



UDS Enterprise
System Requirements

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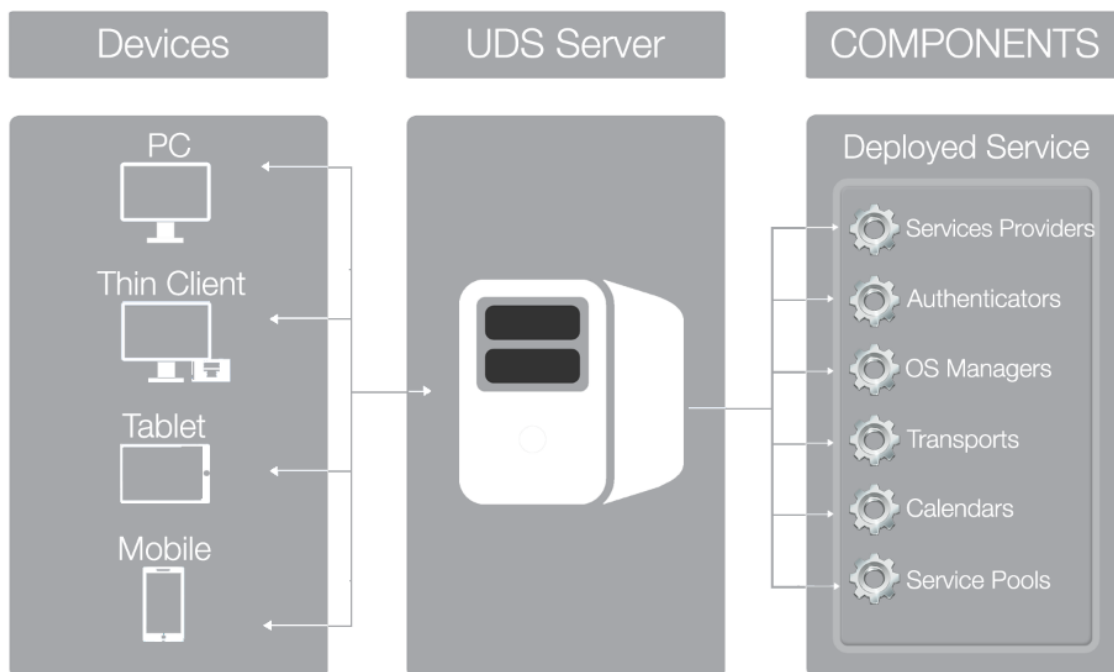
1 INTRODUCTION

UDS Enterprise is a multiplatform connection broker for Windows and Linux desktop and application virtualization. It manages user access to virtual desktops and applications and any other service registered in the system.

UDS Enterprise offers a set of elements that make up a platform for automatic lifecycle management, administration and deployment of VDI and vApp.

This document contains the requirements of the system that will host a UDS Enterprise platform for a proper interaction with the hypervisor or hypervisors chosen for your VDI project.

A full description of all UDS Enterprise components is also included, as well as their technical requirements.

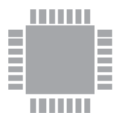
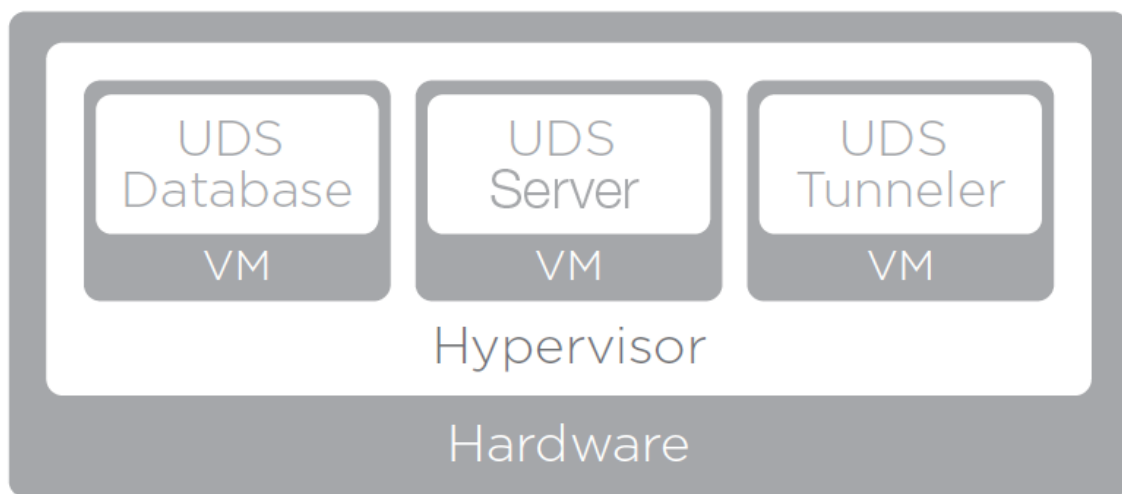




2 UDS ENTERPRISE COMPONENTS

UDS Enterprise is composed of 5 elements that interact with each other:

- **UDS Server (Broker):** It's installed as a virtual machine (VM) and is provided in virtual appliance format.
- **UDS Tunneler:** It's installed as a virtual machine (VM) and is provided in virtual appliance format.
- **UDS Database:** It's installed as a virtual machine (VM) and is provided in virtual appliance format (Does not apply for UDS Enterprise Free and Evaluation editions).
- **UDS Actor:** It's installed as a service in the VM that will be used as a template for desktop deployment.
- **UDS Plugin:** It's installed in the client device in order to connect to virtual desktop services (with all transport protocols except with HTML5).



CPU



MEMORY



NETWORK



STORAGE

Features and technical requirements of each are defined as follows:



2.1 UDS Server

It's the software that mediates between clients and service providers. It is the main piece of UDS, it performs connection broker functions for desktop services enabling administration and management of platforms defined as implemented services.

Virtual Appliance with the following features:

- Virtual disk: 5 GB
- Memory: 1 GB
- CPU: 2 vCPU
- Network: 1 vNIC

Requirements:

- 1 IP Address
- IP DNS
- Network Mask
- IP Gateway
- Domain name
- Database IP
- Name and port number of DB instance
- User and password of DB
- Activation code



2.2 UDS Tunneler

The software responsible of establishing secured connections to desktop services through a WAN and hence provide services with HTML5 access.

UDS Tunneler allows connections from any device/browser/client to services in virtual desktops through SSH tunnel without having any type of software previously installed. Additionally, UDS Tunneler allows RDP access to services and virtual desktops through HTML5.

Virtual Appliance with the following features:

- Disk: 5 GB
- Memory: 1 GB
- CPU: 2 vCPU
- Network: 1 vNIC

Requirements:

- 1 IP Address
- IP DNS
- Network mask
- IP Gateway
- Domain name
- IP UDS Server



2.3 UDS Database

Is the component responsible for storing all the data of UDS system, such as service providers, authenticators, connectivity, etc... as well as all the information that would make the generation of statistics possible.

Currently, UDS Enterprise supports MySQL database manager from version 5.5 and above.

It is necessary to have a MySQL database properly configured with a valid instance and a user at the moment of installation.

IMPORTANT!

In case you don't have a DB manager, VirtualCable can provide you with this component as a virtual appliance. This latter is not included in UDS Enterprise Support.

Virtual Appliance with the following features:

- Disco: 8 GB
- Memoria: 1 GB
- CPU: 1 vCPU
- Network: 1 vNIC

Requirements:

- 1 IP Address
- IP DNS
- Network mask
- IP Gateway
- Domain name
- DB instance name
- User with rights on the DB instance



2.4 UDS Actor

It's the software responsible for communication functions and it works as an interface for data transmission (state of a virtual desktop, machine name...), and commands between the broker and virtual desktop services managed by UDS.

It is installed as a service in the virtual machine that will be used as a template (gold image) for deploying groups of desktop services based on Linked Clones.

Supported operating systems are:

- Windows 10
- Windows 8.1
- Windows 8
- Windows 7
- Windows 2008
- Windows 2012
- Linux (Debian, Ubuntu, CentOS, Fedora, OpenSuse, etc...)

Requirements:

- .Net Framework 3.5 SP1 (Windows)
- Python 2.7 (Linux)
- UDS Master Key
- IP UDS Server



2.5 UDS Plugin

Is the software responsible for calling the connection protocols to run the virtual desktops.

It is installed in the client device to enable connections to virtual desktop services.

Supported operating systems are:

- Windows 10
- Windows 8.1
- Windows 8
- Windows 7
- Windows 2008
- Windows 2012
- Linux (Debian, Ubuntu, CentOS, Fedora, OpenSuse, etc...)
- MAC OSX (10.5 and above)



3 UDS ENTERPRISE PLATFORM REQUIREMENTS

Components of UDS Enterprise can be hosted in different virtualization platforms.

Even if UDS Enterprise components are hosted in one single virtual platform, UDS Enterprise is able to manage deployments of virtual desktops in multiple virtual platforms independently from the platform hosting the solution itself.

The requirements for installing UDS Enterprise in different virtualization platforms as well as the requirements of the virtual platform on which UDS Enterprise will be installed are described in this section.



3.1 Infrastructure requirements

Infrastructure requirements necessary for UDS Enterprise deployment are:

- **Virtualization platform.** Responsible of hosting virtual desktops generated by UDS and then execute the servers that make up UDS.
 - Username and password of the platform administrator with administrative rights.
- **DNS Server.** This service is necessary for both, the good functioning of the virtual platform and UDS platform to be deployed.
- **DHCP Server.** It is necessary a DHCP server that assigns IP addresses to virtual desktop groups created through Linked Clone.



3.2 VMware Vsphere virtual platform requirements

Necessary infrastructure requirements for UDS Enterprise deployment are:

UDS Enterprise can be deployed on VMware vSphere 5 and above.

To know more about requirements of VMware vSphere platform, have a look at this documentation:

- [VMware Compatibility Guide](#)
- [vCenter Server and vSphere Client Hardware Requirements](#)

The platform VMware on which UDS Enterprise will be deployed should fulfill these requirements:

3.2.1 Configuration requirements

- We need at least one VMware ESXi Server with one valid license for hosting UDS Servers and generate virtual desktops.
- The vSphere platform must be managed by a vCenter with a valid license.
- For UDS Enterprise to be installed and send requests to vCenter and that they are executed, you must have the credentials of a user with administrative permissions on the VMware vSphere platform where the virtual desktops are going to be deployed.
- It is necessary to have at least one Virtual Machine Port Group to which the virtual servers of UDS will connect.
- It is necessary to have at least one Virtual Machine Port Group to which the virtual desktops managed by UDS will connect.
- At least 18 GB of free disk space is necessary for hosting the servers that form UDS.
- At least 3 GB of RAM is necessary for hosting the servers that form UDS.
- VNIC adapter of template machine cannot be of type E1000.



3.2.2 Network requirements

For UDS network configuration you should fulfill the following requirements:

- Book at least 3 IP addresses in the same range:
 - ✓ 1 IP for UDS broker.
 - ✓ 1 IP for MySQL Database.
 - ✓ 1 IP for Tunneler (when necessary).

- You should also get available these requirements:
 - ✓ Network masks.
 - ✓ IP of DNS Server.
 - ✓ IP of Gateway.
 - ✓ Domain name (if applicable).
 - ✓ IP of vCenter.

3.2.3 Network connections

The following ports of communication between different UDS components should be enabled:

Source	Destination	Port
UDS Broker	MySQL DB	3306
UDS Broker	vCenter	443
UDS Broker	Authenticator	389, 636 (SSL)
Tunneler	UDS Broker	80, 443
UDS Broker	Virtual desktops	3389 (RDP), 22 (NX), 42966 (RGS)
Tunneler	Virtual desktops	3389 (RDP), 22 (NX), 42966 (RGS)
User	UDS Broker	80, 443
User	Tunneler	443
User	HTML5 (Tunnel)	10443



3.3 oVirt virtual platform requirements

UDS Enterprise can be deployed on oVirt platform starting at version 3.2.

The platform oVirt on which UDS Enterprise will be deployed should fulfill the following requirements:

3.3.1 Configuration requirements

- We need at least one oVirt node for hosting UDS Servers and generate virtual desktops.
- The oVirt platform must be managed by an oVirt-engine.
- For UDS Enterprise to be installed and send requests to oVirt-engine and that they are executed, you must have the credentials of a user with administrative permissions on the oVirt platform where the virtual desktops are going to be deployed.
- It is necessary to have at least one cluster to create and configure different virtual desktops generated by UDS.
- It is necessary to have at least one Logical network to which UDS virtual server will connect.
- It is necessary to have at least one Logical network to which UDS generated virtual desktops will connect.
- At least 18 GB of free disk space is necessary for hosting the servers that form UDS.
- At least 3 GB of RAM is necessary for hosting the servers that form UDS.



3.3.2 Network requirements

For UDS network configuration you should fulfill the following requirements:

- Book at least 3 IP addresses in the same range:
 - ✓ 1 IP for UDS broker.
 - ✓ 1 IP for MySQL Database.
 - ✓ 1 IP for Tunneler (when necessary).

- You should also get available these requirements:
 - ✓ Network masks.
 - ✓ IP of DNS Server.
 - ✓ IP of Gateway.
 - ✓ Domain name (if applicable).
 - ✓ IP of oVirt Engine.

3.3.3 Network connections

The following ports of communication between different UDS components should be enabled:

Source	Destination	Port
UDS Broker	MySQL DB	3306
UDS Broker	oVirt Engine	443
UDS Broker	Authenticator	389, 636 (SSL)
Tunneler	UDS Broker	80, 443
UDS Broker	Virtual desktops	3389 (RDP), 22 (NX), 42966 (RGS)
Tunneler	Virtual desktops	3389 (RDP), 22 (NX), 42966 (RGS)
User	UDS Broker	80, 443
User	Tunneler	443
User	HTML5 (Tunnel)	10443



3.4 RHEV virtual platform requirements

UDS Enterprise can be deployed on Red Hat Enterprise Virtualization version 3.

The platform RHEV on which UDS Enterprise will be deployed should fulfil the following requirements:

3.4.1 Configuration requirements

- We need at least one RHEV Server for hosting UDS Servers and generate virtual desktops.
- The RHEV platform must be managed by a RHEV-Manager.
- For UDS Enterprise to be installed and send requests to RHEV-Manager and that they are executed, you must have the credentials of a user with administrative permissions on the RHEV platform where the virtual desktops are going to be deployed.
- It is necessary to have at least one cluster to create and configure different virtual desktops generated by UDS.
- It is necessary to have at least one Logical network to which UDS virtual server will connect.
- It is necessary to have at least one Logical network to which UDS generated virtual desktops will connect.
- At least 18 GB of free disk space is necessary for hosting the servers that form UDS.
- At least 3 GB of RAM is necessary for hosting the servers that form UDS.



3.4.2 Network requirements

For UDS network configuration you should fulfil the following requirements:

- Book at least 3 IP addresses in the same range:
 - ✓ 1 IP for UDS broker.
 - ✓ 1 IP for MySQL Database.
 - ✓ 1 IP for Tunneler (when necessary).

- You should also get available these requirements:
 - ✓ Network masks.
 - ✓ IP of DNS Server.
 - ✓ IP of Gateway.
 - ✓ Domain name (if applicable).
 - ✓ IP of RHEV-Manager.

3.4.3 Network connections

The following ports of communication between different UDS components should be enabled:

Source	Destination	Port
UDS Broker	MySQL DB	3306
UDS Broker	RHEV-Manager	443
UDS Broker	Authenticator	389, 636 (SSL)
Tunneler	UDS Broker	80, 443
UDS Broker	Virtual desktops	3389 (RDP), 22 (NX), 42966 (RGS)
Tunneler	Virtual desktops	3389 (RDP), 22 (NX), 42966 (RGS)
User	UDS Broker	80, 443
User	Tunneler	443
User	HTML5 (Tunnel)	10443



3.5 Hyper-V virtual platform requirements

UDS Enterprise can be deployed on Microsoft Hyper-V version 3.

The platform Microsoft Hyper-V on which UDS Enterprise will be deployed should fulfill the following requirements:

3.5.1 Configuration requirements

- We need at least one Microsoft Hyper-V server with a valid license for hosting UDS Servers and generate virtual desktops.
- The Microsoft Hyper-V servers can't be part of a Microsoft cluster.
- For UDS to work properly against a Microsoft Hyper-V server it is necessary that this latter isn't part of a Microsoft cluster. Upcoming versions of UDS Enterprise will support different Microsoft Hyper-V in cluster.
- It is necessary to have at least one Virtual Switch to which UDS Servers will connect.
- It is necessary to have at least one Virtual Switch to which UDS generated virtual desktops will connect.
- It is necessary to have credentials of a user with administrative rights on the platform Microsoft Hyper-V where virtual desktops will be deployed.
- At least 18 GB of free disk space is necessary for hosting the servers that form UDS.
- At least 3 GB of RAM is necessary for hosting the servers that form UDS.
- For a proper functioning of Microsoft Hyper-V with UDS Enterprise it is necessary to enable WSMAN in each Hyper-V host used with UDS.
- In order to enable it through HTTPS you should have a valid certificate.



To enable it through HTTP we execute:

- winrm quickconfig
- winrm set winrm/config/service '@{AllowUnencrypted="true"}'
- winrm set winrm/config/service/auth '@{Basic="true"}'

```
Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2012 Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator> winrm quickconfig
WinRM service is already running on this machine.
WinRM is not set up to allow remote access to this machine for management.
The following changes must be made:

Configure LocalAccountTokenFilterPolicy to grant administrative rights remotely to local users.
Make these changes [y/n]? y
WinRM has been updated for remote management.

Configured LocalAccountTokenFilterPolicy to grant administrative rights remotely to local users.
PS C:\Users\Administrator> winrm set winrm/config/service '@{AllowUnencrypted="true"}'
Service
  RootSDDL = 0:MSG:BAD:P(A;;GA;;;BA)<A;;GR;;;IU>S:P(AU;FA;GA;;;WD)<AU;SA;GXGW;;;WD>
  MaxConcurrentOperations = 4294967295
  MaxConcurrentOperationsPerUser = 1500
  EnumerationTimeoutms = 240000
  MaxConnections = 300
  MaxPacketRetrievalTimeSeconds = 120
  AllowUnencrypted = true
  Auth
    Basic = false
    Kerberos = true
    Negotiate = true
    Certificate = false
    CredSSP = false
    CbtHardeningLevel = Relaxed
  DefaultPorts
    HTTP = 5985
    HTTPS = 5986
  IPv4Filter = *
  IPv6Filter = *
  EnableCompatibilityHttpListener = false
  EnableCompatibilityHttpsListener = false
  CertificateThumbprint
  AllowRemoteAccess = true
PS C:\Users\Administrator> winrm set winrm/config/service/auth '@{Basic="true"}'
Auth
  Basic = true
  Kerberos = true
  Negotiate = true
  Certificate = false
  CredSSP = false
  CbtHardeningLevel = Relaxed
PS C:\Users\Administrator>
```



3.5.2 Network requirements

For UDS Enterprise network configuration you should fulfill the following requirements:

- Book at least 3 IP addresses in the same range:
 - ✓ 1 IP for UDS broker.
 - ✓ 1 IP for MySQL Database.
 - ✓ 1 IP for Tunneler (when necessary).

- You should also get available these requirements:
 - ✓ Network masks.
 - ✓ IP of DNS Server.
 - ✓ IP of Gateway.
 - ✓ Domain name (if applicable).
 - ✓ IP of Hyper-V Server.

3.5.3 Network connections

The following ports of communication between different UDS Enterprise components should be enabled:

Source	Destination	Port
UDS Broker	MySQL DB	3306
UDS Broker	Hyper-V	443
UDS Broker	Authenticator	389, 636 (SSL)
Tunneler	UDS Broker	80, 443
UDS Broker	Virtual desktops	3389 (RDP), 22 (NX), 42966 (RGS)
Tunneler	Virtual desktops	3389 (RDP), 22 (NX), 42966 (RGS)
User	UDS Broker	80, 443
User	Tunneler	443
User	HTML5 (Tunnel)	10443



3.6 XenServer virtual platform requirements

UDS Enterprise can be deployed on XenServer version 6.5.

The platform XenServer on which UDS Enterprise will be deployed should fulfill the following requirements:

3.6.1 Configuration Requirements

- We need at least one XenServer server for hosting UDS Servers and generate virtual desktops.
- For UDS Enterprise to be installed and send requests to XenServer and that they are executed, you must have the credentials of a user with administrative permissions on the XenServer platform where virtual desktop are going to be deployed.
- It is necessary to have at least one network to which UDS virtual server will connect.
- It is necessary to have at least one network to which UDS generated virtual desktops will connect.
- At least 18 GB of free disk space is necessary for hosting the servers that form UDS.
- At least 3 GB of RAM is necessary for hosting the servers that form UDS.



3.6.2 Network requirements

For UDS Enterprise network configuration you should fulfill the following requirements:

- Book at least 3 IP addresses in the same range:
 - ✓ 1 IP for UDS broker.
 - ✓ 1 IP for MySQL Database.
 - ✓ 1 IP for Tunneler (when necessary).

- You should also get available these requirements:
 - ✓ Network masks.
 - ✓ IP of DNS Server.
 - ✓ IP of Gateway.
 - ✓ Domain name (if applicable).
 - ✓ IP of XenServer Master.

3.6.3 Network connections

The following ports of communication between different UDS Enterprise components should be enabled:

Source	Destination	Port
UDS Broker	MySQL DB	3306
UDS Broker	XenServer	443
UDS Broker	Authenticator	389, 636 (SSL)
Tunneler	UDS Broker	80, 443
UDS Broker	Virtual desktops	3389 (RDP), 22 (NX), 42966 (RGS)
Tunneler	Virtual desktops	3389 (RDP), 22 (NX), 42966 (RGS)
User	UDS Broker	80, 443
User	Tunneler	443
User	HTML5 (Tunnel)	10443



3.7 Nutanix Acropolis virtual platform requirements

UDS Enterprise can be deployed on the Nutanix Acropolis platform.

The Nutanix Acropolis platform where UDS Enterprise will be deployed should fulfill the following requirements:

3.7.1 Configuration requirements

- For UDS Enterprise to be installed and send requests to Acropolis and that they are executed, you must have the credentials of a user with administrative permissions on Acropolis platform where virtual desktops are going to be deployed.
- It is necessary to have at least one network to which UDS virtual server will connect.
- It is necessary to have at least one network to which UDS generated virtual desktops will connect.
- At least 18 GB of free disk space is necessary for hosting the servers that form UDS.
- At least 3 GB of RAM is necessary for hosting the servers that form UDS.



3.7.2 Network requirements

For UDS Enterprise network configuration you should fulfill the following requirements:

- Book at least 3 IP addresses in the same range:
 - ✓ 1 IP for UDS broker.
 - ✓ 1 IP for MySQL Database.
 - ✓ 1 IP for Tunneler (when necessary).

- You should also get available these requirements:
 - ✓ Network masks.
 - ✓ IP of DNS Server.
 - ✓ IP of Gateway.
 - ✓ Domain name (if applicable).
 - ✓ IP of Acropolis.

3.7.3 Network connections

The following ports of communication between different UDS Enterprise components should be enabled:

Source	Destination	Port
UDS Broker	MySQL DB	3306
UDS Broker	Acropolis	443
UDS Broker	Authenticator	389, 636 (SSL)
Tunneler	UDS Broker	80, 443
UDS Broker	Virtual desktops	3389 (RDP), 22 (NX), 42966 (RGS)
Tunneler	Virtual desktops	3389 (RDP), 22 (NX), 42966 (RGS)
User	UDS Broker	80, 443
User	Tunneler	443
User	HTML5 (Tunnel)	10443



4 ADDITIONAL ELEMENTS

For a correct installation of UDS Enterprise platform it is recommended to have the following elements previously prepared for the installation process:

- **Virtual Desktop Template.** It is necessary to have defined the virtual machines that you will need for the deployment of groups of virtual desktops based on Linked Clones.

5 ABOUT VIRTUALCABLE

VirtualCable develops, supports and sells UDS Enterprise through a subscription model, including support and updates according to the number of users.

Also, VirtualCable offers professional services to install and configure UDS Enterprise.

For additional information, visit www.udsenderprise.com or send us an email: info@udsenderprise.com