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On-Premises Windows BYOI Migration to Oracle OCI with VirtIO Drivers

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1. Introduction

This document outlines the steps required to migrate an on-premises Windows Bring Your Own Image (BYOI) to Oracle Cloud Infrastructure (OCI) using VirtIO drivers for optimal performance.

2. Pre-Migration Preparations

System Requirements

Windows Server version (check compatibility with OCI)

Sufficient local resources for migration

VirtIO Drivers for Windows

Oracle Cloud account with necessary permissions

Backup Procedures

Perform a full backup of the Windows server, including all files, applications, and settings.

Ensure that you have access to restore the backup if needed.

3. Migration Steps

Step 1: Environment Assessment

Review the current server configuration, including:

CPU, RAM, and Disk Size

Network configurations

Installed software

Step 2: Prepare the Windows Environment

Uninstall any unnecessary applications to reduce image size.

Clean up temporary files and defragment the disk (if applicable).

Step 3: Install VirtIO Drivers

Download VirtIO Drivers

Obtain the latest VirtIO driver ISO from the https://edelivery.oracle.com.

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Install Drivers on Windows

Download and unzip the installation setup file on the Windows server.

Follow the prompts to install the VirtIO drivers.

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Drivers Installer

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Welcome to the Oracle Windows VirtIO drivers Installer Release 2.2.0

The Installer will install optimized device drivers for Oracle Linux KVM. Select Install to continue or Cancel to quit.

InstallShield

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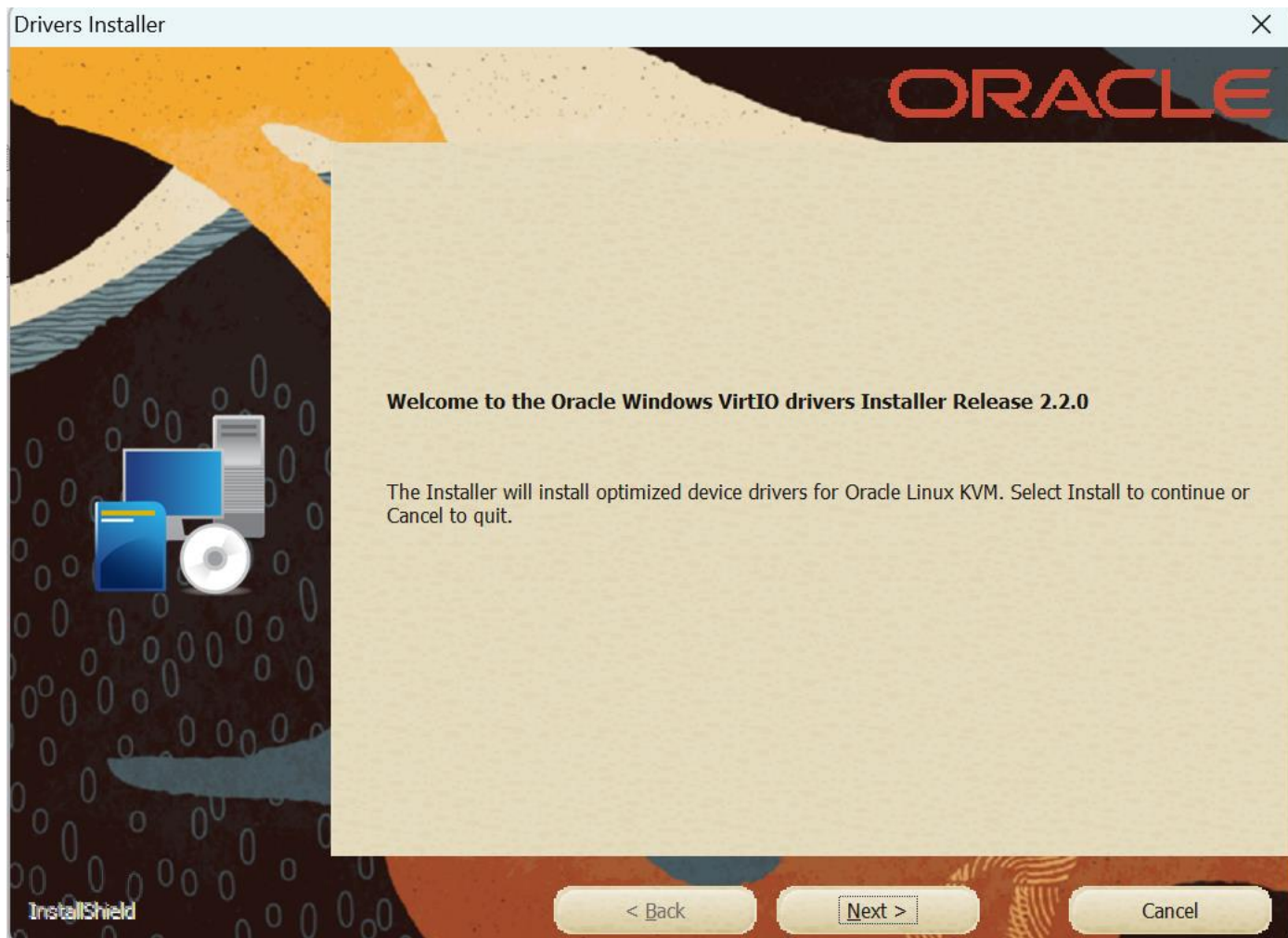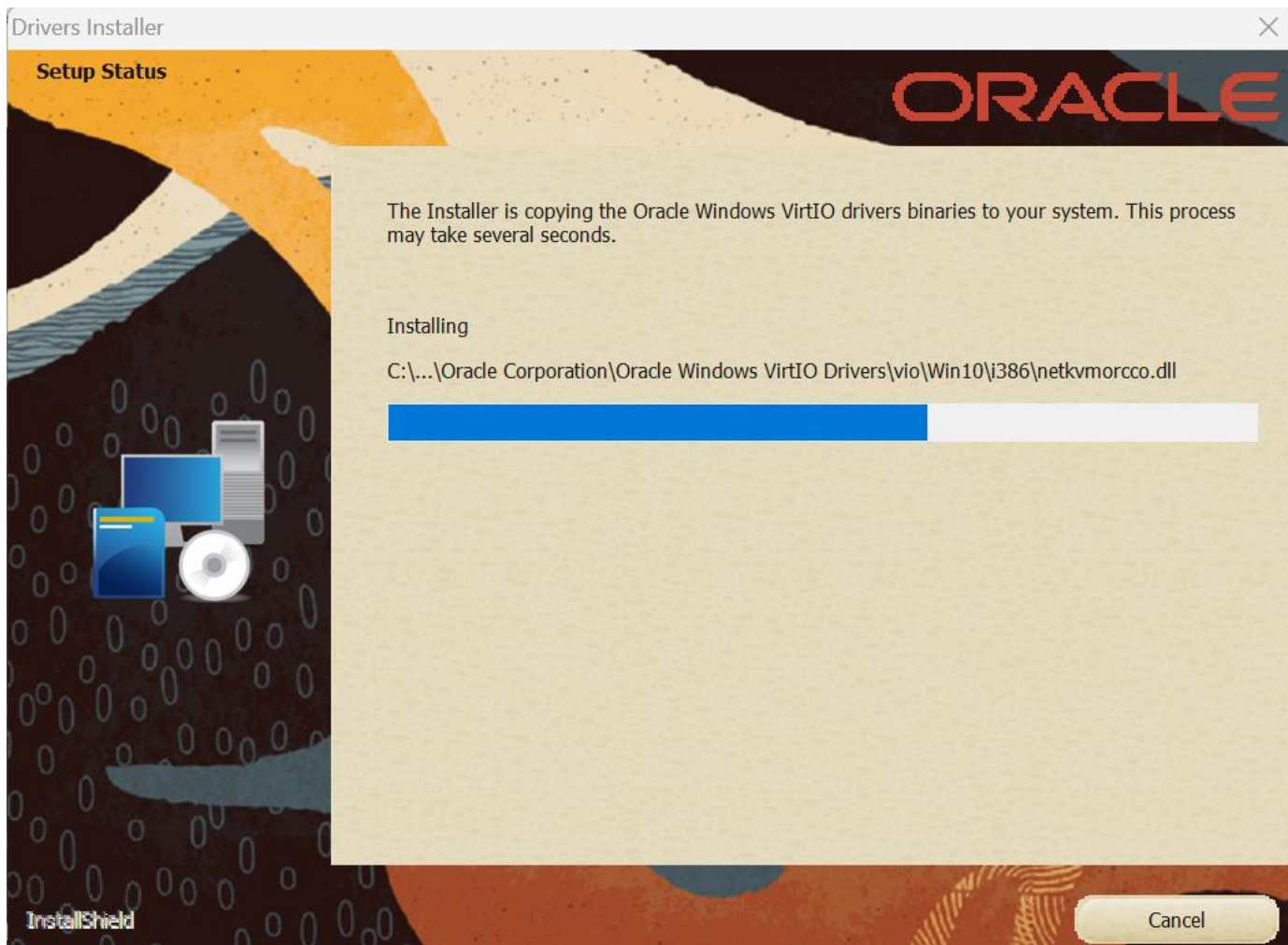
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Reboot the windows instance

Step 4: Create the OCI Instance

Log into Oracle Cloud Console

Navigate to the Compute section.

Create a Custom Image

Go to "Images" and select "Create Image."

Upload the Windows image file (QCOW2/VMDK).

Launch the Instance

Select the custom image.

Configure instance shape, network, and other parameters.

 Migrate the Data

Use a tool like WinSCP or RDP for file transfer.

Copy necessary data and applications to the new OCI instance.

Step 6: Post-Migration Configuration

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Update network settings as necessary.

Configure any necessary security settings and IAM roles.

Install additional software as required.

4. Testing and Validation

Conduct functionality tests on the OCI instance:

Verify application performance.

Check network connectivity.

Ensure that all services are running as expected.

5. Rollback Procedures

In case of issues, restore the backup taken prior to migration.

Reconfigure the on-premises environment if necessary.

6. Conclusion

This document provides a comprehensive guide for migrating an on-premises Windows BYOI to Oracle OCI using VirtIO drivers. Following these steps will ensure a smooth transition and optimal performance in the cloud environment.

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