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Enabling Digital Evolution

Sitecore IP Geolocation

Cristina Dragoş, Nemetos, 2nd February 2017

Geolocation

- Pairing of an IP address to a geographical location

- Used to identify where the web visitors are coming from

Geolocation Providers

- Database
- Web service

- Examples:
  - MaxMind: https://www.maxmind.com/en/geoip2-country-database
  - MaxMind GeoLite2 (free): http://dev.maxmind.com/geoip/geoip2/geolite2/
  - IP2Location: http://www.ip2location.com/

Upgrade from MaxMind

- Previously: MaxMind/Sitecore integrated service from MaxMind
- Sitecore XP 8.0 or older
- 31 August 2015 – integrated service is discontinued

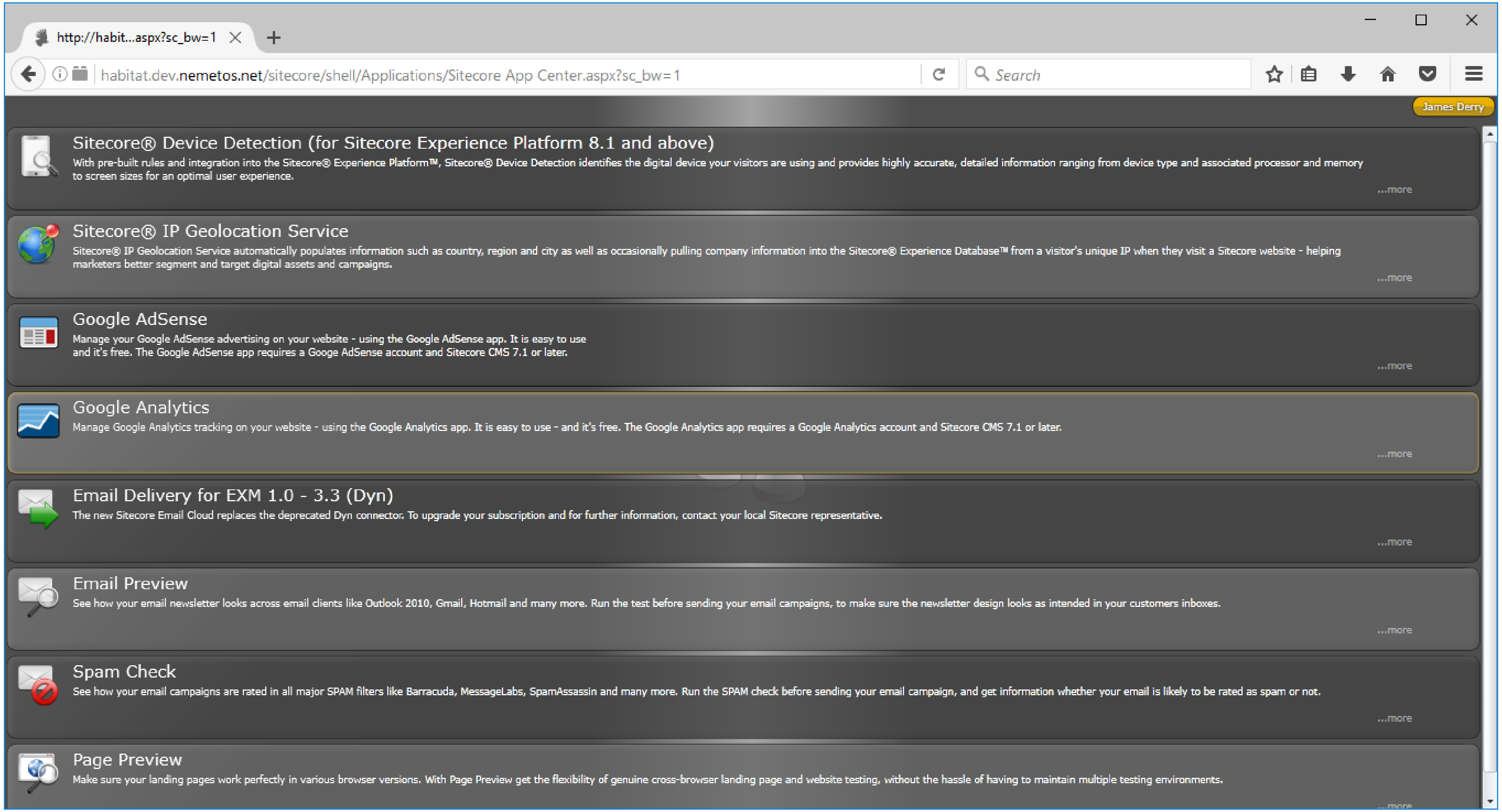
- Recommendation: upgrade to Sitecore XP 8.1 or later
- Result: the URL that pointed to the MaxMind service, will now point to the Sitecore IP Geolocation provider

Sitecore IP Geolocation Service

- Module/service provided by Sitecore
- Installed by default from Sitecore XP 8.1 initial release

- Still uses MaxMind as a provider
- Geo IP Data: Analytics.Model.WhoIsInformation
  - Country
  - City
  - Region
  - Lat & Long

Activation in AppCenter (1)



http://habit...aspx?sc_bw=1
habitat.dev.nemetos.net/sitecore/shell/Applications/Sitecore App Center.aspx?sc_bw=1
Search
James Derry

Sitecore® Device Detection (for Sitecore Experience Platform 8.1 and above)
With pre-built rules and integration into the Sitecore® Experience Platform™, Sitecore® Device Detection identifies the digital device your visitors are using and provides highly accurate, detailed information ranging from device type and associated processor and memory to screen sizes for an optimal user experience.
...more

Sitecore® IP Geolocation Service
Sitecore® IP Geolocation Service automatically populates information such as country, region and city as well as occasionally pulling company information into the Sitecore® Experience Database™ from a visitor's unique IP when they visit a Sitecore website - helping marketers better segment and target digital assets and campaigns.
...more

Google AdSense
Manage your Google AdSense advertising on your website - using the Google AdSense app. It is easy to use and it's free. The Google AdSense app requires a Googe AdSense account and Sitecore CMS 7.1 or later.
...more

Google Analytics
Manage Google Analytics tracking on your website - using the Google Analytics app. It is easy to use - and it's free. The Google Analytics app requires a Google Analytics account and Sitecore CMS 7.1 or later.
...more

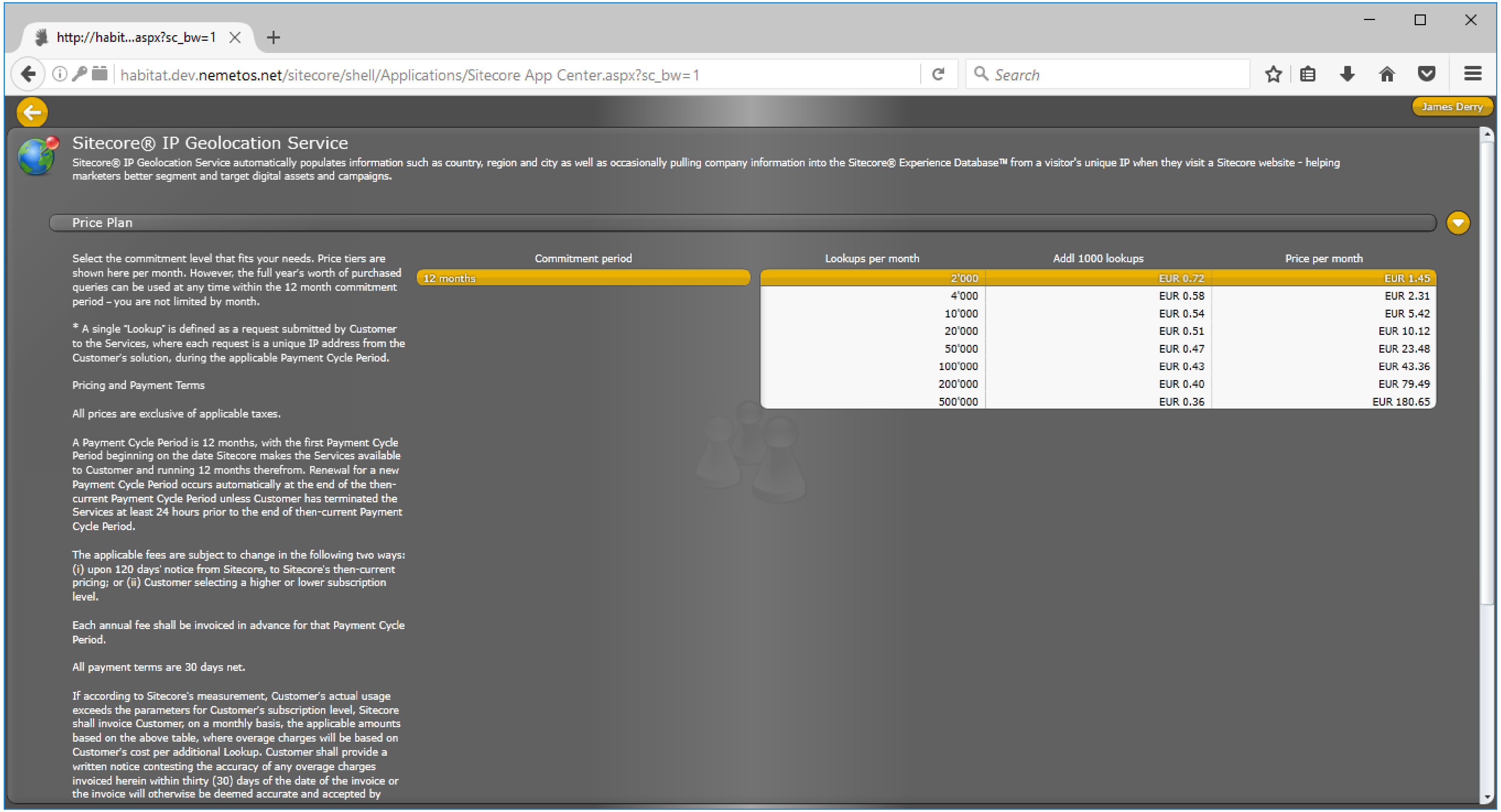
Email Delivery for EXM 1.0 - 3.3 (Dyn)
The new Sitecore Email Cloud replaces the deprecated Dyn connector. To upgrade your subscription and for further information, contact your local Sitecore representative.
...more

Email Preview
See how your email newsletter looks across email clients like Outlook 2010, Gmail, Hotmail and many more. Run the test before sending your email campaigns, to make sure the newsletter design looks as intended in your customers inboxes.
...more

Spam Check
See how your email campaigns are rated in all major SPAM filters like Barracuda, MessageLabs, SpamAssassin and many more. Run the SPAM check before sending your email campaign, and get information whether your email is likely to be rated as spam or not.
...more

Page Preview
Make sure your landing pages work perfectly in various browser versions. With Page Preview get the flexibility of genuine cross-browser landing page and website testing, without the hassle of having to maintain multiple testing environments.
...more

Activation in AppCenter (2)



http://habit...aspx?sc_bw=1
habitat.dev.nemetos.net/sitecore/shell/Applications/Sitecore App Center.aspx?sc_bw=1
Search
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Price Plan

Select the commitment level that fits your needs. Price tiers are shown here per month. However, the full year's worth of purchased queries can be used at any time within the 12 month commitment period – you are not limited by month.

* A single "Lookup" is defined as a request submitted by Customer to the Services, where each request is a unique IP address from the Customer's solution, during the applicable Payment Cycle Period.

Pricing and Payment Terms

All prices are exclusive of applicable taxes.

A Payment Cycle Period is 12 months, with the first Payment Cycle Period beginning on the date Sitecore makes the Services available to Customer and running 12 months therefrom. Renewal for a new Payment Cycle Period occurs automatically at the end of the then-current Payment Cycle Period unless Customer has terminated the Services at least 24 hours prior to the end of then-current Payment Cycle Period.

The applicable fees are subject to change in the following two ways: (i) upon 120 days' notice from Sitecore, to Sitecore's then-current pricing; or (ii) Customer selecting a higher or lower subscription level.

Each annual fee shall be invoiced in advance for that Payment Cycle Period.

All payment terms are 30 days net.

If according to Sitecore's measurement, Customer's actual usage exceeds the parameters for Customer's subscription level, Sitecore shall invoice Customer, on a monthly basis, the applicable amounts based on the above table, where overage charges will be based on Customer's cost per additional Lookup. Customer shall provide a written notice contesting the accuracy of any overage charges invoiced herein within thirty (30) days of the date of the invoice or the invoice will otherwise be deemed accurate and accepted by

Commitment period	Lookups per month	Addl 1000 lookups	Price per month
12 months	2'000	EUR 0.72	EUR 1.45
	4'000	EUR 0.58	EUR 2.31
	10'000	EUR 0.54	EUR 5.42
	20'000	EUR 0.51	EUR 10.12
	50'000	EUR 0.47	EUR 23.48
	100'000	EUR 0.43	EUR 43.36
	200'000	EUR 0.40	EUR 79.49
	500'000	EUR 0.36	EUR 180.65

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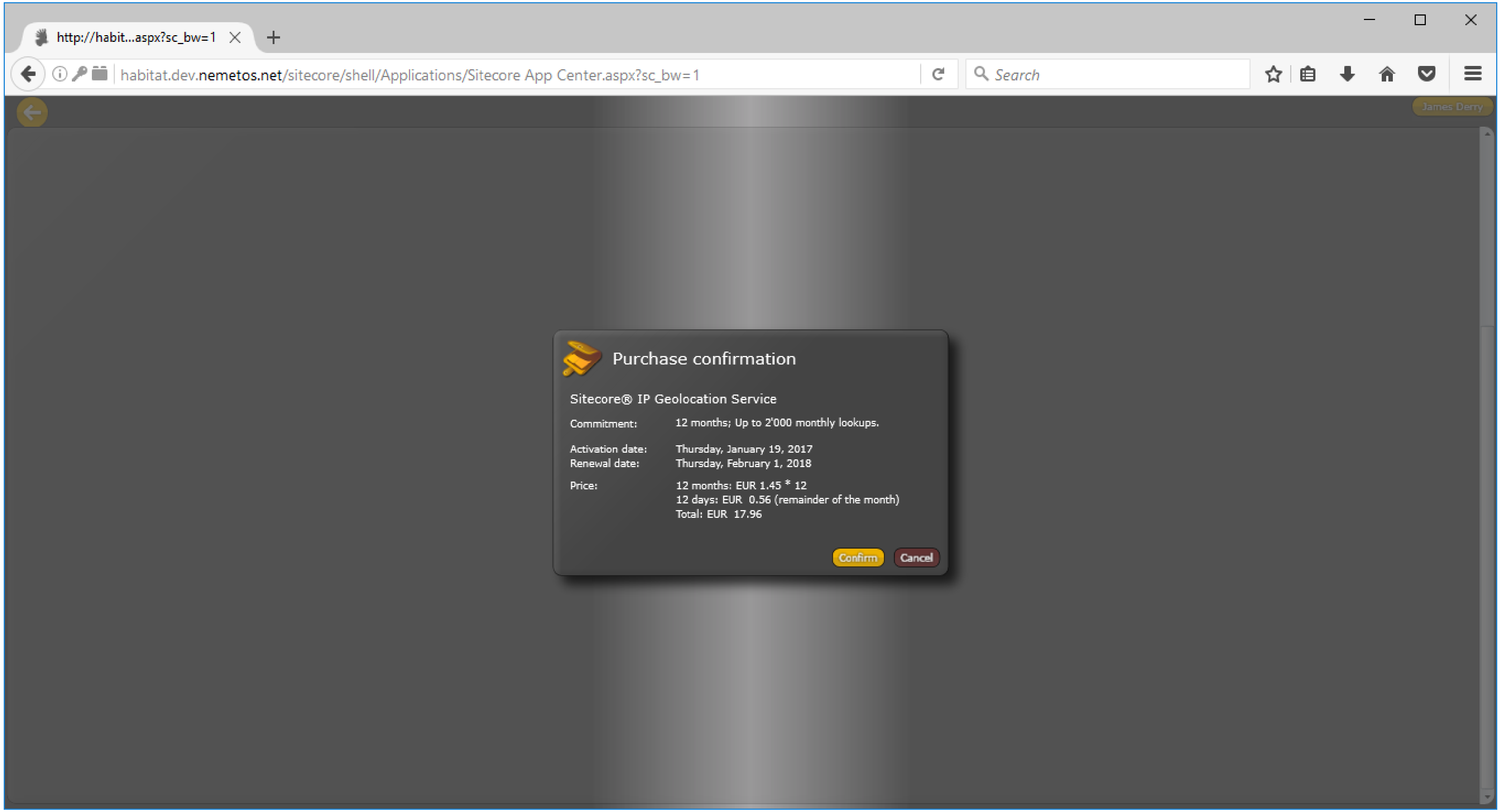
Activation in AppCenter (3)


http://habit...aspx?sc_bw=1
habitat.dev.nemetos.net/sitecore/shell/Applications/Sitecore App Center.aspx?sc_bw=1
Search
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Purchase confirmation

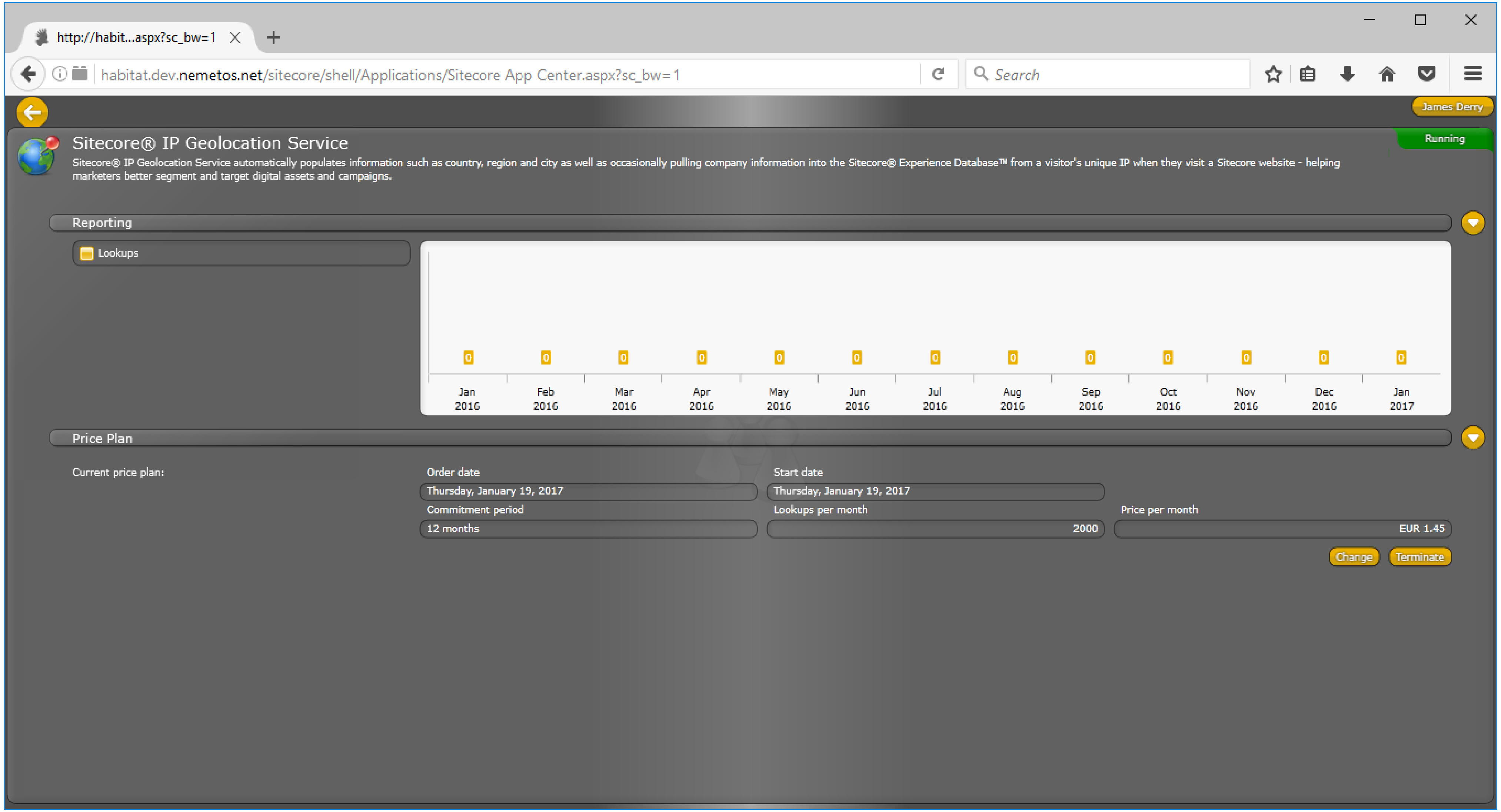
Sitecore® IP Geolocation Service

Commitment: 12 months; Up to 2'000 monthly lookups.

Activation date: Thursday, January 19, 2017
Renewal date: Thursday, February 1, 2018

Price: 12 months: EUR 1.45 * 12
12 days: EUR 0.56 (remainder of the month)
Total: EUR 17.96

Activation in AppCenter (4)



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Current price plan:

Order date: Thursday, January 19, 2017

Start date: Thursday, January 19, 2017

Commitment period: 12 months

Lookups per month: 2000

Price per month: EUR 1.45

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Configuration Settings

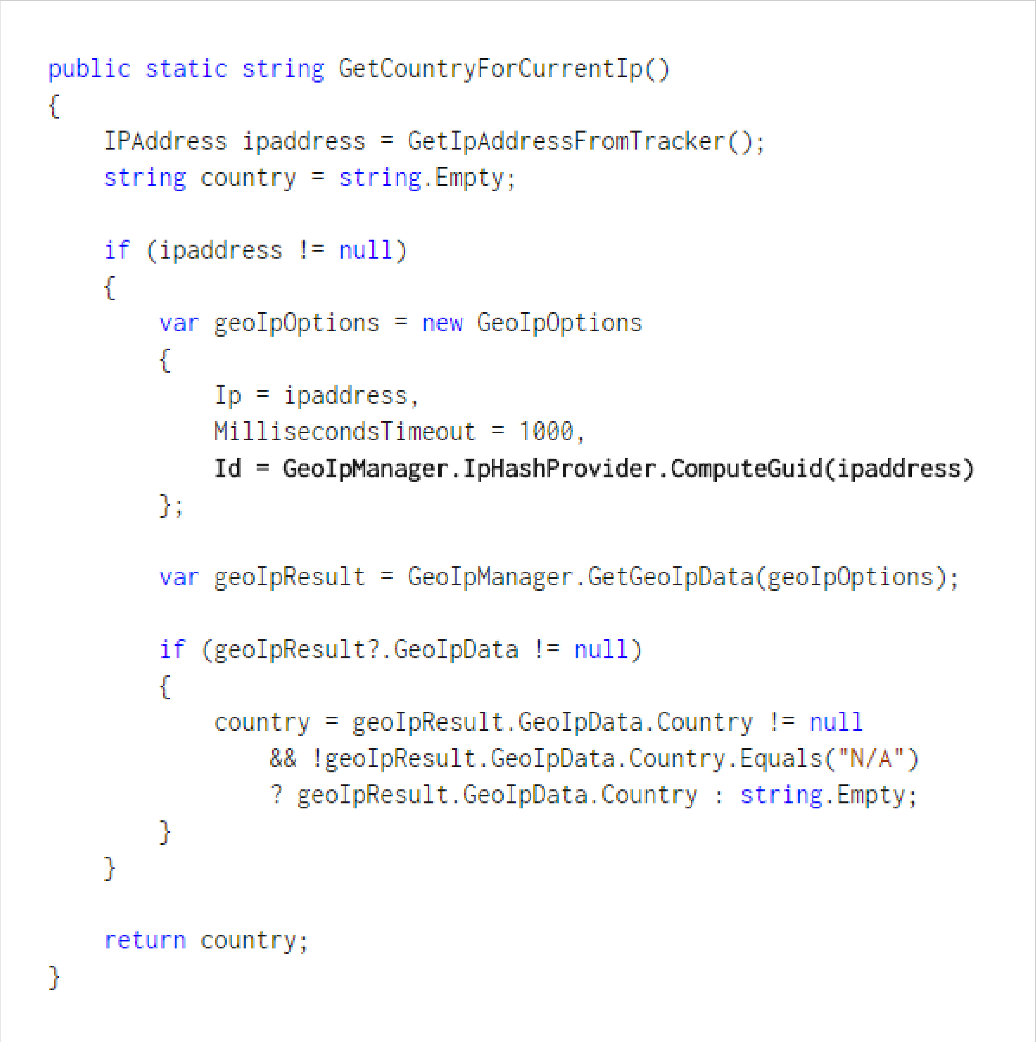
- Analytics enabled
  - Sitecore.Xdb.config

```
<setting name="Xdb.Enabled" value="true" />
<setting name="Xdb.Tracking.Enabled" value="true" />
```

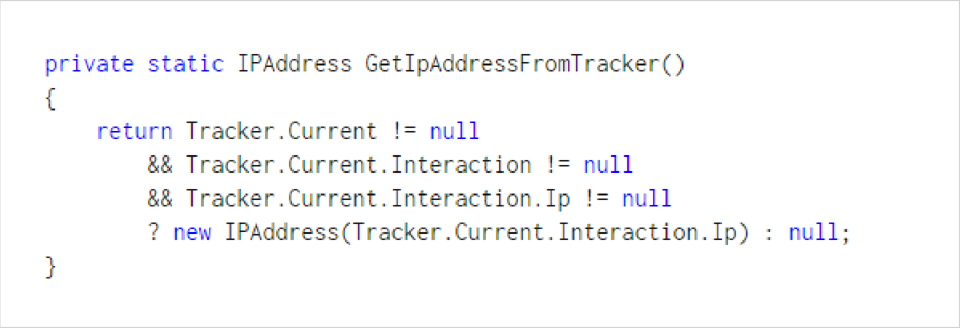
- IP detection
  - Sitecore.Analytics.Tracking.config

```
<setting name="Analytics.ForwardedRequestHttpHeader" value="X-Forwarded-For" />
```

Code



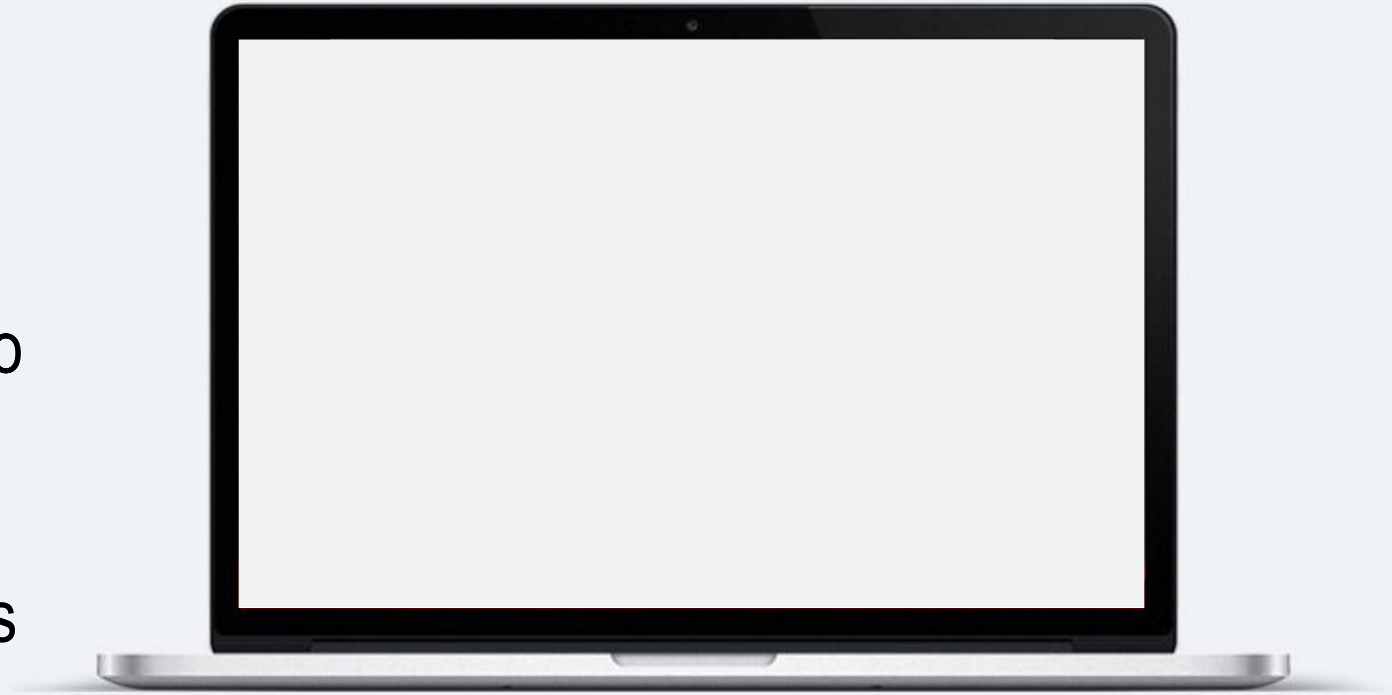
```
public static string GetCountryForCurrentIp()
{
    IPAddress ipaddress = GetIpAddressFromTracker();
    string country = string.Empty;

    if (ipaddress != null)
    {
        var geoIpOptions = new GeoIpOptions
        {
            Ip = ipaddress,
            MillisecondsTimeout = 1000,
            Id = GeoIpManager.IpHashProvider.ComputeGuid(ipaddress)
        };

        var geoIpResult = GeoIpManager.GetGeoIpData(geoIpOptions);

        if (geoIpResult?.GeoIpData != null)
        {
            country = geoIpResult.GeoIpData.Country != null
                && !geoIpResult.GeoIpData.Country.Equals("N/A")
                ? geoIpResult.GeoIpData.Country : string.Empty;
        }
    }

    return country;
}
```



```
private static IPAddress GetIpAddressFromTracker()
{
    return Tracker.Current != null
        && Tracker.Current.Interaction != null
        && Tracker.Current.Interaction.Ip != null
        ? new IPAddress(Tracker.Current.Interaction.Ip) : null;
}
```

Demo – Detect Country based on IP

- Habitat Sitecore Project
- Sitecore 8.2 rev. 161115
- http://habitat.dev.nemetos.net/
- ModHeader – Chrome plugin to change IP
- Test IP: http://habitat.dev.nemetos.net/sitecore/TestIP.aspx



Change provider

- Ex: IP2Location

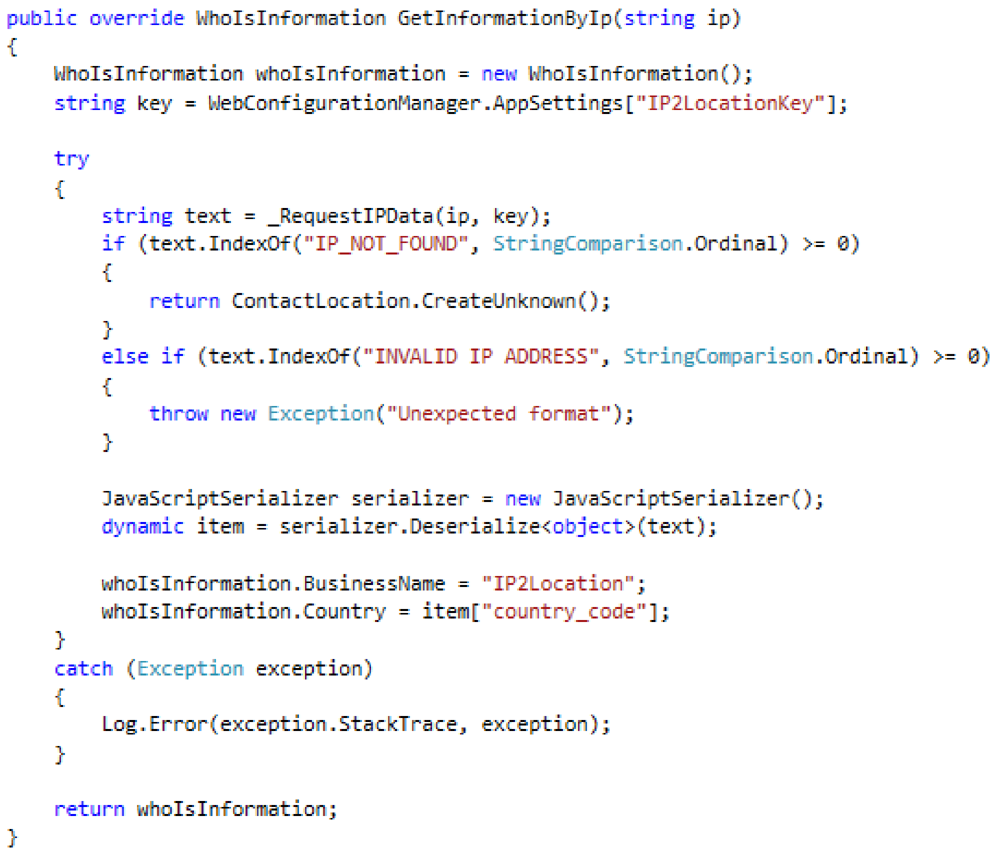
- Web.config

```
<add key="IP2LocationKey" value="demo" />
```

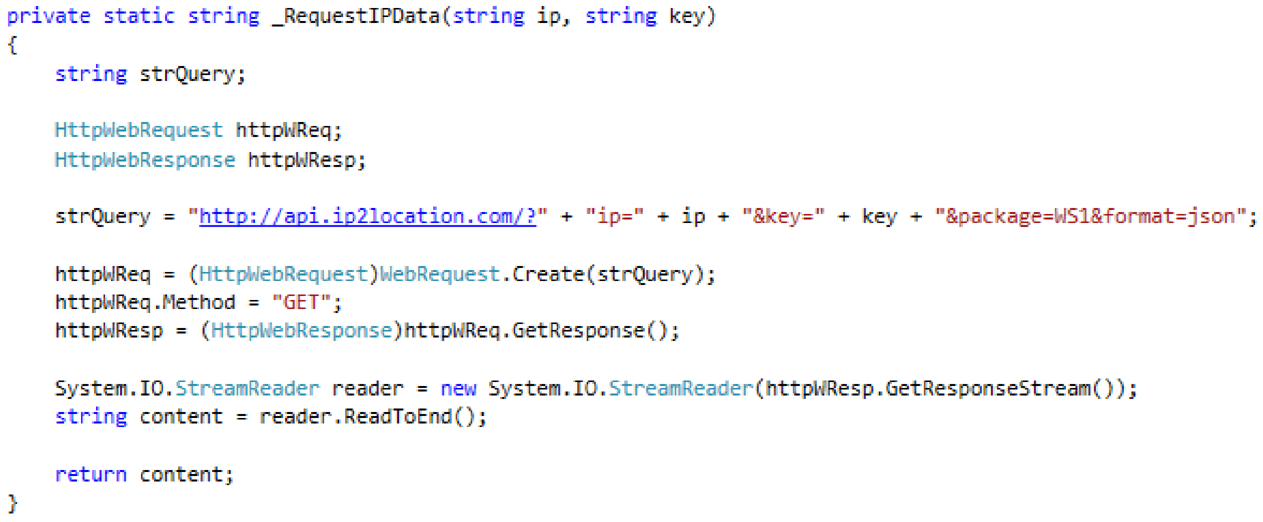
- Sitecore.Analytics.config

```
<lookupManager defaultProvider="default">
   <providers>
    <clear/>
    <add name="default" type="Assembly.Custom.IP2LocationLookupProvider, Assembly"/>
   </providers>
  </lookupManager>
```

IP2LocationProvider



```
public override WhoIsInformation GetInformationByIp(string ip)
{
    WhoIsInformation whoIsInformation = new WhoIsInformation();
    string key = WebConfigurationManager.AppSettings["IP2LocationKey"];

    try
    {
        string text = _RequestIPData(ip, key);
        if (text.IndexOf("IP_NOT_FOUND", StringComparison.Ordinal) >= 0)
        {
            return ContactLocation.CreateUnknown();
        }
        else if (text.IndexOf("INVALID IP ADDRESS", StringComparison.Ordinal) >= 0)
        {
            throw new Exception("Unexpected format");
        }

        JavaScriptSerializer serializer = new JavaScriptSerializer();
        dynamic item = serializer.Deserialize<object>(text);

        whoIsInformation.BusinessName = "IP2Location";
        whoIsInformation.Country = item["country_code"];
    }
    catch (Exception exception)
    {
        Log.Error(exception.StackTrace, exception);
    }

    return whoIsInformation;
}
```



```
private static string _RequestIPData(string ip, string key)
{
    string strQuery;

    HttpWebRequest httpWReq;
    HttpWebResponse httpWResp;

    strQuery = "http://api.ip2location.com/?" + "ip=" + ip + "&key=" + key + "&package=WS1&format=json";

    httpWReq = (HttpWebRequest)WebRequest.Create(strQuery);
    httpWReq.Method = "GET";
    httpWResp = (HttpWebResponse)httpWReq.GetResponse();

    System.IO.StreamReader reader = new System.IO.StreamReader(httpWResp.GetResponseStream());
    string content = reader.ReadToEnd();

    return content;
}
```

Conclusions

- Advantages
  - Integrated with Sitecore, already installed from Sitecore XP 8.1
  - Not expensive, price plan easy to configure from AppCenter

- Disadvantages
  - Not accurate for all IP requests

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Thank you for listening

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