Contents

Introduction ............................................................................................................................................ 4
General Troubleshooting Advice .................................................................................................................. 5
   Ports and the Telnet Client .................................................................................................................. 5
   Port requirements when using SSL Gateway ....................................................................................... 6
   Port requirements when not using the SSL Gateway .......................................................................... 6
   General additional port requirements ................................................................................................ 6
   The RDP Test ........................................................................................................................................ 7
   Determining the source of an error message ...................................................................................... 7
Connection Broker and Management Console Errors ............................................................................ 9
   The Quest Connection Broker service starts and then immediately stops. ........................................ 9
   Error: Connect to DC Service timed out .............................................................................................. 9
   The remote display protocol port is not reachable ............................................................................. 9
   Warning: Remote computer belongs to another computer group ................................................... 10
   Error: The System could not connect to the Password Management Server ................................... 11
Hypervisor Connectivity Issues ............................................................................................................. 12
   vCenter/ESX Connectivity Issues ....................................................................................................... 12
      Error: Callobjectmethod raised an exception ................................................................................ 12
      Error: Caught message-less java exception .................................................................................... 12
      Error: This key is already associated with an element of this collection ....................................... 13
      Error: The session is not authenticated (-1) ................................................................................... 14
Recommended Content ........................................................................................................................ 15
   Scalability Guidelines ......................................................................................................................... 15
   Video Tutorials ................................................................................................................................... 17
      How to Configure Secure-IT for use with the Web Access component of vWorkspace .............. 17
      How to configure Internet Information Services for use with Web Access ................................... 17
      How to Request and Finalize a SSL Certificate for use with vWorkspace ...................................... 17
      How to install the Web Access component of vWorkspace........................................................... 17
Introduction

This document has been produced to help describe the most common support issues arising with the vWorkspace product suite, and ways to approach diagnosing and troubleshooting these issues.

This document will continue to be revised by Quest Support as new information becomes available and that can be shared. The most up to date version of this document is available from the Documentation section of the vWorkspace Product Information Page on SupportLink.

For more details on Quest Support, please refer to the Support Quick Reference Guide, or the Global Support Guide.
General Troubleshooting Advice

Ports and the Telnet Client

With vWorkspace it is very important to have communication between the Clients, Connection Brokers and Terminal Servers/VDIs.

One of the most common causes of issues can be that ports are not reachable from one machine to another, in which case the telnet client is an invaluable tool in testing this scenario.

For example, in order to test if a VDI can reach the connection broker on Port 8080, open a command prompt and type the following:

    telnet machinename 8080 such as Telnet CB1 8080

(Where CB1 is the name of your Connection Broker)

If the results look like the screenshot below, it means that the port is not reachable.

![Screenshot of telnet command output](image)

Ok, so now we have determined that the port is not reachable, we need to work out why by following these steps:

1. Does the name resolve to the correct IP?
2. Is the Service running? (Check the table below for what Service uses what port)
3. Is there a firewall blocking the connection?
Port requirements when using SSL Gateway

Note - These are the Default ports and are user configurable. If they are changed from the default values, make a note of these in case they need to be rolled back at any time.

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Port</th>
<th>Service Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client</td>
<td>SSL Gateway</td>
<td>443</td>
<td>Quest Secure Sockets Layer Gateway</td>
</tr>
<tr>
<td>SSL Gateway</td>
<td>Connection Broker</td>
<td>8080</td>
<td>Quest Connection Broker</td>
</tr>
<tr>
<td>SSL Gateway</td>
<td>TS/VDI</td>
<td>3389</td>
<td>Remote Desktop Services or Terminal Services</td>
</tr>
<tr>
<td>SSL Gateway</td>
<td>Web Server</td>
<td>80</td>
<td>World Wide Web Publishing Service</td>
</tr>
</tbody>
</table>

Port requirements when not using the SSL Gateway

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Port</th>
<th>Service Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Client</td>
<td>Connection Broker</td>
<td>8080</td>
<td>Quest Connection Broker</td>
</tr>
<tr>
<td>Client</td>
<td>Web Server (if used)</td>
<td>80</td>
<td>World Wide Web Publishing Service</td>
</tr>
<tr>
<td>Client</td>
<td>TS/VDI</td>
<td>3389</td>
<td>Remote Desktop Services or Terminal Services</td>
</tr>
</tbody>
</table>

General additional port requirements

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Port</th>
<th>Service Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection Broker</td>
<td>TS/VDI</td>
<td>5203</td>
<td>Quest Data Collector Service</td>
</tr>
<tr>
<td>Connection Broker</td>
<td>TS/VDI</td>
<td>3389</td>
<td>Remote Desktop Services or Terminal Services</td>
</tr>
<tr>
<td>Connection Broker</td>
<td>TS/VDI</td>
<td>5204</td>
<td>Quest Universal Printer</td>
</tr>
<tr>
<td>Connection Broker</td>
<td>Universal Printer Server</td>
<td>5204</td>
<td>Quest Universal Printer</td>
</tr>
<tr>
<td>Connection Broker</td>
<td>TS/Other Connection Brokers</td>
<td>5205</td>
<td>Quest Registry Service</td>
</tr>
<tr>
<td>TS/VDI</td>
<td>Connection Broker</td>
<td>5201</td>
<td>Quest Connection Broker</td>
</tr>
<tr>
<td>TS/VDI</td>
<td>Connection Broker</td>
<td>8080</td>
<td>Quest Connection Broker</td>
</tr>
<tr>
<td>Web Server</td>
<td>Password Management Service</td>
<td>443</td>
<td>Quest Password Management Service</td>
</tr>
</tbody>
</table>
This information can be used to determine if communication is failing between the machines as this is normally the cause for errors.

### The RDP Test

It is often difficult to determine if a connection failure is a vWorkspace issue or a general issue.

The easiest way to determine this is to use the Remote Desktop (RDP) test using the steps below:

- Open RDP
- Start | Run | `mstsc`
- Type in the IP address of the VDI/TS that you are connecting to.

If this fails to connect as well then it is most likely a general machine issue which can be diagnosed using standard methods below, for example:

1. Is the IP address of the machine correct?
2. Does the machine name resolve correctly through DNS?
3. Is the machine contactable on telnet / 3389

The other advantage of the RDP test is that it may reveal an error message on the console that was hidden previously.

### Determining the source of an error message

One of the great things about vWorkspace is that it works with many different platforms and hypervisors. This can also add to confusion when troubleshooting.

It may appear that vWorkspace is sending an error message but the product also forwards error messages from the platform that we are interacting with at the time.

Therefore if you get an error message from vWorkspace and search the Quest Knowledgebase [http://support.quest.com](http://support.quest.com) but fail to find a helpful result, it may be because it isn’t a vWorkspace error but something from the underlying operating system.

If this is the case, and the error does not appear on Quest’s Knowledgebase, try searching for the error through your preferred internet search engine as often you will find that the error comes from the Hypervisor rather than vWorkspace (there are many examples of how to resolve it already on the internet).
Quest Support is constantly expanding the online Knowledge Base to include new solutions to common problems and will continue to add fixes and workarounds to 3rd party errors.
Connection Broker and Management Console Errors

The Quest Connection Broker service starts and then immediately stops.

1. Open the services list by selecting Start | Run and typing services.msc
2. Verify that Quest Database Management service is up and running
   **NOTE: If Quest DB service also cannot start, then there is a problem with SQL database configuration (ODBC) and there is no need to continue with the following steps
3. Open the vWorkspace Management console
   Expand Locations | Location1 (or the modified name) | then Connection Brokers
4. Delete the Connection Broker entry that is specified by IP or FQDN
5. Add the Connection Broker again using the NetBIOS name.
6. Ensure that this name resolves to the correct IP address
7. Switch back to the service list and press F5 (or select Refresh) and wait to verify that CB service is up and running
   Note - Service should be set to an automatic start up type

Error: Connect to DC Service timed out

When initializing a machine, the management console gives the following error "Connect to DC service timed out. Overlapped I/O operation is in progress. (997) Retry will occur automatically if necessary"

This error is caused by the Connection Broker not being able to connect to the Data Collector service on the Machine being initialized.

Please make sure the firewall on the VDI is turned off or open port 5203 from the Connection Broker to the VDI by adding in a firewall exception.

The remote display protocol port is not reachable

If the RDP port is not reachable from the Connection Broker, the machine will be marked as "Not Ready" and you will not be able to log into it through vWorkspace.

This error message can be caused by the Port being blocked. However, the more common cause is that Remote Desktop Services aren’t enabled on the VDI.

1. Login to the machine having the issue
2. Right click My Computer | select Properties
3. Select the Remote tab
4. Check the box Allow users to connect remotely to this computer
5. Click OK
6. Reinitialize through the vWorkspace Management Console

The above method is for a single machine. If deploying machines from a template, it is important to update this template first to save a lot of time!

**Warning: Remote computer belongs to another computer group**

When provisioning machines messages such as “remote computer belongs to another computer group (has a different computer id). (42007) Retry will occur automatically if necessary” may appear.

![Remote computer belongs to another computer group](image)

This can happen for a few reasons such as for example, if you are migrating VDI’s from a test lab to a new farm in your live environment, it is correctly telling you that the machine is from a different farm.

However, it can also appear when adding new machine from a Template.

When a machine is initialized in the vWorkspace Management Console, our product will add some unique registry keys into that machine. If this machine is then turned into a template, all cloned machines will have the same unique keys and cause this error message.

In that case, please perform the following steps on the template:

1. Remove the VDI desktop from the vWorkspace Management Console, if necessary
2. Log on to the VM as Administrator and remove these registry fields:
   - HKLM\SOFTWARE\Provision Networks\Common\License Mode
   - HKLM\SOFTWARE\Provision Networks\Common\LLMServerList
   - HKLM\SOFTWARE\Provision Networks\Common\PublicKey
   - HKLM\SOFTWARE\Provision Networks\Common\ComputerID
3. Restart the Quest Data Collector service on the VDI VM.
4. Import the VDI desktop into the database.
Error: The System could not connect to the Password Management Server

These are steps to perform to troubleshoot when Password Manager is not working correctly:

- Ensure that the Password Manager (PM) service is running

- Turn on debug logging via the Password Manager Control Panel applet, restart PM, reproduce error if needed and check logs

- Check that the right certificate is installed in the PM Control Panel applet and that the certificate name exactly matches the "friendly name"

- Make sure that no other webservers are using SSL on the PM server (if so change the PM port via the Control Panel applet)

- Stop the PM service and use `netstat -aon | more` to determine if any other application is listening on the PM port. (default is 443)

- From the Web-IT admin page, click on Password Manager and use the "fill out all fields" option and the servername or FQDN depending on the certificate. Do not use the IP address. Edit the HOSTS file in `C:\Windows\System32\Drivers\Etc\` if a need to resolve the IP to the servername.

- If using a private certificate authority (CA server) ensure that the Root CA certificate is imported into the Local Machine's computer store, under "Console Root\Certificates (Local Computer)\Trusted Root Certification Authorities\Certificates"

- If unable to connect from the Web-IT server to the PM server, check the firewall for TCP port (default 443). Make sure the port allowed matches the port assigned in the PM Control Panel applet
Hypervisor Connectivity Issues

vCenter/ESX Connectivity Issues

Error: Callobjectmethod raised an exception

The majority of vCenter connectivity issues can be resolved by updating VMWare keystore with vCenter instance information, that is, by recreating vmware.keystore file. Please, refer to the following solution #52378 - “HOWTO: Manually create the vmware.keystore file for VMware Virtual Center integration” for details:

https://support.quest.com/Search/SolutionDetail.aspx?id=SOL52378

In addition, error message "CJvmVmBroker::getVmNames: Error: Callobjectmethod raised an exception (-1)" when attempting to import a template may indicate that management account used by vWorkspace does not have enough permissions in vCenter.

Currently, Quest does not document the minimum permissions required for the Service Account to effectively communicate with Virtual Center, so please ensure this account has full administrator permissions in vCenter.

Error: Caught message-less java exception

A wrong password for vCenter Management Account typically results the error message, part of which is read as follows: “Caught message-less java exception(-1)”
This error may also be due to incorrect URL for vCenter SDK.

To enter connect credentials/URL:
- Open vWorkspace Console
- Navigate to <Location-name> | Properties | Management Servers (or Virtualization Entities)
- Open properties of vCenter entry.
- Ensure that you have valid URL for vCenter SDK and correct credentials for the management account.

**Error: This key is already associated with an element of this collection**

The “Error: This key is already associated with an element of this collection” message typically indicates that there are duplicates of VM/Datacenter/Folder names in vCenter.

This may happen because ESX server is case-sensitive and allows creating of several VMs or folders with names, such as “machine1” and “Machine1” that cannot be distinguished by vCenter.

The easiest way to recognize such duplication in virtual machine names is to export the VM list to a text file and utilize any text processor, such as MS Excel to find duplicates. In vCenter, export could be performed by the following:
- Open vCenter console
- Navigate to “Hosts &Clusters”, & then to “Virtual Machines” tab
- Do “File | Export | Export List”

Another way is to utilize [PowerCLI](https://powercli.microsoft.com) to export all names from vCenter and find duplicates. Sample syntax for VM names:

```
Get-VMMServer -ComputerName “VMMServer01.Contoso.com”
Get-VM | Format-Table name, status
```
**Error: The session is not authenticated (-1)**

The “Error: The session is not authenticated” message typically indicates that Connection Broker service lost synchronization with the vCenter and usually caused by vCenter restart. This error can be confusing because usually some actions, initiated by Connection Broker, can be executed just fine.

Workaround: restart Quest Connection Broker service on all CB machines or restart machines themselves.
Recommended Content

Quest Support provides a list of Recommended Content for vWorkspace, which can be accessed on the vWorkspace Product Information Page on SupportLink.

Scalability Guidelines

The following information is in Solution SOL64491 on SupportLink to provide guidance on scalability. Please check the solution for further updates.

The following guidelines are provided as a conservative indication of the number of virtual desktops that should be managed through vWorkspace Connection Brokers and Farms. Note that these are not hard limits, and depending on the frequency that users log on and off then higher scalability is very achievable.

Also, please note that these limits are for a VDI deployment of virtual desktops hosted on a hypervisor. For Session Host (Terminal Server)-based deployments, the load on each Connection Broker is lighter because it only needs to maintain status information on each Session Host and not each virtual desktop. A rough guideline is that one Connection Broker is required for every 3000-5000 sessions, depending on logon frequency, with a spare recommended for redundancy.

Virtual desktops managed per Connection Broker: 2000

- Multiple connection brokers can be easily deployed and will automatically be load balanced with no further configuration required. vWorkspace Connectors (clients) will automatically load balance between all available brokers without the need for third party load balancing software or hardware.

- To maximize the performance of each connection broker it is recommended the global heartbeat interval be extended from the default of 1 minute. Rapid feedback is generally not required in large farms since there is a large pool of virtual desktops available, and so this can be extended to as much as 30 minutes or even 1 hour.

- Connection Broker load can also be reduced by setting "offline retry" interval to 15 minutes and extending the console auto-refresh time.

- Note that the vWorkspace Connection Broker does much more than just load balance connections to virtual desktops and Session Hosts. It also monitors the health and status of each virtual desktop and acts as a communication hub. Comparisons with other products with much simpler connection broker architectures are generally not valid.

Total virtual desktops per vWorkspace farm: 25000
• Note that this is not an architectural limit, but a conservative number based on testing and customer deployments

• Depending on frequency of user activity (logon/logoff/reboots) this number might be higher or lower. It is also affected by the number of connection brokers deployed. If fewer connection brokers are required because users only logon once or twice a day, or because logon events are evenly distributed over time and not concentrated in 'storms' at particular times of day, scalability will be higher.

Total Connection Brokers per farm: 20

There are other scalability limits to consider from other vendors - especially the hypervisor management servers:

• For VMware ESX: Scalability limit of VMs and ESX hosts per vCenter Server
• For Hyper-V: Scalability limit of VMs and Hyper-V hosts per SCVMM

For large farms, multiple vCenter Servers and SCVMM servers will be required. It is recommended to break virtual desktops into groups of 2000 so that they can be distributed across the vCenter/SCVMM instances effectively.

For more notes on Hyper-V scalability, the following Microsoft paper is recommended:
Video Tutorials

There are also a set of videos to help to be familiar with aspects of the vWorkspace products:

**How to Configure Secure-IT for use with the Web Access component of vWorkspace**

This Demonstration will review how to configure Secure-IT for use with the Web Access component of vWorkspace.

**SupportLink Solution** [SOL58849 - Video Tutorial - How to configure Secure-IT]

Further information can also be found in the solution [SOL507741 – How to Configure Secure-IT]

**How to configure Internet Information Services for use with Web Access**

This Demonstration will review how to ensure Microsoft Internet Information Services (IIS) is ready for use with the Web Access component of vWorkspace.

**SupportLink Solution** [SOL58848 - Video Tutorial - How to configure Internet Information Services for use with Web Access]

**How to Request and Finalize a SSL Certificate for use with vWorkspace**

This Demonstration will review the proper method for requesting an SSL certificate for vWorkspace using Microsoft Internet Information Services (IIS).

**SupportLink Solution** [SOL58211 - Video Tutorial - How to Request and Finalize a SSL Certificate for use with vWorkspace]

**How to install the Web Access component of vWorkspace**

This Demonstration will review how to install Web Access for vWorkspace

**SupportLink Solution** [SOL58859 - Video Tutorial - How to install the Web Access component of vWorkspace]
How to configure Web Access – Basic

This Demonstration will provide an overview of a basic setup of the Web Access component of vWorkspace

SupportLink Solution SOL58850 - Video Tutorial - How to Configure Web Access (Basic)

vWorkspace Community

vWorkspace transforms desktop virtualization management from complex and chaotic to efficient and stress-free. Now you can simplify day-to-day administration even more by participating in the vWorkspace Community.

This valuable 24x7 online resource gives you a central place to:

- Read and comment on the official Quest vWorkspace blog
- Access beta software and our PowerShell cmdlet Library
- Get expert answers to questions via discussion forums, documents, and top support solutions
- Share your knowledge and experience about vWorkspace, and learn from your peers
- Interact with the vWorkspace product team
Quest Support

For Additional Information on vWorkspace, including Solutions, Recommended Content, Community Information, Product Information and Downloads please visit the SupportLink website accessible from http://support.quest.com.

Quest Support provides global coverage from highly skilled professionals committed to your satisfaction, plus options to choose a level of support which accommodates the unique needs of your organization. When selecting a software solutions provider, the strength and quality of its service and support capabilities can often be as important as the product itself.

Global Coverage:

Quest offers global support 24X7 delivered through support centers located around the world. There is always someone available to assist you.

Highly Skilled Engineers:

Customers consistently rate Quest support engineers as some of the best in the industry. They are passionate about customer service in addition to being well trained and knowledgeable on our products with domain expertise.

Commitment to Customer Satisfaction:

This is our driving force and it’s where Quest is renowned in the industry for delivering a consistently high quality of customer service.

Support Features

- SupportLink – Functionally rich customer portal
- Extensive Knowledge Base – available for search
- Case management – online creation and updates
- Communities – peer to peer support with experts
- Documentation - detailed by product
- Video Tutorials – by product functional area
• Product Updates, Service Packs and Fixes
• Subscription Based Automated Product Notifications
Additional Services from Quest

Quest Professional Services

Quest Software consistently delivers premium people, processes, and products to maximize the return on your enterprise IT investment. Each member of the Quest Professional Services team is committed to sharing their dedication, knowledge and expertise with you. With more than 5,000 implementations, they can also provide you with additional product knowledge, functionality and tools to successfully integrate Quest solutions into your own work environment. If you need help with Project Management, Technical Consulting, Architecture Design, Implementation, Documentation, Education or Configuration, we have the trained professionals to help meet your needs.

For further information, please visit www.quest.com/services

Quest Education Services

Quest Education Services provides the necessary expertise to get the most of your software purchase. Each certified instructor brings years of industry experience and in-depth product knowledge to every class they teach. Who better to teach your employees about Quest products than our experts who know the applications and the underlying technology best? Whether you need us to facilitate private group training onsite or online, or you want to attend a public course provided at a Quest training facility or through the Quest Virtual Classroom, we have the program to meet your needs. By the end of class, your staff will know best practices, tips and tricks, how to optimize functionality, as well as an understanding about how the product impacts the business.

For further information, please visit www.quest.com/training