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Database Installation

The Database is located under the following project:

Project - Adrack.Database

To install the database, follow the steps below:

1. Generate a “dacpack” file by building the project.
2. Name the file “Adrack.Database.dacpac”.
3. Deploy the file to your SQL server and get the SQL connection string.

Database Connection Strings

Under the **Adrack.Web/App_Data** folder you can find two files;

1. **ConnectionStringDebug.txt** – use the connection string for debug mode.
2. **ConnectionStringRelease.txt** – use the connection string for release.

Database Location Requirements

The database must be located under the same resource group or the same form of the Adrack application.

SSL Configuration

In order to set the required SSL, follow the instructions below;

You can also use another method (**Web.Config** redirect, **domain** redirect or **javascript** based redirect).

Please note: If you turn on SSL flag then all processing should be done via only https://protocol.

Open AppHttpsRequirementAttribute.cs

- Find OnAuthorization method
- Uncomment the following lines

```
/* //In case if SSL is required please uncomment this line

        else

                appSetting.SslEnabled = true;*/
```

Application Installation and Deployment

Project - Adrack.Web

Build the main project and deploy to the server with IIS and .NET platforms installed.

The latest IIS version and .NET 6.2 platforms are required to run the application.

Publish the application using the Visual Studio 2017 Publish option.

Post-Deployment Compiler

Adrack uses a post-deployment, per-request, run-time compiler and memory cache to generate binary data of all constructed pages. Because of this, the user interface (UI) will load slowly for the first time after publishing a page.

To resolve this issue, please follow the steps below:

1. Open your project published on the VM or Azure service (for help with more than one machine, please see the Configuring Multiple Servers section below).
2. Log in to the Dashboard.
3. Run the following file: “<your server url>/ CalculateCache.html”.
4. Wait until caching and compiling is finished.

After generating a cached and compiled version of your page, it will run faster and use fewer resources on the server.

Configuring Multiple Servers

An Adrack project can be configured on a single server or on multiple machines for high traffic usage.

For multiple machines with high traffic usage, the following configuration is suggested:

- Machine #1 – SQL Server service or VM with the release connection string in the project

- Machine #2 – deployed as the user interface and user experience control machine
- Machine #3 – lead processing; must be deployed to a separate machine and used as a separate URL for importing the leads

For all cases, the database connection string must be the same.

The Adrack cache mechanism must be updated when deploying through multiple machines (for information on how to update the Adrack cache mechanism, see the Adrack Memory Cache section below).

Adrack Memory Cache

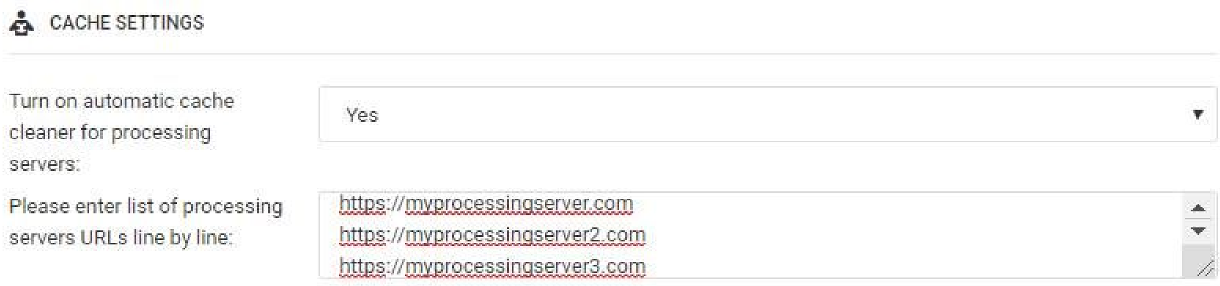
Adrack uses an improved cache system to avoid database overloading while accessing data. Once the data is accessed, it is stored in a memory cache until an update or delete operation is performed with the given data.

Caching also works during lead processing. If the data is modified, then the cache is recalculated. However, the cache is always stored in the memory. When using multiple machines, the cache will cause some of the machines to read incorrect data.

To solve this problem, the user interface machine (#2) must clear the cache of lead processing machines after each update. To enable this setup, go to the **Settings/General Settings/Cache Settings** menu and set the "**Turn ON automatic cache cleaner**" flag to "**YES**".

Turn this flag off if you do not want to see your changes immediately after updating filers, buyers or campaigns. In the **box** below the flag please enter a list of processing server URLs.

For example:



CACHE SETTINGS

Turn on automatic cache cleaner for processing servers: Yes

Please enter list of processing servers URLs line by line:

```
https://myprocessingserver.com
https://myprocessingserver2.com
https://myprocessingserver3.com
```

Processing servers can be included in the load balancer, but in the list you need to put the exact URL addresses of each server.

Manual Cache Clearing

The following API can be called directly from the browser to clear the memory cache on a given server. This API can be used in case the automatic cache cleaner is turned off.

Please note: this function will NOT clear data compiled post-deployment.

<server url>/Home/ClearCacheManager

Triggered Controller Calls

Project - Adrack.Web

Contains controllers that should be called within a period as triggers.

Generates a report for the first page of the dashboard. Without calling this function, the dashboard will be empty. Set this function to be called every 2 minutes.

<server url>/Home/FillMainReport?password=d7DVEkPMRWrnYbp227PawkH

This function generates invoices and should be called one time per day. For each buyer and affiliate, this function will generate an invoice based on the selected invoice generation period.

API URL:

<server url>/Accounting/GenerateInvoices?password=d7DVEkPMRWrnYbp227PawkH

Unit Tests

Project – Unit Test-Services

Test Database

1. Install the test database from the “Documents – Test Database” folder.
2. Set the connection strings from the “Unit Test-Services/App-Data" folder.
3. Set the connection strings to the test database only. Never connect these strings to the real database or you will lose data.

Integration Tests

Project - IntegrationTest-FrontEnd

1. Install the test server on any platform.
2. Set up in UnitTestWeb Test Server property.
3. Run the tests.

Configuration used during stress testing

VMs and DB Configuration

VM specs are z1d.6xlarge 24 core CPU, 192 GB memory, 900GB SSD, 10 Gig Network

SQL m4.4xlarge 16 core CPU, 64 GB memory, General Purpose SSD

IIS Setup

Number of Worker Processes: 8

All other settings are default