

**Veeam Backup  
& Replication  
Click to Run™  
Solution for  
AWS**

The information below includes detailed pre-deployment requirements, an in-depth step by step guide for the AWS Veeam Backup and Replication v11 Click to Run deployment, and post deployment steps that will need to be considered. This guide will outline the overall design, and scope, and technical build requirements

[Page 2: Infrastructure Requirements.](#)

[Page 2: AWS Veeam B&R V11 Pre-Requisites](#)

[Page 5: Deployment Architecture.](#)

[Page 6: AWS Veeam B&R V11 Click to Run Deployment.](#)

[Page 11: Post Deployment Activities for AWS Veeam B&R V11](#)

## AWS Veeam B&R V11 Pre-Requisites

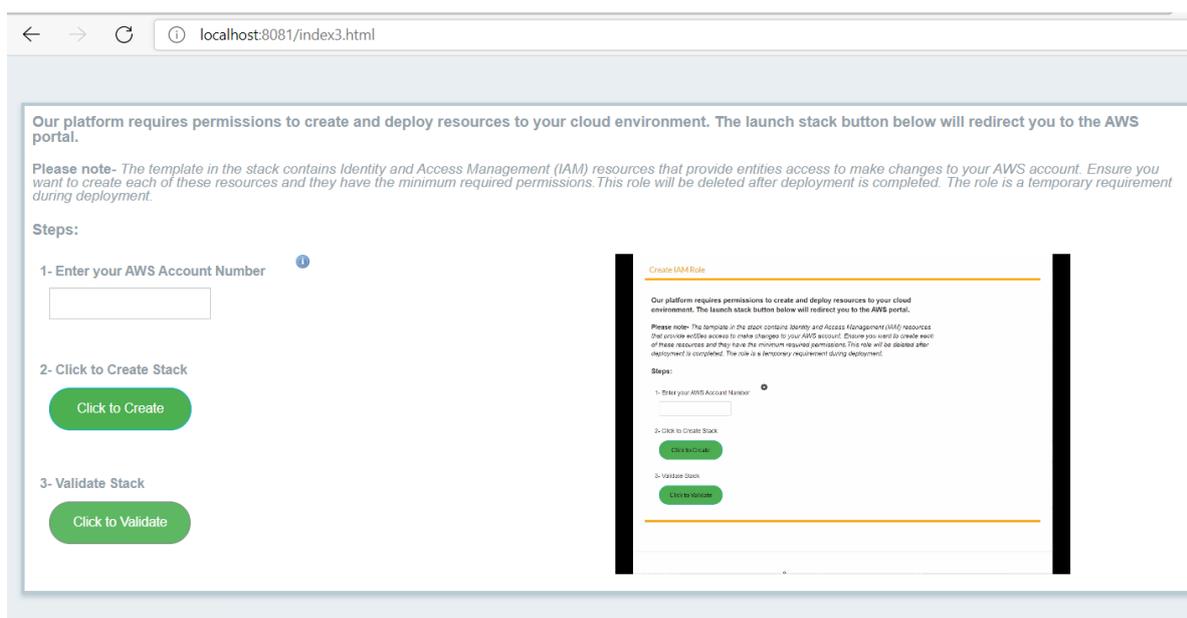
### ✓ Infrastructure Requirements

- Existing VPC and Subnet - This is a requirement because EC2 instances are deployed inside Subnets and VPC's. A VPC with associated subnets must already exist in the region, with corresponding route tables, gateways etc. Those resources will be retrieved from the AWS Account and drop downs will allow the user the selection of those resources.
- Existing Key Pair – This is a requirement because at some point the user will have to connect to the newly created VM and to do so a key in a pem format is usually required to decrypt the password for the administration user. A list of existing keys will be shown in a drop down and the user must confirm he can use the one he has selected.

## AWS Veeam B&R V11 Pre-Deployment Steps

1. In case the user decides to deploy to an existing VPC (future releases will offer VPC creation) he needs to make sure the VPC is created and has at least one subnet. The user will need to record the ID's or names of those resources.

2. When the user starts the purchasing process, he will be sent to the Role creation page. This creates a temporal permission set that allows resource creation inside his AWS account. The least-privilege concept is applied here, and this role will be deleted automatically after a successful deployment. The user must have his AWS credentials and the MFA device at hand (if two-factor authentication is used). This step is always required.



Once the role is created and validated the deployment can start.

## Solution Overview:

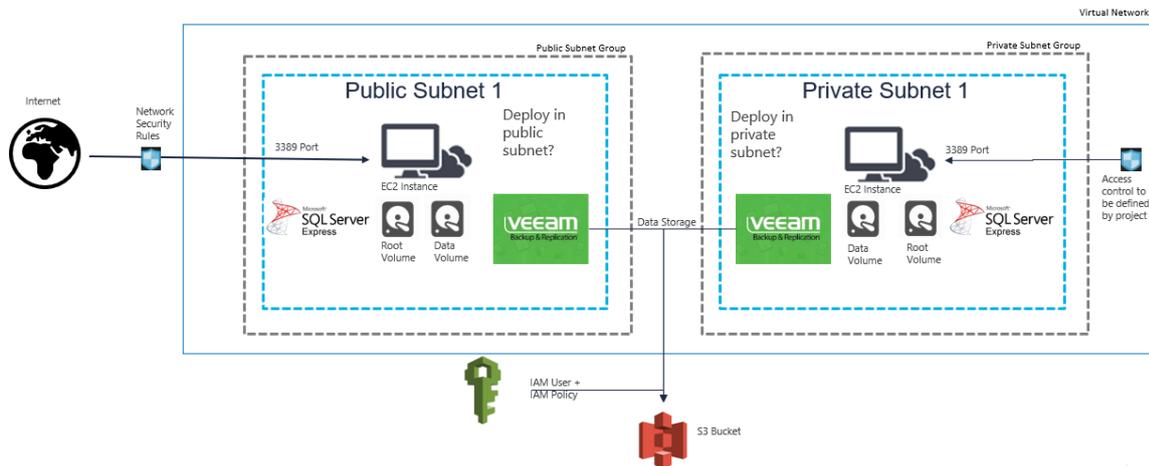
Veeam Backup & Replication is a proprietary [backup app](#) developed by [Veeam](#) for virtual environments built on [VMware vSphere](#), Nutanix AHV, and [Microsoft Hyper-V hypervisors](#).<sup>[3]</sup> The software provides backup, restore and replication functionality for [virtual machines](#), physical [servers](#) and [workstations](#), as well as [cloud-based workload](#).<sup>[4]</sup>

## Parameters & Inputs (a more detailed overview is shown on the next pages):

- Select a Region to deploy to.
- Input a name for your EC2 instance.
- Select your Operating System.
- Create a password for the local user in the EC2 instance.
- Create an S3 bucket for Veeam Data storage.
- Select a Key Pair for connecting to the VM.
- Use an existing IAM user or create a new one for connectivity between EC2 and S3.
- Select the size of your instance.
- Select your root volume and data volume sizes.
- Enable/disable and configure Remote Access to the VM.
- Select the VPC in which the VM will be placed.
- Select the Subnet in which the VM will be placed.

## Deployment Architecture:

### Architecture Design Veeam B&R V11



## AWS Veeam B&R V11 Click to Run Deployment

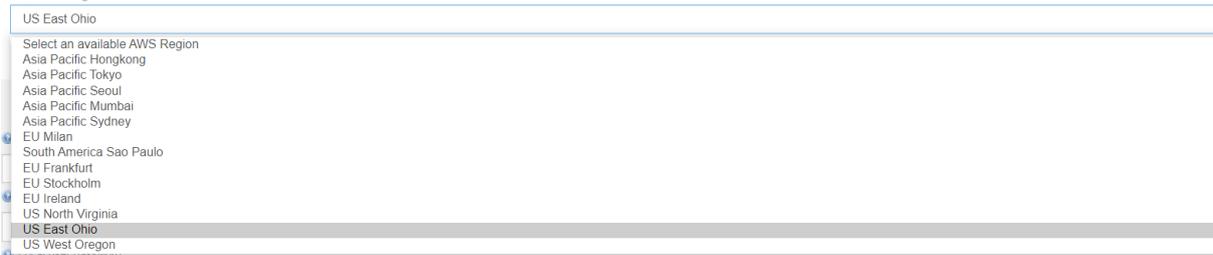
### AWS RDS v2 Deployment and Considerations

Purchase the AWS Veeam Backup and Replication V11 Click to Run Solution through StreamOne Marketplace and proceed to the Digital Locker to configure and deploy the solution.

1. Select an available AWS Region: This is the region where the solution will be deployed. Some regions need to be enabled first on the target account before deploying to them, a warning message will appear in such case.

LOCATION

Select AWS region



2. Select the name for the created VM: This is the name that will be shown in your AWS Console, it does not alter the host name of the VM.

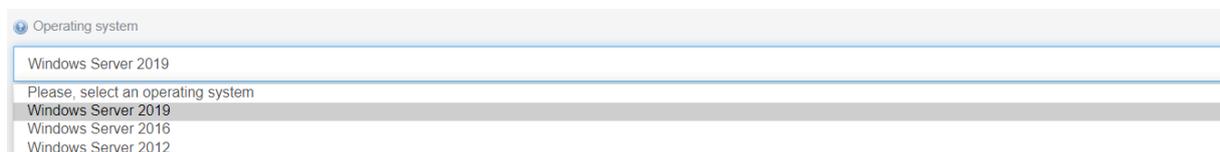


BASIC INFORMATION

Instance name

veeam-testdemo

3. Select the Operating System: Currently only Windows VM's are supported.



Operating system

Windows Server 2019

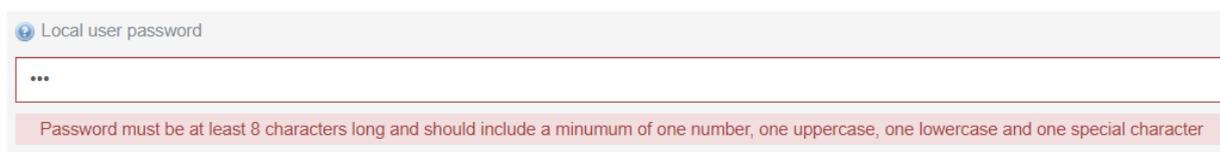
Please, select an operating system

Windows Server 2019

Windows Server 2016

Windows Server 2012

4. Select a Password for the local user: In order for the installation process to succeed a local user with admin privileges is required. The “Administrator” user cannot be used in this case because it is not possible to obtain the password generated by AWS in a programmatic matter therefore a new “veeam” user will be created inside the new Virtual Machine with the password provided in the interface. Please note that standard Windows OS password restrictions apply here.

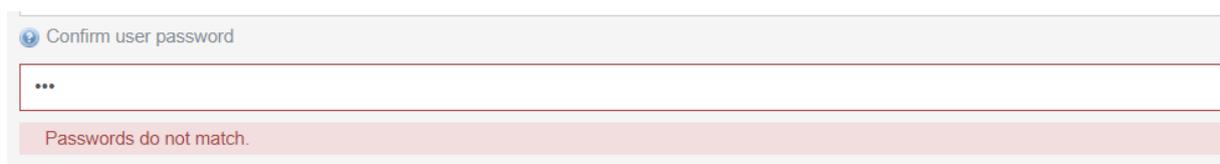


Local user password

...

Password must be at least 8 characters long and should include a minimum of one number, one uppercase, one lowercase and one special character

5. Confirm the Password.



Confirm user password

...

Passwords do not match.

6. Select a name for the S3 Bucket: Live validations will check if the bucket already exists.



The screenshot shows a configuration panel titled "S3 Bucket". Below the title is a text input field containing the name "veeamdemo". Below the input field, a message states "Bucket Name is available".

7. Select Key pair for Remote Desktop Connection: You will need to confirm you can use this key to connect.

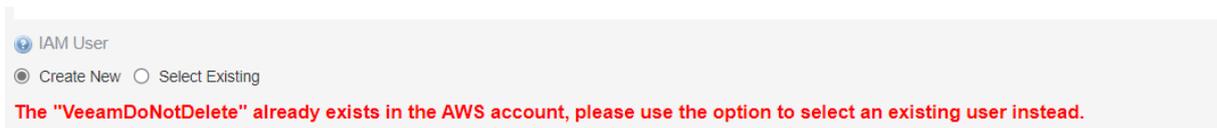


The screenshot shows a configuration panel titled "Key Pair". Below the title is a text input field with the placeholder text "Please, select a key pair". Below the input field is a dropdown menu with the following options: "AM.adriancus", "cloud", and "MN-VeeamKP".

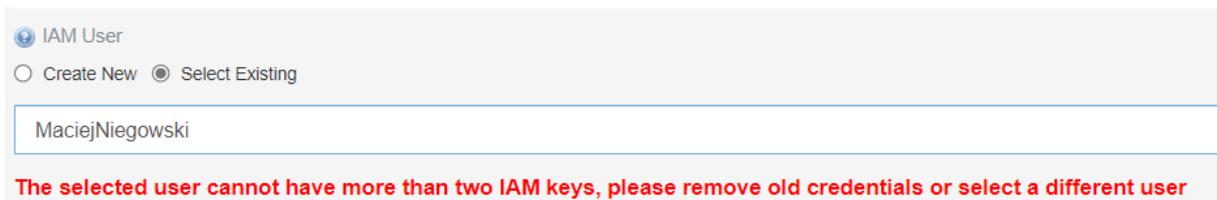


The screenshot shows a configuration panel titled "Key Pair". Below the title is a text input field containing "MN-VeeamKP". Below the input field is a checkbox that is checked, with the text "- I confirm that I have a copy of the above key pair".

8. Select the IAM user: The user that will be used for programmatic access of the communication between EC2 and S3. There is an option to create a new user but if the username "VeeamDoNot Delete" already exists in the account it must be selected as an existing user. An existing user cannot have two or more security credential sets already created.

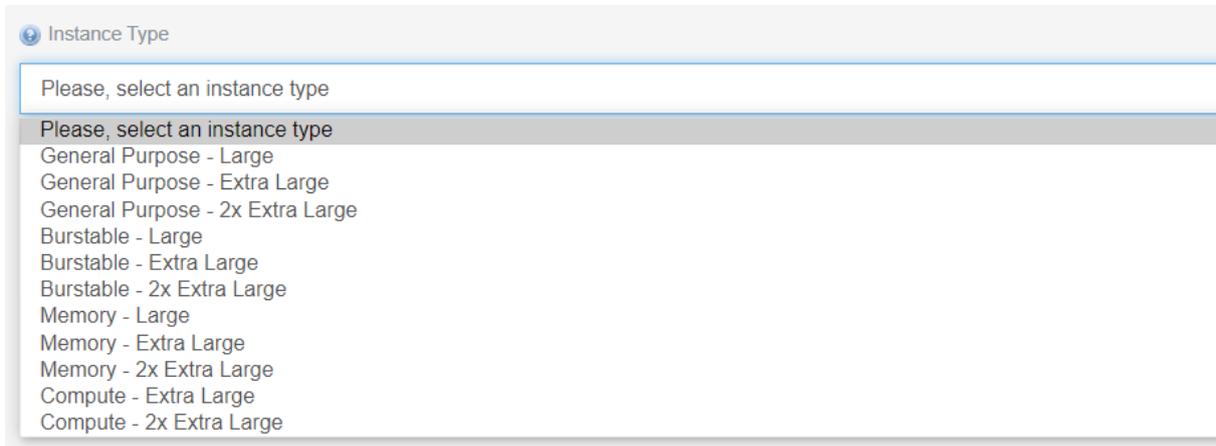


The screenshot shows a configuration panel titled "IAM User". Below the title are two radio buttons: "Create New" (selected) and "Select Existing". Below the radio buttons is a red error message: "The 'VeeamDoNotDelete' already exists in the AWS account, please use the option to select an existing user instead."



The screenshot shows a configuration panel titled "IAM User". Below the title are two radio buttons: "Create New" and "Select Existing" (selected). Below the radio buttons is a text input field containing the username "MaciejNiegowski". Below the input field is a red error message: "The selected user cannot have more than two IAM keys, please remove old credentials or select a different user".

9. Select Instance Size Please choose the best price to performance ratio that interests you



The screenshot shows a dropdown menu titled "Instance Type". The menu is open, displaying a list of instance types. The first option is "Please, select an instance type". Below it are the following options: "General Purpose - Large", "General Purpose - Extra Large", "General Purpose - 2x Extra Large", "Burstable - Large", "Burstable - Extra Large", "Burstable - 2x Extra Large", "Memory - Large", "Memory - Extra Large", "Memory - 2x Extra Large", "Compute - Extra Large", and "Compute - 2x Extra Large".

10. Select the size of your Root and Data volumes.



The screenshot shows two sliders for selecting volume sizes. The first slider is titled "Size of the root volume (Gb)" and has a range from 50 to 300 Gb, with major ticks at 50, 100, 150, 200, 250, and 300. The second slider is titled "Size of the data volume (Gb)" and has a range from 50 to 578 Gb, with major ticks at 50, 156, 261, 367, 472, and 578.

11. Select if a public IP is required When selecting an elastic IP, a quota check will be performed.



The screenshot shows two checkboxes for IP address assignment. The first checkbox is checked and is labeled "- Assign public I.P. address?". The second checkbox is unchecked and is labeled "- Assign elastic I.P. address?".

----- Continue to next page -----

12. Select the VPC Every EC2 requires a VPC to be placed in, if no custom VPC's are in the selected region you can select the default one

Please select an existing subnet

- onetagwithname - subnet-0793390ecfa19dc3a(us-east-2a)
- Private Subnet 1 - subnet-0b85155b8c0310d47(us-east-2a)
- Private Subnet 2 - subnet-023b050c32f37a336(us-east-2b)
- Public Subnet 1 - subnet-07fbd2ee08f2b222(us-east-2a)**
- Public Subnet 2 - subnet-01331613f9d44bf7d(us-east-2b)
- subnet-07aed14b73bb8d4a8(us-east-2b)
- subnet-0d14474e0a90d61de(us-east-2b)
- subnet-0f3c933a5ff6a6e81(us-east-2b)

Please select an existing subnet

13. Choose a Subnet from the Selected VPC.

Please select an existing subnet

- onetagwithname - subnet-0793390ecfa19dc3a(us-east-2a)
- Private Subnet 1 - subnet-0b85155b8c0310d47(us-east-2a)
- Private Subnet 2 - subnet-023b050c32f37a336(us-east-2b)
- Public Subnet 1 - subnet-07fbd2ee08f2b222(us-east-2a)**
- Public Subnet 2 - subnet-01331613f9d44bf7d(us-east-2b)
- subnet-07aed14b73bb8d4a8(us-east-2b)
- subnet-0d14474e0a90d61de(us-east-2b)
- subnet-0f3c933a5ff6a6e81(us-east-2b)

Please select an existing subnet

----- Proceed to the next page to for post-deployment steps -----

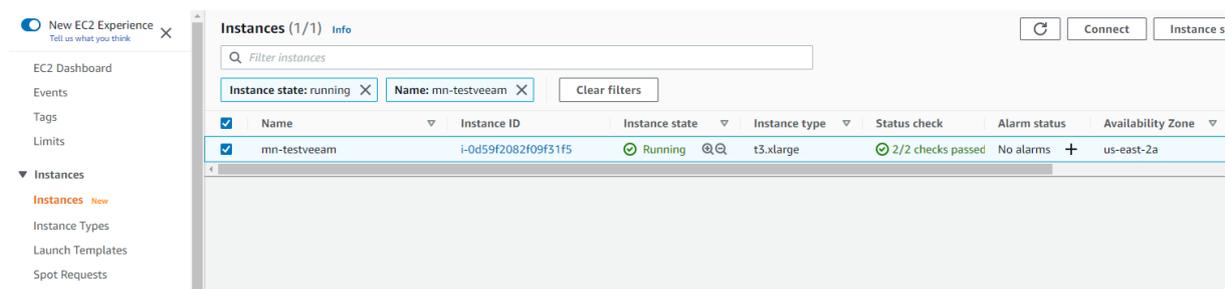
## Post-Deployment activities for AWS Veeam B&R V11:

- Verifying the state of your instance.
- Connecting to your VM.
- Verifying the state of the installation.
- License installation screen.

## Post Deployment Activities

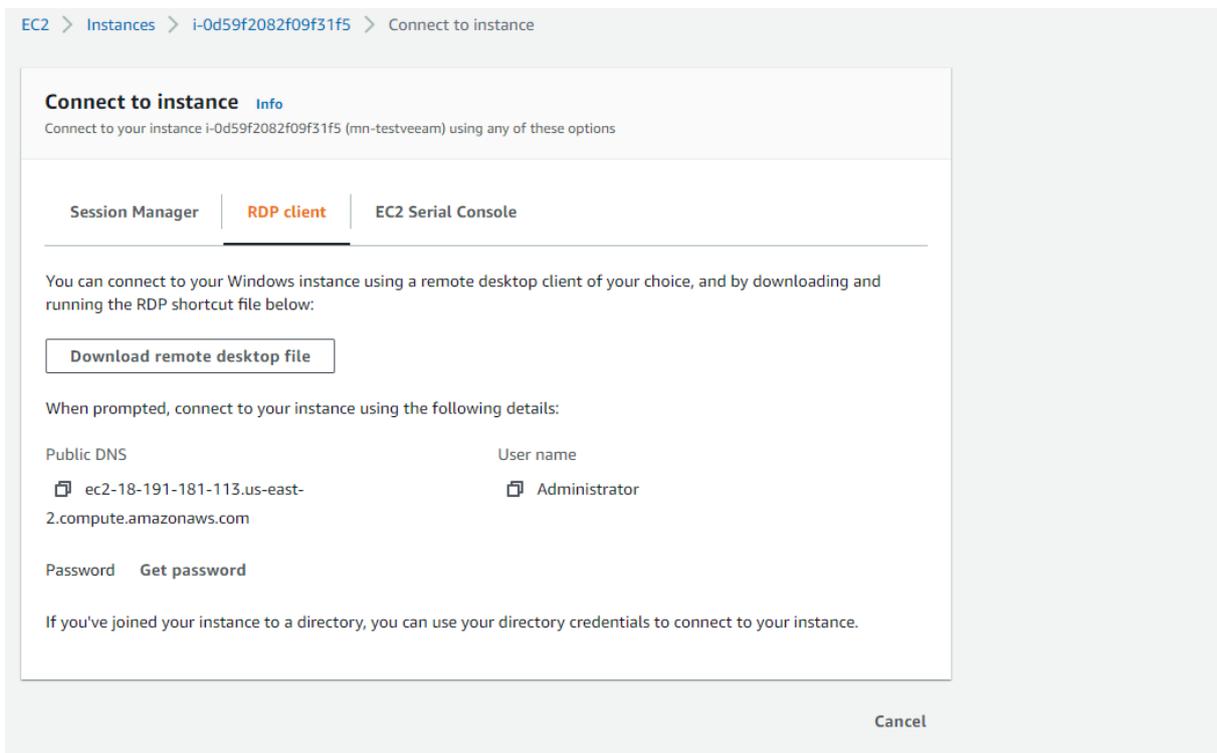
- Verifying the state of your instance.

When the instance is first deployed, its state will change to “running” after some minutes. If the instance doesn’t start there might have been a problem during startup, so either check the deployment logs or contact our support. To verify the state, go to your AWS console. Once logged in, select the service “EC2”. Go to “Instances”. Your instance should appear there, with the name you selected as “Instance Name”. The state will be displayed in the “status” column.



## Connecting to your VM.

You will need to connect to your VM to finish the installation. To do so you need to decrypt the password using the keypair selected in the UI. To do so select the “Connect” button in the EC2 panel, and select the “RDP Client” option.



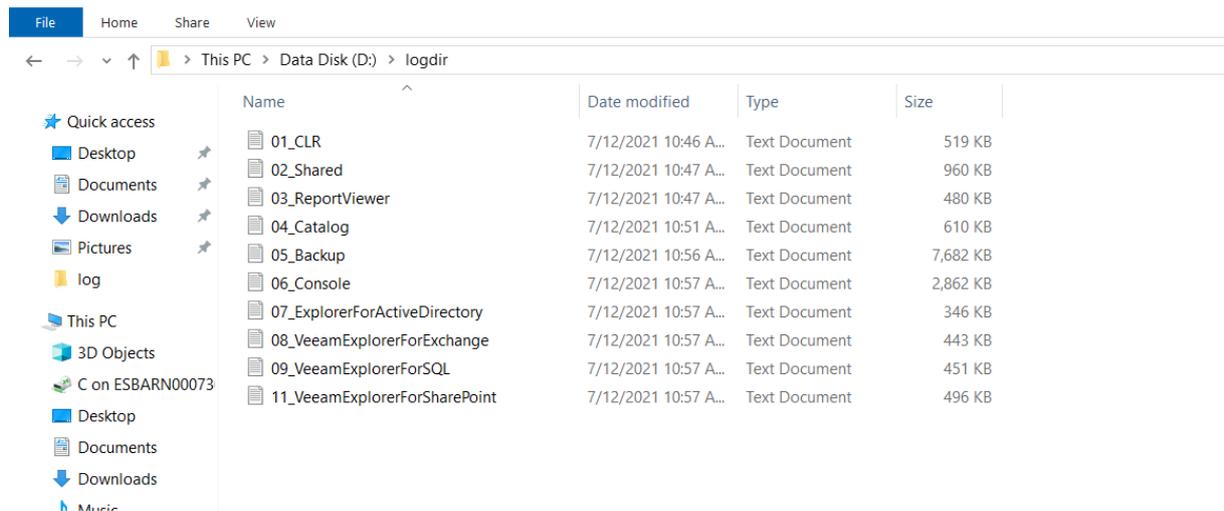
The screenshot shows the AWS Management Console interface for connecting to an EC2 instance. The breadcrumb trail at the top reads: EC2 > Instances > i-0d59f2082f09f31f5 > Connect to instance. The main heading is "Connect to instance" with an "Info" link. Below this, it says "Connect to your instance i-0d59f2082f09f31f5 (mn-testveeam) using any of these options". There are three tabs: "Session Manager", "RDP client" (which is selected and highlighted in orange), and "EC2 Serial Console". A horizontal line separates the tabs from the content below. The text reads: "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:". Below this is a button labeled "Download remote desktop file". The next line says: "When prompted, connect to your instance using the following details:". There are two columns of information: "Public DNS" with the value "ec2-18-191-181-113.us-east-2.compute.amazonaws.com" and "User name" with the value "Administrator". Below this is a "Password" field with a "Get password" link. At the bottom of the main content area, it says: "If you've joined your instance to a directory, you can use your directory credentials to connect to your instance." A "Cancel" button is located at the bottom right of the console area.

In the “Get password” field you need to provide your key to decrypt the password, once this is done paste the DNS, “Administrator” user and the password into your Remote Desktop client.

## Verifying the state of the installation

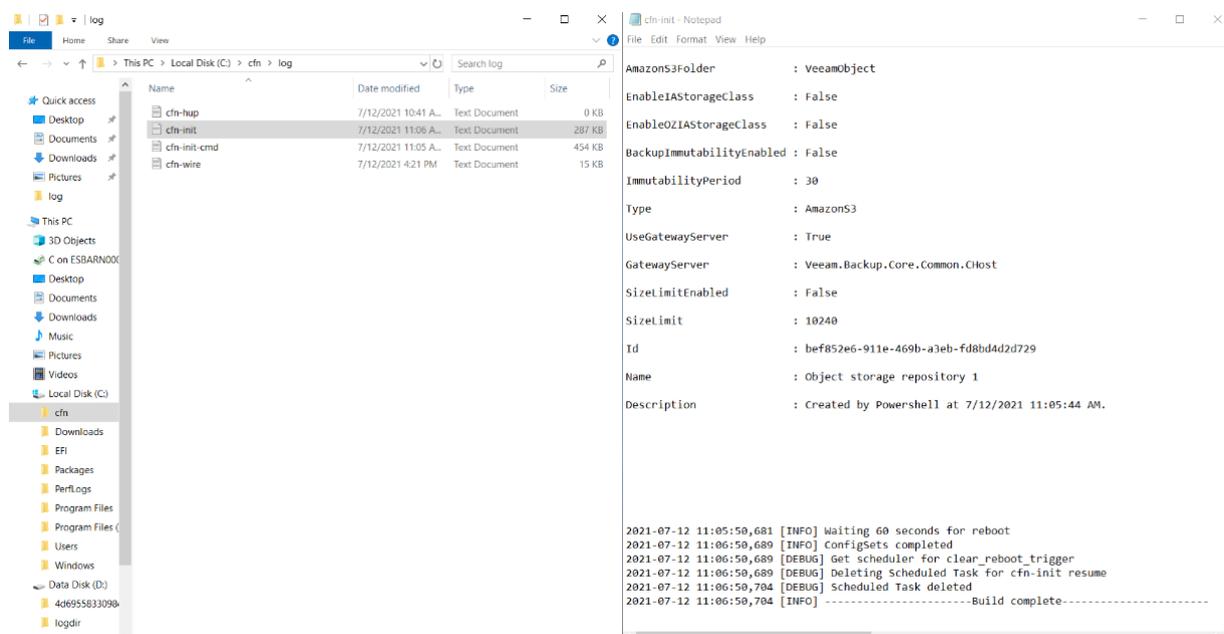
Once you can establish a Remote Desktop session to your VM you may want to check if the installation was successful. Those steps are optional. There are several places where you can look:

- On the data disk in the log directory D:\logdir there should be 11 files



Name	Date modified	Type	Size
01_CLR	7/12/2021 10:46 A...	Text Document	519 KB
02_Shared	7/12/2021 10:47 A...	Text Document	960 KB
03_ReportViewer	7/12/2021 10:47 A...	Text Document	480 KB
04_Catalog	7/12/2021 10:51 A...	Text Document	610 KB
05_Backup	7/12/2021 10:56 A...	Text Document	7,682 KB
06_Console	7/12/2021 10:57 A...	Text Document	2,862 KB
07_ExplorerForActiveDirectory	7/12/2021 10:57 A...	Text Document	346 KB
08_VeeamExplorerForExchange	7/12/2021 10:57 A...	Text Document	443 KB
09_VeeamExplorerForSQL	7/12/2021 10:57 A...	Text Document	451 KB
11_VeeamExplorerForSharePoint	7/12/2021 10:57 A...	Text Document	496 KB

The bootstrap log should have all steps confirmed, and the last one should indicate the S3 bucket has been configured in C:\cfn\log\cfn-init.txt



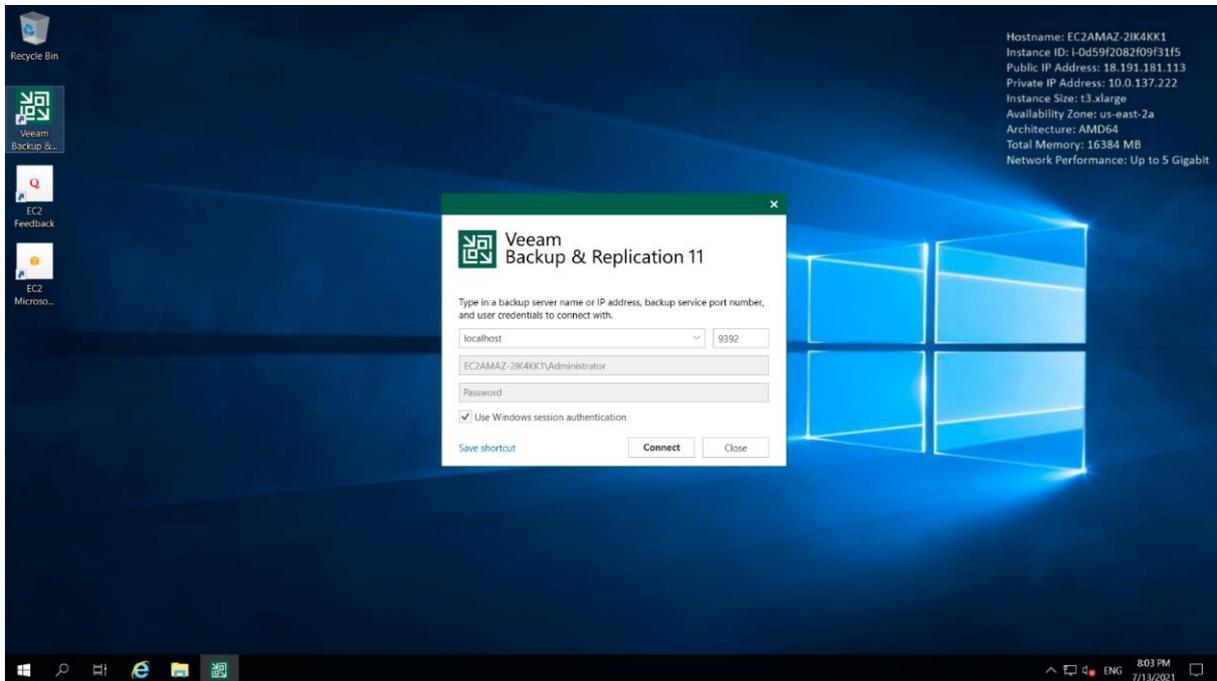
Name	Date modified	Type	Size
cfn-hup	7/12/2021 10:41 A...	Text Document	0 KB
cfn-init	7/12/2021 11:06 A...	Text Document	287 KB
cfn-init-cmd	7/12/2021 11:05 A...	Text Document	454 KB
cfn-wire	7/12/2021 4:21 PM	Text Document	15 KB

```

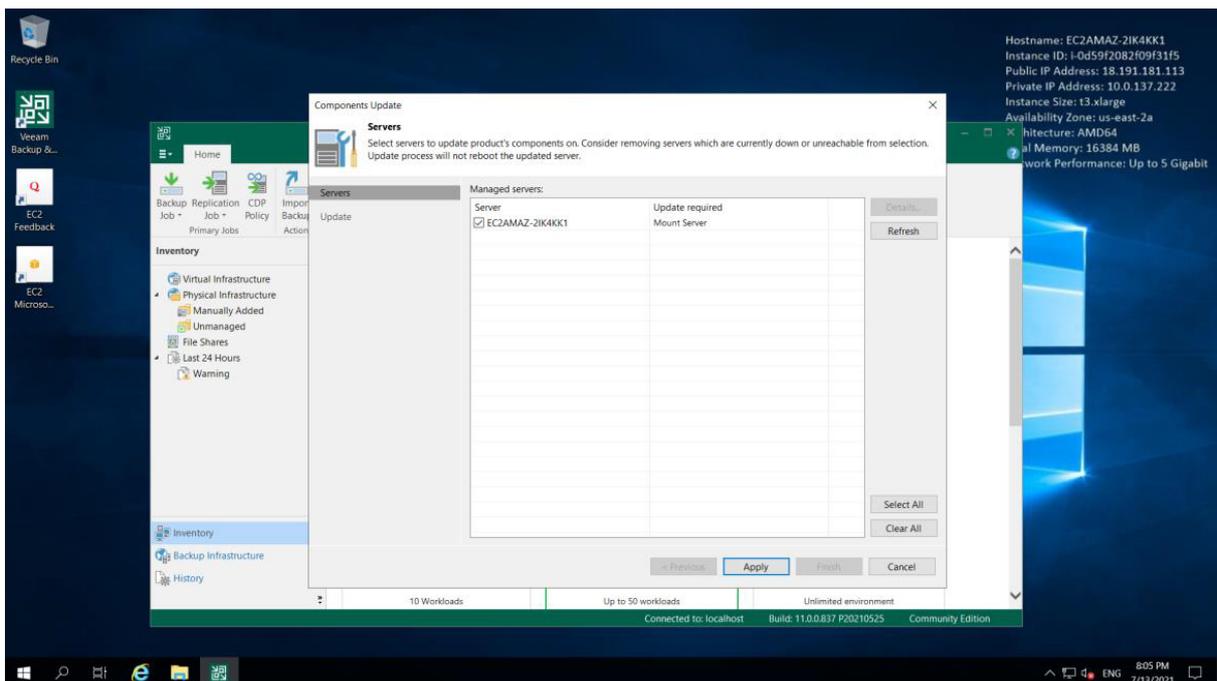
AmazonS3Folder      : VeeamObject
EnableIAStorageClass : False
EnableO2IAStorageClass : False
BackupImmutabilityEnabled : False
ImmutabilityPeriod   : 30
Type                  : AmazonS3
UseGatewayServer      : True
GatewayServer         : Veeam.Backup.Core.Common.CHost
SizeLimitEnabled      : False
SizeLimit             : 10240
Id                    : bef852e6-911e-469b-a3eb-fd8bd4d2d729
Name                   : Object storage repository 1
Description            : Created by Powershell at 7/12/2021 11:05:44 AM.

2021-07-12 11:05:50,681 [INFO] Waiting 60 seconds for reboot
2021-07-12 11:06:50,689 [INFO] ConfigSets completed
2021-07-12 11:06:50,689 [DEBUG] Get scheduler for clear_reboot_trigger
2021-07-12 11:06:50,689 [DEBUG] Deleting Scheduled Task for cfn-init resume
2021-07-12 11:06:50,704 [DEBUG] Scheduled Task deleted
2021-07-12 11:06:50,704 [INFO] -----Build complete-----
  
```

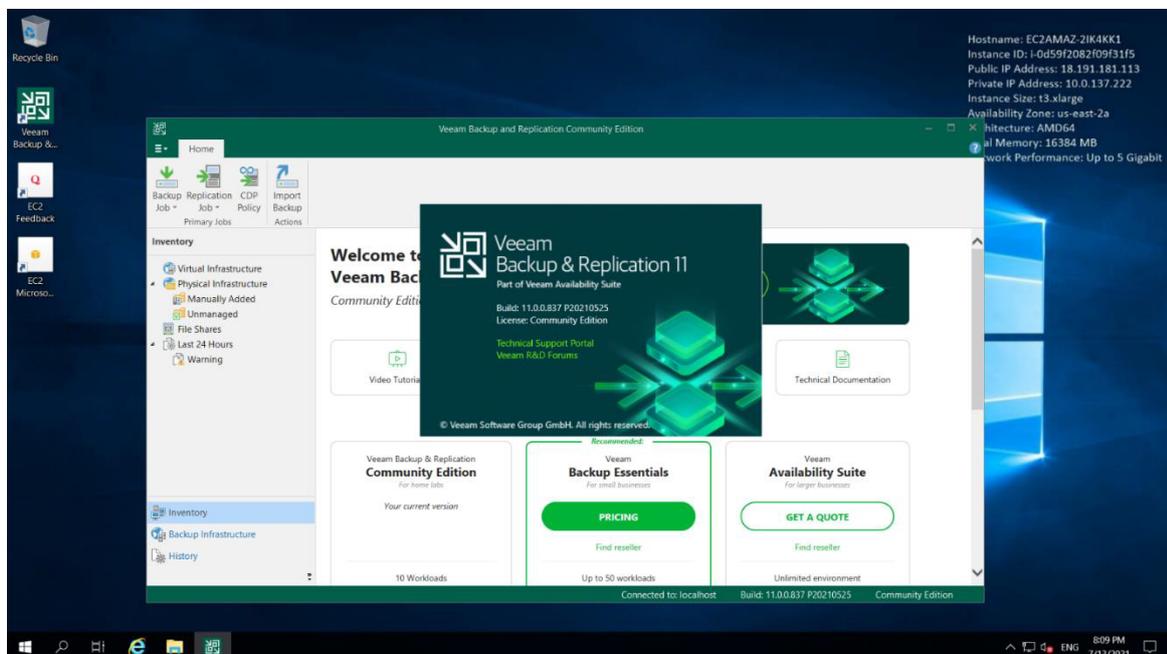
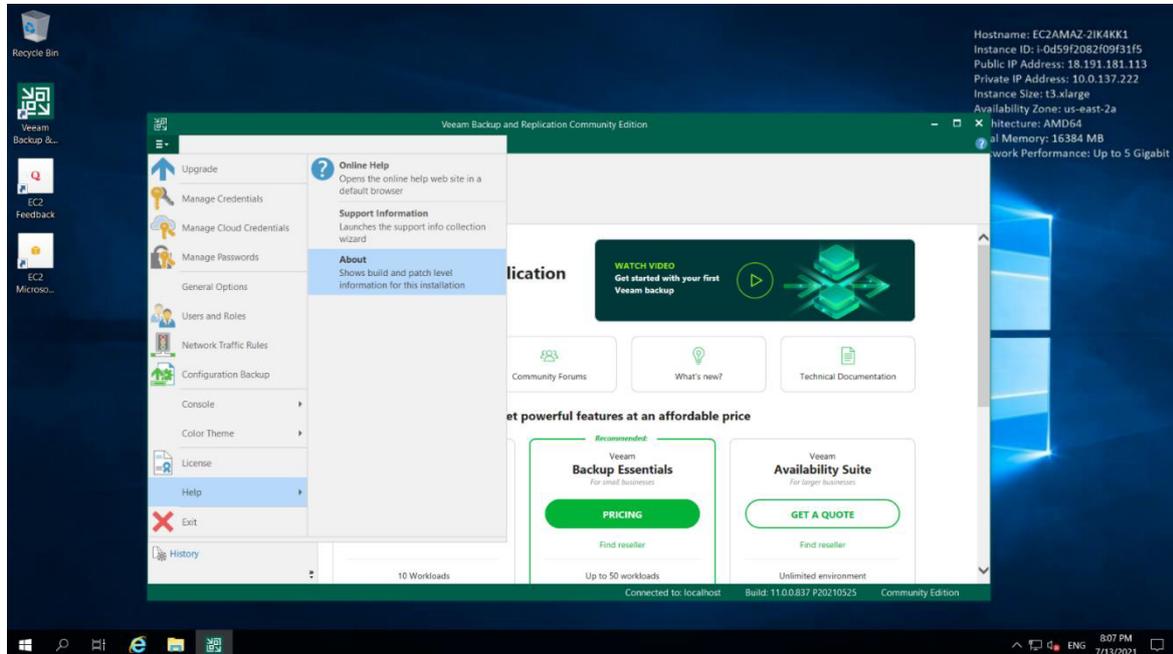
## Launch the Veeam Console and connect to localhost



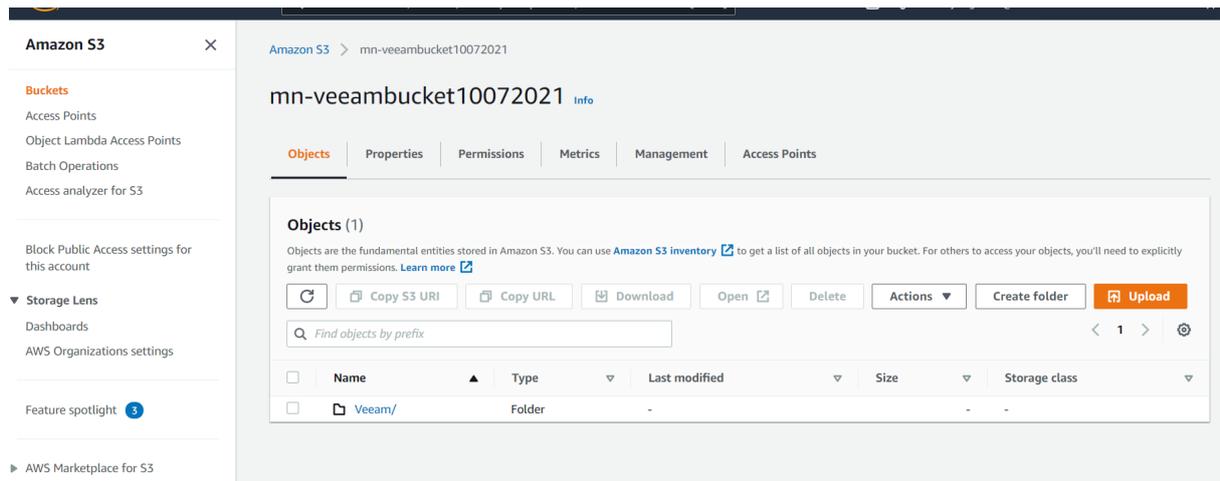
## It should ask you to update some components



## The "About" page should indicate version 11.0.0.837 P20210525



## Review the S3 bucket has a “Veeam/” folder in the AWS Console



## Modifying network access permissions

It is possible that the basic permissions issued at instance deployment will need to be modified later as demands change, source IP changes, or it could be that a mistake was made and the proper CIDR block was entered incorrectly. To modify the network access permissions, follow these steps:

1. Connect to your AWS console. Select the service “EC2” and “Instances”.
2. Go to the “Security” tab of the selected VM.
3. Select the Security Group attached to your instance:

The screenshot shows the AWS Management Console interface. On the left is a navigation menu with options like 'EC2 Dashboard', 'Events', 'Tags', 'Limits', 'Instances', 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances', 'Dedicated Hosts', 'Capacity Reservations', 'Images', 'AMI's', 'Elastic Block Store', 'Volumes', and 'Snapshots'. The main area displays 'Instances (1/2) Info'. A table lists two instances: 'mn-testveeam' (Instance ID: i-0d59f2082f09f31f5, State: Running, Type: t3.xlarge) and 'amadhosingh' (Instance ID: i-0c6d393c2f3b53c77, State: Running, Type: m5.large). Below the table, the 'Security' tab is selected for instance 'mn-testveeam'. The 'Security details' section shows the IAM Role as 'GCI-10000000000013876-1626086176840-EC2W-HostRole-1MUQ5IOL3JPEU' and the Owner ID as '020779576776'. The 'Security groups' section shows 'sg-0eb69a1adb053e4f1 (GCI-10000000000013876-1626086176840-EC2WindowsStack-1DC8XUH2U9EJF-SecurityGroup-15N8364AY1LMU)'. The 'Inbound rules' section is partially visible at the bottom.

#### 4. Edit the inbound rules:

The screenshot shows the 'Edit inbound rules' page in the AWS Management Console. The breadcrumb path is 'EC2 > Security Groups > sg-0eb69a1adb053e4f1 - GCI-10000000000013876-1626086176840-EC2WindowsStack-1DC8XUH2U9EJF-SecurityGroup-15N8364AY1LMU > Edit inbound rules'. The page title is 'Edit inbound rules Info'. Below the title, it states 'Inbound rules control the incoming traffic that's allowed to reach the instance.' The main content area is titled 'Inbound rules Info' and contains a table with the following columns: 'Security group rule ID', 'Type', 'Protocol', 'Port range', 'Source', and 'Description - optional'. A single rule is listed with ID 'sgr-03a64cde45cf7dcc1', Type 'RDP', Protocol 'TCP', Port range '3389', and Source 'Custom' with a search box containing '1.2.3.4/5'. A 'Delete' button is next to the rule. Below the table is an 'Add rule' button. At the bottom right, there are 'Cancel', 'Preview changes', and 'Save rules' buttons.

License installation screen.

- Last step is to select the license and start using the solution.