



cPacket Networks, Inc.

Control Center (cClear-V) Quick Start Guide for Azure

Deploying the cPacket cClear-V virtual
appliance in Azure Cloud

Revision History

Document Version	Date	Notes
1	13Aug2024	<ul style="list-style-type: none">• The original release of this document.
2	06Sep2024	<ul style="list-style-type: none">• Increase recommended instance size and change drive size recommendation.
3	03Dec2024	<ul style="list-style-type: none">• Added Azure Marketplace Instructions

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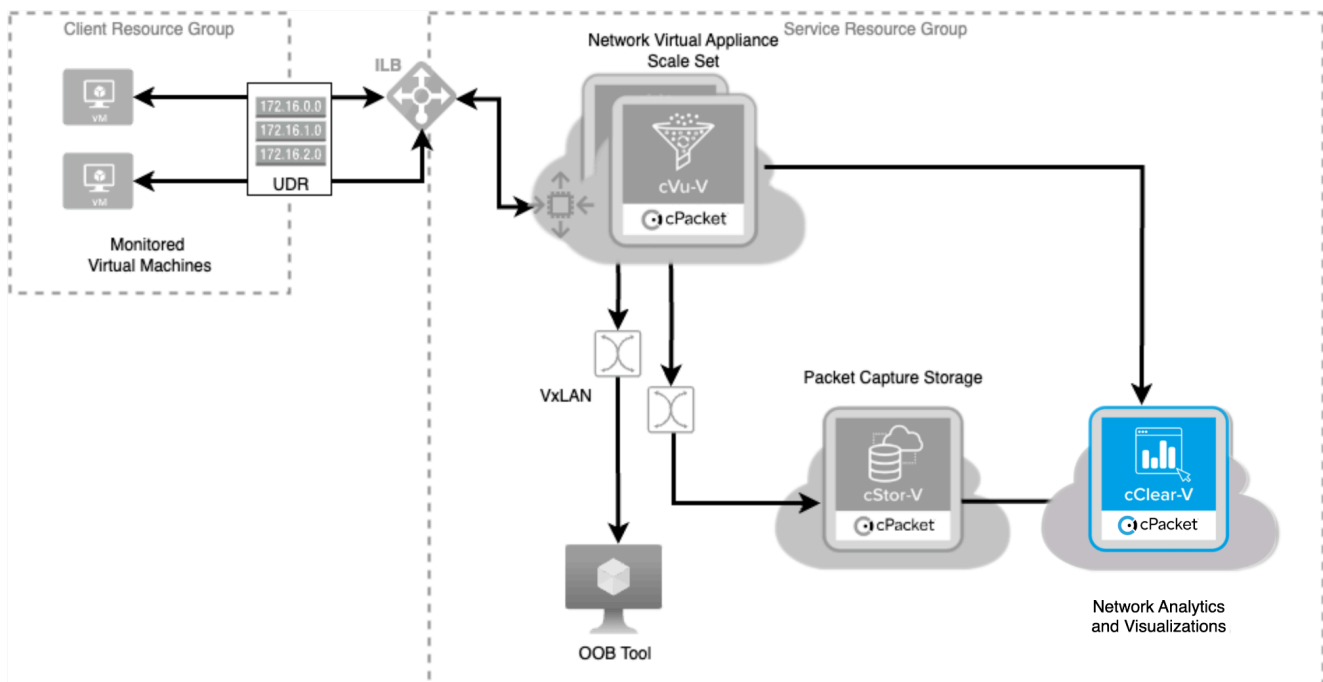
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Introduction

In this guide you will learn how to launch a cPacket cClear-V virtual appliance in your Microsoft Azure environment to analyze packets from a cPacket cVu-V and cPacket cStor-V. We recommend using this guide to set up a basic cClear-V deployment in accounts that are primarily used for testing and evaluation. cPacket Solutions Engineering will work with you to set up cPacket solutions at scale using deployment scripting when you are ready to deploy the solutions more broadly in Azure.

Getting started

Traffic is mirrored to the cPacket cClear-V by deploying a cPacket cVu-V inline with the network traffic to be monitored and a cStor-V to capture packets and create flow data. This setup guide describes how to deploy cClear-V to be used in conjunction with cVu-V and cStor-V. Please see the cPacket *Packet Broker in Azure Quick Start* to setup cVu-V network mirroring and the cPacket *Packet Capture in Azure Quick Start* to setup cStor-V packet capture.



Before you begin

Access to the virtual hard disk (VHD) for cPacket cClear-V is available using the Azure Marketplace or by leveraging Shared Access Signature (SAS) URLs provided by cPacket. These installation instructions will cover both methods. If you prefer to use SAS URLs, please contact your cPacket representative to obtain the requisite SAS URL file.

The following table lists all the requirements necessary to begin installation in Azure.

Requirement	Detail
Azure account	Provides access to your Azure subscriptions.
Resource Group	A container that holds related resources for the cPacket cClear-V.
Location	The geographic region where the Azure resources are located to sustain your virtual cClear-V.
Storage account	The Azure storage account contains all of your Azure Storage data objects, including blobs and disks.
Blob storage container	The storage container where the cPacket cClear-V image is stored as a blob.
Managed disk	The disk required for cPacket cClear-V data storage.
Network security group	The network security group contains security rules that allow or deny inbound network traffic to, or outbound network traffic from the cPacket cClear-V.

Accessing Marketplace Images

To install from the Azure Marketplace follow these steps:

1. Login to the Azure Portal
2. [Navigate to the cClear-V Marketplace offer](#) and select the 'Get It Now' button.
3. Select 'Continue' to proceed past the pop-up to agree to share information with cPacket.
4. Select 'Create' which will take you to the 'Create a Virtual Machine' page.
5. Jump to the [Installation](#) section below to continue the process.

Obtaining the cClear-V image via SAS URL

Once you have received the cCloud Azure SAS URLs from a cPacket representative, you will do the following:

1. Login to the desired Azure account and open Azure Cloud Shell.
2. Upload the SAS URL ccloud-urls.txt file to Azure Cloud Shell.
3. Download the ccloud-azure-images script from [the public GitHub repository](#).

4. Execute the script using the detailed instructions provided in the repository. After executing the script, you will have new image resources in your resource group.
5. Use the search bar to find 'Azure Compute Galleries' and select the service.
6. Locate and select 'cClear-V'.
7. Click the 'Create VM' button to initiate the VM creation process.

Installation

The steps required for installation from the Azure Marketplace and using SAS URLs are similar with a few differences called out below.

Fill in the following details on the Create a virtual Machine page:

Field	Value
Name	Assign a unique name for your machine
Resource Group	Create a new resource group or select the existing resource group where cClear-V should be deployed.
Subscription	Use the dropdown to specify the subscription where the software should be deployed.

1. Select a machine size. The standard machine size recommendation for cClear-V is **Standard_D8s_v5**.
2. Fill in the following required fields:
 - **Username:** ubuntu
 - **SSH public key source:** Allow Azure to generate a new key or use an existing one.
 - **Key pair name:** Use the generated name or assign a new one.
 - **For SAS URL Deployment:** Selected inbound ports: HTTPS (443), SSH (22) (Marketplace images are configured with these ports automatically enabled).
3. Click **Next: Disks**.
4. Create and attach two new disks. The cost will increase with the size of the disks.
 - Click **Create and attach a new disk**.
 - Select a 256 GiB drive or a size that suits your needs. 256GiB can store approximately one week of analytics data for a 5Gbps traffic rate.
 - Check the **Delete disk with VM** option.

- Repeat these steps to add a second disk. The second disk **must** be the same size as the first disk.
 - You can ignore the message “The configuration of this virtual machine and its attached disk(s) does not allow for the disk(s) to utilize their full throughput performance”
5. Click **Next: Networking**
 - Retain the default networking settings. This will provide you with a new Virtual Network, Subnet, and Public IP. Confirm that the allowed inbound ports are HTTPS (443) and SSH (22). Enable the ‘**Delete public IP and NIC when VM is deleted**’ option.
 6. Skip the **Management, Monitoring, and Advanced** sections and proceed to **Tags**. Add any tags required by your organization.
 7. Click **Review + create**, then **Create**.
 8. Once your resource is created, retrieve the public IP for login purposes.
 - Click on **Virtual Machines** from the left-side menu.
 - Select the specific virtual machine for which you want to find the public IP address.
 - On the **Overview** page of the virtual machine, you will find the Public IP address listed.
 9. Please allow up to 15 minutes for cClear-V instances to launch. Navigate to 'https://<your_public_ip>' to log in to the UI.

After Installation and Launching

It will take several minutes for the cClear-V to be accessible. To access the cClear-V use the public IP address that is displayed on the EC2 Instances page, enter the IP address into a browser to login. You will need to accept the certificate to access the login page.

Log In and License

cClear-V requires you to enter the activation key to capture packets and use analytics. Alternatively, if you have an existing cClear or cClear-V with an active cClear-V license you can add this cClear-V to it and refresh the license. The cClear-V must have a network path to the cClear-V. If you want to add an activation key to the cClear-V follow the steps below.

1. At the cClear-V login page use the default admin username: cpacket
2. If you have deployed from Azure Marketplace, the password will be the vmId found in the JSON view for the running virtual machine. The JSON viewer can be accessed by navigating to the Overview tab for the running VM and selecting ‘JSON View’ located on

the right-hand side of the screen. This vmlid looks like `09fd42196-74a6-46dc-a6d4-29ec13ee138d`, where the letters and numbers are unique to your instance. If you have deployed using a cPacket SAS URL's, the password will be: `cpacketpw`

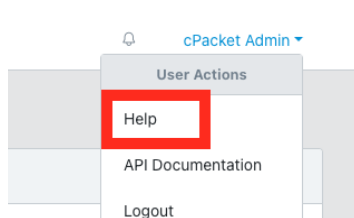
3. After you login on the left pane select Software.
4. Enter the license key provided to you from cPacket.

Important: If you want to reinstall a different configuration and reuse the same license key, make sure you delete the license from the cClear-V using the steps below:

1. On the left panel, select **Software**.
2. Select **Delete** to release the license and confirm the delete.

Verifying Operation

1. In cClear add your cStor. For detailed instructions, please refer to the cClear User Guide which can be accessed from the help menu.

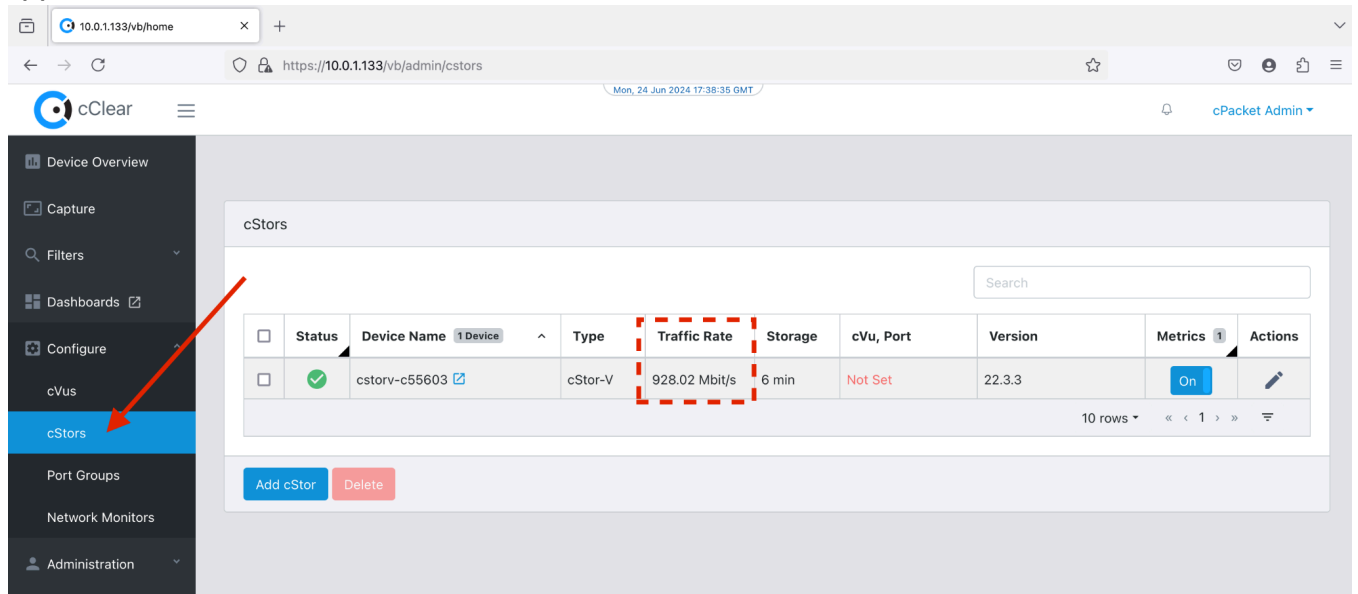


- a. Go to **Configure > cStors**.
- b. Click **Add cStor**.

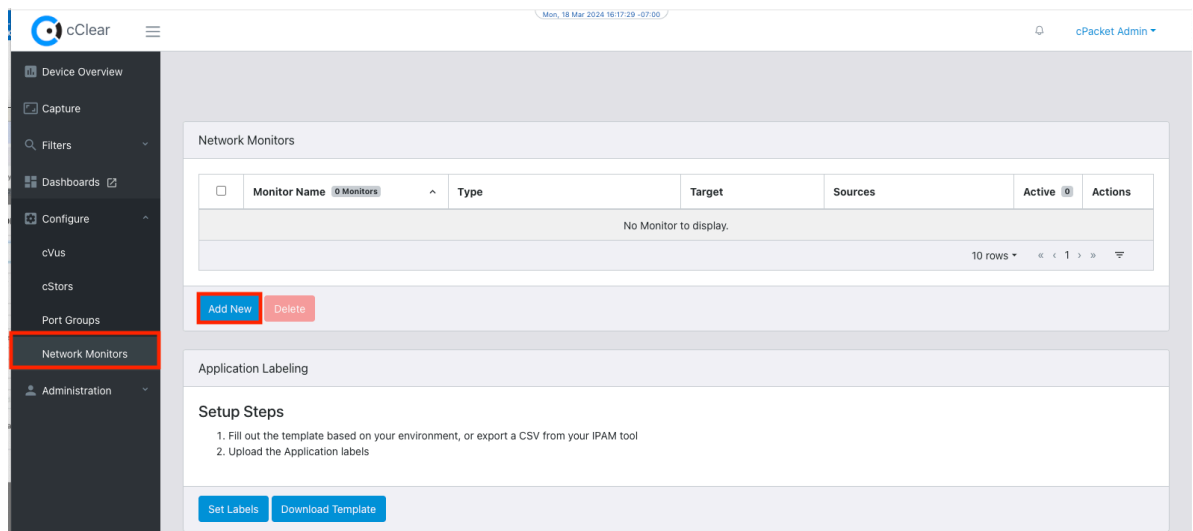
For **Auth Type**, select **User Login**.

- i. Enter the cStor name, IP address, and login credentials. Selecting an associated cVu and port is optional.
- ii. Click **Save** to add the cStor.

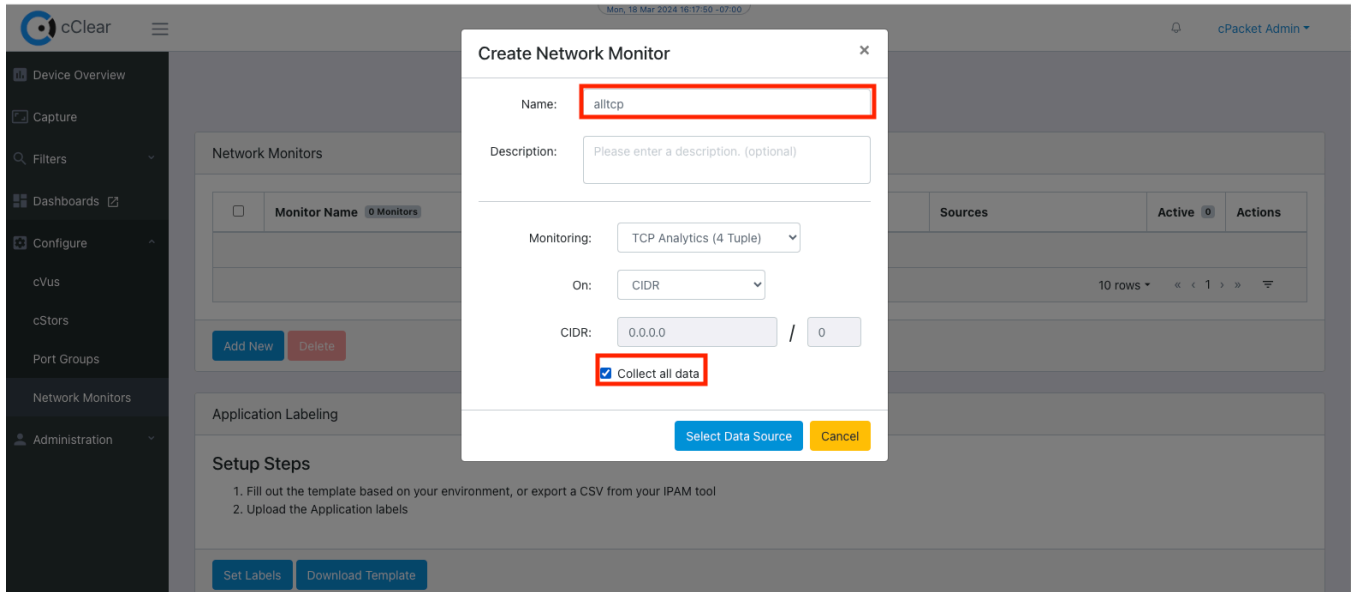
2. Verify that cClear-V is indicating that traffic is flowing to your cStor-V packet capture appliance.



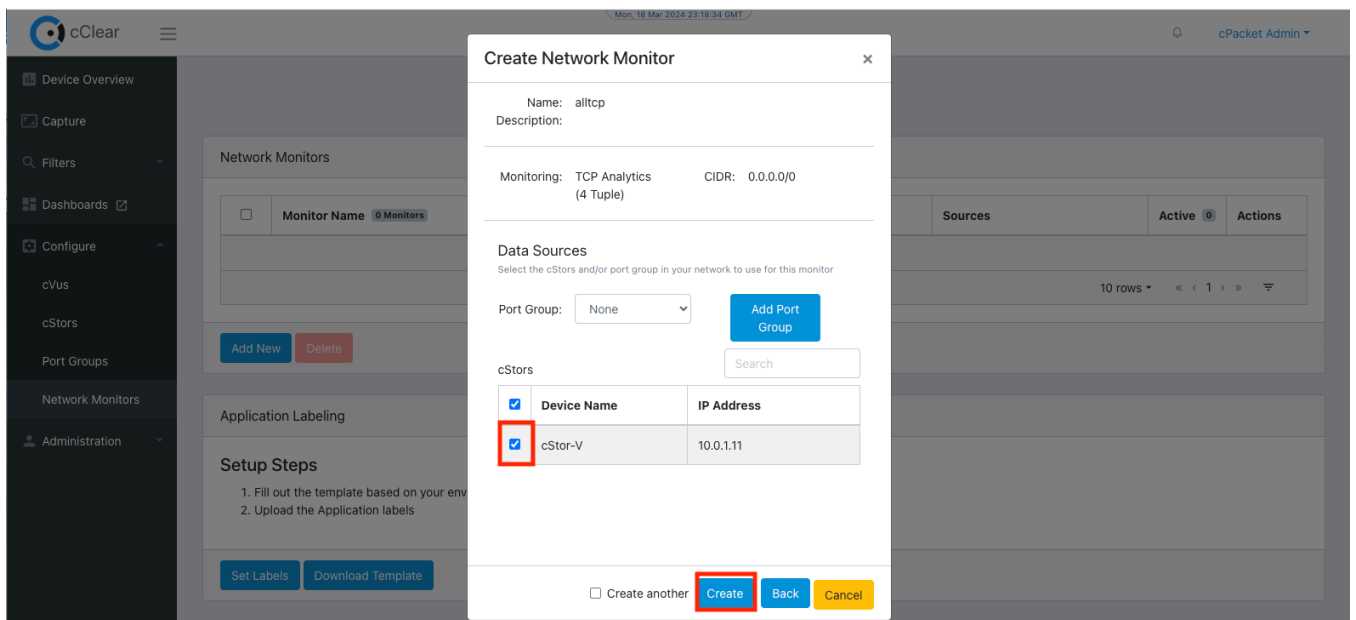
3. In cClear add a network monitor



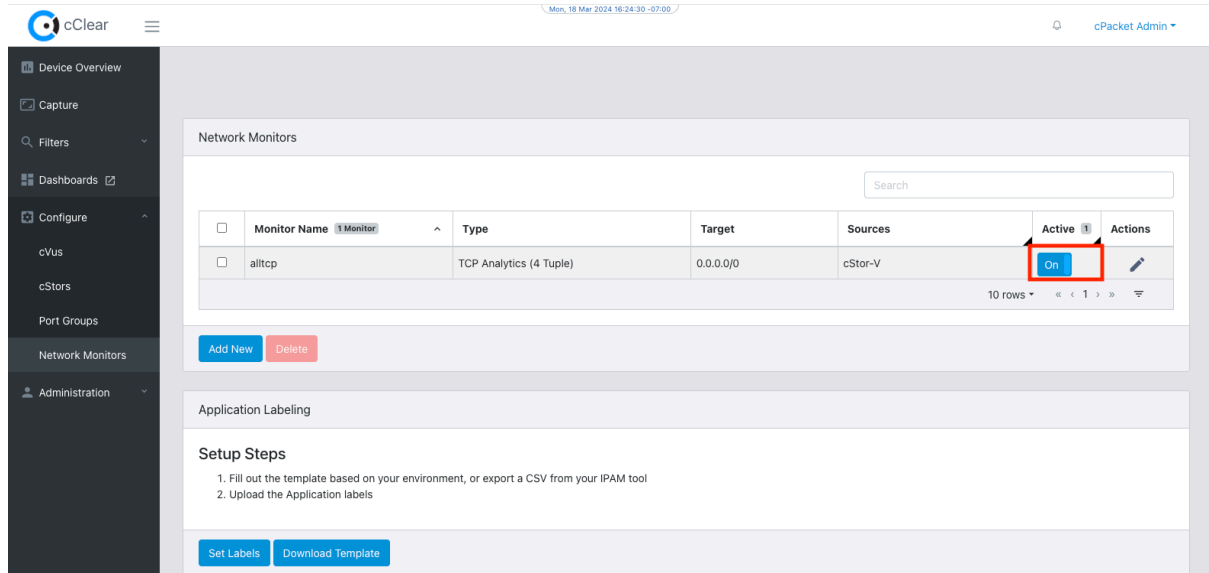
- a. Click Add New
- b. Type in a name and check "Collect all data"



c. Check the cStor device and click “Create”



d. For the new network monitor you just created, make it active by clicking the “On” button



4. Click on the Dashboards in the left menu to take you to the Grafana page.

Troubleshooting

- If no traffic is seen in cClear-V, verify that the green check is shown for the connected cStor in the cStor table in cClear-V.
- If no analytics are seen in the cClear-V dashboards, verify that analytics are enabled in your cStor.

