Propel

Reach your servers

**Configuration Management**

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# Development Phases

Two phases planned so far:

**Phase I**: The tool will be accessible only from a specific server via Remote Desktop technology, reducing any security risk to the minimum.

**Phase II**: The tool will be accessible from the internet adding security to both APP and API.

**This document will focus on the configuration management aspect of Phase I only**.

# First time deployment

This topic is going to cover everything required to deploy the solution for the first time. We will take care of all the project dependencies that we need to install and configure.

## Node.js

Navigate to Node.js site and download the current LTS, (Long Term Support), version. Then install using all by defect options, with the exception of the “Tools for native modules check that need to be checked manually as you can see in Figure 2.

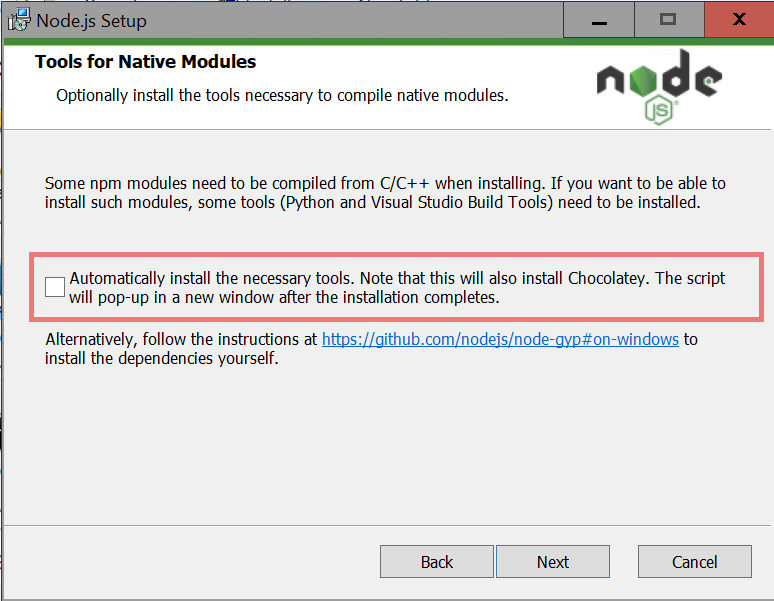


Figure Keep this unchecked: "Tools for Native Modules"

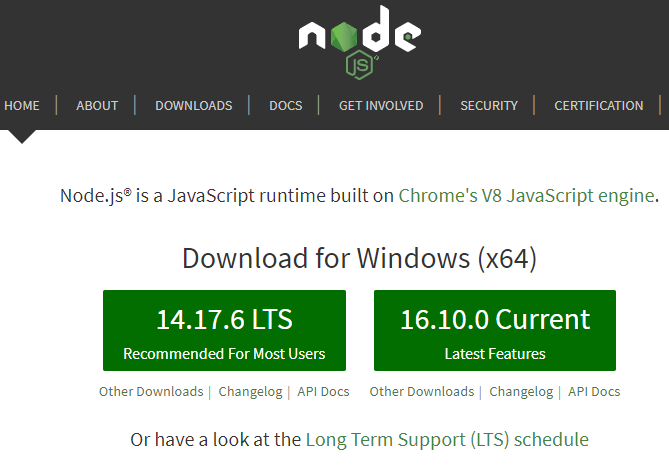


Figure - Node.js LTS version

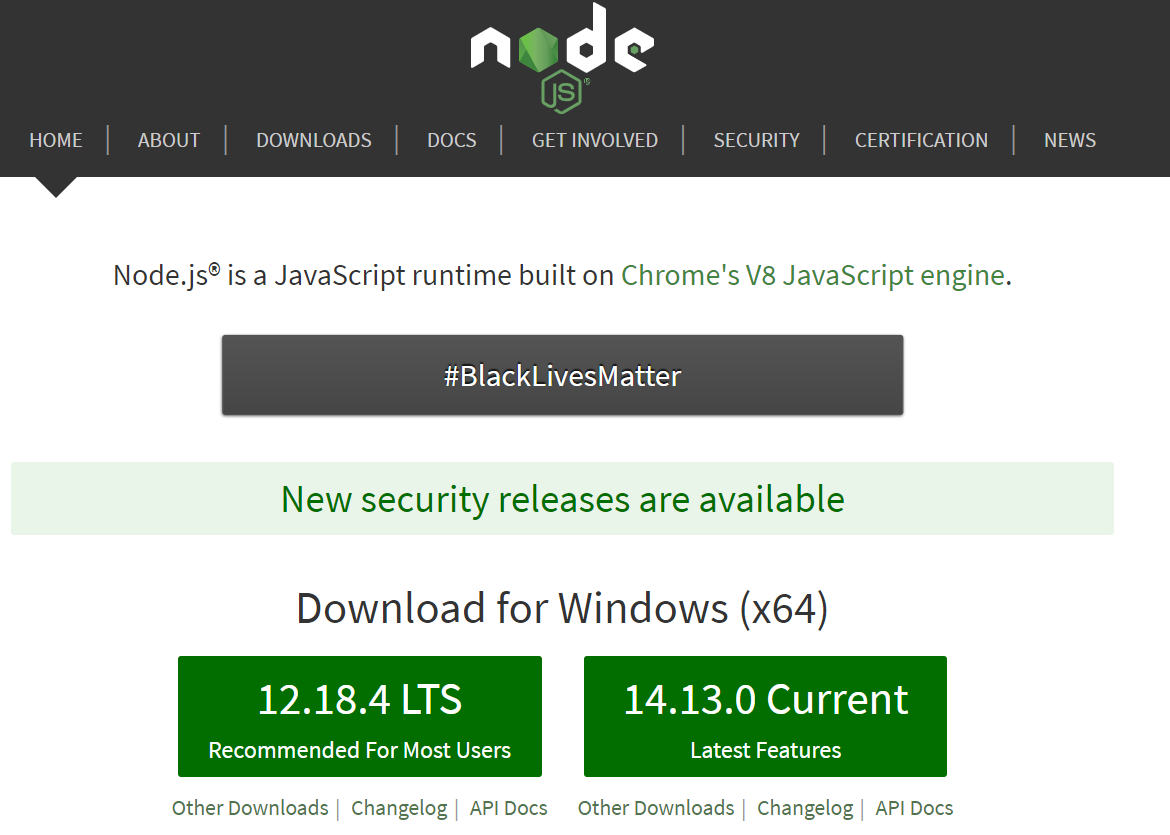


Figure - Node.js LTS version

After Node is installed, you can check it’s version and also the one for Npm, (Node Package Manager), by running the command you can see in Figure in a PowerShell console.

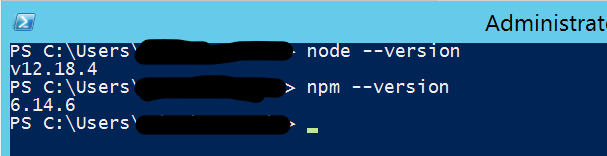


Figure 2 - Checking Node.js versions

## MongoDB

Download the Mongo DB community server edition and install it with the default values. Choose the version based on the support of the OS. From time to time Mongo is dropping the support for different Server versions.

Choose the most up to date version that support your target OS. When the installation prompt for a setup type be sure to select the “Complete” option as you can see in Figure 4.

Next step is to configure MongoDB to run as a service, if you want to change the default Mongo db folders for data and logs, prepare the folders in advance and change them as indicated in **Error! Reference source not found.**.

Last step in the installer is prompting about to install Mongo DB compass, uncheck the option. You can install later if needed. Also, optionally you can try [Robo 3T](https://robomongo.org/), (a.k.a. RoboMongo), is a light Mongo DB GUI.

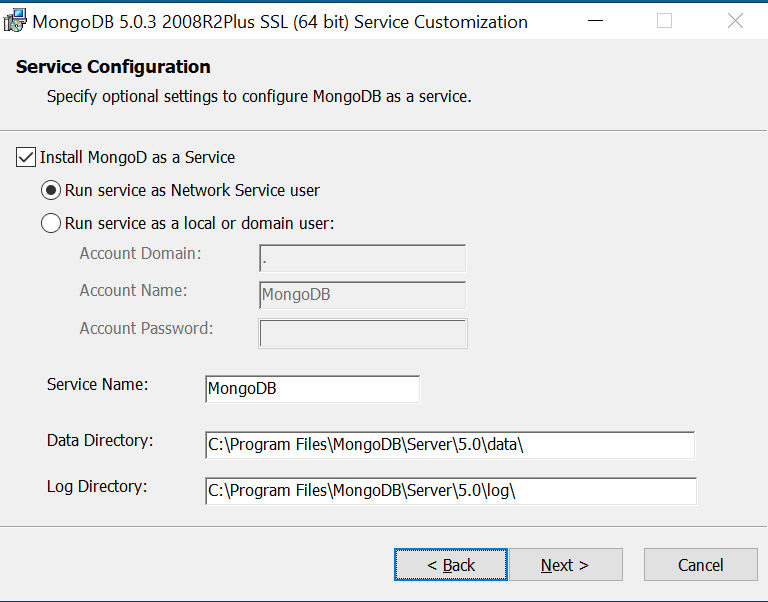


Figure - Installing Mongo DB as a service

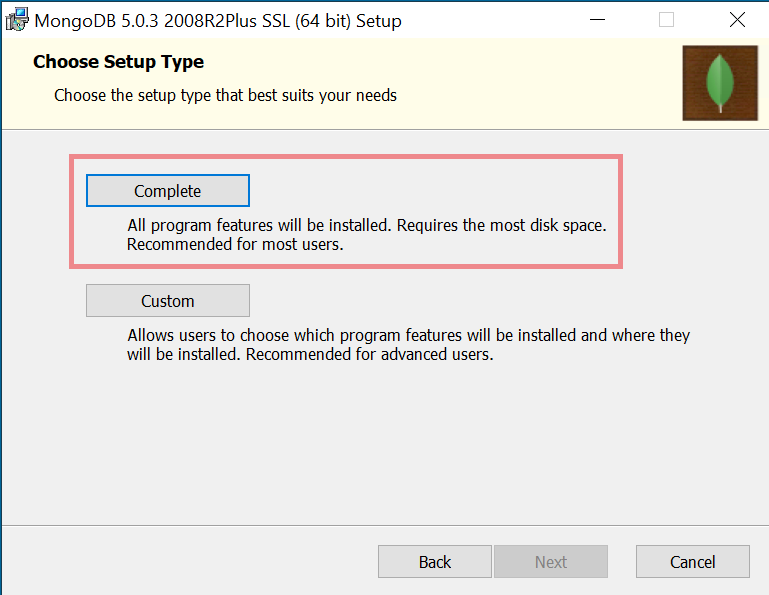


Figure - Choose complete setup type

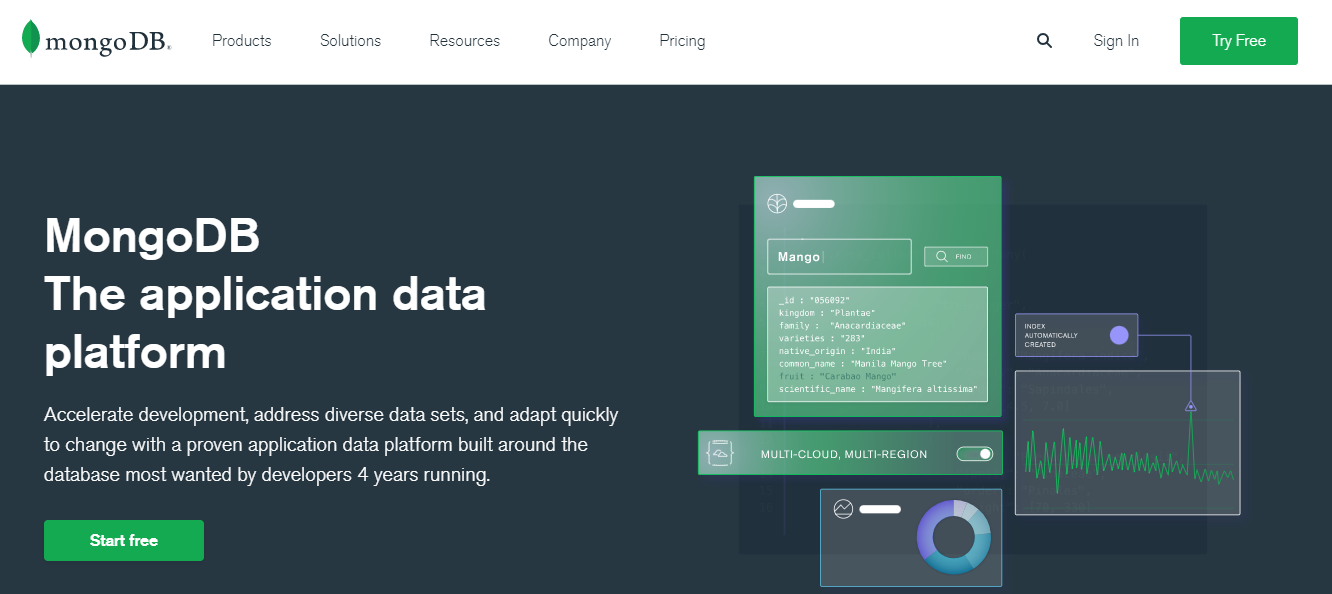


Figure - Mongo DB site

If after the installation you want to change the folders the engine is going to use for data and logging, you must proceed in this way:

**1st -** Stop the “MongoDB” service.

**2nd** - Open the folder “*C:\Program Files\MongoDB\Server\4.0\bin*” with a file explorer instance.

**3rd** - Make a backup of current “mongod.cfg” file.

**4th** - Update the mongod.cfg file by modifying the “storage.dbPath” and “systemLog.path” values as detailed in Figure 6.

**5th** - Grant full access to the local built in account “NETWORK SERVICE” over those folders,(Figure 7).

**6th** - And as last step, start the service.

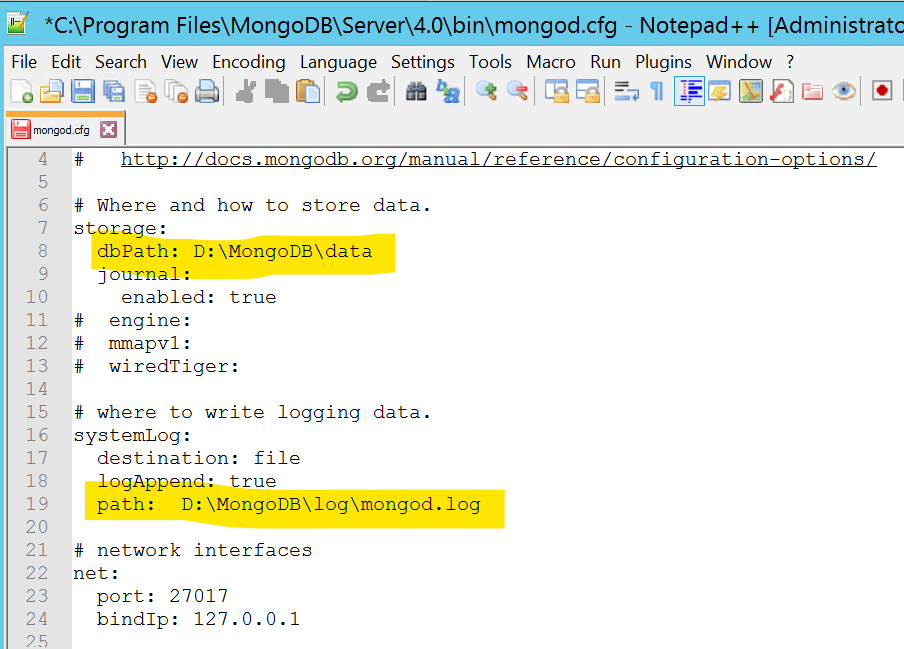


Figure - Modified Mongod.cfg file with alternative folders.

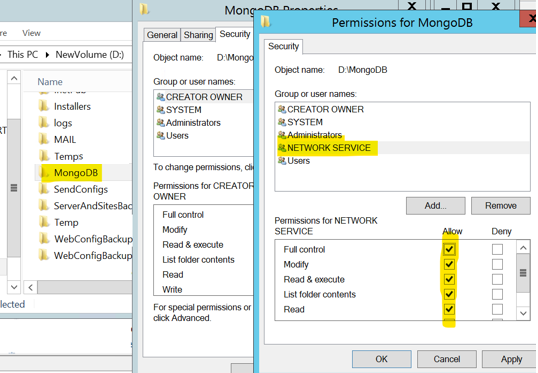


Figure - Granting full access to the service account.

Also, you maybe would like to install the [Mongo DB tools](https://www.mongodb.com/try/download/database-tools). These are helper commands to for example make backups, extract or import data into the db, etc.

To avoid later that the Propel installer failed, there is one more single step required. This is to add Mongo DB runtime folder to the global path. You can do it by running the following script.

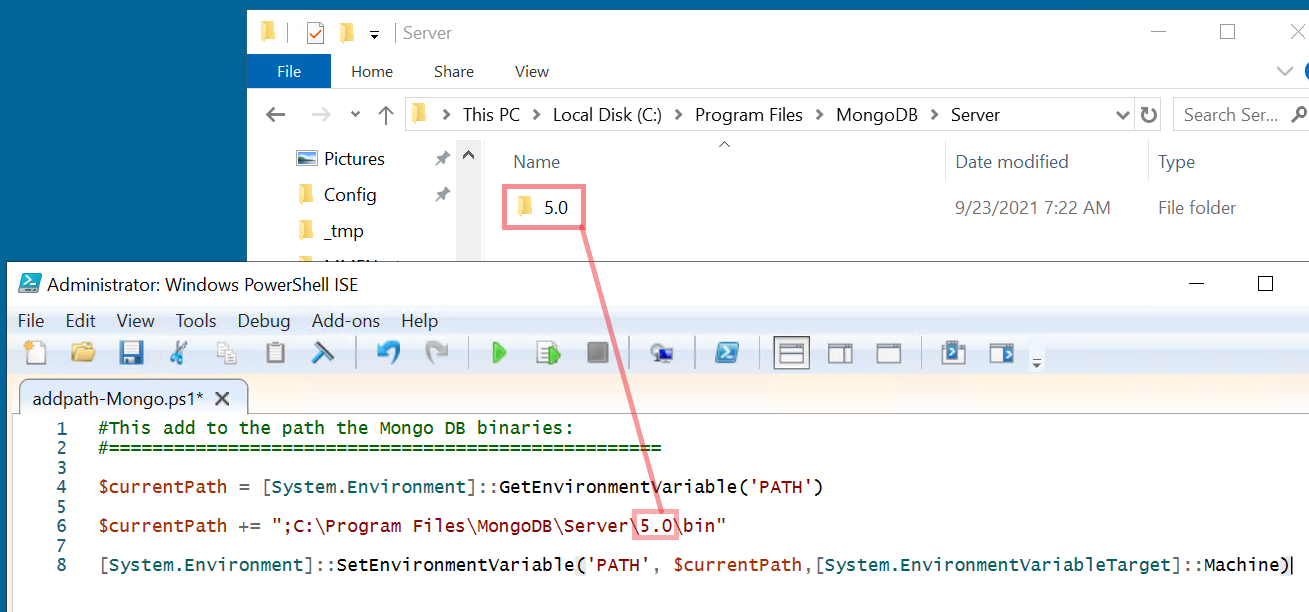


Figure Script to add the Mongo DB path to the PATH system environment variable

Now you can run the command you can see in Figure 9 from any folder to verify the path was set correctly

Next step is to secure the database. To do that, you can use the following script from Propel repository:

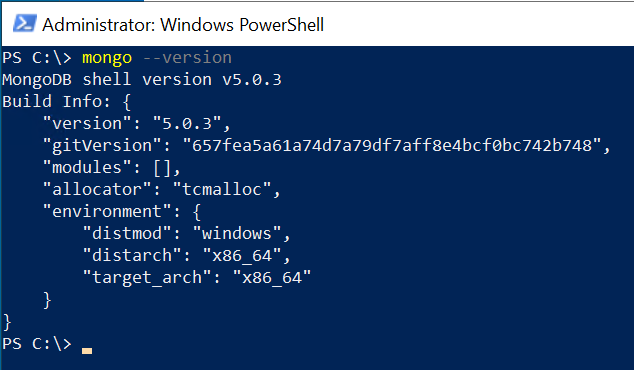


Figure 9 - Getting the Mongo engine version

"*.\distrib\cutover\create-admin-user.js*"

Yu can copy in the target machine and run it as you can see in Figure 10. This script is going to create a user named “*DBA”* in the Admin database that will have administrator privileges in any database.

After doing that our next steps is enforce user authentication in the MongoDB engine.

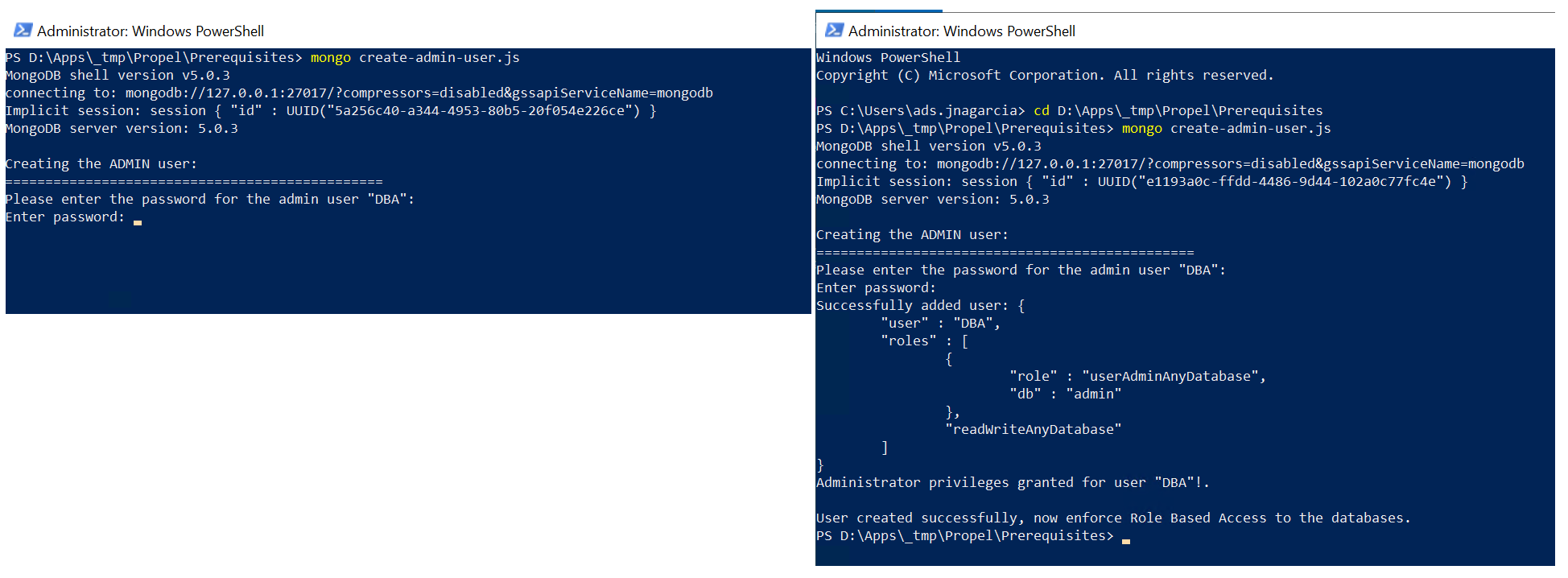


Figure 10 - Creating the new DBA user

So, now we need to stop the MongoDB service, locate the mongod config file located at “*C:\Program Files\MongoDB\Server\{Here the server version folder}\bin\mongod.cfg*” and edit it to enable the authorization security feature as depicted in Figure 11.

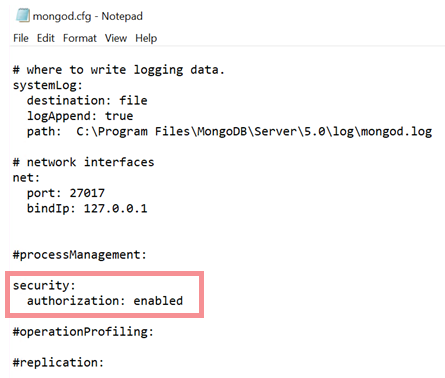


Figure 11 - Adding the Authorization security feature.

After that we can restart the Mongo DB Service.

# Additional tools and steps

Depending on the kind of scripts you are going to execute, maybe yu will need to take care of installing and configuring come of the following PowerShell tools and modules.

## ActiveDirectory Module

In order to be able to run LDAP Queries to Microsoft Active Directory, you will need installed the “*ActiveDirectory*” PowerShell module. To do this, you will need to open the Server Manager and add the feature as depicted in Figure 12

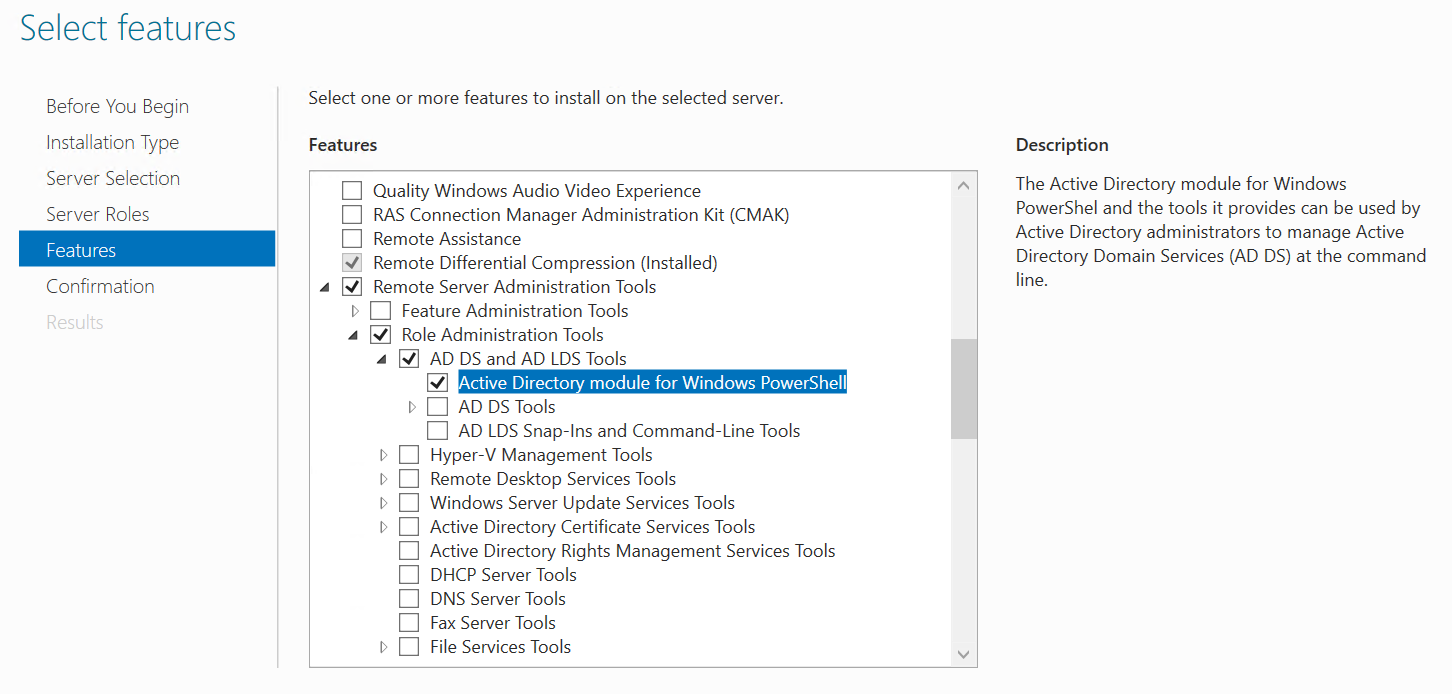


Figure - Installing the PowerShell ActiveDirectory module.

# Deploying Propel

In VS Code click on the “Run Task” menu option of the “Terminal” menu and select the “Build Production” task. After it runs you will have in “.\Distrib\dist” folder the new build.

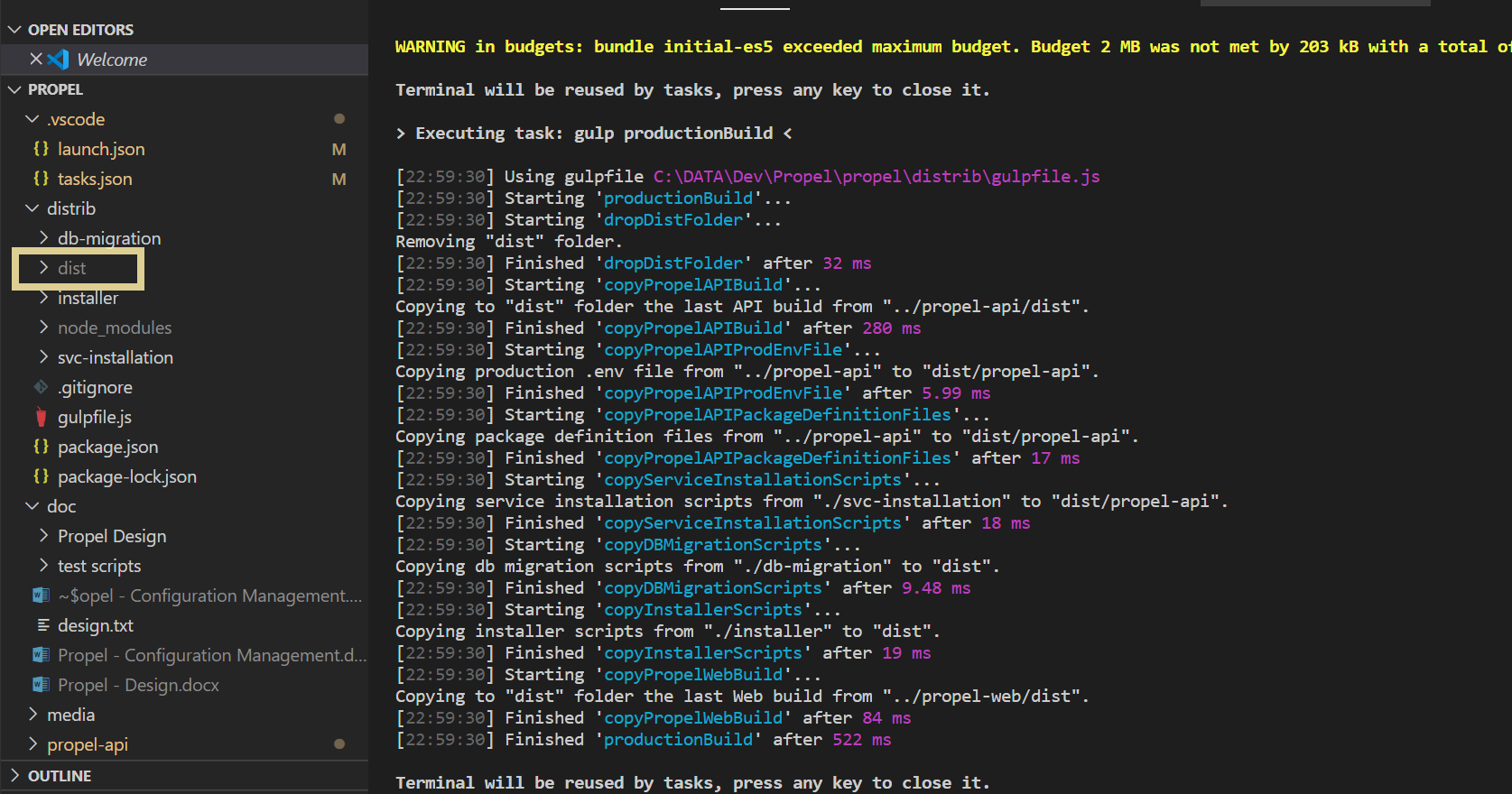


Figure -Dist folder

Next step is to compress the folder content and copy them to the production server in a temporal location. **If it’s a first-time deployment, ensure the destination folder “C:\Propel” exists**, otherwise please create it. That’s the folder where Propel is being installed.

In the temporal installer path, please locate the file “install.ps1” and run it with PowerShell.

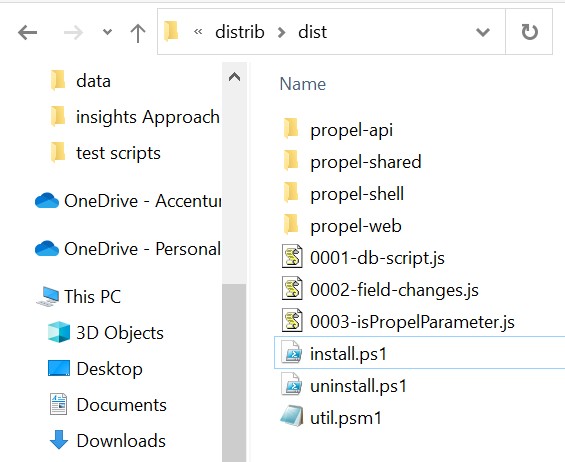


Figure - Installer file

The installer will take care of:

Stop the Propel service if it’s running, install the new version and restart the service.

It will also apply any required database migration script. And will allows you to configure a specific account to use for impersonation during remote script execution, (otherwise remote scripts will run with the credentials set to the service).