



# Launch by Adobe

Reference Architecture Guide for Accelerated Mobile Pages (AMP)

by Adobe Customer Solutions

Version 1.0/March 13th, 2018



## Table of Contents

<b>Reference Architecture Overview.....</b>	<b>3</b>
Platform Scope.....	3
Other Launch Reference Architectures .....	3
Guide Version History: .....	3
Assumptions .....	3
Tools you will need .....	3
General Known Platform Limitations .....	3
<b>AMP Instructions &amp; Setup .....</b>	<b>4</b>
Overview .....	4
Load JavaScript files .....	4
Set Data Layer Variables .....	5
Set up Iframe File .....	7
AMP Demo Site Walkthrough .....	7
<b>General Launch Configuration &amp; Settings.....</b>	<b>8</b>
Data Elements .....	9
<b>Experience Cloud ID Service Configuration &amp; Tagging.....</b>	<b>11</b>
Overview .....	11
Testing Considerations & Steps .....	11
Known Issues or Limitations .....	11
<b>Adobe Analytics Configuration &amp; Tagging .....</b>	<b>12</b>
Overview .....	12
Prerequisites & Product-Specific Setup .....	12
Testing Considerations & Steps .....	14
Known Issues or Limitations .....	14
<b>Adobe Target Configuration &amp; Tagging .....</b>	<b>14</b>
Known Issues or Limitations .....	14
<b>Adobe Audience Manager Configuration &amp; Tagging .....</b>	<b>14</b>
Overview .....	14
Prerequisites & Product-Specific Setup .....	15
Testing Considerations & Steps .....	15
Known Issues or Limitations .....	15



# Reference Architecture Overview

## Platform Scope

This Reference Architecture Guide contains best practices for implementing the Adobe Experience Cloud in Accelerated Mobile Pages (AMP) using Launch by Adobe. As a companion to this guide, a reference implementation using these best practices can be found at:

<http://agslaunchdemo.businesscatalyst.com/amp>

If you would like to download the files used in the reference implementation, extract the contents of the zip archive located here:

<https://agslaunchdemo.businesscatalyst.com/amp/AMP-Files.zip>

## Guide Version History

V1.0 March 12th, 2018 – Original Version

## Other Launch Reference Architectures

Additional reference implementation guides are available on the [Launch by Adobe Reference Architectures landing page](#), including the following:

1. Basic Setup with Launch by Adobe
2. Standard Retail Implementation with Launch by Adobe
3. AngularJS Implementation with Launch by Adobe
4. ReactJS with Redux Implementation with Launch by Adobe

## Assumptions

- You are familiar with Launch by Adobe and already know how to deploy extensions, rules, data elements and publishing tags. It is assumed that you have already reviewed the Basic Setup Guide
- You know how to create AMP pages and have a functional site which leverages AMP. It assumes that you are already familiar with [how AMP works](#)

## Tools you will need

- Access to the Marketing Cloud UI
- Access to Launch by Adobe
- Access to Adobe Analytics, Audience Manager and Marketing Cloud Org ID
- Accelerated Mobile Pages (AMP) hosted on a web server
- A subdomain of the primary domain to host the '[launch.html](#)' iframe page. For example, if your primary subdomains are [www.yoursite.com](#) and [shop.yoursite.com](#), an additional subdomain such as "[launch.yoursite.com](#)" would be needed.
- Google Chrome (preferred Browser) or Mozilla Firefox network debugger
- [Adobe Experience Cloud Debugger](#) (preferred debugger)

## General Known Platform Limitations

Adobe Target is not currently supported on AMP.



Click-tracking is not possible with the approach being used. There is an alternative method (using the "adobeanalytics" template) that allows clicks to be tracked but that approach has the following issues:

- Visitor/visit counts will be hyper inflated
- A separate report suite is recommended to avoid inflating data of other suites
- Experience ID Service is not supported
- No way to tie a visitor back to the originating site (no measuring new vs repeat visitors or user acquisition)

## AMP Instructions & Setup

### Overview

Since AMP pages don't allow custom JavaScript, this section demonstrates how to work around these limitations using the amp-analytics and amp-iframe components. We will be using the "adobeanalytics\_nativeConfig" template where the AMP page requests an iframe page containing the Launch embed codes. The URL of this iframe page will contain all of the data layer elements as URL parameters, which will be used as data elements in Launch to power the Experience Cloud solutions. This section will cover what needs to be included in AMP pages to get page view events to fire.

### Load JavaScript files

The first step is to include the following two scripts in the <head> tag of the AMP page. For more information about these scripts see: <https://ampbyexample.com/components/amp-analytics/>:

1. Load amp-analytics-0.1.js (line 14 below). This is the core analytics component for AMP:

```
<script async custom-element="amp-analytics" src="https://cdn.ampproject.org/v0/amp-analytics-0.1.js"></script>
```

2. Load amp-iframe-0.1.js (line 16 below). Iframes are used by AMP pages to load the custom JavaScript used by Launch and the Experience Cloud Solutions:

```
<script async custom-element="amp-iframe" src="https://cdn.ampproject.org/v0/amp-iframe-0.1.js"></script>
```

```
5 <!doctype html>
6 <html >
7 <head>
8   <meta charset="utf-8">
9   <link rel="canonical" href="self.html" />
10  <meta name="viewport" content="width=device-width,minimum-scale=1">
11  <style amp-boilerplate>body{-webkit-animation:-amp-start 8s steps(1,end) 0s 1 normal both;-moz-animation:-amp-start 8s steps(1
 * -amp-start{from{visibility:hidden}to{visibility:visible}}@keyframes -amp-start{from{visibility:hidden}to{visibility:visible}}<
12  <script async src="https://cdn.ampproject.org/v0.js"></script>
13
14  <script async custom-element="amp-analytics" src="https://cdn.ampproject.org/v0/amp-analytics-0.1.js"></script>
15
16  <script async custom-element="amp-iframe" src="https://cdn.ampproject.org/v0/amp-iframe-0.1.js"></script>
17
18 </head>
```



## Set Data Layer Variables

The next step is to include the "adobeanalytics\_nativeConfig" template at the end of the page, but before the </body> tag. This approach sends data to an iframe page via query string parameters added to the iframeMessage request. More information can be found here: [https://marketing.adobe.com/resources/help/en\\_US/sc/implement/accelerated-mobile-pages.html](https://marketing.adobe.com/resources/help/en_US/sc/implement/accelerated-mobile-pages.html)).

The code sample below is taken directly from the link above (Section: *'Using the amp-analytics tag with the "adobeanalytics\_nativeConfig" template'*) with some modifications.

1. Modify the iframeMessage value to point to a separate file ('launch.html' in our example) which will contain the Launch library reference
2. Next, populate the host with the subdomain where the 'launch.html' file is hosted. Note that this file is hosted on demotestingaccount.businesscatalyst.com as opposed to agslaunchedemo.businesscatalyst.com where our AMP pages are hosted.
3. The last step is to add additional variables to the AMP page. The 'extraUrlParams' essentially passes the data layer from the AMP page to the iframe page so it can be read by and used within Launch. These variables populated in 'extraUrlParams' show up as query string parameters in the iframe URL and need to be captured using a data element in Launch.



Here is an example, with customizable settings highlighted. Please note that you can add many more parameters to the `extraUrlParams` object:

```
<amp-analytics type="adobeanalytics_nativeConfig">
<script type="application/json">
{
  "requests": {
    "base": "//${host}",
    "iframeMessage":
"${base}/launch.html?ampcampaign=${queryParam(cid)}&amppageURL=${ampdocUrl}&ampref=${documentReferrer}"
  },
  "vars": {
    "host": "demotestingaccount.businesscatalyst.com"
  },
  "extraUrlParams": {
    "pageName": "Adobe Analytics Using amp-analytics tag-AMP test page",
    "lang-loc": "en-us",
    "pageType": "amp test"
  }
}
</script>
</amp-analytics>
```



## Set up Iframe File

The 'launch.html' page is a simple HTML file which contains a reference to the Adobe Launch JavaScript library (or header embed code) as shown below. (Since iframes are already loaded asynchronously, we will use the asynchronous Launch embed code, which only includes a header code).

As mentioned earlier, it is required to host this file on a different subdomain in order for analytics tracking to work on AMP pages. In our case, we have hosted AMP pages on <https://agslaunchdemo.businesscatalyst.com> and the 'launch.html' file on <https://demotestingaccount.businesscatalyst.com>.

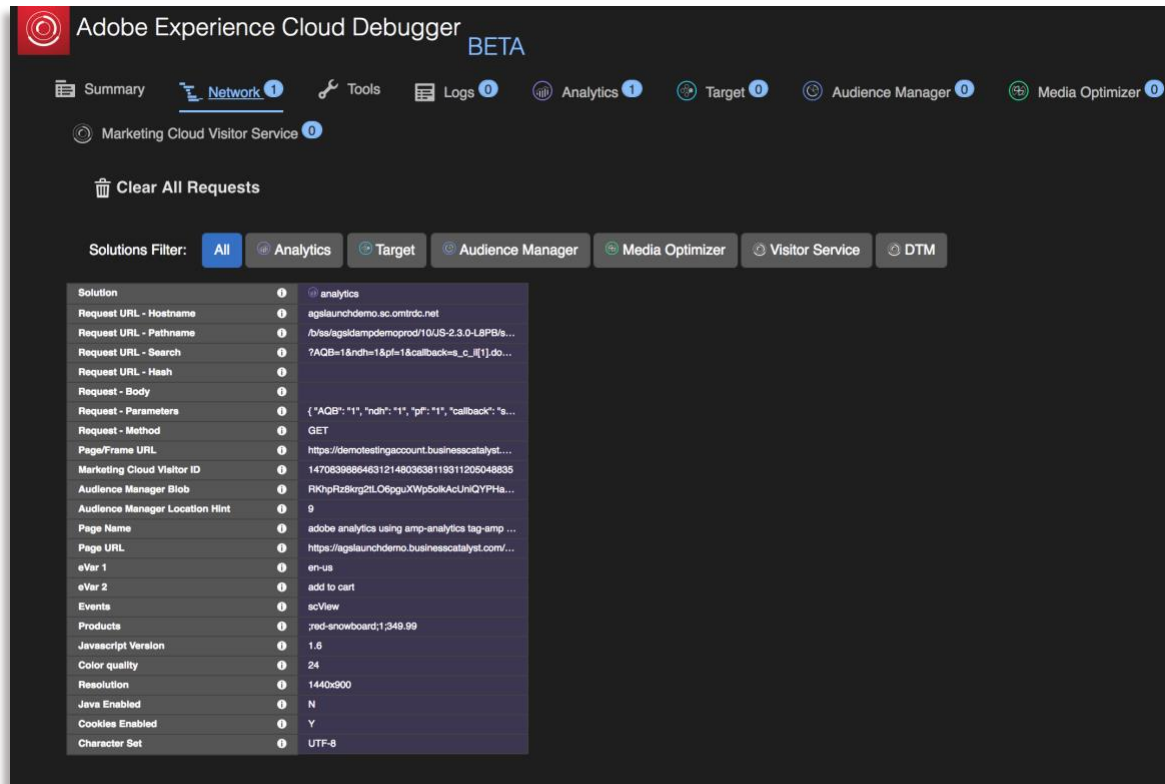
```
<!DOCTYPE HTML>
<html>
  <head>
    <title>Stats</title>
    <script src="//assets.adobedtm.com/launch-EN0080d9552e5d4bac87cd794af2b5d25a.min.js" async></script>
  </head>
</html>
```

Here's a link outlining how amp-iframe works: <https://www.ampproject.org/docs/reference/components/amp-iframe>

## AMP Demo Site Walkthrough

In addition to the basic demo file located at <http://agslaunchdemo.businesscatalyst.com/amp/>, we've also implemented Launch by Adobe on additional pages so you can see image requests for all beacons. Please follow the instructions laid out in this guide as only the pages mentioned below will be AMP and others won't be.

- Visit <https://agslaunchdemo.businesscatalyst.com/amp/amp-products-list> to see an example of the AMP implementation on a product details page.
- We have setup basic eCommerce tracking in Adobe Analytics on these pages.
- Click the green 'Add To Cart' button located at the bottom of the page.
- On the <https://agslaunchdemo.businesscatalyst.com/amp/amp-cart> page, notice that the image request contains the products string and the scView event.



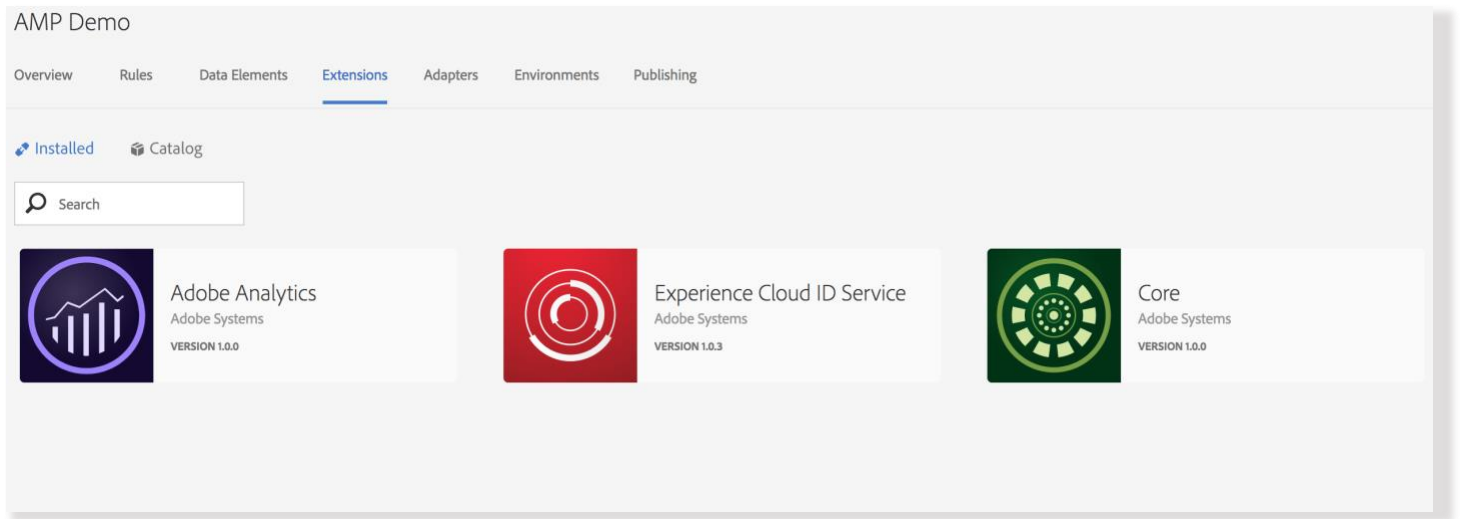
- On this page, click on the 'Checkout' button to get to the <https://agslaunchdemo.businesscatalyst.com/amp/amp-checkout> page.
- There's no need to fill the forms on this page so just clicking the 'Buy Now' button at the bottom of the page will get you to the purchase page <https://agslaunchdemo.businesscatalyst.com/amp/amp-purchase>.

## General Launch Configuration & Settings

Once we follow the steps outlined previously, configuring Launch becomes very simple because we follow almost the same steps as we'd follow for any other implementation. One key difference will be how we define [data elements](#).

We have setup Adobe Analytics, Experience Cloud ID service and Audience Manager on this property. For the purposes of this demo, we have setup server-side forwarding for Audience Manager using the Adobe Analytics extension as described in the [Basic Setup Guide](#). Please note that Adobe Target is not currently supported on AMP pages.





## Data Elements

There are multiple query string parameters present (highlighted in yellow) in the iframe URL as covered in the [‘Set Data Layer Variables’](#) section

(<https://demotestingaccount.businesscatalyst.com/launch.html?ampcampaign=&amppageURL=https%3A%2F%2Fagslaunchdemo.businesscatalyst.com%2Famp%2Famp-products-list&ampref=https%3A%2F%2Fagslaunchdemo.businesscatalyst.com%2Famp%2Famp-purchase&pageName=Adobe%20Analytics%20Using%20amp-analytics%20tag-AMP%20products%20list%20page&lang-loc=en-us&pageType=products-list>) which need to be captured using the ‘Query String Parameter’ Data Element Type in Launch. We will use these data elements and map them to overwrite the default iframe page URL and referrer with the ones populated on the host page.

For any additional page load rules, we will need to leverage the ‘amppageURL’ query string parameter to look for the page URL otherwise.

Steps 1 or 2 (highlighted in the screenshot) have to be followed for every rule which needs to include Page URL or Referrer respectively.

Edit Data Element

Name  
AMP-Page-URL-override

Extension  
Core

Data Element Type  
Query String Parameter

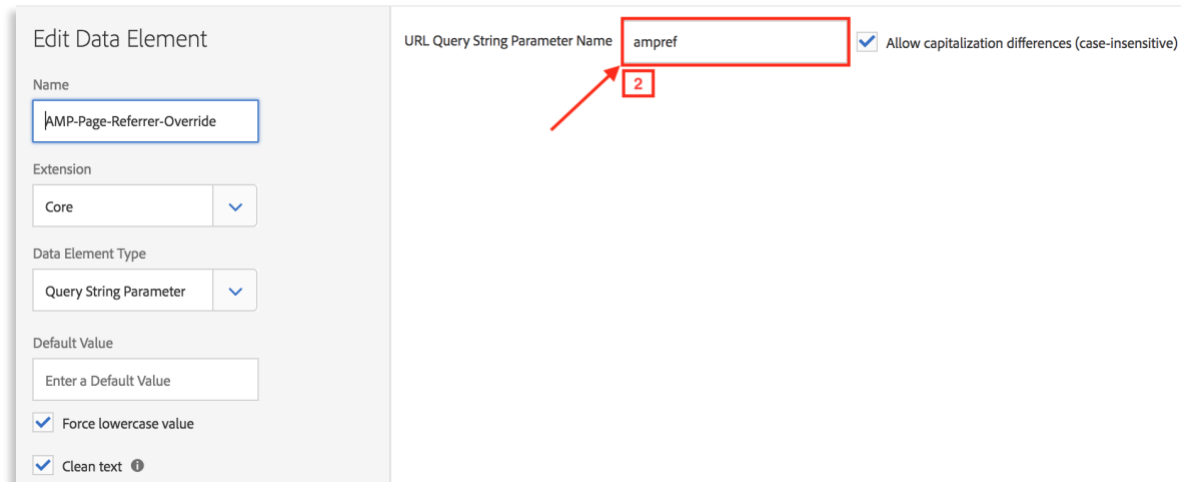
Default Value  
Enter a Default Value

☒ Force lowercase value

☒ Clean text

URL Query String Parameter Name  
amppageURL

☒ Allow capitalization differences (case-insensitive)



Edit Data Element

Name  
AMP-Page-Referrer-Override

Extension  
Core

Data Element Type  
Query String Parameter

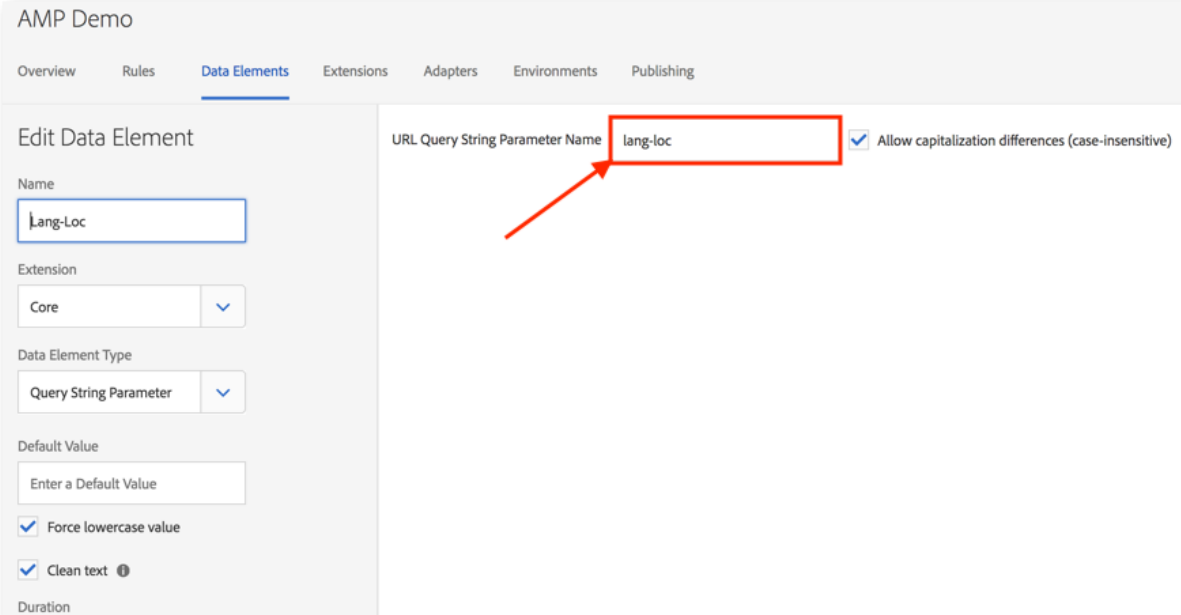
Default Value  
Enter a Default Value

☒ Force lowercase value

☒ Clean text ⓘ

URL Query String Parameter Name  
ampref

☒ Allow capitalization differences (case-insensitive)



AMP Demo

Overview Rules **Data Elements** Extensions Adapters Environments Publishing

Edit Data Element

Name  
lang-loc

Extension  
Core

Data Element Type  
Query String Parameter

Default Value  
Enter a Default Value

☒ Force lowercase value

☒ Clean text ⓘ

Duration

URL Query String Parameter Name  
lang-loc

☒ Allow capitalization differences (case-insensitive)

We have also created additional data elements to capture other query string parameters such as page name, lang-loc etc. and map them to the [Adobe Analytics extension](#).

The following data element types do not work on AMP based on our testing as Launch references the iframe page:

- DOM Attribute
- Page Info

Page Info attributes such as **Page Title, DOM Element and other URL/path related conditional attributes wouldn't work on AMP** as they'll reference the iframe page's DOM and URL properties and not those of the main page. *These attributes must be passed explicitly in the "extraUrlParams" JSON object as mentioned [earlier](#).* Aside from this, the only way for any **page load rules tied to URL to work would be to look for the 'amppageURL' Query String parameter and set conditions accordingly.**



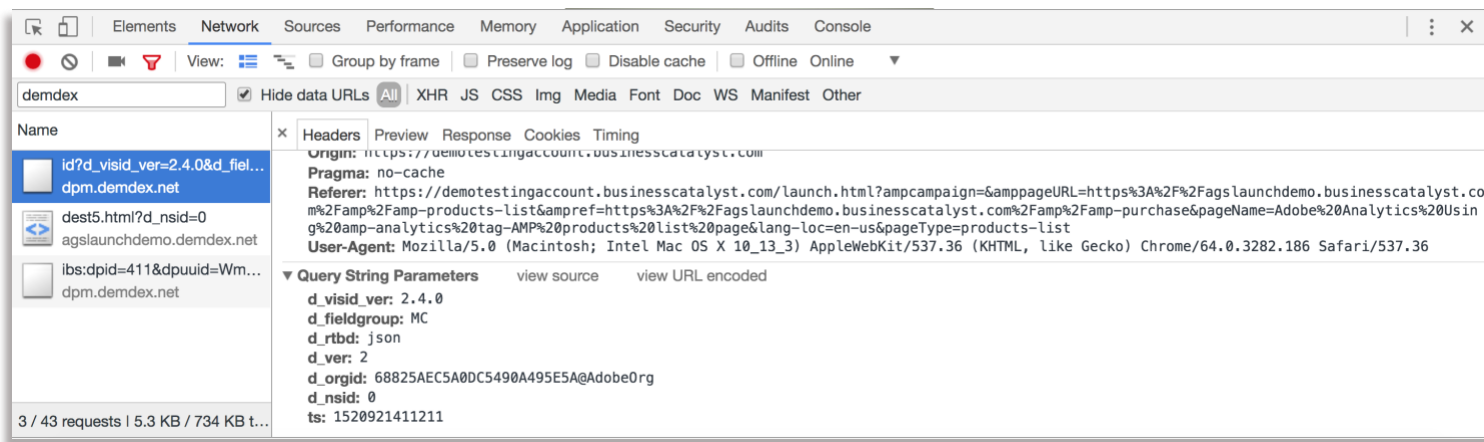
# Experience Cloud ID Service Configuration & Tagging

## Overview

This is a standard implementation of the Experience Cloud ID service following the instructions in the [Basic Setup Guide](#).

## Testing Considerations & Steps

- Filter for 'demdex' in the Network tab of the Chrome Browser.
- Look for the presence of the 'd\_orgid' and 'd\_visid\_ver' parameters.



## Known Issues or Limitations

None



# Adobe Analytics Configuration & Tagging

## Overview

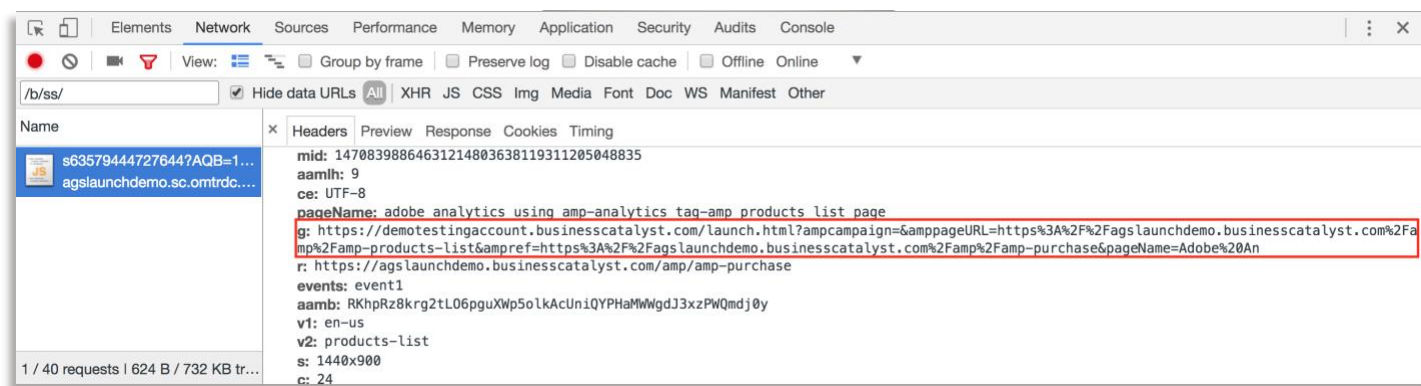
The Adobe Analytics extension has some customizations, but it generally follows all recommended best practices. One key difference since Launch is implemented in an iframe is that we will need to specify the page URL, the referring URL, and other page properties using data elements instead of letting them default to properties of the location object.

## Prerequisites & Product-Specific Setup

Prerequisites: Access to Adobe Analytics UI, report suite IDs for test and production.

Our instance of the Adobe Analytics extension follows the configuration described in the [Basic Setup Guide](#), including the custom AppMeasurement.js file with the Audience Manager Module.

The first thing we have to update is the page URL ('g') parameter, which in the image request shown below is passing the iframe URL instead of the main page URL. We do that by leveraging the data elements created in the '[Data Elements](#)' sub section.



We need to map these two data elements to the Adobe Analytics extension so that we report the correct page URL and referrer values as shown in the screenshot below. Once you map these data elements to point to the public facing site, you will find that the 'page URL ('g') parameter will update to the public facing URL: <https://agslaunchdemo.businesscatalyst.com/amp/amp-products-list>.



Overview Rules Data Elements Extensions Adapters Environments Publishing

**Action Configuration**

Extension: Adobe Analytics

Action Type: Set Variables

Name: Adobe Analytics - Set Variables

Page Name: %Page-Name-AMP%

Page URL: %AMP-Page-URL-override%

Server:

Channel:

Referrer: %AMP-Page-Referrer-Override%

Campaign: Value

State:

Zip:

Transaction ID:

We've also mapped additional data elements to some other Adobe Analytics variables as shown below. In our AMP Demo property, we're mapping these data elements within a rule defined for the Adobe Analytics page load event.

AMP Demo Overview Rules Data Elements Extensions Adapters Environments Publishing

**Action Configuration**

Extension: Adobe Analytics

Action Type: Set Variables

**Variables**

Please note, this action will not send a beacon; it only sets the variables. In order to send the data to Adobe Analytics, you need to add the "send beacon" action from the Adobe Analytics extension to a rule.

eVars

eVar2: Set as %Page-Type%

eVar1: Set as %Lang-Loc%

Select eVar: Set as

Add eVar

Props

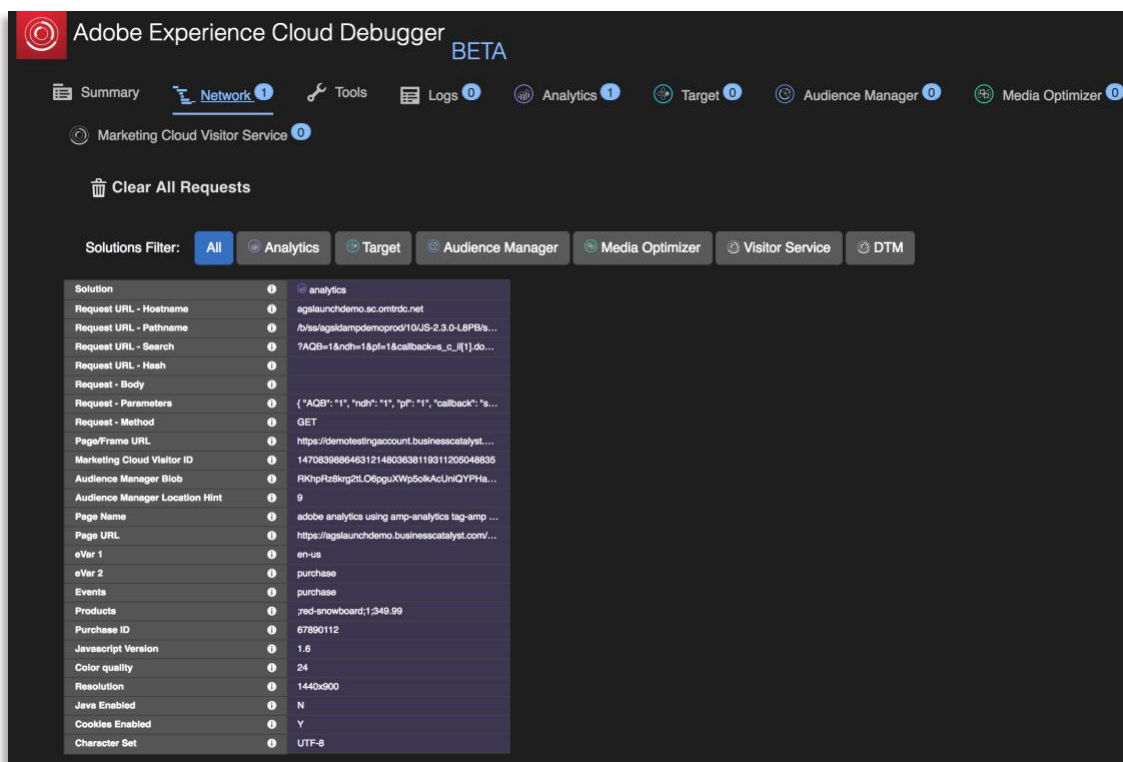
Select prop: Set as



## Testing Considerations & Steps

Below are steps to test the Analytics tag:

- Filter for '/b/ss/' in Google Chrome's network tab to filter for the analytics image request or leverage the Adobe Experience Cloud Debugger for review the analytics tag.
- The analytics call captures the pageName which is defined in the AMP 'extraURLParams' JSON.



## Known Issues or Limitations

Click-tracking is not supported with this approach.

## Adobe Target Configuration & Tagging

### Known Issues or Limitations

Adobe Target implementations are not currently supported in AMP. Although you can configure the extension and fire mbox calls within the iframe, activities will not be delivered properly.

## Adobe Audience Manager Configuration & Tagging

### Overview

We have added the Audience Manager Module to the Adobe Analytics extension to enable server-side forwarding, following the instructions in the [Basic Setup Guide](#).



## Prerequisites & Product-Specific Setup

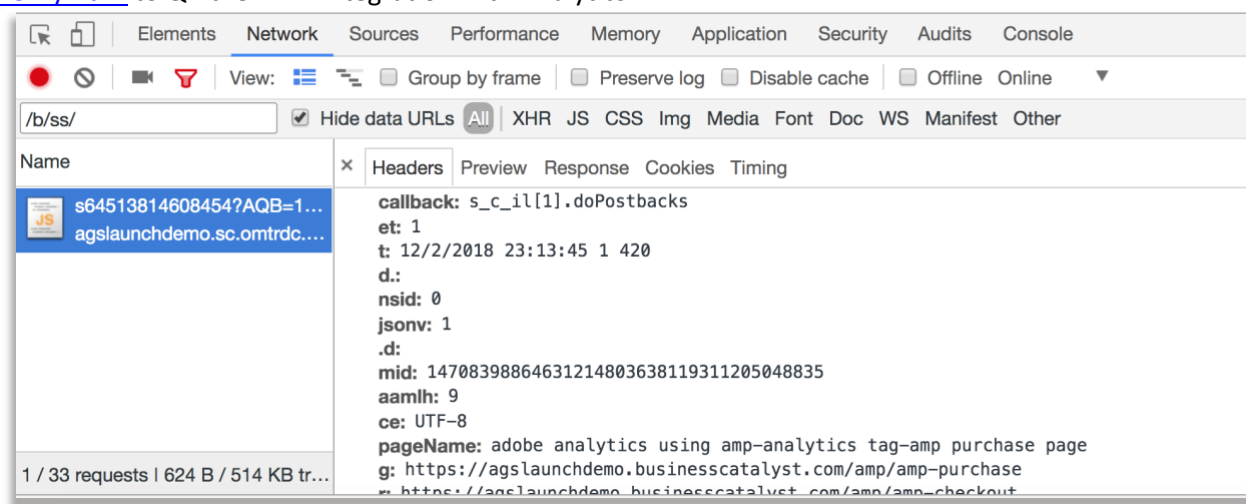
Prerequisites: Access to AAM UI and AAM partner ID.

We didn't add the Audience Manager extension (used for client side DIL) but instead added the server side forwarding AAM module to the existing Adobe Analytics extension. Implementation prerequisites are listed here:

[https://marketing.adobe.com/resources/help/en\\_US/reference/ssf.html](https://marketing.adobe.com/resources/help/en_US/reference/ssf.html)

## Testing Considerations & Steps

- Within the Analytics image request, look for the presence of the 'callback' and 'JSONV' parameters in Chrome.
- Aside from that, follow instructions here: [https://marketing.adobe.com/resources/help/en\\_US/reference/ssf-verify.html](https://marketing.adobe.com/resources/help/en_US/reference/ssf-verify.html) to QA the AAM integration with Analytics.



## Known Issues or Limitations

- We were unable to modify the 'h\_referrer' header URL so it's recommended to create URL based traits using 'c\_pageURL' in AAM.