EMS PLATFORM SERVICES Installation & Configuration Guides

V44.1

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CHAPTER 1: Introduction to EMS Platform Services

This topic contains introductory information regarding EMS Platform Services:

- Overview
- Architecture
- Install EMS Platform Services
- Get Started with Integrations
- API Documentation

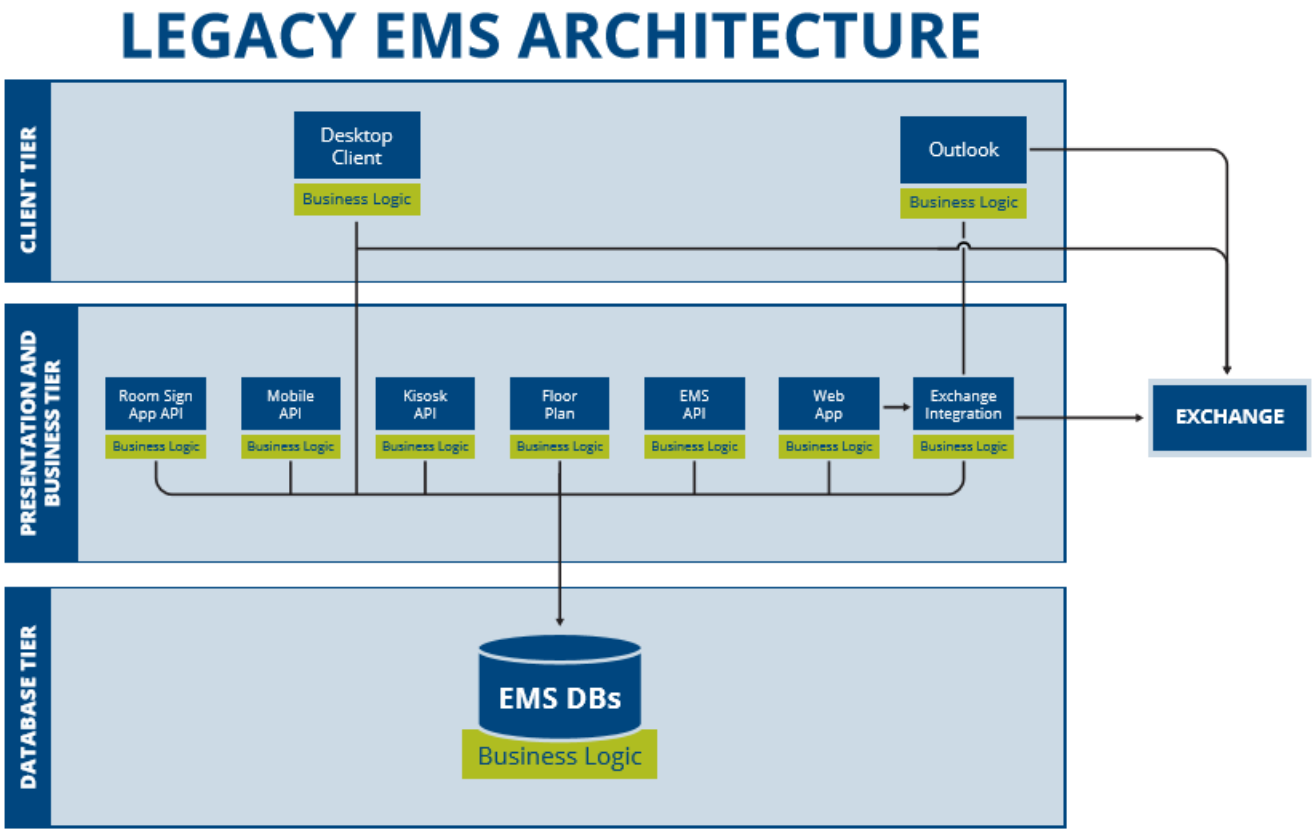
OVERVIEW

WHAT IS EMS PLATFORM SERVICES?

EMS Platform Services is a Platform as a Service (PaaS) solution offering modern, RESTful APIs. Platform Services enables the development of multi-platform applications that can be customized, cloud-based, scalable and easily integrated. It is a true middle tier, providing a business and resource layer that enables the central development of applications, reducing complexity and development time. Platform Services fosters innovation by ensuring easy maintenance and efficient management of an application's lifecycle.

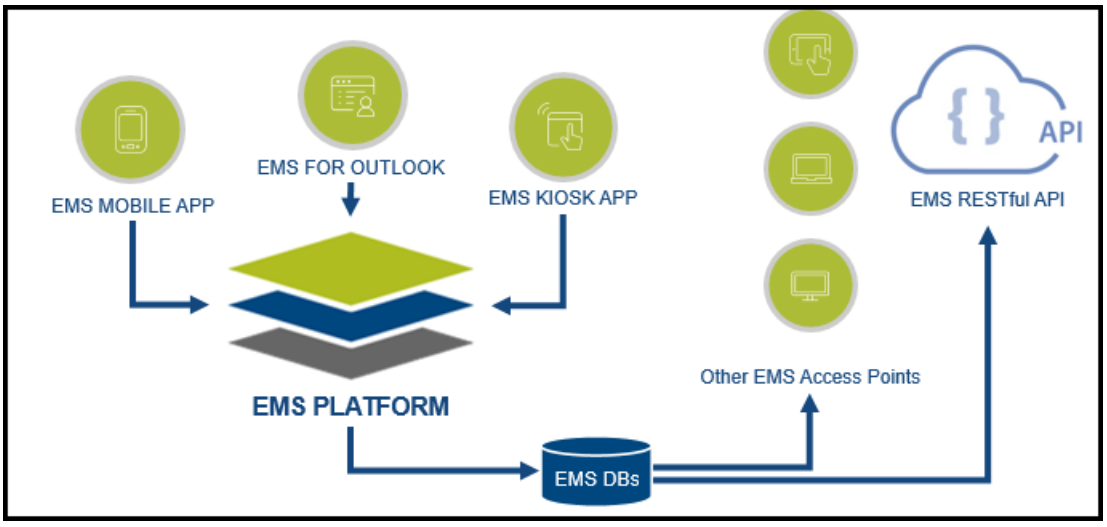
In the current EMS architecture, databases exchange business logic directly with applications in the business tier. The Platform Services architecture creates an intermediary layer of business logic and resources that provides a buffer between the applications and EMS databases. Fixes, enhancements and/or new features can now be dispersed simultaneously to all products through Platform Services.

ARCHITECTURE



In June 2017, the EMS Mobile App was implemented with EMS Platform Services. As of January 2018, the EMS Kiosk App and EMS for Outlook have both been placed on the EMS Platform Services layer. In the future, all EMS applications will consume the Platform Services layer.

Current EMS Platform Services Architecture (January 2018)



For our clients and partners, EMS Platform Services provides a platform for faster, more straightforward custom integrations. Clients will experience a more valuable, consistent user experience across all EMS products. In addition, features and enhancements across all access points will experience faster turn around times. Platform Services has empowered EMS to be a true enterprise solution.

INSTALL EMS PLATFORM SERVICES

To learn more about installing EMS Platform Services, see Install EMS Platform Services.

GET STARTED WITH INTEGRATIONS

Platform Services provides RESTful APIs which empowers customers and partners power to build custom, multi-platform applications connected to EMS. Any client/device accessing EMS Platform Services must be a registered Integration Client. The one exception is that anyone can access the public (open) API requests (/status, /health, /clientauthentication).

There are two types of Integrations:

1. Custom–Customer applications
2. Partner–Third-party EMS partner applications (e.g., 7PointsSolutions, Pepperdash, control concepts, etc.)

Partner and Custom types can be classified as either of the following two client sub-categories:

1. User-based: User-based clients (EMS Mobile, EMS for Outlook) need to authenticate as a user in order to perform any actions. These clients need an integration

client role with minimal access to the following API resources (above and beyond public resources):

- /authentication
- /logging

2. Non-user Based: Non-user Based clients (EMS Kiosk, EMS Room Sign App) provide functionality independent of users but also support user-like functionality (i.e., Check-In, on-the-fly room reservations). These clients need a role with wider access.

TO BEGIN THE INTEGRATION PROCESS:

1. Verify if you have a license for adding Integrations. EMS Licensing manages a numeric count of both Custom and Partner Integration Types. Contact your EMS Sales Representative for a license for EMS Platform Services. View Licensing Requirements (see Licensing Requirements for Platform Services).
2. Access Platform Services documentation (e.g., https://yourcompany.com/ems-platform-ic/swagger-ui/).
3. Access admin portal for Platform Services (e.g., https://yourcompany.com/ems-platform-api/admin) to create a new Integration Client. See Configure Platform Services in the Admin Portal for more information.

> Note: Creating a new Integration Client will generate a Client ID and Secret pair.

4. Platform Services requires a valid JWT Authentication token in order to call any of the API resources with the exception of `/public, /status` and `/cli-entauthentication`. Before making any API request, you must first call `/cli-entauthentication` with a Client ID and Secret pair generated above.
   - The Client token returned from calling /clientauthentication should be applied to the x-ems-api-token header for subsequent API requests.

> Note: There can be multiple active instances of a particular client interacting with the Platform. All devices that share a client/secret will share a common authentication token. If the token expires, all devices will need to authenticate again to get a new shared token.

5. For API resources that require an authenticated web user, your integration client will need to request a web user authentication token for that user. To acquire an authentication token, call the /authentication requests.
6. The Web token returned from calling /authentication should also be applied to the x-ems-api-token header; thus, replacing the client token with a user token.

> Note: Refer to the API documentation to determine the appropriate token (i.e., client token or web token) for the header field.

API DOCUMENTATION

Navigate to Platform Services URL e.g. https://yourcompany.com/ems-platform-api to view the API documentation. You can also manually type in the URL (https://yourcompany.com/ems-platform...ic/swagger-ui/). You can view sample API calls for EMS Platform Services (see EMS Platform Services API to view sample).

BASE URL FOR ALL API REQUESTS

All requests should be made to URL for EMS Platform Services (e.g., https://yourcompany.com/ems-platform-api).

DATE/TIME STANDARDS

All dates and times passed to the API requests follow RFC 3339 Standard and must be in UTC.

All DateTimes follow the standard (e.g., 2008-09-08T22:47:31-07:00)

COMMON RESPONSE CODES

RESPONSE CODE	TITLE	Meaning
200	Success	
400	Bad Request	
401	Invalid/Missing Client Credential	
500	Server Error	

HTTP REQUEST METHODS

METHOD	Description
GET	
POST	
PUT	
DELETE	
PATCH	

CHAPTER 2: Install EMS Platform Services

This topic provides information on the following:

- Install Platform Services
- Verify Installation Status

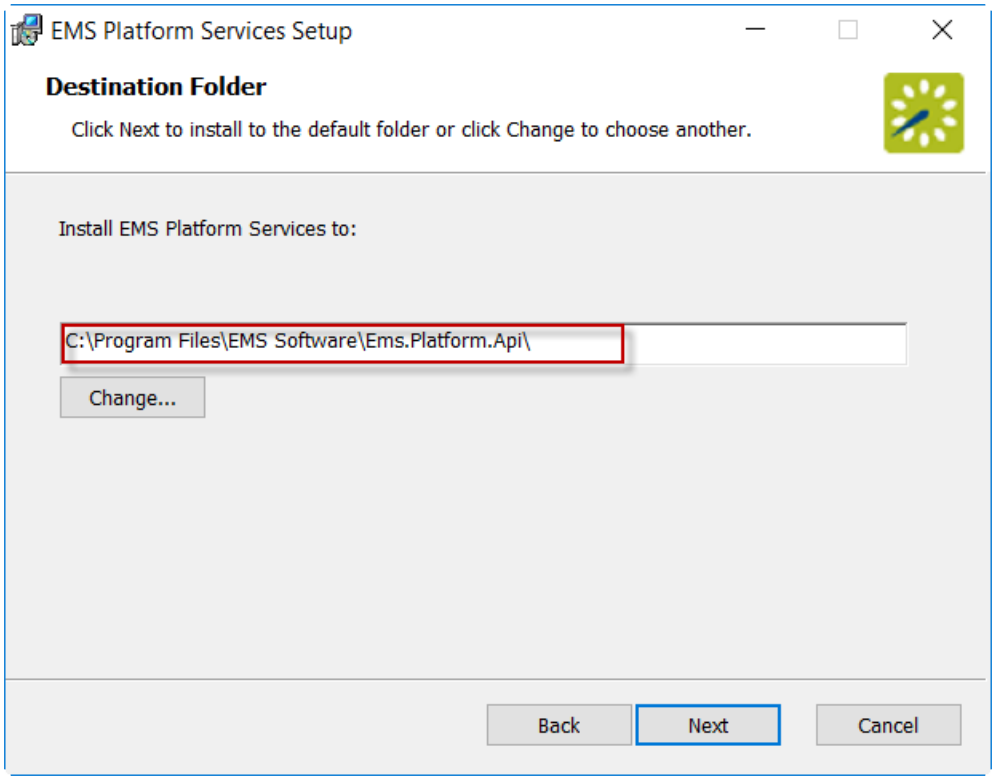
INSTALL PLATFORM SERVICES

1. Verify the System Requirements and install the Prerequisites.

> **NOTE:** HTTPPlatformHandler is a prerequisite and if not installed prior to installing Platform Services, a server reboot may be required.

2. Download the EMS Platform Service installation files by logging into the EMS Customer Portal.
3. From the **Downloads** dropdown, click the **EMS Software** link.
4. From the **Software and Documents** library, click the **44.1 Releases & Patches** link.
5. Download **EMSPlatformServices.msi**. (Required for all installations.)

6. The EMS Platform Services Setup Wizard will appear. Click **Next** to begin installation.



7. Choose a default folder to install EMS Platform Services to. The Platform installer by default will try to install in Programs folder, you can change the path to wwwroot folder. The typical install path is C:\Program Files/EMS Software/Ems.Platform.Api\. Click **Next**.
8. You will need to enter the SQL server and EMS database, configured to allow external connections. Make a note of the database name.

9. Enter a Virtual Directory Name.
10. To enable NTLM authentication for Everyday User Authentication for the Platform Services Admin Portal and Integration Clients, click the **Enable NTLM For EMS Everyday User Authentication** box.
11. Click the **Install** button to complete the installation. You will receive a prompt from the Wizard that installation is complete. EMS Platform Services is now installed on your Web server.
12. Click **Finish**.

VERIFY INSTALLATION STATUS

1. Access your URL for Platform Services (e.g., https://yourcompany.com/ems-platform-api).
2. Verify the status of your installation by navigating to https://yourcompany.com/ems-

platform-api/status.

CHAPTER 3: Licensing Requirements for Platform Services

LICENSED INTEGRATIONS

EMS offers the following LICENSED integrations for Platform Services:

1. **Custom Integrations:** Used when writing applications/services connecting to EMS.
2. **Partner Integrations:** Used when purchasing integrations built by EMS partners (e.g. 7 Points Solutions, PepperDash and Control Concepts).

Note: The Platform Services License includes a numeric count of custom and partner-type integrations. Please contact your EMS Sales Representative for more information.

NON-LICENSED INTEGRATIONS

EMS offers the following NON-LICENSED integrations for Platform Services:

1. **EMS Front end applications:** Necessary to support standard functionality (e.g., EMS Mobile App).
2. **EMS packaged integration access:** Used to support standard EMS pre-packaged integrations (e.g., Skype for Business Integration, Exchange Room Integration).

CHAPTER 4: Configure Platform Services in the Admin Portal

To begin configuration of EMS Platform Services, navigate to the Platform Services URL (e.g., https://yourcompany.com/ems-platform-api/admin).

This topic provides information on the following:

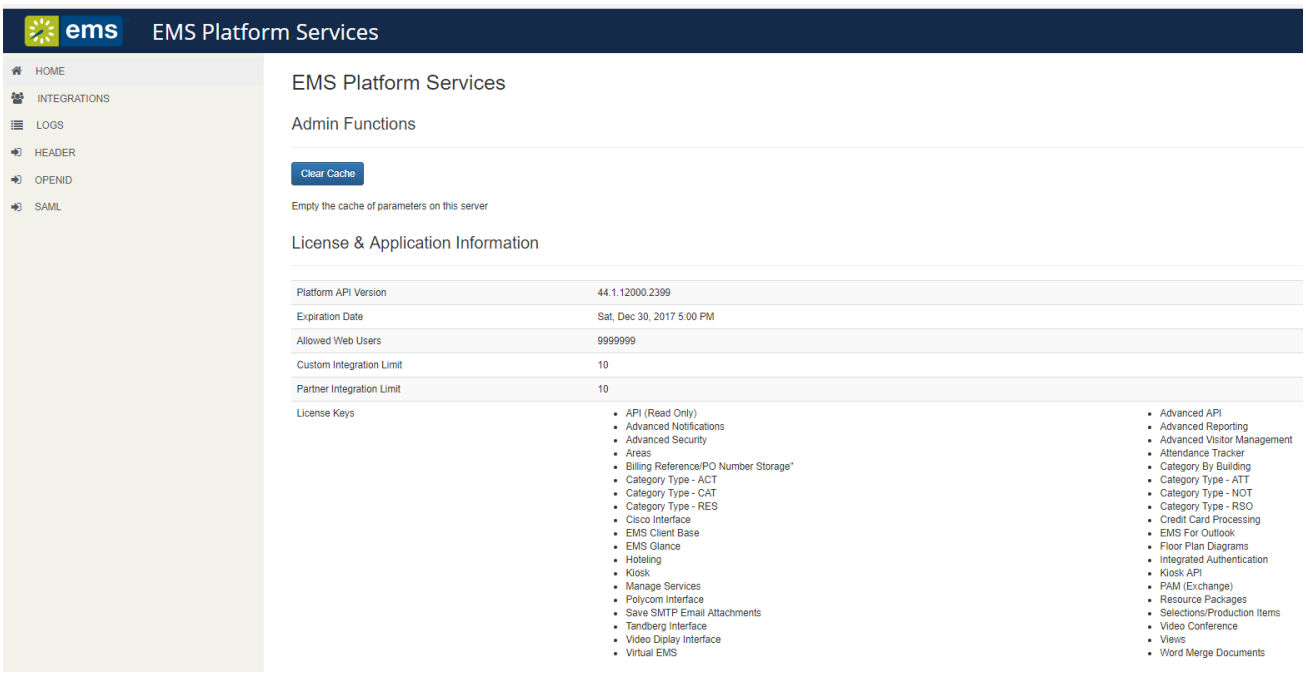
- Authentication Types
- Clear the Cache
- Manage Integration Clients
- View Logs

AUTHENTICATION TYPES

EMS supports two authentication types for the EMS Platform Services Admin Portal:

1. **EMS Native authentication**–A web user with web admin security template credentials can login to admin portal. Verify license information is correctly reflected on the admin home page.
2. **NTLM authentication**–While installing Platform Services, click the **Enable NTLM For EMS Everyday User Authentication** box.

From the EMS Platform Services Admin Portal, you can clear the cache, view license and application information, manage integration clients, and view logs.



CLEAR THE CACHE

Important: The cache must be cleared in Platform Services and the EMS Web App whenever parameter changes are made in the EMS Desktop Client.

To clear your cache and have Platform Services re-read the database parameters:

1. From the **Admin Functions** section of the Home Page, click the **Clear Cache** button.
2. You will receive a notification that the cache has been cleared successfully.

MANAGE INTEGRATION CLIENTS

From the Integrations link on the Home Page, you can create, edit status, or delete integration clients.

TO CREATE A NEW INTEGRATION CLIENT:

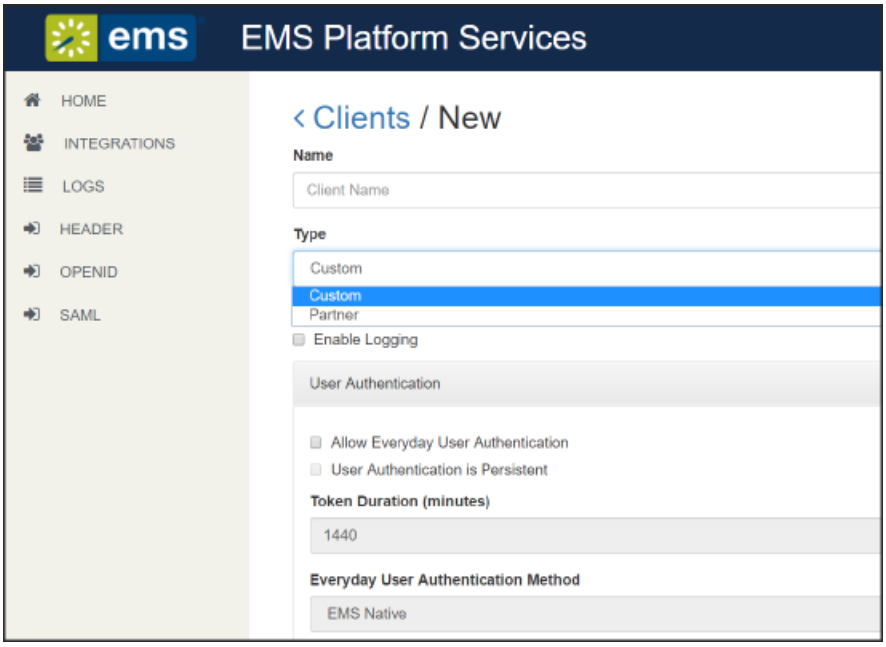
1. From the left sidebar on the Home Page, click **Integrations**. From this screen, you can view a list of integrations and their statuses.
    a. To create a new integration client, click the **New Integration Client** button.
    b. Create a client **Name**.
    c. From the **Type** dropdown, choose either **Custom** or **Partner**.
    d. The **Active** box is checked by default. This indicates that your integration is active.
    e. Click **Enable Logging** to view the logs for this integration through the Log section of the Admin Portal.
    f. Designate a **User Authentication** type.

> Important: Partner and Custom types can be classified as either of the following client sub-categories:

- **User-based:** User-based clients (EMS Mobile, EMS for Outlook) need to authenticate as a user in order to perform any actions. These clients need an integration client role with minimal access to the following API resources (above and beyond public resources):
  - /authentication
  - /logging
- **Non-user Based:** Non-user Based clients (EMS Kiosk, EMS Room Sign App) provide functionality independent of users but also support user-like functionality (i.e., Check-In, on-the-fly room reservations). These clients need a role with wider access.

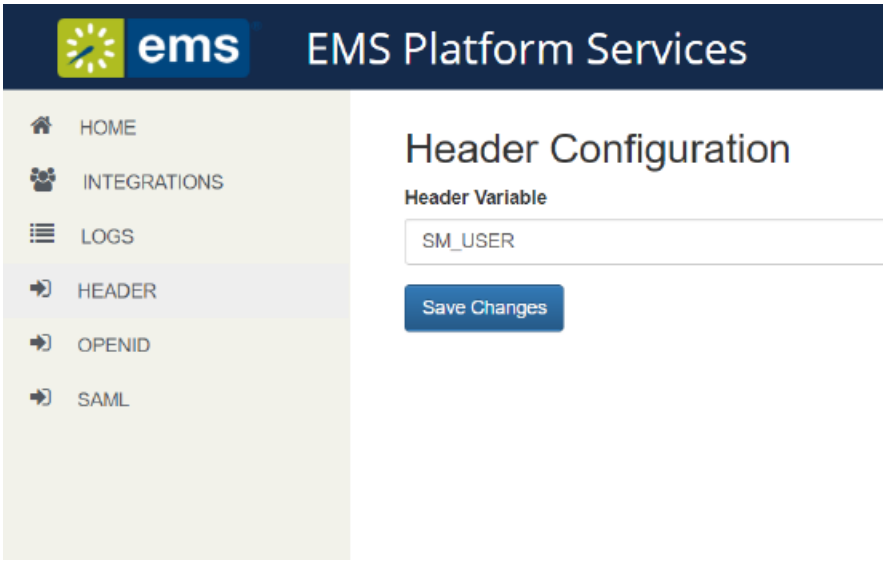
2. To designate the client as an Everyday User:
   a. Click the **Allow Everyday User Authentication** box under User Authentication. If this box is not checked, all other options for everyday user authentication will be inaccessible. Header, OpenID, and SAML are configured from the Admin Portal.
   b. Click the **User Authentication is Persistent** box to allow users to remain logged in.

c. The default for **Token Duration** is one day (1440 minutes). Customize this duration by entering a number of minutes in the field.



d. Choose an authentication method from the **Everyday User Authentication Method** dropdown.

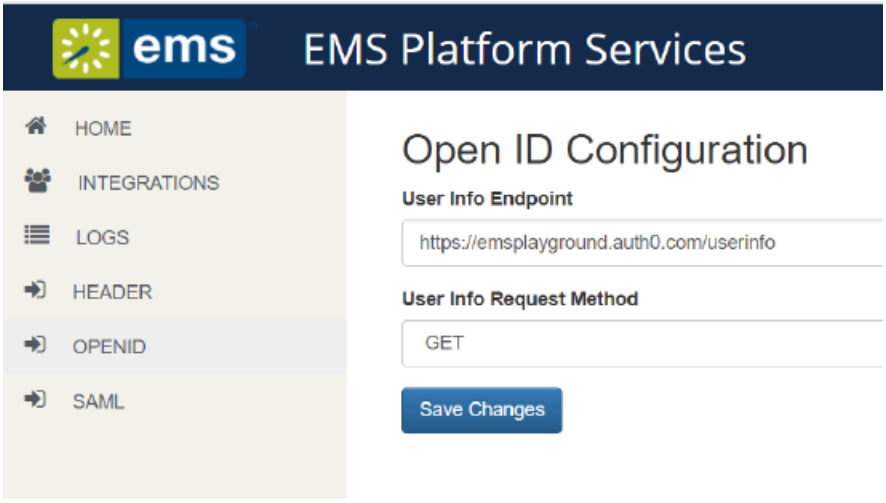
- **EMS Native** authentication: authenticate users via Everyday Application User (webuser) credentials stored in the EMS database. No additional authentication configuration is required.
- **Header** authentication, navigate to the EMS Platform Services Admin Portal. Select Header from sidebar and enter the Header variable.



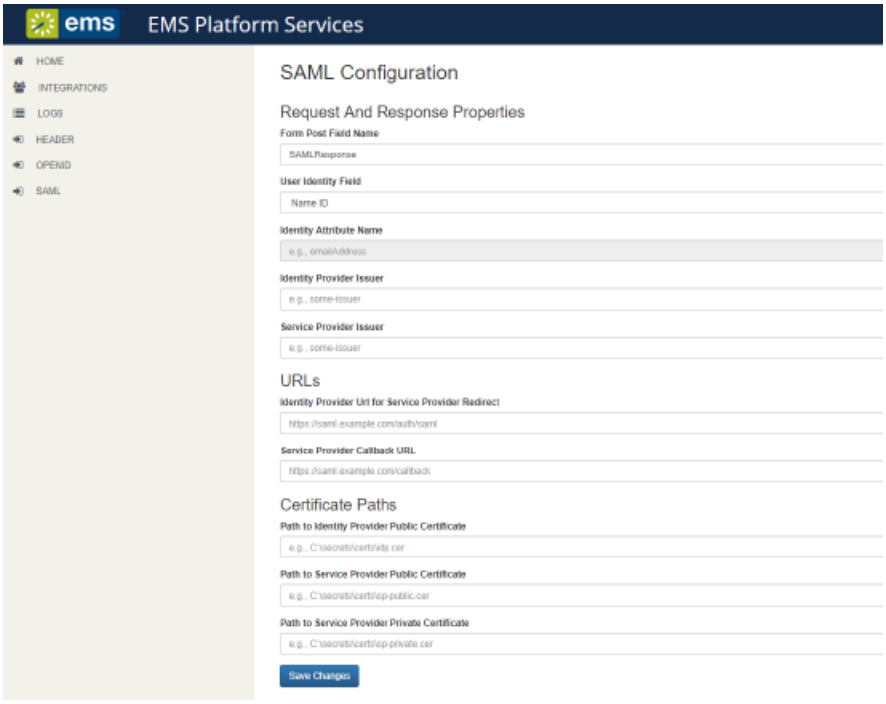
e. Configure **LDAP** authentication in the EMS Web App. See LDAP Authentication.

f. To configure **NTLM** authentication, click the **Enable NTLM For EMS Everyday User Authentication** box. No additional authentication configuration is required.

g. Select **Open ID** authentication from the sidebar and complete the required fields. See Open ID Connect Authentication for more details.



h. Select **SAML** authentication from the sidebar and complete the required fields. See SAML Authentication for more details.



> Note: The Header, OpenID, and SAML authentication settings are applied globally. All Integration Clients with these authentications types selected will default to these settings.

i. Based on client type, platform check against license count, and current number of "active" integration clients. If license count is 0 or equal to the current number of "active" clients, then Platform Services denies the request to add an additional client. Customer would have to either set existing client to inactive, or up their license count via normal licensing process. Please refer to

Licensing Requirements for more details.

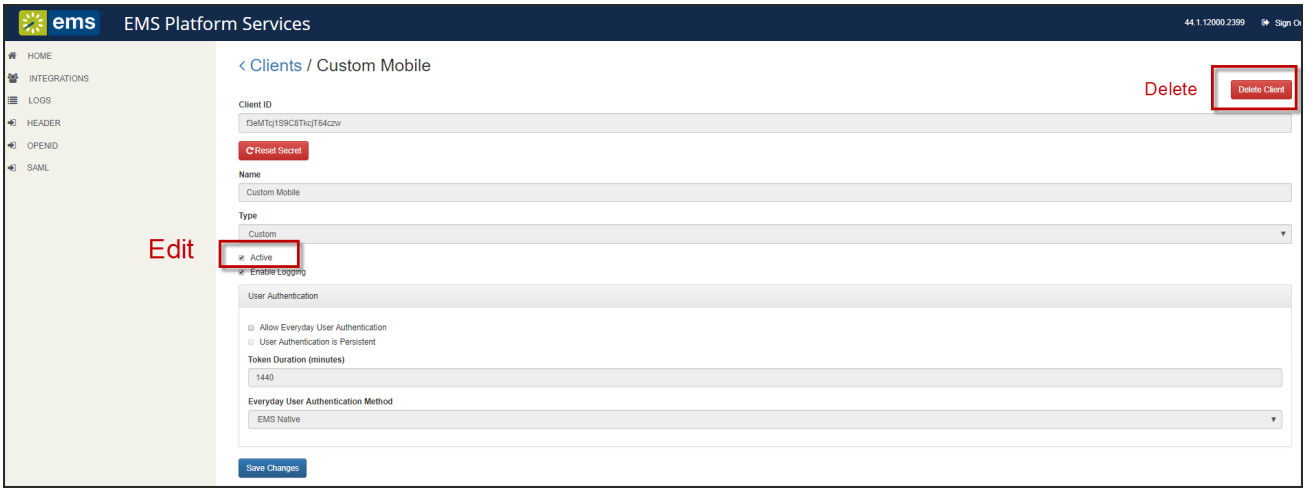
j. Click **Save Client**. A client ID and Secret pair is generated once the Integration Client is successfully saved. Copy and save the Client Secret in a secure location. You will not be able to retrieve the Client Secret; to obtain the Client Secret, you will need to reset it. To reset the Client Secret, navigate to the Integrations tab and select the Integration Client. Click the Reset Secret button.

> Notes: Platform Services requires a valid JWT Authentication token in order to call any of the API resources with the exception of /public, /status/, and /clientauthentication.

Before making any API request, you must first call /clientauthentication with the Client ID and Secret pair generated above.

TO EDIT THE STATUS OF OR DELETE AN INTEGRATION CLIENT

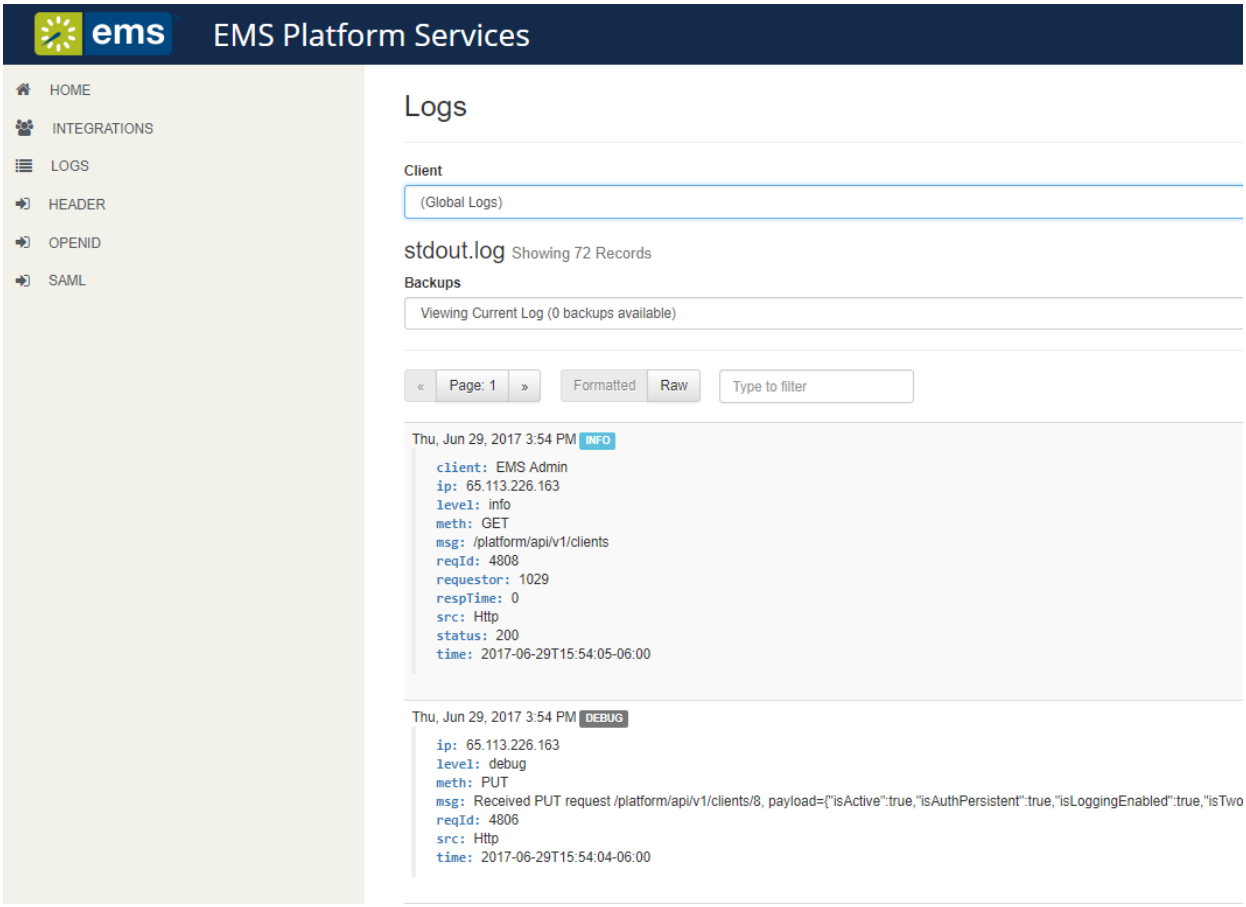
1. Select the Integration link on the Home Page.
2. Select the Integration Client you wish to edit or delete.
3. To edit the status of the Integration Client, uncheck the **Active** checkbox.
4. To delete the integration client, click the **Delete Client** button.
5. Click **Save Changes**.



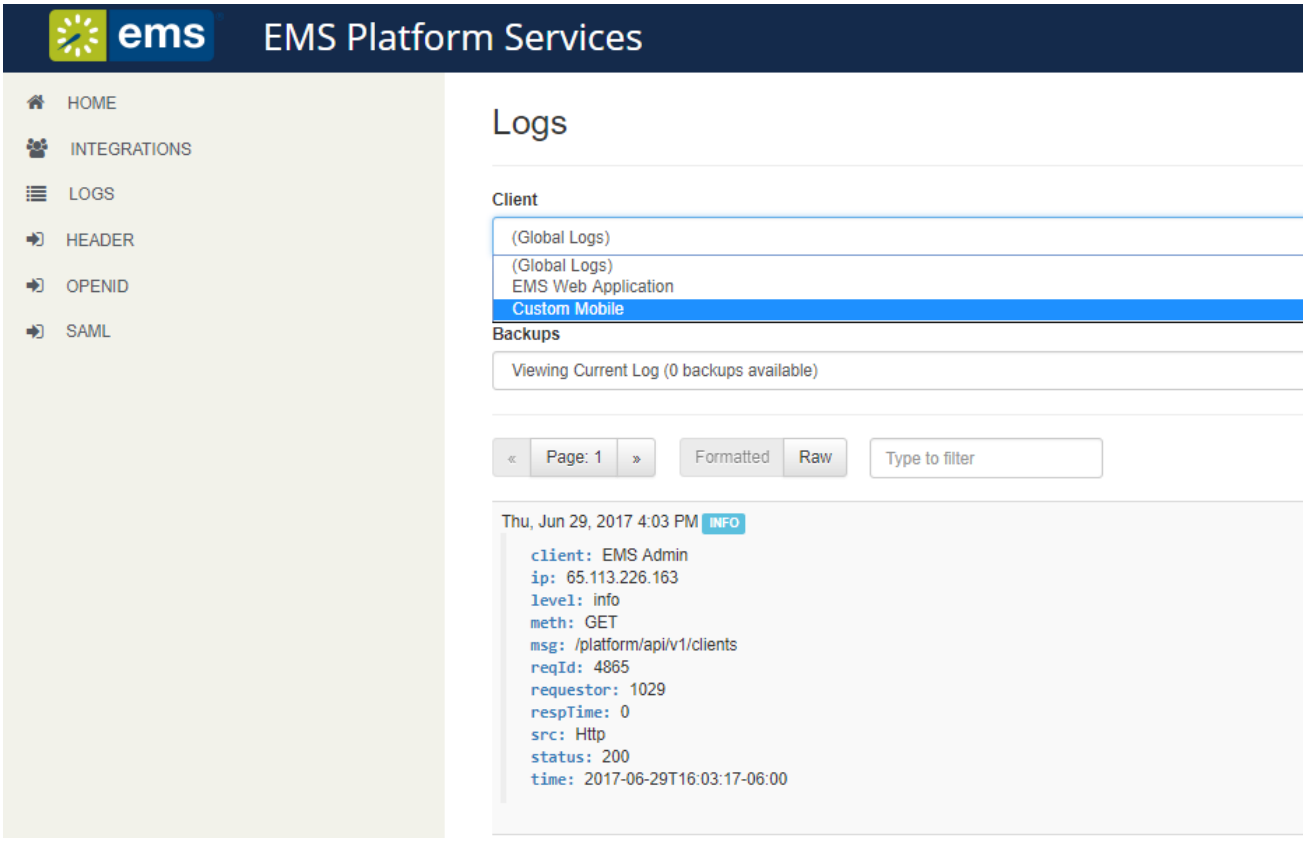
VIEW LOGS

There are two types of logs in EMS Platform Services:

1. **Global logs:** Includes logs for only Platform Services.



2. **Integration logs:** Includes logs for a select integration client. Enable logging for any integration client you wish to view logs for.


ems
EMS Platform Services
HOME
INTEGRATIONS
LOGS
HEADER
OPENID
SAML
Logs
Client
(Global Logs)
(Global Logs)
EMS Web Application
Custom Mobile
Backups
Viewing Current Log (0 backups available)
« Page: 1 »
Formatted Raw
Type to filter
Thu, Jun 29, 2017 4:03 PM INFO
client: EMS Admin
ip: 65.113.226.163
level: info
meth: GET
msg: /platform/api/v1/clients
reqId: 4865
requestor: 1029
respTime: 0
src: Http
status: 200
time: 2017-06-29T16:03:17-06:00