System requirements

Management Server

Hardware Requirements

Component	Requirements
CPU	8 Cores
RAM	16 GB
HDD	500 GB/1 TB

Software requirements

Domain:

- Active Directory

Operating system:

- Windows Server 2012/2012R2
- Windows Server 2016
- Windows Server 2019

Internet Information Services 7.0 and higher, with the following modules:

- Static Content
- HTTP Redirection
- ASP.NET
- .NET Extensibility
- ISAPI Extensions
- ISAPI Filters
- Basic Authentication
- Windows Authentication
- IIS Management Console

Additional Microsoft components:

- Microsoft .NET Core 3.1 Hosting Bundle
- URL Rewrite (IIS extension)

DBMS supported:

- Microsoft SQL Server 2012 SP2 – 2019, any edition
- PostgreSQL Pro 10 and later

Access server

Hardware Requirements

Component	1 – 10 RDP/SSH sessions	11 – 50 RDP/SSH sessions	51 – 100 RDP/SSH sessions
CPU	8 Cores	16 Cores	32 Cores
RAM	8 GB	16 GB	32 GB
HDD SATA/SAS/SSD	1 x 120 GB	2 x 120 GB	2 x 240 GB
RAID	-	+	+
Network adapter	1 Gb	1 Gb	1 Gb

> ⊙ Access server performance in a virtualized environment is about 40% lower.

Software requirements

Domain:

- Active Directory

Operatingsystem:

- Windows Server 2012/2012R2
- Windows Server 2016
- Windows Server 2019

Additional Microsoft components:

- Microsoft Windows Desktop Runtime 3.1

Browser:

- Microsoft Internet Explorer (v11.0.250 (KB5005036) and newer, for Win2012)
- Google Chrome

Role:

- Remote Desktop Session Host

File storage

Media data storage

You can use any network storage within the Active Directory domain to store video files.

Required disk space is calculated based on the following conditions: concurrent sessions of 20/50/100 users, duration of working day is 8 hours, recording time 30 days. The average size of one hour of video recording is 60 MB.

Component	20 RDP/SSH sessions	50 RDP/SSH sessions	100 RDP/SSH sessions
HDD	~ 300 GB	~ 750 GB	~ 1,5 TB

> Disk space was calculated with medium compression and moderate user activity in the session. If the compression parameters will differ from the average, and the user's activity will be very high or too low, then the actual video size may differ from the listed values both to a smaller and a larger side.

Shadow copy file storage

Any server that is part of an Active Directory can be used as a storage for shadow copies of files.

> The size of disk space is calculated individually, and will depend on the intensity of copying files to destination servers, and on the size of the transferred files.

Network connectivity

Active Directory Domain Services

Management / Access Servers	Incoming and outgoing	
	TCP/UDP 53	DNS
	TCP/UDP 389	LDAP
	TCP 636	LDAPS
	TCP 3268	Microsoft Global Catalog
	TCP 3269	Microsoft Global Catalog SSL
	TCP/UDP 88	Kerberos
	TCP/UDP 464	Kerberos

Indeed PAM servers

Management server	Incoming	Outgoing
	TCP 443	TCP 5985/5986
	TCP 139/445	TCP 22
		TCP 1433 (MSSQLServer)/5432 (PostgreSQL)
Access server	**Incoming**	**Outgoing**
	TCP 3389	TCP 443
	TCP 22	TCP 3389
		TCP 22
		TCP 139/445
Windows resources	**Incoming**	**Outgoing**
	TCP 3389	
	TCP 445, 5985/5986	
*nix resources	**Incoming**	**Outgoing**
	TCP 22	