DataSunrise

Configuring DataSunrise with Azure Resource Manager Template on Microsoft Azure Cloud

Instruction Manual

December, 2020

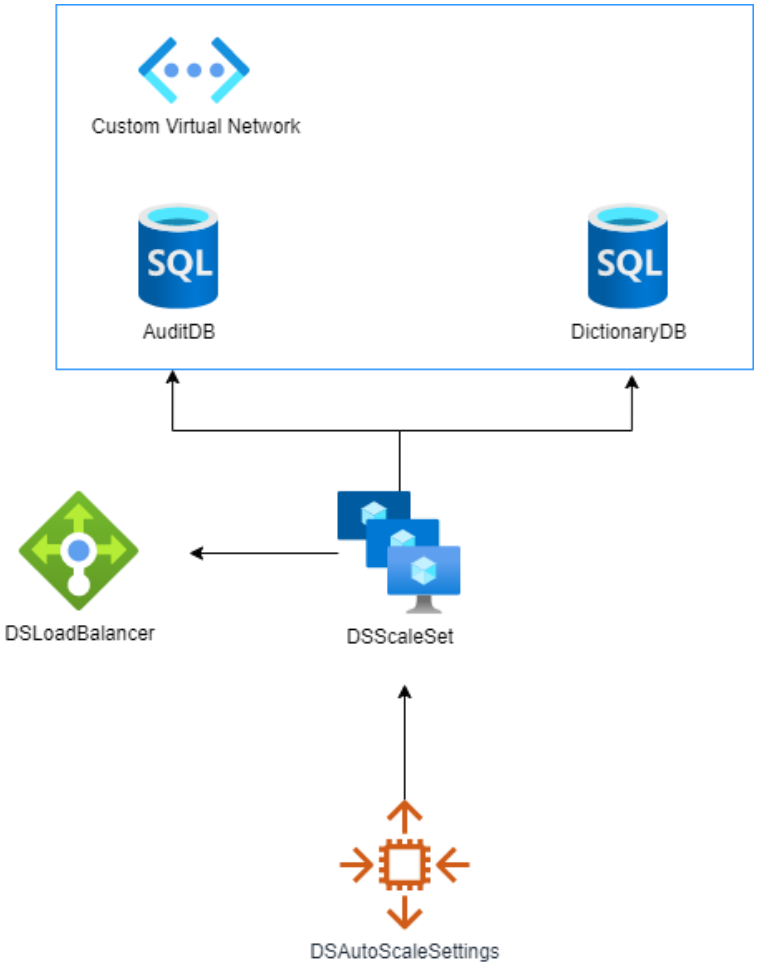
Table of Contents

1. Introduction

Manual deployment of a High Availability (HA) configuration requires accurate settings implementation with all the dependencies applied correctly. Moreover, the product installation process might take much more time by also including the maintenance of a reliable and stable solution to run the production environment. To avoid all of the possible issues and eliminate the presuming inconveniences, DataSunrise provides the dedicated script for the HA infrastructure deployment within the Microsoft Azure service based on the Azure Resource Manager (ARM) template. The deployment process is automated and does not require the manual adjusting.

1.1 Description and structural scheme of an Azure Resource Manager

The following picture displays the most important objects created by Azure Resource Manager as they are listed in the template, creation order is parallel, considering objects' dependencies (marked with arrows).



1. Custom Virtual Network (Microsoft.Network/ virtualNetworks) - Virtual Network where the subnets are stored. Manages free communication between Azure resources;

2. DictionaryDb (Microsoft.DBforPostgreSQL/servers) - Azure database instance used to store DataSunrise settings (Dictionary);

3. AuditDB (Microsoft.DBforPostgreSQL/servers) - Azure database instance used to store DataSunrise's audit journal and other journals (Audit Storage);

4. DSLoadBalancer (Microsoft.Network/loadBalancers) - Load Balancer;

6. DSScaleSet (Microsoft.Compute/virtualMachineScaleSets) - Virtual Machine Scale Set, includes configuration of the failover cluster;

7. DSAutoScaleSettings (Microsoft.Insights/Autoscalesettings) - Auto scaling settings, define the way of deployment of new VMs of the failover cluster.

Note: There are different dependent resources that will be created as well. Describing them here will not bring any useful information.

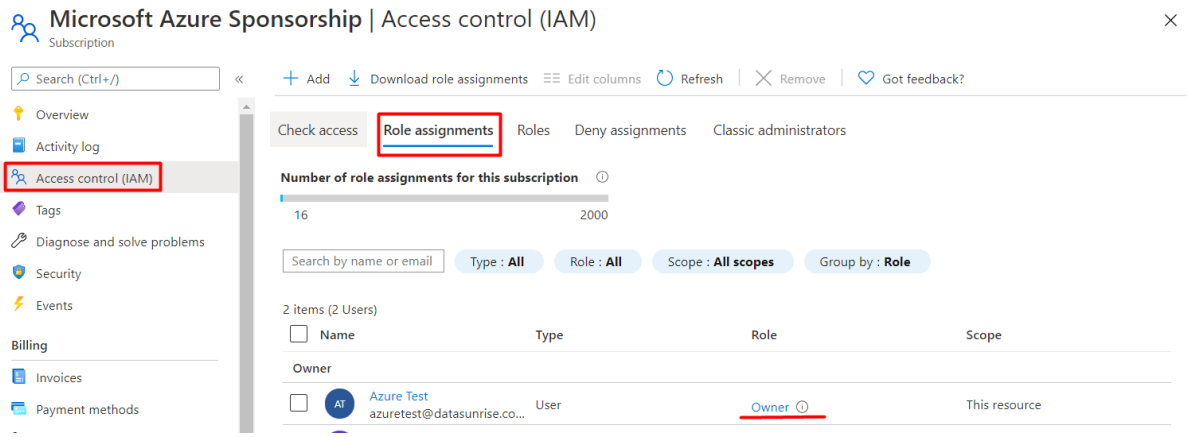
2. Prerequisites

There are some entities that should exist in your Azure environment before you start the deployment process. Here is the list of required items:

- Azure resource group where all the configured resources will be deployed;
- Azure resource group that will be used as the environment for the virtual network with the subnets that you will use;
- Azure virtual network (VNET) that will be used as the environment where the resource manager template will be deployed;
- Subnets within the VNET that you will designate for your DataSunrise cluster running in the specified VNET;
- Subnets to be used should have the following service endpoints attached:
    - Microsoft.Sql server endpoint : required in case sql databases are used.

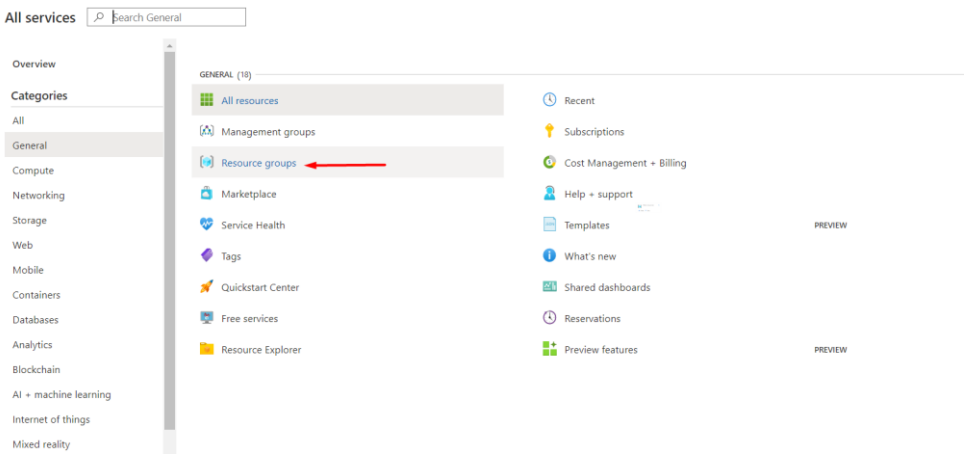
Important:

Your Azure account subscription must be assigned to the Owner role to be able use Managed Identity resource to connect ot Azure CLI and to deploy necessary Azure resources for the successful DataSunrise Suite implementation. You can check it in Subscriptions -> <your-subscription> -> Access control -> Role assignments.



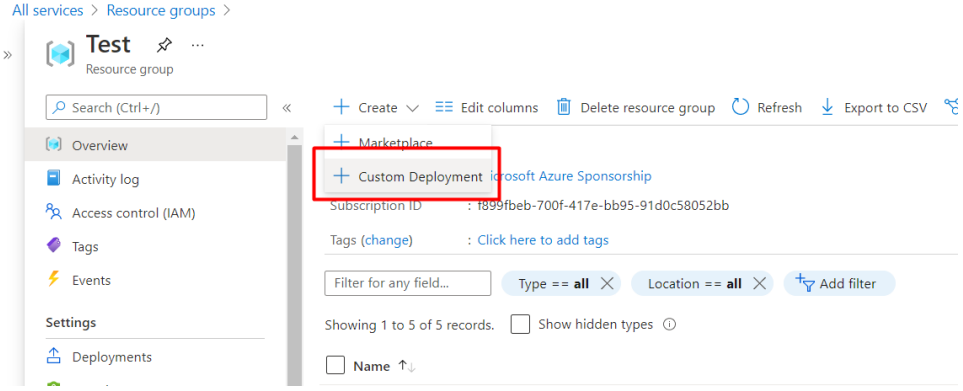
3. Deploying an Azure Resource Manager Template

To deploy DataSunrise in HA configuration, navigate to the Resource groups subsection of *All services -> General*.



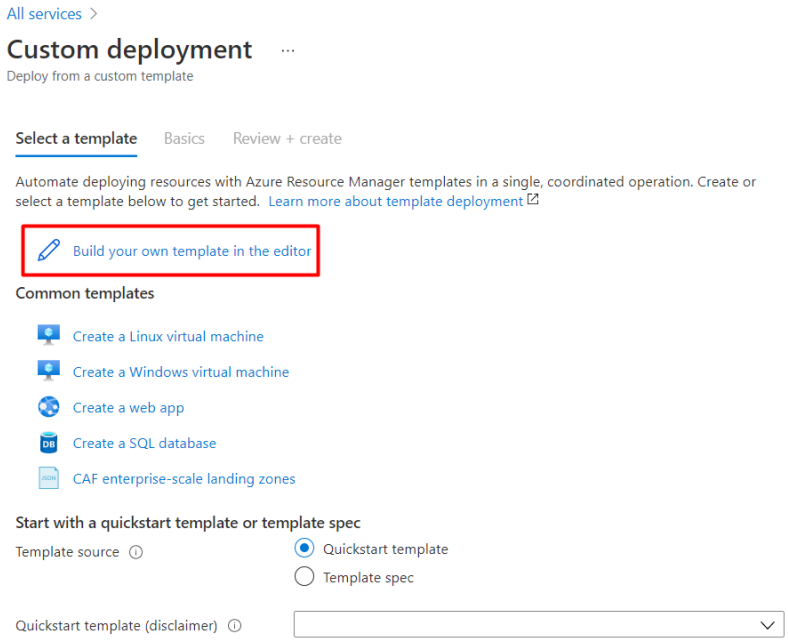
Select the necessary resource group or Create a new one.

Inside the selected resource group click *+Create* to configure the ARM template deployment.

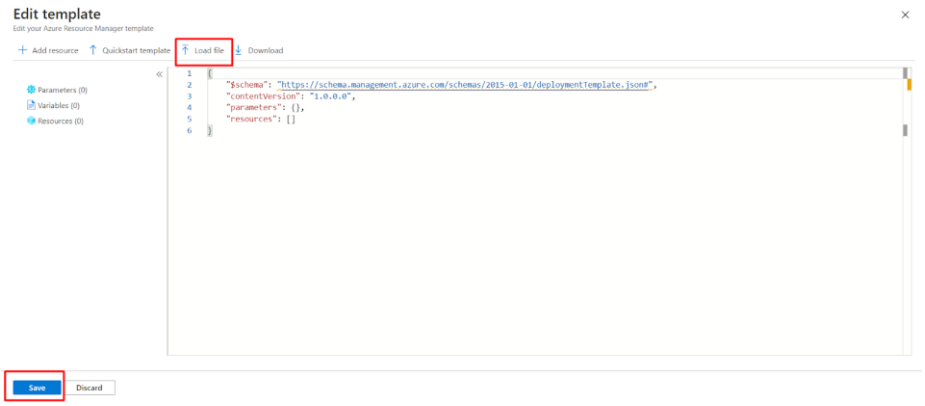


Choose Custom Deployment.

Select *Build your own template in the editor.*

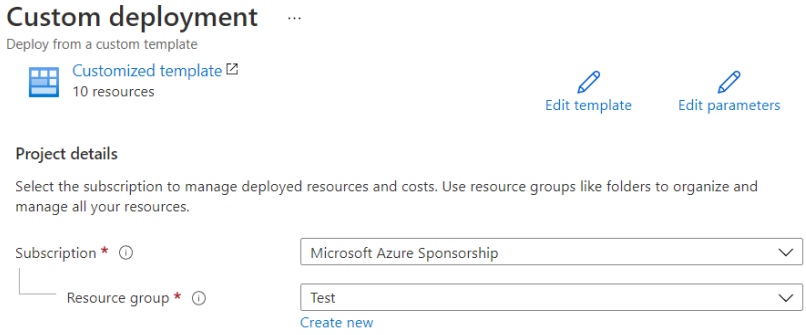


Then, choose *Load file*. In the next window select the prepared *.json* file and upload it to the portal. After the template configuration file is successfully uploaded, click *Save*.



3.1. Filling In the requested parameters

3.1.1. Project details. *-required information.



1. *Subscription* - select the available subscription type for your azure account.
2. *Resource group* - the resource group name that was chosen in the Deploying resource manager template section is set automatically.

3.1.2. Instance details.

In this section arm template parameters are presented. You need to specify the requested parameters for the Datasunrise Suite implementation on the Azure portal.
Let us take a look at them one by one.

Virtual Machine configuration.

1. *Region* - preferred location of your azure resources. It will be set automatically after the resource group is chosen.

2. *Admin Username* - specify the Linux machine *admin username* here. You will use it to connect to your machine using SSH.

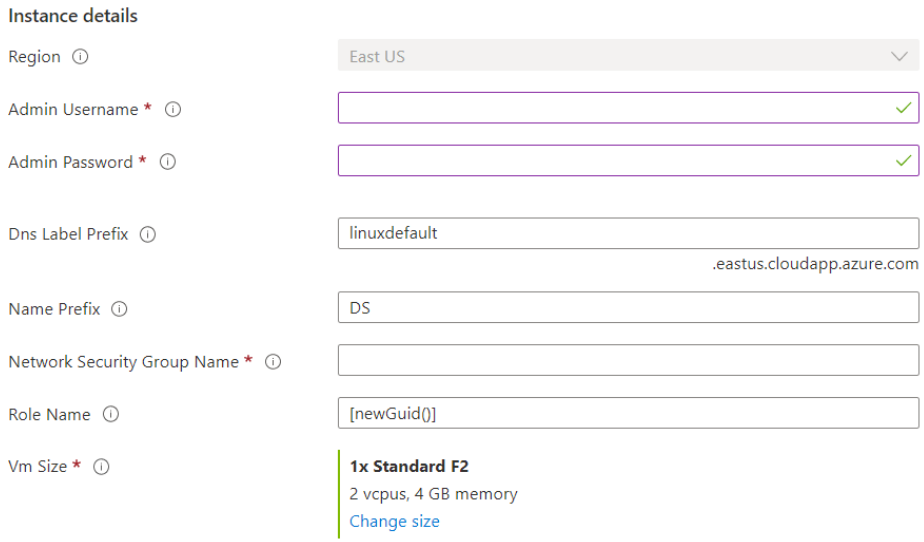
3. *Admin Password* - specify the *password* that will be used along with the Admin Username as credentials for the Linux machine where the Datasunrise server will be installed.

4. *Dns Label Prefix* - *DNS Label* that will be used for the public IP address configuration.

5. *Name Prefix* - specify this parameter with the *name prefix* that will be used for virtual machine scale set resources.

6. *Network Security Group Name* - specify this parameter with the *network security group* name that will be environmental.

7. *Vm Size* - specify the *size of the virtual machine* that will be created. The default value is Standard_F2.



Note: you can choose other virtual machine size values. Please, enter the most convenient value depending on your location and availability set.

Subnets environment

8. *Subnet Resource Group Name* - specify the name of the *resource group* where the VNET is stored.
9. *Virtual Network Name* - specify the *virtual network name* where the subnets are stored.
10. *Subnet Name* - specify the *subnet name* that will be used as the environment.

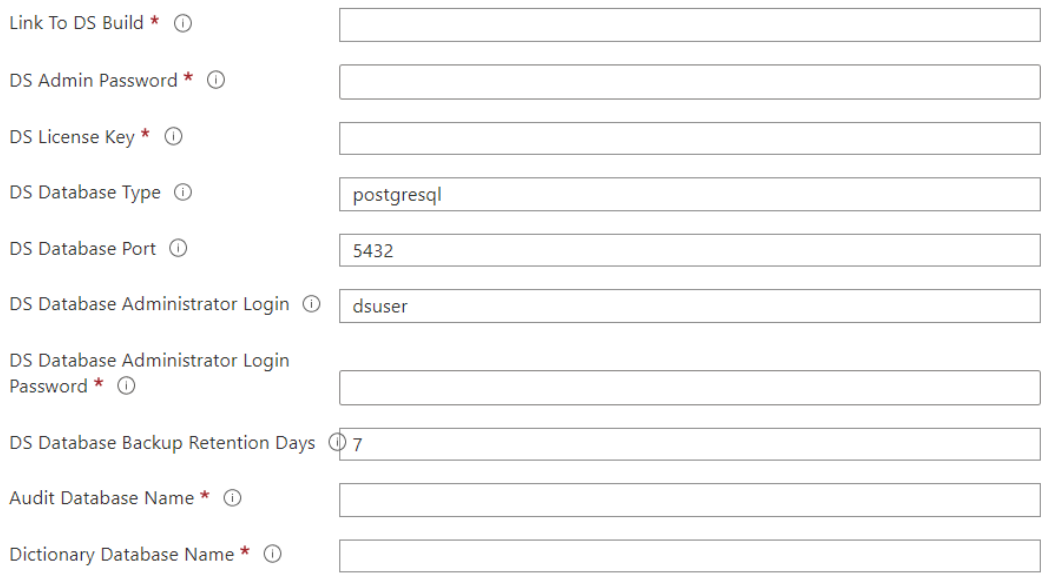
Datasunrise configuration

11. *Link To DS Build* - provide the *link* to download DataSunrise Suite latest solution.

12. *DS Admin Password* - specify with the value that will be used as Datasunrise *admin* user *password* to login to the Web console.
13. *DS License Key* – provide your DataSunrise Suite license.

    Important: It is necessary to place the license value in single quotes (‘ ‘) otherwise it will not be parsed correctly.

14. *DS Database Type – Dictionary and Audit database type.* The default value is postgresql.
15. *DS Database Port* - *port* that will be used by Dictionary and Audit database. The default value is 5432.
16. *DS Database Administrator Login* - specify the *name* of the *user* that will be used to access the Dictionary and Audit databases.
17. *DS Database Administrator Login Password* - specify the *password* that will be used along with the Database Administrator as credentials for the Dictionary and Audit databases.
18. *DS Database Backup Retention Days* – specify the value that will be used as count of databse server backup retention days.



Target database configuration

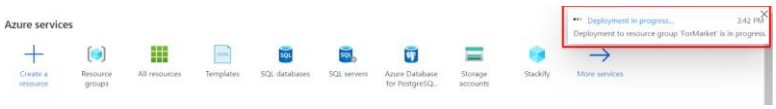
19. *Target DB Name* – enter target database *name*.
20. *Target DB Type* – choose target database *type*.

21. *Target DB Host* – specify the target database *host* value.
22. *Target DB Port* – enter target database *port*.
23. *Target DB Proxy Port* – port that will be used as a *proxy port* for your target database.
24. *Target DB Instance Name* – specify with the value that will be used as *instance name*.
25. *Target DB Login* – enter the target database *username* that will be used to connect to the target database.
26. *Target DB Login Password* – enter the target database username *password*.

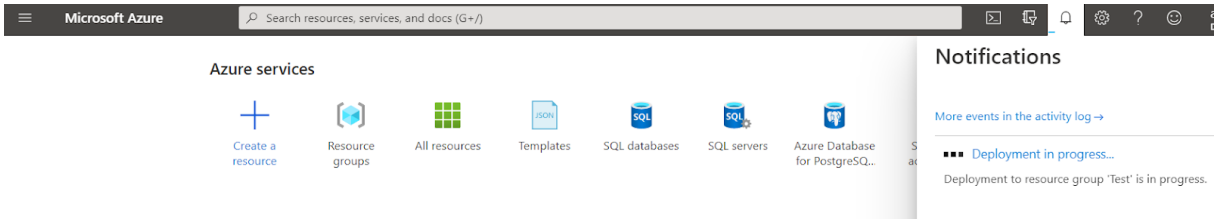
3.2. Finishing the Deployment

After all the parameters are filled in and the *Validation is passed*, click the *Create* button.

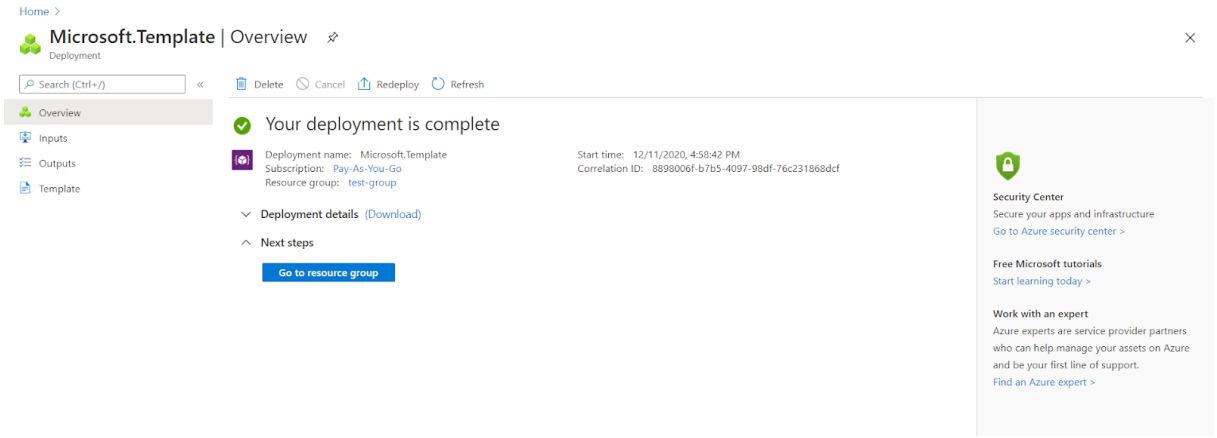
Deployment process has started. To view the particular deployment of every resource click the link in the right corner of the screen.



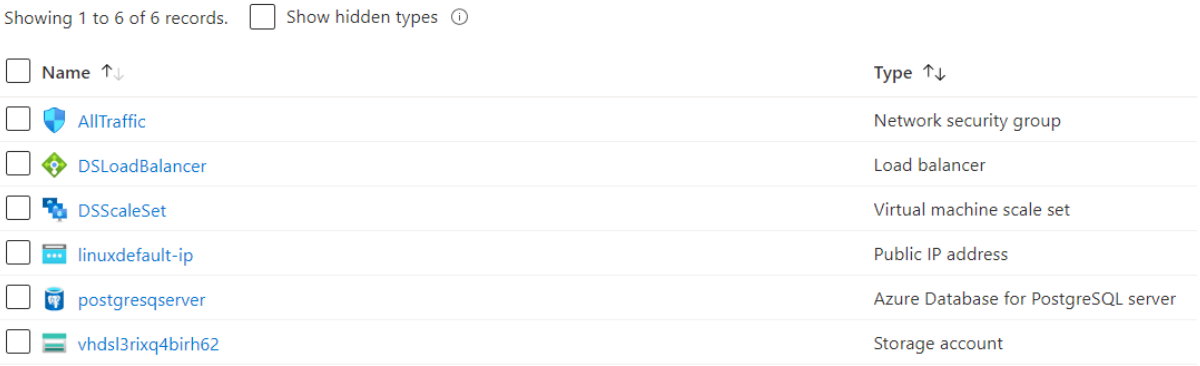
You can also view the *Deployment in progress* message in the Notifications drop down menu.



When the deployment is finished successfully, *Your deployment is complete* message will be on the screen. Click *Go to resource group* to view the created resources.



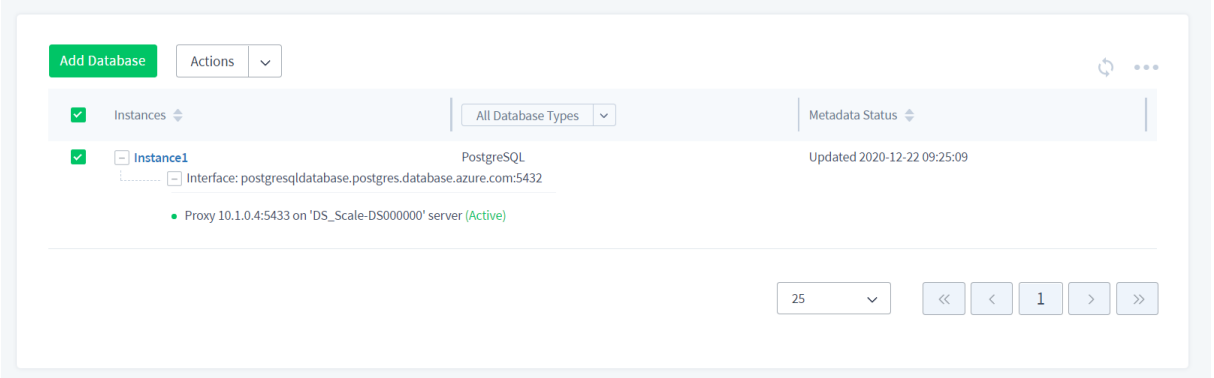
All the resources are successfully deployed and listed inside the resource group.



3.3. Connecting to the DataSunrise Web UI.

To connect to the DataSunrise Web Console, please, use LoadBalancer public IP address. It will automatically connect to one of the configured nodes. You also need to use this IP address to connect to your protected database through proxy and to connect to your Virtual Machine using SSH.

The Target DB will be automatically added to the DataSunrise Suite server.



3. Summary

DataSunrise ARM template is successfully deployed. DataSunrise Configuration and Audit databases are configured on PostgreSQL server. Public Load Balancer IP address is

configured to access Web Console, protected databases and connect via SSH.

HA configuration is set. Autoscaling settings are applied depending on the amount of the DataSunrise servers being alive. Virtual machine contributor role is assigned to the virtual machine scale set to access the Azure CLI.