



HERE HLP_ReverseGeocoder Linux VM

Deployment Guide

Version 1.0.1.0



Important Information

Notices

Topics:

- [Legal Notices](#)
- [Document Information](#)



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Document Information

Product

Name: HERE HLP_ReverseGeocoder Linux VM Deployment Guide

Version: Version 1.0.1.0

Document

Name: HERE HLP_ReverseGeocoder Linux VM Deployment Guide

Status: FINAL

Date: 2019-Dec-13, 12:00 (GMT)

Contents

Notices	2
Legal Notices	3
Document Information.....	4
Contents	5
Overview	6
Introduction	7
Solution Template Overview	7
Deployment Guide	8
Prerequisites and Requirements.....	9
Deploying Solution Template on Azure Portal.....	9
Data Setup on Provisioned VM	27
Access the Newly Provisioned Servers	28
Download the Data Files.....	28
World Map Data Setup.....	33
Starting the HLP Reverse Geocoder.....	34
Commands for the HLP Reverse Geocoder.....	34
Testing the Installation	35
Monitoring Map Data Setup on Provisioned VM.....	36
Access the Newly Provisioned VM	36
Here Monitoring Tool.....	36



Chapter 1

Overview

Topics:

- [Introduction](#)
- [Solution Template Overview](#)

This document introduces the deployment steps for HERE HLP_ReverseGeocoder Linux VM on Azure Marketplace. The HERE HLP_ReverseGeocoder Linux VM Template is a Solution Template on Azure Marketplace which deploys a Linux VM containing HERE Reverse Geocoder API in your Azure Resources. The Template allows you to install multiple VM's at once, create a load balancer for multiple VM's and also sets up Map Data required for Reverse Geocoder API to function.

Introduction

The Reverse Geocoder API provides search capability for Reverse Geocoding and Location Search.. Key features include:

Reverse Geocoding: The Reverse Geocoder interface allows client applications to retrieve the next street address based on a given coordinate or to retrieve the area information for the given coordinate. The difference between address and area retrieval is that for area retrieval the service does not search for the closest street address (which can be in an adjoining administrative area apart from the position that is provided for in the request). Instead, the service retrieves the administrative area information for exactly the position provided in the request.

Landmark Geocoding: Landmark Geocoding is a combination of geocoding, landmark search, and reverse geocoding. It supports searches for not only addresses and areas but also geographic regions, mountains, rivers, and widely known places (e.g., "Eiffel Tower") or places classified as being of national importance (e.g., international airports). The aggregation logic of Landmark Geocoding offers smart parsing of the text input. This means it classifies the input and directs the request to the different underlying search capabilities. The result of this service is a list of ranked locations – which can include street addresses, an administrative area, a geographic region or feature, or places.

Solution Template Overview

HERE HLP_ReverseGeocoder Linux VM Template provides you the capability to automate the provisioning of Reverse Geocoder API on your Azure VM. The solution template will guide you to build multiple new Linux VM which will be auto-provisioned with Reverse Geocoder API. It will automatically provision load balancer for the VM's and provides option to automatically download and setup Map Data required for the API. API monitoring scripts are also uploaded so that you can easily monitor the API status.

Chapter 2

Deployment Guide

Topics:

- [*Prerequisites and Requirements*](#)
- [*Deploying Solution Template on Azure Portal*](#)
- [*Downloading the Data Files*](#)
- [*World Map Data Setup*](#)
- [*Starting the HLP Reverse Geocoder API as a Service*](#)
- [*Commands for the HLP Reverse Geocoder*](#)
- [*Testing the Service*](#)

Prerequisites and Requirements

Microsoft Azure Account: You must have a Microsoft Azure account to access the solution template.

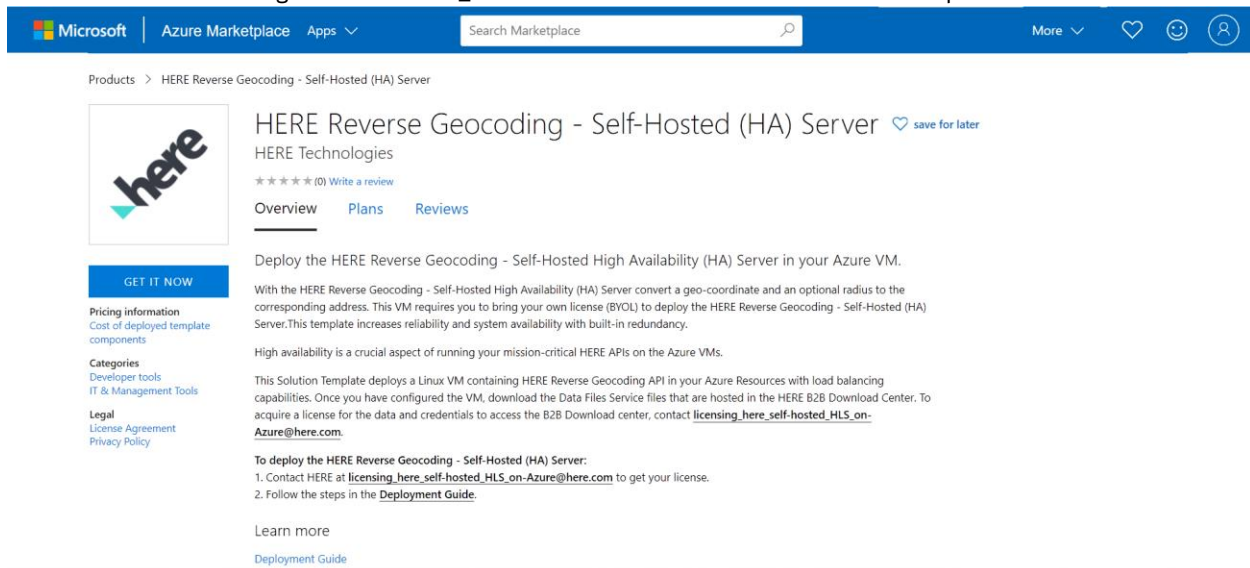
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Deploying Solution Template on Azure Portal

The below steps help you deploy HERE HLP_ReverseGeocoder Linux VM Template in your Azure resource group.

Step 1: On Azure Marketplace (<https://azuremarketplace.microsoft.com/en-us>), search for HERE Reverse Geocoder – Self-Hosted Server. Click on Get it Now button to begin the installation. Follow the prompts to proceed with template deployment.

Figure 1: HERE HLP_ReverseGeocoder Linux VM in Azure Marketplace



The screenshot shows the Azure Marketplace interface. At the top, there's a navigation bar with 'Microsoft', 'Azure Marketplace', and 'Apps' tabs, along with a search bar and user icons. Below the navigation bar, the breadcrumb trail reads 'Products > HERE Reverse Geocoding - Self-Hosted (HA) Server'. The main content area features the HERE logo on the left, followed by the title 'HERE Reverse Geocoding - Self-Hosted (HA) Server' with a 'save for later' link. Below the title is the publisher 'HERE Technologies' and a star rating '(0) Write a review'. There are three tabs: 'Overview' (selected), 'Plans', and 'Reviews'. The 'Overview' tab contains the following text: 'Deploy the HERE Reverse Geocoding - Self-Hosted High Availability (HA) Server in your Azure VM.' followed by a paragraph explaining the template's purpose and requirements. Below this is a section on 'High availability' and another paragraph about the solution template's capabilities. At the bottom, there's a 'To deploy the HERE Reverse Geocoding - Self-Hosted (HA) Server:' section with two numbered steps: 1. Contact HERE at licensing_here_self-hosted_HLS_on-Azure@here.com to get your license. 2. Follow the steps in the [Deployment Guide](#). There are also links for 'Learn more' and 'Deployment Guide'.

Products > HERE Reverse Geocoding - Self-Hosted (HA) Server

HERE Reverse Geocoding - Self-Hosted (HA) Server [save for later](#)

HERE Technologies

★ ★ ★ ★ (0) [Write a review](#)

[Overview](#) [Plans](#) [Reviews](#)

Deploy the HERE Reverse Geocoding - Self-Hosted High Availability (HA) Server in your Azure VM.

With the HERE Reverse Geocoding - Self-Hosted High Availability (HA) Server convert a geo-coordinate and an optional radius to the corresponding address. This VM requires you to bring your own license (BYOL) to deploy the HERE Reverse Geocoding - Self-Hosted (HA) Server. This template increases reliability and system availability with built-in redundancy.

High availability is a crucial aspect of running your mission-critical HERE APIs on the Azure VMs.

This Solution Template deploys a Linux VM containing HERE Reverse Geocoding API in your Azure Resources with load balancing capabilities. Once you have configured the VM, download the Data Files Service files that are hosted in the HERE B2B Download Center. To acquire a license for the data and credentials to access the B2B Download center, contact licensing_here_self-hosted_HLS_on-Azure@here.com.

To deploy the HERE Reverse Geocoding - Self-Hosted (HA) Server:

1. Contact HERE at licensing_here_self-hosted_HLS_on-Azure@here.com to get your license.
2. Follow the steps in the [Deployment Guide](#).

[Learn more](#)

[Deployment Guide](#)

Figure 2: HERE HLP_ReverseGeocoder Linux VM Marketplace

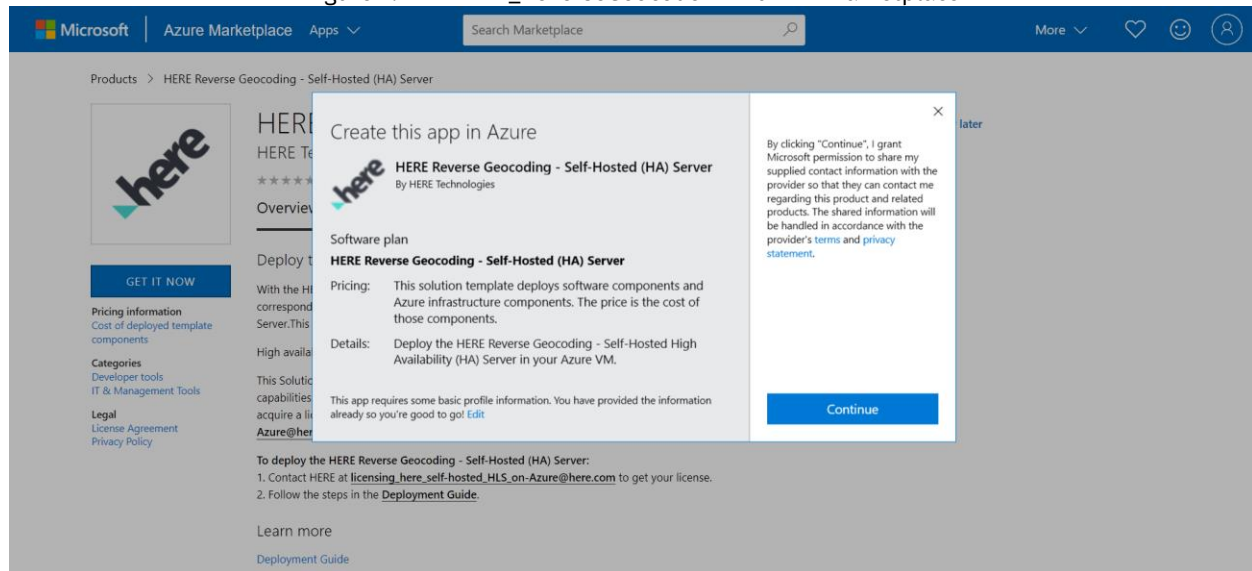
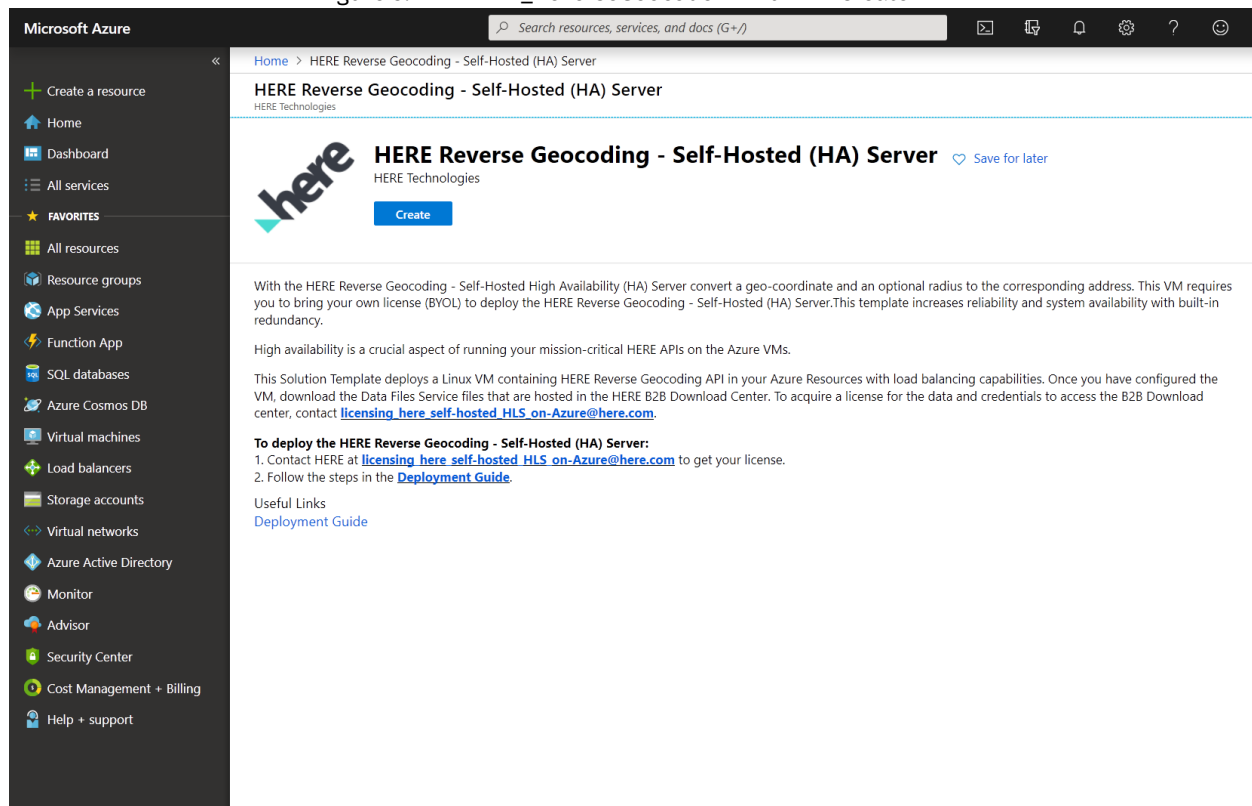
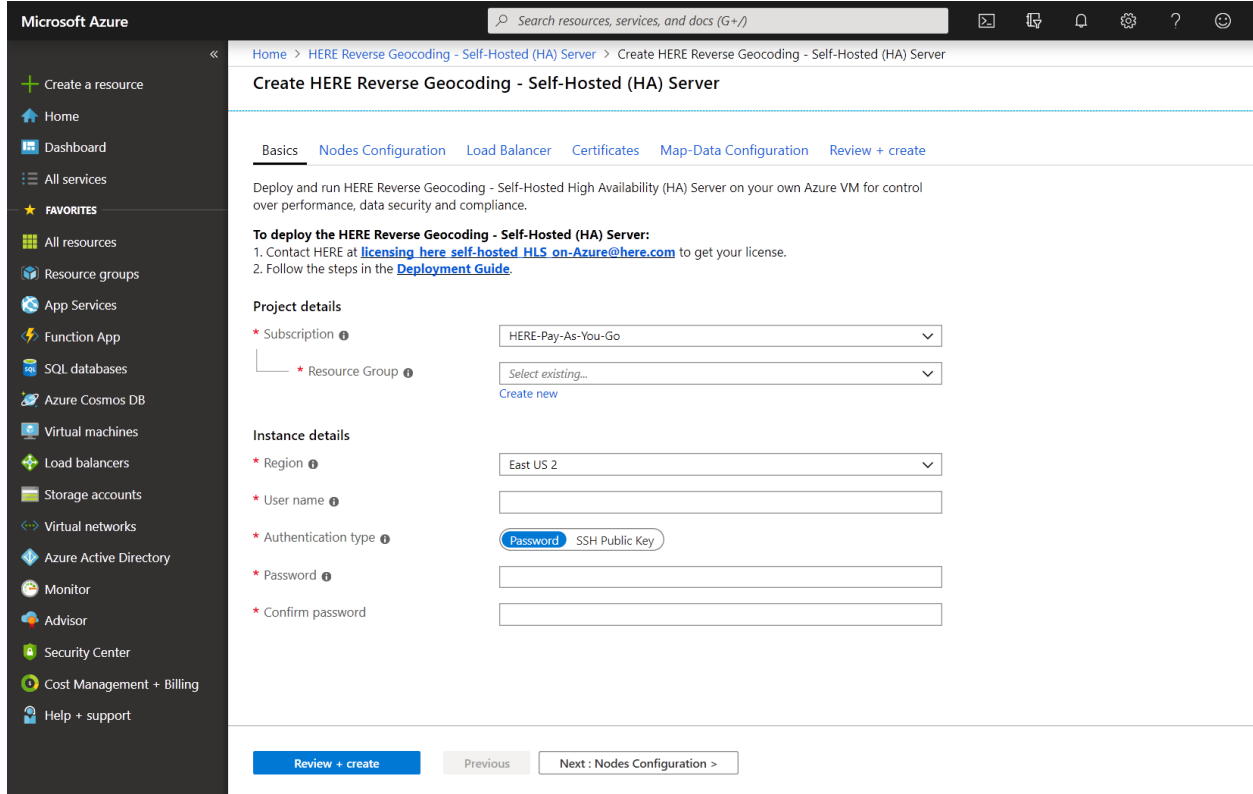


Figure 3: HERE HLP_ReverseGeocoder Linux VM Create VM



Step 2: You will be re-directed to the template. Please provide relevant details in the fields to proceed to next section.

Figure 4: HERE HLP_ReverseGeocoder Linux VM Basic Details



Microsoft Azure

Search resources, services, and docs (G+)

Home > HERE Reverse Geocoding - Self-Hosted (HA) Server > Create HERE Reverse Geocoding - Self-Hosted (HA) Server


Create HERE Reverse Geocoding - Self-Hosted (HA) Server


Basics Nodes Configuration Load Balancer Certificates Map-Data Configuration Review + create

Deploy and run HERE Reverse Geocoding - Self-Hosted High Availability (HA) Server on your own Azure VM for control over performance, data security and compliance.


To deploy the HERE Reverse Geocoding - Self-Hosted (HA) Server:
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2. Follow the steps in the [Deployment Guide](#).


Project details


* Subscription  HERE-Pay-As-You-Go


* Resource Group  Select existing...
[Create new](#)

Instance details

* Region  East US 2

* User name 

* Authentication type  Password SSH Public Key

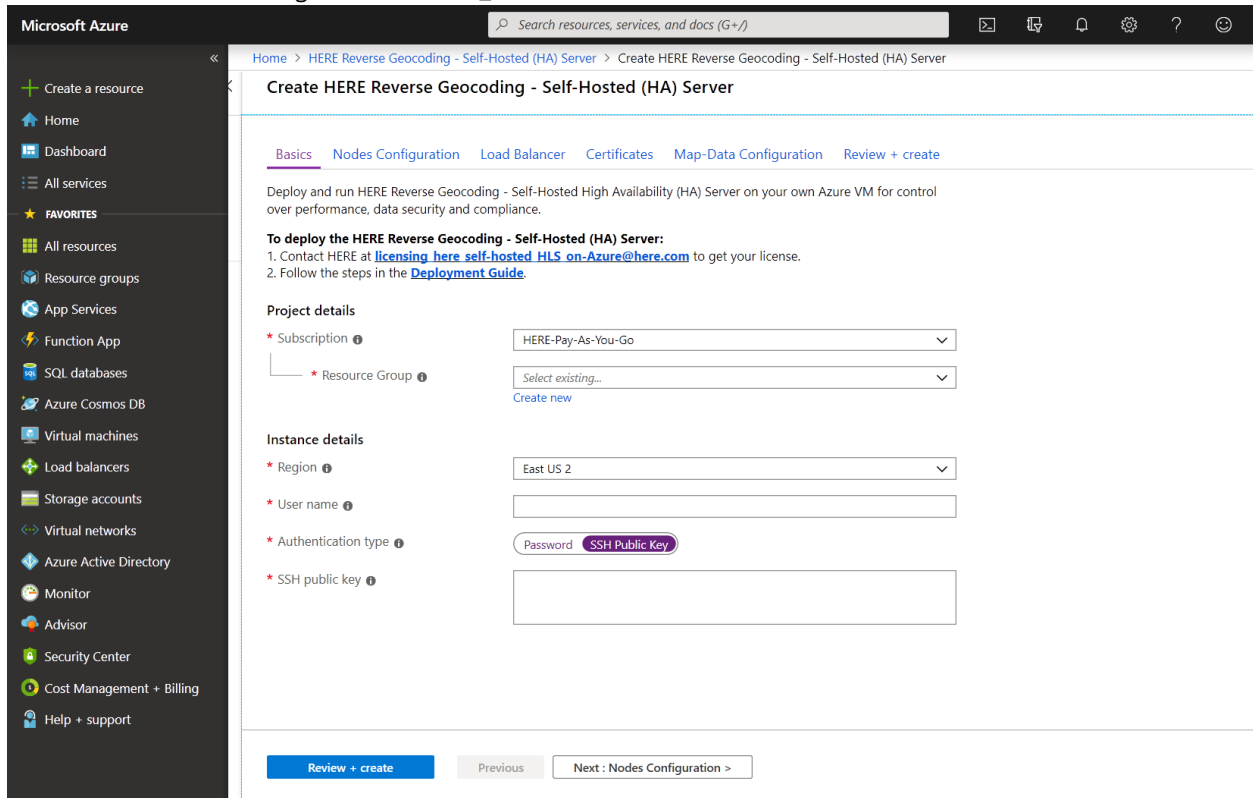
* Password 

* Confirm password

[Review + create](#) [Previous](#) [Next : Nodes Configuration >](#)

Step 3: You can use two authentication types for accessing the VM, namely “Password” or “SSH Public Key”. Please select one of the options and provide the relevant details. Once you have provided all the relevant information, please click on “OK” to proceed to next section.

Figure 5: HERE HLP_ReverseGeocoder Linux VM Basic SSH Details



Microsoft Azure

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Create HERE Reverse Geocoding - Self-Hosted (HA) Server


Basics Nodes Configuration Load Balancer Certificates Map-Data Configuration Review + create


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2. Follow the steps in the [Deployment Guide](#).


Project details


* Subscription  HERE-Pay-As-You-Go


* Resource Group  Select existing...
[Create new](#)

Instance details

* Region  East US 2

* User name 

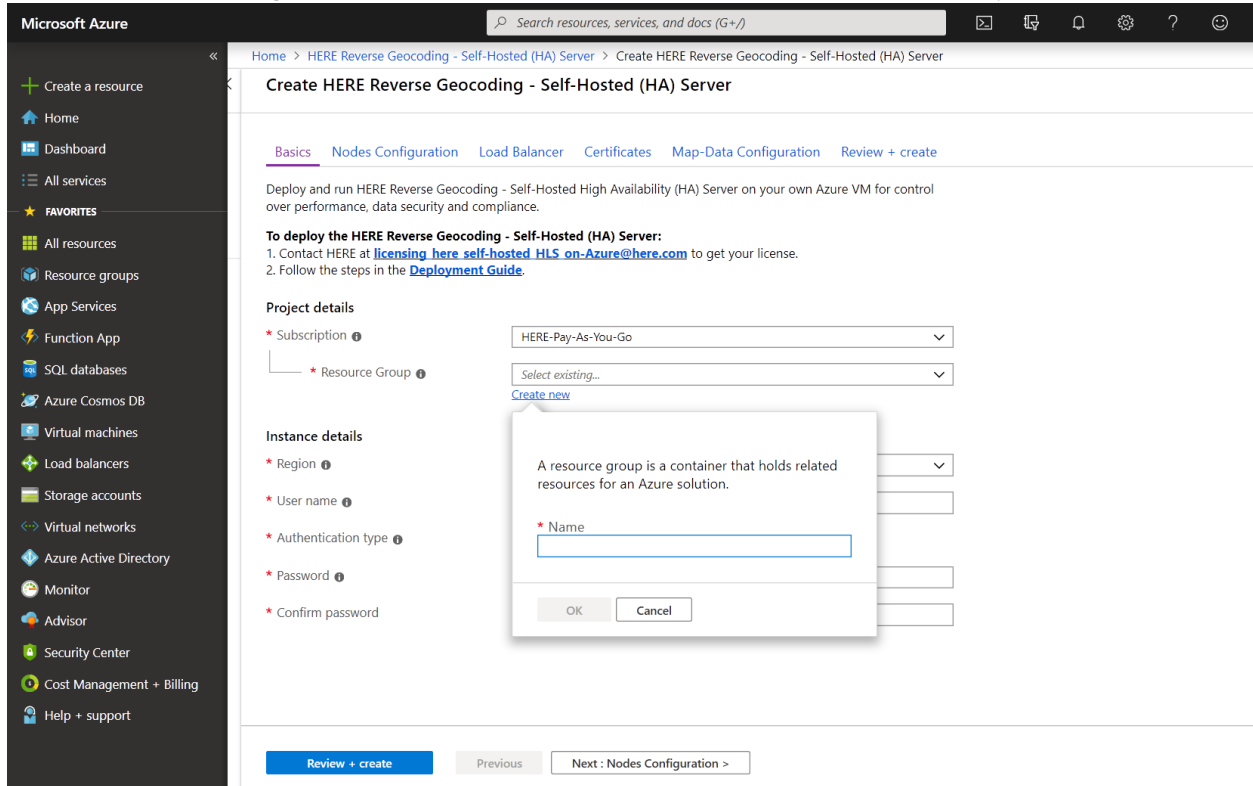
* Authentication type  Password SSH Public Key

* SSH public key 

[Review + create](#) [Previous](#) [Next : Nodes Configuration >](#)

Step 4: You can choose any existing Resource Group to create the VM or you can create a new one using the option “create new” under Resource Group field.

Figure 6: HERE HLP_ReverseGeocoder Linux VM Basic Resource Group



Microsoft Azure

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Home > HERE Reverse Geocoding - Self-Hosted (HA) Server > Create HERE Reverse Geocoding - Self-Hosted (HA) Server

Create HERE Reverse Geocoding - Self-Hosted (HA) Server


Basics Nodes Configuration Load Balancer Certificates Map-Data Configuration Review + create


Deploy and run HERE Reverse Geocoding - Self-Hosted High Availability (HA) Server on your own Azure VM for control over performance, data security and compliance.

To deploy the HERE Reverse Geocoding - Self-Hosted (HA) Server:



1. Contact HERE at licensing_here_self-hosted_HLS_on-Azure@here.com to get your license.
2. Follow the steps in the [Deployment Guide](#).


Project details


* Subscription  HERE-Pay-As-You-Go


* Resource Group  Select existing... [Create new](#)

Instance details

* Region  

* User name 

* Authentication type 

* Password 

* Confirm password

Modal Dialog:

A resource group is a container that holds related resources for an Azure solution.

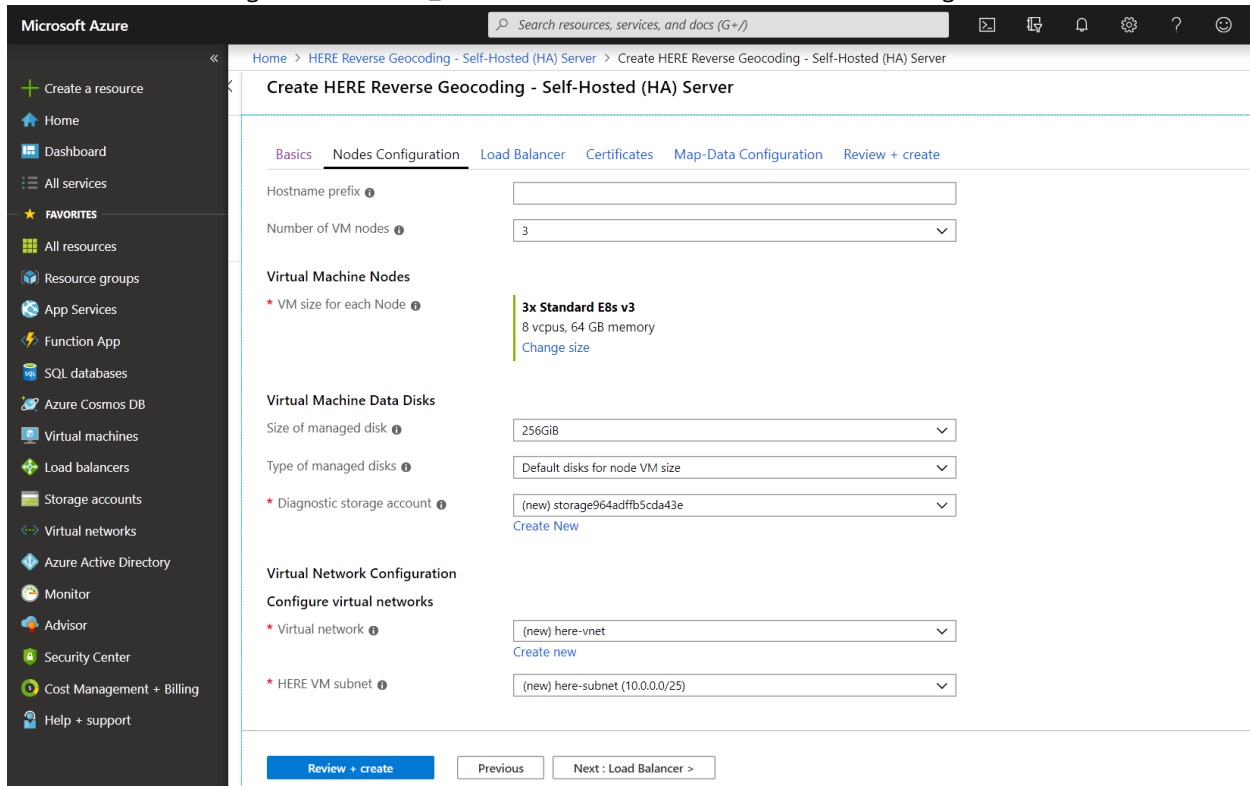
* Name

OK Cancel

[Review + create](#) [Previous](#) [Next : Nodes Configuration >](#)

Step 5: You now need to provide Host Prefix, No. of VM required, Size, storage and network details of the VM. To run Reverse Geocoder API, VM must have 4 GB or more RAM. Host prefix is used to identify the VM's created as part of Azure resource, this string will be pre-fixed to all the resources created as part of the deployment. You should have at least 200 GB of disk space if you wish to setup Map Data during the provisioning of VM. Kindly provide relevant values to the field and click on "OK" to proceed.

Figure 7: HERE HLP_ReverseGeocoder Linux VM Basic Nodes Configuration



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Create HERE Reverse Geocoding - Self-Hosted (HA) Server

Basics Nodes Configuration Load Balancer Certificates Map-Data Configuration Review + create

Hostname prefix

Number of VM nodes

Virtual Machine Nodes

* VM size for each Node
8 vcpus, 64 GB memory
[Change size](#)

Virtual Machine Data Disks

Size of managed disk

Type of managed disks

* Diagnostic storage account
[Create New](#)

Virtual Network Configuration

Configure virtual networks

* Virtual network
[Create new](#)

* HERE VM subnet

[Review + create](#) [Previous](#) [Next : Load Balancer >](#)

Step 6: Next you have to select the type of load balancer you would like to provision to manage the VM's. For security purpose, VM's created as part of this are accessed via jump box and services can be accessed from load balancer. All VM's do not provide public IP's for external access and can be accessed from jump box server. You can create "external" or "internal" load balancers as part of deployment. Please select desired size of Jump Box and click OK to proceed.

Figure 8: HERE HLP_ReverseGeocoder Linux External Load Balancer

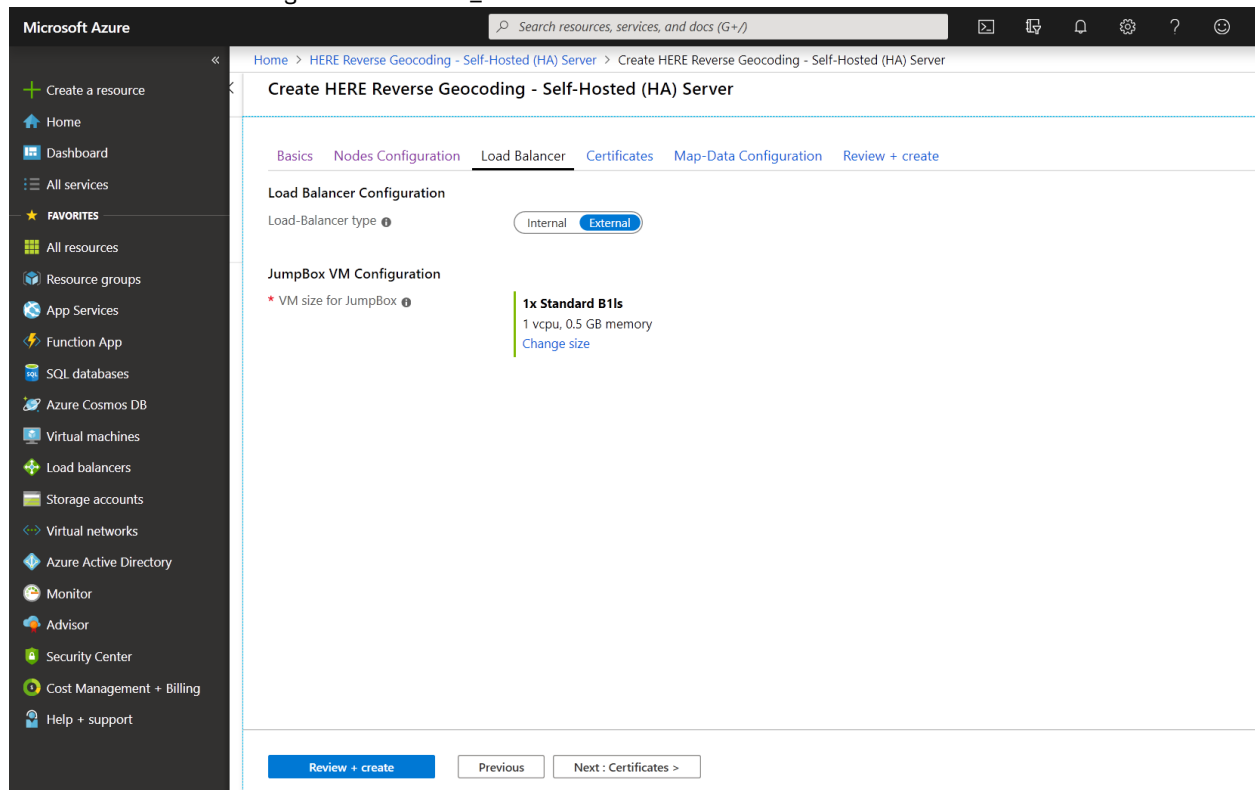
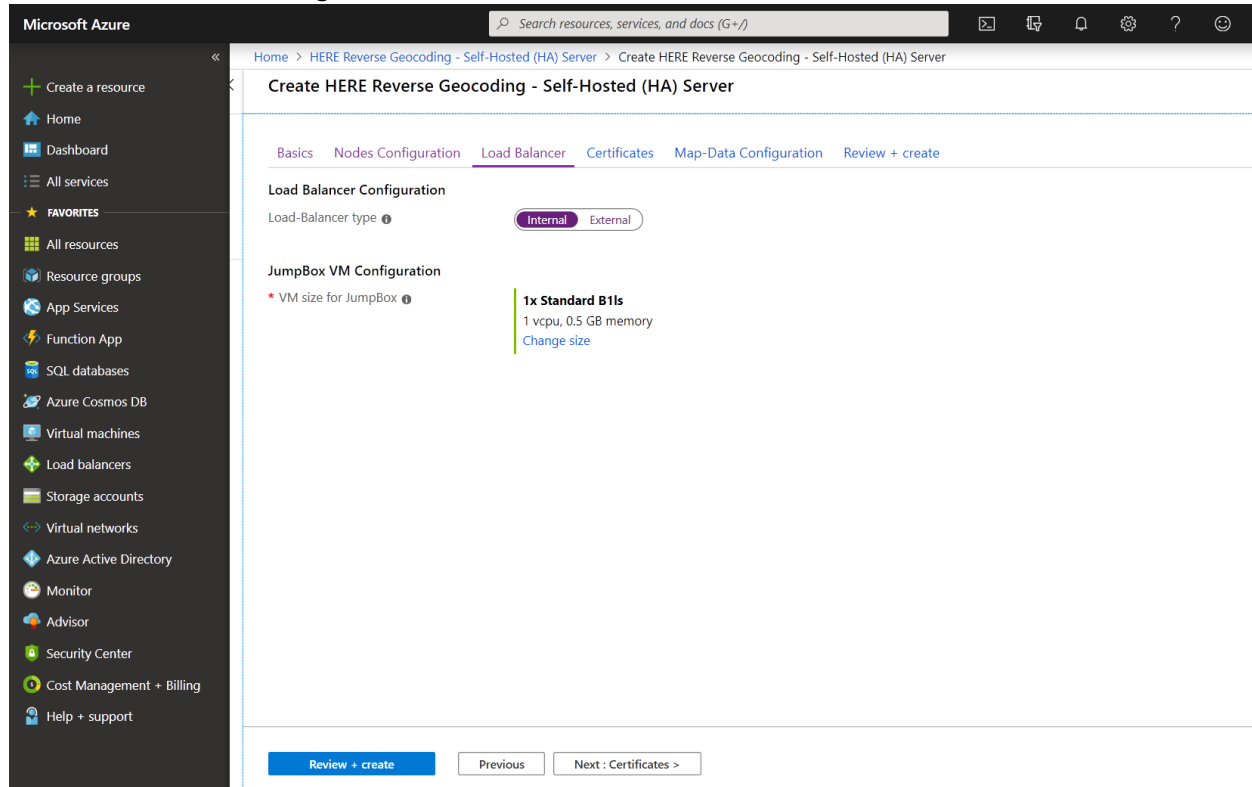


Figure 9: HERE HLP_ReverseGeocoder Linux Internal Balancer



Step 7: If you would like to secure the service using SSL certificates, select “Yes” and upload the details of the certificate. If you do not have a certificate available at this time or do not wish to use SSL certificate, please select “No” and click on OK to proceed.

Figure 10: HERE HLP_ReverseGeocoder Linux SSL Certificate

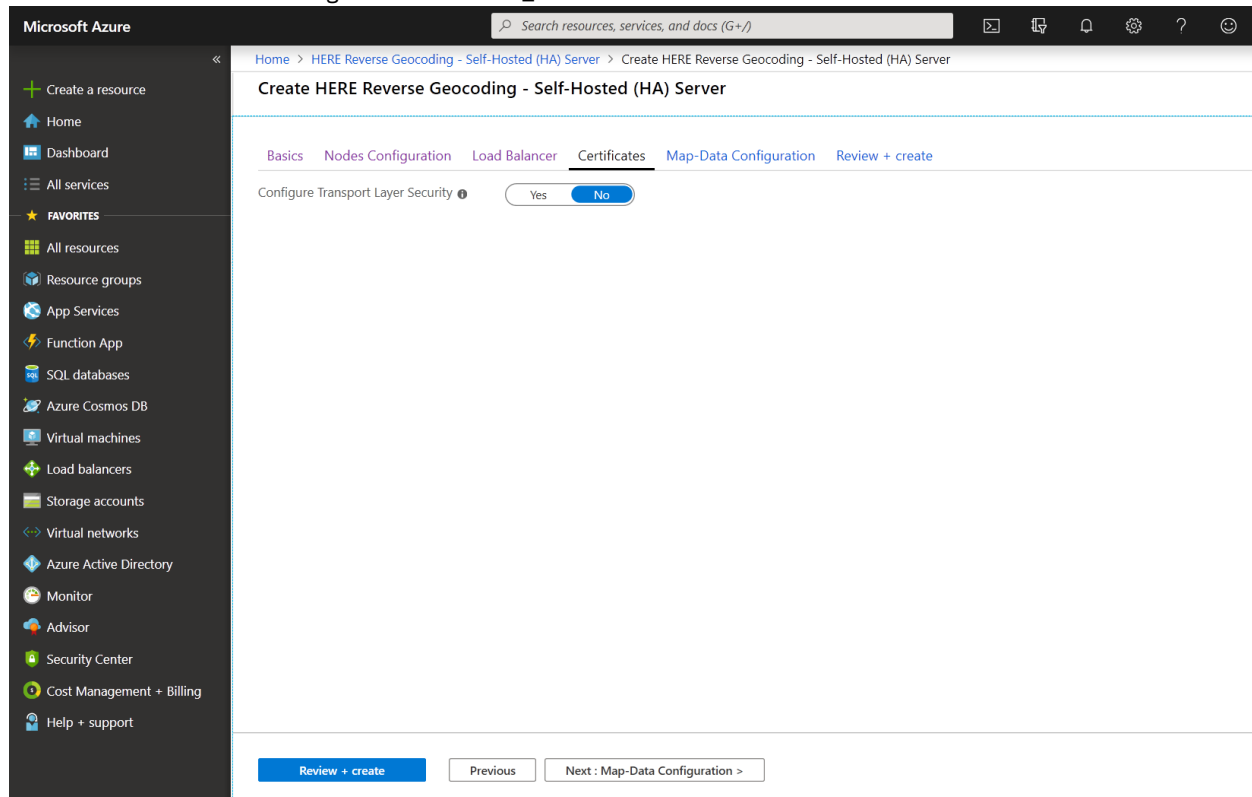
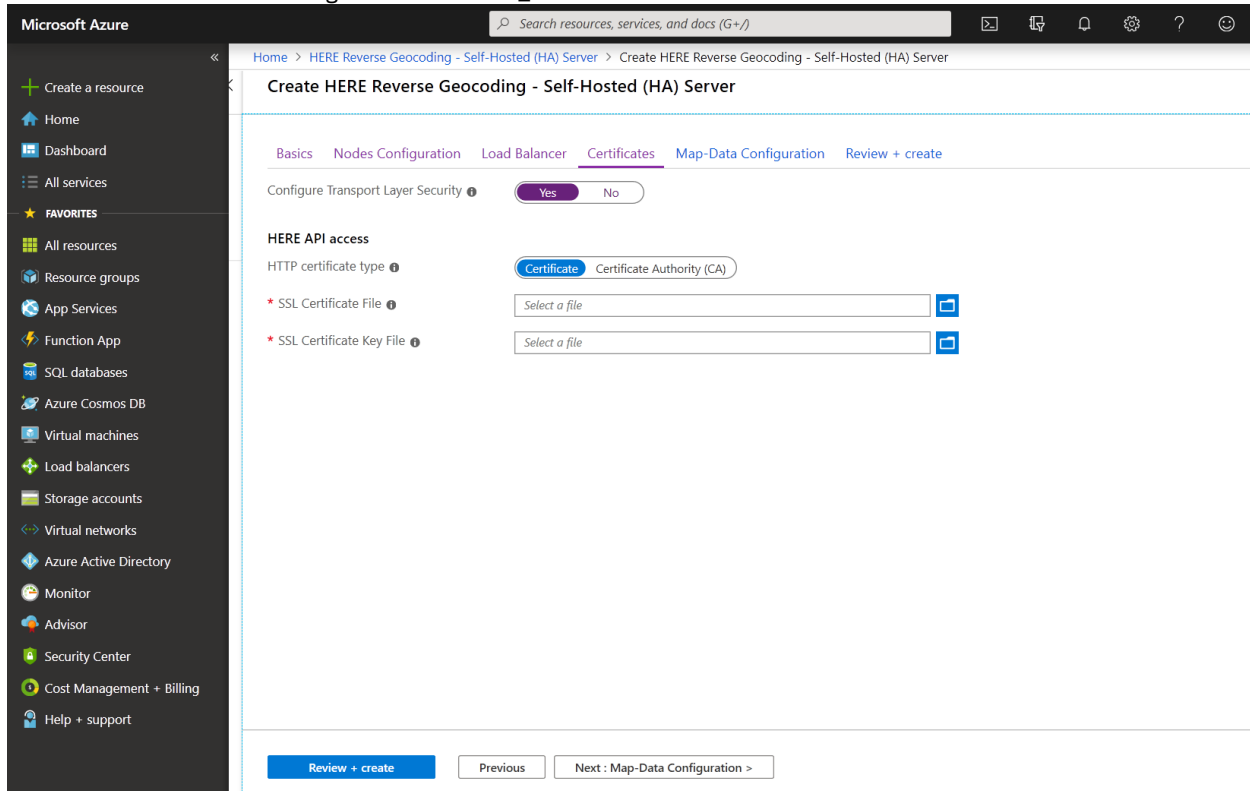


Figure 11: HERE HLP_ReverseGeocoder Linux SSL Certificate



Microsoft Azure

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Home > HERE Reverse Geocoding - Self-Hosted (HA) Server > Create HERE Reverse Geocoding - Self-Hosted (HA) Server


Create HERE Reverse Geocoding - Self-Hosted (HA) Server


Basics Nodes Configuration Load Balancer **Certificates** Map-Data Configuration Review + create

Configure Transport Layer Security ☒ Yes ☐ No

HERE API access

HTTP certificate type ☒ Certificate ☐ Certificate Authority (CA)

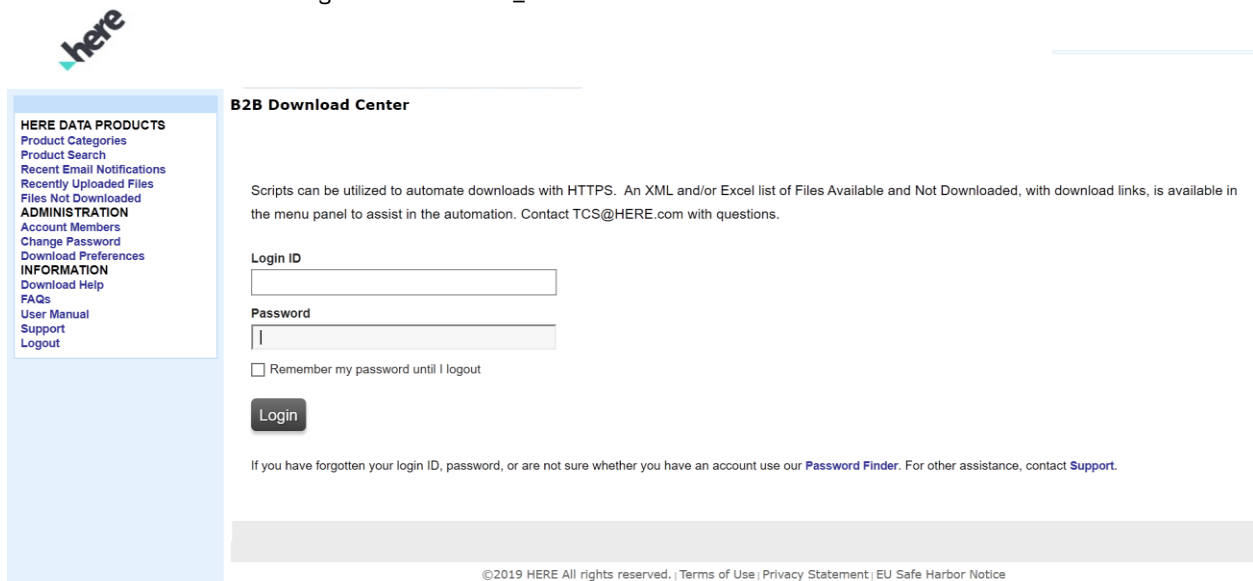
* SSL Certificate File 

* SSL Certificate Key File 

[Review + create](#) [Previous](#) [Next : Map-Data Configuration >](#)

Step 8: If you wish to setup Map Data automatically at the time of installation instead of setting it manually at a later time, please select “Yes” and provide flexnet URL for your account, else select “No” to proceed. To obtain the flexnet url, please login to B2B download center using your credentials. You can access B2B Download Centre using URL: <https://here.flexnetoperations.com/> in your browser. To acquire credentials to access the B2B Download center, contact HERE Licensing (licensing_here_self-hosted_HLS_on-Azure@here.com). Once you have logged in, browse for the product and right click to copy link. Paste the same link in the text box and click “OK” to proceed.

Figure 12: HERE HLP_ReverseGeocoder B2B Download Center



HERE DATA PRODUCTS
Product Categories
Product Search
Recent Email Notifications
Recently Uploaded Files
Files Not Downloaded

ADMINISTRATION
Account Members
Change Password
Download Preferences

INFORMATION
Download Help
FAQs
User Manual
Support
Logout

B2B Download Center

Scripts can be utilized to automate downloads with HTTPS. An XML and/or Excel list of Files Available and Not Downloaded, with download links, is available in the menu panel to assist in the automation. Contact TCS@HERE.com with questions.

Login ID

Password


☐ Remember my password until I logout

Login

If you have forgotten your login ID, password, or are not sure whether you have an account use our [Password Finder](#). For other assistance, contact [Support](#).

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Figure 13: HERE HLP_ReverseGeocoder B2B Download Center



Account Name:
HERE

HERE DATA PRODUCTS
[Product Categories](#)
[Product Search](#)
[Recent Email Notifications](#)
[Recently Uploaded Files](#)
[Files Not Downloaded](#)

ADMINISTRATION
[Account Members](#)
[Change Password](#)
[Download Preferences](#)
[Email Preferences](#)

INFORMATION
[Download Help](#)
[FAQs](#)
[User Manual](#)
[Support](#)
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Figure 14: HERE HLP_ReverseGeocoder B2B Download Center



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HERE DATA PRODUCTS
[Product Categories](#)
[Product Search](#)
[Recent Email Notifications](#)
[Recently Uploaded Files](#)
[Files Not Downloaded](#)

ADMINISTRATION
[Account Members](#)
[Change Password](#)
[Download Preferences](#)
[Email Preferences](#)

INFORMATION
[Download Help](#)
[FAQs](#)
[User Manual](#)
[Support](#)
[Logout](#)

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Figure 15: HERE HLP_ReverseGeocoder B2B Download Center

Account Name:
HERE

HERE DATA PRODUCTS
Product Categories
Product Search
Recent Email Notifications
Recently Uploaded Files
Files Not Downloaded

ADMINISTRATION
Account Members
Change Password
Download Preferences
Email Preferences

INFORMATION
Download Help
FAQs
User Manual
Support
Logout

B2B Download Center

Product List

HERE Platform

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Current Release

Previous Releases

Version	Description	
S191	HERE CLE 2.5.19 D108	Download Log
S191	HERE CLE 3.0.24 D109	Download Log
S191	HERE GFE 2.5.19 D108	Download Log
S191	HERE Geocoder 6.2.191.1 D109	Download Log
S191	HERE Geocoder Autocomplete 6.2.191.1 D109	Download Log
S191	HERE MRS 2.1.70.8 D109	Download Log
S191	HERE Reverse Geocoder 6.2.191.1 D109	Download Log
S191	HERE Routing 7.2.109 D109	Download Log
S191	HERE Geocoder 6.2.187.1 D107	Download Log
S191	HERE Geocoder Autocomplete 6.2.187.1 D107	Download Log
S191	HERE MRS 2.1.70.7 D108	Download Log
S191	HERE Reverse Geocoder 6.2.187.1 D107	Download Log
S191	HERE Routing 7.2.107 D108	Download Log
S191	HERE Traffic 6.0.114.2 D108	Download Log
S191	HERE Geocoder 6.2.179.1 D103	Download Log
S191	HERE Geocoder Autocomplete 6.2.179.1 D103	Download Log
S191	HERE MRS 2.1.70.4 D103	Download Log
S191	HERE Routing 7.2.103 D103	Download Log
S191	HERE Traffic 6.0.85.7 D103	Download Log
S171	HERE Batch Geocoder 6.2.58.0 D83	Download Log
S171	HERE JSAPI 3.0.17.0 D90	Download Log

Figure 16: HERE HLP_ReverseGeocoder B2B Download Center

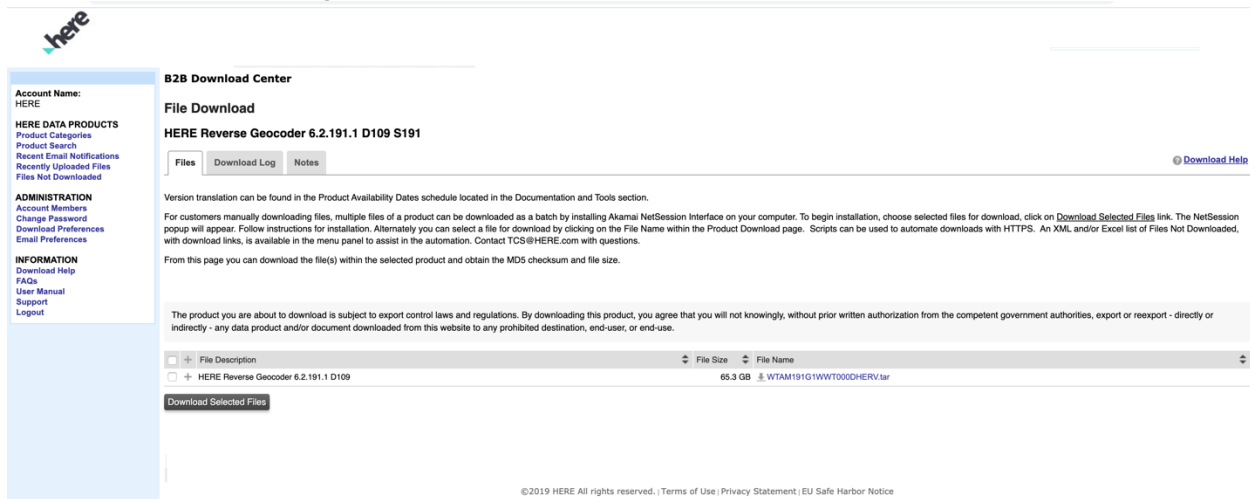


Figure 17: HERE HLP_ReverseGeocoder B2B Download Center

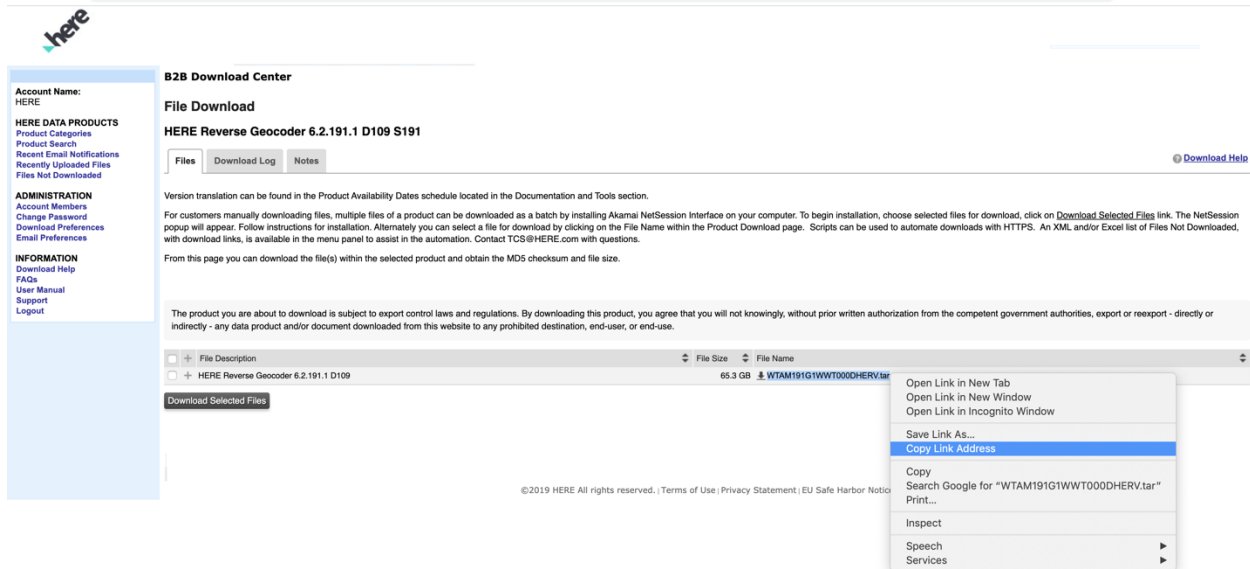


Figure 18: HERE HLP_ReverseGeocoder Map Data Configuration

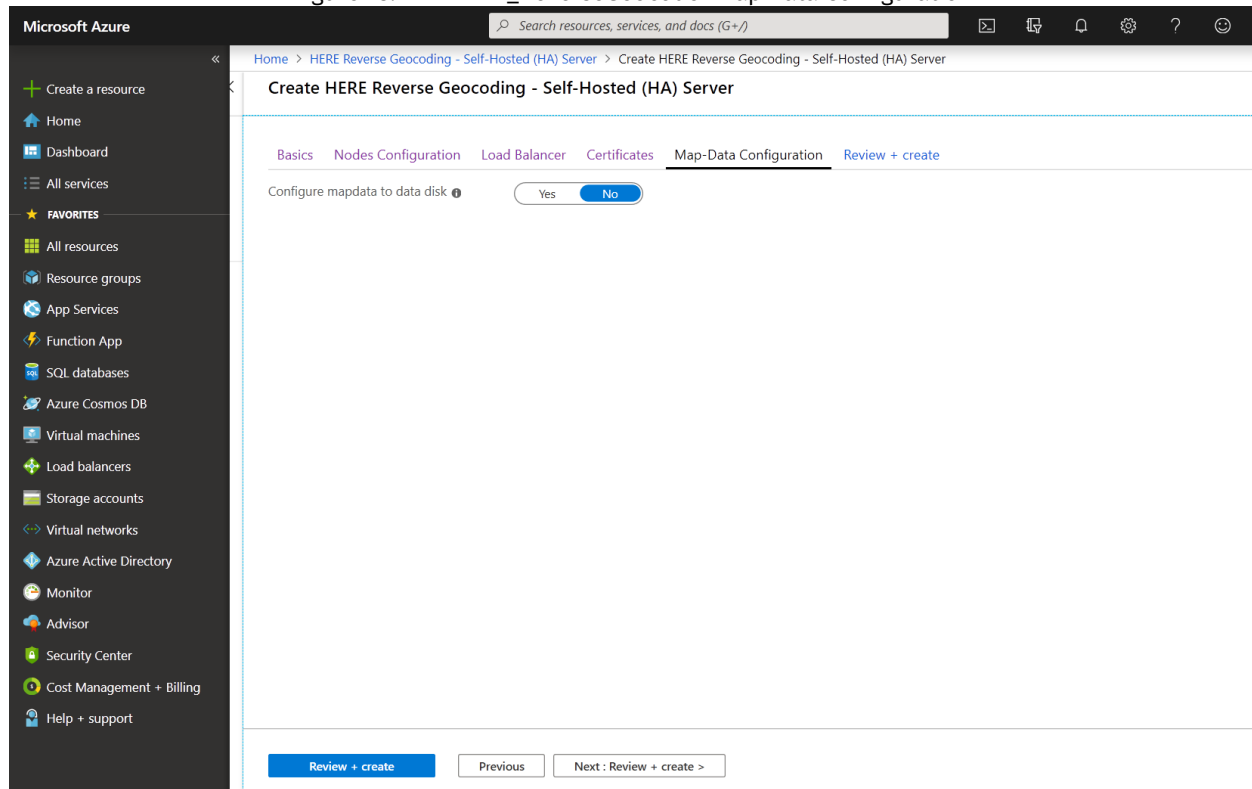
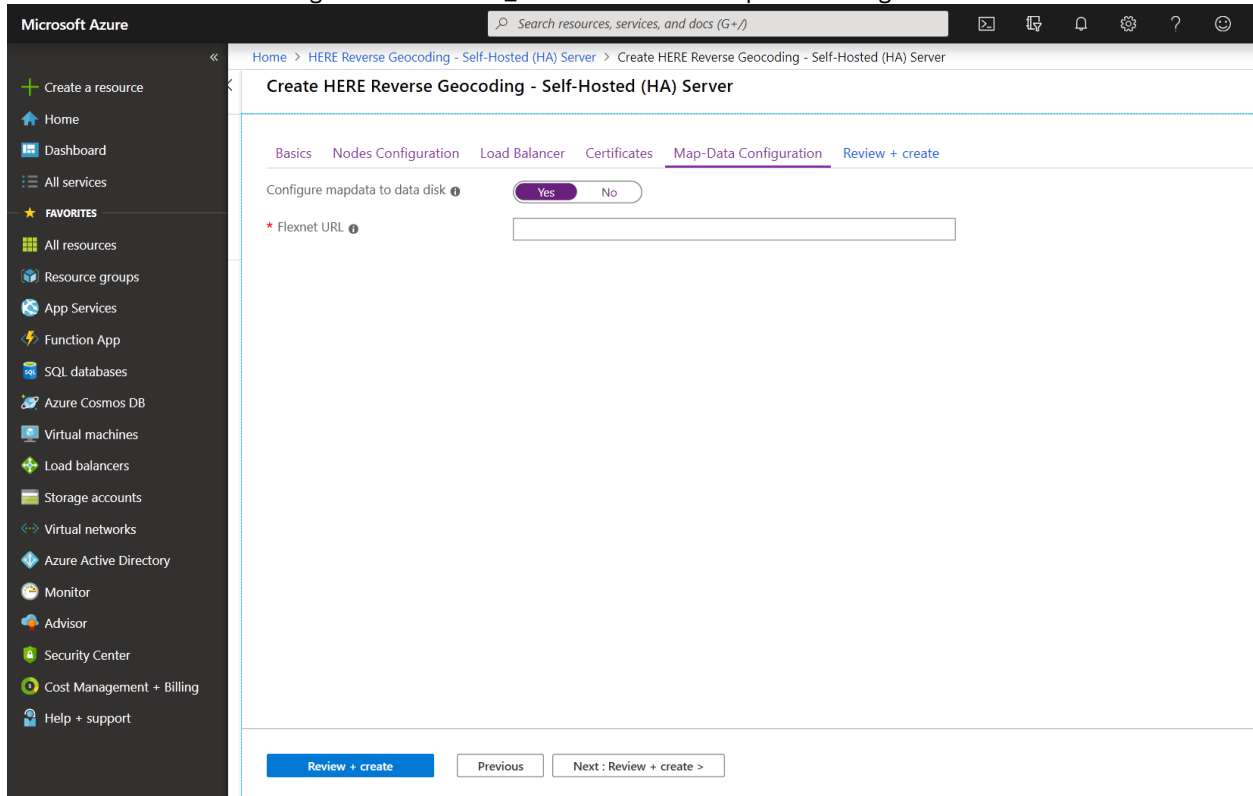


Figure 19: HERE HLP_ReverseGeocoder Map Data Configuration



Microsoft Azure

Home > HERE Reverse Geocoding - Self-Hosted (HA) Server > Create HERE Reverse Geocoding - Self-Hosted (HA) Server

Create HERE Reverse Geocoding - Self-Hosted (HA) Server

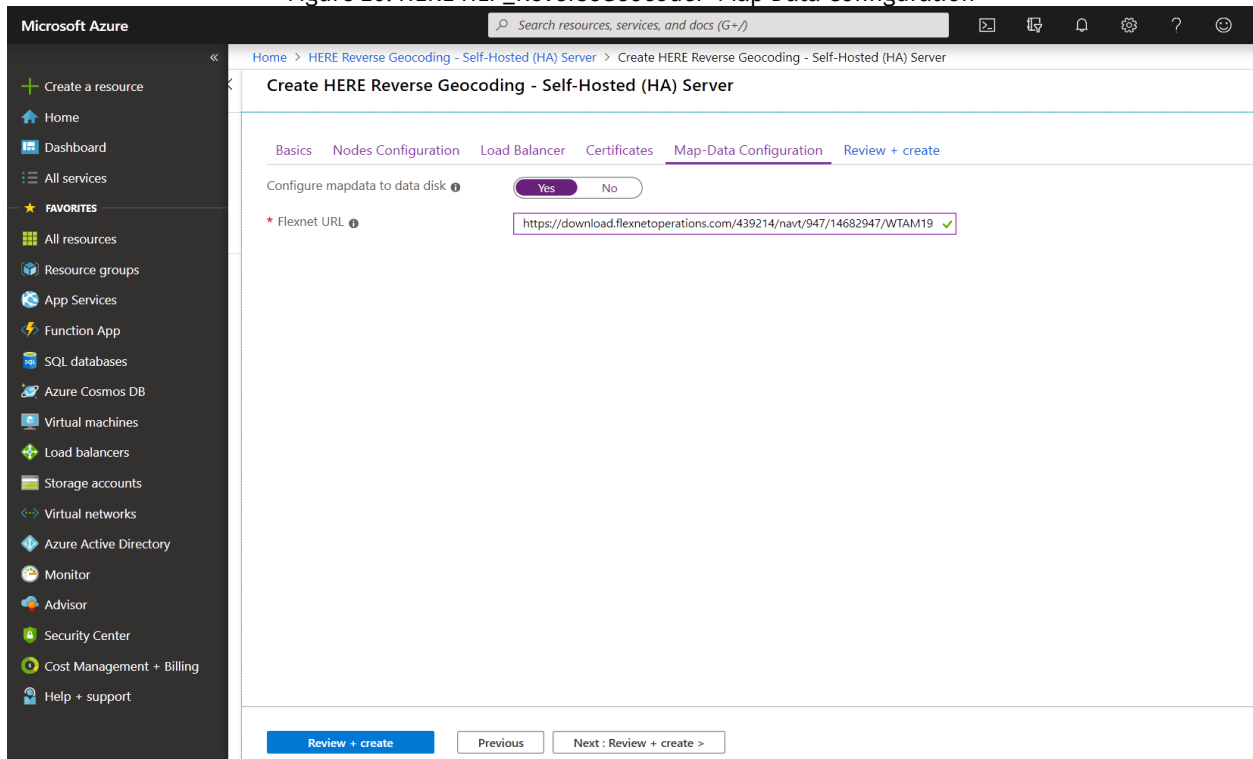
Basics Nodes Configuration Load Balancer Certificates **Map-Data Configuration** Review + create

Configure mapdata to data disk ☒ Yes ☐ No

* Flexnet URL

Review + create Previous Next : Review + create >

Figure 20: HERE HLP_ReverseGeocoder Map Data Configuration



Microsoft Azure

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Create HERE Reverse Geocoding - Self-Hosted (HA) Server

Basics Nodes Configuration Load Balancer Certificates **Map-Data Configuration** Review + create

Configure mapdata to data disk ☒ Yes ☐ No

* Flexnet URL

Review + create Previous Next : Review + create >



Step 9: In the Summary section, you will be able to review your information. An automated check will take place to ensure everything is in order. Once you receive the message “Validation Passed”, click on “OK” button to start the deployment.

Figure 21: HERE HLP_ReverseGeocoder Deployment Summary

Microsoft Azure

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Create HERE Reverse Geocoding - Self-Hosted (HA) Server

✓ Validation Passed

Basics Nodes Configuration Load Balancer Certificates Map-Data Configuration Review + create

PRODUCT DETAILS

HERE Reverse Geocoding - Self-Hosted (HA) Server

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Basics

User name	reversegeocoderdemo
Password	*****
Subscription	HERE-Pay-As-You-Go
Resource Group	reversegeocoderdemo
Region	East US

Nodes Configuration

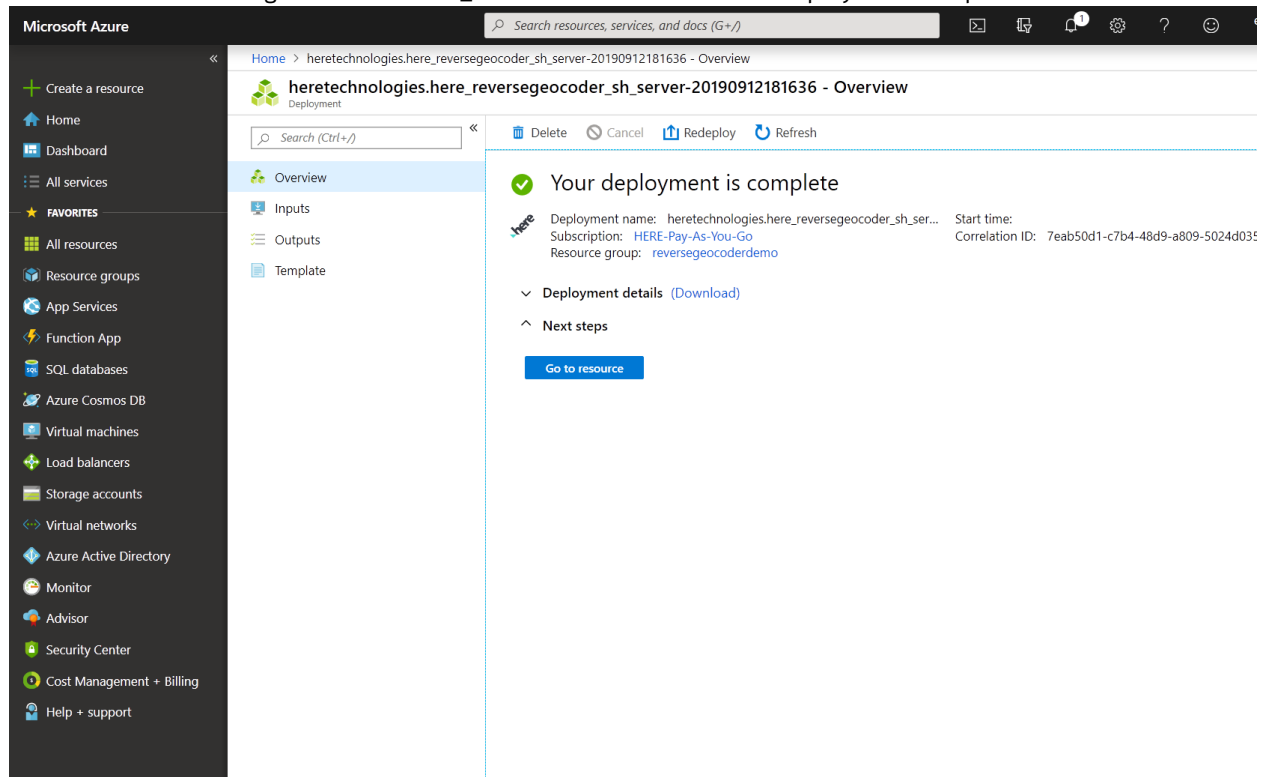
1 Node

Create Previous Next Download template and parameters



Step 10: Deployment should have started, and you will be able to see in the notification tabs deployment in progress. Once deployment is complete, you should receive the notification of the same and be able to see new resources in the resources section of your account.

Figure 22: HERE HLP_ReverseGeocoder Linux VM Deployment Complete



Chapter 3

Data Setup on Provisioned VM

Topics:

- [Access the newly provisioned VM](#)
- [Download the Data Files](#)
- [World Map Data Setup](#)
- [Start Reverse Geocoder API service](#)
- [Commands for the HLP Reverse Geocoder](#)
- [Testing the installation](#)

Access the Newly Provisioned Servers

For security reasons, VM's provisioned only carry private IP address and not Public IP addresses. To access the VM, please go to Virtual Machines section of your Azure Portal and find the jump box prefixed with string you have provided at the time of deployment of template. Use the Public IP access of the Jump Box to login to the server console. Once logged in, type the command `here_monitoring` and select option 0 to view the list of provisioned VM's. To login to any of the VM, please use ssh command provided below.

`ssh <node name> or ssh <ip address of node>`

In case you have used ssh authentication while creating the VM's, as an additional step you have to setup private access key available with you on the jump box server. You can ftp the private key file using any standard ftp tool or can use scp command provided below.

The file should be placed at path `/home/<username>/.ssh` on the jumpbox server.

`scp -i </path/name of private key file> </path/name of private key file> <jump box connection string>:~/.ssh`

On the jump box server, once you have copied the file, please execute below command to set necessary permissions.

`chmod 600 <name of private key file>`

to login to any of the nodes, if your private key filename is "id_rsa", simply use `ssh <nodename>` to connect, else use `ssh <nodename> -i <private key file name>`

Download the Data Files

Follow this section if you have selected option as "No" in the Map Data Setup section of template during deployment. If you selected "Yes", move directly to section 4.

Service files are hosted in SubscribeNet EDD (External Data Download), also known as the B2B Download

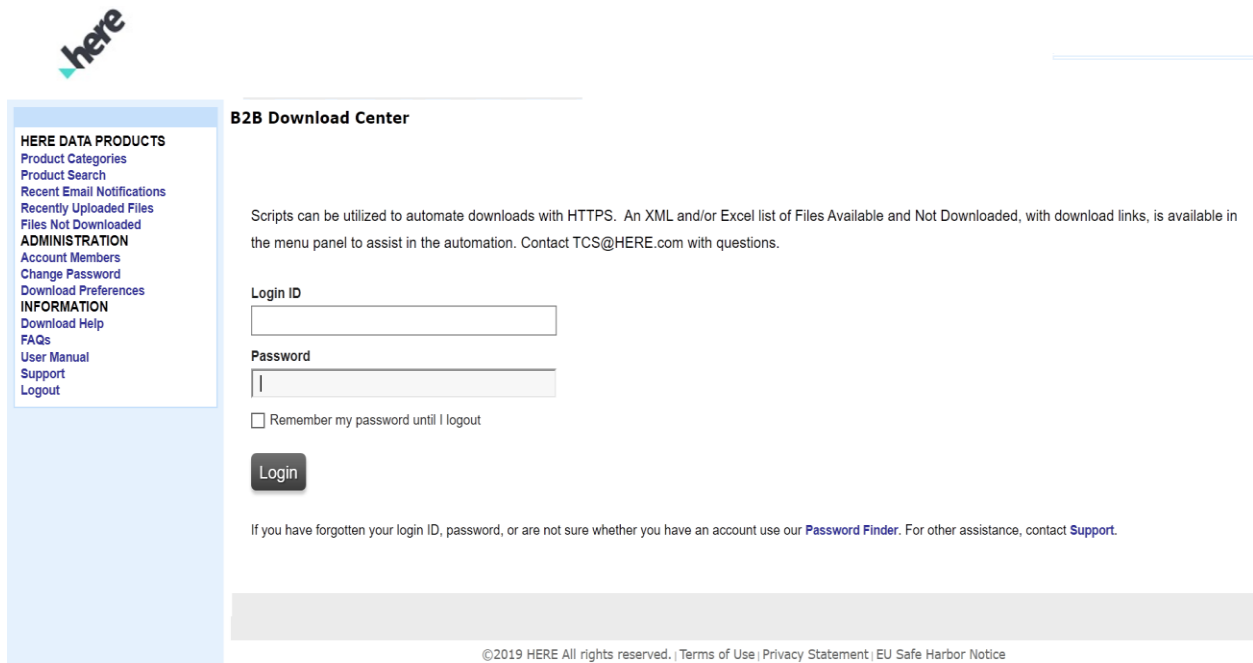
Center.

Note: To acquire credentials to access the B2B Download center, contact HERE Technical Support

(support_here_self-hosted_HLS_on-Azure@here.com).

In your browser, navigate to the B2B download center using this link: <https://here.flexnetoperations.com/>. Enter your login credentials at the prompt and click the Login button.

Figure 23: HERE HLP_ReverseGeocoder B2B Download Center



The screenshot shows the B2B Download Center login interface. On the left is a navigation menu with links for data products, administration, and information. The main content area has a title 'B2B Download Center' and a paragraph about using scripts for automation. Below this is a login form with fields for 'Login ID' and 'Password', a 'Remember my password' checkbox, and a 'Login' button. A footer note provides links for password recovery and support.

here

HERE DATA PRODUCTS
Product Categories
Product Search
Recent Email Notifications
Recently Uploaded Files
Files Not Downloaded

ADMINISTRATION
Account Members
Change Password
Download Preferences

INFORMATION
Download Help
FAQs
User Manual
Support
Logout

B2B Download Center

Scripts can be utilized to automate downloads with HTTPS. An XML and/or Excel list of Files Available and Not Downloaded, with download links, is available in the menu panel to assist in the automation. Contact TCS@HERE.com with questions.

Login ID

Password

☐ Remember my password until I logout

Login

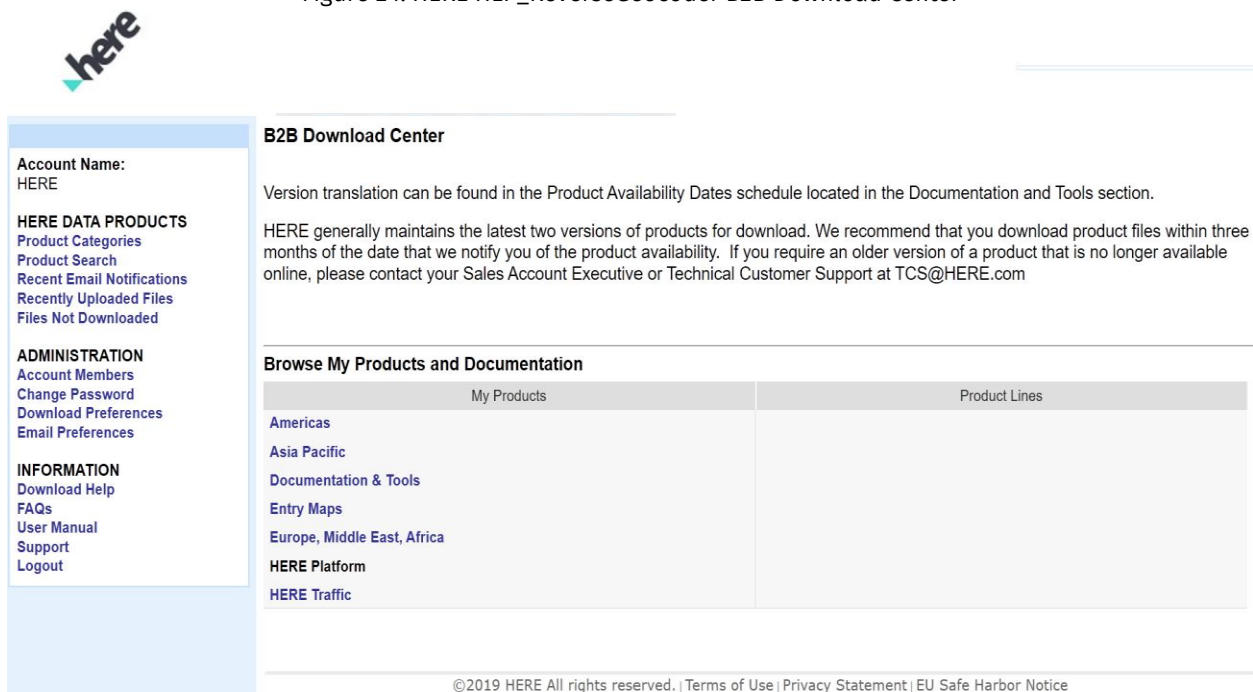
If you have forgotten your login ID, password, or are not sure whether you have an account use our [Password Finder](#). For other assistance, contact [Support](#).

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File Download

The files you need for the service are in the HERE Platform menu item. Select this item, as shown below:

Figure 24: HERE HLP_ReverseGeocoder B2B Download Center



Account Name:
HERE

HERE DATA PRODUCTS
[Product Categories](#)
[Product Search](#)
[Recent Email Notifications](#)
[Recently Uploaded Files](#)
[Files Not Downloaded](#)

ADMINISTRATION
[Account Members](#)
[Change Password](#)
[Download Preferences](#)
[Email Preferences](#)

INFORMATION
[Download Help](#)
[FAQs](#)
[User Manual](#)
[Support](#)
[Logout](#)

B2B Download Center

Version translation can be found in the Product Availability Dates schedule located in the Documentation and Tools section.

HERE generally maintains the latest two versions of products for download. We recommend that you download product files within three months of the date that we notify you of the product availability. If you require an older version of a product that is no longer available online, please contact your Sales Account Executive or Technical Customer Support at TCS@HERE.com

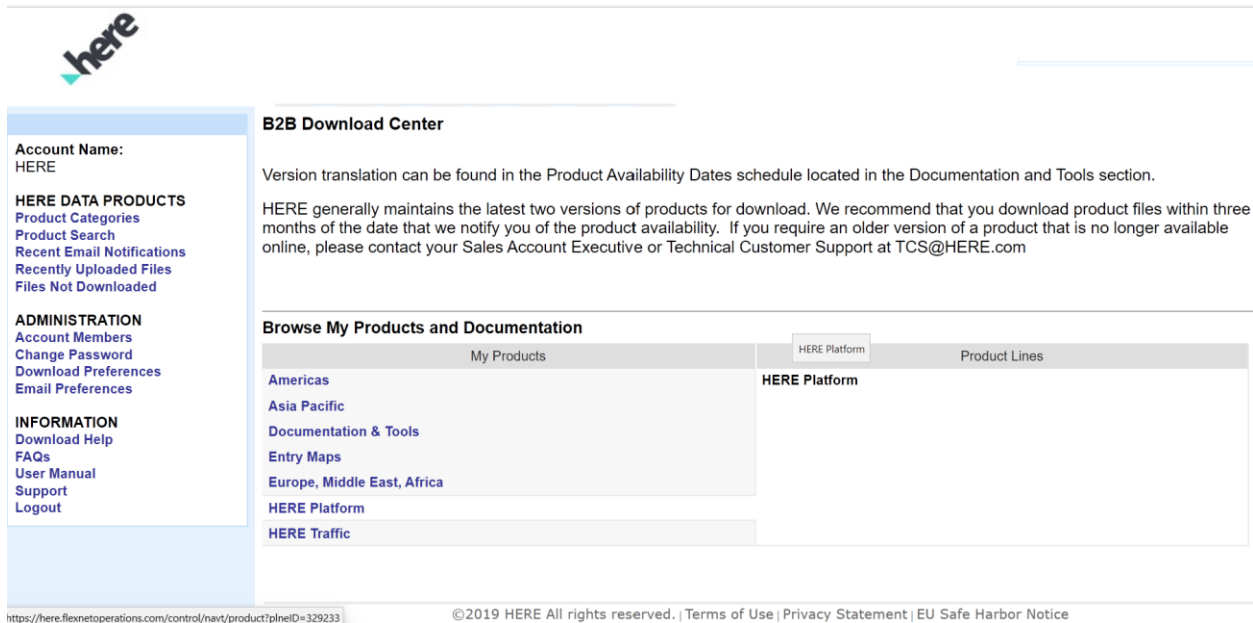
Browse My Products and Documentation

My Products	Product Lines
Americas	
Asia Pacific	
Documentation & Tools	
Entry Maps	
Europe, Middle East, Africa	
HERE Platform	
HERE Traffic	

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A submenu of download items appears on the right side of the screen. Select HERE Platform again.

Figure 25: HERE HLP_ReverseGeocoder B2B Download Center



B2B Download Center

Version translation can be found in the Product Availability Dates schedule located in the Documentation and Tools section.

HERE generally maintains the latest two versions of products for download. We recommend that you download product files within three months of the date that we notify you of the product availability. If you require an older version of a product that is no longer available online, please contact your Sales Account Executive or Technical Customer Support at TCS@HERE.com

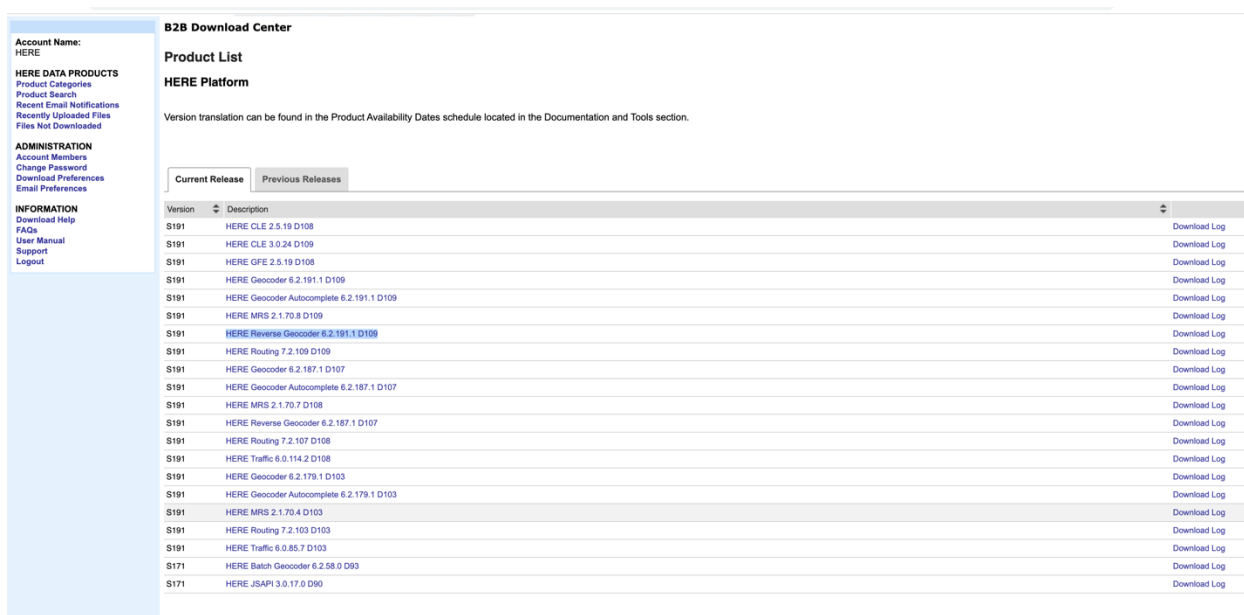
Browse My Products and Documentation

My Products	HERE Platform	Product Lines
Americas	HERE Platform	
Asia Pacific		
Documentation & Tools		
Entry Maps		
Europe, Middle East, Africa		
HERE Platform		
HERE Traffic		

<https://here.flexnetoperations.com/control/navt/product?plnid=329233> ©2019 HERE All rights reserved. | [Terms of Use](#) | [Privacy Statement](#) | [EU Safe Harbor Notice](#)

The screen now displays your download options within HERE Platform. For the HLP Reverse Geocoder, select HERE Reverse Geocoder 6.2.191.1 D109. Please ensure you download this version only to ensure compatibility with the VM.

Figure 26: HERE HLP_ReverseGeocoder B2B Download Center



B2B Download Center

Product List

HERE Platform

Version translation can be found in the Product Availability Dates schedule located in the Documentation and Tools section.

Current Release Previous Releases

Version	Description	
S191	HERE CLE 2.5.19 D108	Download Log
S191	HERE CLE 3.0.24 D109	Download Log
S191	HERE GFE 2.5.19 D108	Download Log
S191	HERE Geocoder 6.2.191.1 D109	Download Log
S191	HERE Geocoder Autocomplete 6.2.191.1 D109	Download Log
S191	HERE MRS 2.1.70.8 D109	Download Log
S191	HERE Reverse Geocoder 6.2.191.1 D109	Download Log
S191	HERE Routing 7.2.109 D109	Download Log
S191	HERE Geocoder 6.2.187.1 D107	Download Log
S191	HERE Geocoder Autocomplete 6.2.187.1 D107	Download Log
S191	HERE MRS 2.1.70.7 D108	Download Log
S191	HERE Reverse Geocoder 6.2.187.1 D107	Download Log
S191	HERE Routing 7.2.107 D108	Download Log
S191	HERE Traffic 6.0.114.2 D108	Download Log
S191	HERE Geocoder 6.2.179.1 D103	Download Log
S191	HERE Geocoder Autocomplete 6.2.179.1 D103	Download Log
S191	HERE MRS 2.1.70.4 D103	Download Log
S191	HERE Routing 7.2.103 D103	Download Log
S191	HERE Traffic 6.0.85.7 D103	Download Log
S171	HERE Batch Geocoder 6.2.58.0 D93	Download Log
S171	HERE JSAPI 3.0.17.0 D90	Download Log

Once you have selected the appropriate package, the screen lists all the files you need to install the HLP

Reverse Geocoder. Service downloads are created in split tar files that are a maximum of 2 Gigabytes in size, so most have multiple files that need to be downloaded.

Download via Browser:

At this screen, click the appropriate download button for each file shown:

- High Speed Download: uses Fast and Secure Protocol (FASP), an alternative to Transmission Control

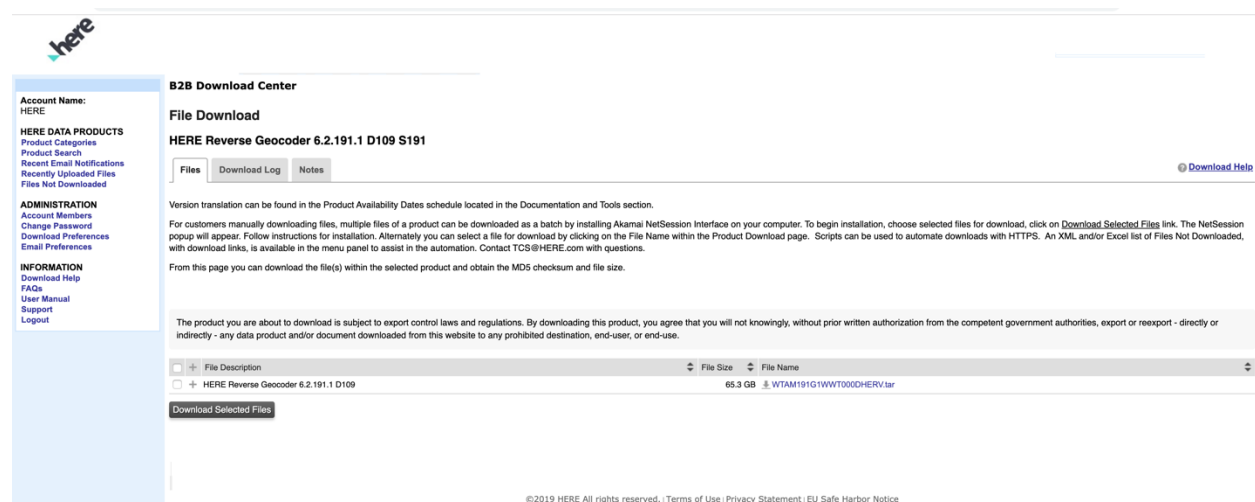
Protocol (TCP), which accelerates bulk data transfer.

- FTP Download: uses File Transfer Protocol (FTP) to download files.

- HTTP Download: downloads files via HTTP. This is the slowest of the download protocols, and takes

approximately twice as long as the FTP download.

Figure 27: HERE HLP_ReverseGeocoder B2B Download Center



Download via Command Line:

You may instead wish to use Linux to download files via command line, using the `wget` command. If that is the case, you can save the appropriate URL for each file download by right-clicking the download button and choosing Copy Link Location. You have to paste the url to the command line in quotation marks and also use the `-O` option to specify the file name. Just like shown below:

```
wget "pasted_url" -O WTAM191F0WWT000DHERV.tar
```

Extract downloaded file

```
tar -xvf WTAM191F0WWT000DHERV.tar
```

Use below command to unzip the zip file

```
unzip HERE_*
```

To extract all smaller archives named from `.tgz.split.aa` until the last one that exists `.tgz.split.zz`.

You can use this command but be sure you have enough disc space:

```
[maptp@<host> <user ID>]$ cat HERE-*.tgz.* | tar -xz
```

Once this command has completed, you will have an additional subdirectory in your current directory. This subdirectory will contain the files that you need to use to setup World Map data.

World Map Data Setup

1. In the directory `/datadrive/disk1/mapdata`, copy the map packed data files `RGC_2019Q1.001.RR.20190327.tgz` and `UDM_2019Q1.001.RR.20190327.tgz` to this directory and unpack it.
2. To unpack the tar file, you can use command `sudo tar -xvf <file name>`.
3. Make sure you have the following directories at `/datadrive/disk1/mapdata`:
`RGC_2019Q1.033.RR.20190919`
`UDM_2019Q1.033.RR.20190919`
4. Execute command `sudo chown -Rh navteq:navteq *` to ensure correct permissions are set.
5. Create soft links using below commands to create softlink between source data and system config.

```
sudo ln -s /datadrive/disk1/mapdata/UDM_2019Q1.033.RR.20190919  
/var/opt/Navteq/share/search/geocoder/
```

```
sudo ln -s /datadrive/disk1/mapdata/RGC_2019Q1.033.RR.20190919  
/var/opt/Navteq/share/search/geocoder/
```

Note: It is not recommended to use map from a different release. Use only the in guide recommended map for each HLP Reverse Geocoder release.

Starting the HLP Reverse Geocoder

1. Start the Reverse Geocoder API by invoking:

```
/opt/Navteq/bin/search-search6-aggregation-service-6.2.179.1 start
```

2. Verify the successful startup of Reverse Geocoder API with the following command.

```
/opt/Navteq/bin/search-search6-aggregation-service-6.2.179.1 status
```

The output should look similar to:

```
Trying to switch to user navteq context via sudo...  
Status of search-search6-aggregation-service-6.2.179.1:  
PID 20689 (process watcher) running: /bin/bash  
PID 20698 (search-search6-aggregation-service-6.2.179.1) running:  
/usr/java/jre1.8.0_31/bin/  
Java
```

3. View the log output produced by Tomcat during startup:

```
tail -f /var/opt/Navteq/log/search-search6-aggregation-service-6.2.179.1/  
search-search6-aggregation-service-6.2.179.1@<host>-console.log
```

The service is up and running when the following message is printed
org.apache.catalina.startup.Catalina start
INFO: Server startup in 335986 ms

Commands for the HLP Reverse Geocoder

The following Table of Commands contains the commands that are used to check the status of the service, start it, restart it, or stop it.

Description	Command
Start the service	<pre>/opt/Navteq/bin/search-search6- aggregation-service-6.2.179.1 start</pre>
Restart the service	<pre>/opt/Navteq/bin/search-search6- aggregation-service-6.2.179.1 restart</pre>
Check the status of the service	<pre>/opt/Navteq/bin/search-search6- aggregation-service-6.2.179.1 status</pre>

Stop the service	<code>/opt/Navteq/bin/search-search6-aggregation-service-6.2.179.1 stop</code>
------------------	--

Testing the Installation

Once the HLP Reverse Geocoder is installed, you can verify that the installation is correct by executing these test cases.

In the URL, <host> and <port> are the hostname and port number of the Load Balancer created as part of deployment.

For better readability URL parameters haven't been URL encoded.

1. Version Information

```
# wget -O - "http://localhost:8080/6.2/version.txt"
```

Reverse Geocoder API version information

2. Health Check

```
# wget -O - "http://localhost:8080/6.2/isalive.html"
```

HTTP 200 response listing the status of the different components

3. Reverse geocode retrieveAddresses

```
# wget -O - "http://localhost:8080/6.2/reversegeocode.xml\?  
prox=50.1115,8.6805,100&mode=retrieveAddresses" | xmllint --format -
```

Address result:

```
<MatchLevel>houseNumber</MatchLevel>  
<Label>Berliner Straße 56, 60311 Frankfurt am Main, Deutschland</Label>
```

4. Reverse geocode retrieveAreas

```
# wget -O - "http://localhost:8080/6.2/reversegeocode.xml?\?  
prox=50.1115,8.6805&mode=retrieveAreas" | xmllint --format -
```

Address result:

```
<MatchLevel>district</MatchLevel>  
<Label>Altstadt, Frankfurt am Main, Hessen, Deutschland</Label>
```

Chapter 4

Monitoring Map Data Setup on Provisioned VM

Topics:

- [Access the Newly Provisioned VM](#)
- [Here Monitoring Tool](#)

Access the Newly Provisioned VM

For security reasons, VM's provisioned only carry private IP address and not Public IP addresses. To access the VM, please go to Virtual Machines section of your Azure Portal and find the jump box prefixed with string you have provided at the time of deployment of template. Use the Public IP access of the Jump Box to login to the server console. Once logged in, type the command `here_monitoring` and select option 5 to view the list of provisioned VM's. To login to any of the VM, please use `ssh` command provided below.

Ssh <node name>

Here Monitoring Tool

Once you have logged in to jump box server, type command `here_monitoring` and press any option between 0-5 to see respective details. For each operation, you will be shown a list of available VM's. You can either select 0 to view the details of all VM's together or choose the number of specific VM for which you wish to see the details. Once deployment has been completed, you can test the API's responses by using options 3 and 4. Use option 5 to quit the tool.

Figure 28: HERE HLP_ReverseGeocoder Deployment Monitoring Tool

```

-----
                        Copyright 2019 HERE Europe B.V.
                    Installation & API health checker for Backend Pool VMs
-----
0) List Nodes
1) Deployment Status
2) Deployment Log
3) API 'Version'
4) API 'retrieveAreas'
5) Exit

select option [0-5], followed by [ENTER] : 0
-----

rgeo-node0 - 10.0.3.8
rgeo-node1 - 10.0.3.9
rgeo-node2 - 10.0.3.5
rgeo-node3 - 10.0.3.6
rgeo-node4 - 10.0.3.7
-----

Do you want to perform more operation [Y/n] :

```

Figure 29: HERE HLP_ReverseGeocoder Deployment Monitoring Tool

```

-----
                        Copyright 2019 HERE Europe B.V.
                    Installation & API health checker for Backend Pool VMs
-----
0) List Nodes
1) Deployment Status
2) Deployment Log
3) API 'Version'
4) API 'retrieveAreas'
5) Exit

select option [0-5], followed by [ENTER] : 1
-----

0) All
1) rgeo-node0
2) rgeo-node1
3) rgeo-node2
4) rgeo-node3
5) rgeo-node4
Select All[0]/Node[1..] for details, followed by [ENTER] : 0
-----

====> [rgeo-node0]
-----
Content-type: text/html

rgeo-node0 :: Thu Aug 29 06:04:23 UTC 2019

Configure HTTP TLS      [Configure SSL Certificates      ] [OK]
ReverseGeocoder API Config [Update server.xml, server.ini File ] [OK]
Install Monitoring API  [Install here_monitoring Script    ] [OK]
Wget MapData tar        [Download tar file from flextnet    ] [In-Progress]
Extract Tar             [Extract downloaded flexnet tar     ] [Pending]
Map Data Setup          [Setup mapdata into /var/mapdata    ] [Pending]
Service Start           [Start search aggregation Service    ] [Pending]

-----

====> [rgeo-node1]
-----
Content-type: text/html

rgeo-node1 :: Thu Aug 29 06:04:07 UTC 2019

```

Figure 30: HERE HLP_ReverseGeocoder Deployment Monitoring Tool

```

-----
Copyright 2019 HERE Europe B.V.
Installation & API health checker for Backend Pool VMs
-----
0) List Nodes
1) Deployment Status
2) Deployment Log
3) API 'Version'
4) API 'retrieveAreas'
5) Exit

select option [0-5], followed by [ENTER] : 2
-----
0) All
1) rgeo-node0
2) rgeo-node1
3) rgeo-node2
4) rgeo-node3
5) rgeo-node4
Select All[0]/Node[1..] for details, followed by [ENTER] : 0
-----
====> [rgeo-node0]
-----
Content-type: text/html

[29082019-06:04:23] Begin execution of script extension on rgeo-node0
[29082019-06:04:23] rgeo-node0 not found in /etc/hosts
[29082019-06:04:23] hostname rgeo-node0 added to /etc/hosts
[29082019-06:04:23] Option A set
[29082019-06:04:23] Option S set
[29082019-06:04:23] Option K set
[29082019-06:04:23] Option U set
[29082019-06:04:23] [configure_xinetd] installing xinetd package
[29082019-06:06:08] [configure_xinetd] installing service /etc/xinetd.d/here_logs
[29082019-06:06:08] [configure_xinetd] restarting xinetd service
[29082019-06:06:08] [install_monitoring_api] /usr/local/bin/here_monitoring installed
[29082019-06:06:08] [add_firewall_rules] Adding firewall rules
[29082019-06:06:10] [add_firewall_rules] Adding port redirection from 80->8080 & 443->8443
[29082019-06:06:13] [add_firewall_rules] firewall rules added for port 80/tcp & 443/tcp
[29082019-06:06:14] [add_firewall_rules] 80/tcp 443/tcp 8080/tcp 65000/tcp 65001/tcp
[29082019-06:06:14] [format_data_disks] starting
[29082019-06:06:14] [format_data_disks] data disks may be attached

```

Figure 31: HERE HLP_ReverseGeocoder Deployment Monitoring Tool

```

-----
Copyright 2019 HERE Europe B.V.
Installation & API health checker for Backend Pool VMs
-----
0) List Nodes
1) Deployment Status
2) Deployment Log
3) API 'Version'
4) API 'retrieveAreas'
5) Exit

select option [0-5], followed by [ENTER] : 1
-----
0) All
1) demo-node2
Select All[0]/Node[1..] for details, followed by [ENTER] : 0
-----
====> [demo-node2]
-----
Content-type: text/html

demo-node2 :: Thu Aug 29 17:53:05 UTC 2019

Configure HTTP TLS      [Configure SSL Certificates      ] [OK]
ReverseGeocoder API Config [Update server.xml, server.ini File ] [OK]
Install Monitoring API  [Install here_monitoring Script    ] [OK]
Wget MapData tar        [Download tar file from flexnet     ] [OK]
Extract Tar             [Extract downloaded flexnet tar     ] [OK]
Map Data Setup          [Setup mapdata into /var/mapdata   ] [OK]
Service Start           [Start search aggregation Service   ] [OK]
-----
Do you want to perform more operation [Y/n] :

```

Figure 32: HERE HLP_ReverseGeocoder Linux VM Deployment Complete

```

-----
Copyright 2019 HERE Europe B.V.
Installation & API health checker for Backend Pool VMs
-----
0) List Nodes
1) Deployment Status
2) Deployment Log
3) API 'Version'
4) API 'retrieveAreas'
5) Exit

select option [0-5], followed by [ENTER] : 3
-----

0) All
1) demo-node2
Select All[0]/Node[1..] for details, followed by [ENTER] : 0
-----

====> [demo-node2]
-----
Service: search-search6-aggregation-service-impl - search-search6-aggregation-service-impl, Version: 6.2.183.1
-----

Storage: 2019Q1.011.RR.20190523

JLAM191P0: [SDN, SYR, YEM]
NAAM19110: [BHS, BLZ, BMU, CAN, CRI, CUB, CYM, DOM, GTM, HND, HTI, JAM, MEX, NIC, PAN, PRI, SLV, SPM, TCA, USA, VGB, VIR]
NXAM19112: [ASM, AUS, CCK, COK, CXR, FJI, FSM, HMD, KIR, MHL, NCL, NFK, NIU, NRU, NZL, PCN, PYF, TKL, TON, TUV, VUT, WLF, WSM]
PKAM131P0: [PAK]
PZAM19104: [VNM]
PZAM19112: [BRN, CHN, GUM, IDN, JPN, KHM, KOR, LAO, MMR, MNG, MNP, MYS, PHL, PLW, PNG, PRK, SGP, SLB, THA, TLS]
RRAM19112: [BGD, BTN, IND, IOT, LKA, MDV, NPL]
SZAM18129: [ARG, CHL, FLK, SGS]
SZAM19112: [ABW, AIA, ATG, BES, BLM, BOL, BRA, BRB, COL, CUW, DMA, ECU, GLP, GRD, GUF, GUY, KNA, LCA, MAF, MSR, MTQ, PER, PRY, SUR, SXM, TTO, URY, VCT, VEN]
TAAM191E0: [ATA]
UEAM19112: [ALB, ARM, AZE, BGR, BIH, BLR, BSB, CUN, CYP, CZE, EST, GEO, GRC, HRV, HUN, KAZ, KGZ, KOS, LTU, LVA, MDA, MKD, MNE, NCY, POL, ROU, RUS, SRB, SVK, SVN, TJK, TKM, TUR, UKR, UZB]
UWAM19112: [AND, AUT, BEL, CHE, DEU, DNK, ESP, FIN, FRA, FRO, GBR, GIB, GRL, IMN, IRL, ISL, ITA, LIE, LUX, MCO, MLT, NLD, NOR, PRT, SJM, SMR, SWE, VAT]
VDAM19112: [CHN, TWN]
VMAM18148: [ISR, WEB]

```

Figure 33: HERE HLP_ReverseGeocoder Linux VM API Testing

```

-----
Copyright 2019 HERE Europe B.V.
Installation & API health checker for Backend Pool VMs
-----
0) List Nodes
1) Deployment Status
2) Deployment Log
3) API 'Version'
4) API 'retrieveAreas'
5) Exit

select option [0-5], followed by [ENTER] : 4
-----

0) All
1) demo-node2
Select All[0]/Node[1..] for details, followed by [ENTER] : 0
-----

====> [demo-node2]
-----

Success : Response [
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<ns2:Search xmlns:ns2="http://www.navteq.com/lbsp/Search-Search/4">
  <Response>
    <MetaInfo>
      <Timestamp>2019-08-29T23:13:35.700Z</Timestamp>
    </MetaInfo>
    <View xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xsi:type="ns2:SearchResultsViewType">
      <ViewId>0</ViewId>
      <Result>
        <Relevance>1.0</Relevance>
        <Distance>0.0</Distance>
        <Direction>0.0</Direction>
        <MatchLevel>district</MatchLevel>
        <MatchQuality>
          <Country>1.0</Country>
          <State>1.0</State>
          <County>1.0</County>
          <City>1.0</City>
          <District>1.0</District>
          <PostalCode>1.0</PostalCode>
        </MatchQuality>
        <Location>

```