



CloudFront

VERSION VAULT



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1. Introduction

CloudFront Version Vault is a centralized tool designed to simplify the management and tracking of AWS CloudFront distribution configurations. It enables users to view versions, and restore changes made to behaviors, origins, error pages, aliases, and Lambda functions. Every configuration update is stored as a version, offering full visibility and control over distribution history.

Dashboard Overview: The dashboard includes two main sections:

- Active Distributions (Default view).
- Deleted Distributions.

Clicking on a distribution ID opens a detailed view with multiple tabs reflecting configuration details similar to the CloudFront console. One key tab is Versions, which displays a list of all saved versions for that distribution.

Version Management

For Active Distributions:

- Roll back to a selected version.
- Copy a version to another distribution.
- Create a new distribution from any version.

For Deleted Distributions:

- Copy a version to an existing distribution.
- Recreate the deleted distribution using a saved version.

Both views allow side-by-side version comparison to easily identify configuration changes.

User Management

- Admins can manage users by providing and managing role based access control.

Schedule Management

- Define cron-based schedules for specific distributions.

SMTP Notifications

- Configure SMTP settings to enable event-based email alerts.

SSL Configuration

- Secure your custom domain with certificate and key configuration.

Discover What's New in v1.2 ✨

- **Detecting and restoring deleted distributions.**
- **Copying a version to another distribution.**
- **Creating a new distribution from a saved version.**
- **Centralized Schedule Management for tracking changes and deletions.**
- **Supports automatic email notifications via SMTP for important events and updates.**
- **Supports SSL configuration to enable secure HTTPS access using custom domains.**

2. Getting Started

2.1 Launching the Instance

- Subscribe to the CloudFront Version Vault AMI from the AWS Marketplace.
- Launch an EC2 instance using this AMI.
- We recommend using a t3.medium instance or higher for smooth performance.

2.2 Security Group Configuration

- Open Required Ports: Ensure that the following Ports are open in your Instance's Security Group.

Note: It is recommended to open the below ports only for internal IP Addresses, do not keep ports open for all.



- **Port 443: For accessing the Web App.**

2.3 IAM Role Attachment

1. Open IAM Console >> Go to Roles >> Click Create Role.

2. Select Trusted Entity:

- Choose AWS service.
- Use Case: EC2.
- Click Next.

3. Skip Permissions:

- Don't attach any policies here (you'll add an inline policy next).
- Click Next >> Add a role named **cloudfront-version-vault-role** >> Create role.

4. Add Inline Policy:

- After creating, open the role >> Go to Permissions tab >> Click Add inline policy.
- Choose JSON tab >> Paste the policy json on page 03.
- Click Review policy, name it **cloudfront-version-vault-inline-policy** >> Create policy.

5. Attach Role to EC2 Instance:

- Go to EC2 console >> Select instance >> Actions > Security > Modify IAM role.
- Attach the newly created role.

2. Getting Started

```
{
  "Version": "2012-10-17",
  "Statement": [
    {
      "Sid": "VisualEditor0",
      "Effect": "Allow",
      "Action": [
        "s3:GetBucketAcl",
        "s3:PutBucketAcl",
        "lambda:ListFunctions",
        "lambda:GetFunction",
        "lambda:ListLayerVersions",
        "lambda:EnableReplication",
        "cloudfront:ListCloudFrontOriginAccessIdentities",
        "cloudfront:ListFunctions",
        "cloudfront:ListOriginAccessControls",
        "cloudfront:ListFieldLevelEncryptionConfigs",
        "cloudfront:ListOriginRequestPolicies",
        "cloudfront:GetDistribution",
        "cloudfront:ListDistributionsByRealtimeLogConfig",
        "cloudfront:ListKeyGroups",
        "cloudfront:ListSavingsPlans",
        "cloudfront:ListRateCards",
        "cloudfront:UpdateDistribution",
        "cloudfront:ListContinuousDeploymentPolicies",
        "cloudfront:GetDistributionConfig",
        "cloudfront:ListUsages",
        "cloudfront:ListResponseHeadersPolicies",
        "cloudfront:ListDistributionsByCachePolicyId",
        "cloudfront:ListDistributionsByLambdaFunction",
        "cloudfront:ListCachePolicies",
        "cloudfront:ListDistributionsByKeyGroup",
        "cloudfront:ListPublicKeys",
        "cloudfront:ListConflictingAliases",
        "cloudfront:ListTagsForResource",
        "cloudfront:ListRealtimeLogConfigs",
        "cloudfront:ListInvalidations",
        "cloudfront:ListFieldLevelEncryptionProfiles",
        "cloudfront:ListDistributions",
        "cloudfront:ListStreamingDistributions",
        "cloudfront:ListKeyValueStores",
        "cloudfront:ListDistributionsByWebACLId",
        "cloudfront:ListDistributionsByResponseHeadersPolicyId",
        "cloudfront:ListDistributionsByOriginRequestPolicyId",
        "cloudfront:CreateDistribution"
      ],
      "Resource": "*"
    }
  ]
}
```


2. Getting Started

- **Open Browser:** Navigate to your instance's public IP address or DNS name using a web browser.
- **Access CloudFront Version Vault:** The frontend will be accessible at <https://<your-instance-public-ip>>.
- **Login:** Use the initial login credentials:
- **Username:** admin
- **Password:** AcRW%exB5o%4Qs

Note: Please make sure to reset the admin password!



2.4 User Role and Permission

- This application includes three user roles: Read-Only, Editor, and Admin. Each role has specific permissions that define what users can access and modify within the application.

1. Read-Only Role

- **Login & Password Management:** Users can log in and change their password.
- **Access:** Users with this role can only view data related to CloudFront distributions and versions.
- **Restrictions:** They are not permitted to modify, create, or delete any entity.

2. Editor Role

- **Login & Password Management:** Users can log in and change their password.
- **Read-Only Permissions:** The Editor role includes all permissions granted to the Read-Only role.
- **Generate and Rollback CloudFront Versions:** Editors can create new CloudFront versions and perform rollbacks on existing versions.
- **Restrictions:** Editors cannot manage other users or change their roles.

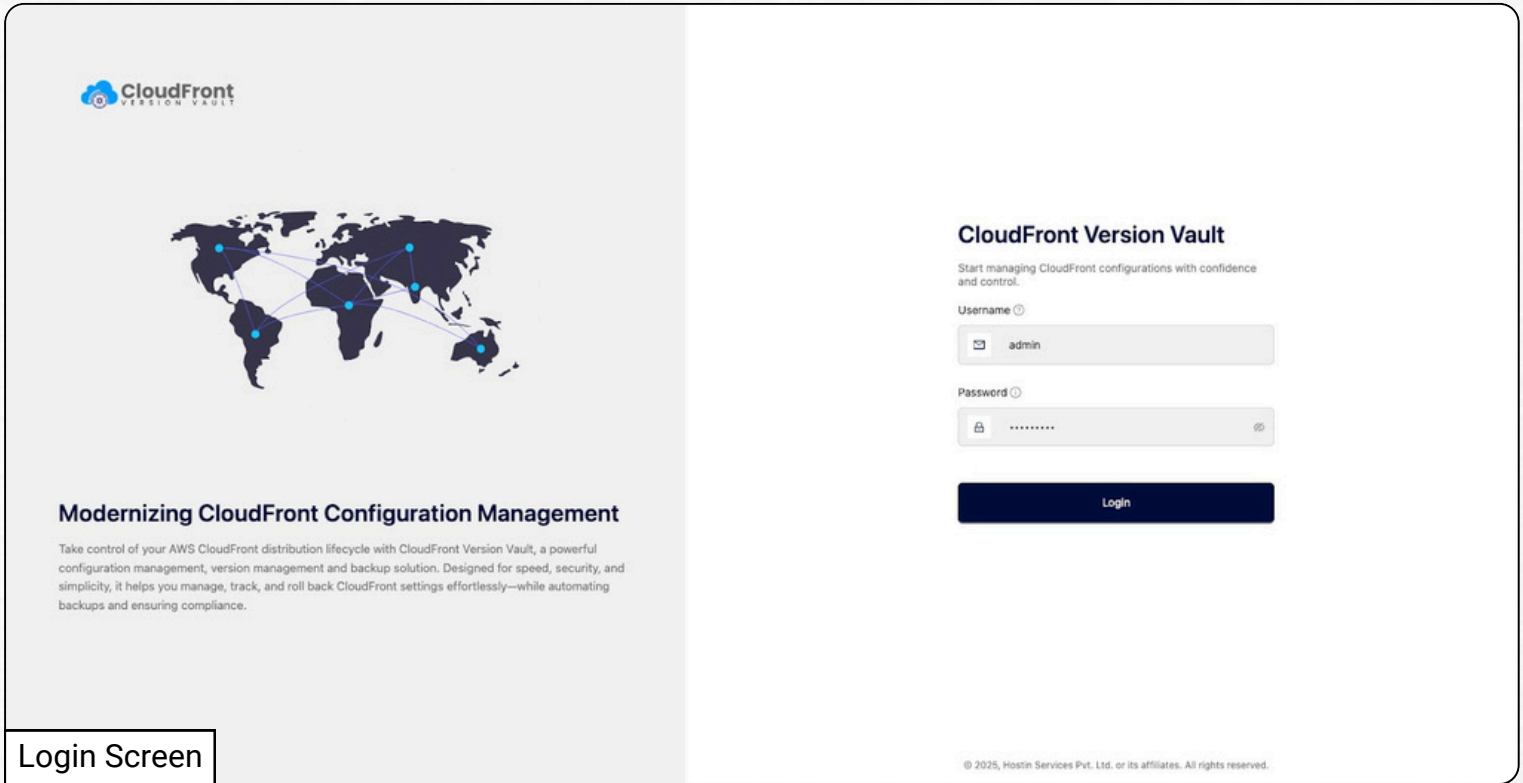
3. Admin Role

- **Login & Password Management:** Admins can log in, change their password, and manage other users passwords.
- **Full Access:** Admins have all permissions assigned to the Editor role.
- **User Management:** Create new users, Change the roles of existing users, Delete users from the application.
- **SMTP Configuration:** Configure SMTP settings to enable event-based email alerts.
- **SSL Configuration:** Secure your custom domain with certificate and key configuration.

Each role is designed to ensure that users have the appropriate level of access for their responsibilities. Be sure to assign roles carefully based on the user's responsibilities and required access level.

3. UI Guide: Manage & Roll Back CloudFront Configurations

The CloudFront Version Vault dashboard enables users to view, manage, and restore CloudFront distribution configurations efficiently with a modern and intuitive interface.



3.1 Application Layout

The application features a persistent sidebar offering the following primary navigation options:

- **Distributions:** View and manage both active and deleted distributions.
- **Users:** The admin manages platform users and their access levels.
- **Settings:** Access password, Schedule management, Email Notifications, SSL Configuration.
- **Logout:** Securely sign out of the application.

3.2 Viewing and Managing Distributions

a. Accessing Distributions

- Click the **Distributions** menu from the sidebar.
- You'll see two tabs at the top:
 - **Active Distributions (default).**
 - **Deleted Distributions.**
- Below the tabs, the respective list of distributions is displayed.

3. UI Guide: Manage & Roll Back CloudFront Configurations

CloudFront

Distributions

Users

Settings

Signout

CloudFront Version Vault (AWS Account No 123456789012)

admin

Distributions

Active DistributionsDeleted Distributions

Input search text

Clear

| ID | Enabled | Description | Type | Domain name (standard) | Alternate domain names | Origins | Last Modified Time (UTC) | Actions |
|----------------|---------|----------------------------|----------|-------------------------|------------------------|-----------------------------------|---------------------------|---------|
| EDX8V9HG865JC | Enabled | Edge Team Testing | Standard | dummyurl.cloudfront.net | - | signed-url-test-22.s3.ap-sou... | Jun 20, 2025 06:41:12 UTC | |
| EB6HXPM3G39U | Enabled | VFORT IO TESTING ... | Standard | dummyurl.cloudfront.net | - | vfort-io-test-cf, AWS-io-distr... | Jul 27, 2023 07:39:01 UTC | |
| E2VZ6CNC993W6J | Enabled | Edge Services Conso... | Standard | dummyurl.cloudfront.net | www.example.com | Backend - Edge Services Co... | Aug 12, 2024 06:38:41 UTC | |
| E1UJ3YLQFDS13W | Enabled | vfort-cdn-manager-d... | Standard | dummyurl.cloudfront.net | www.example.com | vfort-cdn-manager-frontend,... | May 23, 2025 09:19:59 UTC | |
| EZP79R2DXTA9W | Enabled | Test Distribution | Standard | dummyurl.cloudfront.net | www.example.com | AI-Interviewer-Prod, AIntervi... | Jun 18, 2025 07:26:45 UTC | |
| EK6A3LGAKW2G | Enabled | mmt poc dist | Standard | dummyurl.cloudfront.net | - | demo.html | Oct 14, 2024 09:35:37 UTC | |
| EZC0M2SP2SNP | Enabled | Aditya: Media testing... | Standard | dummyurl.cloudfront.net | - | his-path, aditya-test-vod-so... | Mar 10, 2025 11:16:06 UTC | |
| E3NW0IU15QJU68 | Enabled | SAM-App-Cloudfront... | Standard | dummyurl.cloudfront.net | - | sam-api-gateway | Nov 19, 2024 06:49:46 UTC | |
| EOJKN1DZRO78O | Enabled | Prowler Distribution ... | Standard | dummyurl.cloudfront.net | - | Prowler Server | May 15, 2025 05:30:51 UTC | |
| ESY6ZAD6FPV6O | Enabled | Testing Distro Create... | Standard | dummyurl.cloudfront.net | - | demo.html | Jun 06, 2025 07:37:51 UTC | |

Dashboard




b. Distribution Details View:

- Clicking on a Distribution ID opens a detailed view with several tabs, designed to resemble AWS CloudFront's distribution information layout. Tabs include:
- General Info:** Basic configuration and metadata.
- Origins:** Origin domain and path settings.
- Behaviors:** Cache and request behavior configurations.
- Invalidations:** History of cache invalidations.
- Aliases:** Alternate domain names.
- Versions:** Version history of distribution configuration.

3.3 Working with Versions

a. Versions Tab (For Active Distributions)

In the Versions tab of an active distribution:

- You'll find a version table listing all saved configurations.
- For each version, the following actions are available:
-  **Rollback:** Revert the distribution to this version.
-  **Copy to Another Distribution:** Apply this version's config to another existing distribution.
-  **Create New Distribution:** Launch a brand-new distribution using this version's config.
- Compare:** View configuration differences between two selected versions.

3. UI Guide: Manage & Roll Back CloudFront Configurations

CloudFront

Distributions

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CloudFront Version Vault (AWS Account No : 123456789012)

admin

E27BSAOBQRTV4I - Active

General

Origins

Behaviors

Security

Invalidations

Geographic Restrictions

Tags

Versions

Schedule Backup

Version No

Etag

Previous Version

Roll Back From

Author

Version Number

Etag

Previous Version

Roll Back From

Author

Find

Clear

Compare Versions

| Version | Last Modified Time (UTC) | Etag | Rolled Back from | Author | Notes | Actions |
|---------|-------------------------------|----------------|------------------|--------|----------------------|-------------------------------------|
| 3 | Tue, 24 Jun 2025 09:56:28 GMT | E9SIMMJ56QGWO | Version 1 | admin | Rolled back from v1 | <div></div> <div></div> <div></div> |
| 2 | Tue, 24 Jun 2025 09:56:01 GMT | E1TABPPPG9WSF7 | - | - | CloudFront Generated | <div></div> <div></div> <div></div> |
| 1 | Tue, 24 Jun 2025 09:54:25 GMT | ELEVXTLXUQ7QP | - | - | CloudFront Generated | <div></div> <div></div> <div></div> |

Current Page: 1 Total Pages: 1 Page Size: 10

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Go

Version Tab - Active

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b. Versions Tab (For Deleted Distributions)

In the Deleted Distributions tab, selecting a Distribution ID and navigating to its Versions tab allows you to:

- Copy to Existing Distribution.
- Recreate Distribution** using a selected version.
- Compare Versions**

CloudFront

Distributions

Users

Settings

Signout

CloudFront Version Vault (AWS Account No : 123456789012)

admin

EM9YLL7KEKKM0 - Deleted

General

Origins

Behaviors

Security

Versions

Version No

Etag

Previous Version

Roll Back From

Author

Version Number

Etag

Previous Version

Roll Back From

Author

Find

Clear

Compare Versions

| Version | Last Modified Time (UTC) | Etag | Rolled Back from | Author | Notes | Actions |
|---------|-------------------------------|----------------|------------------|--------|----------------------|-------------------------------------|
| 3 | Tue, 17 Jun 2025 12:16:33 GMT | E2F4PK8FST4WTF | - | - | CloudFront Generated | <div></div> <div></div> <div></div> |
| 2 | Tue, 17 Jun 2025 06:22:13 GMT | ETTCHASJQGRBF | - | - | Automated Backup | <div></div> <div></div> <div></div> |
| 1 | Tue, 17 Jun 2025 06:17:45 GMT | E1XVL3VMUN8TM4 | - | - | Automated Backup | <div></div> <div></div> <div></div> |

Current Page: 1 Total Pages: 1 Page Size: 10

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Next

Page ...

Go

Version Tab - Deleted

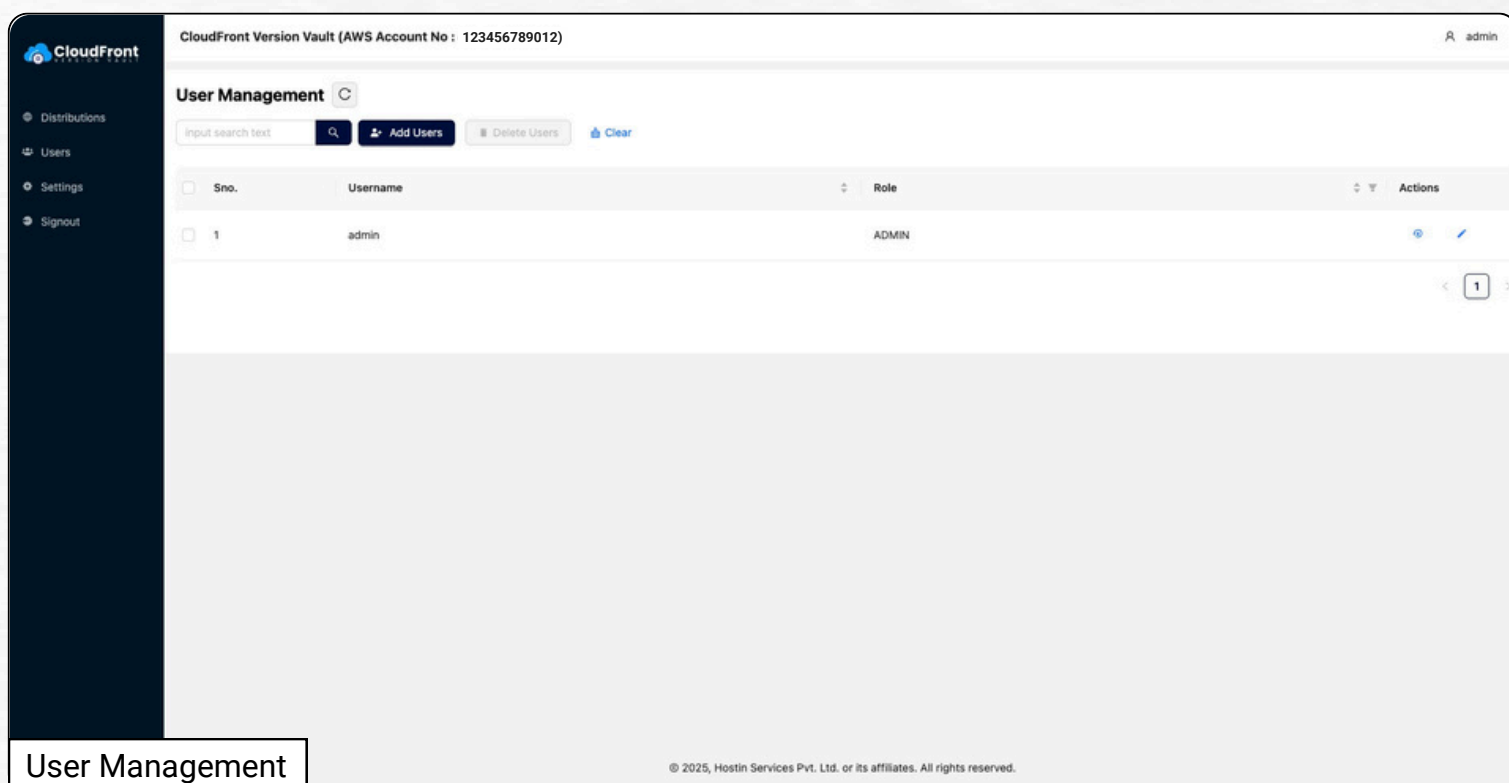
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3. UI Guide: Manage & Roll Back CloudFront Configurations

3.4 User Management

Accessible via the Users option in the sidebar, the User Management interface allows the admin to perform the following actions:

- **Add, modify, or delete users with the following roles:**
 - **Admin:** Full access to all application features including user and role management.
 - **Editor:** Has the same permissions as the Admin role, except cannot add or modify users.
 - **Read-Only:** Can view distribution info but cannot perform actions.



3.5 Settings Tab


Within the Settings menu, the following key options are available:

3.5.1 Change Password

To change your password:

- Go to **Settings**.
- Navigate to the **Change Password tab**.
- Enter your **current password**, **new password**, and **confirm the new password**.
- Click **Submit** and you're all set!

3. UI Guide: Manage & Roll Back CloudFront Configurations



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admin

Settings

Change Password

Schedule Management

Email Notifications

SMTP Configuration

SSL Configuration

* Current Password ⓘ

Enter your current password

* New Password ⓘ

Enter new password

* Confirm New Password ⓘ

Re-enter your new password

Change Password

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Reset Password

Tips for Creating a Secure Password

- Use at least 6 characters.
- Include a mix of uppercase, lowercase, numbers, and special characters.
- Avoid using common words, personal info (like birthdays), or simple patterns (e.g., 123456, password, qwerty).
- Consider using a passphrase (e.g., Purple\$Rain!2024Sunny) for better memorability and strength.



3. UI Guide: Manage & Roll Back CloudFront Configurations

3.5.2 Schedule Management

a. Accessing Schedule Management

- Go to Settings >> Schedule Management.

b. Master Schedule

- It checks for configuration changes and monitors deleted distributions across all entries every hour.
- Detect changes in configuration for every distribution.
- Monitor deleted distributions and disk usage, and send alerts if usage exceeds 90% if SMTP and email are configured.

c. Distribution-Specific Schedules

- This schedule monitors changes in a particular CloudFront distribution.

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VERSION VAULT

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admin

Settings

Change Password

Schedule Management

Email Notifications

SMTP Configuration

SSL Configuration

Schedules

Refresh

Create Schedule

?

Delete Selected

| <input type="checkbox"/> | # | Job ID | Distribution ID | Expression | Status | Schedule Date (UTC) | Last Run | Actions |
|--------------------------|---|-----------------|-----------------|------------|--------|---------------------------|---------------------------|---------|
| <input type="checkbox"/> | 1 | master-schedule | ALL | 0 * * * * | active | Jul 04, 2025 09:11:37 UTC | Jul 07, 2025 18:30:44 UTC | |
| <input type="checkbox"/> | 2 | EZP79R2DXTA9W | EZP79R2DXTA9W | * * * * * | paused | Jul 07, 2025 06:51:36 UTC | Jul 07, 2025 06:51:04 UTC | |

<

1

>

10 / page

Schedule Management

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The master schedule runs regularly to check for any missing CloudFront distributions. It first saves a snapshot of all existing ones. On future runs, it compares the current list with the saved one. If any are missing, they're marked as deleted and shown in the dashboard for easy tracking and recovery.



3. UI Guide: Manage & Roll Back CloudFront Configurations

3.5.3 Email Notification and SMTP Configuration

SMTP is what lets the system send emails (like alerts or updates). You set it up by adding server details, AWS login, and a sender email. A green status shows when it's working.

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VERSION VAULT

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Email Notifications

SMTP Configuration

SSL Configuration

SMTP Configuration

RefreshDeleteEdit

Provider: Amazon SES (ap-south-1)

Server Address: email-smtp.ap-south-1.amazonaws.com

Username: BLSFT574LFFTMLKVBEM

Security: TLS (STARTTLS)

Port: 587

Sender Email: example@xyz.com

✓ SMTP Configuration Active

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SMTP Configuration

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CloudFront Version Vault (AWS Account No : 123456789012)

admin

Settings

Change Password

Schedule Management

Email Notifications

SMTP Configuration

SSL Configuration

Notification List

Refresh

| # | Event Type | Description | Actions |
|---|------------------------------|--|---------|
| 1 | Disk Alert | You will receive a notification when server disk usage exceeds 90%. | ✉ |
| 2 | Distribution Management | New version detection / detecting deleted distribution when some change occurs at CloudFront level for scheduled distributions | ✉ |
| 3 | Version Amendment Management | Notifications triggered by version rollbacks, configuration transfers between distributions, and restoration of deleted distributions. | ✉ |
| 4 | User Management | Notifications triggered by user creation, user deletion or user updation. | ✉ |
| 5 | Notification Management | Notifications triggered by changes in updating mailing list or SMTP Configuration. | ✉ |
| 6 | Schedule Management | Notifications triggered by schedule management configuration changes. | ✉ |

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Notification List

3. UI Guide: Manage & Roll Back CloudFront Configurations

Step 1: SMTP Setup

- The admin adds the email server settings (SMTP).
- Once it's set, the system is ready to send emails.

Step 2: Notification Triggers

The system watches for important events like:

- Low disk space.
- User changes.
- Distribution updates.

When something happens, the system prepares an email.

Step 3: Sending the Email

- The system sends the message using the SMTP server.
- The email goes out from the sender you set up to the right people.
- To manage recipients, the user clicks the mail icon in the Action tab, which opens the mailing list modal. From there, they can add new emails or delete existing ones using the available options.

3.5.4 SSL Configuration

SSL (Secure Sockets Layer) certificates are like a digital passport for your website. They make sure that the connection between your users and your CloudFront distribution is secure and private. This is important for protecting sensitive information and building trust.

The screenshot displays the CloudFront Version Vault interface. On the left is a dark sidebar with navigation links: Distributions, Users, Settings, and Signout. The main content area is titled 'CloudFront Version Vault (AWS Account No : 123456789012)' and shows a 'Settings' tab. A 'Configure SSL' modal is open in the center, featuring an 'Important Notice' box with a yellow background and an exclamation mark icon. The notice states: 'Please ensure you enter a valid domain name and provide a certificate and private key in PEM format with correct headers. Incorrect configuration may result in your application becoming temporarily inaccessible.' Below the notice are three input fields: 'Domain Name' (with a hint 'e.g., mail.example.com'), 'SSL Certificate' (with a hint 'Paste your complete SSL certificate here'), and 'SSL Private Key' (with a hint 'Paste your complete SSL private key here'). At the bottom of the modal are 'Cancel' and 'Configure' buttons. In the background, the 'SSL Configuration' section of the settings page is visible, showing 'Refresh', 'Default', and 'Configure' buttons. A footer at the bottom of the interface reads '© 2025, Hostin Services Pvt. Ltd. or its affiliates. All rights reserved.'

3. UI Guide: Manage & Roll Back CloudFront Configurations

1. Domain Name

- This is the web address (like **yourwebsite.com** or **mail.example.com**) that your SSL certificate is for.
- Enter your domain name here.

2. SSL Certificate

- This is the actual certificate code you received from your SSL provider (like Let's Encrypt, DigiCert, etc.).
- It's a long string of characters that typically starts with -----BEGIN CERTIFICATE----- and ends with -----END CERTIFICATE-----.
- Carefully copy and paste your complete SSL certificate into this box.

3. SSL Private Key

- Every SSL certificate has a matching private key. This key is crucial for decrypting the secure connection.
- It's another long string of characters, usually starting with -----BEGIN PRIVATE KEY----- or -----BEGIN RSA PRIVATE KEY----- and ending with -----END PRIVATE KEY----- or -----END RSA PRIVATE KEY-----.
- Carefully copy and paste your complete SSL private key into this box.
Keep this private key very secure and do not share it with anyone!

Steps to Configure SSL

Step 1: Go to SSL Configuration

To get started with SSL, simply go to:

- In the left sidebar, click on **Settings**.
- Then, click on the **SSL Configuration** tab.
- On the **SSL Configuration** screen, look for the **Configure** button (usually on the right side). Click it to begin setting up your SSL certificate.

Step 2: Fill in Your SSL Details

Now, you'll need to provide three key pieces of information for your SSL certificate:

Step 3: Save Your Configurations

- Once you've entered all three required pieces of information, click the **Configure** button at the bottom of the pop-up window.

That's it! Your CloudFront Version Vault will now use your provided SSL certificate to secure the connections for your specified domain.

4. Conclusion

CloudFront Version Vault is a robust and intuitive tool designed to streamline the management of AWS CloudFront distributions. It empowers users with full visibility and control over distribution configurations, making tasks like rollback, monitoring, and version management seamless.

With CloudFront Version Vault, you can:

- **Roll back to any previous version of a distribution.**
- **Copy any saved version to another distribution or create a new distribution from it.**
- **Compare two versions side-by-side to identify configuration changes.**
- **Schedule monitoring tasks using cron-based or master schedules.**
- **Receive real-time email alerts via configurable SMTP settings.**
- **Secure your environment using custom SSL certificates.**
- **Manage user access and permissions with role-based controls (Admin, Editor, Read-only).**

We recommend reviewing version history regularly, keeping SMTP and SSL configurations up to date, and enforcing appropriate access control for all users.

Thank you for Trusting CloudFront Version Vault. ✨



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