Enterprise Self-Hosted
Standard Installation Guide

ASSEMBLA

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System Requirements

We recommend bare metal systems. You are welcome to use virtualization for more convenient scaling and migration; however, please note that you will need to ensure that the hypervisor is passing through the networking interface directly to the guest OS and that the latest native networking driver is in use - this is to ensure the best performance.

Hardware

- MINIMUM:

    - Processor: 3.70 GHz Intel® Xeon® Processor E3-1290 v2
    - Memory: 8 GB RAM (DDR3 1333MHz ECC FBDIMMs)
    - Networking: 1Gbps interface with Jumbo Frames capability
    - Storage:
        - 100 GB HDD-backed primary (OS) physical storage
        - +100 GB HDD-backed secondary (Repository/Application) virtual storage

- RECOMMENDED:

    - Processor: 3.60 GHz Intel® Xeon® Processor E5-1650 v4 or better *(prefer core count over single threaded performance)*
    - Memory: 16 GB RAM (DDR4 2400MHz ECC FBDIMMs)
    - Networking: 10Gbps+ interface with Jumbo Frames capability
    - Storage:
        - 100 GB SSD-backed primary (OS) physical storage
        - +100 GB SSD-backed secondary (Repository/Application) virtual storage

- ADDITIONAL RECOMMENDATIONS:

- If running in a virtualized environment, use passthrough for the networking interface to ensure the best performance.
- For the best experience with future growth, ensure that your primary and secondary storage are expandable
- It is best practice to ensure that your storage for both the OS/Application and the Repositories is redundant - we recommend a RAID configuration such as RAID 1 (for minimum protection), RAID 6 (for better protection), or RAID 10 (for performance).

- In order to ensure that client systems are able to make full use of the networking capabilities of the system, please ensure that the networking gear in use is capable of 1Gbps on each client machine, and that Jumbo Frames are enabled.

Software

We support Linux-based servers that can run current versions of Docker and Kubernetes. Your machine must support docker-engine 18.06.1 . The install script will install docker-engine 18.06.1 and Kubernetes 1.13.0 .
We provide an easy install script to work with the following list of operating systems.

- Ubuntu 18.04
- Red Hat Enterprise Linux 7.4 - 7.6
- CentOS 7.4 - 7.6

Skills and Experience

The end user should have on-hand experience working with Ubuntu, Red Hat or CentOS 7, systemd, and Kubernetes, or a person on-staff with these skills. Users deploying to Amazon EC2 should have knowledge of EC2 Instances, Elastic Load Balancers, and Virtual Private Cloud.

Getting Started

First, SSH into your Linux server and run the following install script:

```
curl -sSL https://download.assembla.com/private-cloud-us/install.sh | sudo bash
```

You should be able to select the defaults for any prompts that are presented.

Once the installation script is completed, it will show the URL you can connect to in order to continue the installation. This install script will install Docker, Kubernetes, and prepare the server for your application.

Once the installer is completed, you'll see:

```
Installation Complete ✔

To access the cluster with kubectl, reload your shell:

    bash -l

To continue the installation, visit the following URL in your browser:

    http://35.226.70.55:8800
```

Accessing Management Interface

At this point, Replicated and Kubernetes are running, but the main Assembla application isn't yet. To complete the installation, visit the URL that the installation script displayed when completed. Click **Continue to Setup** and you'll get an SSL security warning. Replicated automatically provisions a self-signed certificate on every installation, so you'll have to accept this cert to continue. We recommend that every installation change this to a trusted cert, which can be completed in the browser during the next step.
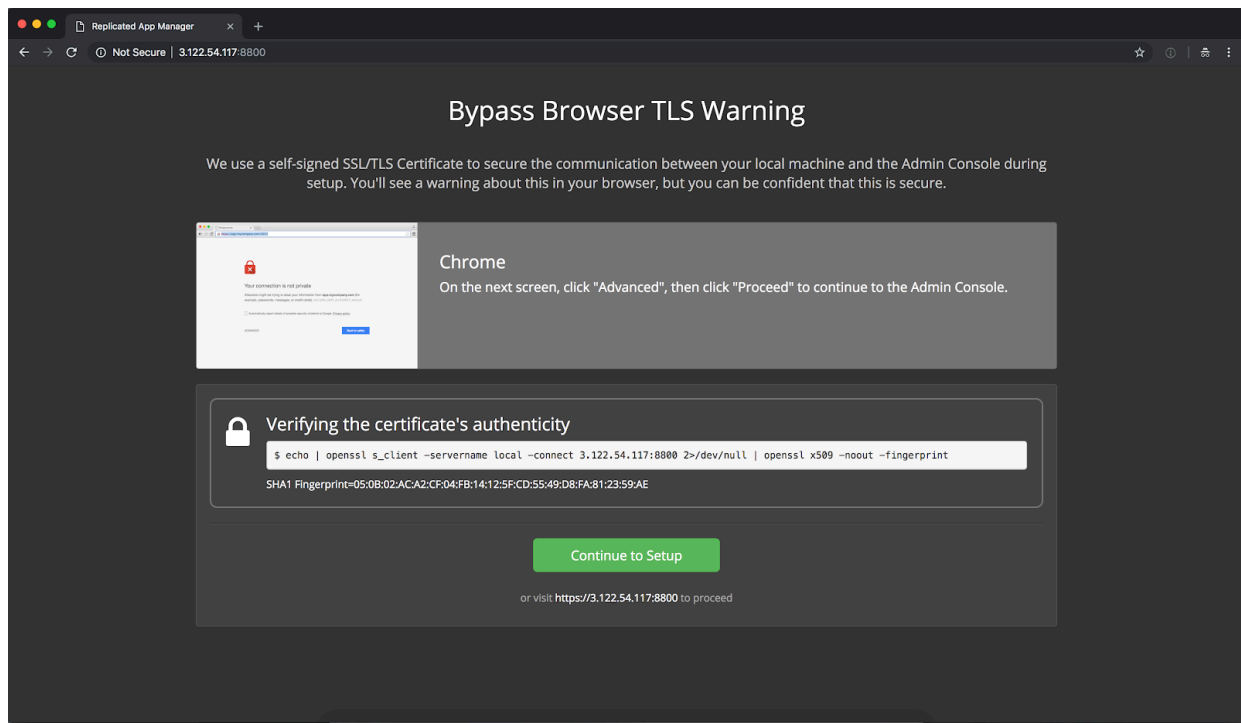
On the next screen, click **Advanced**, then click **Proceed** to continue to the Admin Console and continue using a self-signed certificate.
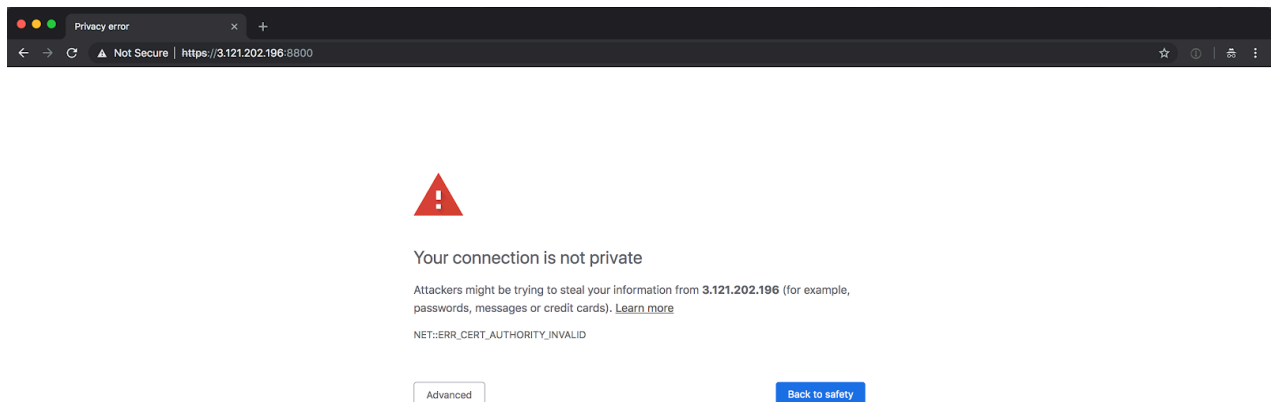

Configure Hostname & SSL

Now you have the option to upload a trusted cert and key or to continue with the self-signed cert generated by the system. Add the internal hostname that resolves to that IP address. Click **Use Self-Signed Cert** to continue, and then **Proceed Anyway** in the popup or upload a custom TLS/SSL cert/key and click **Upload & Continue**.
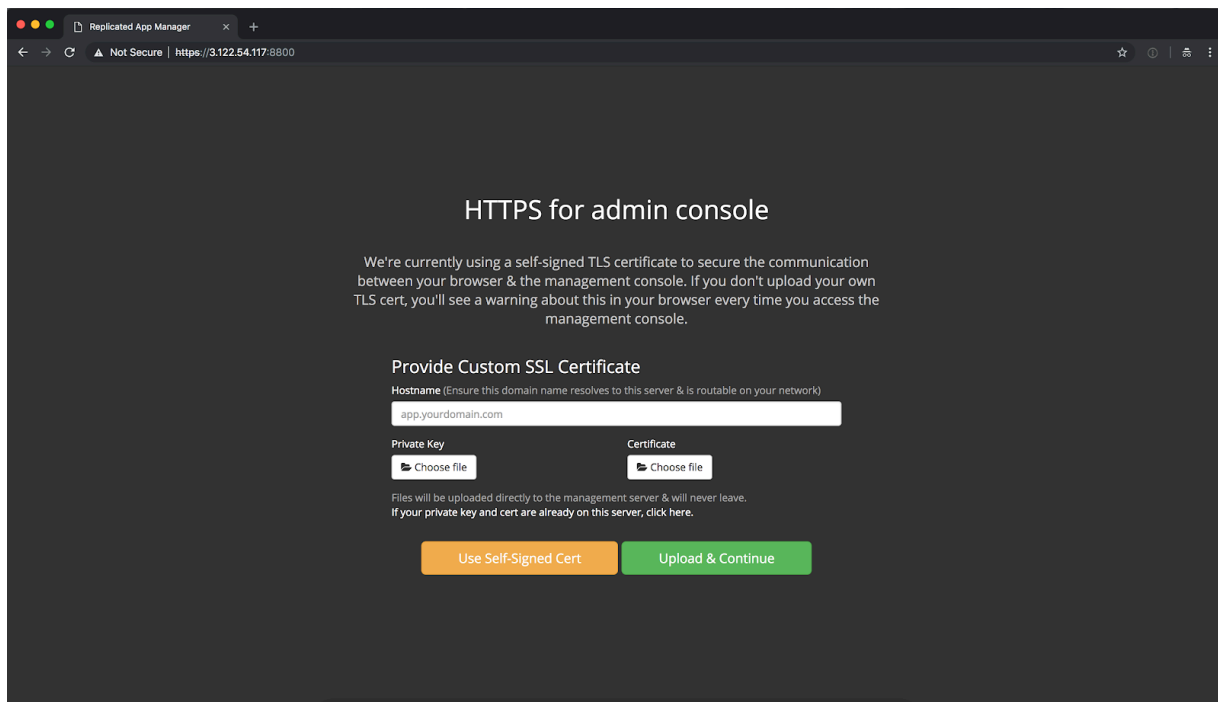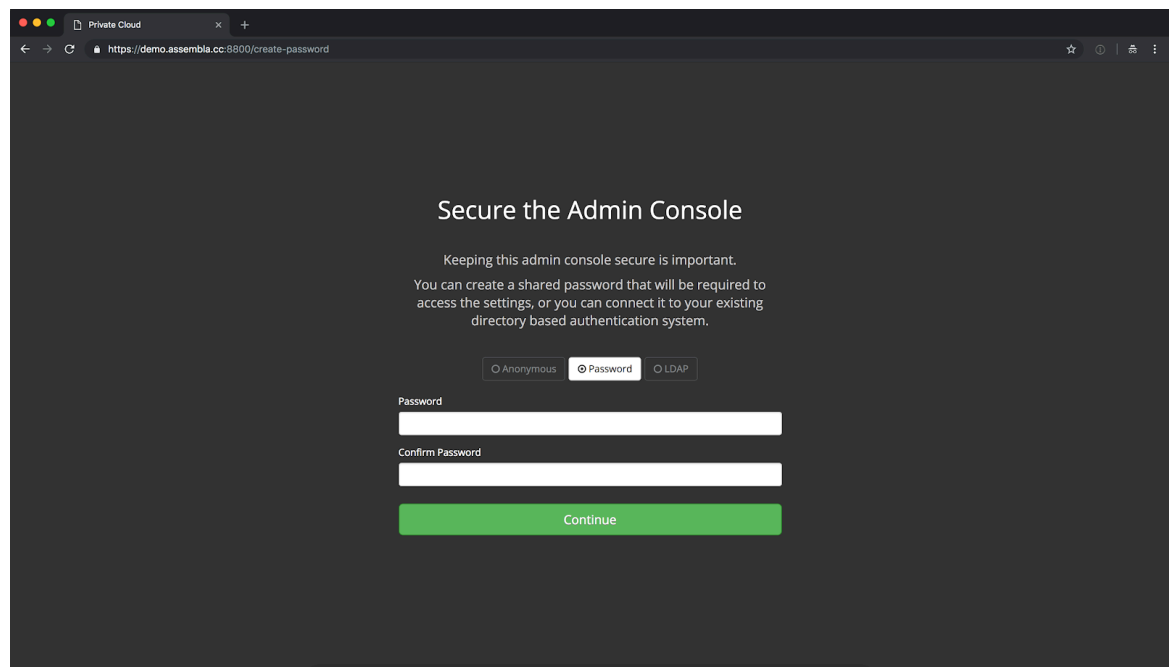
Upload Your License

Click the **Choose License** button and select the .rli file provided to you to continue.
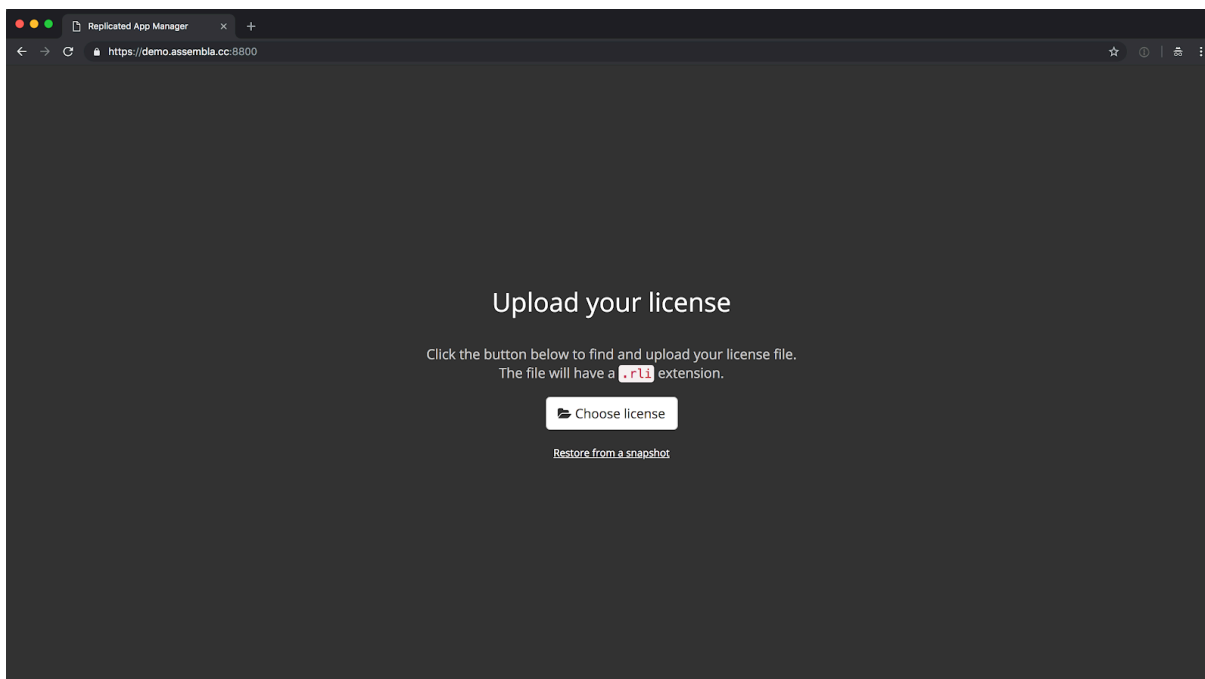
Secure the Admin Console

Because this server is on the public Internet, we should put a password on the admin console. This will prevent unauthorized changes from being applied to our application. Go ahead and enter any password you'd like or
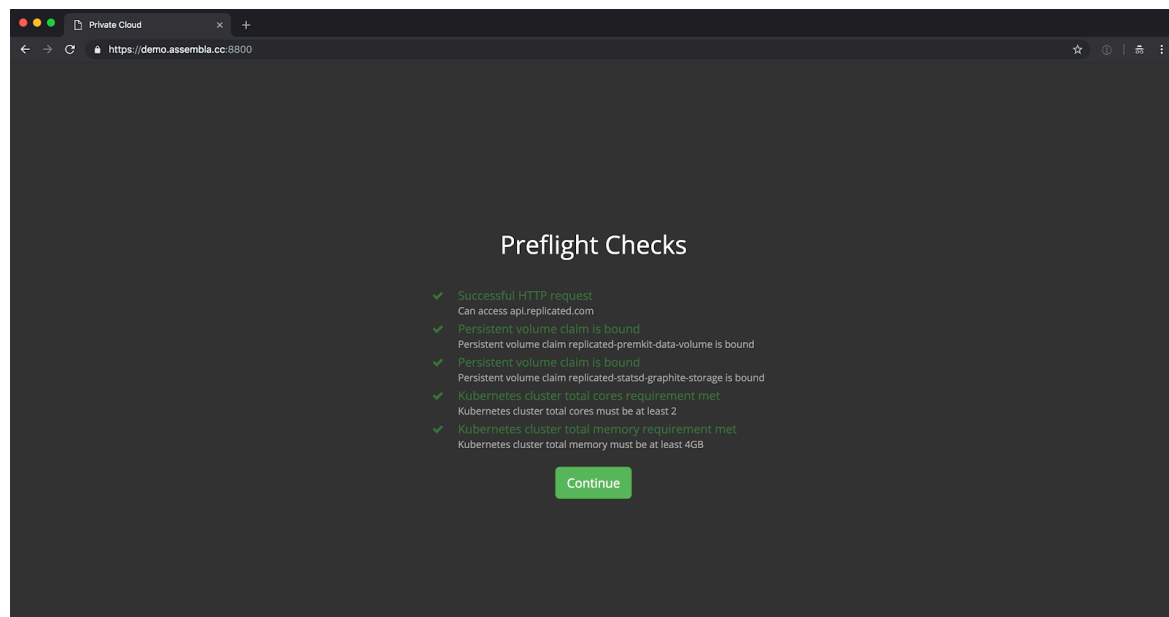
connect to your LDAP server, confirm it and click **Continue**. You can choose **Anonymous**... but we don't recommend it.

Preflight Checks

Preflight checks are designed to ensure this server has the minimum requirements and environment to run the application. Everything should pass, so click **Continue** to proceed.

Configure Settings & Boot

Use the settings page to enter default configuration items. Be sure to complete all the required fields. When you've finished, click **Save** to continue.

General Settings

Hostname: DNS name to access the application	This will be the domain you use to access the application from any client on your network. The application locks down the access of clients to those using that specific domain so it is important to choose a name for the duration of the product life cycle. Recommended settings are 'myserver.mycompany.com' It must also match requests for non-existent domain names *.myserver.mycompany.com *.myserver.mycompany.com must point to myserver.mycompany.com
Use same management console TLS cert/key	You can use the same TLS cert/key added earlier or upload a new one. Unmark this box to submit a new TLS cert/key.
Application domain: in case the DNS name contains a subdomain, the application domain is required to make portfolios work properly. The Application domain must start with a **dot**	Same as the hostname but put a '.' in front.
Company Name	This setting will appear on certain screens and in email templates so choose something that will identify these assets to users clearly.

Admin login: Assembla superuser	**This will be the login to the application**
Admin password: Assembla superuser password	**This will be the password for your admin login, you can change it later in the Profile page**
Admin email: Assembla superuser email	**This will be the email address of your superuser. Recommended settings are 'admin@mycompany.com'**

Network

SSH port to listen on: for git over ssh and svn+ssh protocol	**Before you change the port from the proposed 2222 port to standard SSH port 22 make sure you have changed your local SSH daemon to a port different than 22, for example 2244. Double check that your server is accessible with the new port, open a new terminal, and connect to the server via SSH over port 2244 to confirm access.**

Email Server Settings

This is not required, but is recommended. Without properly configuring your Email Server, some application functions will not work, for example email mentions and invites.

SMTP settings: configure the mail server. This mail server must be present and working during the step or installation cannot continue.	**For gmail smtp recommended settings are:** **SMTP Server Address:** smtp.gmail.com:587 **SMTP Domain:** smtp.gmail.com **SMTP Username:** <> **SMTP Password:** <> **From Address:** admin@demo.assembla.cc What will the From header look like in emails from the system. **Enable STARTTLS** **Type:** Login

To verify smtp settings click **Test SMTP Authentication**.

Advanced

Configure your advanced settings

Alerts mail server host: all Assembla alerts will be sent from that domain	**This setting will dictate how emails present to users of the system.** **Recommended settings are 'mycompany.com'**
Tickets email host: same as previous setting, but for tickets activity	**Same as above but for tickets.** **Recommended settings are 'mycompany.com'**
Signup: Enable anonymous user registration or invite only	**Disable this setting to ensure you can control who has access to the system.**
Support email: What the From header will look like in emails from the system.	**Recommended settings are 'assembla-support@mycompany.com'**
Service support phone: What the From header will look like in emails from the system.	**Recommended to be the phone number of your administrator(s) for this system in case users have issues.**
Support email host: support-specific Assembla alerts will be sent from that domain	**This setting will dictate how emails present to users of the system for support workflows.** **Recommended settings are 'mycompany.com'**

LDAP Server settings

| LDAP: Enterprise user access control	Disable unless you require LDAP. Please use the LDAP configuration guide for more information on how to properly setup LDAP with this server.

SAML Settings

SAML Settings: Enterprise authentication services	**Disable unless you require SAML. Please use the SAML configuration guide for more information on how to properly set up SAML with this server.**

Once you've entered all of your settings, click **Save** and **Apply Changes**.
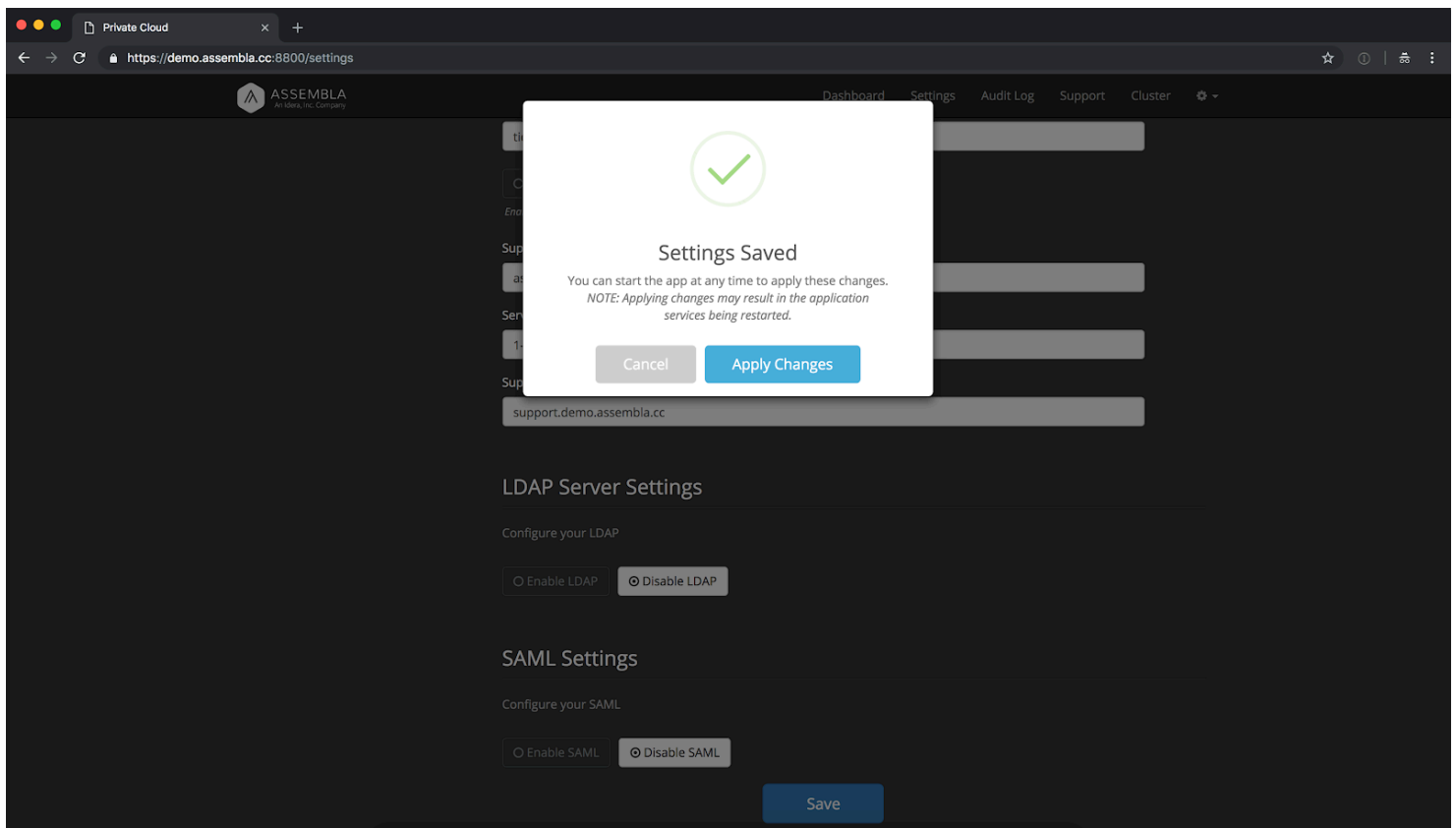
Click **Open** to open the application in a new tab.
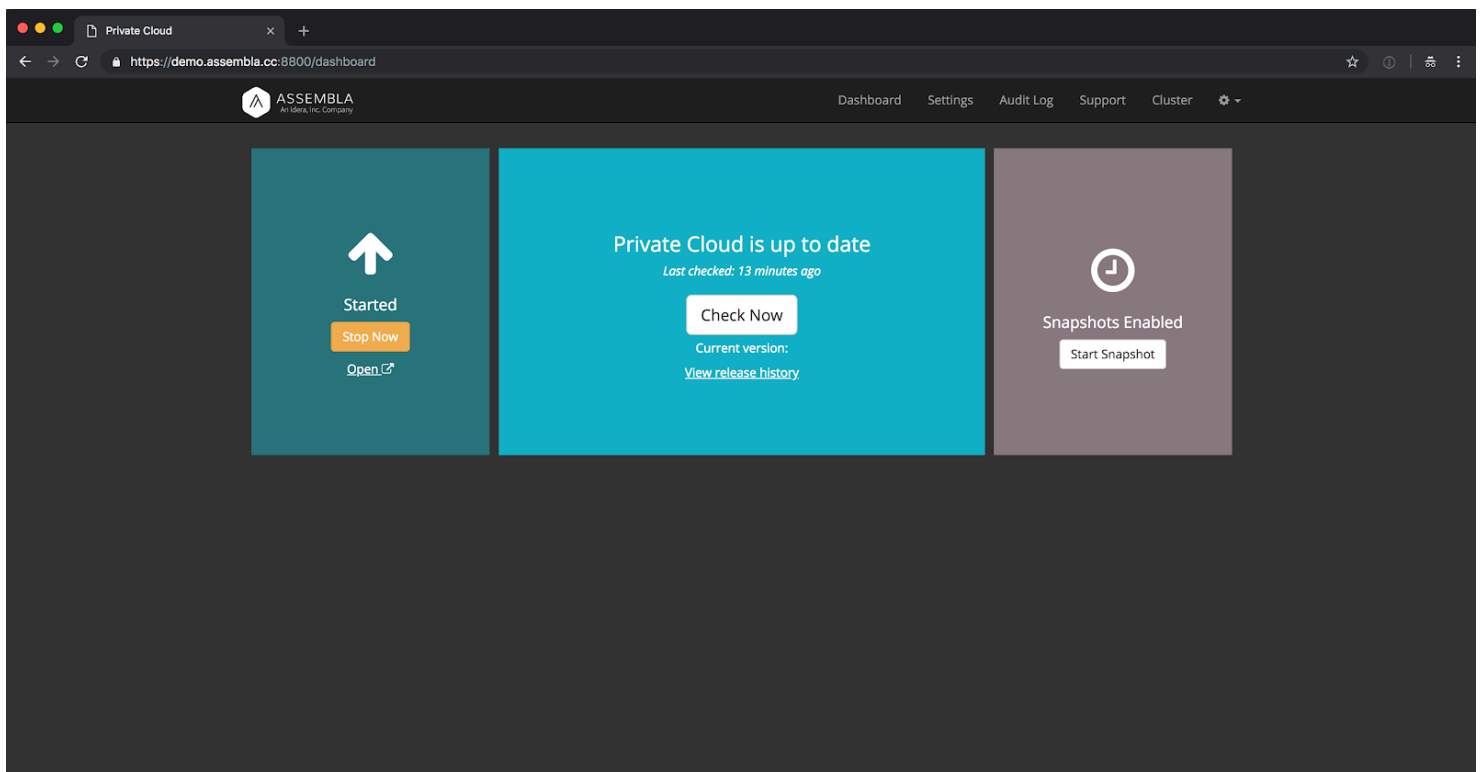
On the top nav, there's a link to the **Cluster** page. Clicking that will show you the Kubernetes services that we just deployed.

First Login

On the install console page below the yellow **Stop Now** button is a link to **Open** the Assembla web application. After clicking, you should see a login form. Use the admin super user and password that you created while configuring your settings to log into the Assembla application.
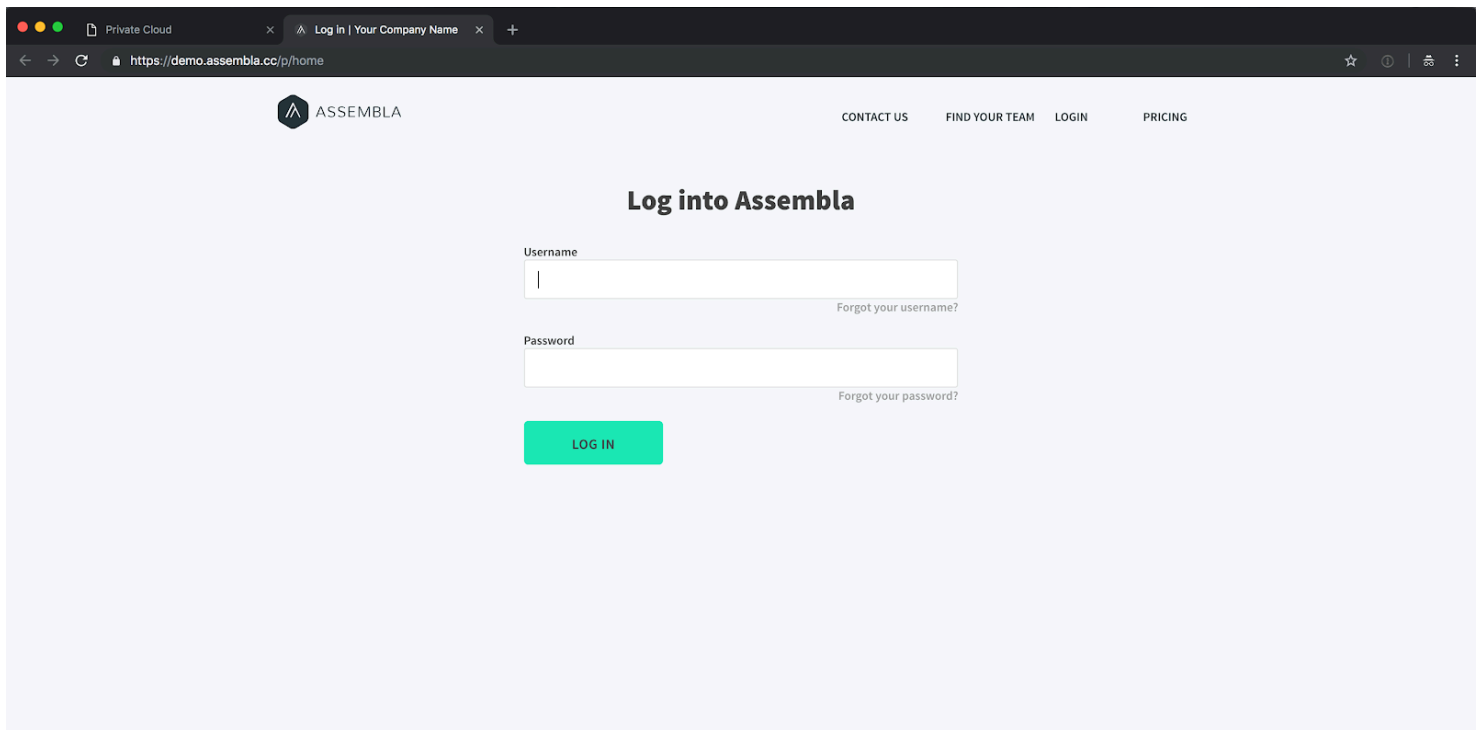
Next, you may proceed with importing repositories, or skip to *Inviting Your Team*.

How to Add / Invite Users

Assembla gives you the power to invite team members, administrators, or contractors to collaborate at both the high-level "Portfolio" level, and the more specific project or "Space" level.

Once you invite users to either your Portfolio or a specific Space, they will receive an email invitation with a link to set up their Assembla user profile. Once they finish setup, they will automatically be added to the Portfolio/Space you invited them to!

Adding users to a Portfolio

To add a new user with access to your Portfolio, begin by opening the Users tab from the top of the screen.
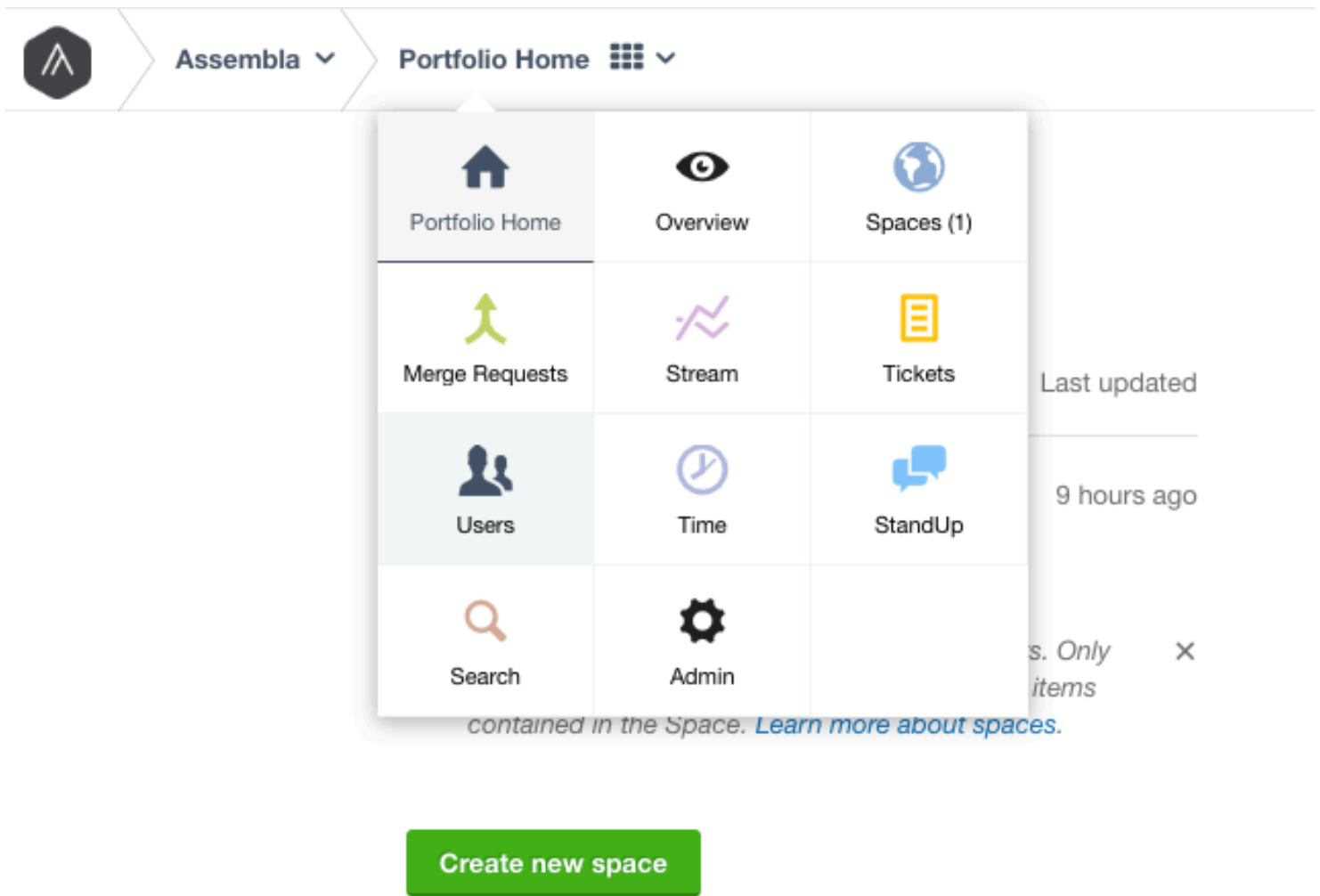
You will then be brought to the **Invite Users** page. Here, you can either invite a new user by sharing the given URL with then, or by entering their Assembla username or email into the search box below. Users can be designated as either a Manager, Core, or Watcher. For more information on the access and abilities of these roles, check out our article on the topic.

Watchers and Core Portfolio members can be given access to select spaces, and Portfolio Managers can view and join any of the Spaces in a Portfolio.

Important Note: If you don't configure a SMTP server in General Settings step the only way to invite users is by sharing the given URL. Emails will not be sent from the Assembla system to users.

List **Invite Users** Thumbnails Groups

Invite users using this URL:
This URL should be used to send an email to invite a user with no account.

https://demo.assembla.cc/url_invite/f52c515756e5745adbc1608da83809fac7775acc   expires in 22 minutes

☐ Block invites by url   Refresh Token

Invite users by name or email
This option can be used to invite existing users with an Assembla account. Or invite new users by email if they do not have an account with

Insert user Name or Email   Search

Manager

They have access to all spaces and information. They can also invite other users and update their roles.

Core

They are members/owners of your spaces. They can't invite users to a portfolio, however, they can see some reports about their space tick

Watcher

They will see a start page listing the spaces and activities that they are working on with you and the defined access to each space you invit

Your Company Name / **Phone** 1-555-555-555

Adding users to a Space

To add a new user with access to a specific Space, begin by opening the **Team** tab from the top of the screen in
that Space.

You will then be brought to the **Users** page. Here, you can invite new users by entering their Assembla username or email into the search box on the left of the screen. There are also options to **Invite people from other teams** and to **Invite from my Google contacts**. Remember that if you have not set up a SMTP server for your Assembla installation that emails will not be sent, and users must be invited using a URL as described in the *Adding users to a Portfolio* section above.

Importing Existing Repositories

SVN

To import an existing Subversion repository, please use the following guide:

https://articles.assembla.com/using-subversion/getting-started/migrating-svn-repositories-to-assembla

Git

To import an existing Git repository, please use the following guide:

https://articles.assembla.com/using-git/getting-started/migrating-git-repositories-to-assembla

Note: If you have trouble importing, please contact Support.

Offline Install (Airgapp)

An "airgapped" environment is a network that has no path to inbound or outbound internet traffic at all. Some enterprise customers require that you ship a package they can install in their airgapped environment.

Assembla supports this type of installation, using the following steps:

Prepare the Environment

The customer will be responsible for delivering a server that is capable of running Replicated, Kubernetes, and Docker. Refer to the *Software System Requirements* for a list of officially supported systems.

The Replicated airgap installation script for Kubernetes will install docker-engine, Kubernetes, and all necessary dependencies.

First run the following commands:

```
sudo sysctl -w vm.max_map_count=262144
echo vm.max_map_count=262144 | sudo tee /etc/sysctl.d/10-vm-max-map-count.conf
sudo mkdir -p /opt/assembla
sudo ln -sf /opt/assembla /var/lib/breakout
```

Replicated can be installed by downloading the latest release from https://download.assembla.com/private-cloud-us/replicated__docker__kubernetes.tar.gz and running the following commands:

```
tar xzvf replicated__docker__kubernetes.tar.gz
cat ./kubernetes-init.sh | sudo bash -s airgap disable-contour
```

Download the Application Airgap Bundle

Follow the Assembla Airgap package download link and select **Get Download Link** for the latest release. Download the package to the target server. It is important to set the --trust-server-names and --content-disposition flags for wget or rename the file to something ending with .airgap (please don't use spaces in filename).

You will need the .airgap package and the license (.rli) file.

Package download example:

```
wget --trust-server-names --content-disposition "https://replicated-airgap-rw-
prod.s3.amazonaws.com/d5e73a202f27a287798de8fc3ecf2b1c/188/archive.tgz?X-Amz-
Algorithm=AWS4-HMAC-SHA256&X-Amz-Content-Sha256=UNSIGNED-PAYLOAD&X-Amz-
Credential=AKIAJF5BJMACS5KILFMQ%2F20190131%2Fus-east-1%2Fs3%2Faws4_request&X-Amz-
Date=20190131T113115Z&X-Amz-Expires=600&X-Amz-SignedHeaders=host&response-content-
disposition=attachment%3B%20filename%3DPrivate%20Install%20-%20188.airgap&X-Amz-
Signature=b9fca29be047b7b7921c8b74941c23abed2e4405dd05970fc0b4a114e3eeaeaa"
```

Rename your package name to end in .airgap:

```
mv Private\ Install\ -\ 188.airgap package.airgap
```

Install Application

Next, navigate to the management console at https://<server_ip>:8800. Accept the self signed certificate, pass the preflight checks, and you will see the license upload screen. Upload the license and then select the **Airgapped** installation option. You will have to provide a path to the .airgap file and upload the .rli file here.
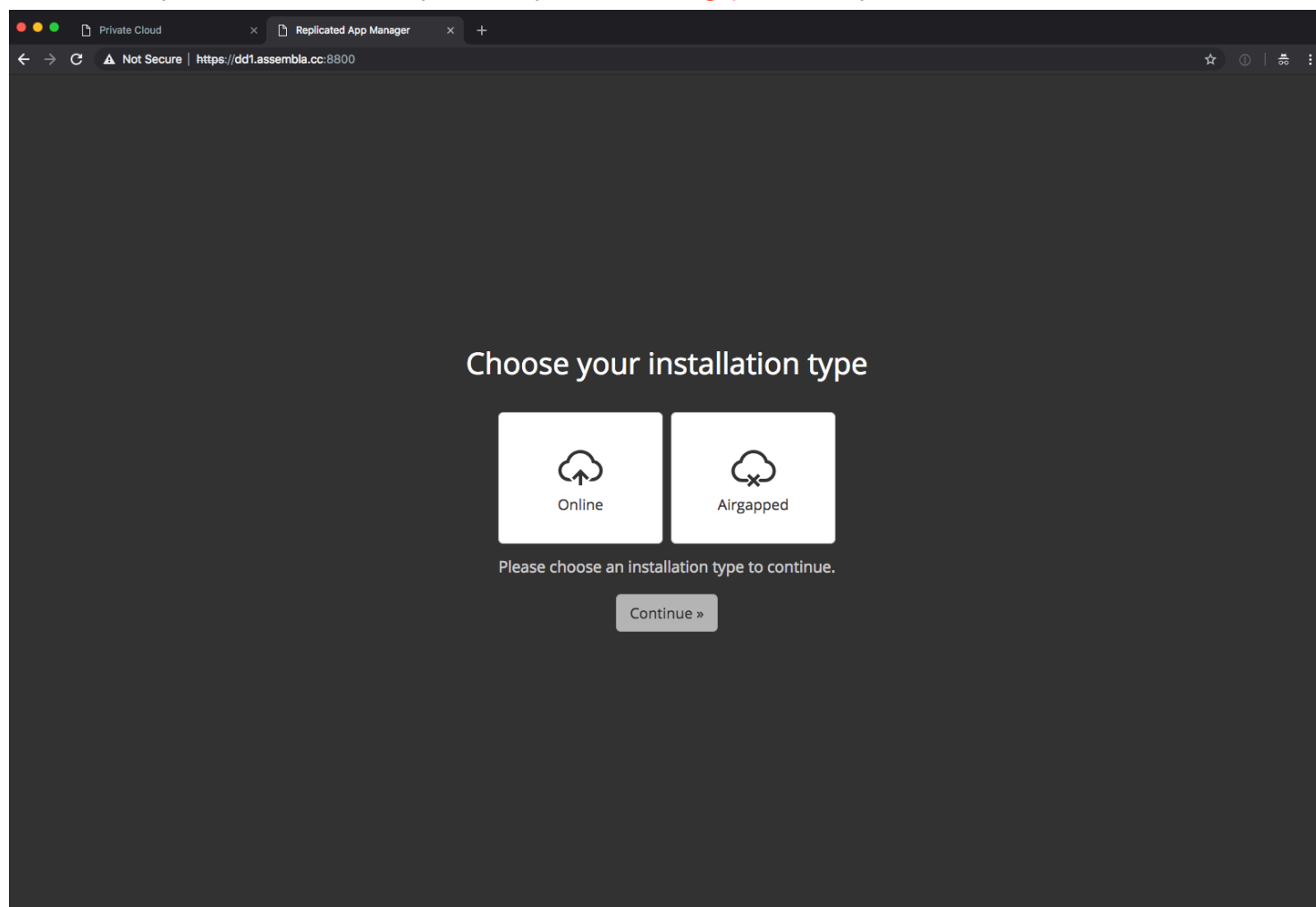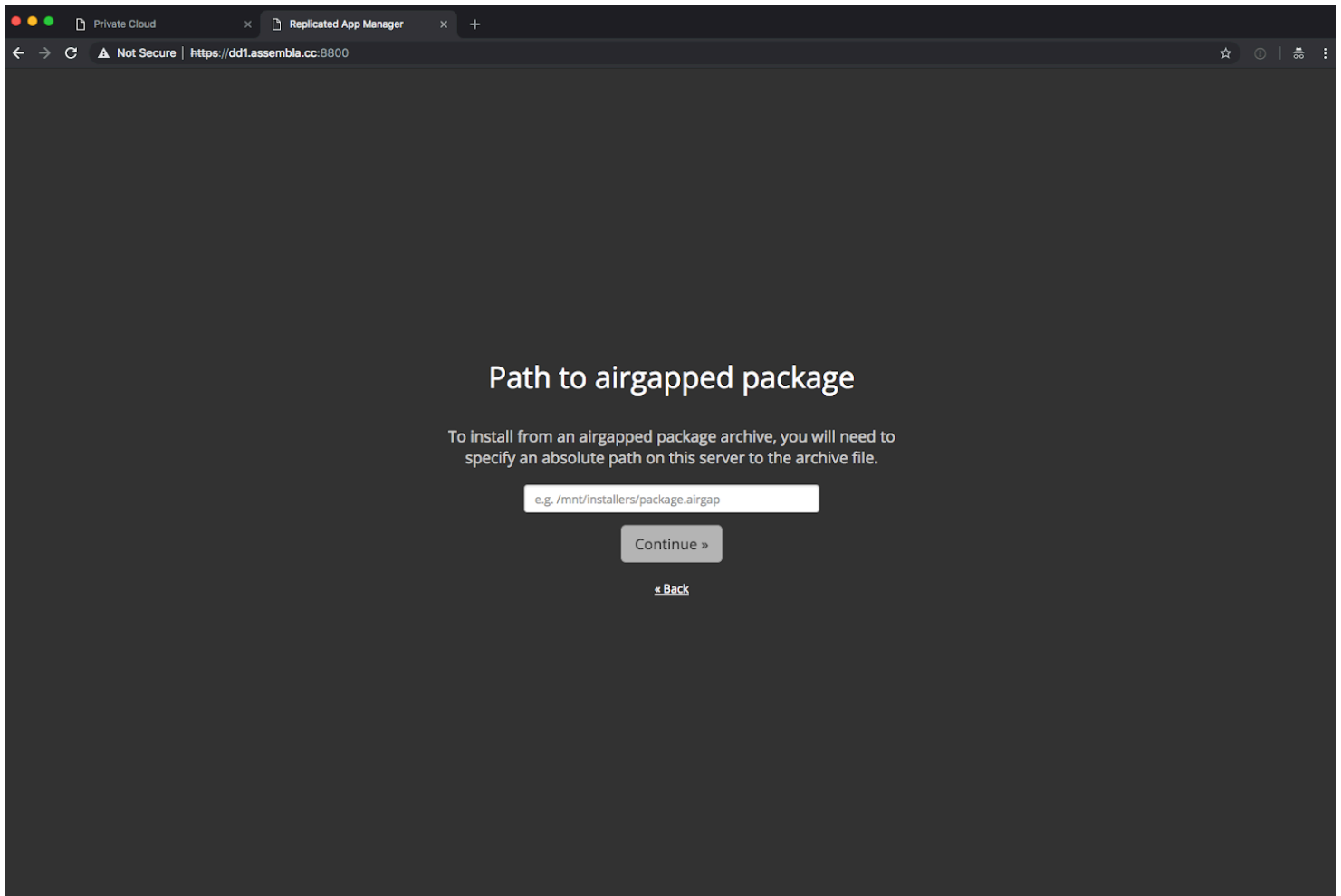
Once this screen is completed, follow the instructions in the *General Settings* section to configure your installation.

Updating License and Application

In the :8800/console/settings page, there is an **Airgapped Settings** section. You can install updates and sync the license by downloading their new versions, renaming them with the .airgap extension, and placing them in the locations specified on the /console/settings page.

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Open Source

TLS Key & Cert

The management console uses TLS encryption. Please select key type and location you wish to use.

⊙ Self-signed (generated)   ○ Upload files

Airgapped Settings

Update Path

/home/assembla/airgap

The management console will check this directory for any `.airgap` update packages.

License File

/home/assembla/airgap/airgap_test.rli

Replace this license file to apply new settings.

Need help? Contact us at support@assembla.com