Amazon Web Services (AWS) as a cloud provider

- Parallels Remote Application Server 19.1

Description

Parallels Remote Application Server v19 will provide the ability to integrate, configure, maintain, support, and access AWS EC2 workloads on top of the existing capabilities of Parallels RAS.

Prerequisites

• AWS account. If you do not already have an account, you can create and activate your account for free at aws.amazon.com/ec2/.

• Working Microsoft Active Directory environment to enable you to join the Amazon EC2 cloned instances to your domain.

• Preconfigured Virtual Private Cloud (VPC) as your virtual network and security groups that act as a virtual firewall for your EC2 instances to control incoming and outgoing traffic.

• Preconfigured Amazon EC2 instance, which will be used later as a Parallels RAS Template, running on Windows Server 2012 up to Windows Server 2022

• AWS Identity and Access Management (IAM) user account for programmatic access.

Configuration

First, you need to create an IAM user for programmatic access. To create the IAM user account, you can use the AWS Management Console, the AWS CLI, Tools for Windows PowerShell, or AWS API operation. In this instruction, we will be using the AWS Management Console:

1. **Sign in to the AWS Management Console** and open the IAM page at **console.aws.amazon.com/iam**.

2. In the navigation pane, choose **Users** and then click the **Add users** button.

3. Under the Set user details section, provide a user name such as "ParallelsConnector"

4. Under the AWS access type, select **Access key - Programmatic access**, as the Parallels RAS Console will use APIs to communicate with your AWS account. This will create an access key for the IAM user. You can view or download the access keys when you get to the Final page. Click **Next** to proceed to the permissions page.

5. On the permissions page, you can create a user group for the new IAM user to be a part of. This is recommended as its beneficial for management purposes, although not mandatory.

6. If you are not using groups, choose Attach existing policies directly. A list of the AWS-managed and customer-managed policies in your account will appear.

7. Filter policies and **choose AmazonEC2FullAccess**, which is an AWS-managed preconfigured policy, and click **Next** to proceed to the next page.

8. Optionally, on this page, you can use the tags to organize, track, or control access for this user.

9. Once the tags are ready, click **Next** to see all of the choices you made up to this point. When you are ready to proceed, click Create user.

10. To view the user's access key ID and secret access keys, click **Show next** to each password and access key that you want to see. To save the access keys, choose **Download CSV** and then save the file to a safe location. Please note that this is your only opportunity to view or download the secret access keys.

11. Save the user's new access key ID and secret access key in a safe and secure place to be used next in the Parallels RAS Console.

Configuring Amazon Web Services as a Cloud Computing provider

1. Navigate to **Farm > Providers**.

2. Click the **Tasks** drop-down menu and choose **Add** (or click the **[+]** icon).

3. In the menu, select **Amazon EC2**. The Add Cloud Computing Provider wizard opens.

4. In the Wizard, specify the following:

• **Name**: Name of the provider.

• **Description**: Description of the provider.

• **Manage credentials**: the administrative accounts that will be used to deploy Parallels Agents.

• **Access Key ID**: Your access key ID.

• **Secret Access Key**: Your secret key.

5. Click **Next**.

6. Wait until Parallels RAS validates the settings and click Next.

7. Select the Region that you will use.

8. Click **Finish**.

Creating a template

1. Navigate to **Farm > VDI**.

2. Select the **Templates** tab.

3. Click the **Tasks** drop-down menu and choose **Add** (or click the **[+]** icon).

4. In the open dialogue box, select a guest VM from which you would like to create a template and click **OK**. Create Parallels Template Wizard will open.

5. The wizard will check if the selected VM has the RAS Guest Agent installed. Wait for it to finish, and then examine the Status field (closer to the bottom of the page). Depending on the result, do one of the following:

- If the agent is installed,
    - ♦ Click **Next** to continue.

- If the agent is not installed, you need to install it.
    - Click the **Install** button and follow the onscreen instructions to install the agent software. Click **Next**. Note: You may see a warning “Guest VM failed to power on.” in the Status field. If this happens, restart the wizard.

6. Specify options as described in https://download.parallels.com/ras/v18/docs/en_US/Parallels-RAS-18-Administrators-Guide/46775.htm Click Next

7. Specify options as described in https://download.parallels.com/ras/v18/docs/en_US/Parallels-RAS-18-Administrators-Guide/46776.htm Click Next.

8. Choose the type of instance that you want to use and click Next.

9. Customize your storage device and click Next.

10. Specify options as described in the RAS V18 Admin guide Click Next.

11. Specify options as described in the RAS V18 Admin Guide Click Next.

12. Specify options as described in the RAS V18 Admin Guide Click Next.

13. On the Summary page, review the template summary information. If any information needs to be corrected, press the **Back** button and make the required changes. Once done, press **Finish**.

Testing recommendations after the configuration above

1. Publish a Desktop using Parallels RAS Console.

2. Publish an application using Parallels RAS Console.

3. Use Parallels Client to access the resources which are running on AWS.

4. Confirm that you can access virtual resources from instances running on AWS.

5. Explore Autoscaling and Power Management capabilities.

6. Recreate guest VMs with different hardware specifications (instance and storage types). This can be done from the template properties.

7. During the creation of Template or guest VMs, one can monitor the activity from the AWS management console by looking at the EC2 instances, AMIs and Snapshots categories.

Known Issues and Limitations

• Applicable only to RD Session Hosts and server-based VDI.

• In this version, Parallels RAS can create instances based on the following operating systems: Windows Server 2012, Windows Server 2012 R2, Windows Server 2016, Windows Server 2019, and Windows Server 2022.

• In this version, if you go to Farm > Providers > right-click your AWS provider > Properties > Credentials > Check Credentials, you will see a message “Cannot connect to the provider”. Ignore this message. • Experimental for this version, it is also possible to use single session Windows desktop operating system, however, this requires the use of dedicated AWS infrastructure with bringing your own Microsoft Windows Desktop Client licenses.

Documentation and References

- Amazon EC2 Instance Types https://aws.amazon.com/ec2/instance-types/
- EC2 pricing link: https://aws.amazon.com/ec2/pricing/on-demand/
- Storage pricing link: https://aws.amazon.com/ebs/pricing/
- EBS volume type limits link: https://docs.aws.amazon.com/AWSEC2/latest/UserGuide/ebsvolume-types.html

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