

# The Map of Migration Tool for Huawei Cloud C-POMC

Version 1.1

31 Oct 2023

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# What's New?

No.	Version	Description	Phase	Modified By	Audited By	Document Name
1	V1.0	<ul> <li>Reorganize the document structure</li> <li>Add the "Ecosystem Tool Framework"</li> <li>Update the "Discovery Tools"</li> <li>Update "Packer / RiverMeadow / Disk2VHD / qemu-img-hw / image-migrator / kclone / i2active / DMS / DRS / UGO "</li> <li>Update "OMS / Fastcopy / RCLONE / RSYNC / FPSYNC"</li> <li>Add LLD2Terraform</li> </ul>	27 Sep 2023	Liu Shaowei	lichang	The Map of Migration Tool for Huawei Cloud-v1.0
2	V1.1	Update "Inventory 1 - Huawei Cloud Migration Tools"	31 Oct 2023	Liu Shaowei	lichang	The Map of Migration Tool for Huawei Cloud-v1.1

# **Preface**

Currently, the public cloud is widely used, and HUAWEI CLOUD is also used by more and more users in Latin America. To help HUAWEI CLOUD users quickly migrate services to HUAWEI CLOUD, Huawei Latin America cloud team prepares this manual.

We hope to help you:

First, you can quickly find efficient and available tools, including open-source tools, Huawei tools, and third-party tools, based on migration scenarios.

Second, you can quickly master how to use the tool based on the tool introduction.

Third, share tool usage experience within your team, provide feedback, and help HUAWEI CLOUD optimize tool capabilities.

# Disclaimer for Tool Use

No.	Topic	Description	Remark
1	To Which the Document Is Applicable	Huawei Cloud engineers HUAWEI CLOUD partner engineers and HUAWEI CLOUD customers	
2	Compliance Suggestion	The use of Open Source tools must comply with relevant open source license agreements.  The use of Commercial tools must comply with relevant commercial software license requirements.	
3	Disclaimer	This document is for reference only. HUAWEI CLOUD is not responsible for data loss and service interruption caused by the use of the tool. Users must have basic technical capabilities. Before operating the production environment, fully evaluate and verify the tools to prevent service interruption caused by improper tool operations.	

# Inventory 1 - Huawei Cloud Migration Tools

Domain	SN	Tool Name	Online or Offline?	Global or Region level?		Sao Paulo1 Region	MexicoCity 2 Region	Product Manager	Discovery	Assessm ent	Resource orchestration	Host Migration	K8S Migration	Docker image	File Migration	DB Migration	OS Upgrading	Others	Remarks
Migration	1	MgC	Online	Global		Available			Yes	Yes									
Managem ent	2	Haydn	Online	Region	Available	TBD	TBD				Yes (Pending on RFS)							Soluton Design / Project Management	
Discovery & Assessme	3	RDA	Offline	NA	Available	Available	Available		Yes	Yes									
nt	4	KSPIDER	Offline	NA	Available	Available	Available		Yes	Yes									
Resource orchestrati on	5	RFS	Online	Region	2023/12/30	2023/9/30	2023/12/30				Yes								
Server Migration	6	SMS	Online	Global	Available	Available	Available					Yes							
3	7	qemu-img-hw	Offline	NA	Available	Available	Available					Yes							
Container	8	K8CLONE	Offline	NA	Available	Available	Available						Yes						
Migration	9	image-migrator	Offline	NA	Available	Available	Available							Yes					
Database	10	DRS	Online	Region	Available	Available	Available									Yes			
Migration	11	UGO	Online	Region	Available	NA	NA									Yes			
Storage		OMS	Offline	NA	Available	Available	Available								Yes				
Migration	12	Oivio	Online	Region	Available	Available	Available								Yes				



# Inventory 2 - 3<sup>rd</sup> party Migration Tools

Domain	SN	Tool Name	Status	Provider	Business Type	Charged or not	Necessary to authorize?	Discove ry	Assess ment	Resource orchestrat ion	Host Migratio n	K8S Migratio n	Docker image	File Migration	DB Migration	OS remodeling	Others	Remarks
	1	RVTools	available	Rob de Veij	Closed source (free of charge)	No charge.	Unlimited	Yes										
Discovery & Assessment	2	ARI (Azure Resource Inventory)	available	Azure	open source	No charge.	Unlimited (MIT)	Yes										
	3	ADE (aws-discovery- export)	available	GCP	open source	No charge.	Unlimited (Apache 2.0)	Yes										
	4	FADDOM	available	FADDOM	Commerce	Charged	N/A				Yes							
Resource orchestration	5	packer	available	<u>hashicorp</u>	open source	No charge.	Unlimited (BUSL)			Yes								
	6	I2move	available	i2soft	Commerce	Charged	N/A				Yes							Win2003 / Centos 5.X
Server Migration	7	disk2vhd	available	microsoft	Closed source (free of charge)	No charge.	Unlimited				Yes							Windows Image Migration
	8	RiverMeadow OSM	Adaptation	RiverMeadow	Commerce	Charged	N/A				Yes					Yes		Windows/Linux upgrade and reconstruction
Database	9	DMS (Database Migration Service)	available	AWS	Cloud service	Charged	N/A								Yes			Migrating AWS RDS to HUAWEI CLOUD
Migration	10	i2Active	available	i2soft	Commerce	Charged	N/A								Yes			
	11	fastcopy	available	FastCopy Lab	Commerce	<u>Charged</u> (Working)	N/A							Yes				Windows SMB File
Storage Migration	12	Rclone	available	N/A	open source	No charge.	Unlimited (MIT)							Yes				Linux
granorr	13	Rsync	available	N/A	open source	No charge.	Unlimited (GPL 3.0)							Yes				Linux
	14	fpsync	available	N/A	open source	No charge.	Unlimited (BSD)							Yes				Linux



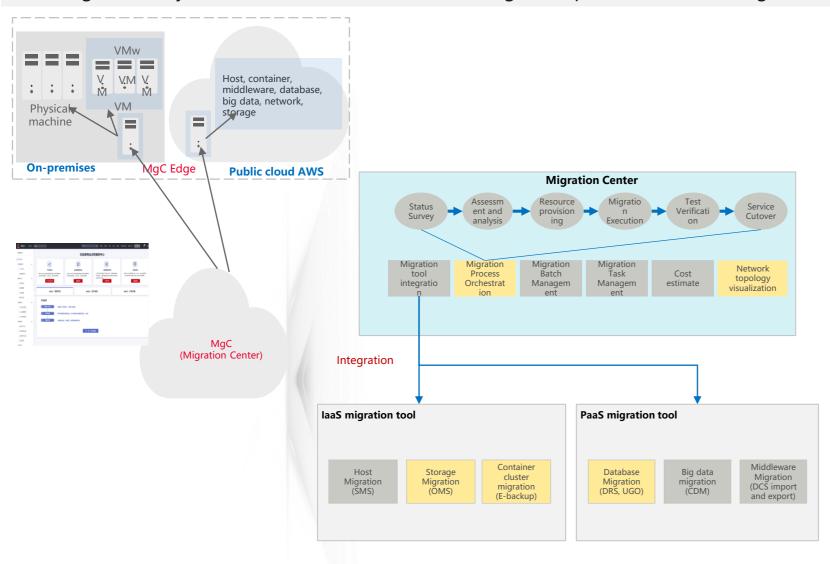
# Inventory 3 - Huawei Latin Cloud developed tools

Domain	SN	Tool Name	Online or Offline?	Global or Region level?	Santiago Region	Sao Paulo1 Region		Product Manager	Discover y	Resource orchestration	Host Migration	Docker image	File Migratio n	DB Migration	OS Upgrading	Others	Remarks
Resource orchestration	1	LLD2Terraform	Offline	NA	Available	Available	Available			Yes							



Others

Positioning: Integrates migration tools to cover the entire migration process and domain, and supports one-stop migration service, including Discovery & Assessment, orchestration of migration processes and management of migration tasks.



# **Application Scenarios**

- VMware (Available)
- AWS (In development)
- Azure (In development)
- GCP (In development)
- OCI (In development)

# **Major Features**

- Survey and Assessment
- **Migration Planning**
- Migration implementation



# Haydn Solution Digital Platform



Positioning: Haydn Cloud Solution Factory (HaydnCSF) is a one-stop digital platform for solution full lifecycle management. It digitalizes objects, workflows, and

rules to help partners and end users design, deploy, verify, deliver, and manage solutions online in a collaborative manner, accelerating solution monetization.

Assessment

Resource orchestration Migration

Server

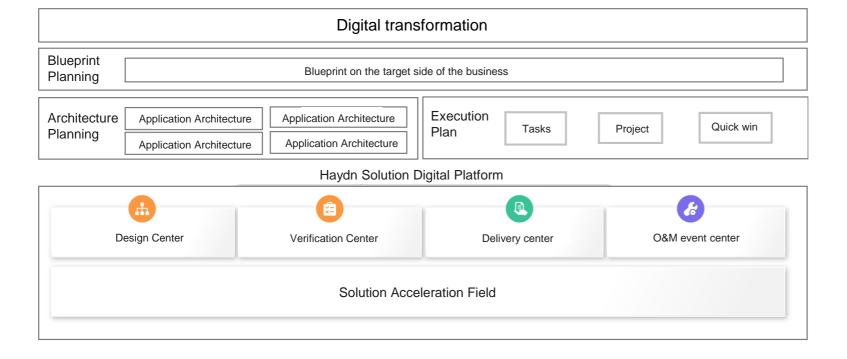
Container Migration

Database Migration

Storage Migration

Others

# Overall Diagram for Haydn Solution Digital Platform



# **Application Scenarios**

- Solution Design
- **Baseline Verification**
- **Certification Test**
- Project PoC
- Solution Delivery
- **O&M Event Management**

Haydn Document

Limitation: Haydn is available in Santiago Region, partner could use the Solution Design function. (Delivery function will be available until the RFS is available in Santiago Region.)



Discovery Assessment Mgmt

orchestration

Migration

Container Database Migration Migration

Migration

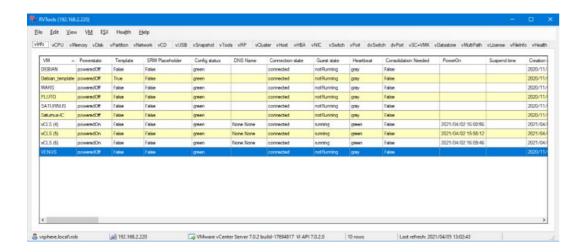
Others

### Positioning: RVTools is a discovery tool for VMware Platform, it can export the Virtual Machine List with one command

### **RVTools Introduction**

RVTools is a Windows .NET 4.6.1 application which uses VMware vSphere Management SDK 7.0 and CIS REST API to display information about your virtual environments.

VirtualCenter 4.x, ESX Server 4.x, VirtualCenter 5.x, ESX Server 5.x, VirtualCenter 6.x, ESX Server 6.x, VirtualCenter 7.0 and ESX server 7.0. https://www.robware.net/rvtools/

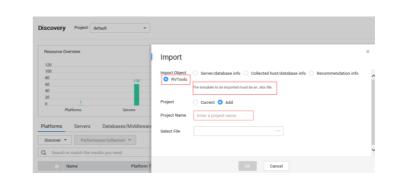


Suggest to export all information to xlsx file, then you can import the xlsx file to RDA.

1. Export Guide: Start RVTools with userid password, and export all to xlsx

Start RVTools connect to a specific virtualcenter or ESX server, pass userid and password, start export all to xlsx and write the xlsx files to the given directory with the given filename.

- Command Format: RVTools.exe -s virtualcenter.domain.local -u userid -p password -c ExportAll2xlsx -d directory -f filename
- Command Example: RVTools.exe -s 192.168.2.220 -u Administrator -p password -c ExportAll2xlsx -d c:\temp -f rvtools.xlsx
- 2. Import Guide: Import xlsx file to RDA for further analysis and migration RDA Console -> Discovery -> Import -> RVTools -> Select xlsx File -> OK





Assessment

Database

Migration

Others

# Positioning: Resource Discovery Assessment (RDA) is a tool deployed on Windows hosts for resource discovery and migration assessment.

### **Scenario 1: Resource Discovery**

With the cloud discovery and information collection functions of the RDA, resource information about the cloud platform, host, database, container, big data, and middleware can be collected and exported.

### **Scenario 2: Migration Evaluation**

Analyze collected resource information before migration, identify migration risks, provide migration suggestions, and evaluate the driving force and readiness for cloud migration.

### **Support cloud platform**

Supported the cloud platform VMware, AWS.

### **Support cloud services**

Host, container, middleware, database, big data, network, and storage (7 types)

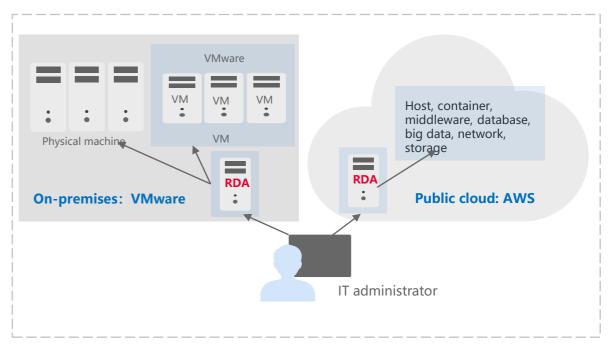
### **Support Group and Team**

Technical support

- Luo Junlin
- Xie Peicai
- Tang Fa

RDA用户交流群(RDA Users Communication Gr...





### **Installation Procedure**

Step 1 Download the RDA installation package to the Windows computer, double-click the RDA installation package, and click Next.

Step 2 On the License Agreement page, read the license agreement carefully, select I accept the terms in the license agreement, and click Next.

Step 3 Select an installation directory and click Next.

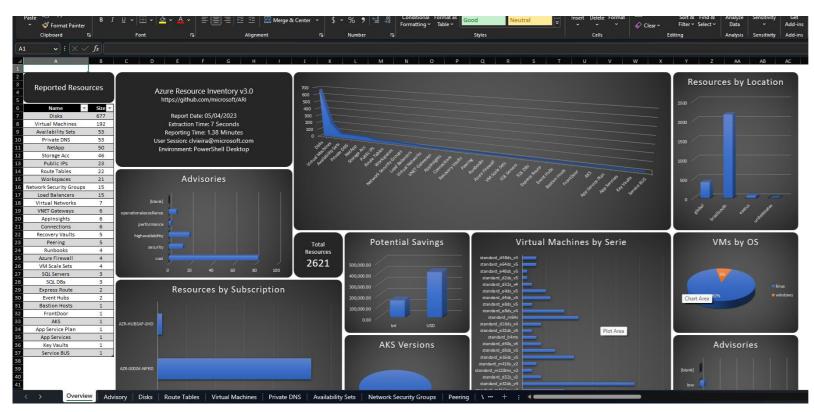
Step 4 After the installation is complete, click Finish to enter the RDA console.



Others

# Positioning: Azure Resource Inventory - It's a Powerful tool to create EXCEL inventory from Azure Resources with low effort

# https://github.com/microsoft/ARI



# **Application Scenarios**

Azure

# **Major Features**

Survey



Positioning: aws-discovery-export is a discovery tool to create inventory from AWS Resources with low effort.

https://github.com/GoogleCloudPlatform/aws-discovery-export



# **Application Scenarios**

AWS 29 Cloud Services

By default resources from following services are collected: ec2, s3, route53, apigatewayv2, appconfig, appstream, appconfigdata, application-autoscaling, autoscaling, eks, efs, ebs, lambda, rds, sns, cloudfront, elasticbeanstalk, iam, glacier, kinesis, dynamodb, elasticache, redshift, sagemaker, sqs, lightsail, cloudwatch, chime, clouddirectory

### **Features**

Discovery

### Remark

The EC2 Discovery has been validated sucessfully. <a href="https://github.com/huaweicloud-latam/migration-tool-map/tree/main/02-003-aws-discovery-export">https://github.com/huaweicloud-latam/migration-tool-map/tree/main/02-003-aws-discovery-export</a>



# KSPIDER for kubernetes cluster survey

Migration Mgmt Discovery

Assessment

Resource orchestration

Server Migration

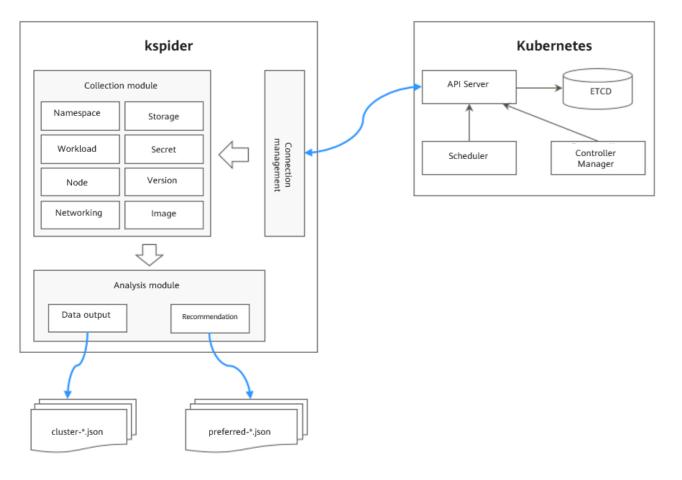
Container Database Migration Migration

Storage Migration

Others

Positioning: kspider is a tool used to collect information about the source cluster.

It provides cluster-related data such as the Kubernetes version, scale, workload quantity, storage, and in-use images. The data helps you understand the current status of the cluster and evaluate migration risks, and select a proper destination cluster version and scale.



# **Application Scenarios**

- **Kubernetes**
- **AWS EKS**
- Azure AKS
- **GCP GKS**
- **Huawei Cloud CCE**

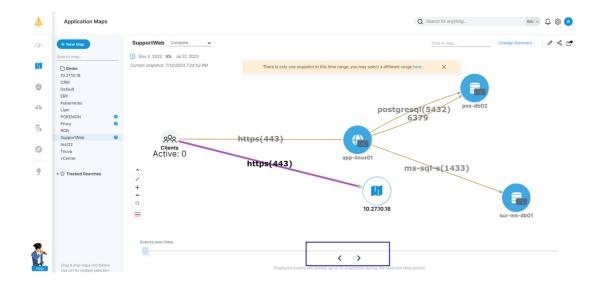
# **Major Features**

- Collect information from source cluster
- Evaluate the destination cluster

**KSPIDER Document** 



Positioning: FADDOM is a tool that Map all your on-prem servers and cloud instances, applications, and dependencies in under 60 minutes.



# Azure Google Cloud Microsoft Hyper-v NUTANIX

# **Application Scenarios**

- Vmware / Hyper-V / Nutanix
- AWS / Azure / GCP

# **Major Features**

- Discovery
- Recommendation (Sizing)
- Change Management
- Cybersecurity



FADDOM Help Center



Migration Mgmt

Discovery Assessment

Resource orchestration Server

Migration

Container Migration

Database Migration

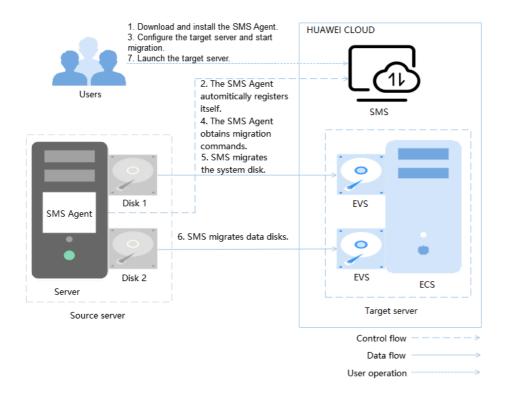
Storage Migration

Others

# Positioning: SMS (Server Migration Service) is a Cloud Service which is provided by Huawei for online server migration.

### **SMS Workflow**





# **Application Scenarios**

- P2V (physical machine to virtual machine)
- V2V (virtual machine to virtual machine)
- AWS EC2 / Azure Machine / GCP Compute Engine / Vmware VM / Hyper-V VM / Nutanix VM etc.

# **Major Features**

- Windows: Windows Server 2008 and higher OS version
- CentOS / Redhat / Oracle Linux 6.0 or higher Version
- Debian 6 / Ubuntu 12 / Suse 11 or higher OS version

Refer to the SMS Guide

Migration Mgmt

Discovery Assessment

Server Migration

Container Database Migration Migration

Storage Migration

Others

# Positioning: Packer is an open-source tool for creating custom images for multiple cloud platforms in parallel.



# **Application Scenarios**

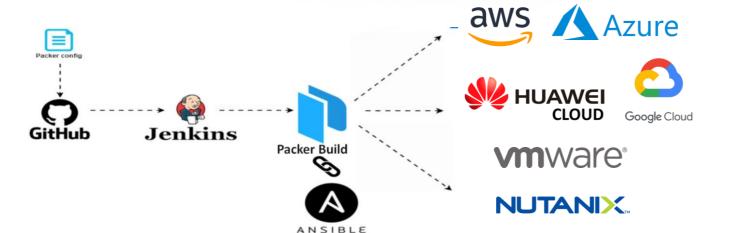
Automatic image creation

# **Major Features**

Simplifies private image creation by using manageable code

Creating a Private Image Using Packer

Huawei Cloud Packer Provider Manual



https://developer.hashicorp.com/packer

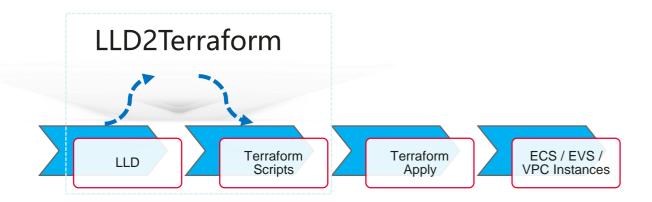


HUAWEI

Migration Mgmt Discovery Assessment

# Positioning: LLD2Terraform is a Python script tool to convert Low-Level Design (LLD) to Huawei Cloud Terraform code

### LLD2Terraform Workflow



Python tool that reads LLD information and converts to Terraform code Available at

<a href="https://github.com/huaweicloud-latam/lld-to-terraform">https://github.com/huaweicloud-latam/lld-to-terraform</a>

# **Application Scenarios**

Resource Provisioning on Huawei Cloud

# **Major Features**

Creating Resources in Batches Based on LLD Information





Migration Mgmt

Discovery Assessment

Container Migration

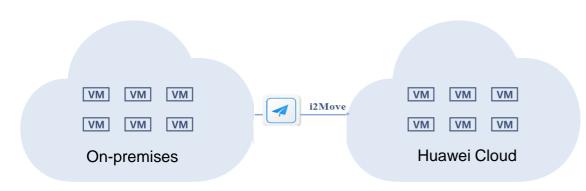
Database Migration

Storage Migration

Others

# Positioning: I2MOVE is a commercial migration tool provided by I2Soft for online server migration.

### **I2MOVE Workflow**



### Official Website

https://www.info2soft.com/en/product/i2move

# KooGallery

https://marketplace.huaweicloud.com/intl/product/00301 -173035-0--0

# **Application Scenarios**

- P2V (physical machine to virtual machine)
- V2V (virtual machine to virtual machine)
- V2P (virtual machine to physical machine)
- P2P (physical machine to physical machine)

# **Major Features**

- Windows: Windows Server 2003 R2, Windows Server 2008 and above system, Windows XP, Windows 10, etc.
- Linux: CentOS 4.4(\*) and above system, including CentOS 6.5, 7.0, 7.1, etc.
- Others: Redhat 4.8 (\*) and above system, SUSE10sp1 and above system; NeoKylin 6.5, NeoKylin 7.2 and so on.
- Various virtualization platforms, Hyper-V, Citrix Xen Server, VMware, KVM

### Remark:

\* Huawei Cloud ECS needs KVM driver, some old Operating Systems don't have KVM (VirtIO) Driver, such as Centos 4.X – 5.0 / 5.1

Migration Mgmt

Discovery Assessment

Resource orchestration

Container Server Migration

Database Migration

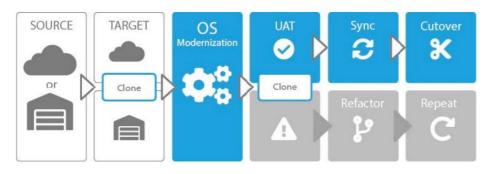
Storage Migration

Others

Positioning: RiverMeadow's Multi-Cloud Migration Platform is quick to implement and will safely upgrade your source OS versions as part of the migration.



### **OS Modernization Workflow**



### OS Modernization Workflow

Items	MANUAL OS upgrade - Standard -	AUTOMATED OS Upgrade - RiverMeadow -					
Time to Execution	4-5 hours per manual process	Minutes					
Speed of Process	Slow & not sustainable eg 5 per week	Fully Automated and built for scale eg 75-100 per week					
Downtime (Source Applications)	Excessive - Process must be done in a maintenance window	No downtime required on the source					
Single-hop or multi- hop?	Single-hop only eg n-2 to n-1	Multi-hop - For example, choose to go from Window Server 2003 (64bit) to Windows Server 2019 or any version in between					
Pre-Flight Compatibility Scan?	None	Pre-flight scan identifies known compatibility issues before migration start					
Certification by Microsoft?	No	Yes - Microsoft has certified the OSM process for Windows Server teams and Azure Product Owners					

# **Application Scenarios**

- AWS / Azure / GCP
- Huawei Cloud (Doesn't support\*)

# **Major Features**

- **Project Management**
- **Server Migration**
- OS Modernization (Highly recommended)

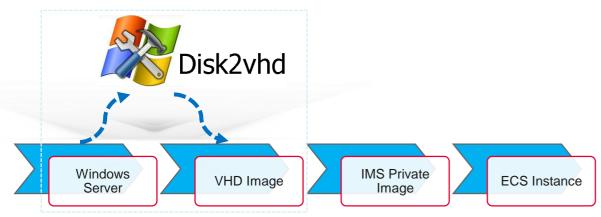
\* Remark: If you have Project requirement, please contact Huawei Cloud team.

Assessment

Others

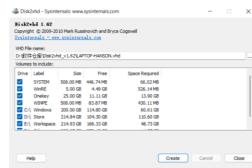
# Positioning: Disk2vhd is a utility that creates VHD (Virtual Hard Disk)

# Disk2vhd Workflow



### Software Version and Console

Version	Compatiable OS List	Download Link
V1.62	Windows XP SP2 Windows Server 2003 SP1, and higher, including x64 systems.	https://github.com/huaweiclo ud-latam/migration-tool- map/blob/main/02-007- disk2vhd/Disk2vhd_v1.62.zip
V2.02	Windows Vista, Windows Server 2008, and higher, including x64 systems.	https://learn.microsoft.com/e n- us/sysinternals/downloads/di sk2vhd



# **Application Scenarios**

Windows 2003 or later(\*)

**Major Features** 

Server Migration (Offline mode)

### **REMARK**

 Huawei Cloud doesn't support Windows XP, because Windows XP doesn't have KVM Driver \*\* V2.02 doesn't support Windows 2003, so please download the previous versión V1.62.

**Disk2vhd Document** 



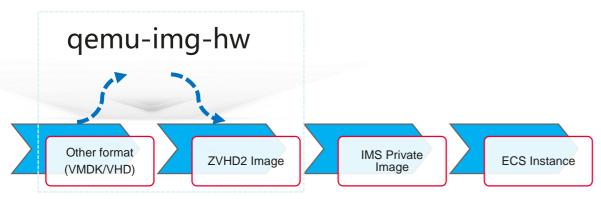
Container

Migration

Others

Positioning: qemu-img-hw is developed by Huawei and is used for converting image formats from other formats to RAW or ZVHD2 format.

# qemu-img-hw Workflow



### Software Version and Console

Version	Compatiable List	Download Link
V2.3.0	VHD, VMDK, QCOW2, RAW, VHDX, QCOW, VDI, QED, ZVHD or ZVHD2	Converting the Image Format Using qemu-img-hw

# **Application Scenarios**

Server Image in formats: VHD, VMDK, QCOW2, RAW, VHDX, QCOW, VDI, QED, ZVHD or ZVHD2

**Major Features** 

**Image Format Converting** 

### **REMARK**

• The Image size of IMS Service has limitation, so it's mandatory to convert the image to RAW or ZVHD2 first, then import the image through fast import feature.

**Qemu-img-hw Document** 

# image-migrator for docker image migration

Migration Discovery Mgmt

Assessment orchestration

Resource

Migration

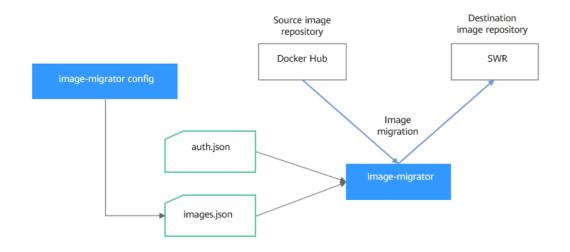
Database Migration

Storage Migration

Others

Positioning: image-migrator is an image migration tool that can automatically migrate images from the Docker image repository built on Docker Registry v2 to SWR.

# Image-migrator Workflow



# **Application Scenarios**

- AWS <u>Elastic Container Registry (ECR)</u>
- Azure Container Registry
- GCP <u>Artifact Registry</u>
- **Huawei Cloud SWR**

# **Major Features**

Docker Image Migration in parallel

**Docker Image Migration Guide** 



# K8CLONE for kubernetes metadata migration

Migration Discovery Mgmt

Assessment

Resource orchestration

Migration

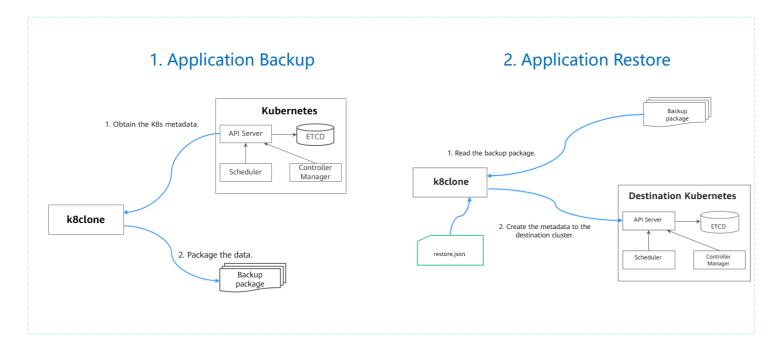
Database Migration

Storage Migration

Others

Positioning: k8clone is a simple Kubernetes metadata cloning tool. It can save Kubernetes metadata (objects) as a local package and restore the metadata to the destination cluster.

# **K8CLONE Migration Workflow**



# **Application Scenarios**

- **AWS EKS**
- Azure AKS
- **GCP GKS**
- **Huawei Cloud CCE**

# **Major Features**

application migration

k8clone Document



Migration Discovery Mgmt

Assessment

Resource orchestration Migration

Server

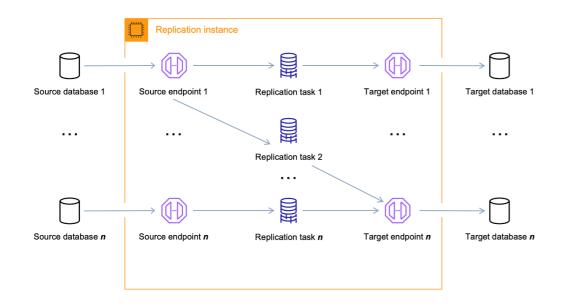
Container Migration

Migration

Others

Positioning: DMS is a Database Migration Service developed by AWS, supports the database migration from AWS RDS to Huawei Cloud RDS (MySQL / PGSQL / SQLSERVER engine).

# **DMS Migration Workflow**



# **Application Scenarios**

AWS RDS to Other Clouds

# **Major Features**

Database migration

**AWS DMS Document** 

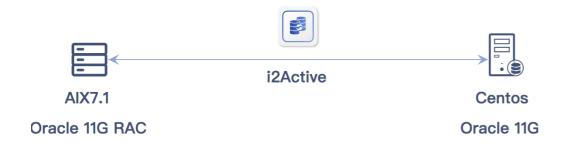


Assessment

Others

Positioning: i2Active is a database transaction-level real-time synchronization software. It supports Oracle Database online migration.

# i2Active Oracle Migration Workflow



# **Application Scenarios**



Oracle on other Cloud to Huawei Cloud

Server

- Oracle on AIX to Oracle on Huawei Cloud
- Single / Active-Standby / Oracle RAC

# **Major Features**

Oracle Database Migration (Online)

**Koogallery Product Link** 

<u>i2Active-HWY</u>



Migration Mgmt

Discovery Assessment

Resource orchestration

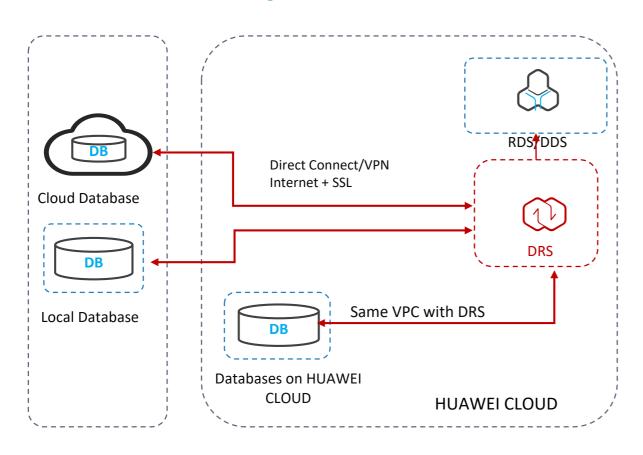
Container Migration

Migration

Others

Positioning: Data Replication Service (DRS) is a stable, efficient, and easy-to-use cloud service for real-time database online migration and synchronization.

# **DRS Migration Workflow**



# **Application Scenarios**

MySQL / PGSQL / SQLSERVER to RDS

Server

Migration

- MongoDB to DDS
- AWS RDS / Azure SQL / GCP Cloud SQL

# **Major Features**

**Database Migration** 

### **Product Link**

**DRS Document** 

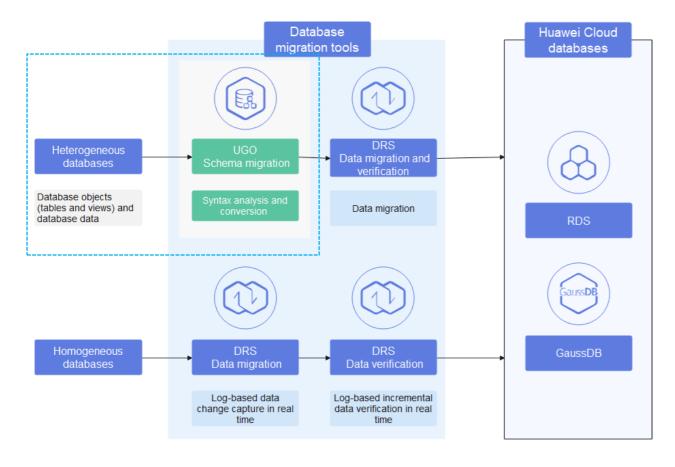


Assessment

Others

Positioning: Database and Application Migration UGO, referred to as UGO, is a professional cloud service focused on heterogeneous database schema migration.

# **UGO Migration Workflow**



# **Application Scenarios**

- On-premises Oracle Database
- **AWS Oralce Database**

# **Major Features**

- Oracle to PGSQL Schema Migration
- Oracle to GaussDB Schema Migration

**Product Link** 

**UGO Document** 



Migration Mgmt Discovery

Assessment

Resource

orchestration

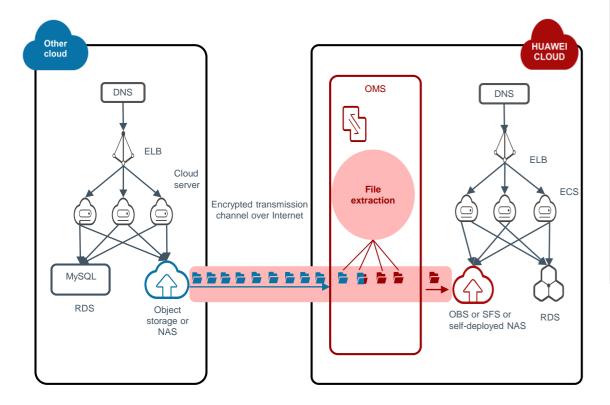
Server Migration Container Migration

Database Migration

Others

Positioning: Object Storage Migration Service (OMS) migrates object storage data and file storage data from AWS, Azure, or GCP to HUAWEI CLOUD.

# **OMS Migration Workflow**



### **Scenario 1: OBS File Migration**

- Migrating AWS S3 to OBS on HUAWEI CLOUD
- Migrating AWS S3 to HUAWEI CLOUD SFS Turbo

### **Scenario 2: NFS File Storage Migration**

- Migrating AWS EFS to HUAWEI CLOUD OBS
- Migrating AWS EFS to HUAWEI CLOUD SFS Turbo

### **Supported storage types**

Deployment Mode	RDA + OMS plug-in (offline deployment version)	OMS (cloud service edition)			
Object Storage Support	AWS S3 / Azure Blob / GCP Cloud Storage	AWS S3 / Azure Blob			
File storage support	NFS V3 and SMB protocol (AWS / Azure / GCP)	Not supported			

### **Typical Unsupported Scenarios**

- CIFS file storage. Recommended solution: Use the FastCopy tool to migrate data.
- FTP file storage. Recommended solution: Use the SMS or WinSCP for host migration.

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# Fastcopy for Windows File copy

Discovery Assessment

Migration Mgmt

Resource orchestration Migration

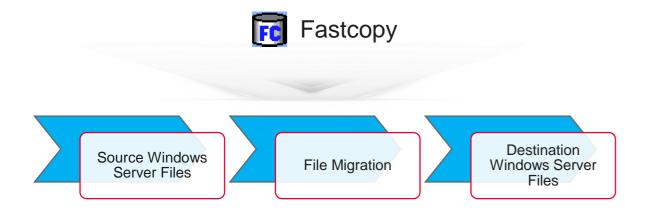
Server

Container Migration

Database Migration Storage Migration

Others

# Positioning: FastCopy is a Fast Copy/Backup Software on Windows.



Version	License Mode	Compatiable OS List	Download Link		
V5.x.x	Business Software	Windows 7/8/8.1/10/11 Windows Server 2012(&R2)/2016/2019/2022	https://fastcopy.jp/		
V3.x.x-V4.x.x	Freeware	Windows Vista/7/8/8.1/10 Windows Server 2008(&R2)/2012(&R2)/2016/2019	https://github.com/huaw eicloud- latam/migration-tool- map/tree/main/02-011- fastcopy		

# **Application Scenarios**

- SMB File Copy in Windows
- **CIFS File Copy in Windows**

# **Major Features**

Windows file copy



Migration Discovery Mgmt

Assessment

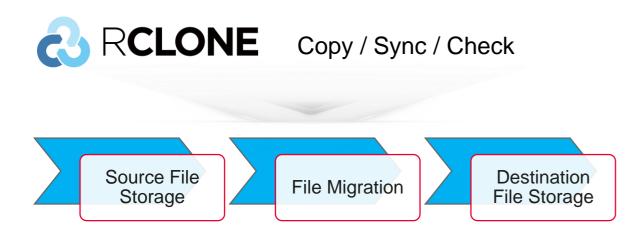
Resource orchestration

Container Server Migration Migration

Migration

Others

Positioning: Rclone is a command-line program to manage files on cloud storage.



Does rclone preserve file permissions? Currently when copying or syncing files with Rclone, it DOES NOT PRESERVE the permissions of those files.

Rclone is multi threaded with a user definable number of simultaneous transfers.

# **Application Scenarios**

Windows / Linux / macOS / BSD

- · Backup (and encrypt) files to cloud storage
- Restore (and decrypt) files from cloud storage
- Mirror cloud data to other cloud services or locally
- Migrate data to the cloud, or between cloud storage vendors

# **Major Features**

- Transfers
  - 1. MD5, SHA1 hashes are checked at all times for file integrity
  - 2. Timestamps are preserved on files
  - 3. Operations can be restarted at any time
  - 4. Can be to and from network, e.g. two different cloud providers
  - 5. Can use multi-threaded downloads to local disk
- Copy new or changed files to cloud storage
- Sync (one way) to make a directory identical
- · Move files to cloud storage deleting the local after verification

**Product Link RCLONE** 



# Rsync File Replication Between Linux Servers

Migration Mgmt

Discovery

Resource orchestration

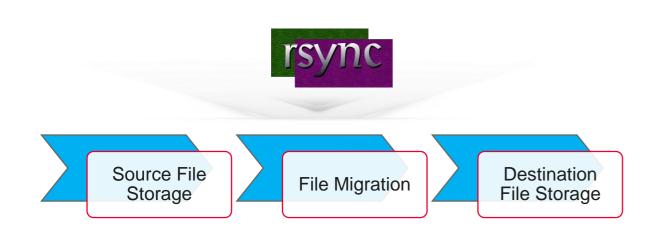
Server Migration Container

Migration

Migration

Others

Positioning: RSYNC is a fast, versatile, remote (and local) file-copying tool. It can copy locally, to/from another host over any remote shell, or to/from a remote rsync daemon.



# One Command:

# rsync -avHPX --sparse --one-file-system --numeric-ids --stats /data/ root@<DESTINATION IP>:/data

# **Application Scenarios**

Synchronize Files / Folders from one Linux Server to another Linux Server

# Major Features

Assessment

- 1. Rsync supports incremental synchronization.
- 2. Rsync preserves file attributes and permissions (owners, groups, and permissions)

### Limitation

- Rsync is single threaded, doesn't support multiple threads.
- The RSYNC synchronization efficiency is lower than FPsync for multilevel directories with a large number of small files.

### **Product Link**

# **RSYNC Website**



# FPsync - File Replication Between Linux Servers

Migration Mgmt

Discovery

Assessment

Resource orchestration

Server Migration

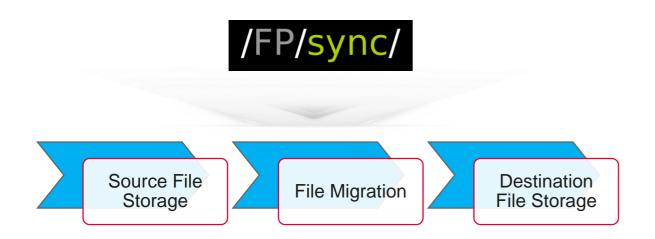
Migration

Container

Migration

Others

Positioning: FPSYNC is a shell script that wraps FPART and RSYNC, CPIO or TAR to launch several synchronization jobs in parallel



### One Command:

# fpsync -n 4 -f 1000 -s \$((100 \* 1024)) /data/src/ root@XXX:/data/dest/

# **Application Scenarios**

Synchronize Files / Folders from one Linux Server to another Linux Server

# **Major Features**

- 1. FPSYNC supports incremental synchronization.
- 2. FPSYNC preserves file attributes and permissions (owners, groups, and permissions)
- 3. FPSYNC supports concurrent tasks.

### Remarks

- FPsync supports multiple threads.
- · The FPsync synchronization efficiency is higher than RSYNC for multilevel directories with a large number of small files.

### **Product Link**

# **FPSYNC Website**



# How to obtain the support from LATAM Cloud Regional Team?

# **Huawei Internal Support Channel**

Please Huawei staff use Welink to scan and join the group

LATAM Migration Tool Support Group

- 1. After you join the group, the Latin America Cloud Regional Work Team will provide support.
- 2. Tool contact person:
  - lichang /
  - liushaowei /
  - Nestor Joel /
- 3. If your partner has requirements on migration tools, you can contact the Latin America cloud team for tool training and support.

### **External Support Channel**

If you (Huawei Cloud Customers or Partners) have any questions or suggestions, please feel free to contact us:

Send email to public mailbox:



!atamhwcloud@huawei.com

2. Create Issue on Github:

https://github.com/huaweicloud-latam/migration-toolmap/issues



# Thank you.

