Cloudera Data Visualization 7.2.4

Embedding apps with client pages

Date published: 2020-10-30
Date modified: 2024-05-30

https://docs.cloudera.com/

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Embedding apps with client pages

Cloudera Data Visualization (CDV) allows you to embed CDV apps into client pages using an HTML iframe component. You have two options: open access, which makes the app available to all users without requiring authentication or login, or trusted authentication for added security.

About this task

When you embed a CDV app into an iframe on a web page, you need to specify the frame-ancestor attribute, otherwise the browser security policy prevents the application from rendering on the page. The host sources you list will be the locations where the app can be embedded.

Before you begin

- If you want to embed a CDV app into a client page iframe without requiring authentication, enable the Enable Unauthenticated Access option for the app. For more information and instructions, see the *Public Applications* section in Securing Applications.
- Turn on the correct cookie settings by setting the environment variable IS_EMBED='true'.
- If you want to maintain the embedding URL and prevent links from opening the application outside the embedded environment, add EMBED_URL_PREFIX=embeddingurl to the advanced site settings and restart the application. This prefix will be added to all CDV URLs.

  For example: EMBED_URL_PREFIX=https://embeddingsite.com# will open the url https://embeddingsite.com#/arc/apps/data if you open the data page in a new tab.

Procedure

1. Navigate to Project Settings Advanced in CML/CDSW.
2. Set the CDSW_FRAME_ANCESTORS environment variable: specify one or more website locations where you want to embed the application in <host-source> format.

   If you are adding multiple websites, use a comma-separated list.

Embedding apps with unauthenticated access

In Cloudera Data Visualization (CDV), providing unauthenticated access when embedding apps can be a valuable aspect of your configuration. Unauthenticated access simplifies user interactions, making it seamless for viewers to engage with your embedded content. By adding specific login settings in the Advanced Site Settings, you can enable a smooth experience for your users.

Procedure

1. In CDV, add the following login settings in the Advanced Site Settings text box in key = value format under Site settings Advanced Settings .
   - AUTOLOGIN_ENABLED = False
   - AUTOLOGIN_USERNAME = None
   - AUTOLOGIN_PASSWORD = None
2. Restart the CDV application for the changes to take effect.

Embedding apps with trusted authentication

Embedding Cloudera Data Visualization (CDV) apps within client pages can enhance the user experience and extend the functionality of your applications. One option for embedding is trusted authentication, which introduces an additional layer of security, ensuring that only authorized requests are processed.

Overview of trusted authentication process

Cloudera Data Visualization (CDV) supports embedding CDV apps within client pages through an HTML iframe component. You have two options: one for open access and another with trusted authentication for enhanced security.

In trusted authentication, the CDV Server authenticates the <iframe> request made by the client and then returns the CDV visualization. To achieve this authentication, CDV uses the trusted authentication protocol, which involves the following steps:

1. **User Browser requests an App page.**

   The user requests a web page from the parent web server, which includes an embedded CDV visual within an <iframe> element.
2. **App Server requests a ticket from CDV Server.**

   The parent App Server makes a POST ticket request to the CDV Server, including the CDV username for authenticating the <iframe>.

   The ticket request can be authenticated through one of two methods:

   - Ticket-granting user: The ticket request includes the CDV username and password of the trusted ticket granter. This account does not normally have admin or superuser privileges. For more information, see *Post ticket request using a ticket-granting user*.
   - Trusted IP: The parent App Server is listed among trusted IPs. The POST request includes only the CDV username to obtain the ticket-granting user's full credentials. For more information, see *Post ticket request using an IP*.

   By default, the ticket may only be used once. However, it can be configured for multiple uses for debugging purposes. The ticket is valid for a configurable time period before expiring.
3. **CDV Server authenticates the request and returns a unique ticket.**

   - If the request is valid, CDV Server creates a ticket and returns it as a response to the POST request.
   - If the request is invalid, it returns the value of -1 as a response to the POST request.
4. **App Server returns an HTML page that contains an iframe tag with CDV URL and the ticket.**

   The parent App Server uses the ticket to generate a unique URL containing the ticket for the embedded visual. This URL is used for the visual's <iframe> element in the HTML returned to the client. For more information, see Request Visual from CDV Server.

5. **User Browser requests the iframe from CDV Server, including the ticket.**

   The client browser uses the iframe URL obtained in the previous step to request the App from the CDV Server.

6. **CDV Server authenticates User Browser based on the ticket and returns the visualization for the iframe.**

   The CDV Server authenticates the <iframe> request based on the ticket that is part of the request URL. If the ticket is valid, it automatically logs in the username specified in the original POST request and then sends the visual to the client.

After the user is logged in using the ticket, they can request any other URL until that session expires. The login session expires at the end of the browser session.

Enabling trusted authentication

Before embedding CDV Services within client pages, you must first enable trusted authentication on the CDV Server.

Procedure

1. Add the following settings to the advanced site settings.

```
INSTALLED_APPS = INSTALLED_APPS + ('trustedauth',)

AUTHENTICATION_BACKENDS = (
      'django.contrib.auth.backends.ModelBackend',
      'trustedauth.backends.TrustedAuthBackend'
)

TRUSTED_AUTH = {
      'trusted_ips': ['127.0.0.1'],
      'trusted_users': ['tadmin'],
      'timeout': 120,
      'single_use': True,
      'session_expiry': 0,
      'allow_superuser': True
}
```

Settings explanation:

trusted_ips:

A list of trusted IPs. Ticket requests from these IP addresses are validated. You can either specify a list of trusted_ips, a list of trusted_users, or both.

trusted_users:

A list of trusted ticket-granting usernames. You can either specify a list of trusted_users, a list of trusted_ips, or both.

timeout:

The time that the ticket remains valid, in seconds.

single_use:

The ticket can be used only one time.

session_expiry:

The duration time of the user session, in seconds. A setting of 0 ends the user session when the browser closes.

allow_superuser:

Allows authentication of a user with admin privileges using a ticket. Set this to False to disable this feature.

2. Restart the application to apply the new configuration.

Authenticating embedded requests

For embedding apps within client pages, Cloudera Data Visualization (CDV) uses the trusted authentication protocol to authenticate embedded requests.

About this task

Follow these steps to authenticate an embedded request from the client:

Procedure

1. Request a ticket from the CDV Server.

   The parent Application Server sends a POST ticket request to the CDV Server, either by using the ticket-granting CDV username, an IP address, or both. The ticket request has the following syntax:

   ```
   https://<appserver>/arc/trustedauth/getticket
   ```

   - Posting a ticket request using a ticket-granting user:

     To authenticate the ticket request using the trusted ticket granter's CDV username and password, use the following syntax:

     ```
     curl --data \ "username=cdvuser&trustedusername=ticketgranter&trustedpas
     sword=trustedpass" \
     ```

```
http://127.0.0.1:8000/arc/trustedauth/getticket
```

If the request is valid, the CDV Server returns the ticket cYvvmRSHSWOOWNCOeve1vA.

- Posting a ticket request using an IP Address:

  In this case, the CDV Server already has the parent Application server IP in the list of trusted IPs. The POST request includes only the CDV username to get the ticket-granting user's full credentials. To authenticate the ticket request using an IP address, use the following syntax:

  ```
  curl --data "username=cdvuser" http://127.0.0.1:8000/arc/trustedauth/get
  ticket
  ```

  If the request is valid, the CDV Server returns the ticket cYvvmRSHSWOOWNCOeve1vA.

The following POST parameters are used in the preceding examples:

- Username: User identifier for automatic login.
- Trustedusername: User identifier for ticket-granting user (optional when using trusted IP authentication).
- Trustedpassword: Password for ticket granting user.

2. Generate a unique URL.

The parent Application Server uses the ticket to generate a unique URL, which contains the <iframe> tag and the ticket for the embedded visual, and sends it to the client.

For example, the URL address in the <iframe> would be:

```
http://127.0.0.1:8000/arc/trustedauth/trusted/cYvvmRSHSWOOWNCOeve1vA/app/1
```

3. Request visual from CDV Server.

The client browser uses the <iframe> URL obtained from the Application Server and forwards the same URL to the CDV Server, requesting the visual.

```
http://127.0.0.1:8000/arc/trustedauth/trusted/cYvvmRSHSWOOWNCOeve1vA/app/1
```

4. Return CDV visual.

The CDV Server authenticates the <iframe> request based on the ticket that is part of the request URL. If the ticket is valid, it automatically logs in the username specified in the original POST request and then sends the visual to the client.

Embedding a dashboard without CDV header

You can embed a Cloudera Data Visualization (CDV) dashboard within a client web page without displaying the CDV header, which includes the navigation bar and logo.

About this task

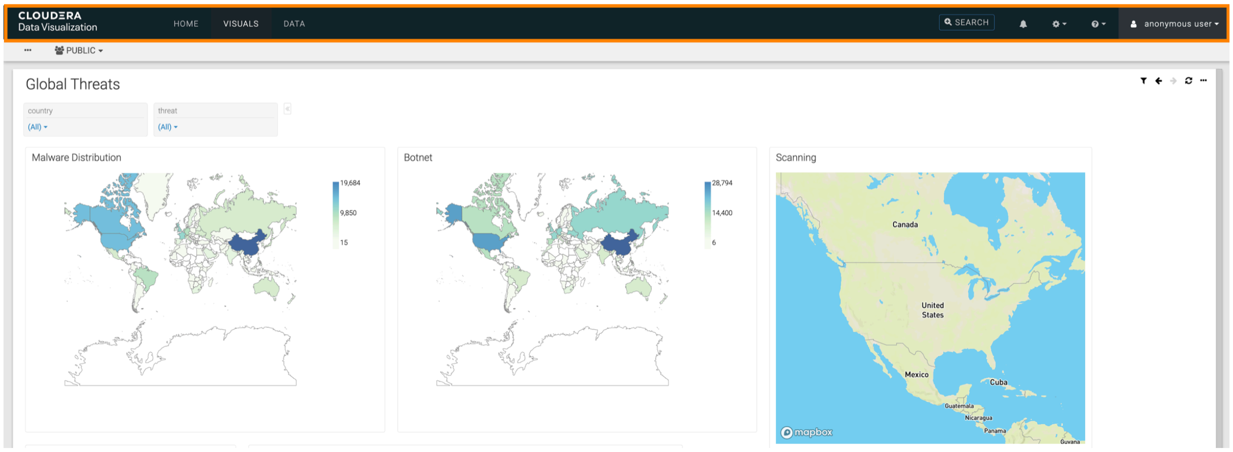
Follow these steps to remove the header from a dashboard.

Note: You can only remove the header in View mode.

Procedure

1. **1.** Open a dashboard in View mode.

   You can see that the dashboard has a Cloudera header at the top.



2. **2.** Identify the URL of the dashboard.

   It typically follows this format:

```
http://<appserverip>:<port>/arc/apps/app/<dashboard ID>
```

   For example:

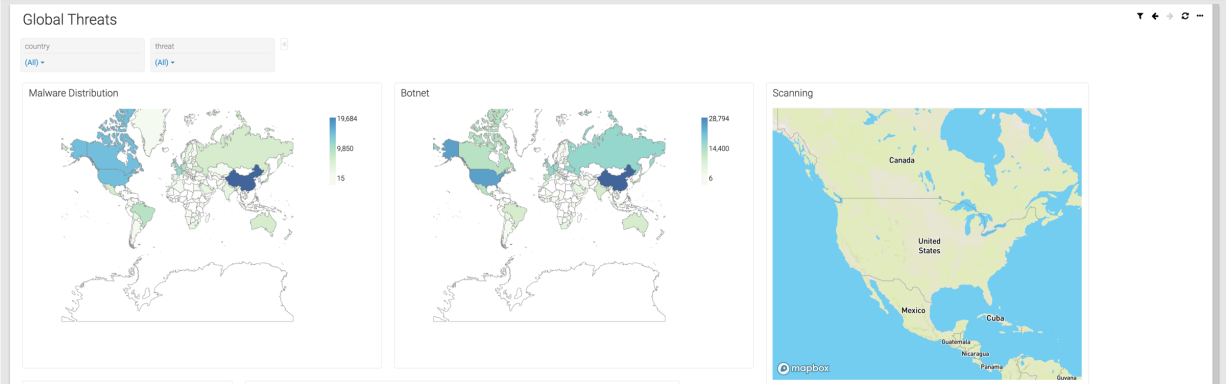
```
http://127.0.0.1:8000/arc/apps/app/3851
```

3. **3.** Add ?embed=true at the end of the URL and click enter.

   For example:

```
http://127.0.0.1:8000/arc/apps/app/3851?embed=true
```

   The header is removed from the dashboard.



4. **4.** You can now embed the dashboard into your web page using an <iframe> tag.

Embedding a jobs status page without CDV header

You can embed a Cloudera Data Visualization (CDV) Jobs status page within a client web page without displaying the CDV header, which includes the navigation bar and logo.

About this task

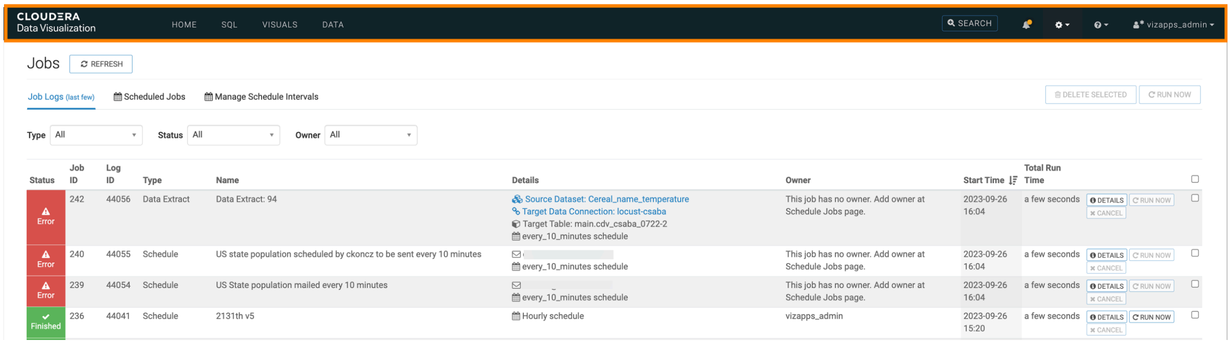
Follow these steps to remove the header from the Jobs status page.

Note: Depending on your role, you have access to different information and can perform different actions on this interface.

Procedure

1. Navigate to the Jobs status page.

   You can see that the page has a Cloudera header at the top.



Jobs REFRESH

Job Logs (last few) | Scheduled Jobs | Manage Schedule Intervals

DELETE SELECTED | RUN NOW

Type All ▾ Status All ▾ Owner All ▾

Status	Job ID	Log ID	Type	Name	Details	Owner	Start Time	Total Run Time		☐
Error	242	44056	Data Extract	Data Extract: 94	Source Dataset: Cereal_name_temperature Target Data Connection: locust-csaba Target Table: main.cdv_csaba_0722-2 every_10_minutes schedule	This job has no owner. Add owner at Schedule Jobs page.	2023-09-26 16:04	a few seconds	DETAILS RUN NOW CANCEL	☐
Error	240	44055	Schedule	US state population scheduled by ckoncz to be sent every 10 minutes	[redacted] every_10_minutes schedule	This job has no owner. Add owner at Schedule Jobs page.	2023-09-26 16:04	a few seconds	DETAILS RUN NOW CANCEL	☐
Error	239	44054	Schedule	US State population mailed every 10 minutes	[redacted] every_10_minutes schedule	This job has no owner. Add owner at Schedule Jobs page.	2023-09-26 16:04	a few seconds	DETAILS RUN NOW CANCEL	☐
Finished	236	44041	Schedule	2131th v5	Hourly schedule	vizapps_admin	2023-09-26 15:20	a few seconds	DETAILS RUN NOW CANCEL	☐

2. Identify the URL of the status page.

   It typically follows this format:

```
http://<appserverip>:<port>/arc/jobs/<jobs_ID>
```

   For example:

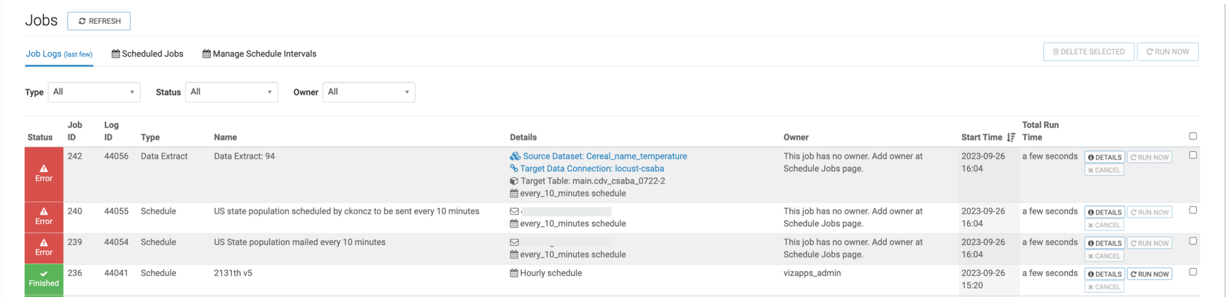
```
http://127.0.0.1:8000/arc/jobs/adminlogs
```

3. Add ?embed=true at the end of the URL and click enter.

   For example:

```
http://127.0.0.1:8000/arc/jobs/adminlogs?embed=true
```

   The header is removed from the Jobs status page.



Jobs REFRESH

Job Logs (last few) | Scheduled Jobs | Manage Schedule Intervals

DELETE SELECTED | RUN NOW

Type All ▾ Status All ▾ Owner All ▾

Status	Job ID	Log ID	Type	Name	Details	Owner	Start Time	Total Run Time		☐
Error	242	44056	Data Extract	Data Extract: 94	Source Dataset: Cereal_name_temperature Target Data Connection: locust-csaba Target Table: main.cdv_csaba_0722-2 every_10_minutes schedule	This job has no owner. Add owner at Schedule Jobs page.	2023-09-26 16:04	a few seconds	DETAILS RUN NOW CANCEL	☐
Error	240	44055	Schedule	US state population scheduled by ckoncz to be sent every 10 minutes	[redacted] every_10_minutes schedule	This job has no owner. Add owner at Schedule Jobs page.	2023-09-26 16:04	a few seconds	DETAILS RUN NOW CANCEL	☐
Error	239	44054	Schedule	US State population mailed every 10 minutes	[redacted] every_10_minutes schedule	This job has no owner. Add owner at Schedule Jobs page.	2023-09-26 16:04	a few seconds	DETAILS RUN NOW CANCEL	☐
Finished	236	44041	Schedule	2131th v5	Hourly schedule	vizapps_admin	2023-09-26 15:20	a few seconds	DETAILS RUN NOW CANCEL	☐

4. You can now embed the report page into your web page using an <iframe> tag.