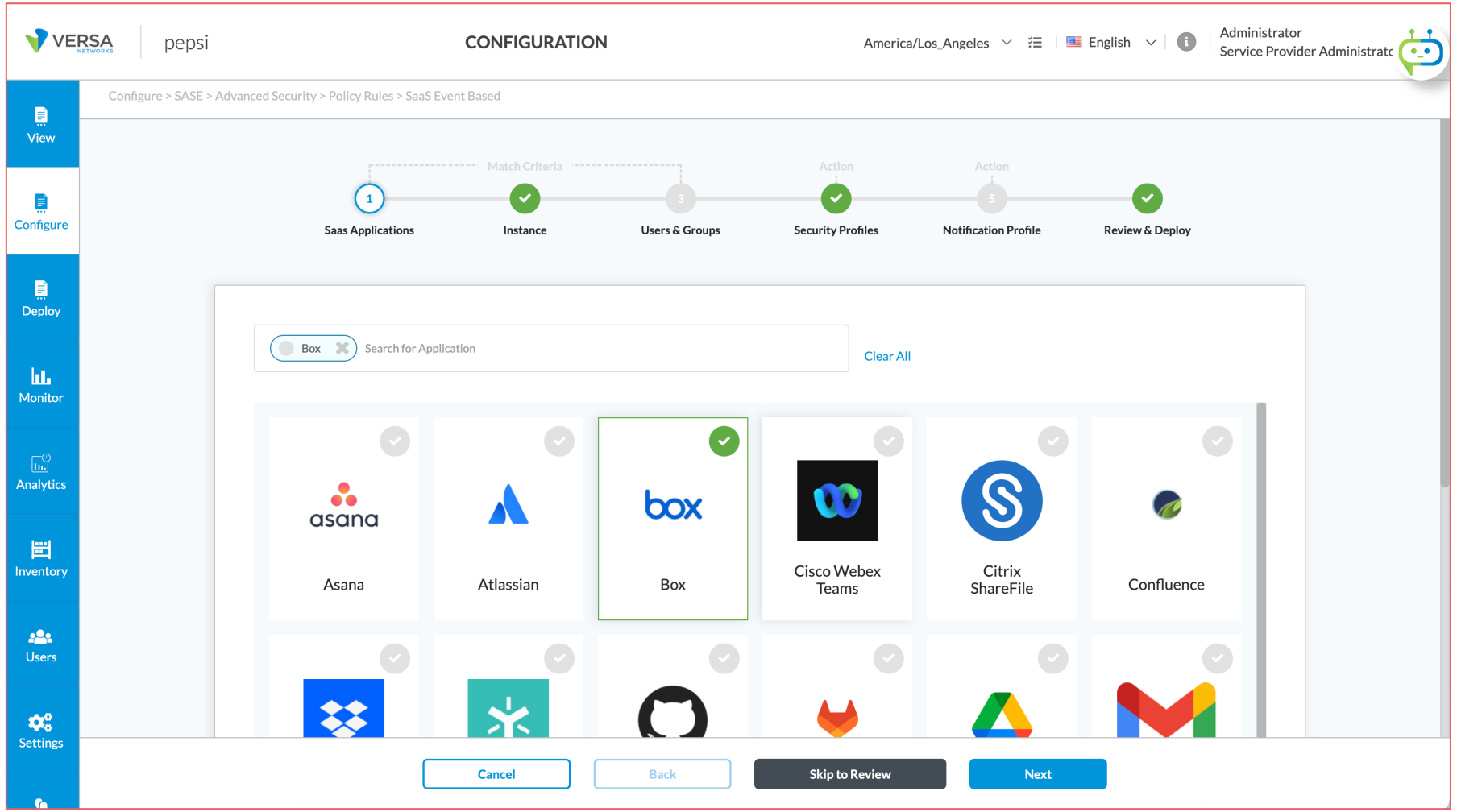
API-DP Policy Rule



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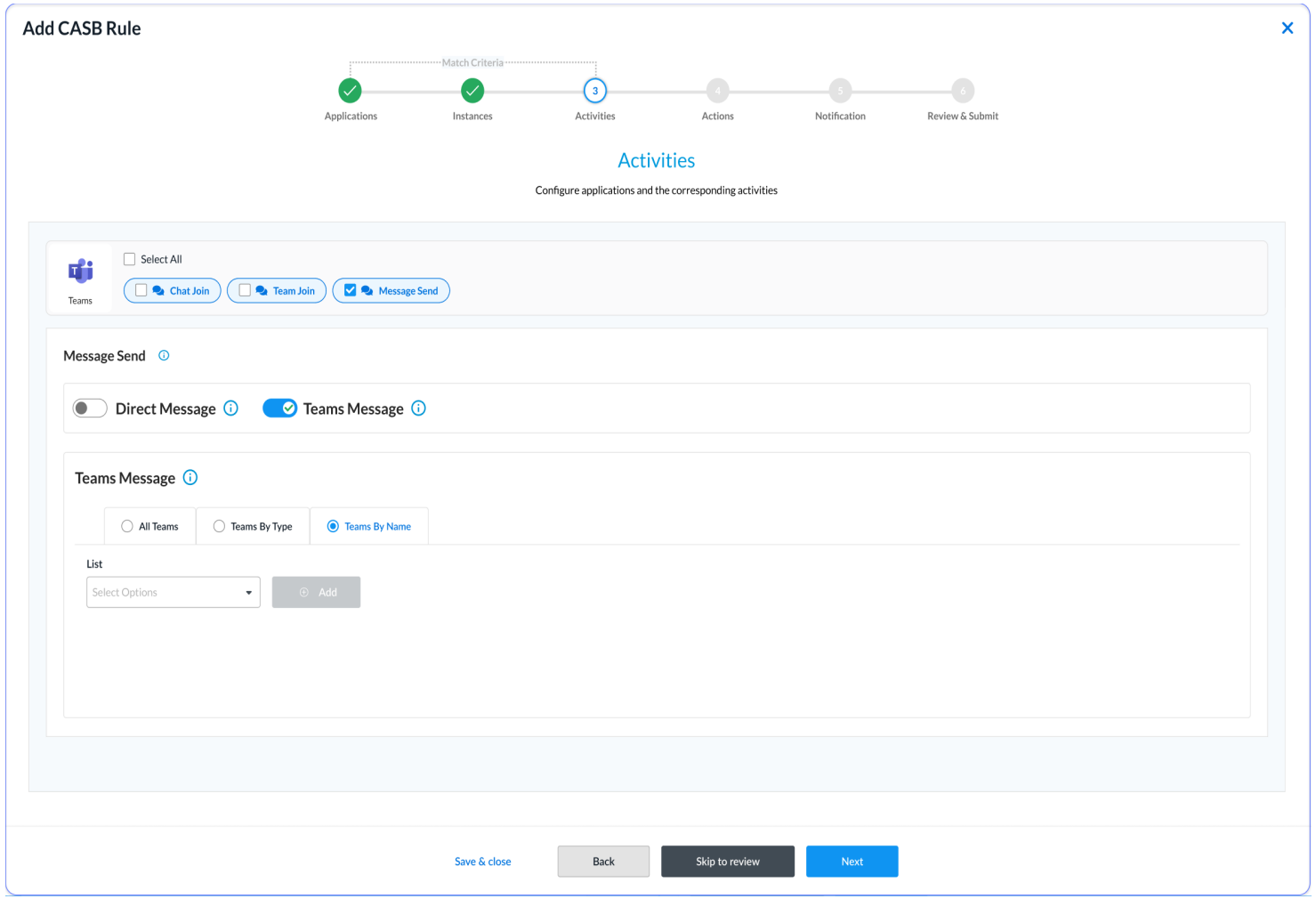
Offline CASB Rule



- Application specific activities and access control
- Fine-grained actions per activity
- Finer control on running DLP and ATP services at the user level or based on application specific activities

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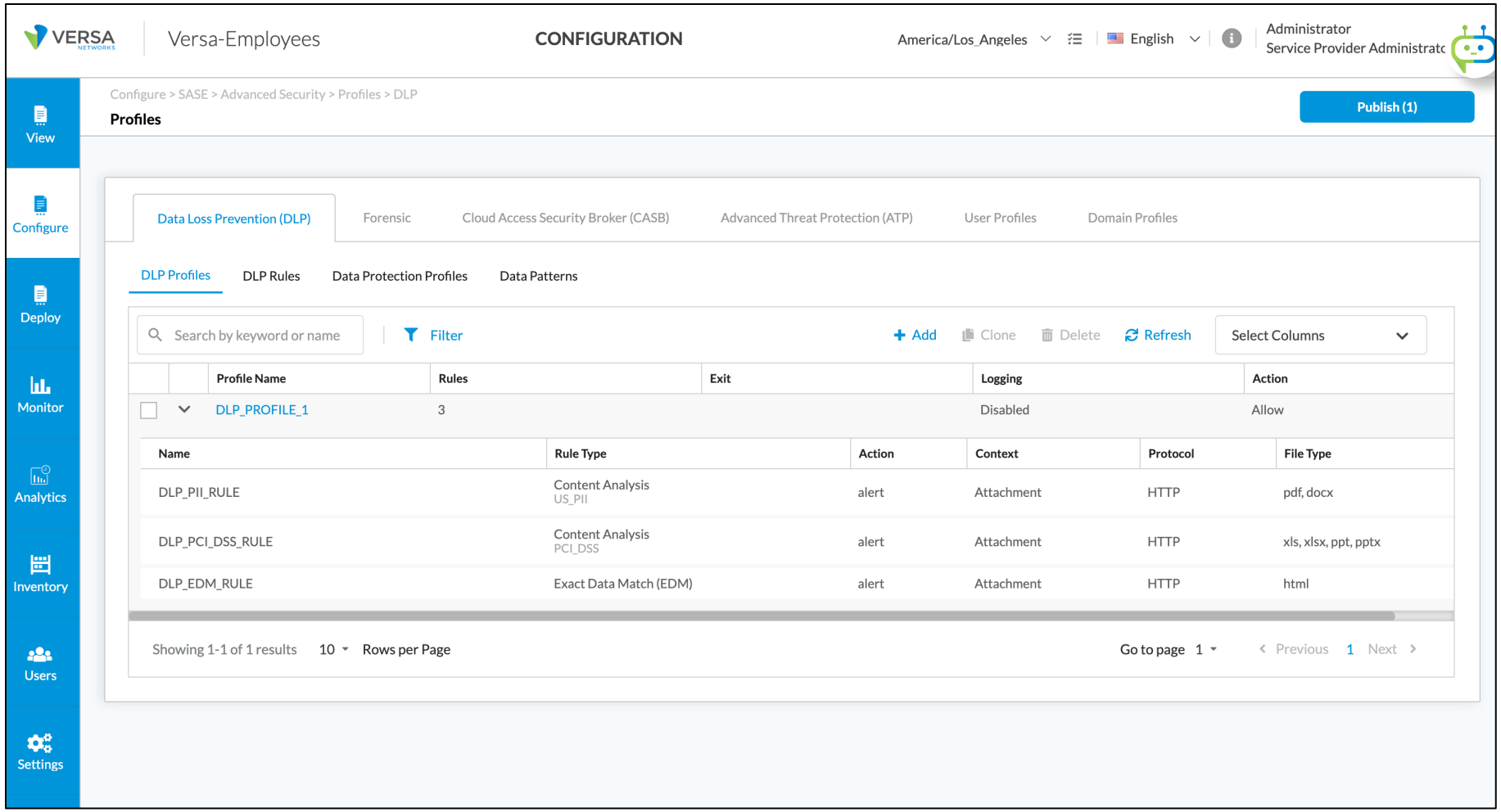
DLP Profile



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Retroactive and Scheduled Scans

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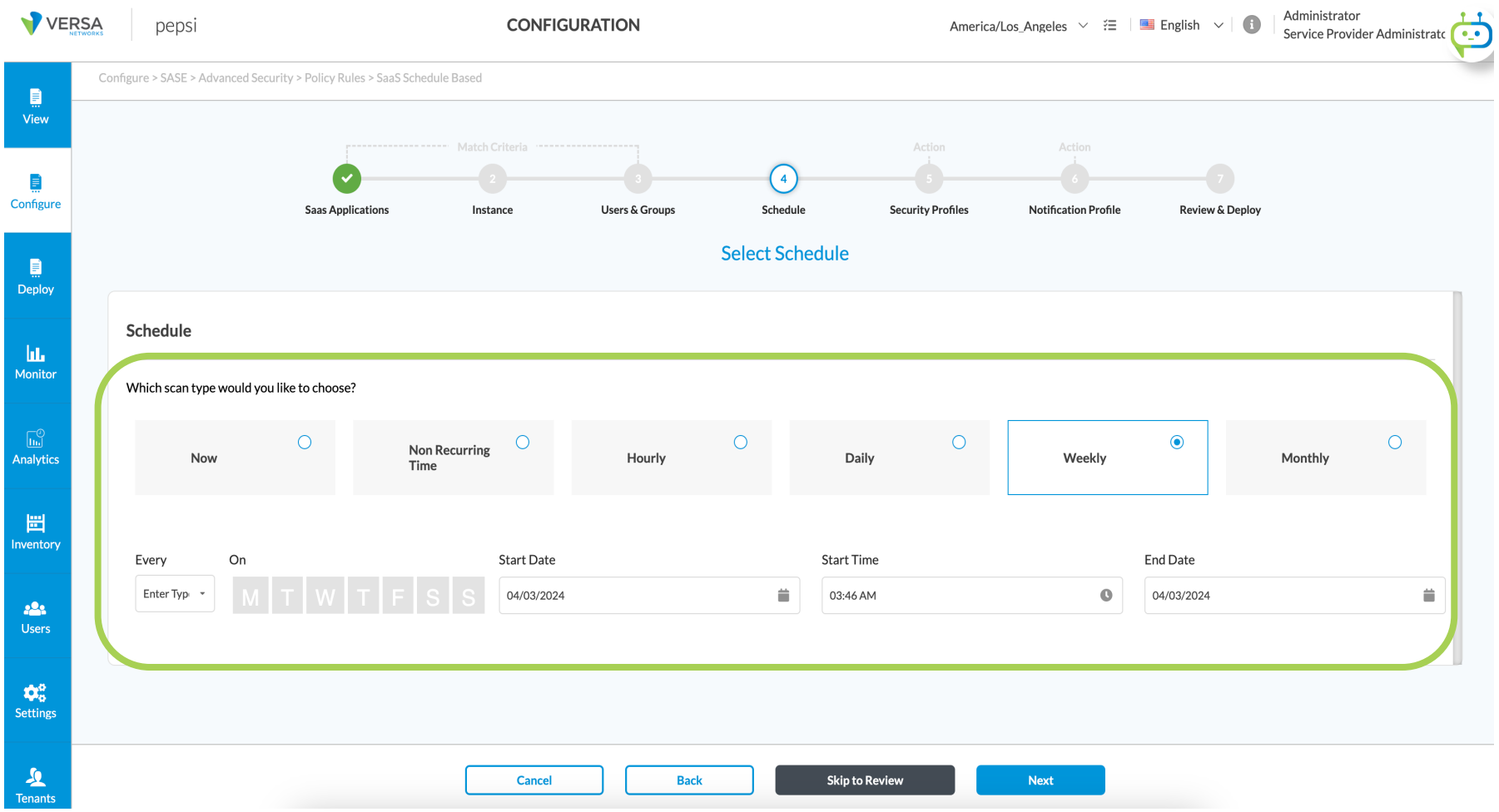
Scheduled Job



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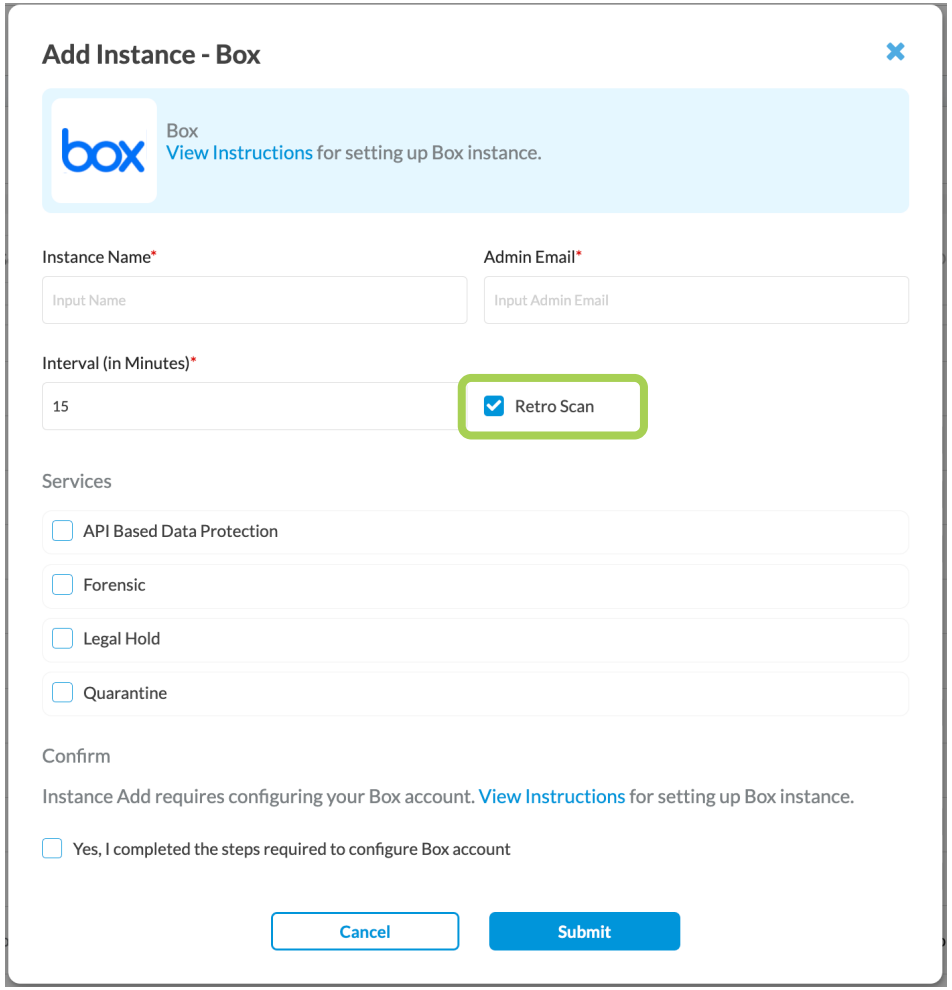
Retroactive Scan



- Retro scan can be enabled during the connector creation.
- Scans historical data at rest existing before using Versa API-DP
- Violation detected will be logged in Analytics

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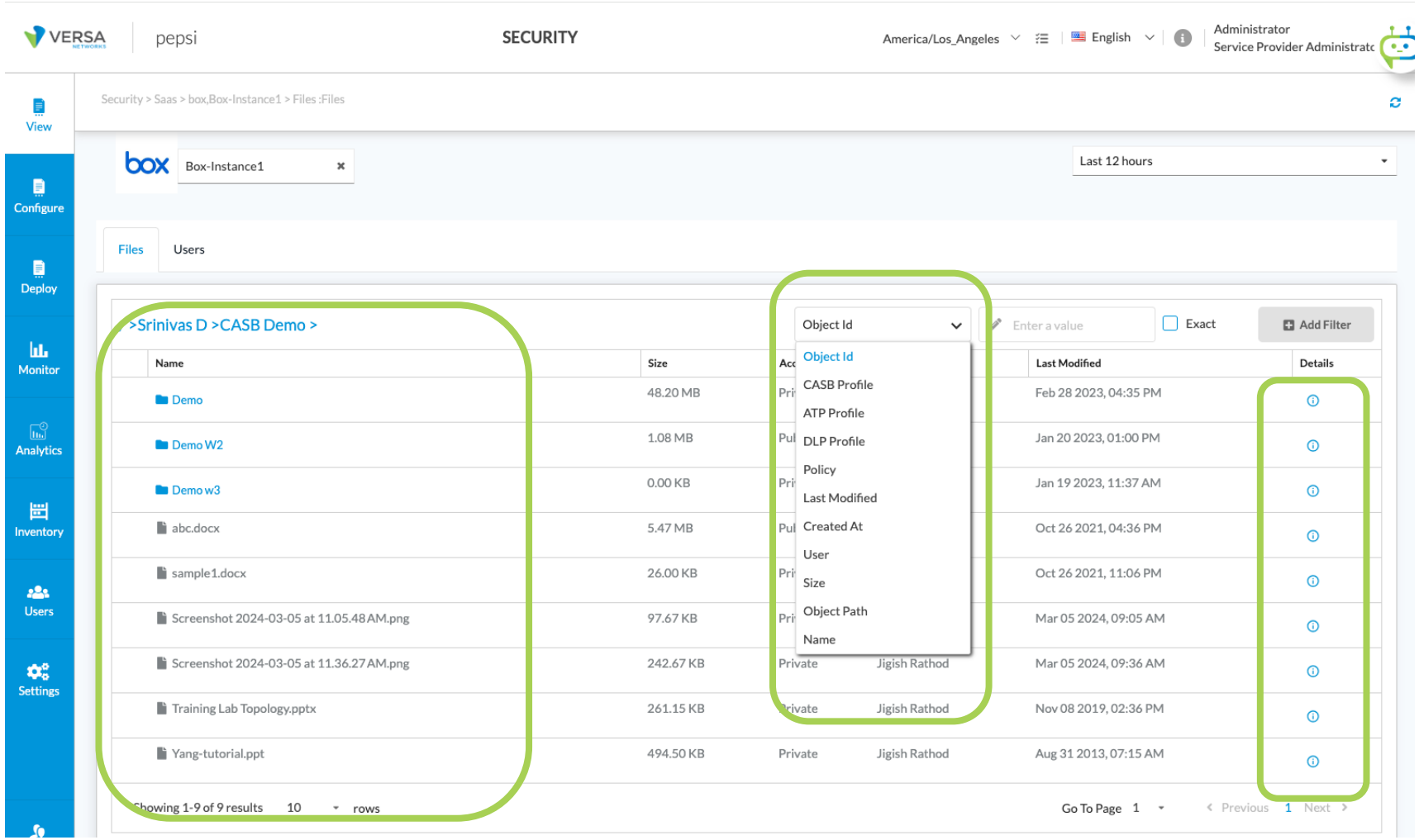
Data at Rest



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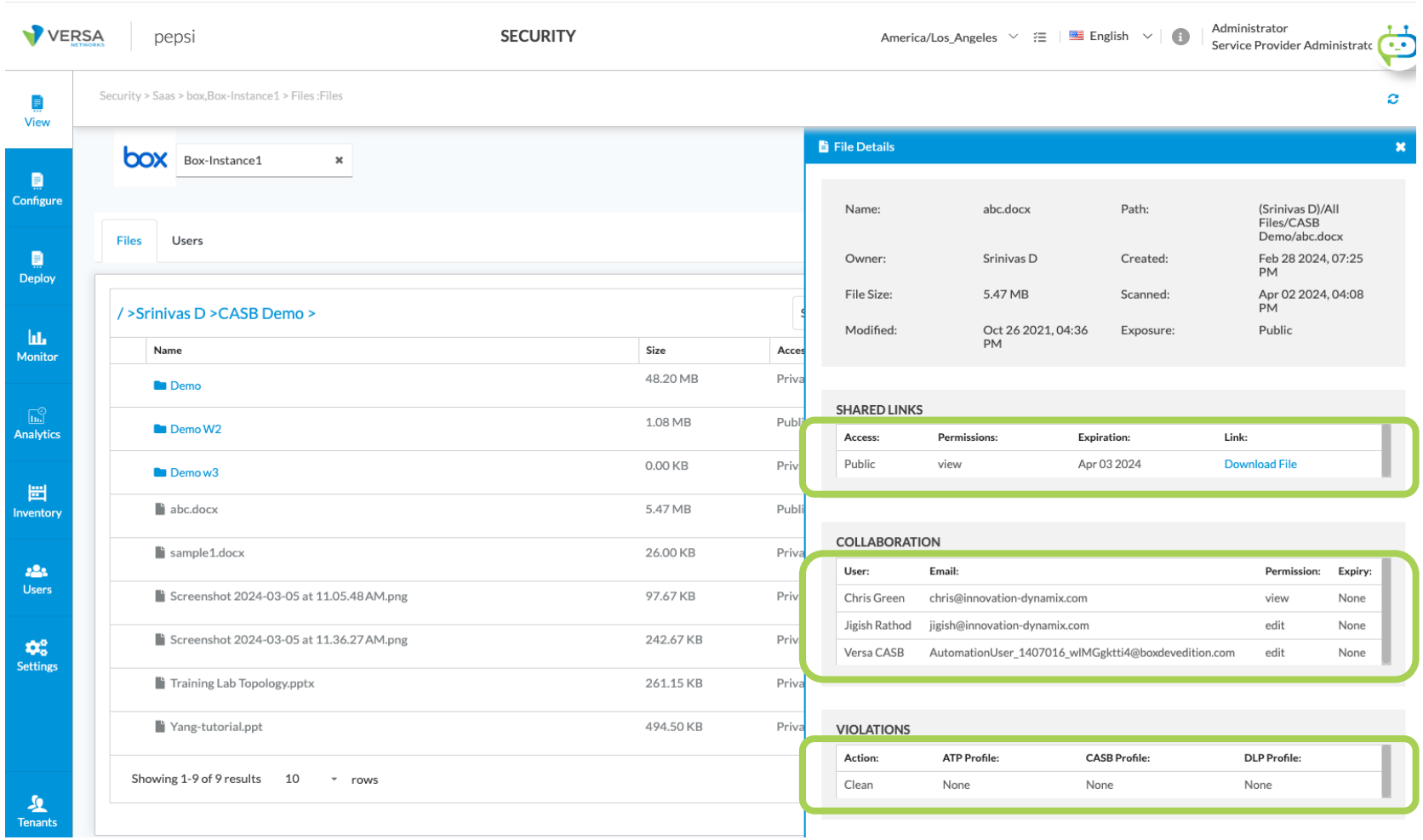
Data at Rest



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Email Protection: SMTP Proxy

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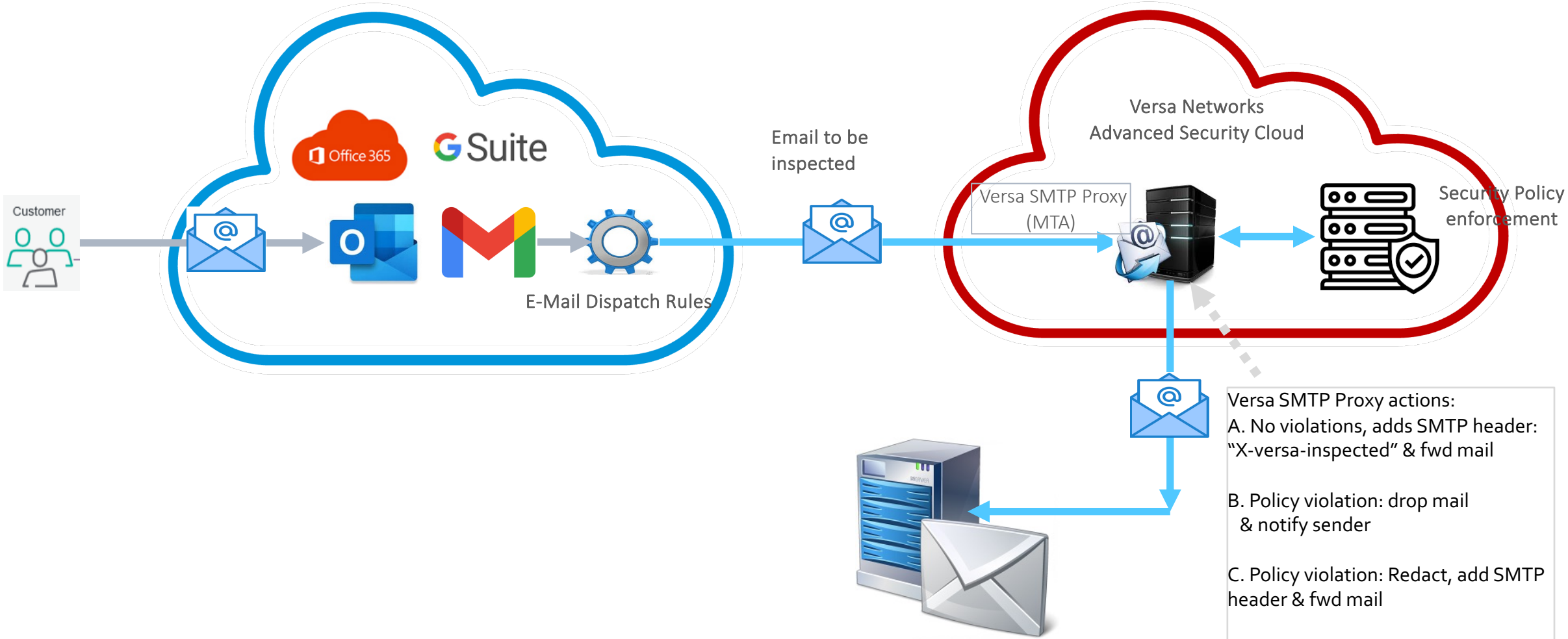
Email Protection

- SMTP Proxy for Email Protection provides protection for cloud emails (cloud hosted email exchanges: GMAIL or O365 or a custom exchange)
- Design & workflow:
  - Organization/Tenants GMAIL (G-Suite) or O365:
    - Configure outbound connectors to filter/route emails outbound/inbound emails to SMTP proxy
    - Inbound connectors are configured to accept emails SMTP proxy
  - Outbound/inbound email received on the GMAIL/O365 exchanges is forwarded to SMTP Proxy
  - Proxy maps email to tenant specific security enforcement policies (DLP, ATP etc.)
  - Policy specific actions such as forward, redact, drop, notify
  - Inspected header is added, and emails can be routed through the same GMAIL or O365 exchange or any other configured MTA
- Integrated with Analytics

SMTP Proxy & Security Policy Enforcement



Versa SMTP Proxy actions:

A. No violations, adds SMTP header: "X-versa-inspected" & fwd mail

B. Policy violation: drop mail & notify sender

C. Policy violation: Redact, add SMTP header & fwd mail

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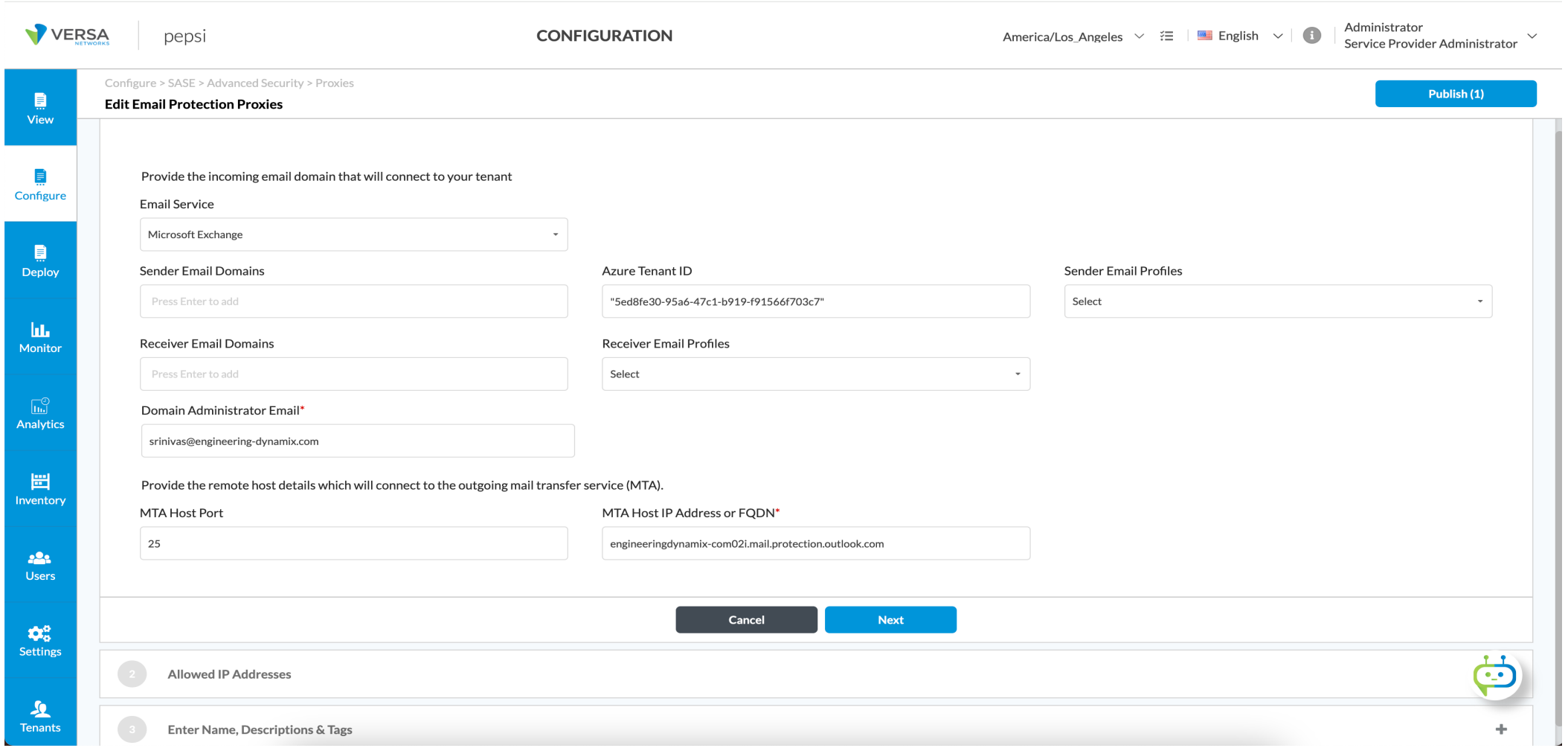
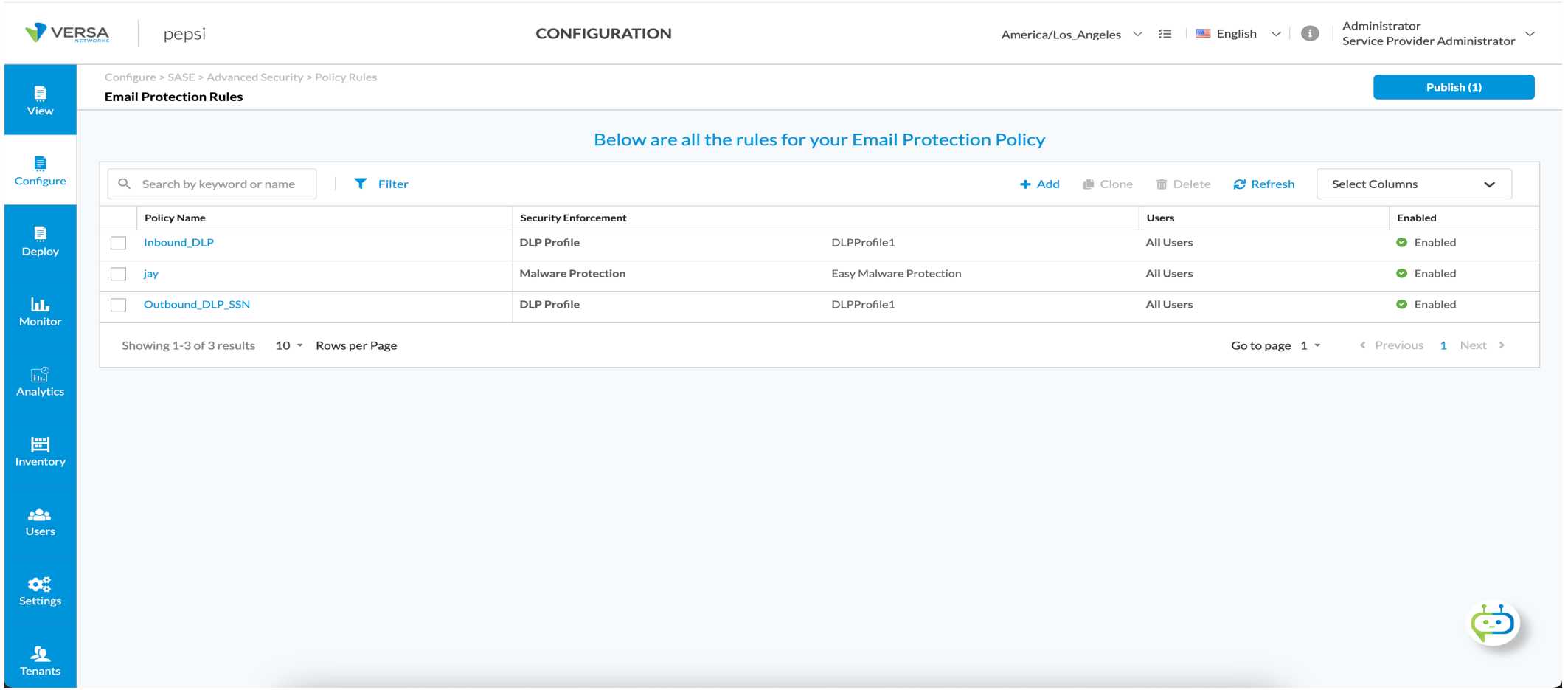
Email Protection: SMTP Proxy Configuration



Email Protection: Policy Detail



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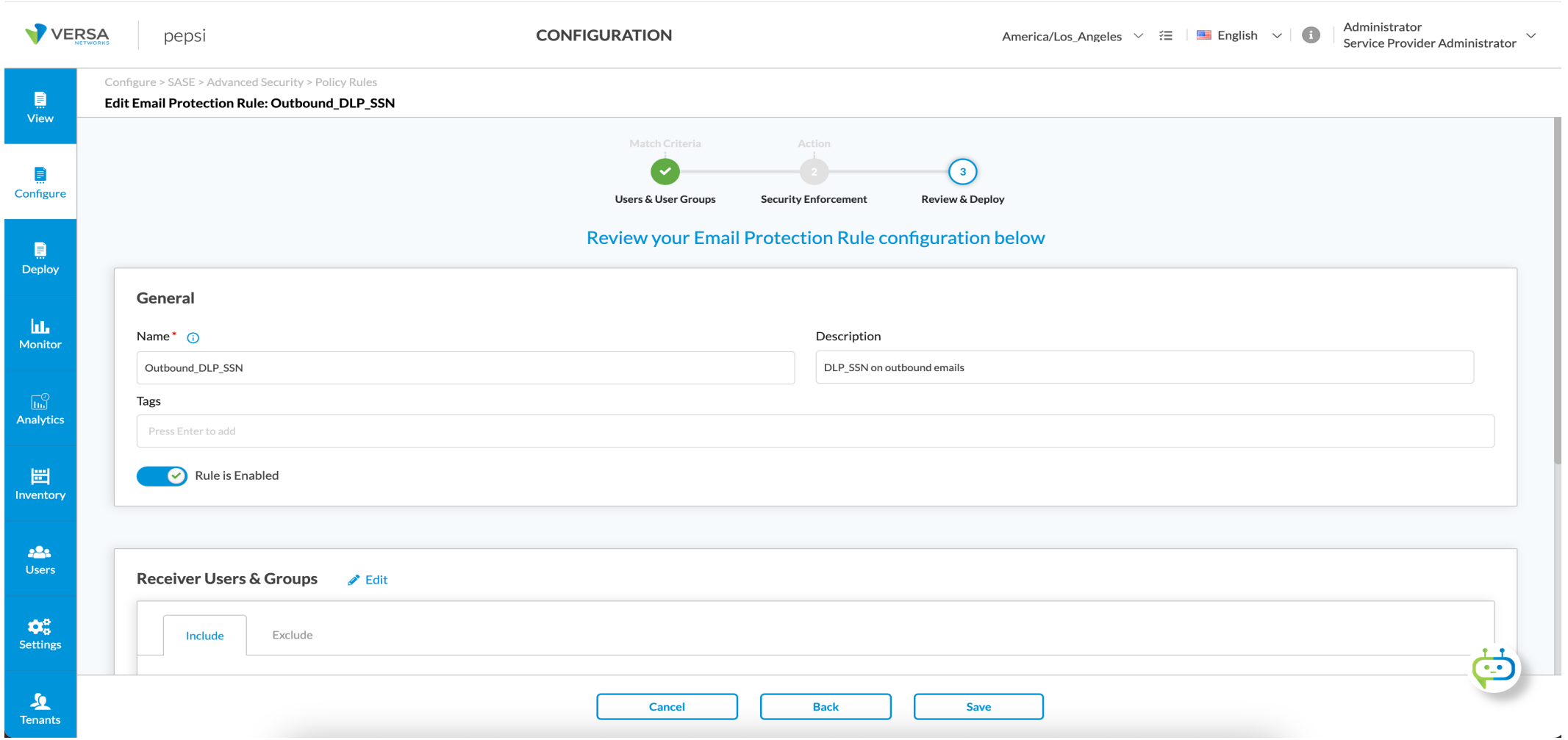

Monitoring

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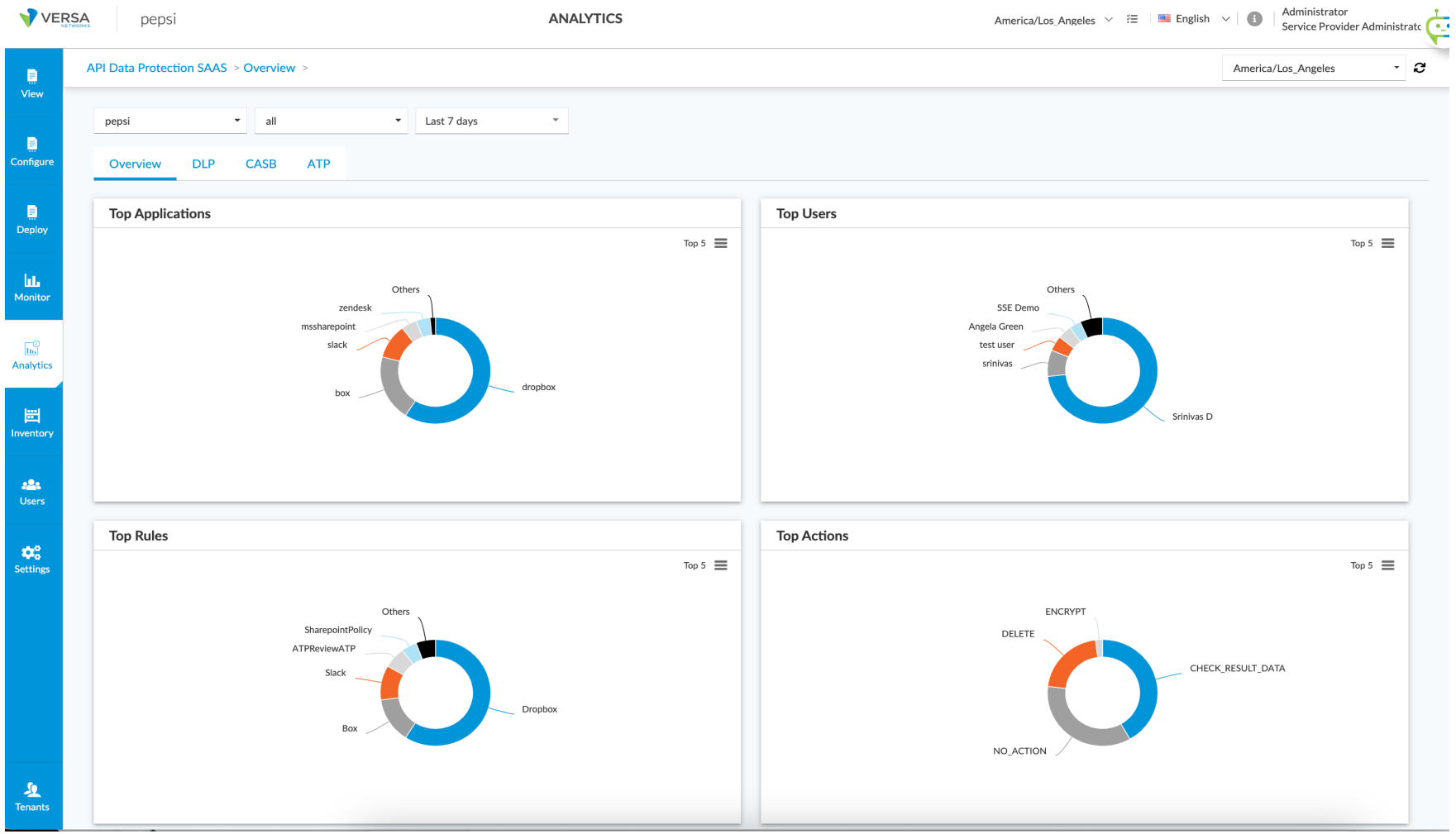
API-DP Analytics



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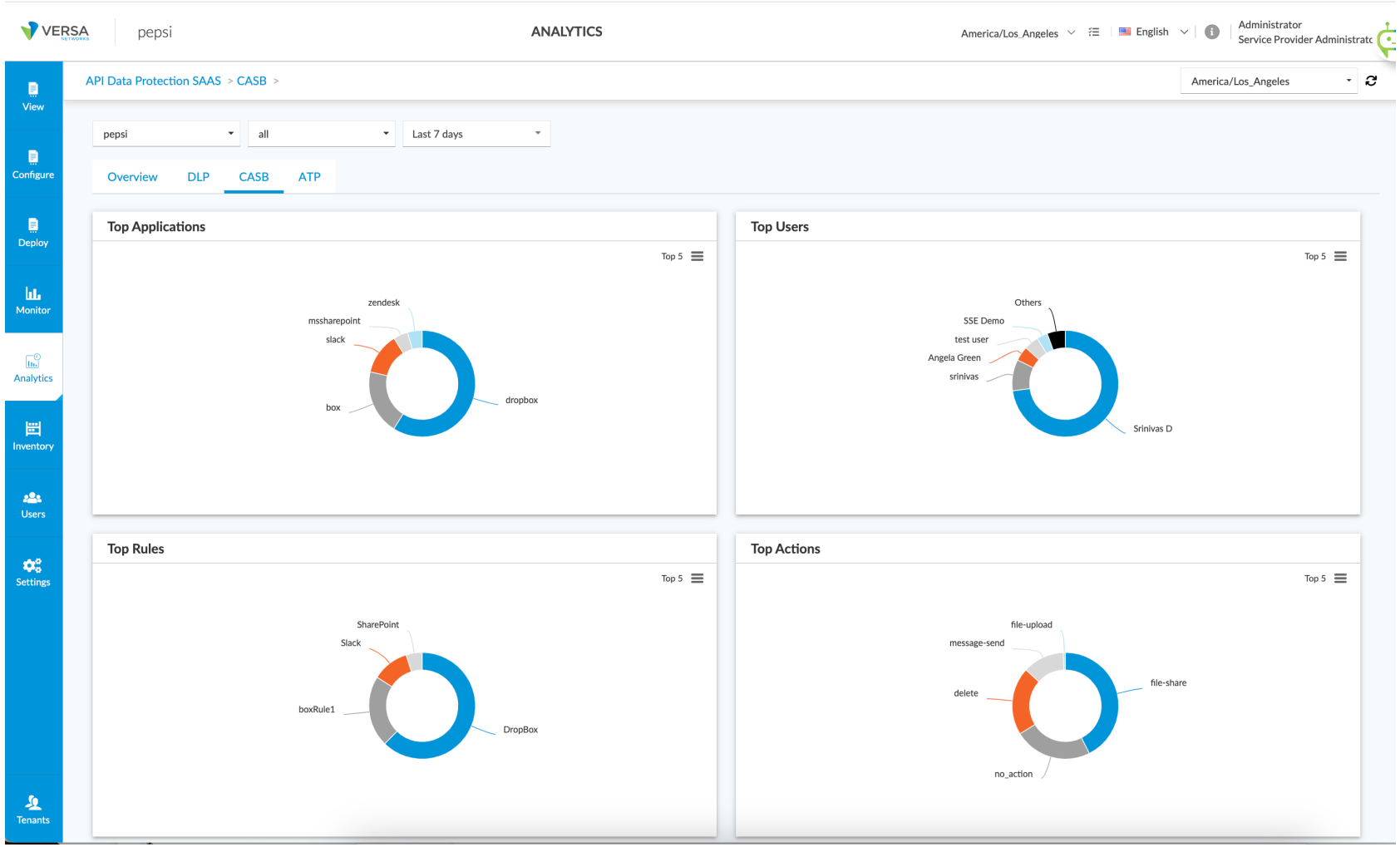
Offline CASB Analytics



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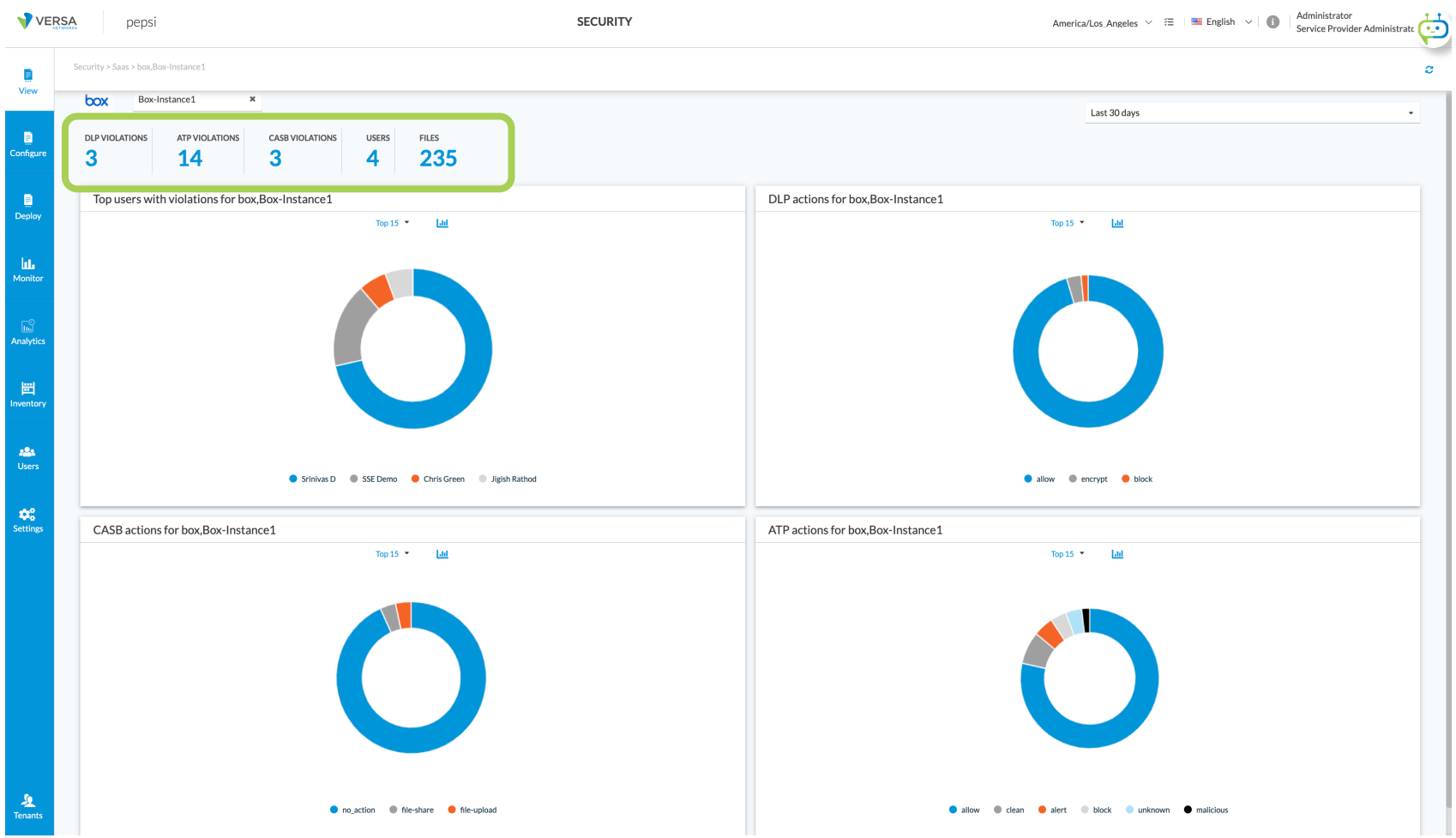
Per Application Instance Analytics



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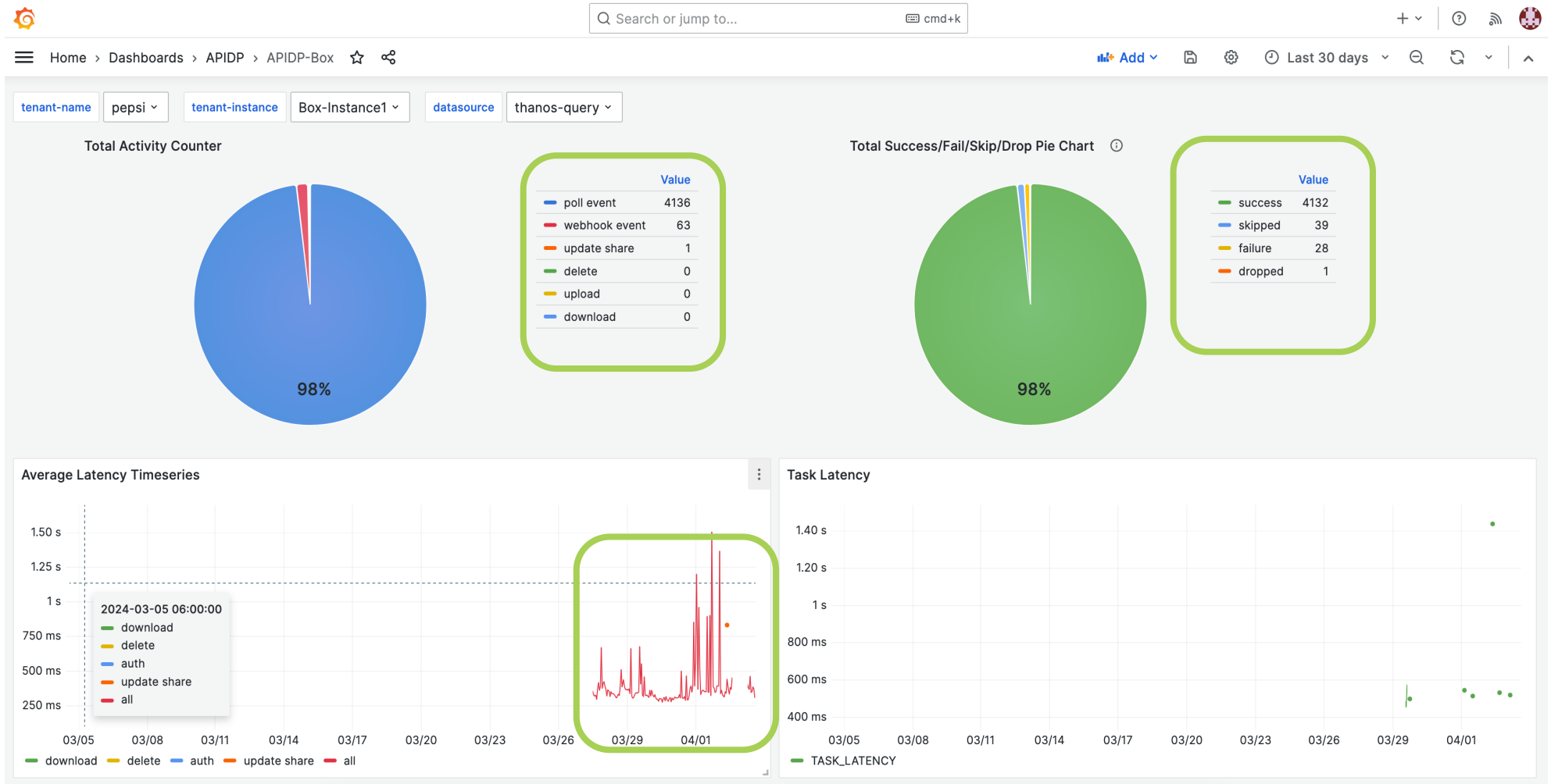
Managed Ops Dashboard



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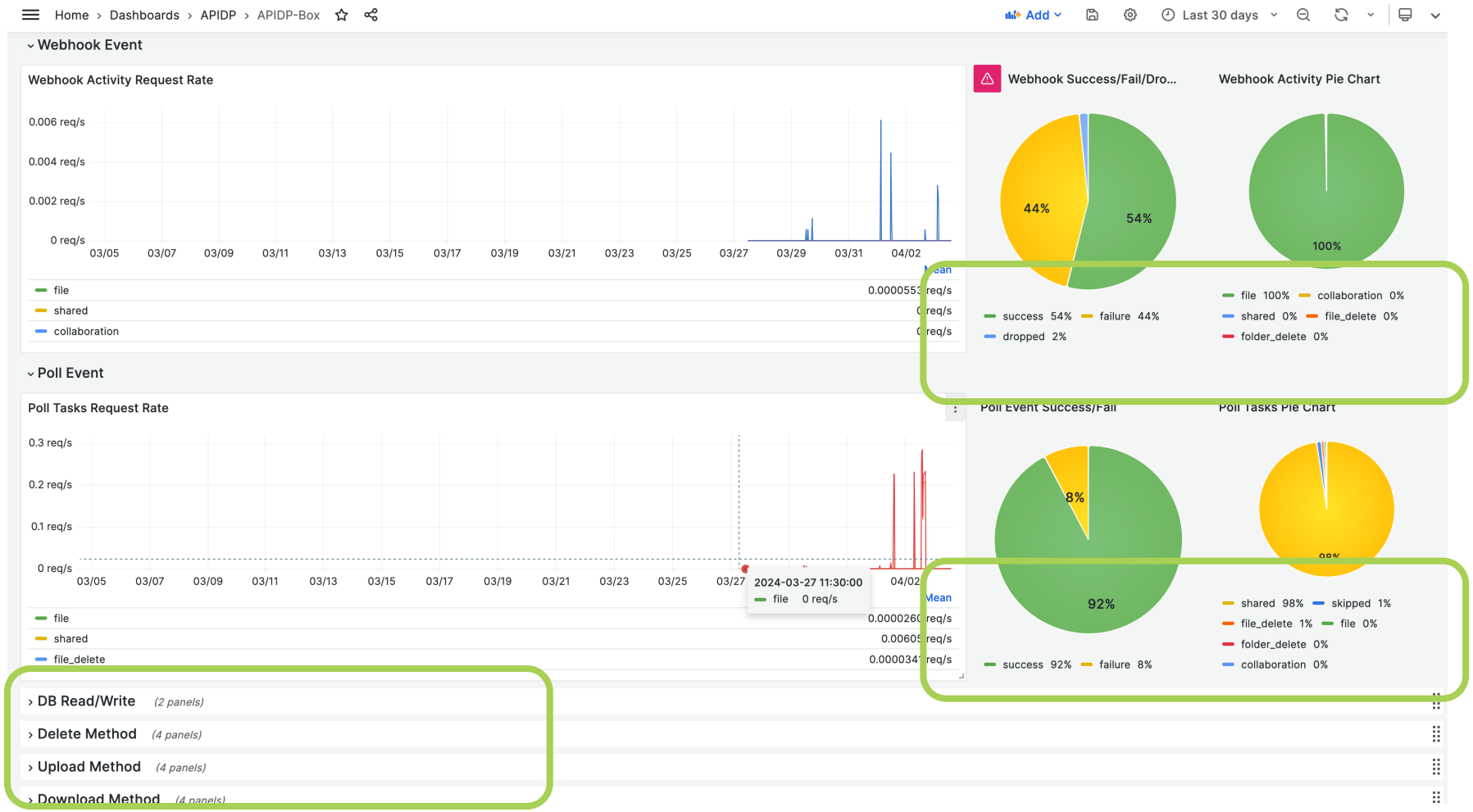
Managed Ops Dashboard



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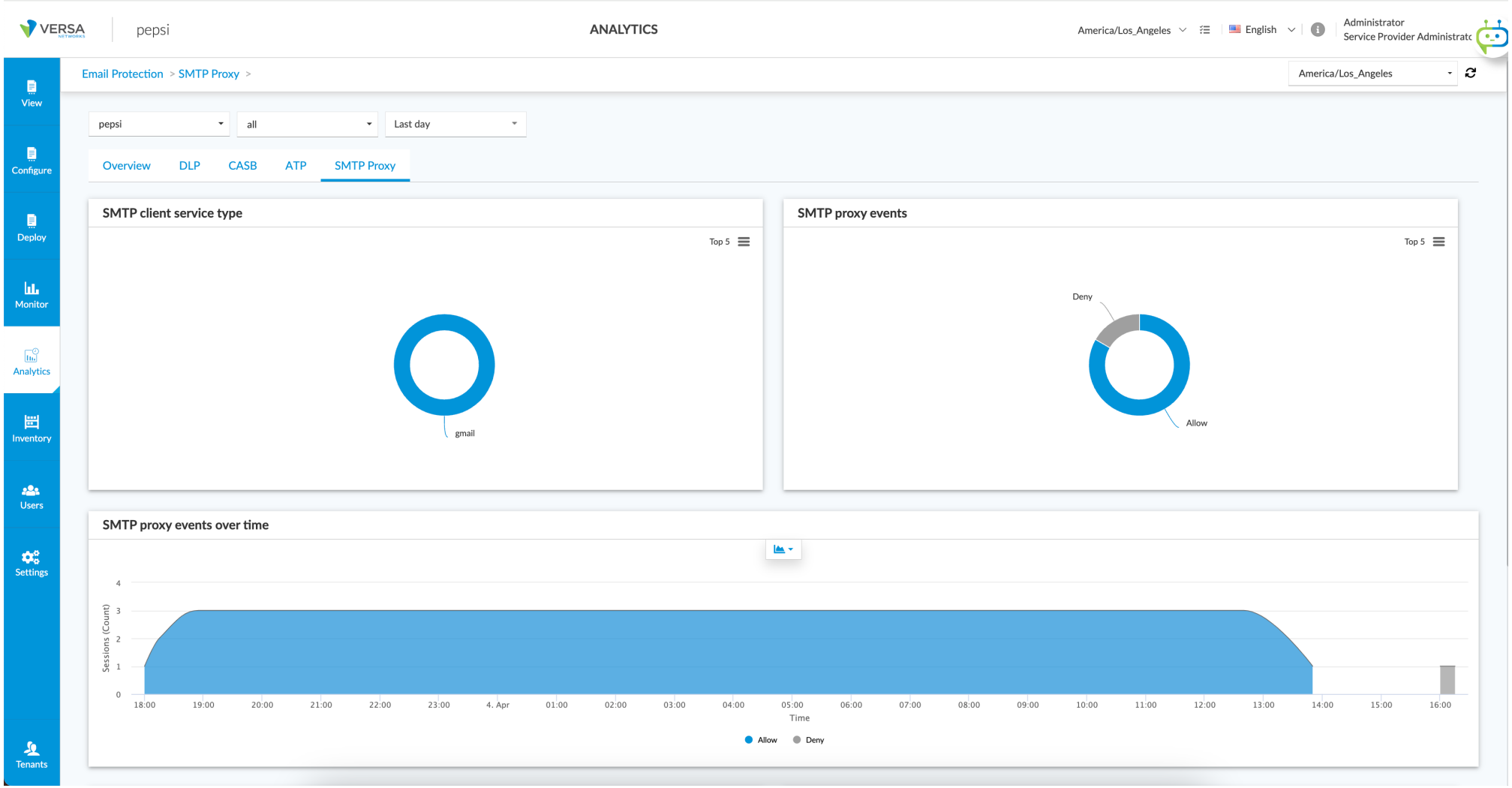
SMTP Proxy Analytics



Demo

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Demo

- File activity on Box
  - Shared publicly – Set link expiry
  - Infected with malware – Deleted
  - Containing confidential information – Replace with encrypted version
- User activity on Slack
  - User joining public channel – Remove
- Email Protection
  - Send email to external user from Gmail enterprise account
    - Attach document containing confidential information – DLP blocks
    - Attach clean document – Allow

Questions

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Thank you

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