

ZNODE AWS INSTALLATION GUIDE

October 2015



Znode Multifront Installation on AWS

Prerequisites

- Open http://aws.amazon.com, and then click Sign Up.
- $\ensuremath{\operatorname{Follow}}$ the on-screen instructions given in the below document.

http://docs.aws.amazon.com/gettingstarted/latest/wah/getting-started-prereq.html

Required software:

- 1. SQL Server 2008 R2
- 2. .Net Framework 4.5
- 3. IIS 7.5
- 4. Microsoft report viewer 2010

Note: To install the IIS and .Net framework please refer Step 4 in the below document. http://docs.aws.amazon.com/gettingstarted/latest/wah/getting-started-deploy-app.html

Installation Steps:

- 1. Download the Installer from Znode.com
- 2. Run the Installer
- 3. Create the Database from the Znode_Multifront_Database.sql script.
- 4. Update the Znode Multifront Domain Name in the ZnodeDomain table
- 5. Update Znode.Engine.Admin and Znode.Engine.Api Web.config
- 6. Update Znode.Engine.MvcDemo Web.config
- 7. Update Znode Background Service Config and install.
- 8. Build the projects
- 9. IIS Setup





1. Download the Installer from Znode.com

2. Run ZNode Multifront Installer

1. Download the installer file and double click.

NOTE: Be sure to select a desired location for Znode, it is recommended that you **do not** put Znode in the Program Files folder. We will reference this directory as \$InstallationDirectory throughout this document.

2. Follow the prompts.



Projects Folder contains all projects and libraries associated with the Multifront Solution: Znode.Engine.Admin – Project associated with running the Merchant Admin Dashboard Znode.Engine.MvcDemo –Project associated with running the Front End U/I of the demo site. Znode.Engine.API – Project associated with running the Znode API

SQL contains the script for creation of the Znode Multifront database.



3. Database Setup

In order to render the Znode Multifront site, the Znode Multifront database must be created.

You can find the database creation script under the \$InstallationDirectory\SQL folder.

1. Open Microsoft SQL Server Management Studio. (IMPORTANT: Always run SQL Server as admin)

2. Run the znode_multifront_database.sql script (found in the SQL folder). This will create a new database called **znode_multifront**. You can change the name of the database prior to running the script, but you will need to update the remaining config files manually.

3. Create a SQL Login. Default web.config settings will use userid = znodeuser with password = p@ssw0rd in their connection string. (Note that you can create a different SQL login or use windows authentication --- in those cases you need to update the web.config appropriately).

4. Open Security folder and Right click the Logins folder and select New Login. This is optional you can also use existing znodeuser dbo user.



- 5. Enter Login name in the Login name field.
- 6. Select the SQL Server Authentication radio button.



7. Enter the password associated with your SQL username in the Password field and enter it again in the Confirm Password field.

8. Click OK. Important: Assign DBO permissions to the login for the database for both schema and roles.

8	Login Properties	s - znodeuser	_ D X
Select a page	<u> S</u> cript 👻 🛐 Help		
General Server Roles User Mapping Securables Status	Login name: Vindows authentication SQL Server authentication Password: Confirm password: Specify old password Old password: Enforce password policy Enforce password expira User must change passw Mapped to certificate	znodeuser	Search
Connection	Map to Credential		► Add
Server: WIN-3H2ME5C3VR2\SQLEXPRE Connection: WIN-3H2ME5C3VR2\Administrato	Mapped Credentials	Credential Provider	
Progress			Remove
O ^{Ready}	Default database: Default language:	master English	× ×
		ОК	Cancel

9. Right---click your new znodeuser login ID and select Properties.





Object Explorer	→ ↓ ×
Connect 🕶 📑 📑	- 7 🥃 📓
😑 🐻 WIN-3H2ME5C	C3VR2\SQLEXPRESS (SQL Server
🖃 🚞 Databases	
🕀 🧰 System I	Databases
💮 📑 Znode_N	Multifront
🖃 🦲 Security	
E Logins	4S. Dolicy EventDrococcingLogic
A ##M	MS_PolicyZsalExecutionLogin#
🚮 BUIL	LTIN\Users
A NT A	AUTHORITY\SYSTEM
👼 NT S	SERVICE\MSSQL\$SQLEXPRESS
📥 sa	
🐣 WIN	N-3H2ME5C3VR2\Administrato
🐣 znoc	e New Login
🕀 🧰 Server R	R Scriptlogipas N
🕀 🛄 Uredent	
🖶 📴 Server Obje	e Policies 🕨
🕀 🛄 Nanageme	e Facets
	Start PowerShell
	Reports 🕨
	Rename
	Delete
	Refresh
	Properties

10. Select User Mapping in the upper left, and then select the znode_multifront database. 11. Scroll to and check the db owner role membership in the lower---right panel.

12. Confirm Public is already checked (it should be check by default). If it's not, check the box now.

13. Click OK.





4. Update Domain Settings

In order to render the Znode/Multifront site, the Domain Name associated to your Multifront instance needs to be added to the Znode Domain table. (This is the Domain name of your website)This will be required for all stores. Only follow these steps if yourwebsite name is different from default websites.

To update Domain name in the Domain table:

- 1. Open SQL Server.
- 2. Go to the ZnodeDomain table in znode_multifront database
- 3. Add New domain name For Example: ec2-54-68-32-246.us-west-2.compute.amazonaws.com



5. Update Admin and API Web.configs

Update connection string and Lucene Index file location in below projects web.config files

- 1. Znode.Engine.Admin path is \Projects\Znode.Engine.Admin\Web.config
- 2. Znode.Engine.API path is \Projects\Znode.Engine.Api\Web.config
- 3. Znode.Engine.Demo path is \Projects\Znode.Engine.Demo\Web.config Example of

connection string is given below

```
<connectionStrings>
<add name="ZNodeECommerceDB" connectionString="Data Source=localhost;Initial
Catalog=znode_multifront;user id=YourUserId;password=YourPassword " />
</connectionStrings>
```





Default Lucene Index file location and LuceneIndexReaderKey is given below. Below entry needs to match in all configs

```
<add key="LuceneIndexLocation" value="C:\LuceneData" /> <add key="LuceneIndexReaderKey" value="Ajgsfdj342343kdksjsjncmflfl" />
```

6. Update MVCDemo Web.configs

1. Update following in appSettings section of Znode.Engine.MVCDemo/web.config

```
<add key="ZnodeApiRootUri" value="http://api.multifront.localhost.com" />
<add key="ZnodeApiUriItemSeparator" value="," />
<add key="ZnodeApiUriKeyValueSeparator" value="~" />
<!-- Store Domain and Key : key=DomainName and Value=ApiKey -->
<add key="mvcdemo.multifront.localhost.com" value="4FB7C166-AF0F-43A2-
A02AEFB14D5ADAFF"
/>
<add key="mvcnutsdemo.multifront.localhost" value="DCD0F4BD-1E83-455B-A845-
4632C3EE27C8" />
<add key="store.multifront.localhost.com" value="a940eed6-5fd8-4970-
9ecefdff029e4ab8"
/>
```

Note: api.multifront.localhost.com is the default domain name of Znode API. Make sure it matches API domain name and API Key that has been configured in the ZNodeDomain database table.

7. Znode Background Service Installation

This is a Windows service that must be installed and running in order for the Lucene search index to be updated and maintained. The name of the executable is Znode.BackgroundService.exe and shows up in Service Manager as "Znode Background Service". Each web server will have its own copy installed and running.

1. Open command prompt. (Start->Run->cmd)

2. Enter the following command to build Znode.Engine.Task

C:\Windows\Microsoft.NET\Framework\v4.0.30319\msbuild "\$InstallationDirectory%\Projects\Znode.Engine.tasks\Znode.Engine.tasks.csproj"

3. Create a directory e.g. (C:\BackgroundService) where the BackgroundService files will be deployed.

4. Copy all files from \$InstallationDirectory\Projects\Znode.Engine.Task\bin\Debug to C:\BackgroundService



5. Copy all files from \$InstallationDirectory\SharedLibaries\BackgroundService to C:\BackgroundService NOTE: Installing the Background service from different locations will allow you to rebuild the project in the future without running into errors with the background service dll(s) being in use.

6. Open Znode.Background.Service.exe config in a text editor with the below sections updated: <Znode.Engine.Tasks.Lucene>

```
<LogFolder value="C:\BackgroundService\Logs" />
<TransactionLogFile value="C:\BackgroundService\Logs\_transaction.log" />
<LuceneIndexLocation value="C:\LuceneData" />
<LuceneIndexInterval value="30" />
<LuceneIndexReaderKey value="913837FD-36F5-4B88-85A7-651E9976A775" />
<LuceneIndexReaderUrl
value="http://api.multifront.localhost.com/search/reloadindex" />
<OnStartWaitTime value="10" />
<ServerName value="SERVER_NAME" />
</Znode.Engine.Tasks.Lucene>
```

a. LogFolder ---> Location of log file

b. TransactionLogFile ---> Location of Transaction logs

c. LuceneIndexLocation ---> Location of Lucene Index file

NOTE :--- Make sure this location is same which has been provided in other web.config files (section 5).

d.LuceneIndexReaderUrl --->

- WebForms (http://demo.multifront.localhost.com/UpdateLuceneReader.aspx)
- MVC (http://api.multifront.localhost.com/search/reloadindex)

e. ServerName ---> This is the name of the server where the Lucene background task is running

7. Update App Setting Section

```
<appSettings>
<add key="EnableWhatDoIHave" value="false" />
<add key="EnableDebugLog" value="true" />
<add key="DebugLogFile"
value="C:\BackgroundService\Logs\_debug.log" />
<add key="LuceneIndexLocation" value="C:\LuceneData" />
</appSettings>
```

Provide Same LuceneIndexLocation.





8. Update Connection string

9. Znode.Background.Service.Install.bat is a file that will install the service and reference the location of the Znode.Background.Service.exe. Verify binPath is pointing to Znode.Background.Service.exe

• e.g. (binPath= "C:\BackgroundService\Znode.BackgroundService.exe")

10. To run the batch script, right---click on the Znode.BackgroundService.Install.bat file and select Run as administrator.

8. Build Applications

To compile/build application:

Please update the highlighted path with your installer location

- 1. Open command prompt. (Start->Run->cmd)
- 2. Enter the following command to build Znode.Engine.Admin

C:\Windows\Microsoft.NET\Framework\v4.0.30319\msbuild "<mark>C:\Installer\Znode Multifront_</mark> <mark>Enterprise</mark>\Projects\Znode.Engine.Admin\Znode.Engine.Admin.csproj"

NOTE: If you face the following error while building the project "v11.0\WebApplications\Microsoft.WebApplication.targets was not found"

Then you can resolve the issue by Copying the following folder from your dev machine to your build server

C:\Program Files (x86)\MSBuild\Microsoft\VisualStudio\v11.0\WebApplications

3. After successful build, enter the following command to build Znode.Engine.MvcDemo C:\Windows\Microsoft.NET\Framework\v4.0.30319\msbuild "C:\Installer\Znode Multifront Enterprise\Projects\Znode.Engine.MvcDemo\Znode.Engine.Mvcdemo.csproj"



4. After successful build, enter the following command to build Znode.Engine.Api C:\Windows\Microsoft.NET\Framework\v4.0.30319\msbuild "C:\Installer\Znode Multifront Enterprise\Projects\Znode.Engine.Api\Znode.Engine.Api.csproj"

5. After successful build, enter the following command to build Znode. Engine. Demo

C:\Windows\Microsoft.NET\Framework\v4.0.30319\msbuild "C:\Installer\Znode Multifront Enterprise\Projects\Znode.Engine.Demo\Znode.Engine.Demo.csproj"



9. IIS Setup

To begin the configuration of Znode.Engine.Api :

1. Open IIS and select Sites.

2. Right click and click Add Web Site and enter the Sitename, select the physical path as (\Projects\Znode.Engine.Api) and enter the host name as follows:

Note: Make sure Host name is the same as Domain name for the API given in ZnodeDomain Table and provided in MvcDemo web.config file



Add Website ? X
Site name: Application pool: ZnodeAPI ZnodeAPI
Content Directory Physical path: Znode Multifront Enterprise\Znode.Engine.api Pass-through authentication Connect as Test Settings
BindingType:IP address:Port:httpIII Unassigned84Host name:ec2-54-68-32-246.us-west-2.compute.amazonaws.comExample: www.contoso.com or marketing.contoso.com
✓ Start Website immediately OK Cancel

3. Click Ok, A new website is created in IIS. To give the permissions, select the site, right click and select Edit

4. Give Permissions for NETWORK SERVICE and IIS_USR.

5. Right click on API Website and Add Virtual Directory and point that virtual directory to Projects/Znode.Engine.Admin/data folder as shown in below screenshot.



	Add Virtual Directory
Site name: Path:	multifrontapi /
Alias: Data Example: ima Physical path	ges :
∲rojects\Zno Pass-through Connect as	authentication Test Settings
	OK Cancel

6. Make an entry in the host file for API configuration.

- Hosts file is located at (C:\Windows\System32\drivers\etc\hosts)
- Create an entry for the API URL (i.e. 127.0.0.1 ec2-54-68-32-246.us-west-2.compute.amazonaws.com)

7. Update the .Net Version to ".Net CLR version v4.0.30319" in your App pool

Open IIS Server->Application Pool->Select your AppPool->Basic Settings

Edit Application Pool 🛛 ? 🛛 🗙		
Name:		
multifrontapi		
.NET CLR version:		
.NET CLR Version v4.0.30319		
Managed pipeline mode:		
Integrated 🗸		
Start application pool immediately		
OK Cancel		

8. Restart IIS.

Znode AWS Installation Guide Copyright © 2015. All rights reserved.





MVC Site, Web Form and Site admin Set up

Znode Multifront provides several projects to allow control in flexibility to how the solution will be deployed in IIS. As such, your deployment steps by include changes such as binding, websites, applications, and application pools. These steps are intended as a generic guideline for running the solution in IIS, either in production, staging, or development machine.

Each project must be built or published before deploying.

Follow same steps for all websites

- 1. Open IIS Manager (inetmgr.exe)
- 2. Right Click "Sites"
 - a) "Add Website" a. Site name: Name of the website that will be displayed in IIS.
 - b) Physical Path: Will be one of the following for 3 different sites
 - (1) Znode.Engine.Admin
 - (2) Znode.Engine.MvcDemo
 - (3) Znode.Engine.Demo
 - c) Host name: Will be the domains being used for stores. These should match up with domains in the Znode Domain table of the Znode Multifront database.
 - d) Physical path should point to the appropriate solution i. MVC Websites = Znode.Engine.MvcDemo ii. Admin Dashboard = Znode.Engine.Admin iii. Web Form Website = Znode.Engine.Demo.

Verify the Deployment of Multifront

After creating the database and updating the corresponding web.config files, set each of the following as Startup Projects and debug to confirm the website will load:

- Znode.Engine.Admin
- Znode.Engine.MvcDemo
- Znode.Engine.API

Note: Default username/password for Site Admin is admin/admin



U	LTIFRONT®	
	Merchant Login Log in to setup and manage your store.	
	▲ Username	
	Password	
	LOGIN	

Remember Me	Forgot your password?





Home API

API Overview

The Znode API is organized around REST and is designed to have predictable, resource-oriented URLs and to use HTTP response codes to indicate API errors. The API uses built-in HTTP features — such as headers, methods, and status codes — which can be understood by any off-the-shelf HTTP client. The Znode API only supports requests and responses in JSON format.

Authentication

The Znode API supports authentication by looking for the following values in the request header:

- Znode-DomainName: This is the domain for the store whose data will be retrieved during the request.
- Znode-DomainKey: This is the API key for the domain, as found in the ZNodeDomain table in the Multifront database.

Having these two values in the header also sets the context for the request. Meaning, if you set the Znode-DomainName header value as "www.mysite1.com", then all data retrieved during the request will be for the store related to that domain.

All requests to the Znode API require that **both** header values exist in the request; if either one doesn't exist, the request will fail. Also, if the Znode-DomainKey value doesn't match the one associated with the Znode-DomainName, the request will fail. If either of these two scenarios cause the request to fail, the response will immediately return with the following information:

- HTTP status code: 403 Forbidden
- · HTTP status description: Domain name and key are either incorrect or missing from the reaquest header.

Disabling Authentication

Authentication can be disabled by setting ValidateDomainHeaders to false in the <appSettings> section of the API's web.config file. However, in most cases, this value should be set to true in production environments.

<add key="ValidateDomainHeaders" value="true" />

During Development

When developing a client that uses the Znode API, it will be useful at times to open endpoints in a browser in order to see data. To ensure this is possible, you need to add an entry in the ZNodeDomain table for the domain of the API itself. In this case, simply disabling authentication will have no affect.

For example, if you have the API deployed locally at "api.localhost.com", you should add an entry in the ZNodeDomain table where the DomainName field is "api.localhost.com" with the relevant portal ID. This will be the context for retrieving data when viewing endpoints in a browser.

IMPORTANT: This should be for development purposes only.





Our Special Offers of the Month



Best Sellers



Subscribe Your Email ID	Newsletter >		f 7 8 8 7
SHOP	HELP	STORE INFO	CUSTOMER SUPPORT



< >



Email Settings

- 1. Go to Setup->Stores
- 2. Click on Manage for the specific store.
- 3. Goto SMTP tab and click Edit

4. Enter the following settings in Edit SMPT settings. Your SMTP details will be found in Console->SES

Using SMTP to Send Email with Amazon SES

You can send email through Amazon SES by using a variety of SMTP-enabled programming languages an

To send email using SMTP, you will need to know the following:

Server Name:	email-smtp.us-west-2.amazonaws.com	
Port:	25, 465 or 587	
Use Transport Layer Security (TLS): Yes		
Authentication:	Your SMTP credentials - see below.	

To send email through Amazon SES using SMTP, you must create SMTP credentials. SMTP credent Amazon SES SMTP endpoint. You can use the same set of SMTP credentials for all regions in which Ama

To obtain your SMTP credentials, click the button below. For more information about SMTP credentials, cl

Create My SMTP Credentials

Note: Your SMTP user name and password are not the same as your AWS access key ID and secret acce against the SMTP endpoint. For more information about credential types, click here.

Edit SMTP Settings for - Fine Foods

SMTP Settings	
SMTP Port	
SMTP Server	
SMTP Server User Name	
SMTP Server Password	
Enable SSL for SMTP	
	SUBMIT CANCEL

5. Please make sure you have verified the email id in Verified sender section of SES.





Add Port Numbers to your Website (For testing)

To add a port to the exceptions list

- 1) Open Windows Firewall.
- 2) Click the Exceptions tab, and then click Add Port.
- 3) In Name, type a name for the port exception. This name will appear in the exceptions list.
- 4) In Port number, type the number of the port that you want to add to the exceptions list.
- 5) Click either TCP or UDP, depending on the type of traffic, and then click OK.





Trouble Shooting

• If you are facing the below error or you are facing an issue in Reports

Could not load file or assembly 'Microsoft.SqlServer.Types, Version=11.0.0.0, Culture=neutral, PublicKeyToken=89845dcd8080cc91' or one of its dependencies. The system cannot find the file specified.

then you can resolve the issue by Copying the following folder from your dev machine to your build server

C:\Program Files (x86)\ Common Files\Merge Modules

	Advance	ed Settings ?	x
⊿	(General)		^
	.NET CLR Version	v4.0	
	Enable 32-Bit Applications	True	¥
	Managed Pipeline Mode	Integrated	
	Name	multifrontapi	
	Queue Length	1000	
	Start Mode	OnDemand	=
⊿	CPU		
	Limit (percent)	0	
	Limit Action	NoAction	
	Limit Interval (minutes)	5	
	Processor Affinity Enabled	False	
	Processor Affinity Mask	4294967295	
	Processor Affinity Mask (64-bit option)	4294967295	
⊿	Process Model		
⊳	Generate Process Model Event Log Entry		
	Identity	NetworkService	
	Idle Time-out (minutes)	20	

• If you are facing issue in API runtime then update the following in your IIS Apppool



Allow apps to communicate through Windows Firewall

To add, change, or remove allowed apps and ports, click Change settings.

What are the risks of allowing an app to communicate?

🛞 Change settings

Allowed apps and features:					
Name	Private	Public	^		
iSCSI Service					
Key Management Service					
Netlogon Service					
Network Discovery					
Performance Logs and Alerts					
Port 81-84		✓	=		
Remote Desktop	\checkmark	✓			
Remote Event Log Management					
Remote Event Monitor					
Remote Scheduled Tasks Management					
Remote Service Management					
Remote Shutdown			\checkmark		
	Details	Remove	e		
	Allow another app				

