

VLink AWS Configuration Guide



Amazon
EC2

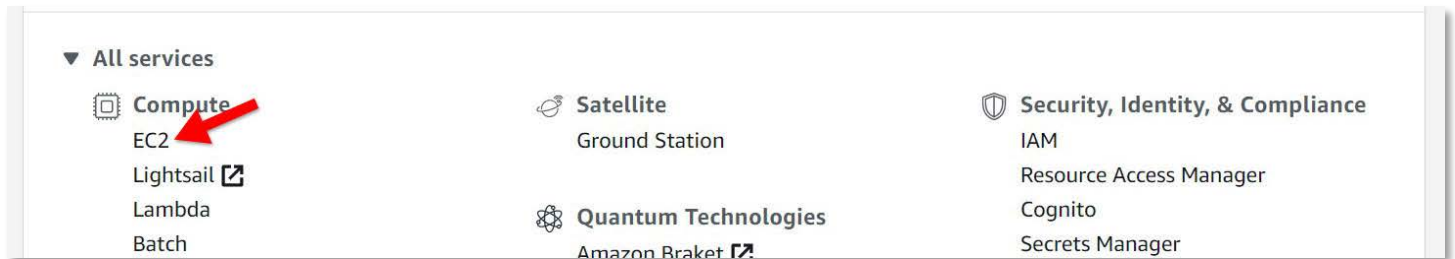


VLink

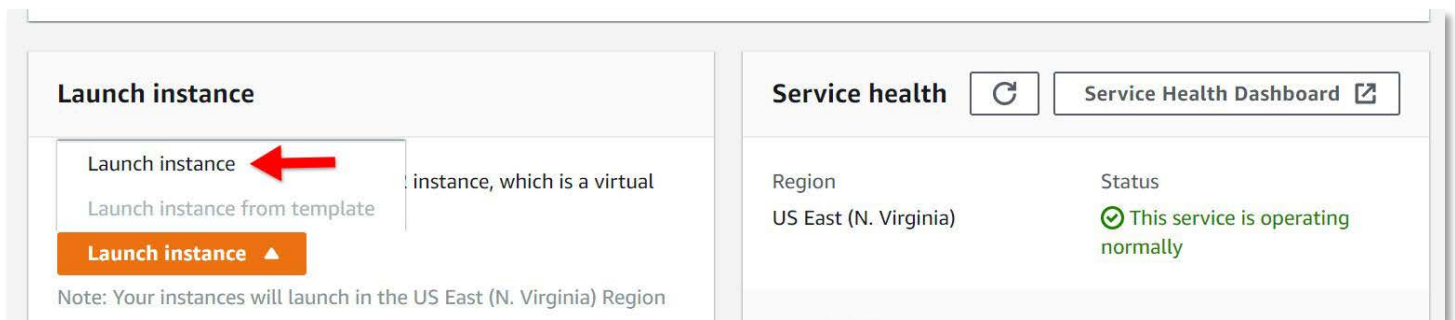
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Creating an EC2 instance

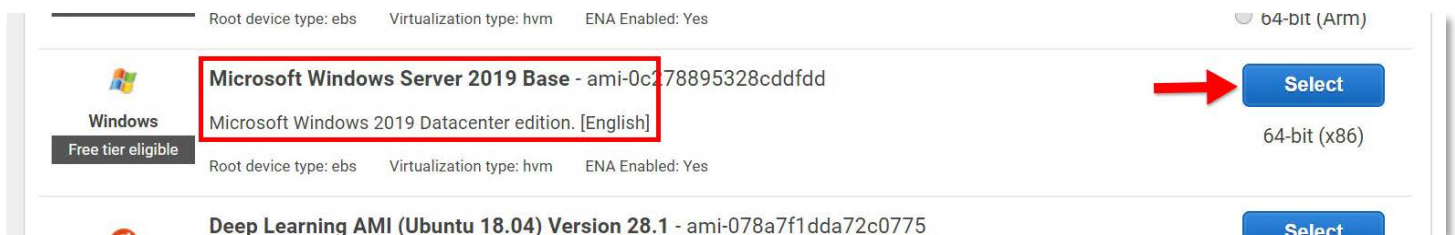
This portion of the guide will show you how to create a virtual machine in the AWS EC2 Cloud.



From the AWS Management Console select EC2 under the Compute services section.



Click the orange Launch instance button then click Launch instance.



Scroll through the server OS options and select the Microsoft Windows Server 2019 Base image.

Note: VLink can be run on all modern Windows Operating Systems. You may use a different version than what is show above.

<input checked="" type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t3a.nano	2	0.5	EBS only	Yes	Up to 5 Gigabit	Yes

Cancel Previous **Review and Launch** Next: Configure Instance Details

You will now select the hardware specifications for your EC2 instance. System hardware requirements are dependent on the number of concurrent users that will be accessing the system. Please refer to the VLink Virtual Matrix Intercom System Requirements document for more information. For the purposes of this guide of this guide I have selected the t2.medium specifications featuring 2 processor cores and 4 Gb of RAM.

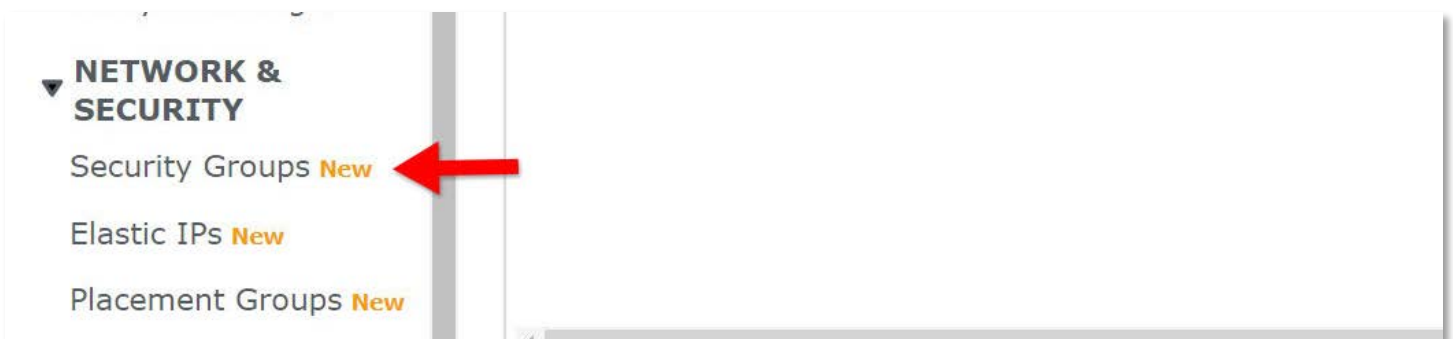
Port Range	Source	Description

Cancel Previous **Launch**

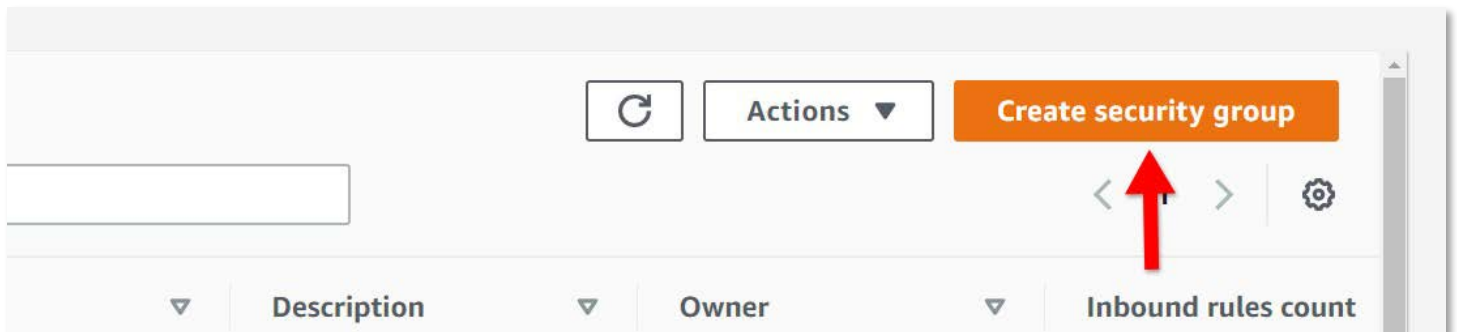
After reviewing your EC2 server options click the Launch button on the bottom right to create and start the server.

AWS Security Group (firewall) Configuration :

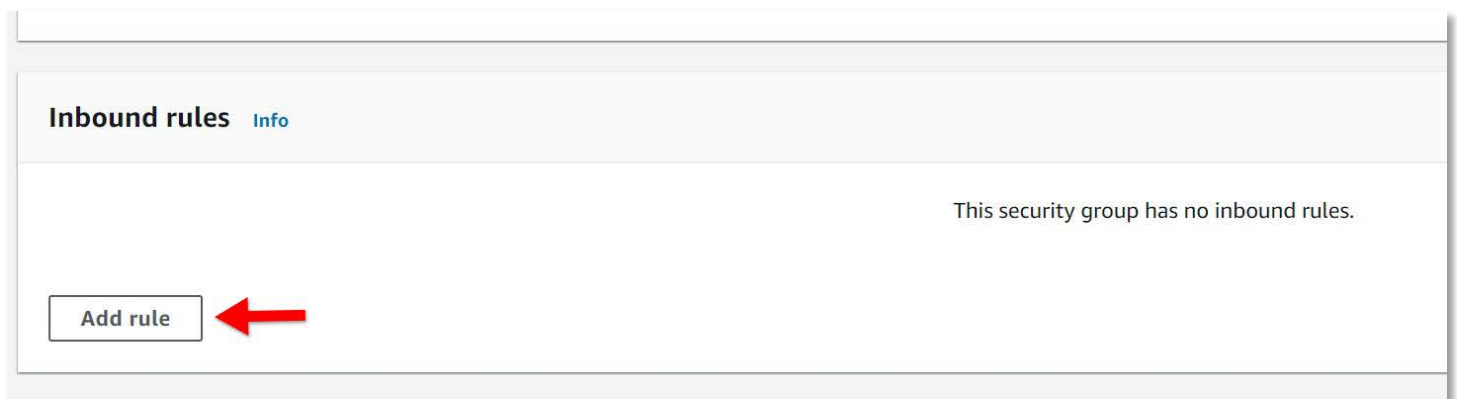
VLink Virtual Matrix uses a variety of ports which will need to be open for the software to function properly. This portion of the guide will show you how to create to configure an AWS Security Group for VLink Virtual Matrix.



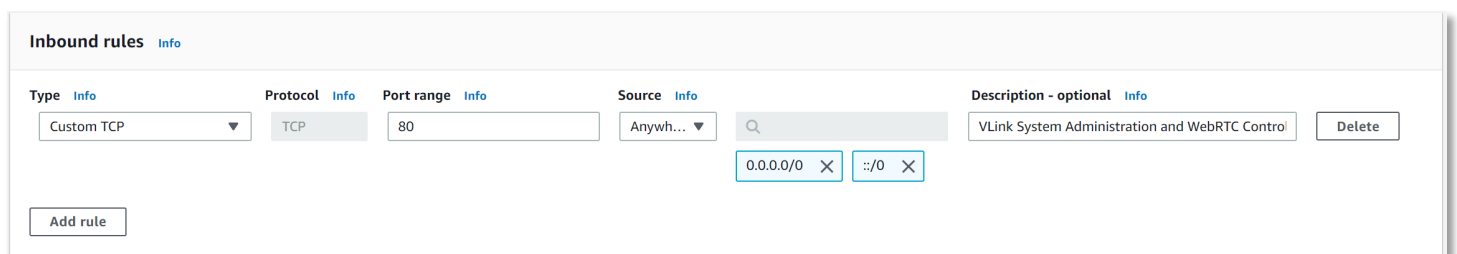
From the left-hand side of the AWS EC2 Management Console click the Security Groups option under the Network & Security section.



On the top right click Create security group.



Enter a Security group name and Description (other options can be left default). Scroll down and under the Inbound rules section click Add rule.



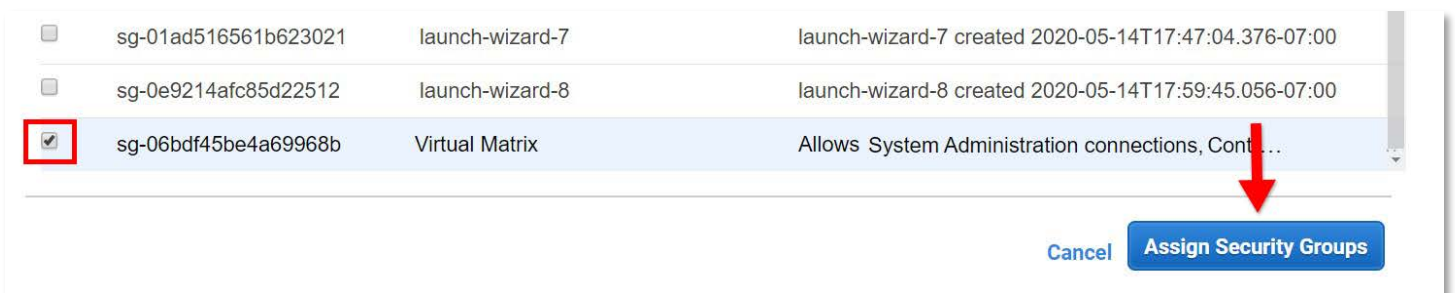
A full list of the required, default VLink ports is below. You will need to add an inbound rule for every port/range listed. When you are finished, click the Create security group button at the bottom of the page.

Note: If you do not add an inbound rule for port 3389 TCP & UDP you will not be able to connect to the server via RDP.

Port / Range	TCP and/or UDP	Description
80	TCP	System Administration and WebRTC Control Panel data (Unsecure)
443	TCP	System Administration and WebRTC Control Panel data (Secure)
81	TCP	WebRTC Control Panel Signaling data (Unsecure)
444	TCP	WebRTC Control Panel Signaling data (Secure)
1000	TCP & UDP	Control Panel for Windows/iOS/Android & Device Interface data and audio
1001	TCP	Virtual Matrix Failover data
5060	TCP & UDP (Can be set to TCP only)	SIP Signaling data
16384 - 32768	UDP	SIP Client audio
49152 - 65535	UDP	WebRTC Control Panel audio
27415	TCP	Connection to RTS TrunkMaster

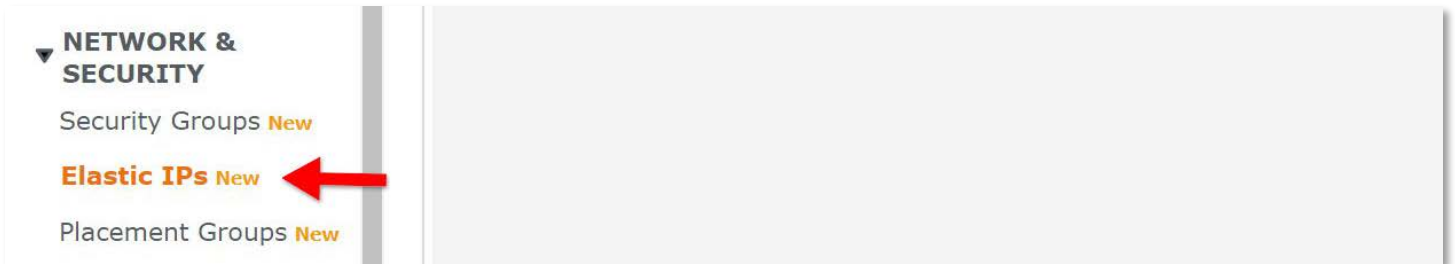


Navigate back to the Instances page and select your new server instance. From the Actions menu at the top go to the Networking section and select Change Security Groups.

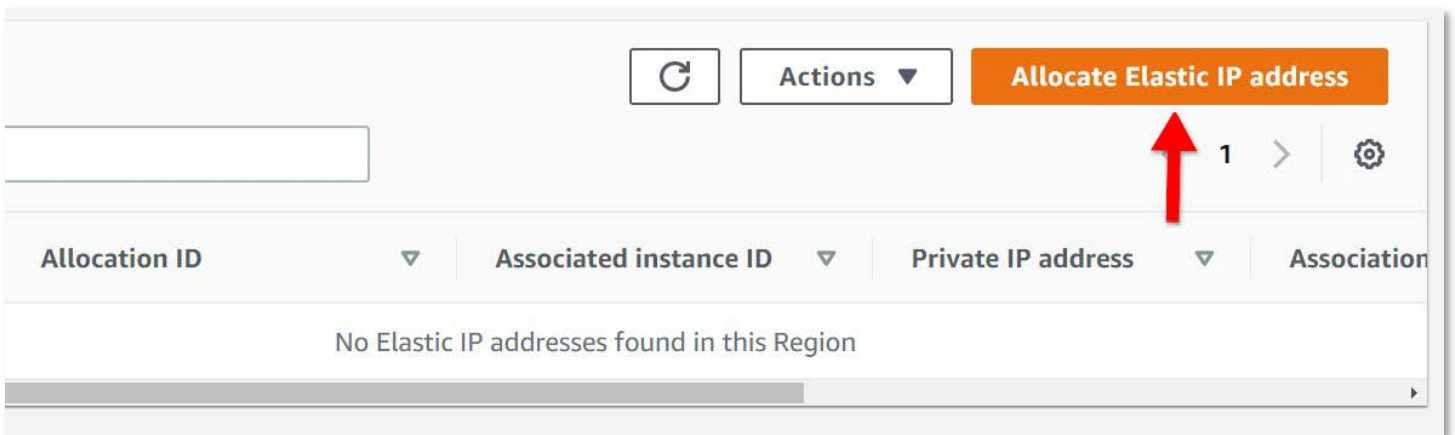


Deselect the default Security Group assigned to the instance and select the Security Group you just created. Finally, click Assign Security Groups to complete the process.

Static IP Address Configuration (recommended):



From the left side menu select Elastic Ips



Click Allocate Elastic IP address on the top right.

Scope
Indicates whether the IP address is available for use in the VPC or EC2-Classic scope.

VPC
 EC2-Classic

Public IPv4 address pool
Public IP addresses are allocated from Amazon's pool of public IP addresses, from a pool that you own and bring to your account, or from a pool that you own and continue to advertise..

Amazon's pool of IPv4 addresses
 Public IPv4 address that you bring to your AWS account(option disabled because no pools found) [Learn more](#)
 Customer owned pool of IPv4 addresses(option disabled because no customer owned pools found) [Learn more](#)

Cancel **Allocate**

Leave all options default and click Allocate.

Actions ▲ **Allocate Elastic IP address**

- View details
- Release Elastic IP addresses
- Associate Elastic IP address ←
- Disassociate Elastic IP address
- Move to VPC scope

Allocation ID	Associated instance	Association
eipalloc-0dfc457c199b45cd6	-	-

Ensure that the IP address you were just given is selected on the list and then from the Actions menu select Associate Elastic IP address.

Instance

Q i-0629ac681dfb7378f X ↻

Private IP address
The private IP address with which to associate the Elastic IP address.

Q Choose a private IP address

Reassociation
Specify whether the Elastic IP address can be reassociated with a different resource if it already associated with a resource.

Allow this Elastic IP address to be reassociated

Cancel Associate

Select your EC2 instance from the list and then click Associate. All other options can be left default.

Connecting to the EC2 Instance:

Launch Instance ▾ Connect Actions ▾

Filter by tags and attributes or search by keyword

<input type="checkbox"/>	Name ▾	Instance ID ▾	Instance Type ▾	Availability Zone ▾	Instance State ▾	Status Checks ▾	Alarm Status
<input checked="" type="checkbox"/>		i-03eab2866c8ef034d	t2.medium	us-east-1a	● running	✓ 2/2 checks ...	None
<input type="checkbox"/>	Ben's Test S...	i-3aee20d5	t2.micro	us-east-1a	● running	✓ 2/2 checks ...	None

After your server has finished initializing, select it from the list and click the Connect button at the top.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Create a new key pair

Key pair name
Virtual Matrix Key Pair

Download Key Pair

You have to download the **private key file** (*.pem file) before you can continue. **Store it in a secure and accessible location.** You will not be able to download the file again after it's created.

Cancel Launch Instances

The options you select from this menu will vary depending on if you have an existing key pair you want to use or wish to continue without a key pair. For the purposes of this guide I have chosen to create a new key pair. If you create a new key pair, you will need to enter a name and then download the key pair. After completing these steps click Launch Instances

You can connect to your Windows instance using a remote desktop client of your choice, and by downloading and running the RDP shortcut file below:

Download Remote Desktop File

When prompted, connect to your instance using the following details:

Public IP	34.207.171.139
User name	Administrator
Password	Get Password

If you've joined your instance to a directory, you can use your directory credentials to connect to your instance.

If you need any assistance connecting to your instance, please see our [connection documentation](#).

Click the button to Download Remote Desktop File and then Click the Get Password button. Save the Remote Desktop File and remember its location as you will need it in the next section of this guide.

The following Key Pair was associated with this instance when it was created.

Key Name Virtual Matrix Key Pair.pem

In order to retrieve your password you will need to specify the path of this Key Pair on your local machine:

Key Pair Path VirtualMatrixKeyPair.pem

Or you can copy and paste the contents of the Key Pair as follows:

```

-----BEGIN RSA PRIVATE KEY-----
MIIEpQIBAAKCAQEA0LHqUzVkJ9pq/5RG9VRggdCcF+RNb91IEaWAomHm1w1hFLcdtqpGtxX3DLgN
VHsL0ILj44H1iYrKlaFmUVOpwxu1pTw7VG7AwrMt5SvjTA3tguswJFGzf/Daw2qtK4xyG4juXN+S
Zc2DUuLm/y5iTL6w7XOSWBiYkYkGidmoNI3Ws8r9BoJeKEM+h7+GrMl6ymu0uLX+Mz0rzEiiXc9I
C8n9QBUfyyMTOax2pylwczAeNLv7gVz7SsKVf5vjBOxMBe1TjdLMYvl55erp3/itXfl33ltc96b9
l6ncShklc2u6QCj8SAKBlbGZsw/p0h1ew5dqJsYT4dR1dTx0Q37n8wIDAQABAoIBAHUwQtXquHX8

```

Click the Choose File button and then navigate to your saved key pair file to upload it. Then, click the Decrypt Password button and copy your password. It is recommended to save the password somewhere so you can connect to the server in the next section.

Configuring the EC2 Instance :

Dashboard

Local Server

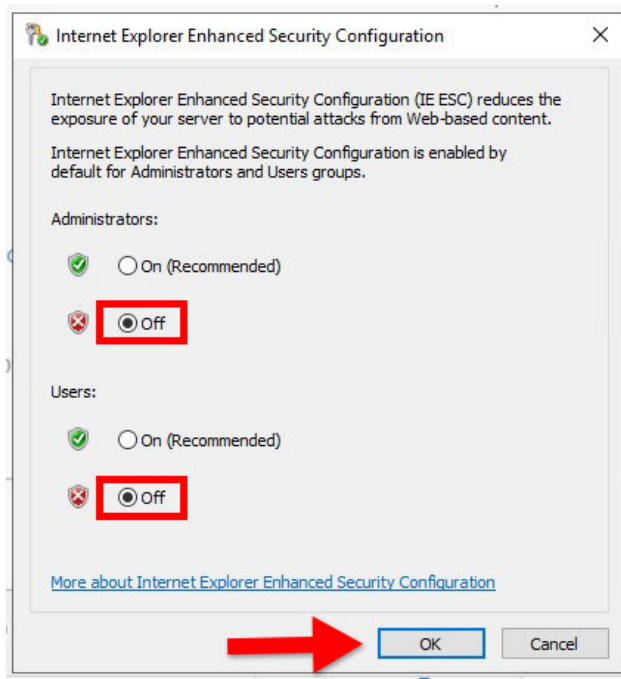
All Servers

File and Storage Services

For EC2AMAZ-HFC2Q71

Computer name	EC2AMAZ-HFC2Q71	Last installed updates	Never
Workgroup	WORKGROUP	Windows Update	Never check for updates
		Last checked for updates	Never
Windows Defender Firewall	Public: On	Windows Defender Antivirus	Real-Time Protection: On
Remote management	Enabled	Feedback & Diagnostics	Settings
Remote Desktop	Enabled	IE Enhanced Security Configuration	On
NIC Teaming	Disabled	Time zone	(UTC) Coordinated Universal Time

To connect to your server double click the Remote Desktop File and paste in your password when prompted. If you select the Remember me option, then you will not need to reenter the credentials in the future. By default, Windows Server will have IE Enhanced Security enabled. With this setting turned on you will not be able to download the VLink Virtual Matrix software via the internet. To disable it, launch the Server Manager application and then select Local Server from the left. On the right, click the On button next to the line that says IE Enhanced Security Configuration.



Disable the IE Enhanced Security Configuration as show above then click Ok. You will now be able to download the VLink Virtual Matrix Software.



You will need to either disable the Windows firewall entirely or configure Inbound Rules for all of the ports required by VLink Virtual Matrix. To create an Inbound Rule launch the Control Panel > Firewall > Advanced Settings. Click Inbound Rules and then click New Rule. For a full list of the required ports please look in the AWS Security Group (firewall) Configuration section of this guide

VLink Virtual Matrix Installation:

VLink Virtual Matrix can be downloaded [here](#). Extract the program and then run the installer. Follow the prompts to complete the installation. From the System Administration application you will be able to view your System ID. Please provide this System ID to your RTS support agent in order to obtain your license file. For more details, please read the VLink Virtual Matrix User Guide.

For more information of how to configure your VLink server please read the VLink Virtual Matrix System Administration Web User Guide.