Visma Cloud Gateway

VISMA

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About this document

About this document

This document contains Visma Cloud Gateway User Guide (Visma Cloud Gateway Introduction, Installation Requirements, Installation Preconditions, Deployment Model, Installation Steps, Error handling section and Uninstallation Guide) and Visma Update User Guide.

This document is actual for Visma Cloud Gateway version 8.2 and Visma Update 3.0.

Please note that Visma Cloud Gateway(VCG) is the new name of Visma On Premises Gateway(OPG).

Visma Cloud Gateway

Introduction

This section contains information about VCG and all related micro services. If you need more technical information please contact the Integration Platform team for developers guides.

Visma Cloud Gateway is part of the Integration Platform Project.

Integration **P**latform **P**roject (IPP) is a "family" of microservices which can be used independently or all together (depending on the type of the integration) for communications between different Visma products (with security when it is needed). IPP supports 2 types of communications: synchronous(via invocations) and a-synchronous(via messages). This document contains information for communication between local applications (On Premises) installed on the customer side and products / services delivered over the internet (On Demand) involving Visma Cloud Gateway. This group of IPP modules manages the connections between On Demand and On Premises and guarantees the security for data transmission in order to avoid snoopers or even to protect our customers data. All sequential communication between Visma Cloud Gateway and On Demand Gateway goes through the encrypted ssh tunnel. In this document we will mainly talk about Cloud Gateway and On Demand Gateway, because they are the most visible components for end users.

Customer's side component: Visma Cloud Gateway (VCG): an intermediary Windows service and part of the bridge between OD and OP. Each customer can install one or several (one for each OP application) VCGs as it is described in the Deployment Models section. The Visma Cloud Gateway knows how to call home and does so to establish a SSH tunnel. Please note that each SSH tunnel (or VCG tunnel) is unique per machine due to certificate usage and security requirements. Visma Cloud Gateway redirects:

- all communication from On Premises which destined for On Demand to the On Demand Gateway;
- all communication from On Demand (received via On Demand Gateway) to On Premises Applications;
- all messages from On Demand (via On Demand Gateway and Message Router) to appropriate On Premise messaging system (MSMQ or ActiveMQ);
- all messages from On Premises Applications messaging system (MSMQ or ActiveMQ) to Message Router through On Demand Gateway;

It is possible to receive automatic updates for Visma Cloud Gateway. In such a case Visma Cloud Gateway should be installed together with the Visma Update Client. For more information see What is Visma Update.

Important notes related to VCG:

1. Visma Cloud Gateway(VCG) is the new name of Visma On Premises Gateway(OPG)
2. Visma Cloud Gateway service is run as Network Service Windows user by default, but it can be changed manually and run as Local Service or Local System user instead;
3. Each SSH tunnel (or VCG tunnel) is unique per machine due to certificate usage and security requirements. Cloning of machines with VCG installed will cause problems. Please uninstall such VCG and make a fresh install
4. Since 4.1 version Visma Cloud Gateway supports MSMQ messages besides web service calls;
5. Starting from version 5.0 it is possible to set up several VCG instances for different customers on the same machine/ server (for more details see the appropriate chapter);
6. Staring from version 5.2 VCG supports not only SOAP but also REST calls
7. Starting from version 5.3 Visma Cloud Gateway supports ActiveMQ for messages and it is optional to use it;
8. If you want to receive automatic updates of VCG use Visma Update client which is part of the installation package;
9. Besides communication between different applications it is possible to register ODP data via VCG
10. Starting from 6.0 it is possible to keep VCG configuration (data registered in ODP) after uninstallation and reuse the same configuration on the next VCG install
11. Staring from 6.1 ActiveMQ installation is optional and it is possible to set up firewall rules from the installer
12. Starting from 6.5 VCG supports work through proxy (http proxy with and without username/password authentication)
13. Windows XP, Windows Vista and Windows 2003 are not supported any more starting from VCG 6.3
14. Older versions of VCG than 7.0 are not allowed for the new installation or creation of new VCG instances. If you already have VCG older than 7.0 installed and running on your machine, it should work fine. But if you would like to re-install it then you will be asked to use the latest version
15. From version 7.4 it is possible to install VCG without providing the initial client credentials. These can be later added through the Diagnosis application or from the On Premises application(exposed methods in VCG)
16. Visma Update installer no longer visible and starts automatically in the background

17. The ip address behind odg.visma.net is changed to 91.123.56.26

On **D**emand **G**ateway (ODG) is installed on the On Demand side and supported by Visma. ODG redirects all traffic:

- from Visma Cloud Gateway to the correct OD application
- from OD applications (destined for one of the customers' OP application) to the correct Visma Cloud Gateway, which redirects the traffic to the correct OP application

Important notes related to ODG:

1. Since 4.1 version ODG accepts msmq messages from VCG, transforms them into jms messages and sends them further to the Message Router. For more information about messages please contact the Integration Platform team.
2. Starting from version 5.2 ODG supports beside SOAP also REST calls
3. Starting from version 5.3 ODG supports ActiveMQ messages from/to ODP

Requirements:

Requirements section contains Supported Operating System requirements, installer prerequisites and Visma Cloud Gateway requirements.

Supported Operating system:

- Windows XP (32 and 64 bit) - Not supported any more starting from 6.3
- Windows Vista (32 and 64 bit) - Not supported any more starting from 6.5
- Windows Server 2003 (32 and 64 bit) - Not supported any more starting from 6.5
- Windows Server 2008 (32 and 64 bit) - Not supported any more starting from 6.12
- Windows 7 with no SP (32 and 64 bit) - Not supported any more starting from 6.12
- Windows Server 2008 R2 SP1 / SP2 (32 and 64 bit) - Not supported any more starting from 7.5
- Windows 7 starting with SP1 (32 and 64 bit) - Not supported any more starting from 7.5
- Windows 8 (32 and 64 bit) - Not supported any more starting from 7.5
- Windows Server 2012 (64 bit) - starting from VCG 4.1
- Windows Server 2012 (R2) (64 bit) - starting from VCG 5.1
- Windows 8.1 (32 and 64 bit) - starting from VCG 4.4
- Windows 10 (32 and 64 bit) - starting from VCG 5.6
- Windows Server 2016 (64 bit)
- Windows Server 2019 (64 bit)
- Windows 11 (64 bit)
- Windows Server 2022 (64 bit)

Prerequisites for installer:

- .Net Framework 4.8 - starting from VCG 7.6
- Windows Installer 4.5
- Installation requires administrator rights
- Please do NOT use temporary Windows users to install Visma Cloud Gateway
- We highly recommend you to apply windows update to upgrade your Operating System before you install Visma Cloud Gateway

Prerequisites for Visma Cloud Gateway:

- Starting from version 7.4, it is not mandatory to be registered as an On Demand Customer in the On Demand Platform. However, in order for the On Premises application integrations to work, at one point, the VCG needs to be activated with User and Password. In the registration process one or more Customer administrators roles should be given. For details please access the On Demand Platform documentation.
- The installer and Visma Cloud Gateway itself must be able to access odg.visma.net. This can be confirmed by pinging this host. Please, allow to connect to any ports of odg.visma.net (telnet command to test after firewall / network configuration).
- In order for VCG to install and work properly at customer side needs to be allowed the following firewall rules:
    1. outgoing TCP connection and HTTPS (TLS 1.2) to odg.visma.net:38181 or odg.visma.net:443 (91.123.56.26:38181 or 91.123.56.26:443)
    2. outgoing TCP connection and SSH protocol allowed to odg.visma.net:2233 (91.123.56.26:2233)
    3. outgoing TCP connection and SSH protocol allowed to odg-ld.visma.net:2233 (91.123.56.61:2233)
    4. outgoing TCP connection and HTTPS (TLS 1.2) to vcg-update.visma.net:443 (91.123.56.250:443)
    5. outgoing TCP connection and HTTPS (TLS 1.2) to static.ipp.prodaws.visma.com:443 (54.230.96.57:443)
- Visma Cloud Gateway windows service will be run as LOCAL SYSTEM by default. In the case of problems with LOCAL SYSTEM / LOCAL SERVICE it is possible to use NETWORK SERVICE. For this operation the NETWORK SERVICE must have the correct user policy rights to be able to start a service, otherwise it will not be possible to start the ssh process. If the account to run the service was changed, then it will remain changed even after VCG upgrade with a new version. For more information see How to verify user policy rights

- SSH (ssh.exe), VCG (Visma.Services.OPGateway.OPGatewayService.exe) and Visma Update (VismaUpdateClient.exe) should not be blocked by firewall / antivirus

Firewall and network rules for Visma Cloud Gateway:

- The installer and Visma Cloud Gateway itself must be able to access odg.visma.net (91.123.56.26) and vcg-update.visma.net (91.123.56.250).
- In order for VCG to install and work properly at customer side needs to be allowed the following firewall rules (telnet command to test after firewall / network configuration):
    1. outgoing TCP connection and HTTPS (TLS 1.2) to odg.visma.net:38181 or odg.visma.net:443 (91.123.56.26:38181 or 91.123.56.26:443)
    2. outgoing TCP connection and SSH protocol allowed to odg.visma.net:2233 (91.123.56.26:2233)
    3. outgoing TCP connection and SSH protocol allowed to odg-ld.visma.net:2233 (91.123.56.61:2233)
    4. outgoing TCP connection and HTTPS (TLS 1.2) to vcg-update.visma.net:443 (91.123.56.250:443)
    5. outgoing TCP connection and HTTPS (TLS 1.2) to static.ipp.prodaws.visma.com:443 (54.230.96.57:443)

After installation

- Visma Cloud Gateway windows service will be run as LOCAL SYSTEM by default. It is also possible to use NETWORK SERVICE or LOCAL SERVICE. For this operation the NETWORK SERVICE must have the correct user policy rights to be able to start a service, otherwise it will not be possible to start the ssh process. For more information see How to verify user policy rights
- SSH (ssh.exe), VCG (Visma.Services.OPGateway.OPGatewayService.exe) and Visma Update (VismaUpdateClient.exe) should not be blocked by firewall / antivirus

What is new in 8.2 version

This section contains last changes that were done after the 7.6 version and included into 7.8 related to On Premises clients.

Visma Cloud Gateway (VCG)

- VCG connection to our servers in AWS cloud
- Update .net framework to 4.8
- Improved calls response time
- Update Apache.NMS libs to 2.1.0
- Security improvements
    - HTTPS TLS 1.2 connection to our cloud AWS server doesn't need VismaCA1 root certificate imported anymore, is done though the Entrust CA
    - Opening outgoing connection to 18181 port is not needed anymore
    - stop calls to decommissioned Visma services
    - stop spam messages that can clutter the servers
    - added Snyk checks for VCG libs
    - Updated OpenJRE to 11.0.21_9 version
- Bug fixing

Diagnosis App

- Update .net framework to 4.8
- Bug fixing

OD and OP .net dev libraries

- Update .net framework to 4.8
- Update Apache.NMS libs to 2.1.0
- Support async AMQ messages methods
- Bug fixing

Relocation

This section contains the details how to relocate On Premise application (with or without VCG) with keeping the same licence and how to relocate VCG to another machine with keeping Visma.net data

The relocation concept was introduced based on Lonn integration requirements in version 6.5 to help moving OP Application from one machine to another while keeping the same license. At the move step the application is getting a new URI and new queue names registered in ODP. IPP offers the possibility to retrieve messages from an "relocated" queue into the newly registered application instance's queues and do not lose messages. Starting from the 6.6 version the process is automated and requires very few manual actions. Starting from the 6.8 version it is possible to move VCG by using VCG Diagnosis application.

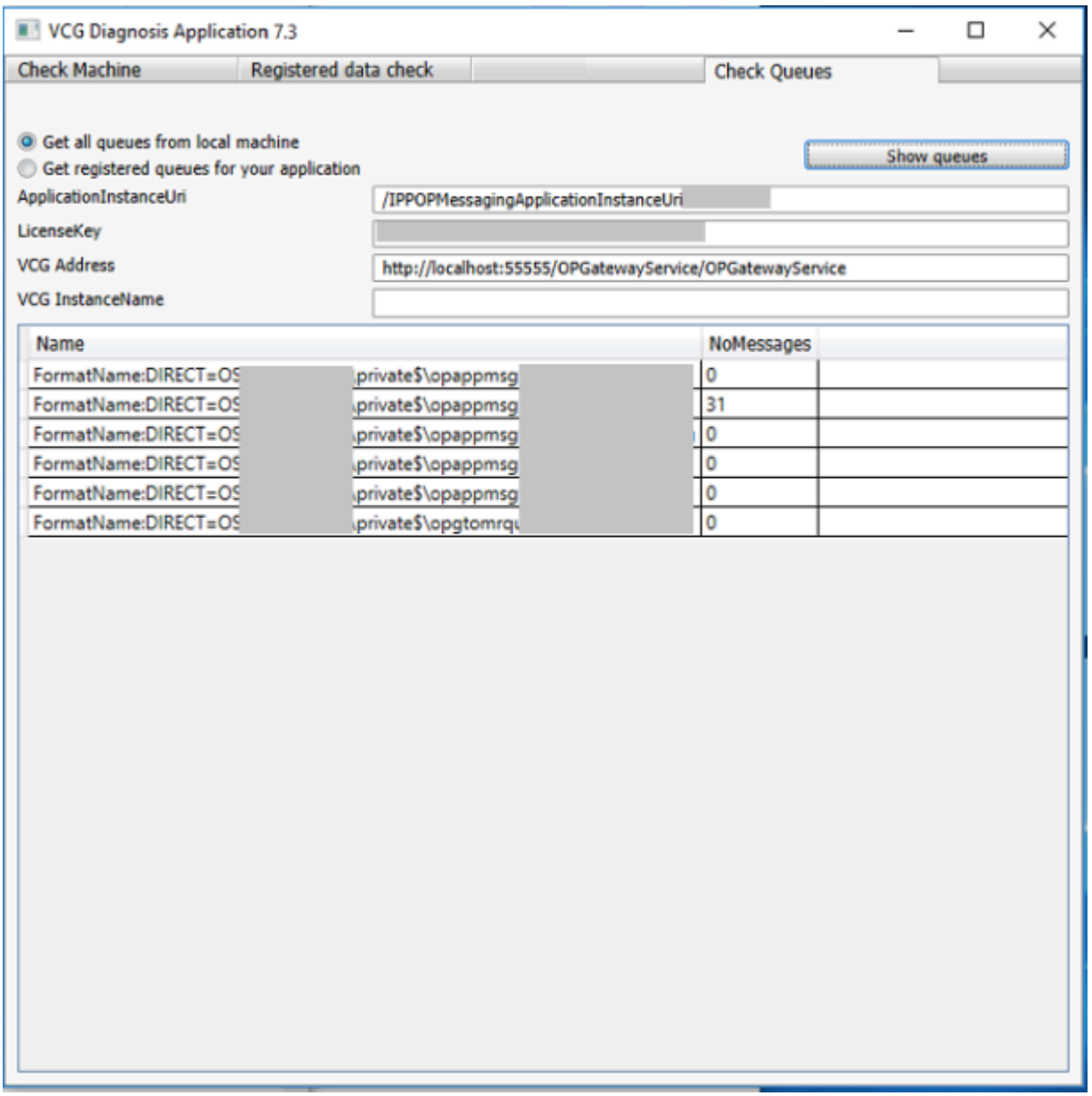
Please note:

- When On Premises Application and/or VCG are moved to another machine, then it is important to make sure no messages are stuck on the old machine in old queues. To insure that it does not happen please use Check Queues (see page 37) from VCG Diagnosis Application
- There are two possible ways to relocate license: from your On Premises Application (if it is supported) or from web Licensing User interface. This document contains only the suggestion how to do it via Licensing web interface because different OP applications can have different user interfaces and different implementations and it is not possible to write generic ways covering all possible implementations. For the details related to your exact OP application please ask for that application documentation.
- The recommended way to relocate your VCG from one machine to another is by using Move VCG (see page 38). Please note that it is still possible to just fresh install VCG on your new machine/server and re-create VCG instances and Visma.net data instead of moving VCG.

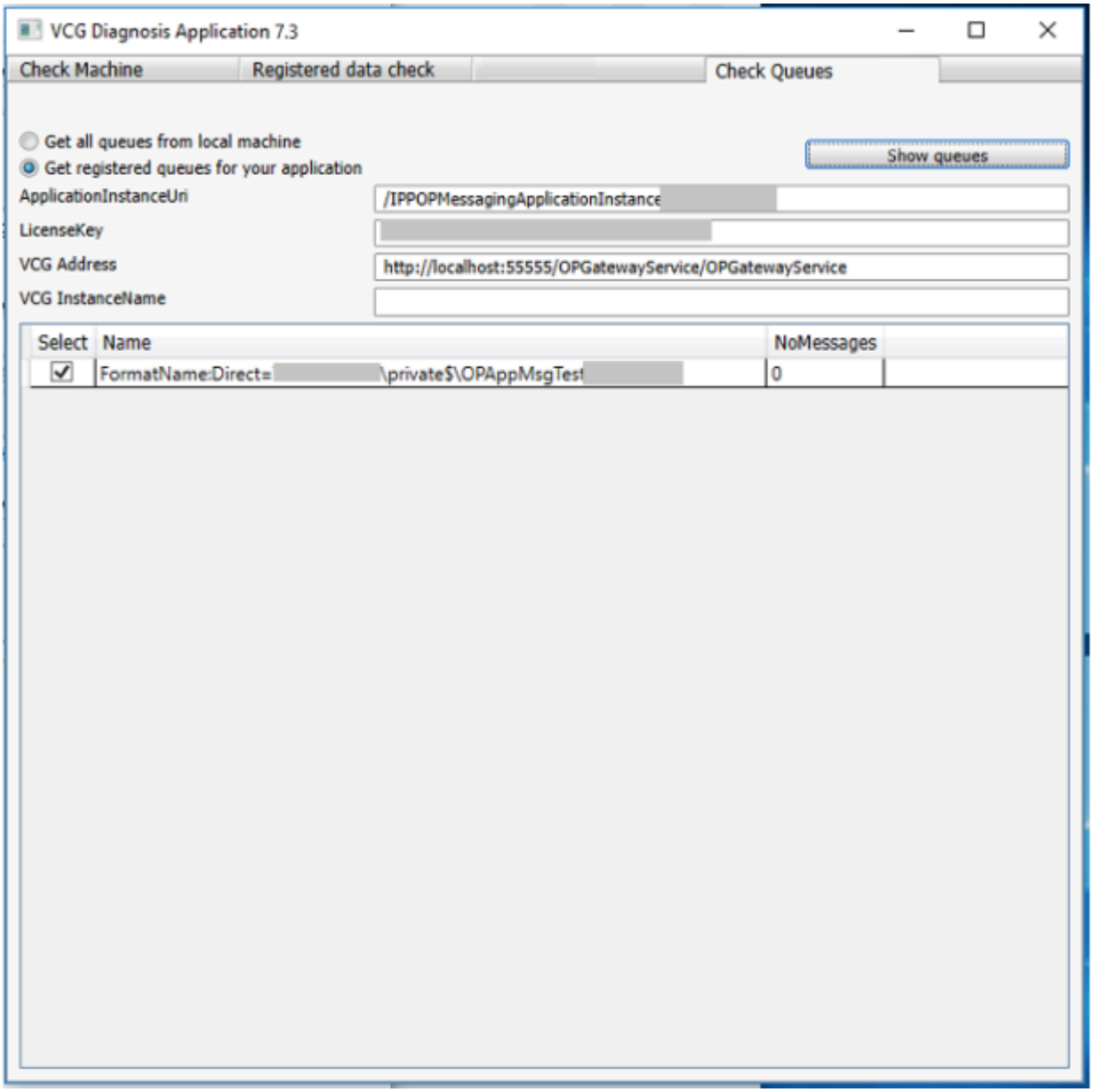
Relocation Use Case #1

Use case #1: On Premises Application (e.g. Visma Global) and VCG are installed on the different servers. VCG is used by several different applications as a central entry point into Visma.net. It is necessary to move one OP Application to another server (e.g. because of a new hardware update) and keep the same license, but VCG should still stay on the old server. If it is needed to move more than one On Premises Application please repeat the same steps for all of them.

1. Log in into VLS user interface->Chose Licensing tab->Find your ODP Customer->Chose your License and go inside of it->Use “Show Instances” from more options->Select your Application Instance you would like to move to another server->Click “Relocate selected instances”
   Please note:
   - Licensing web user interface requires sufficient permissions
   - You can use Licence Relocation feature from your On Premises Application as a replacement for this step if it is supported by your application
2. Before doing any uninstallation it is needed to make sure that there are no messages stuck in the local queues
   - When you are going to uninstall your On Premises application, please check the queues on the same machine as your OP App
   - In case if your On Premises application has ActiveMQ as local message broker please use http://localhost:8161/ admin/queues.jsp
   - In case your On Premises application has MSMQ as local message broker please use VCG Diagnosis application and Check Queues tab. See the corresponding section of the document
   - If you are not sure what type of message broker your application is using please use VCG Diagnosis application and Check Machine tab to check if ActiveMQ is activated on your machine.
3. To check MSMQ queues please open VCG Diagnosis Application and go to “Check Queues” tab
   - Chose “Get all queues from local machine” option
   - Click “Show queues”. This action will show you all the local queues
   - Make sure that your On Premises Application consumes all the messages from your local queue before proceeding with uninstallation



4. You can also use “Get registered queues for your application” option to filter the queues for your Application Instance
    - Provide your Application Instance URI and your License Key
    - In case if you have several instances of VCG please do this step for each instance but entering VCG Instance Name
    - Click “Show queues” to get the list of queues (it can be just one queue or none if you do not have messaging functionality in your On Premises Application). Number of messages will be 0 if the local queues are not on the same machine as VCG Diagnosis Application or if there are no messages in those queues



5. Uninstall your On Premises application from your old server
6. Install your On Premises application on your new server
    - Please make sure that MSMQ (or ActiveMQ if your application has as a local message broker) is activated on your new machine
    - If your application uses ActiveMQ as a local broker, please note that ActiveMQ requires the latest version of Java
    - Use the same license key as it was used for the old installation
    - Use new Application Instance URI (the same as it was provided in step 1). If you provide wrong URI, then it will be en error and it will not be possible to proceed
    - Make sure that your new On Premises Application is connected to your old VCG
    - Your On Premises Application should register all needed data in Visma.net for you

Relocation Use Case #2

Use case #2: On Premises Application (e.g. Visma Global) and VCG are installed on the different servers. It is a need to move VCG to another server (e.g. because of new hardware update) and keep the same license and other Visma.net data (like companies and queues), OP Application should still stay on the old server. This section describes how to do it from VCG Diagnosis Application by using Move VCG (see page 38) tab

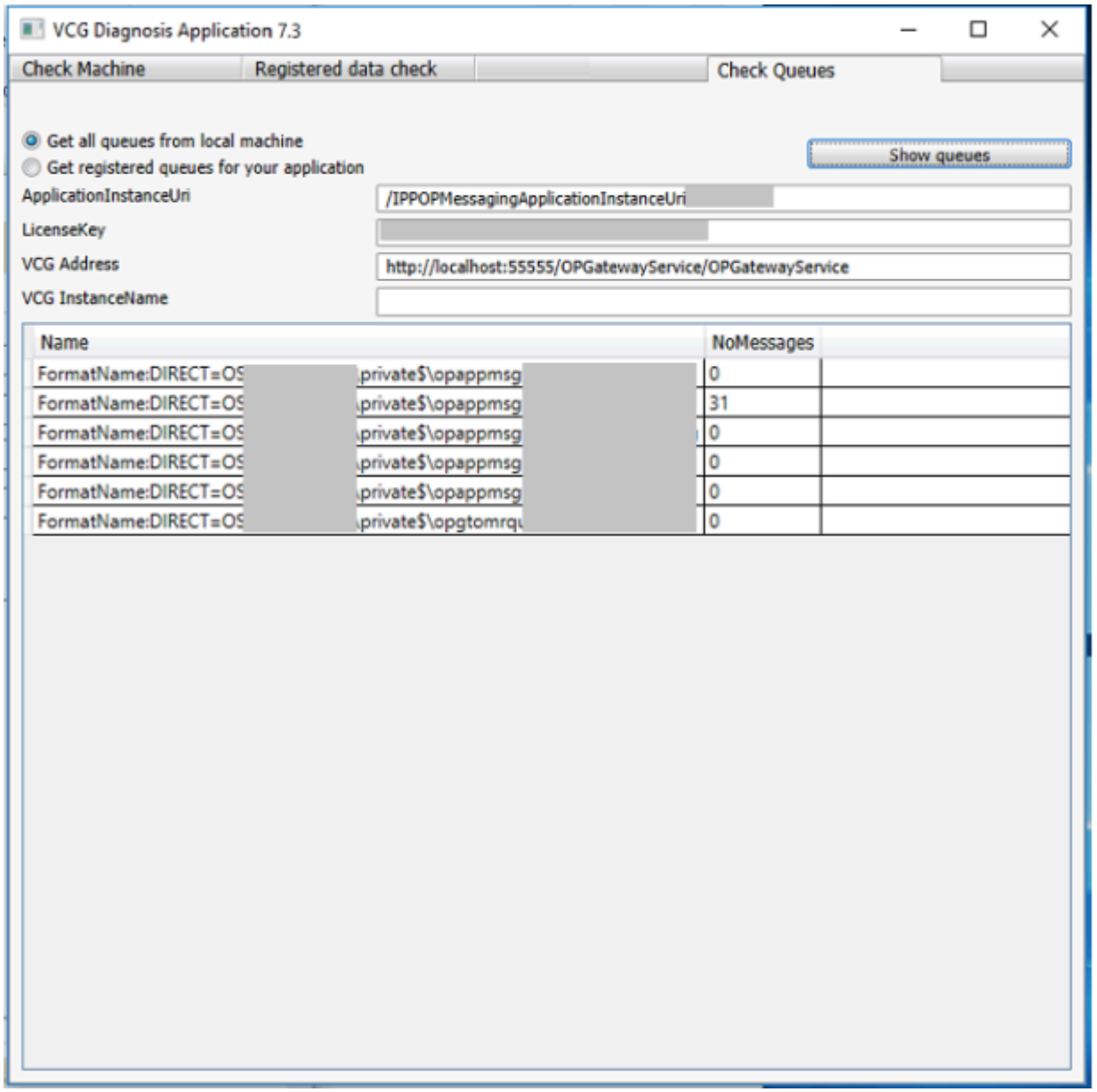
1. Stop your On Premises Application in order to not send any data to Visma.net during the next steps otherwise something can be lost
2. Please make sure that your new machine/server meets the Requirements (see page 6) needed for Visma Cloud Gateway

3. Please do not forget that before starting using the VCG Diagnosis application you need to make the “Move VCG” tab available for you. There are two ways to do it: download VCG Diagnosis from internet or copy it from VCG folder to any other location as it is described in “Move VCG” section
4. Please follow the step from Move VCG (see page 38)
5. Please make sure that you have the correct address of VCG (proper hostname and port) in your On Premises Application config file.
6. Make sure that your On Premises Application is connected to your new VCG (firewall/network should allow such connection).
7. Start your On Premises Application

Relocation Use Case #2

Use case #3: On Premises Application (e.g. Visma Global) is installed together with VCG on the same server and it is a need to move both OP Application and VCG to another server (e.g. because of new hardware update) and keep the same license.

1. Log in into VLS user interface->Chose Licensing tab->Find your ODP Customer->Chose your License and go inside of it->Use “Show Instances” from more options->Select your Application Instance you would like to move to another server->Click “Relocate selected instances”
   Please note:
   - Licensing web user interface requires sufficient permissions.
   - You can use the Licence Relocation feature from your On Premises Application as a replacement for this step if it is supported by your application.
2. Before doing any uninstallation it is needed to make sure that there are no messages stuck in the local queues.
   - When you are going to uninstall your On Premises application, please check the queues on the same machine as your OP App
   - In case your On Premises application has ActiveMQ as a local message broker please use http://localhost:8161/ admin/queues.jsp.
   - In case your On Premises application has MSMQ as local message broker please use VCG Diagnosis application and Check Queues tab. See the corresponding section of the document.
   - If you are not sure what type of message broker your application is using please use VCG Diagnosis application and Check Machine tab to check if ActiveMQ is activated on your machine.
3. To check MSMQ queues please open VCG Diagnosis Application and go to the “Check Queues” tab.
   - Choose the “Get all queues from local machine” option.
   - Click “Show queues”. This action will show you all the local queues
   - Make sure that your On Premises Application consumes all the messages from your local queue before proceeding with uninstallation
4. Stop your On Premises Application in order to not send any data to Visma.net during the next steps otherwise something can be lost.
5. Make sure that your new machine/server meets the Requirements (see page 6) needed for Visma Cloud Gateway



6. Please do not forget that before starting using the VCG Diagnosis application you need to make the “Move VCG” tab available for you. There are two ways to do it: download VCG Diagnosis from the internet or copy it from VCG folder to any other location as it is described in “Move VCG” section
7. Reinstall your VCG on your new machine/server following the recommendations and steps from Move VCG (see page 38)
8. VCG reinstallation should activate MSMQ (or ActiveMQ) on the new machine for you, no need to do anything about it
9. Uninstall your On Premises application from your old server
10. Install your On Premises application on your new server
    - Please make sure that MSMQ (or ActiveMQ if your application has as a local message broker) is activated on your new machine
    - If your application uses ActiveMQ as a local broker, please note that ActiveMQ requires the latest version of Java
    - Use the same license key as it was used for the old installation
    - Use new Application Instance URI (the same as it was provided in step 1). If you provide wrong URI, then it will be en error and it will not be possible to proceed
    - Make sure that your new On Premises Application is connected to your old VCG
    - Your On Premises Application should register all needed data in Visma.net for you
11. Please make sure that you have the proper address (hostname and port) of VCG in your On Premises Application config file
12. Make sure that your On Premises Application is connected to your new VCG (firewall/network should allow such connection)
13. Start your On Premises Application

Proxy set up

Visma Cloud Gateway supports work through http proxy without (starting from 6.2) and with (starting from 6.5) username/password authentication, if you have another type of proxy please try the below workaround to redirect the traffic.

In case of the supported proxy please follow the installation steps from Installation (see page 15).

If you have non supported proxy or you still prefer to use a workaround there are programs that might help to redirect the traffic:

- Sockscap
- Hummingbird SOCKS 8.0
- Proxifier

Deployment Models

There are two ways to deploy Visma Cloud Gateway. **Centralized** deployment: Visma Cloud Gateway is shared by servers on the network that hosts On Premises Applications. **Local** deployments: everything is installed together on one server. Both deployment types can have one or several instances of VCGs.

Important notes:

- Communication between On Premises Applications and Visma Cloud Gateway is not encrypted. Select the local deployment model if this is a concern.
- It is possible to change the type of deployment after Visma Cloud Gateway installation by changing the deployment model setting in Visma.Services.OPGateway.OPGatewayService.exe.Config file. See Visma Cloud Gateway Configuration: deployment model settings.
- Starting from version 5.0 it is possible to have more than one VCG instance per machine. It is relevant for both deployment models

Centralized Deployment

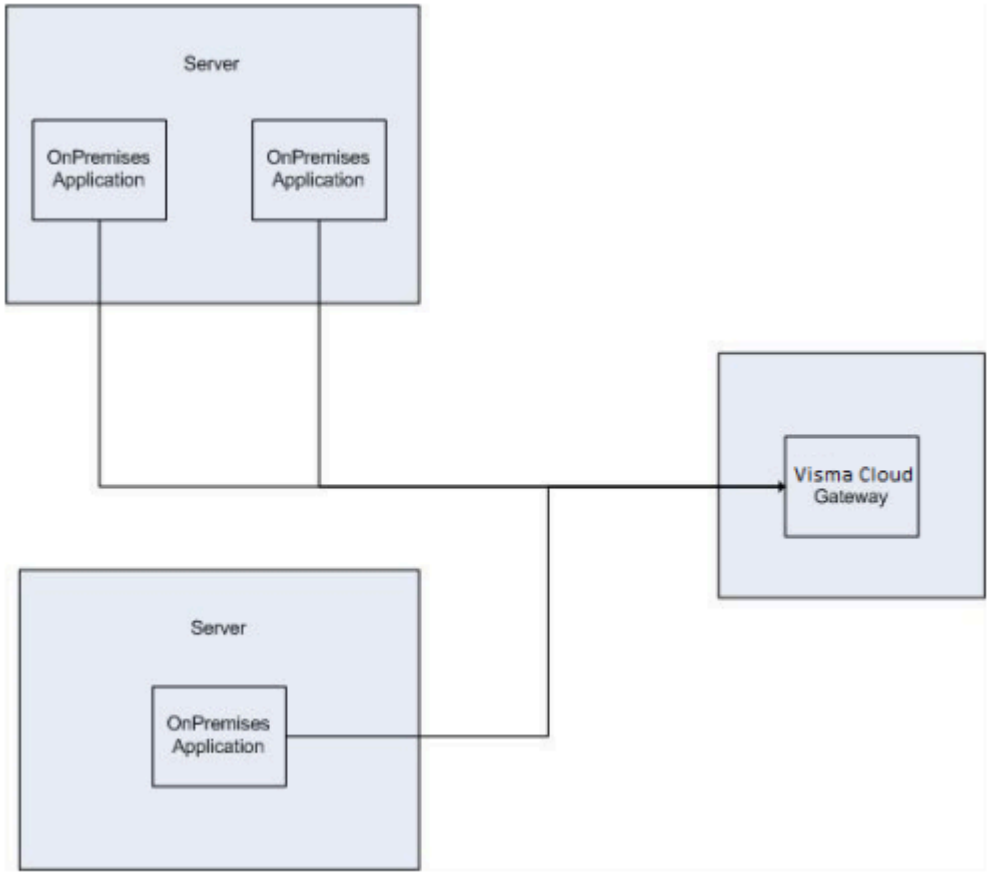
The Visma Cloud Gateway can be installed on another machine (server) than On Premises Applications.

In this configuration the Visma Cloud Gateway is shared by servers on the network that hosts On Premises Applications

The Network and / or Firewall have to be configured so that only servers hosting On Premises Applications have access to the Visma Cloud Gateway listening port. This port (“OPGPort”) can be found after the Visma Cloud Gateway installation in the bottom of \Visma.Services.OPGateway.OPGatewayService.exe.Config file. See Visma Cloud Gateway Configuration.

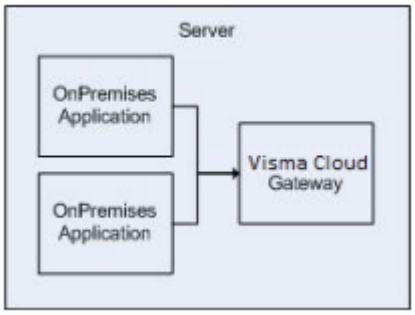
In the case of calls and messages from OD side to OP side: Visma Cloud Gateway needs to have access to the servers where On Premises applications are registered . (Visma Cloud Gateway needs to connect to the server where the On Premises application was registered).

Please pay attention to **Visma Cloud Gateway available only from local machine** option during Visma Cloud Gateway installation. This option is checked by default and you need to uncheck it for Centralized deployment.



Local Deployment

Visma Cloud Gateway and On Premises Applications are installed on the same machine (server)
In this configuration the Visma Cloud Gateway is only accessible to locally installed On Premises Applications. This type of deployment is more secure



Multiple Visma Cloud Gateway Instances

Multiple VCG instances and services on one machine(server) for different ODP users and customers.

1. Multiple VCG instances are supported starting from version 5.0;
2. One VCG instance per one ODP user and one customer;
3. Each VCG instance can have one VCG service;
4. Please do not mix VCG service and VCG instance. VCG instance is what you install and VCG service is what you can find in the list of Windows Services.
5. Each VCG instance can be created for ODP customer with sub-customers and then all companies belonging to these sub-customers will be available through the VCG instance;
6. Multiple VCG instances consist of **the main** VCG instance and **additional VCG instances**;
7. The main VCG instance should be installed before any additional instances;
8. The main VCG instance is installed as usual: using Visma Installer user interface or installation scripts. Follow steps from the appropriate chapters of Visma_Cloud_Gateway_Guide document;

9. The main VCG instance should be installed prior to any additional VCG instances and Visma.Services.OPGateway.OPGatewayService.exe should already exist;
10. The multiple instances installation should be done via scripts created by OP Application development team. OP Application development team should contact IPP team for the appropriate development guide;
11. All commands to install/start/stop/uninstall instances and create/start/stop/remove services should be run as **Administrator**;
12. The main VCG instance has VCG service (Visma Cloud Gateway Service) by default;
13. IMPORTANT NOTE !!! Instances can now be created only if VCG version >= 7.0
14. Detailed info regarding used command SC Command.
15. **IMPORTANT NOTE !!!** Creating instances will not be possible if you have installed VCG without client credentials. Please activate VCG before creating instances. This is valid for VCG 7.4 and above.

Instances and Services

All commands should be run as **Administrator** and from the folder where the main VCG is installed.

Please do NOT mix YOUR VCG **INSTANCE** NAME with YOUR VCG **SERVICE** NAME. One VCG instance means one installation with a VCG instance folder and the instance configuration. Each instance can be run in a console mode. VCG Service is a Windows service which is run in a background and displayed in the list of Windows Services.

1. The command to create a new VCG instance (all parameters are mandatory, but Customer ID or License Key- if an ODP user has Customer Administrator role only for 1 ODP Customer, then Customer ID or License Key can be omitted and new VCG instance will be created for that ODP Customer by default):
   Command based on Customer ID: *Visma.Services.OPGateway.OPGatewayService.exe --install --email=<ODP USER EMAIL> --password=<ODP USER PASSWORD> -- customerID=<ODP CUSTOMER ID> --instanceName=<YOUR VCG INSTANCE NAME>*
   Command based on License Key: *Visma.Services.OPGateway.OPGatewayService.exe --install --email=<ODP USER EMAIL> --password=<ODP USER PASSWORD> -- licenseKey=<ODP CUSTOMER LICENSE KEY> --instanceName=<YOUR VCG INSTANCE NAME>*
2. The command to run an VCG instance in a console mode (via command line or cmd):
   Visma.Services.OPGateway.OPGatewayService.exe --start --instanceName=<YOUR VCG INSTANCE NAME>
3. To stop VCG instance just close the console window;
4. After a new VCG instance is installed it is possible to create a service for it which can be configured to start automatically on your operating system start up;
5. Please note that the default Visma Cloud Gateway Service belongs to the main VCG instance;
6. The command to create a new VCG service run as Local System Windows account be default (all parameters including the path for Visma Cloud Gateway folder are mandatory):
   sc create <YOUR VCG SERVICE NAME> binPath= " <Visma Cloud Gateway folder>\Visma.Services.OPGateway.OPGatewayService.exe --start --instanceName=<YOUR INSTANCE NAME>" start= auto DisplayName= "DISPLAY NAME FOR YOUR VCG SERVICE NAME"
7. The command to create a service under Network Service Windows account instead of Local System (if obj parameter is omitted then your service will be created for Local System by default):
   sc create <YOUR VCG SERVICE NAME> binPath= "<Visma Cloud Gateway folder> \Visma.Services.OPGateway.OPGatewayService.exe --start --instanceName=<YOUR INSTANCE NAME>" start= auto DisplayName= "DISPLAY NAME FOR YOUR VCG SERVICE NAME" obj= "NT AUTHORITY\NetworkService" password= ""
8. Please do **not** use Windows Administrator or **your Windows user** with which you login into your Operating system in this command, because your Windows user does not have proper permissions to run VCG service;
9. After a VCG service is created it will be displayed in the list of Windows Services;
10. Besides starting VCG service from the list of Windows Services it is possible to use appropriate commands;
11. The command to start VCG service: sc start <YOUR INSTANCE NAME>
12. The command to stop VCG service: sc stop <YOUR VCG INSTANCE NAME>

Instances Configuration

1. The configuration for the main VCG instance is stored in the main VCG folder in *Visma.Services.OPGateway.OPGatewayService.exe.Config* . See On Premises Gateway Default Location
2. The configuration for additional VCG instances are stored in separate folders for each additional VCG instance: <Visma Cloud Gateway Main Location>\VCGInstance_CustomerID_InstanceName *Visma.Services.OPGateway.OPGatewayService.exe.Config*
3. Logs from each VCG instance are stored in the default logs folder. See Where to find LOGs
4. To check how many VCG instances / services and their status is possible with Check Machine application which is part of VCG Diagnosis Application (follow steps from How to use Check Machine);

5. Each VCG Service can be run under a different Windows account (NETWORK SERVICE, LOCAL SYSTEM or LOCAL SERVICE). It can be changed for example from Windows Services (services.msc). We recommend using a Local System account because it has enough privileges to kill not needed VCG processes during VCG upgrade.

Instances and Service Uninstallation

All commands should be run as **Administrator**.

Please do not forget to stop your service if you want to remove it;

1. The command to remove VCG service: *sc delete <YOUR VCG SERVICE NAME>*
2. Make sure that your VCG service and your VCG instance are stopped before uninstallation of your instance;
3. The command to uninstall VCG instance: *Visma.Services.OPGateway.OPGatewayService.exe -- uninstall --instanceName=<YOUR INSTANCE NAME>*
4. The uninstallation of the main VCG instance will remove all VCG services and uninstall all VCG instances;
5. To uninstall the main VCG instance please follow the normal uninstall steps described in VCG Uninstallation section (for example by running uninstall.exe)

Installation

There are two ways to install Visma Cloud Gateway:

- The *first* way: installation via interface. Visma Cloud Gateway will be installed together with Visma Update. Visma Update installation is mandatory and will ensure that you always have the latest version of VCG.
    - See Visma Installer Package (see page 15) and “Visma Update” chapter for more details.
- The *second* way: installation via Scriptable installer. In this case Visma Cloud Gateway can be installed without any interface. See Scriptable VCG installer for the details.
    - Please note, that Visma Update also supports scriptable installation, and it should be installed running the command specially for it.
    -

The latest installer for Visma Cloud Gateway and Visma Update with documentations are available: VCG installer package\

Visma installer package

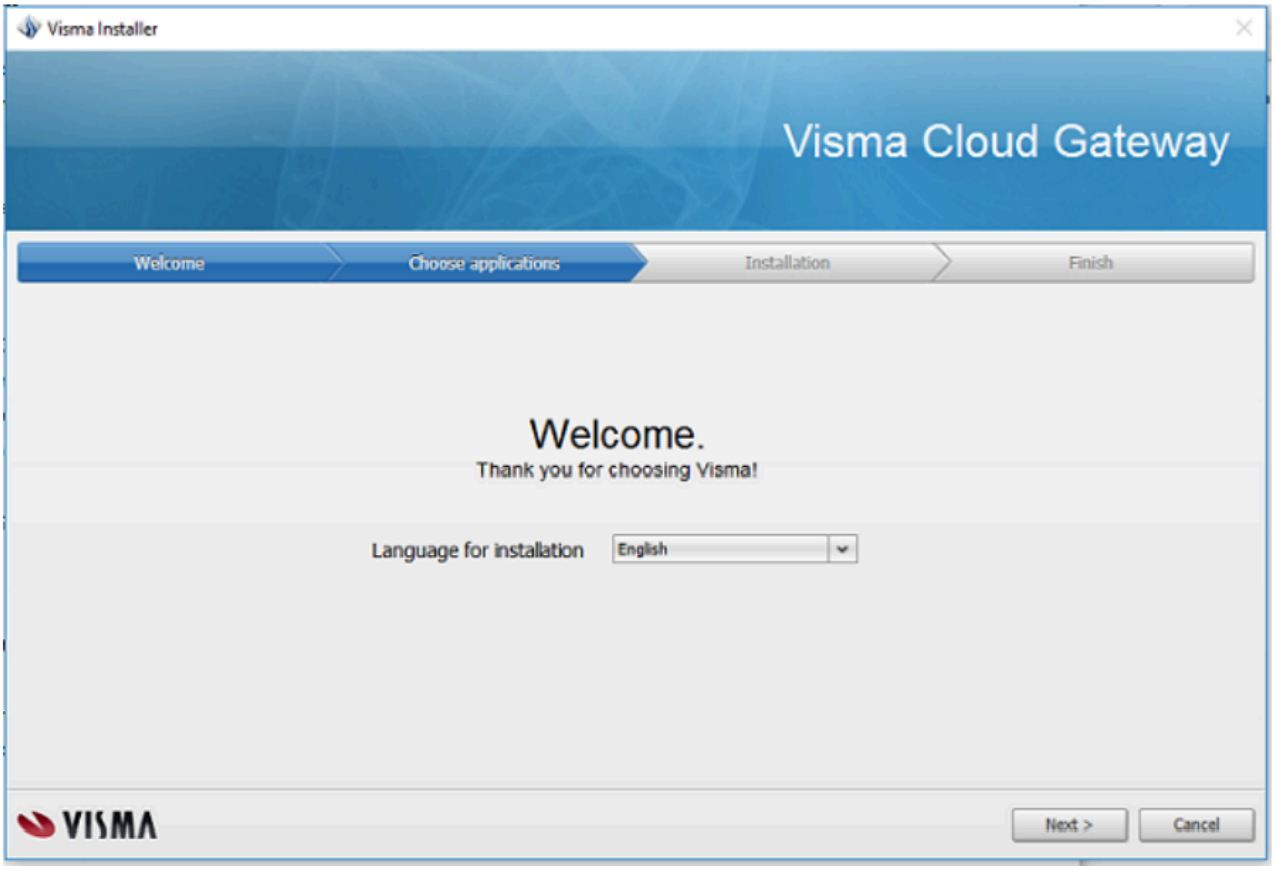
This section describes pre-installation steps. Pre-installation checks if any Windows updates are needed, downloads and install Windows Installer 4.5 and .Net Framework 4.5.2 if it is necessary, and allows users to choose a language, to install Visma Cloud Gateway together with Visma Update.

Installation steps:

1. Run the setup.exe in order to start the Visma Installer package
2. In the case if Windows Installer 4.5 and/or .Net Framework 4.8 are absent on your machine you will be asked to install them. Please note that on Windows Server 2012 during such installation it will be displayed Windows PowerShell. Please, do not close it but wait until the installation is completed.
    - Bootstrapper
    - Windows Installer 4.5 installation steps
    - .Net Framework 4.8 installation steps (see page 17)
    - Java JRE installation steps
    - In the case of any issues go to Issues to be expected section
    - It is possible that machine reboot will be requested after installing Windows Installer or .Net Framework. If VCG installer does not start automatically after the reboot, then just run setup.exe again



3. Wait until **Welcome** screen is displayed



4. Select installation language and press **Next**
5. Follow Visma Cloud Gateway Installation Steps for VCG installation

Bootstrapper

Is a customizable application that, prior to the installation, checks and installs prerequisites needed for the installer / installed applications to run.
In order to run this application the user must have administrative rights.
On running the setup.exe file the bootstrapper starts and checks the system for prerequisites:

- Windows Installer 4.5
- .Net Framework 4.8



If any of the needed components is not found then the installer will download and try to install them.
It is possible that your system will require rebooting after the prerequisites installation.
In case of problems during prerequisites installation please read Known Issues (see page 17) section.

Windows Installer 4.5 installation steps

If you do not have installed Windows Installer 4.5 it will be downloaded from the internet and installed during the Visma Cloud Gateway installation. Please check if download from the internet is allowed.

To install Windows installer 4.5 follow the below steps:

1. Press Install. Wait for the component to download. After download a welcome screen will be displayed.
2. Press Next.
3. You should confirm that you accept the license agreement: Check “I agree”.
4. Press Next.
5. After the installation is completed, you will be asked to restart the computer: Press Finish.
6. After the computer restarts, Visma CloudGateway installation will proceed automatically. If not, please run setup.exe again.

.Net Framework 4.8 installation steps

If you do not have installed .Net Framework 4.8 it will be downloaded from the internet and installed during the Visma Cloud Gateway installation. Please check if download from the internet is allowed.

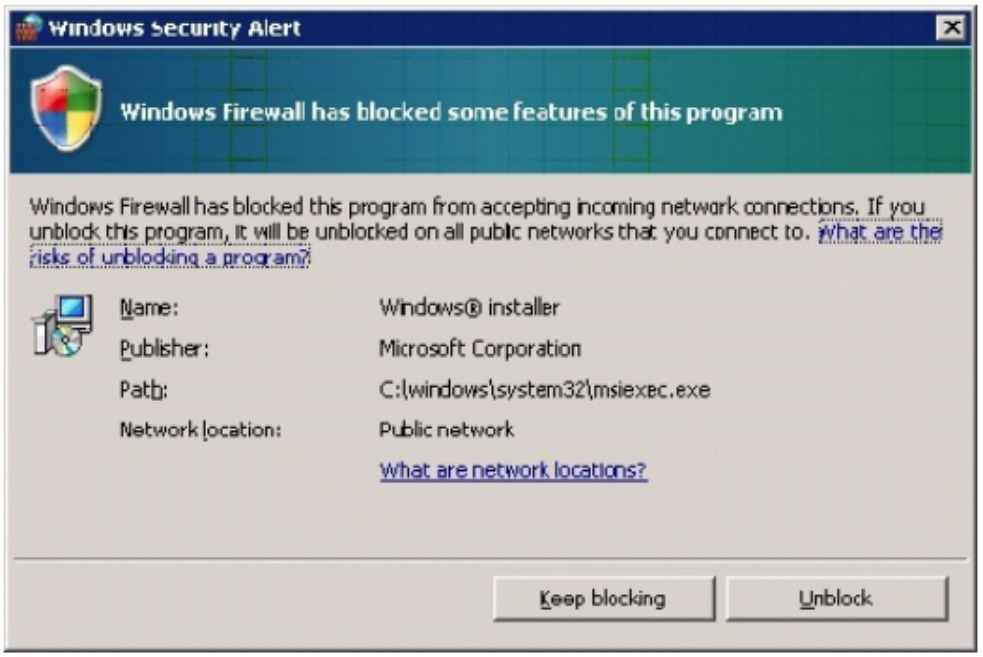
To install .Net Framework 4.8 follow the below steps:

1. If you are asked to “Download and install this feature” .Net Framework 4.8 please agree to do it
2. Choose Install and wait for the component to download. After download a welcome screen will be displayed.
3. Confirm that you accept the license agreement.
4. When the installation is completed press Finish.
   Please note, that in the case of Windows Server 2012 Windows PowerSell will be displayed. Please, do not close it but wait until the installation is completed.
5. In case of problems follow the instructions from Known Issues (see page 17)

Known Issues

This section contains the list of known issues with workaround instructions.

Issue 1:
Also, when using Windows 7 OS you might be returned a message like follows:



Please, click the “Unblock” button to continue the Installation.

Issue 2:
Please follow the instructions from Troubleshooting Blocked .NET Framework Installations and Uninstallations if you have any issues with .Net Framework 4.8 installation

Issue 3:
Error 114 from installer (or error 201 from On Premises Plugin) and in logs: Error Message: System.TypeLoadException: Could not load type 'System.Security.Authentication.ExtendedProtection.ExtendedProtectionPolicy' from assembly 'System, Version=2.0.0.0, Culture=neutral, PublicKeyToken=b77a5c561934e089'

The error is caused by Microsoft updates:

- 982167
- 982168 (KB976769v2)
- 979909

Recommendations how to solve it:

1. Uninstall those Microsoft updates
2. Reboot
3. If 1 and 2 do not help then reinstall .Net Framework
4. Try to use Visma Cloud Gateway again

Visma Platform Validator

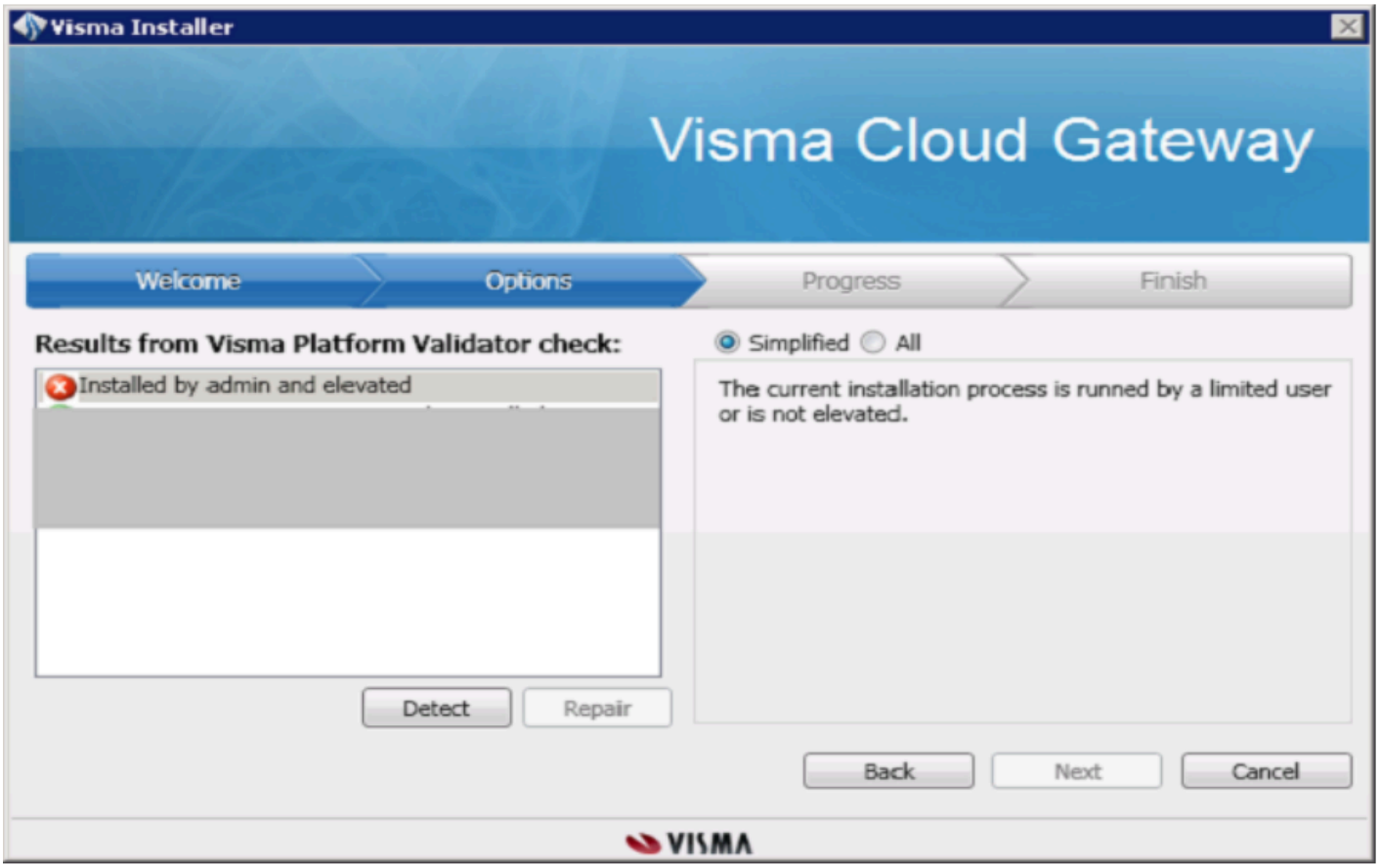
Visma Platform Validator is developed by the Visma Installer team and integrated into Visma Cloud Gateway installer for the purpose to verify operating system configuration (supported operating system versions, network and firewall settings required for Visma Cloud Gateway Service installation and starting). Visma Platform Validator is not available in the case of scriptable installation. Validation screen is shown to users only in the case of problems.

Visma Platform Validator screen is shown only in the case if operating system settings do not match Visma Cloud Gateway Requirements. All problems found by Visma Platform Validator **should be fixed before** continuing VCG installation.

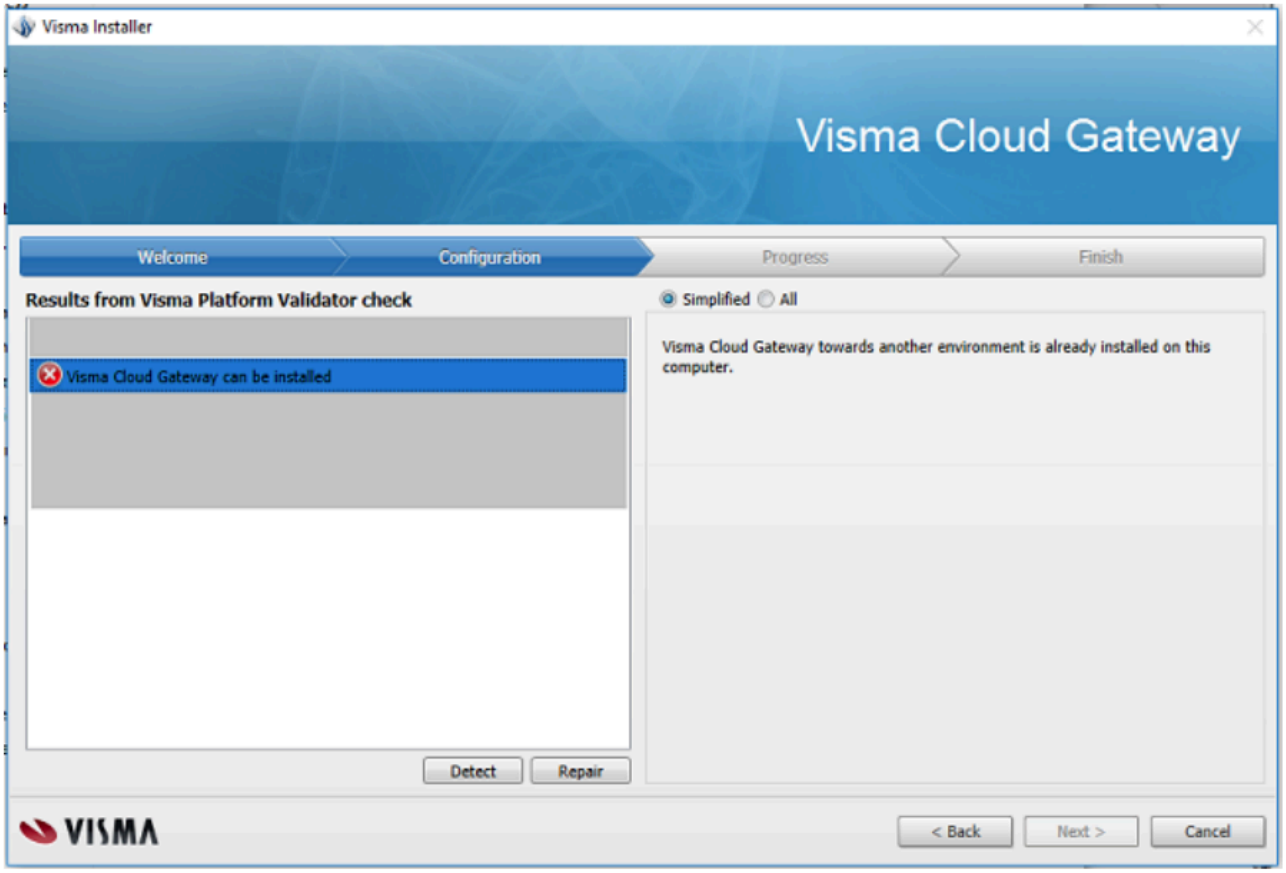
Note: EJBCAWrapper and TunnelManager are the part of Integration Platform involved in encrypted tunnel creation and certificate fetching while Visma Cloud Gateway installation. On Demand Gateway is On Demand part of the bridge between On Premises and On Demand side. Usually this information is excessive for users in the case of proper configuration of network and firewall.

The list of possible messages from Visma Platform Validator is below:

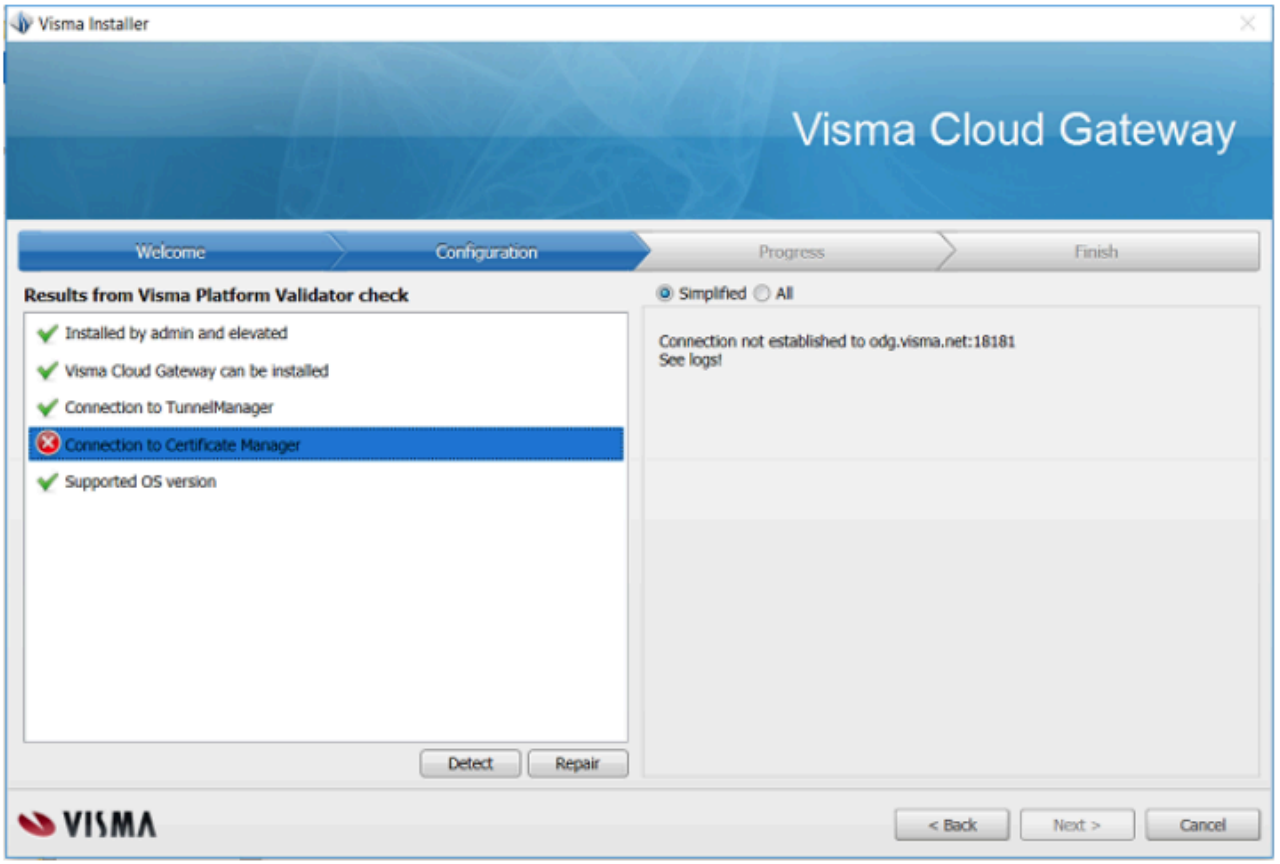
1. **Not sufficient user privileges**. Please Cancel the installation and run it again using a local administrator user and allow the installation to run elevated.



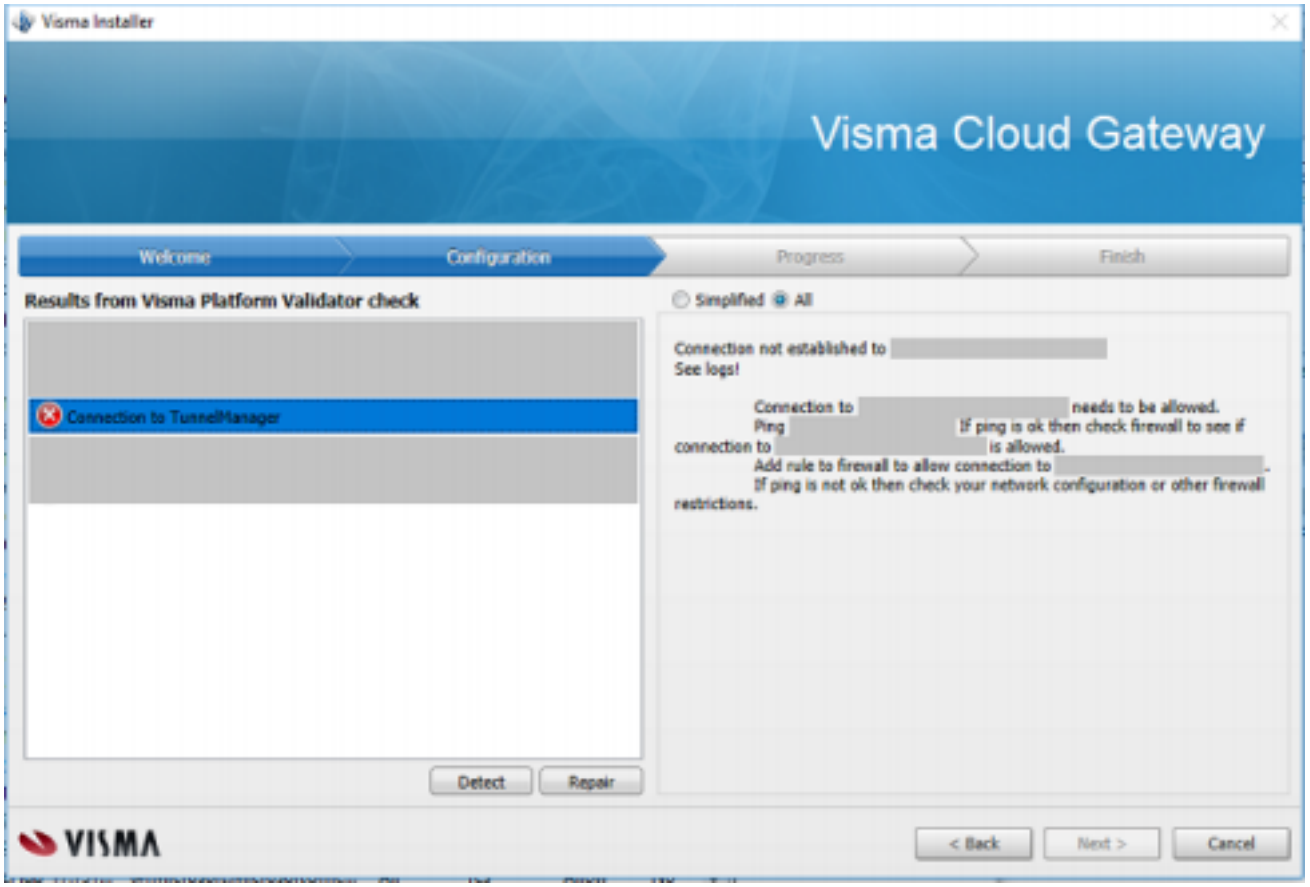
2. Visma Cloud Gateway is already installed on the machine towards some test environment. Please uninstall it first and try again. This issue should not appear for Visma Cloud Gateway installation in real life. It is needed only for testing purposes.



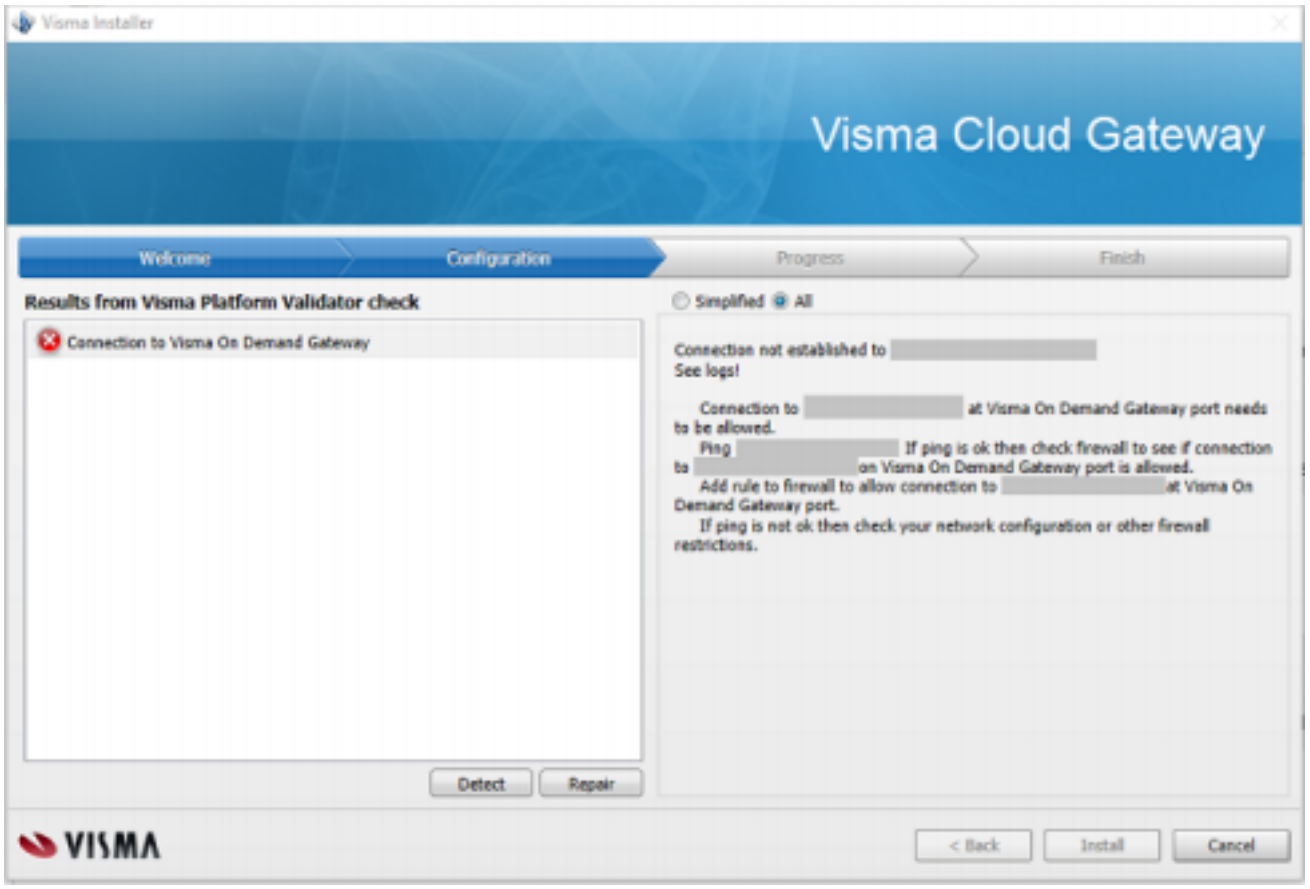
3. **Problems with Connection to Certificate Manager** which is needed for signing your Visma Cloud Gateway. You can allow the access by clicking the Repair button (will create a new rule in the local firewall to allow outgoing traffic) and then the Detect button. If it does not help to solve the connection problem please contact your network administrator**.**



4. **Problems with Connection to Tunnel Manager.** You can allow the access by clicking the **Repair** button (will create a new rule in the local firewall to allow outgoing traffic) and then the **Detect** button. If it does not help to solve the connection problem please contact your network administrator.



5. Problems with Connection to On Demand Gateway. You can allow the access by clicking **Repair** button (will create a new rule in the local firewall to allow outgoing traffic) and then **Detect** button. If it does not help to solve the connection problem please contact you network administrator.



Note: Regarding the issues at point 3, 4 and 5, please make sure that your server has the following:

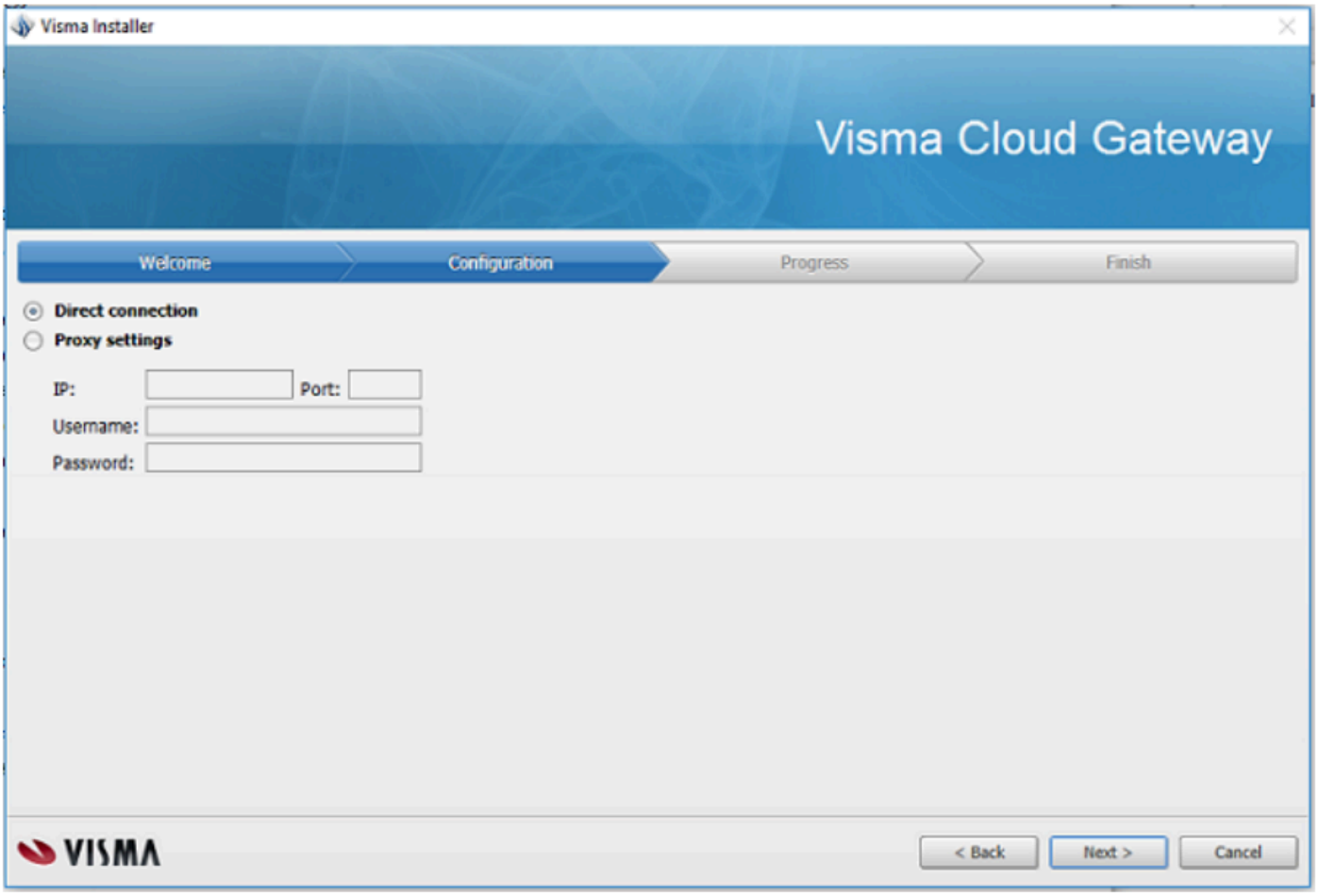
Firewall and network rules for Visma Cloud Gateway

- The installer and Visma Cloud Gateway itself must be able to access odg.visma.net (91.123.56.26) and vcg-update.visma.net (91.123.56.250).
- In order for VCG to install and work properly at customer side needs to be allowed the following firewall rules (telnet command to test after firewall / network configuration):
    1. outgoing TCP connection and HTTPS to odg.visma.net:18181 or odg.visma.net:443
    2. outgoing TCP connection and HTTPS to odg.visma.net:38181 or odg.visma.net:443
    3. outgoing TCP connection and SSH protocol allowed to odg.visma.net:2233
    4. outgoing TCP connection and SSH protocol allowed to odg-ld.visma.net:2233
    5. outgoing TCP connection and HTTPS to vcg-update.visma.net:443

VCG Installation Steps

This section describes how to install Visma Cloud Gateway via interface.

1. Proxy If you do not have a proxy installed please just click **Next** to skip the below step. In case if you would like VCG communication going through http proxy choose Proxy settings, provide IP address and port of your proxy, and User and Password of needed (for a proxy without user/password please leave these 2 fields empty)



2. *Visma Platform Validator* will be displayed in the case if *Visma Cloud Gateway Requirements* are not satisfied

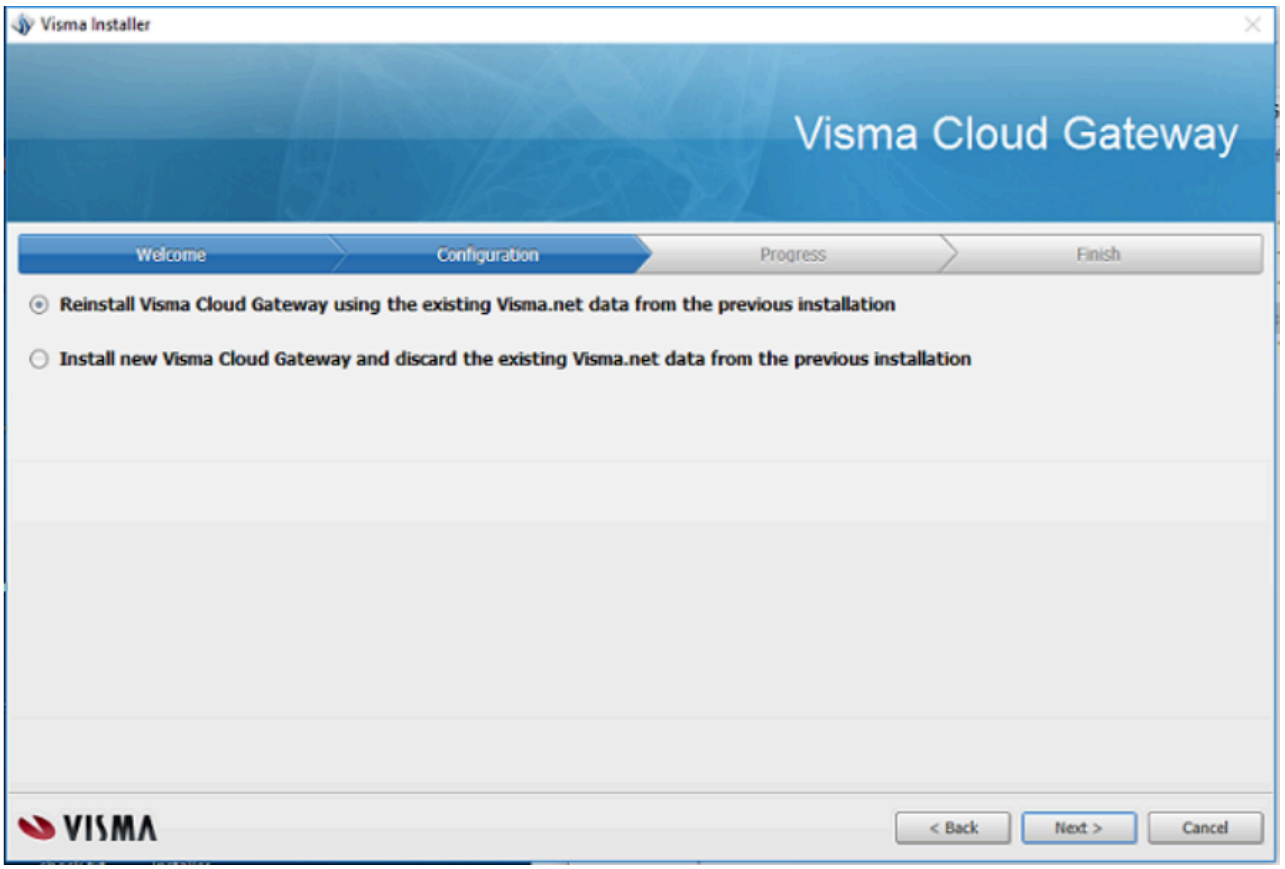
3. In case if you are installing VCG NOT for the first time and chose to keep configuration (VCG instances) from the previous installation during the uninstall process you will be asked if you want to **Reinstall** VCG (re-using the data from previous installation) or if you want a **Fresh** VCG install (all the data from previous VCG installation will be removed). Keeping the data from previous installation is the default option

Note:

• In case if you decide to choose **Reinstall** you will NOT be asked to provide user/password/customer/folder since you already made those choices before and there is no need to ask you again. The next several screens will be

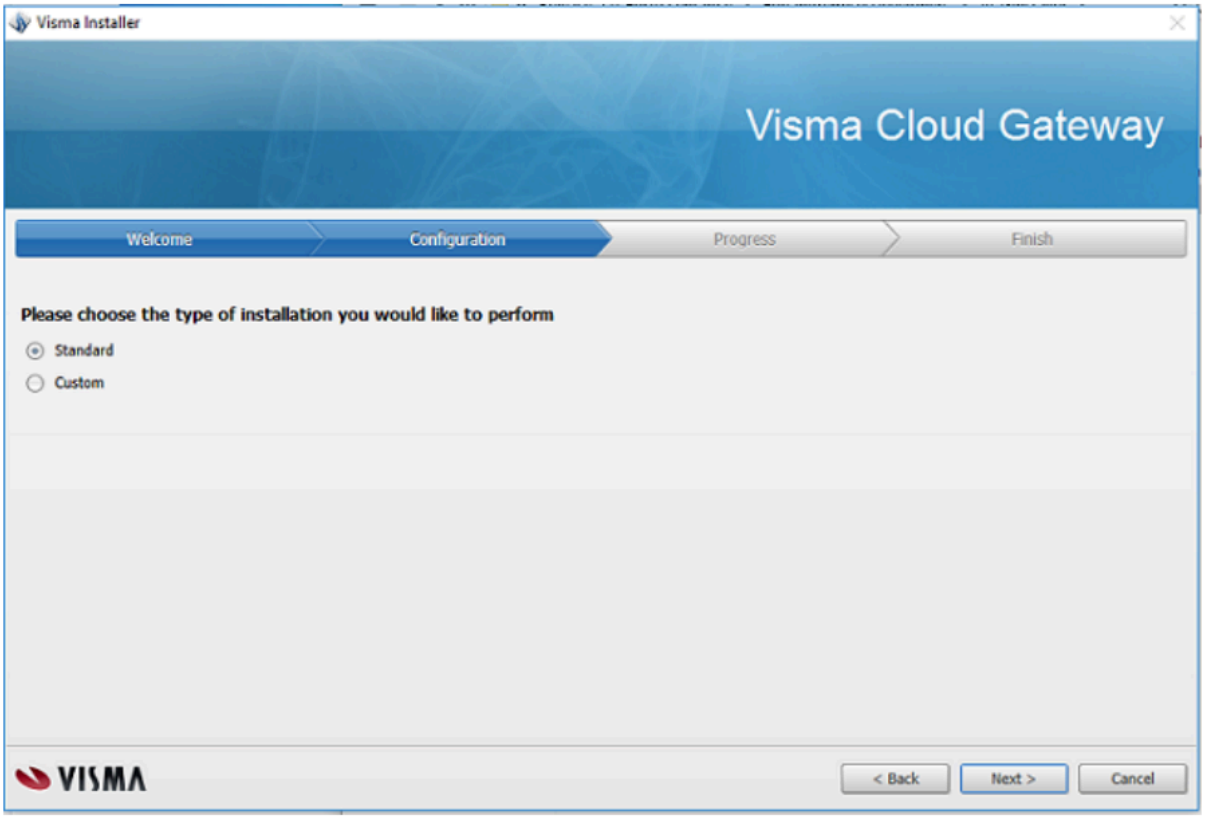
omitted and you will get a window with successful (or not successful in case of problems) installation

- In case if you chose **Fresh** install, all old data from previous VCG installation will be discarded and you will be asked to provide user/password/customer/folder
- Also please note that reinstalling using old data, should always be done using an VCG version >= then the previous uninstalled one !!!

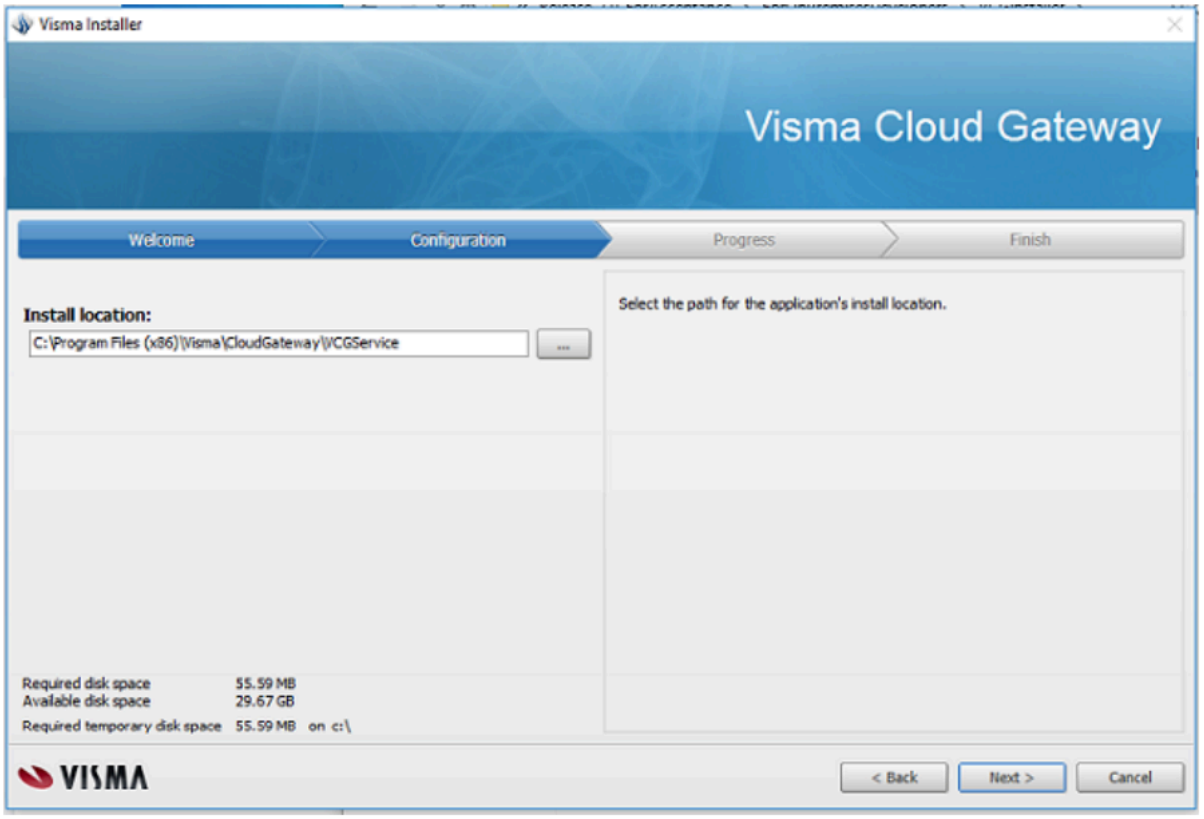


4. For default installation use **Standard** and press **Next**.
Default Visma Cloud Gateway location:

- C:\Program Files\Visma\CloudGateway\VCGService for 32 bit systems
- C:\Program Files (x86)\Visma\CloudGateway\VCGService for 64 bit systems



5. For custom installation choose **Custom** and press **Next**. In this case you will be asked to set up the location for Visma Cloud Gateway



6. In this step it is possible to check/uncheck different options (deployment model, whether to install Active MQ, permissions on VCG folder, what to store in VCG logs). Please check an option only if you are sure you need it. Press **Next** after making your choice to continue the installation.

Note:

• *Deployment Models* (see page 13): "**Visma Cloud Gateway available only from local machine**" is *checked by default*. If you need to have "centralized" deployment *uncheck* it.

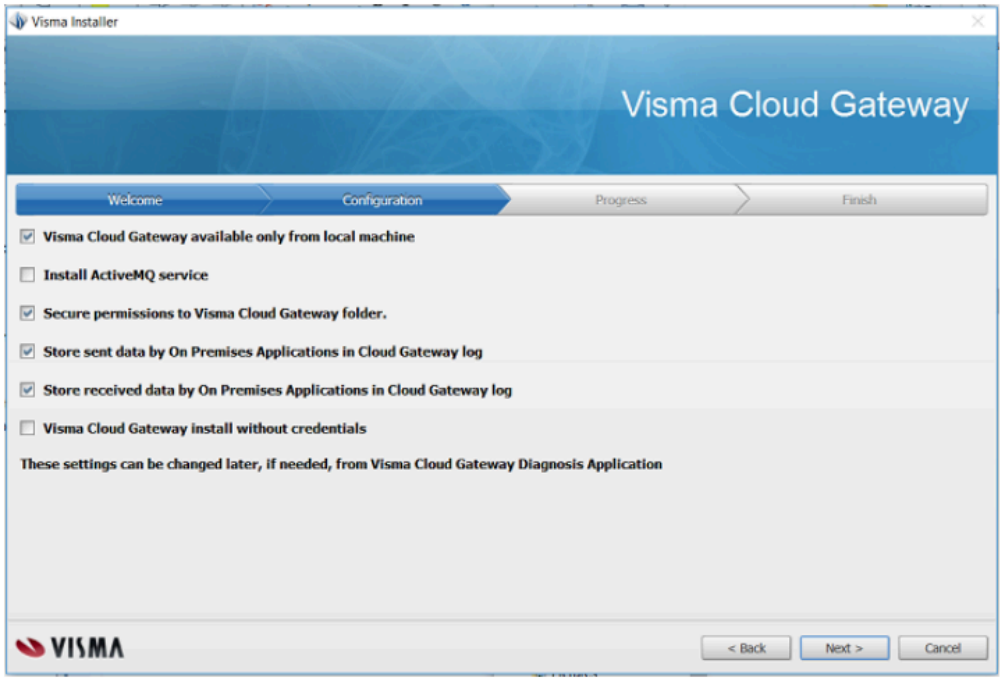
• "**Install Active MQ service**" option is *unchecked by default*. If you need to use Active MQ please check it. Active MQ can be also installed later from the VCG Diagnosis application if needed. If Java JRE is not installed, then this option is disabled since Active MQ will not work without Java

• "**Secure permissions to Visma Cloud Gateway folder**" is checked by default and means that access rights inheritance will be removed from VCG folder. It can be changed during VCG installation or later from VCG Diagnosis application

• "**Store sent data by On Premises Applications in Cloud Gateway log**" is checked by default and can be changed from VCG Diagnosis later if needed. This option is working only when log level is set to Debug (Severity Level equals All in VCG configuration file). In case if this option is unchecked all content (body) of invocations and message send by your On Premises Application (except ODP data registration) will be removed from logs, only the headers will be left

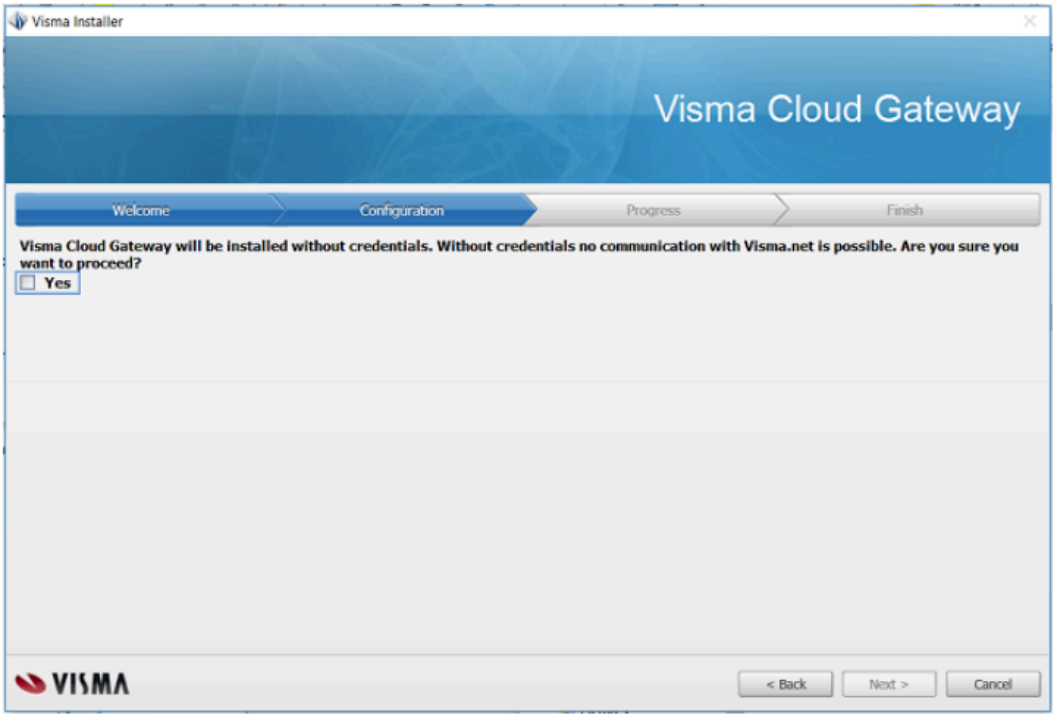
• "**Store received data by On Premises Applications in Cloud Gateway log**" is checked by default and can be changed from VCG Diagnosis later if needed. This option is working only when log level is set to Debug (Severity Level equals All in VCG config). In case if this option is unchecked all content (body) of invocations and message received by your On Premises Application will be removed from logs, only the headers will be left

• "**Visma Cloud Gateway install without credentials**" is *unchecked by default* .This option allows you to install VCG without providing any client credentials. This means that in order for your On Premises application integrations to work, you have to activate VCG by entering the credentials at a later time.

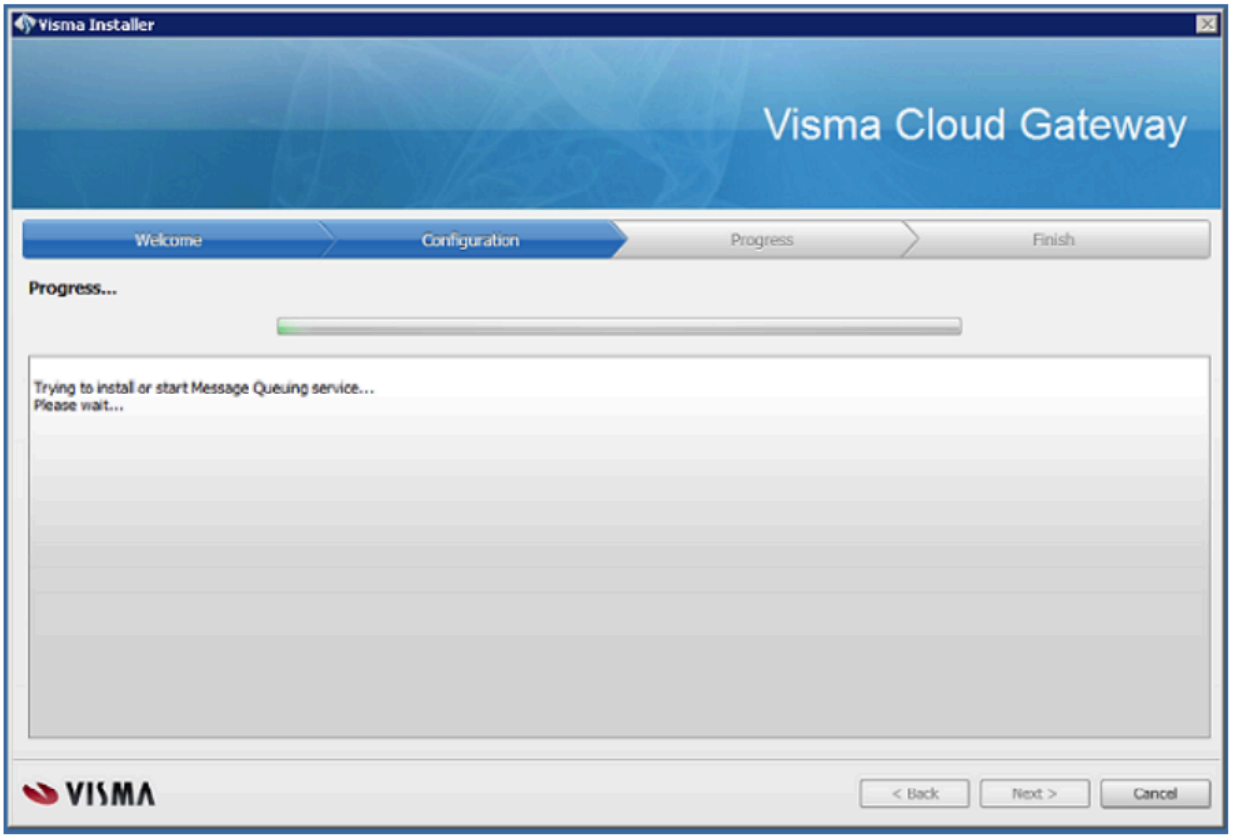


7. This step will only be available if you checked the "Visma Cloud Gateway install without credentials" option at Step 7. It is basically a confirmation of this option to make sure clients do not use it by mistake. Press **Next** after checking the **"Yes" option** to continue the installation.

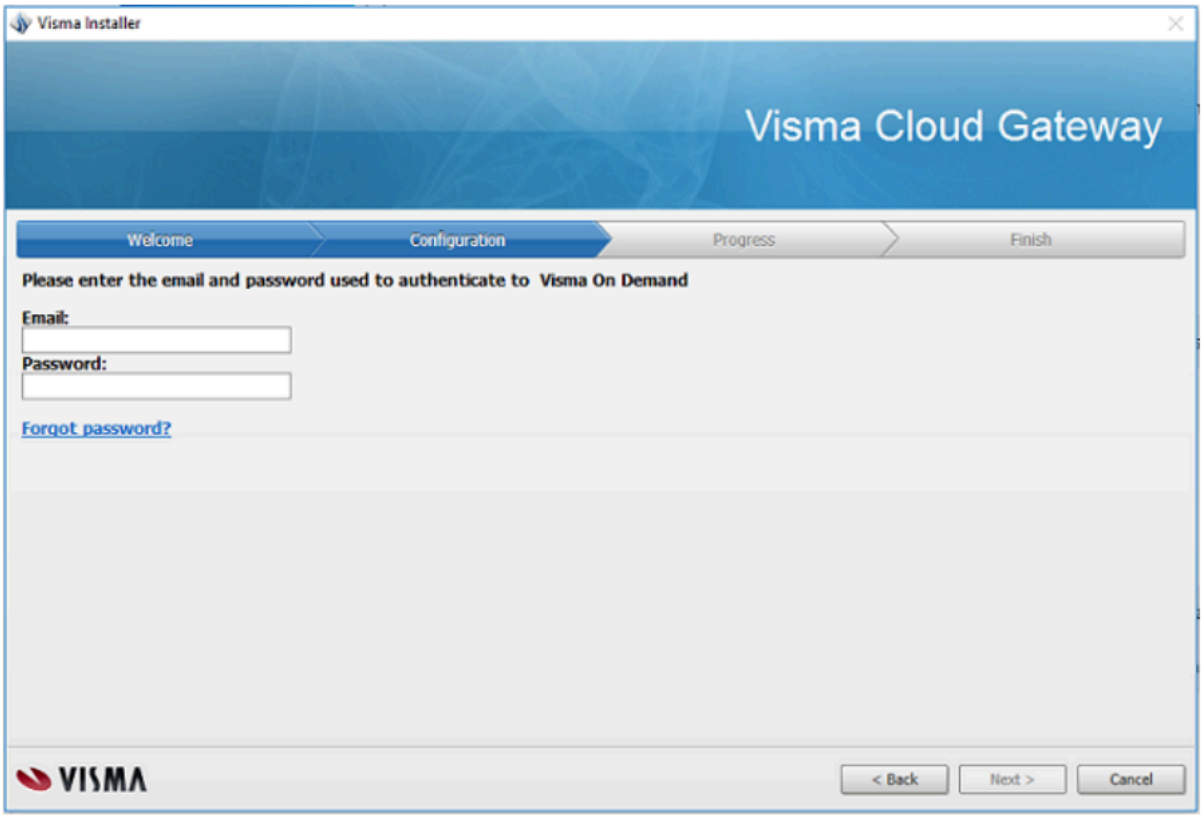
Using the No Credentials option will skip the next few steps and jump straight to **Step 13**.



8. The installer will activate Microsoft Message Queueing which is part of Windows system and does not require anything but activation. Microsoft Message Queueing is needed for those applications which need to send/receive messages. For more details about messages see *Messaging* chapter

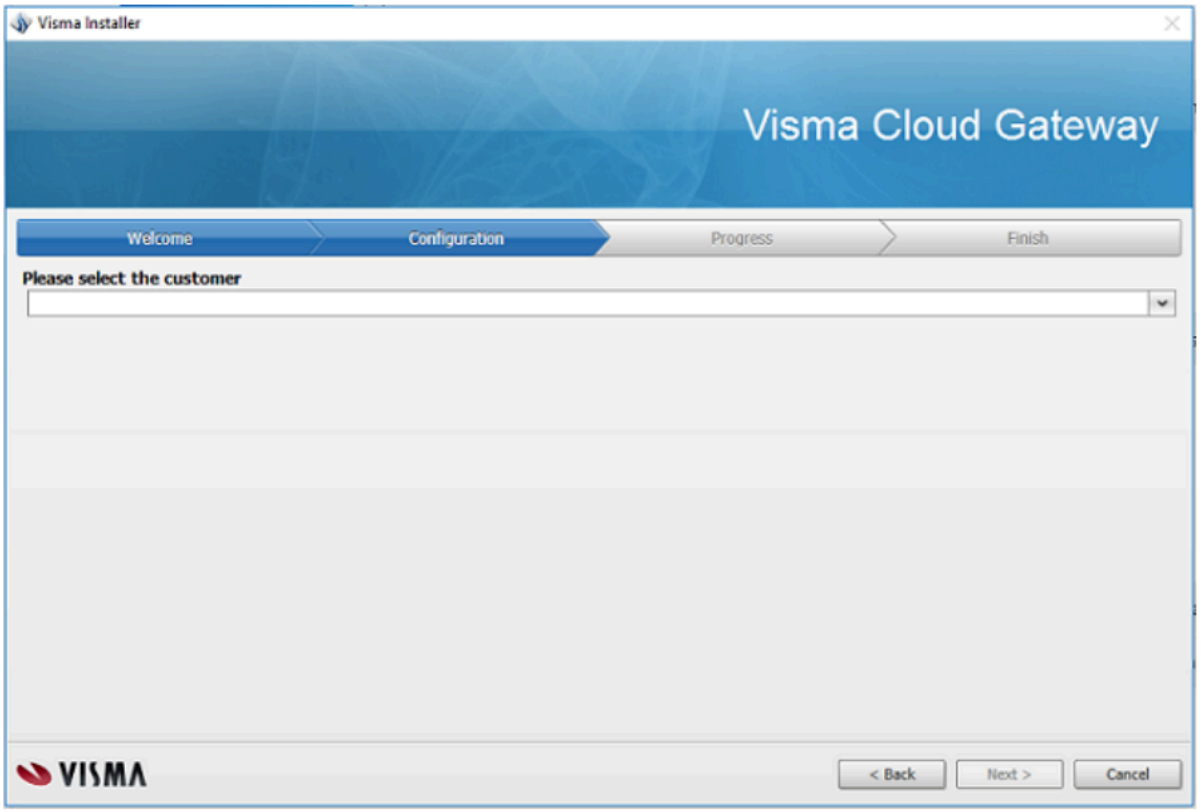


9. In this step it is needed to provide your Visma On Demand user credentials and press **Next**.

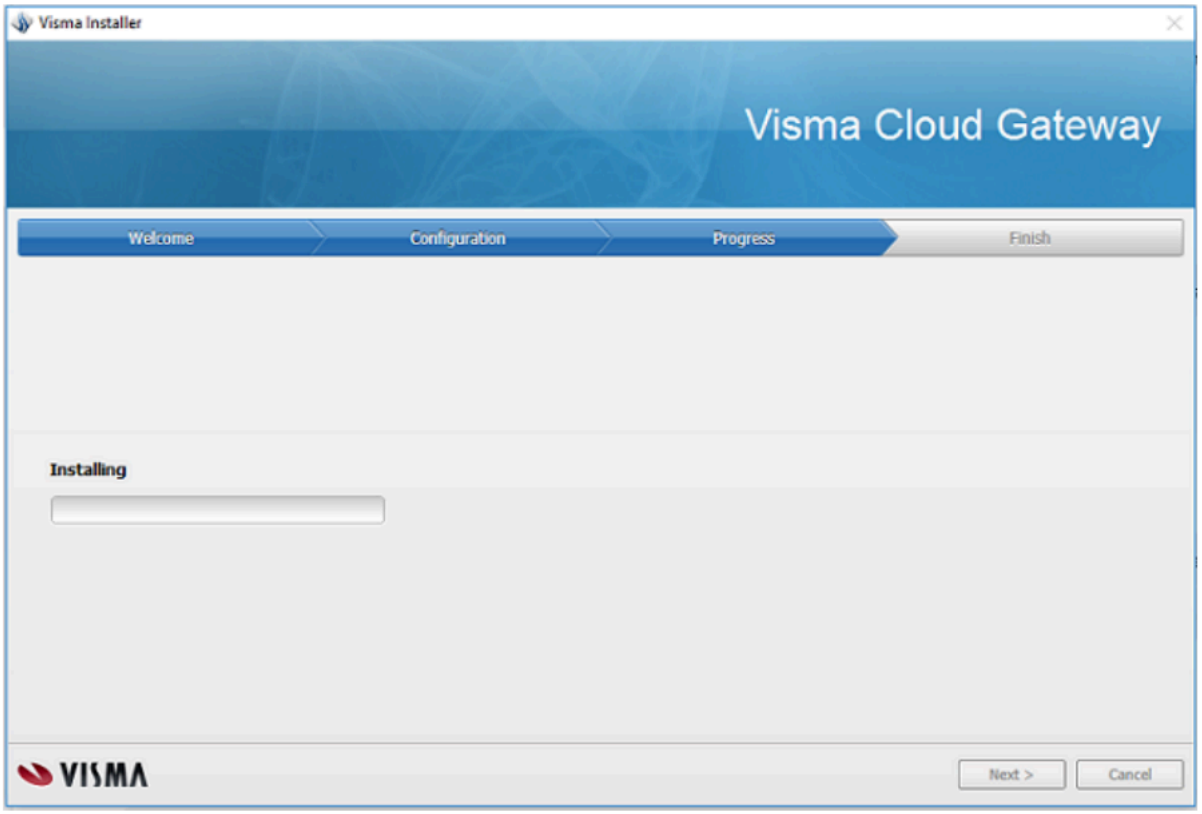


10. If you do not remember your password you can use ***Forgot password?*** link to set a new one.
11. The below screen containing Customer list will be displayed in the case if your user has "Customer Administrator" role for several Customers. Please choose your **customer** and press **Next**. In the case when your user has a Customer Administrator role for only one Customer the below screen will be skipped and the customer will be chosen automatically.

Note: it is possible to search for your customer by starting typing its name

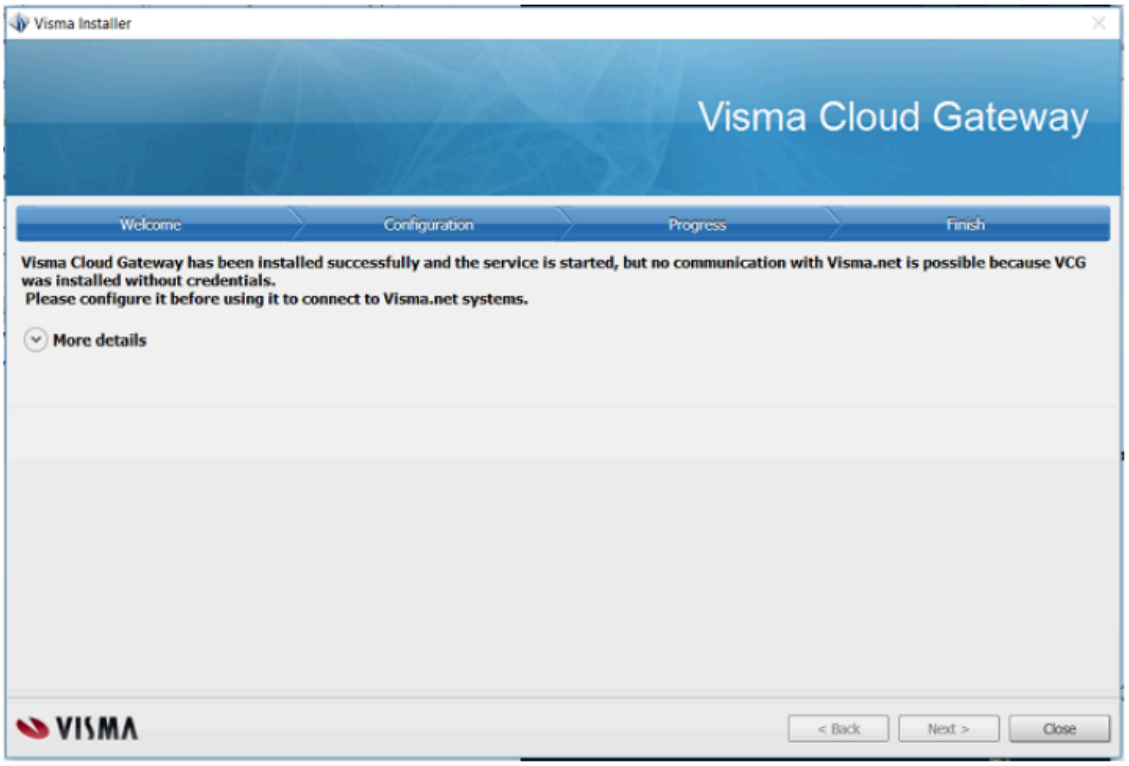


12. Wait until the installation is completed and Visma Cloud Gateway Service starts.

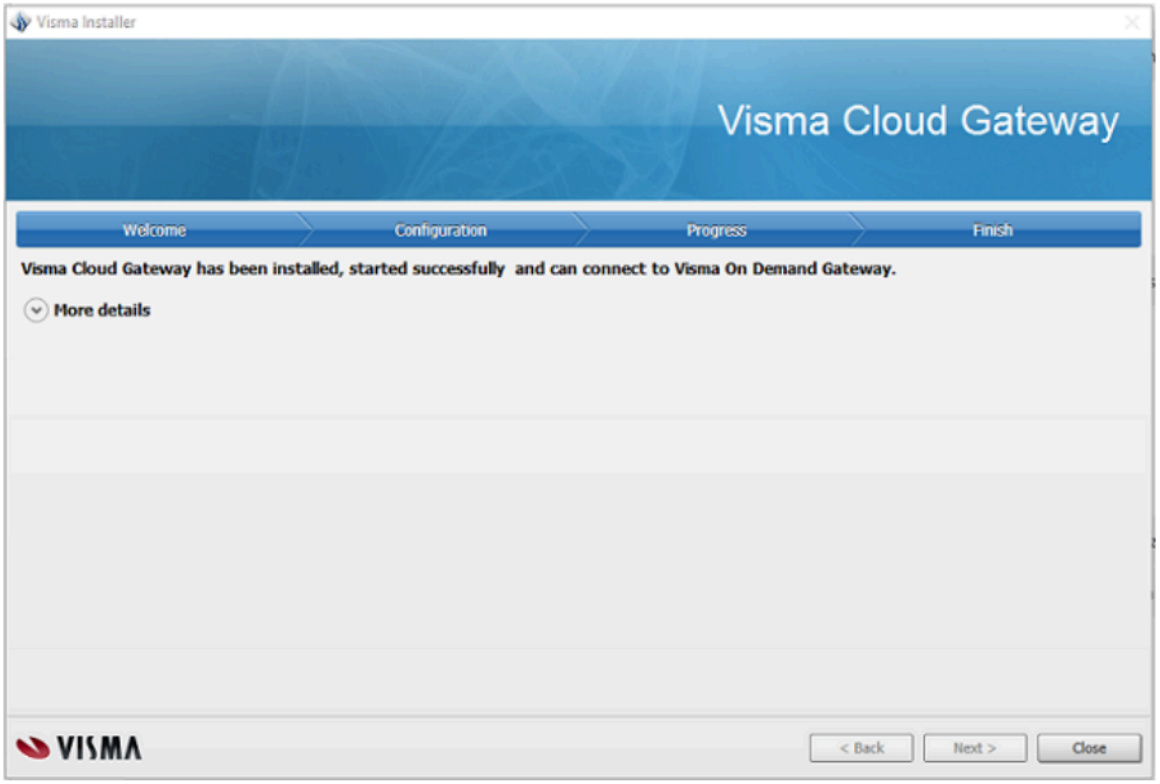


13. During the installation *Visma Platform Validator* checks if it is possible for Visma Cloud Gateway to connect to On Demand Gateway. If such a problem is detected, then it will not be possible to proceed with installation until this connection problem is solved.

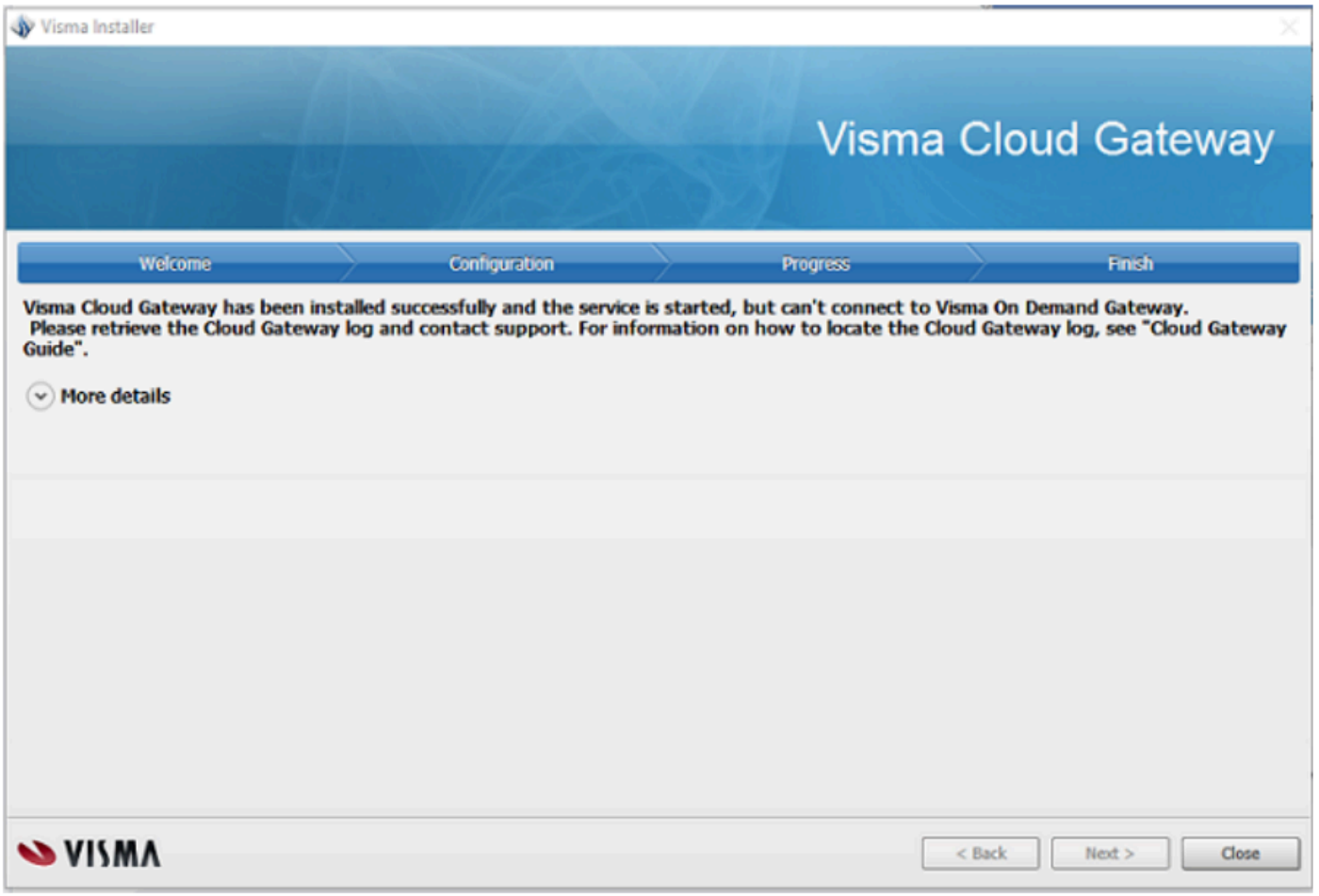
14. In the end of the successful installation the below screen will be displayed. You can expand "More details" to see the messaging status. Please click **Close** to complete the installation. **This step is only valid if you chose to install VCG without credentials(step 8) !!!**



15. In the end of the successful installation the below screen will be displayed. You can expand "More details" to see the messaging status. Please click **Close** to complete the installation.



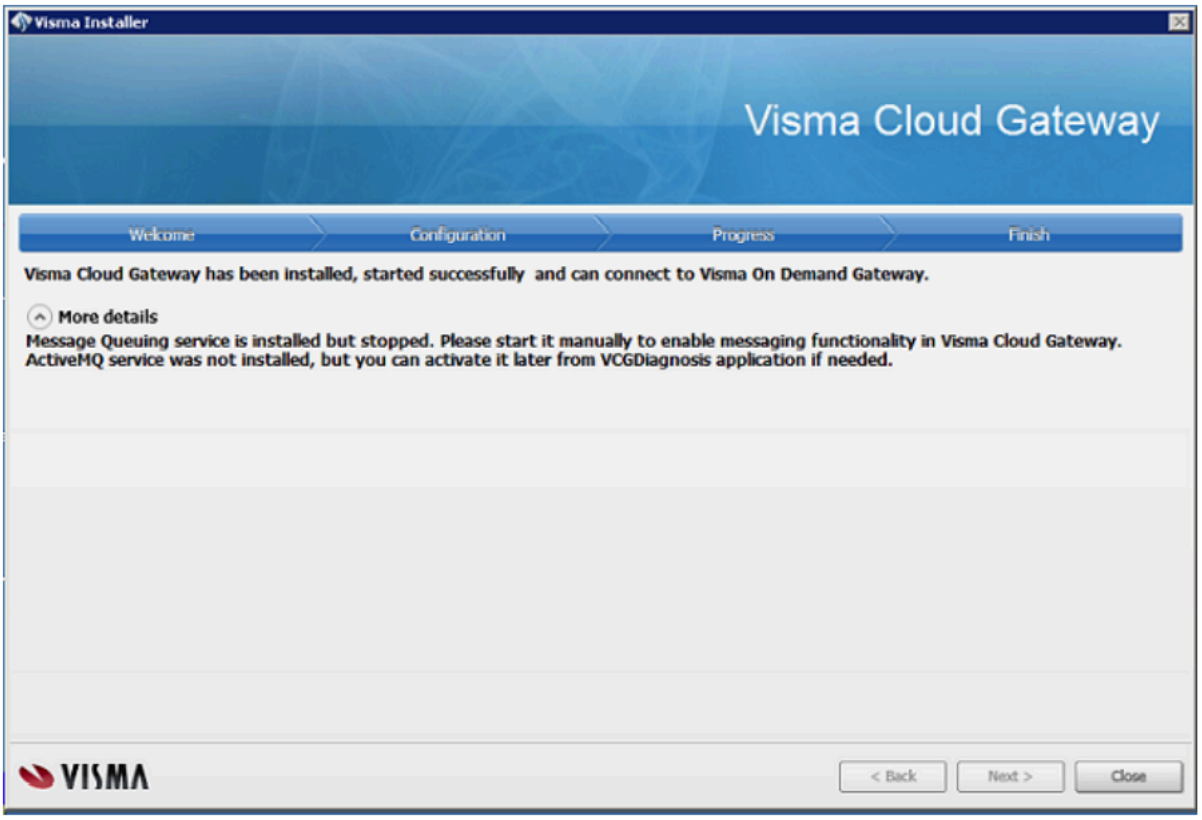
16. The below screen will be displayed in the case if Visma Cloud Gateway service has problems to connect to On Demand Gateway or when it is not possible to define if everything is working as expected.



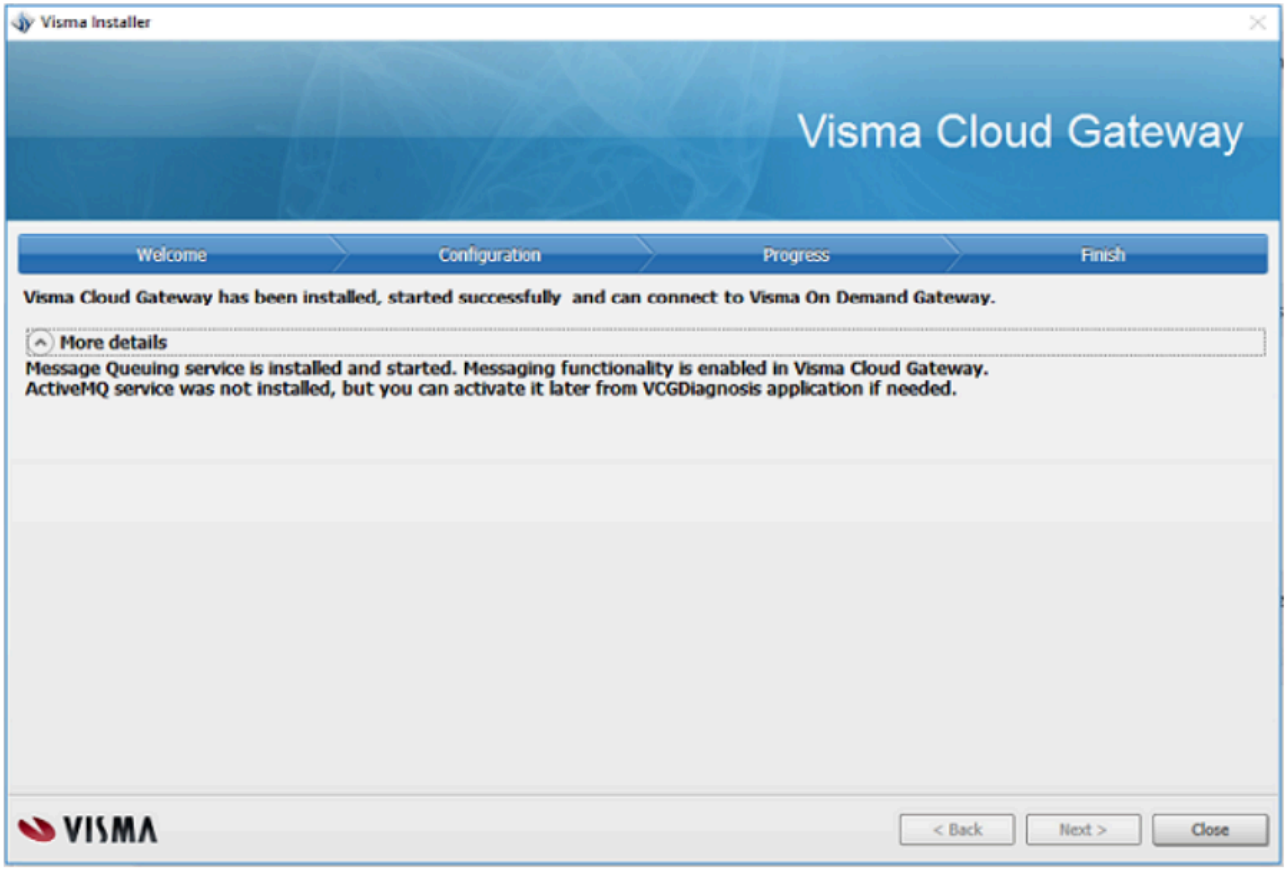
More details about the problem could be found in logs. See *Where to find LOGs*.
17. In the case of problems with Message Queuing it is possible to fix it manually:

• Activate/De-activate Message Queuing from Control Panel->Programs and Features-> Turn Windows features on or off->Microsoft Message Queue (MSMQ) Server
• Start/Stop MQ service via Control Panel->Administrative Tools->Services->Message Queuing service • Managing queues via Control Panel->Administrative Tools->Computer Management->Services and Applications->Message Queuing->Private Queues
• Using VCG Diagnosis Application: **the most recommended way**

Please note that fixing Message Queuing problems is needed only in the case if your application is using a messaging system. See *Messages* chapter for more details.



18. The installation completed, the service was started successfully and Visma Cloud Gateway can connect to Visma On Demand Gateway but ActiveMQ service was not installed. Please click **Close** to complete the installation. If you need ActiveMQ service you can install and activate it later from VCG Diagnosis application



Scriptable VCG installer

It is possible to install Visma Cloud Gateway Service without any interfaces.

Please note, that scriptable installation has the same requirement as installation with interface:*Visma Cloud Gateway Requirements* . Windows Installer 4.5 and .Net Framework 4.5.2 or higher should be installed manually before scriptable installation. Staring from 6.0 is is possible to reuse visma.net data from the previous installation (just omit user, password and customer from the command) and starting from 6.1 VCG also supports scriptable uninstall (see Uninstallation section)

The **command** for scriptable installation:

1. Installation based on ODP Customer ID : `msiexec /i "<path>/CloudGatewayService.msi" USEREMAIL="<value>" PASSWORD="<value>" CUSTOMERID="<value>" DIRINSTALL="<value>" LOCALOPG="<value>" INSTALLACTIVEMQ="1" SECUREPERMISSION="1" /qn`

2. Installation based on activation key: `msiexec /i "CloudGatewayService.msi" DIRINSTALL="<path>" LOCALOPG="<value>" USEREMAIL="<value>" PASSWORD="<value>" LICENSEKEY="<value>" /qn /l*v msi.log`

3. Installation for VCG working through http proxy without user/password: `msiexec /i "CloudGatewayService.msi" DIRINSTALL="<path>" LOCALOPG="<value>" USEREMAIL="<value>" PASSWORD="<value>" LICENSEKEY="<value>" PROXYISUSED="True" PROXYIP="<value>" PROXYPORT="<value>"`

4. Installation for VCG working through http proxy **with** user/password: `msiexec /i "CloudGatewayService.msi" DIRINSTALL="<path>" LOCALOPG="<value>" USEREMAIL="<value>" PASSWORD="<value>" LICENSEKEY="<value>" PROXYISUSED="True" PROXYIP="<value>" PROXYPORT="<value>" PROXYUSER="<user name for proxy>" PROXYPASSWORD="<password for proxy>"`

5. Installation of VCG **without** customer credentials : `msiexec /i "<path>/CloudGatewayService.msi" VCGNOCRED="1" /qn /l*v msi.log`

6. Installation of VCG **without** customer credentials and through Proxy **with** user/password: `msiexec /i "<path>/CloudGatewayService.msi" VCGNOCRED="1" INSTALLACTIVEMQ="0" SECUREPERMISSION="1" PROXYISUSED="True" PROXYIP="<value>" PROXYPORT="<value>" PROXYUSER="<user name for proxy>" PROXYPASSWORD="<password for proxy>" /qn / l* msi.log`

Please note if you omit USEREMAIL and PASSWORD parameters in case when you already had VCG installation before on the same machine/server and during uninstallation chose to keep VCG configuration (instances), then instead of fresh install it will be re-installation (re-usage of the previous VCG configuration).

If you set USEREMAIL and PASSWORD parameters in case when you already had VCG installation before on the same machine/ server and during uninstallation choose to keep VCG configuration (instances), then a fresh install will be done and all your previous VCG data will be deleted.

The same command could be used for Visma Cloud Gateway upgrade without interface:

```
msiexec /i "<path>/CloudGatewayService.msi" /qn /l* msi.log
```

Please, note that on machines with **UAC "ON"** the command needs to be run from cmd.exe opened as Administrator, or another application with **administrative rights**.

> We recommend to specify a log file (Example: /l* <path to log file>) to see more details about errors in the log file.

Visma Cloud Gateway Installer variables

• ***USEREMAIL***: On Demand Platform user email (*mandatory*) for the fresh install
• ***PASSWORD***: On Demand Platform user password (*mandatory*) for the fresh install
• ***CUSTOMERID***: ID of the customer for which Visma Cloud Gateway will be installed (*mandatory in the case if user has mapped to multiple customer and optional if user has only one customer*)
• ***LICENSEKEY***: License Activation Key for Application and Customer. Based on this key VCG will obtain ODP Customer ID *(mandatory in the case if user has mapped to multiple customer and optional if user has only one customer)*
• ***DIRINSTALL***: path for folder where Visma Cloud Gateway will be installed *(optional)* • Example:

DIRINSTALL="c:\Visma\CloudGateway\VCGService"

• If not set VCG will install in the default directory:
• C:\Program Files\Visma\CloudGateway\VCGService for 32 bit systems
• C:\Program Files (x86)\Visma\CloudGateway\VCGService for 64 bit systems
• ***LOCALOPG***: If it is not set, Visma Cloud Gateway will be installed by default to be accessible only from a local machine (local VCG deployment)*(optional*). Can be changed later in VCG configuration file or by using VCG Diagnosis Application
• "1" - Visma Cloud Gateway will be accessible only from local machine (local VCG deployment) • "0" - Visma Cloud Gateway will be accessible from network machines (centralized VCG deployment) • ***INSTALLACTIVEMQ***: needed to install and activate ActiveMQ (*optional*), if not set - ActiveMQ will not be installed
• ***SECUREPERMISSION***: needed to set up secure permissions to Visma Cloud Gateway folder and means removing the permission inheritance from the folder settings. It is *optional* and if omitted, then the default value is 1 • "1" - Visma Cloud Gateway folder will NOT have permission inheritance from the parent folder • "0" - Visma Cloud Gateway folder will have permission inheritance from the parent folder
• ***LOGSENTOPDATA***: actual only together with SeverityLevel equals All (Debug mode logging level) and is needed in case if an On Premises client sends security sensitive data (like salary information) to On Demand and do not want support team to see such information in VCG logs. The setting is *optional*, if omitted - then the default value is used:
• "1" - Default value, sent data is stored in VCG logs.
• "0" - Sent data is **NOT** stored in VCG logs
• ***LOGRECEIVEDOPDATA***: actual only together with SeverityLevel equals All (Debug mode logging level) and is needed in case if an On Premises client receives security sensitive data (like salary information) from On Demand and do not want support team to see such information in VCG logs. The setting is *optional*, if omitted - then the default value is used:
• "1" - Default value, received data is stored in VCG logs.
• "0" - Received data is **NOT** stored in VCG logs
• ***PROXYISUSED***: VCG can work through proxy. The setting is *optional*, If omitted - then the default used. Can be changed later in VCG configuration file or by using VCG Diagnosis Application
• "False" - Default value
• "True" - VCG will work through proxy. Will require 2 additional parameters. See below • ***PROXYIP***: proxy IP address. *Mandatory* together with port in case if *PROXYISUSED="True"*. Can be changed later in VCG configuration file or by using VCG Diagnosis Application
• ***PROXYPORT***: proxy port. *Mandatory* together with IP in case if *PROXYISUSED="True"*. Can be changed later in VCG configuration file or by using VCG Diagnosis Application
• ***PROXYUSER***: User for proxy. Should be used together with other PROXY settings. If omitted that the installer assume no authentication is needed
• ***PROXYPASSWORD***: Password for proxy. *Mandatory* together is PROXYUSER is set up • ***VCGNOCRED***: This is needed **ONLY** if you plan to install VCG with no Client credentials. It is *optional* and it should be used instead of USERNAME, PASSWORD, CUSTOMERID OR LICENSEKEY.

Verification and Diagnosis

After the installation Visma Cloud Gateway should be shown in a Windows services list as **Visma Cloud Gateway** service and should have ***Started*** status. If Visma Cloud Gateway service has ***Starting*** status follow *Error handling* section.

VCG Diagnosis Application

Compulsory: VCG Diagnosis Application is an application which can help to diagnose VCG problems and help in case when it is needed to move your application from one machine / server to another and keep the same licence. VCG Diagnosis Application consists of Check Machine, Register Data Check, Check Queues, AddCredentials(if installed without Client details), Move VCG and AMQ Admin.

Version 8.2

- VCG Diagnosis Application is installed automatically together with Visma Cloud Gateway into the same folder and can be found in <...>\CloudGateway\VCGDiagnosisApp folder. See *Visma Cloud Gateway Default Location*.
- In the case if Visma Cloud Gateway installation failed it is possible to download VCG Diagnosis Application from *VCG Diagnosis Application*
- VCG Diagnosis Application should be placed at the same machine where VCG is or will be installed.
- To start VCG Diagnosis Application please use *Visma.Services.OPGateway.OPGDiagnosisApp.exe*
- VCG Diagnosis Application requires local administrator permissions.
- Configuration file *Visma.Services.OPGateway.OPGDiagnosisApp.exe.config*
- Please note that during the Visma Cloud Gateway upgrade VCG Diagnosis configuration file is kept and not re-written.
- VCG Diagnosis Application consist of 6 tabs:
  - *Check Machine*
  - *Check Queues*
  - *Move VCG*
  - *Registered data check*
  - *Add Credentials*
  - *AMQ Admin*

In the case of any problems with Visma Cloud Gateway installation please:
1. Read “Error Handling” chapter from Visma Cloud Gateway Installation Guide
2. If that chapter does not help **before reporting a problem**, please run VCG Diagnosis Application and follow the instructions
3. Please, do not forget to send whole folder with logs together with your issue description:
`C:\ProgramData \Visma`

Check Machine

Check Machine is needed in the case of Visma Cloud Gateway (VCG) installation problems and for Messaging activation. It is very easy to use if you follow the below instructions.

Since version 3.1 Check Machine becomes a part of *VCG Diagnosis Application*

Check Machine works only if it is on the same machine where VCG is supposed to be installed.

Check Machine results logs: C:\ProgramData\Visma\CheckMachineApp\7.6\Logging\log

Check Machine collects:
1. Operating system information
2. Whether needed ports for VCG installation are accessible
3. Whether Windows user has Local Administrator privileges
4. Whether VCG already installed

5. Which version of VCG is installed
6. How many VCG instances and services are created
7. Which VCG instance is installed for which ODP Customer (Customer ID)
8. Whether each VCG service is started
9. Whether VCG configuration file is correct
10. Information about status of MS Message Queuing
11. Information about status of Active MQ
12. The list of VCG instances and services if there are more than one
13. VCG folder permissions

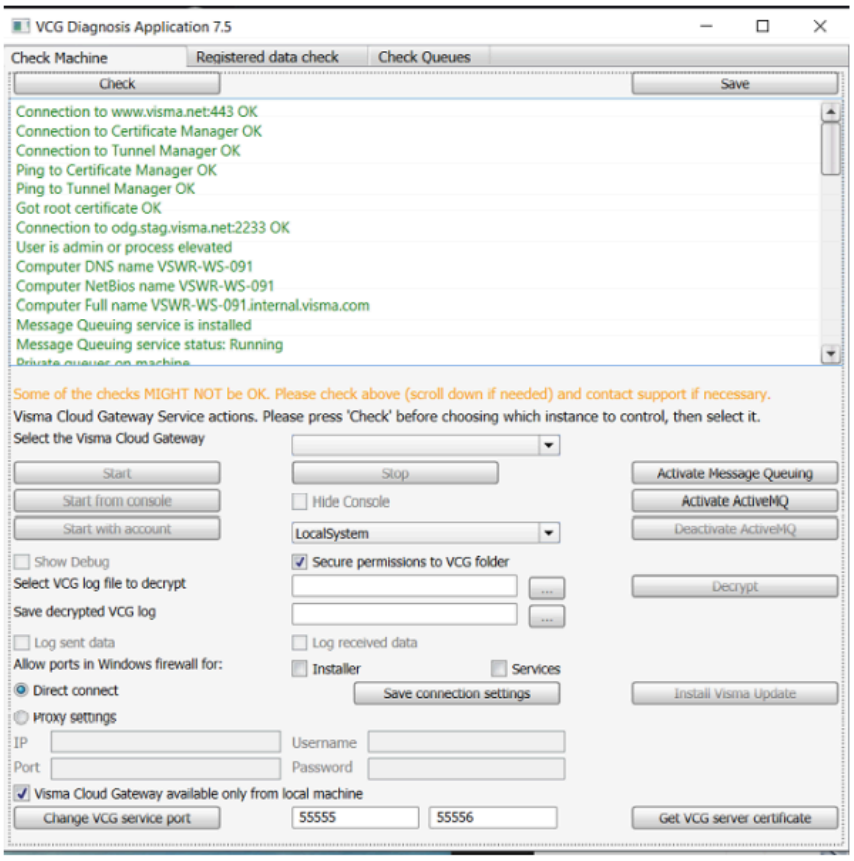
Check Machine can help:

1. Can add firewall rules needed for VCG installation and for VCG service working
2. Improve privileges for Visma Cloud Gateway folders if it is needed
3. Re-start the main Visma Cloud Gateway service
4. Start Visma Cloud Gateway Service as exe file (from the console) and not as a service. This option could identify problems when there are not enough permissions to start VCG as a windows service. For more information about needed permissions to run VCG service see: *privileges to run ssh process on a client side* and *How to verify Windows account policy rights needed to run a service*
5. Change the Windows account to run Visma Cloud Gateway service
6. Identify connections problems
7. Activate Message Queueing
8. Activate/Deactivate Active MQ
9. Make content of all sent/received data through VCG not stored in VCG logs (actual only in case if log level is Debug)
10. De-crypt selected log files
11. Switch between proxy connection and direct connection
12. Change HTTP and HTTPS ports

How to use Check Machine

Please always start with clicking "**Check**" in order for the Diagnosis application being able to find all VCG instances and services on your machine/server

Check Machine tab



1. Use "Check" button to start verification.
2. "Green" response means that everything is OK and "Red" - means problems.
3. Use "Check" button to start verification.

4. Use “Save” button to save the result of the verification into a file.
5. “Visma Cloud Gateway Service actions” section allows you to choose which service you need and Stop/Start it from Check Machine and not going to Windows Services.
6. Use “Show Debug” to turn on debug mode and have more detailed information.
7. “Start from console” will start the service from console as exe file. It could help to identify errors related to ssh or problems with access rights to start VCG as a service. Please select the service you want to start, otherwise this option will be disabled for you.. See *Privileges to run ssh process on a client side*. To stop the service in console mode just close the console.
8. “Start with account” button can help to change the Windows account which is used to run the service. It could help in the case if the default account does not have enough permissions to start VCG service. To start the service under another Windows account please stop it, select an account from the drop-down and then press “Start with account” button
9. Use “Secure permissions to VCG folder” checkbox if you want to remove access rights inheritance from the VCG folder.
10. Use “Activate Message Queuing” to activate MSMQ
11. Use “Activate ActiveMQ” and “Deactivate ActiveMQ” to activate/deactivate ActiveMQ
12. If you do not store the content of invocations and messages in logs for sending data please select VCG instance and un-check “Log sent data”. This option is actually only in case the Debug log level is turned on
13. If you do not store the content of invocations and messages in logs for sending data please select VCG instance and un-check “Log received data”. This option is actual only in case if Debug log level is turn on
14. Use “Select VCG log file to decrypt” if you have Debug log level and Log encryption turned on and press “Decrypt” button to decrypt selected file
15. Use “Save decrypted VCG log” to save the file from the previous step
16. Use “Save” button on the top at the right side to save the result of Check action
17. Check “Installer” and / or “Services” checkboxes to create firewall rules
18. If Visma Update is not installed, then “Install Visma Update” button is enabled. Please use it to make sure that you always get the latest version of Visma Cloud Gateway on your server
19. Use “Direct connect” or “Proxy settings” together with “Save connection settings” button to change the way how VCG connects to ODG
20. Use “Change VCG Service Port” to change the HTTP or HTTPS ports of your VCG Service

Check Queues

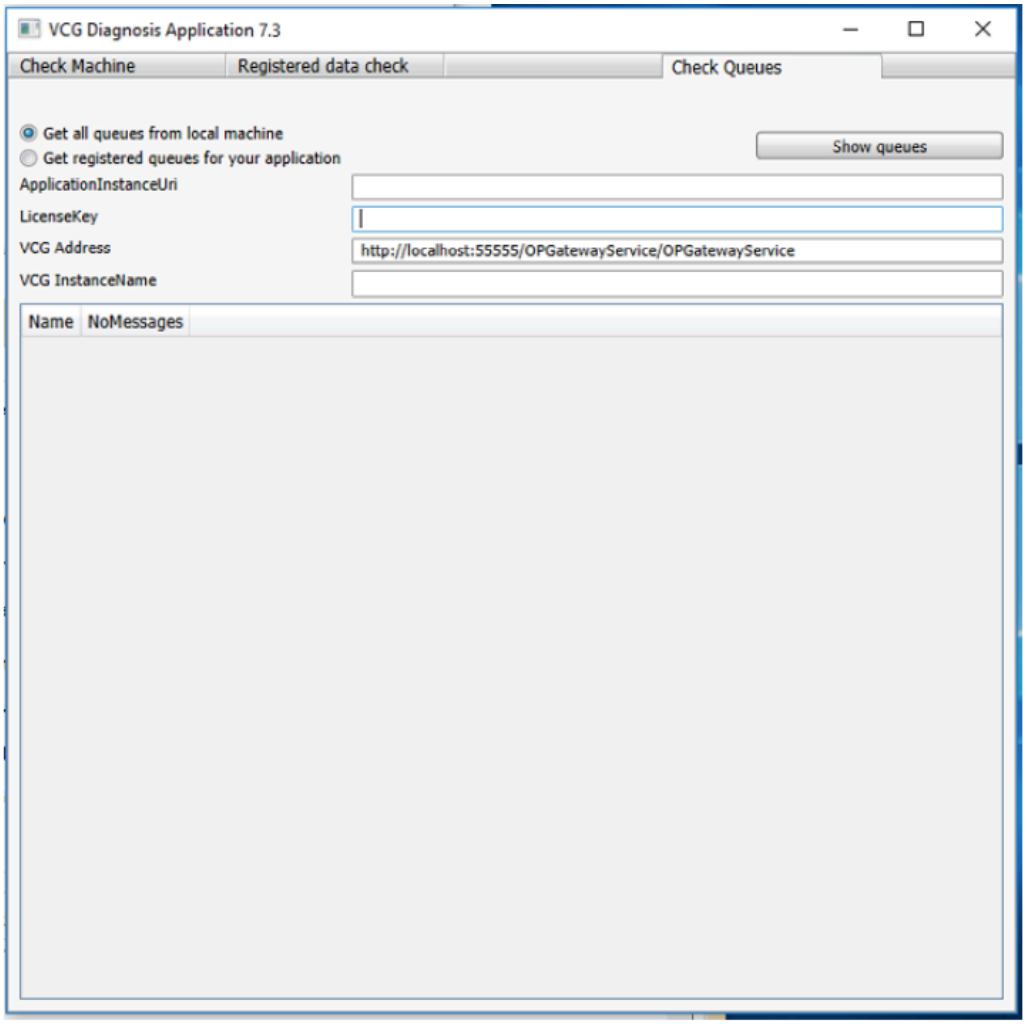
Check Queues tab can help to check if there are messages in MSMQ queues without using Queue Manager. Also, from version 7.3, it can check AMQ messages as well.

Important notes: Check Queues tab

1. The tab has been included into *VCG Diagnosis Application* starting from 6.5 version
2. The tab can help to make sure no messages are stuck or lost in MSMQ queues when it is needed to relocate On Premises Application and keep the same license
3. Check Queues supports 2 possible options:

• “Get all queues from local machine” displays all the queues with the number of messages in them • “Get registered queues for your application” displays the filtered list of queues based on your application details (Application Instance URI and License Key)
4. The tab can check messages only if your application has MSMQ and/or AMQ as local

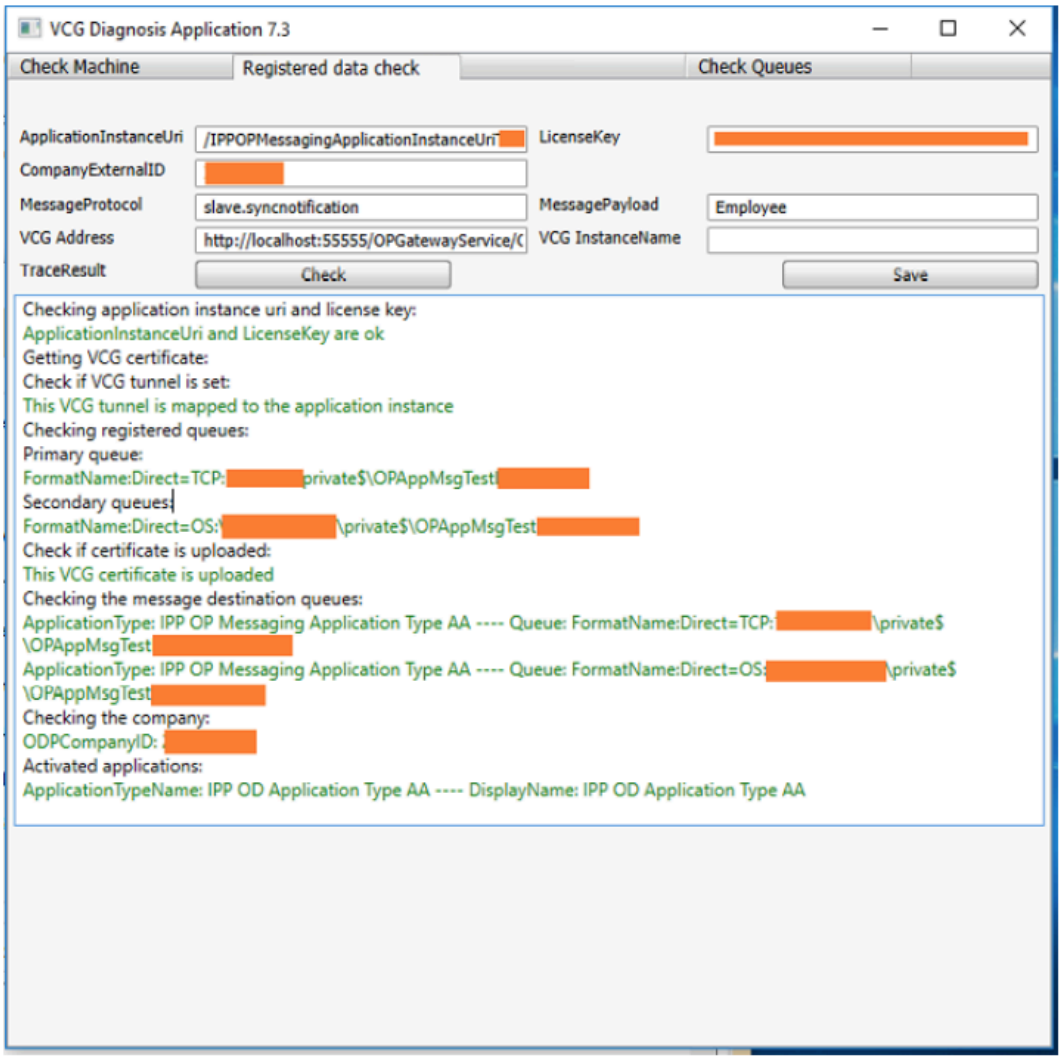
message brokers.



Registered data check

Registered data check tab can help to check if the On Premises Application data is properly registered in ODP. Important notes: Registered data check tab

1. Has been included into *VCG Diagnosis Application* starting from 6.10 version
2. Can help check the folowing data:
• Check if the combination of the license key and application instance uri is ok or not
• Check if the VCG tunnel is properly set for the specific application instance uri
• Check what queues are registered for the application instance. Displays both first and second queues if there are any registered in ODP
• Check if any certificates are uploaded on the application instance, and if that certificate belongs to the VCG through which the call is made
• Check the queues where a message identified by MessageProtocol, MessagePayload and CompanyExternalID will arrive
• Check if the company identified by the CompanyExternalID exists in ODP and what applications are activated for it



Move VCG

Move VCG tab can help to to move VCG from one machine to another with keeping the same configuration and Visma.net data and replaces manual steps

Important notes regarding Move VCG feature:

1. It helps to move VCG and make a fresh installation of Visma Update (no need to keep the same Visma Update, please just make a new install of it and your VCG will be always up to date)

2. Move VCG feature replaces the manual way

3. It has been included into *VCG Diagnosis Application* starting from 6.8 version

4. It is **NOT** available if VCG Diagnosis Application is in the same folder as VCG. It is done in order to prevent problems when VCG Diagnosis is trying to move itself

5. Move VCG requires to have VCG installer

6. VCG Diagnosis Application can be downloaded from *VCG Diagnosis download* and saved to any other folder than "VismaCloudGateway". In such case Move VCG tab will be accessible

7. VCG Diagnosis Application can be also copied from the "VismaCloudGateway" folder to any other place and then the Move VCG tab will become available. See *Visma Cloud Gateway Default Location* (see page 47)

8. Before moving VCG please make sure no messages are stuck or lost in MSMQ queues and use the instructions from *Check Queues* (see page 36)

9. If you have ActiveMQ as

10. The tab will move the main VCG instance and all additional VCG instances you have. For more details about VCG instances see *Multiple Visma Cloud Gateway Instances* (see page 13)

11. In order to move VCG to the new machine you do not need to remember ODP user and password which was used for the installation in the first place

12. Moved VCG will be for the same ODP customer (customers in case of multiple VCG instances) as on the old machine/server

13. VCG relocation will keep all the settings of the old VCGs including ports of VCG services and Windows accounts under which your VCG service was started. E.g.:

• If your Visma Cloud Gateway Service was started under a Local System account then on the new machine it will be the same. Please make sure on the machine machine an account to run VCG has sufficient permissions • If your Visma Cloud Gateway Service was occupying port 55556 on the old machine, then on the new machine it will be the same. If port 55556 on the new machine is occupied by another process then during reinstallation the installer will choose next not occupied port (e.g. 55557)

14. Always start with clicking "**Check**" from the "Check Machine" tab in order for the Diagnosis application to verify your VCG installation. Please make sure that:

• You have VCG installed. If you do not - then there is nothing to move

• Your old existing VCG is ok. If it is not - please try to fix all the red issues before moving it. Otherwise the same issues might appear on your new machine/server. If the problems cannot be fixed then it is safer to have a fresh install on the new machine/server instead of moving broken VCG

15. Relocation of Visma Cloud Gateway consists of two major parts:

• Removing old VCG and saving all the configuration to the new machine

• Re-installing VCG on the new machine and using configuration from the old machine (saved in the previous part)

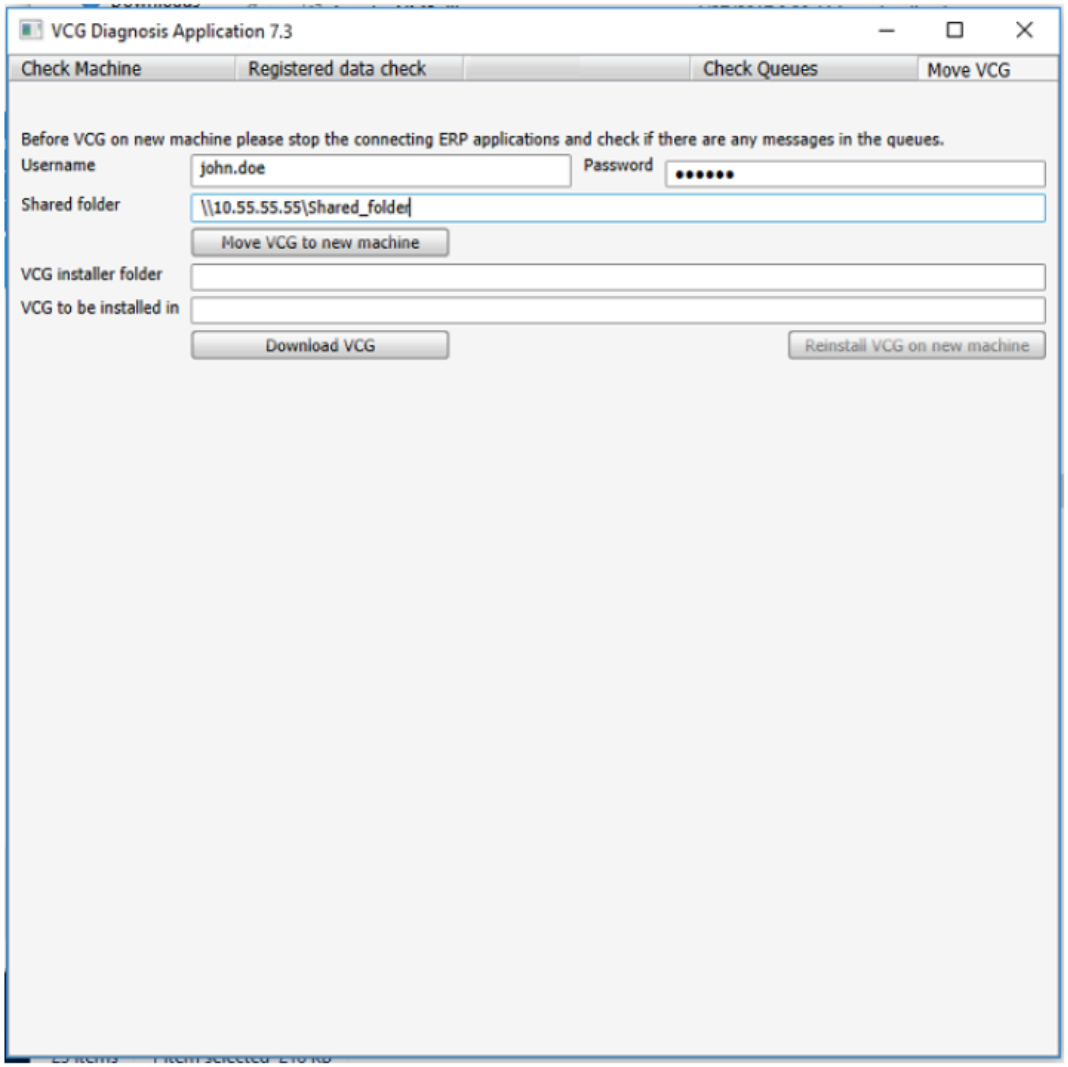
16. Please make sure that your new machine/server meets the *Requirements* (see page 6) needed for Visma Cloud Gateway

Remove VCG and Save Configuration

This is the first part of VCG relocation. Please note that:

• During the below steps all the configuration and settings will be saved and sent to the shared folder on the new machine.

• Removing of the old existing VCG is needed in order to still keep the unique tunnel. The VCG on the new machine will get the same tunnel and if the old one is not removed, then your VCG tunnel will not be unique and nothing will work.



1. Please do not forget that before starting using the VCG Diagnosis application you need to make the "Move VCG" tab available for you. There are two ways to do it: download VCG Diagnosis from internet or copy it from VCG folder to any other location as it is described in "Move VCG" section

2. Please prepare a folder on the new machine, grant write access to a windows user which can access this folder remotely

3. Run VCG Diagnosis application from the existing VCG machine you desire to move

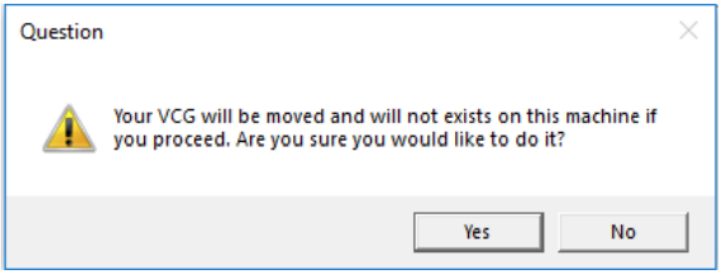
4. Go to "Move VCG" tab and set up the below data as it is shown in the above screenshot

• Windows user name who has privileges to copy anything to the remote shared folder

• Password for your user

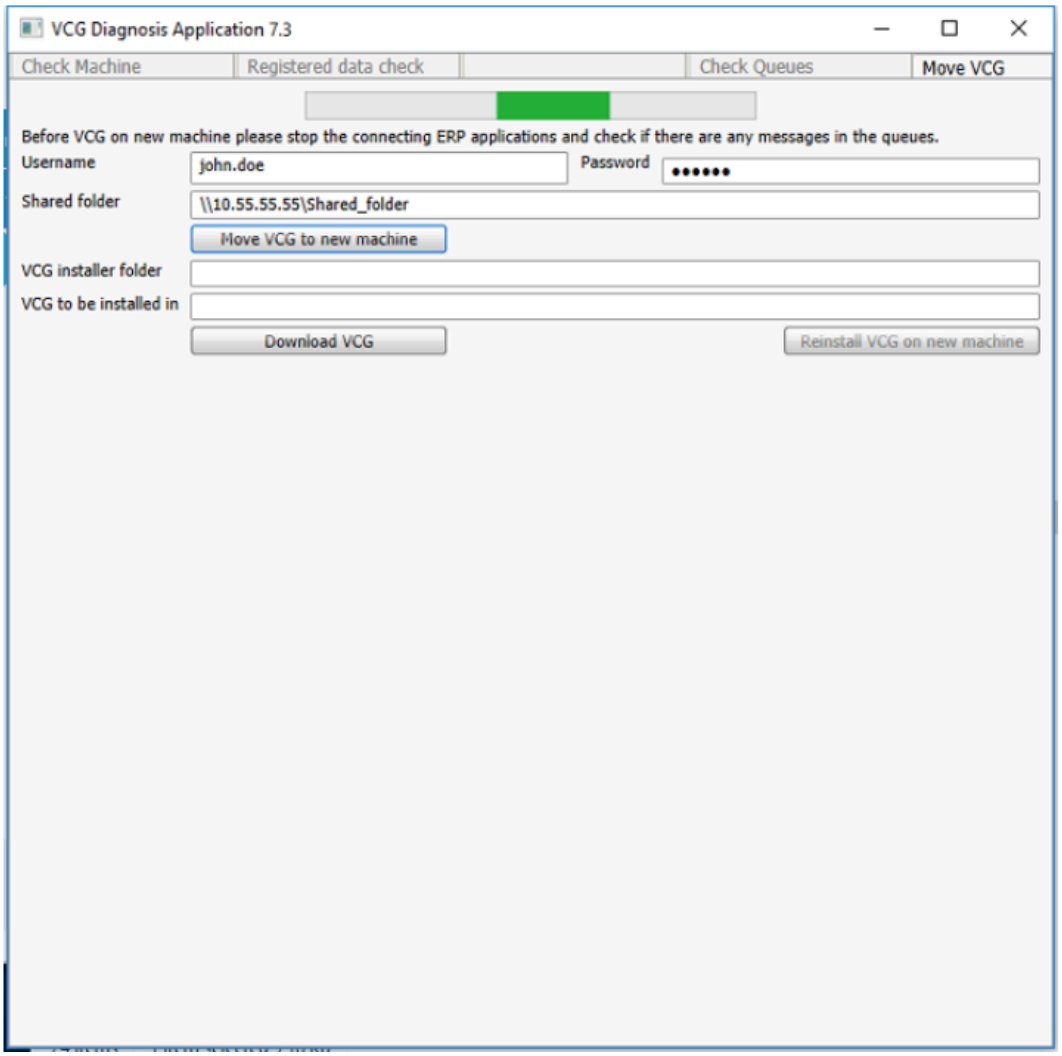
• The address of your shared folder on your new machine. The path can be with the IP address of your new machine or with the host name

5. Click the "Move VCG to new machine" button. You will get the below warning telling you that your existing VCG will be removed and you will not be able to use it any more.

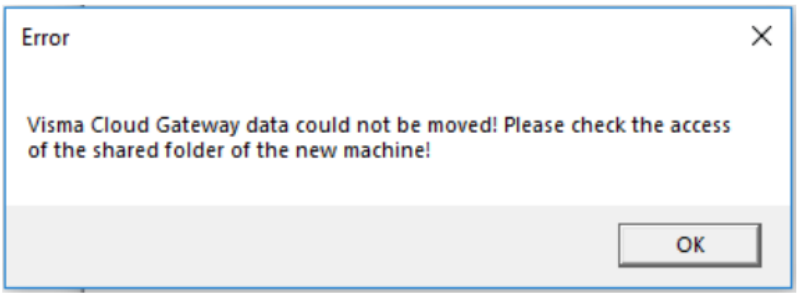


6. If you are sure that VCG relocation is the action you would like to do please click the "Yes" button and wait

7. Saving all the configurations and removing your old VCG takes some time



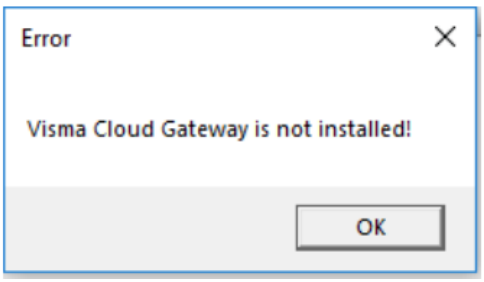
8. If something goes wrong (e.g. access for the folder and user you provided is not allowed, or you use not correct password) the error will be displayed and existing VCG will still stay on your old machine and you can still use it



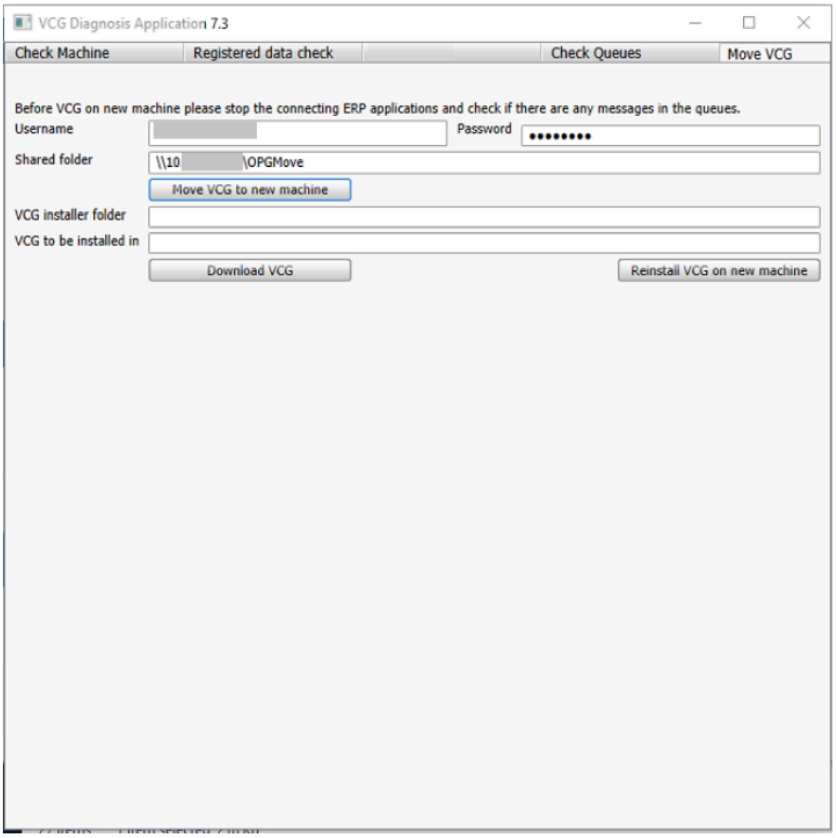
9. If everything is ok then in the end the below message will be displayed



10. After that the VCG on your old machine will not exist any more. You can verify it by switching to Check Machine tab and clicking the 'Check' button. If you try to use Move VCG to new machine button again you will get the below error



11. Your Move VCG tab will be in the below state



12. Please close it and follow the steps from the second part of VCG relocation. See *Reinstall VCG* (see page 41)

Reinstall VCG

This is the second part of VCG relocation. Please note that:

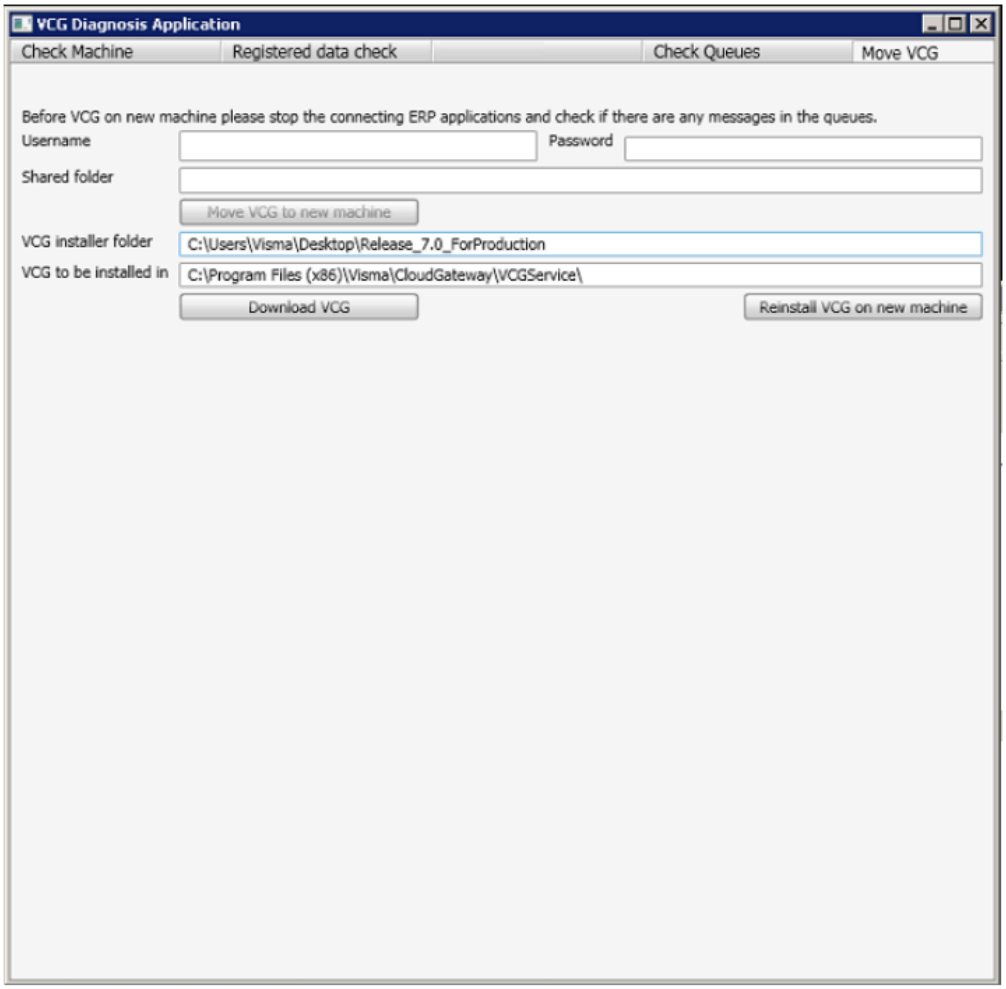
• The second part of VCG relocation can be conducted only after the first one: *Remove VCG and Save Configuration* (see page 39)

• You will need to have moved VCG Diagnosis application on your new machine. It should be located in the shared folder and have **MovedDiagnosisApp** name

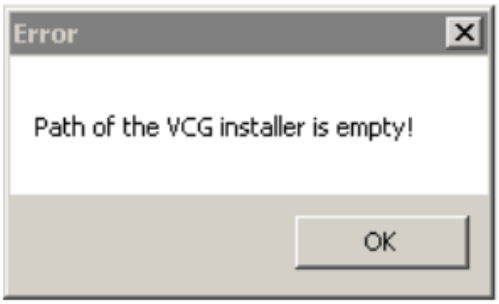
• You will need to have VCG installer locally on the new machine. It can be achieved by using “Download VCG” option in Move VCG tab from VCG Diagnosis application (it will download the latest available VCG installer from internet) or just copied from somewhere (in case if you would like to keep the same VCG version as before)

• This part is called **Reinstall VCG** because it will use this feature from the VCG installer • During this part you will be asked if you would like to install Visma Update. We strongly recommend you to agree to it in order to have your Visma Cloud Gateway always up to date. Visma Update does not require any settings from your old machine/server and it is enough to have fresh install

• Please make sure that your new machine satisfies the *Requirements* (see page 6) needed for Visma Cloud Gateway

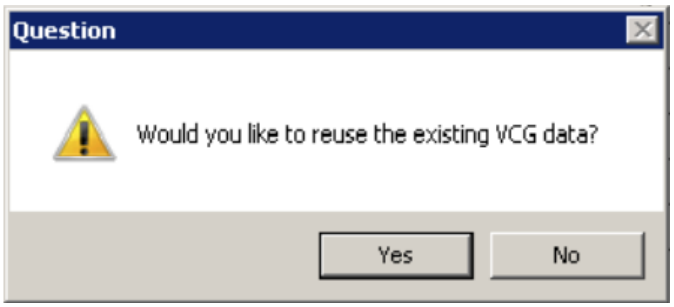


1. Please start VCG Diagnosis on your new machine from the MovedDiagnosisApp folder and go to "Move VCG" tab **2.** Provide a path for VCG installer on your new machine: **VCG installer folder** field. If it is empty you will get an error



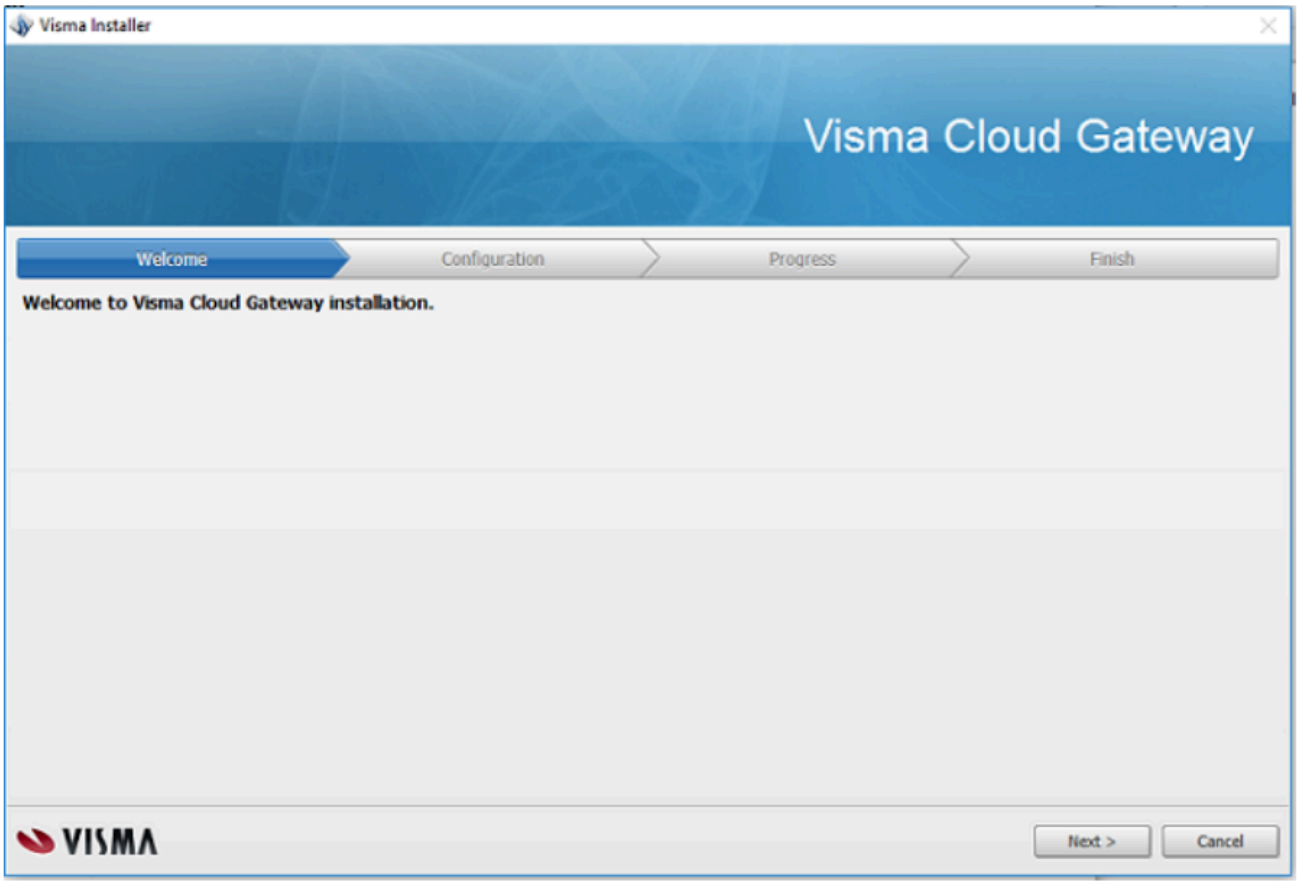
3. Use "Download VCG" button to download the latest VCG installer to your machine

4. Click "Reinstall VCG in new machine". You will be asked if you would like to reuse the configuration from the VCG from your old machine. Here you can chose "No" and then you can proceed with a fresh install. If you chose "Yes" then the following instructions are relevant

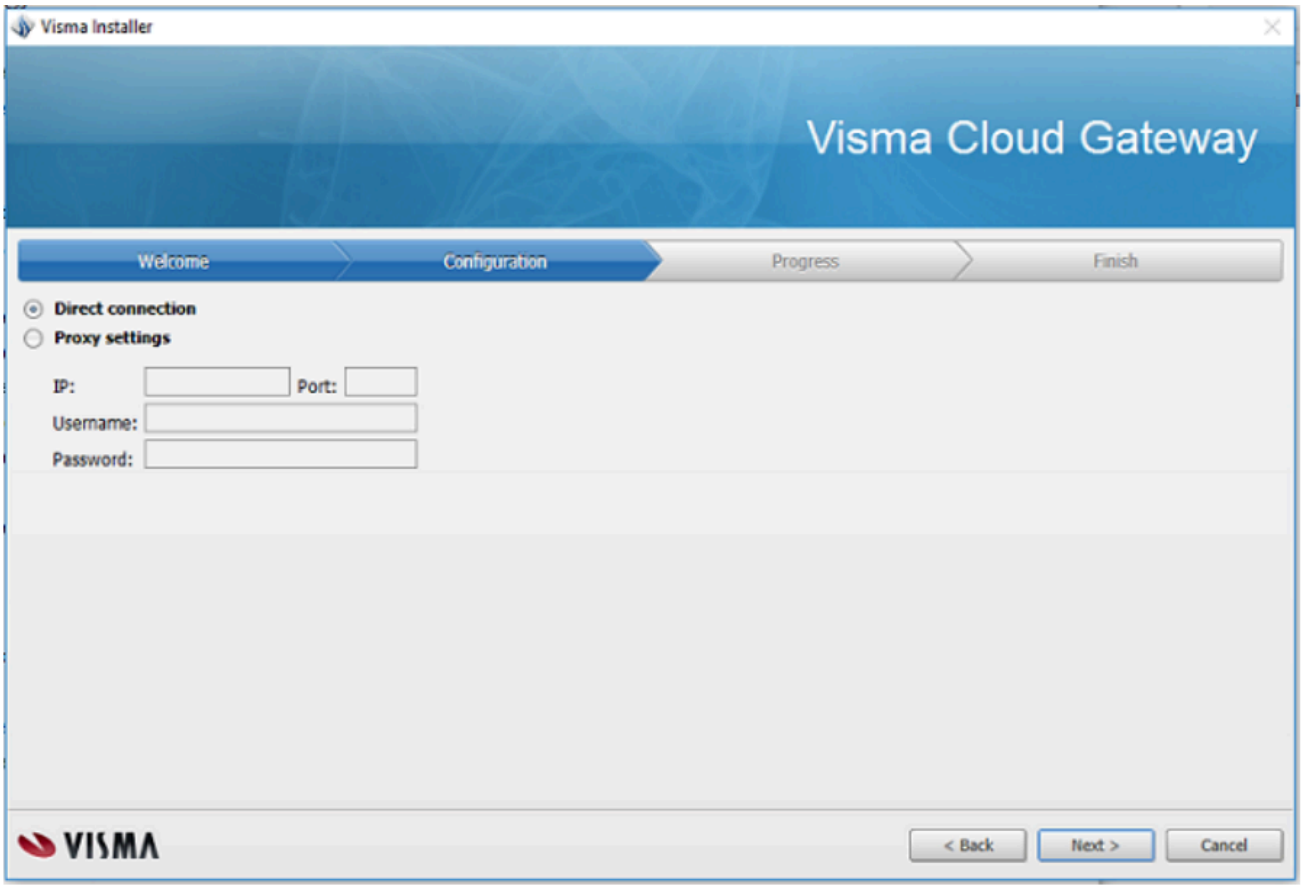


5. You will be asked to select the language and choose the applications to install: Visma Cloud Gateway and Visma Update. Please select bot

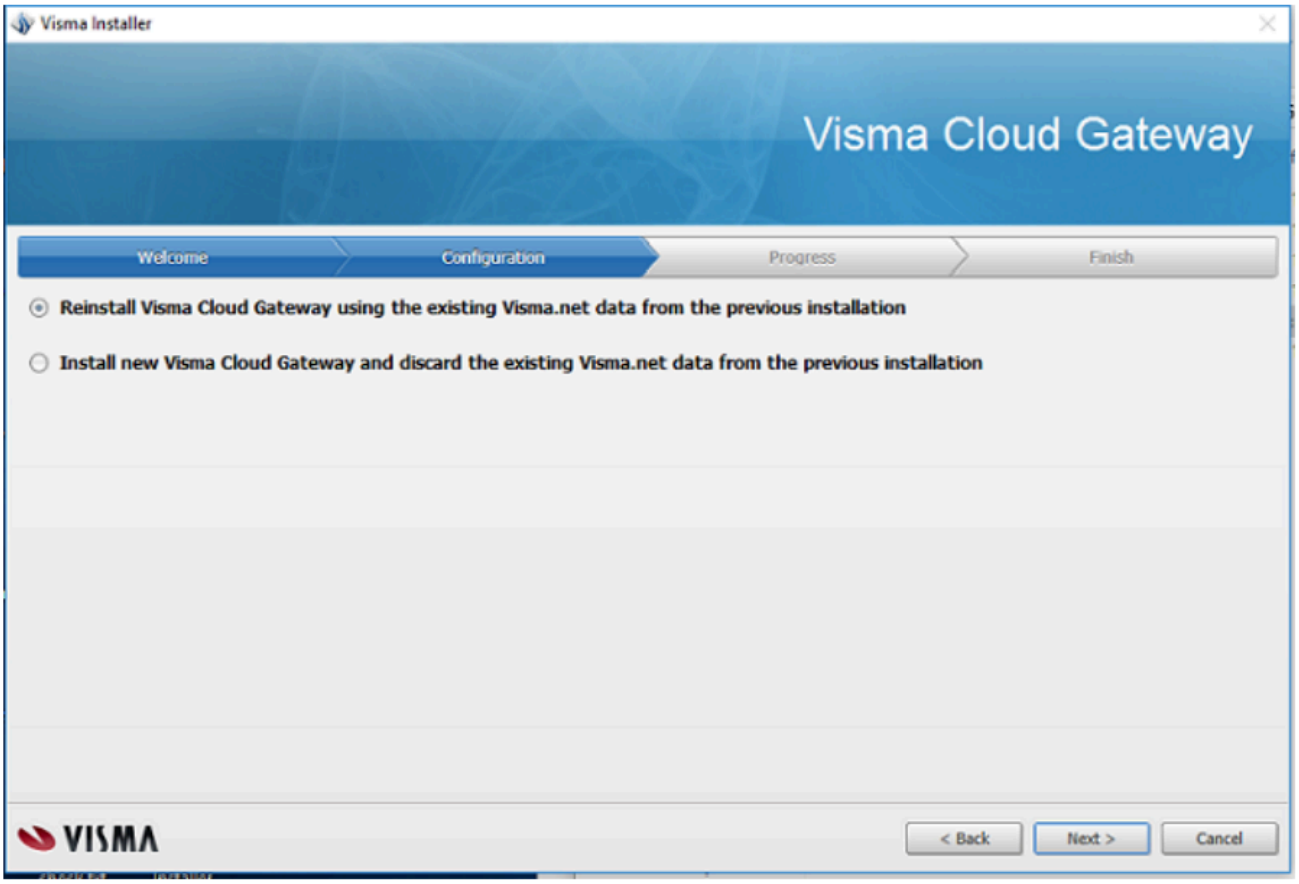
6. You will be welcomed to the Visma Cloud Gateway installation. Please press Next



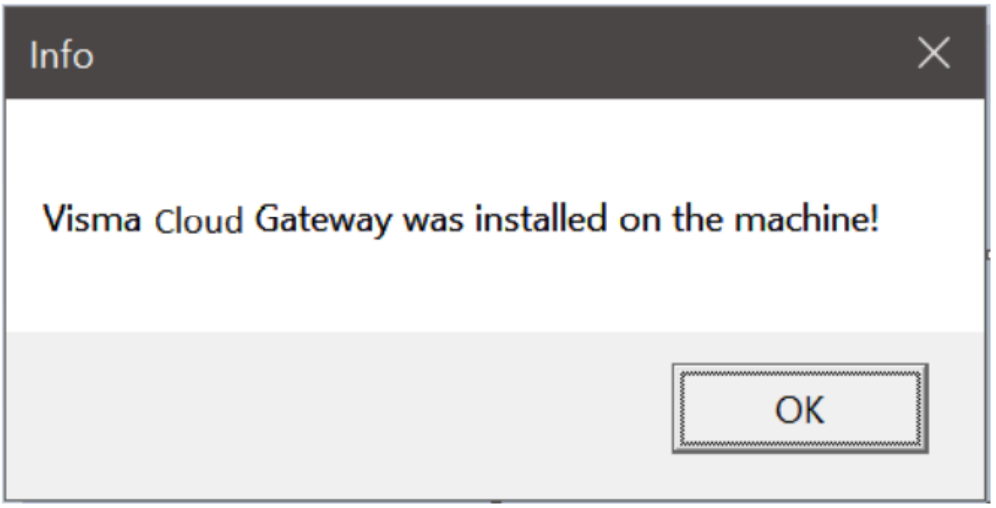
7. On the next screen you will be able to configure the Proxy setting. See *VCG Installation Steps* (see page 23) step 2. In case you do not need it just press “Next” button



8. On the next step you will be asked if you would like to reuse existing VCG data or to conduct fresh installation. Please choose reuse existing data and click “Next” button



9. Wait for the reinstallation to be competed



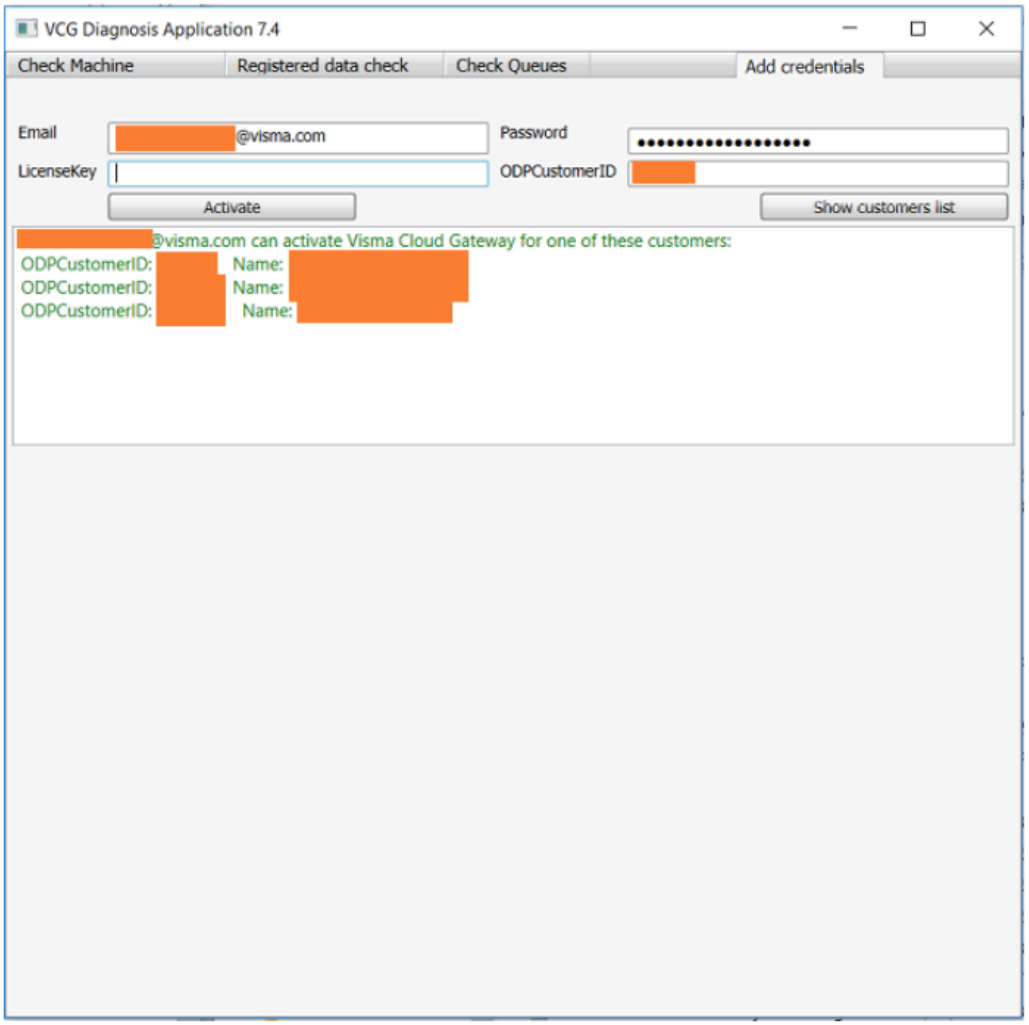
10. Proceed with Visma Update installation. See *VU Client Installation and Uninstallation* (see page 66) **11.** Now you have VCG moved from your old machine/server to your new one and ready to be used. You probably will need to check some configuration on your On Premises application in order to make sure it can connect to your VCG installed on the new machine

Add Credentials

Add Credentials is needed in the case of Visma Cloud Gateway (VCG) being installed without providing any Client credentials. It is very easy to use if you follow the below instructions.

Since version 7.4 Add Credentials becomes a part of *VCG Diagnosis Application*

Add Credentials works only if it is on the same machine where VCG is supposed to be installed.



As you can see in the picture above the tab consists in several simple elements:

1. Email - This is the User that has Customer Administrator rights
2. Password - Password for the User
3. LicenseKey - The activation key that belongs to the wanted Customer
4. ODPCustomerID - The ID of the Customer that is needed to activate the VCG

- This can easily be obtained just by adding the UserEmail, Password and clicking on "Show customers list" button.
- A list of ODP customers with ID and Names will appear for which the User has a CustomerAdministrator

role. In order to activate the VCG you have 2 available options:

1. Email+password+Licensekey of the desired customer
2. Email+password+ODPCustomerID

Once the activation is complete, this message will appear in green "Visma Cloud Gateway is configured successfully!

In case you enter the wrong ODPCustomerID, you will get in red Error 122 with "Error Message: CUSTOMERID has an invalid value."

The same is for a wrong license: "Error Message: No customers" with error 106

AMQ Admin

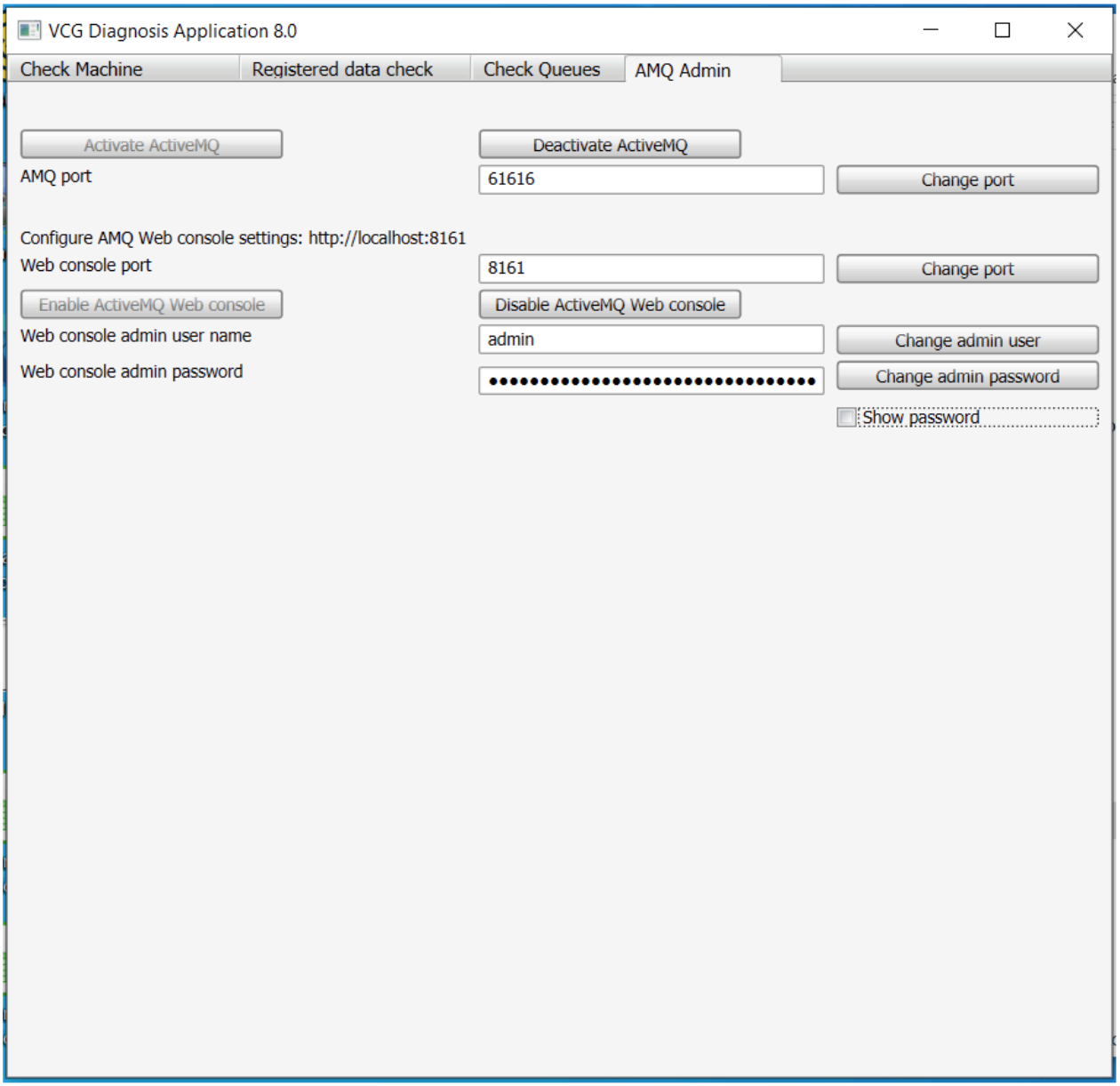
AMQ Admin is a tab useful for editing the ActiveMQ setup on the server. It is very easy to use if you follow the below instructions.

Since version 8.0 AMQ Admin becomes a part of *VCG Diagnosis Application*

AMQ Admin works only if it is on the same machine where VCG is supposed to be installed.

This tab contains several sections:

1. Activate AMQ sections contains:
    - “Activate ActiveMQ” button that allows the user to activate the service if it is desabled/not installed.
    - “Deactivate ActiveMQ’ button that allows the user to deactivate the service in case it is active.
    - “Change Port” button that together with the text field can be used to change the port of the ActiveMQ service.
2. AMQ Console section contains:
    - “Change port” button that together with the text field allows the port of the web console interface to be changed.
    - “Enable ActiveMQ Web console” used to enable access to the web console interface.
    - “Disable ActiveMQ Web console” used to disable access to the web interface.
    - “Change admin user” + “Change admin password” used together with their respective text fields will allow the user to change the web console interface credentials.



Configuration

It is possible to set up Visma Cloud Gateway configuration during the installation, some part of configuration could be changed later from the configuration file. Visma Cloud Gateway service could require some Windows system configuration, but usually such changes are needed only in the case of problems. If everything is working it is recommended to use the default settings.

Important: It is possible to install VCG for ODP customer with several sub-customers and then all companies belonging to those sub-customers will be available via this VCG.

Visma Cloud Gateway configuration set up during the installation:

- VCG folder: can **not** be changed later. See *Visma Cloud Gateway Default Location*
- ODP user and customer: can **not** be changed later. If it is needed to use VCG for another customer please uninstall your current version of VCG and then install it again using another ODP user and/or customer • *VCG Deployment Models*: **can** be changed later in VCG configuration file. See *Visma Cloud Gateway Configuration File*
- VCG can be installed without providing the Client credentials, but in order for your On Premises application integrations to work, the credentials need to be added later !!!

Visma Cloud Gateway configuration after installation:

- Windows account to run Visma Cloud Gateway service. Can be changed only after VCG is installed. See *Privileges to run ssh process on a client side*
- Windows account policy to run the service. Can be configured independently on VCG installation. See *How to verify Windows account policy rights needed to run a service*

Multiple VCG instances:

- **Can** be **added/removed** at any time, but not changed. If the instance is already created for the certain ODP user and customer the only way to change it is to delete the instance and create it again
- If the main VCG instance is uninstalled then all additional VCG instances will be removed

Visma Cloud Gateway Default Location

- C:\Program Files\Visma\CloudGateway\VCGService for 32 bit systems
- C:\Program Files (x86)\Visma\CloudGateway\VCGService for 64 bit systems

Visma Cloud Gateway Configuration File

Visma.Services.OPGateway.OPGatewayService.exe.Config (Visma Cloud Gateway Configuration file) is located in “VCGatewayService” folder (For default Visma Cloud Gateway installation see *Visma Cloud Gateway Default Location*).

Please, note:

- Below is an example of configuration and in your Visma Cloud Gateway installation might be another ports value, host names and other settings
- Visma Cloud Gateway Service should be restarted if something is changed in Visma Cloud Gateway Configuration file

Configuration settings

1. All the settings between *<appSettings>* tag should not be empty, except this one: *<add key="ipaddress" value="" />*
2. The version of installed Visma Cloud Gateway on you machine: *<setting name="**VersionName**">7.5</setting>* **3.** In the case of problem with Visma Cloud Gateway Service starting check if this setting is false: *<runtime> <generatePublisherEvidence enabled="**false**"/> </runtime>*
4. Obsolete starting from version 6.6 (kept for backward compatibility, please do not use it any more): To turn on **Debug mode**: change **Info** to **All** here“<Name>OPGService</Name> <SeverityLevel>**Info**</SeverityLevel>” **5.** To turn on **Debug mode**: change **Info** to **All** here “<add key="LogLevel" value="**Info**"/>” **6.** On Demand Gateway is in use (IP address or host name): “<add key="server" value="52ccc18d658d4ba7ae9c5c9773cfd960@**odg.visma.net**" />”
7. On Demand Gateway port for your VCG installation: “<add key="**remote_port**" value="**xxxx**" />”
8. Local forwarding port: “<add key="**local_port**" value="**30300**" />”
9. Your Visma Cloud Gateway port: “<add key="**OPGPort**" value="**55555**" />”. If 55555 is already occupied by any other process then VCG port will get next available one after 55555;
10. Your unique Visma Cloud Gateway ID check “<add key="**OPGID**" value="**52ccc18d658d4ba7ae9c5c9773cfd960**" />”
11. Visma Cloud Gateway Service starts automatically and checks if it is possible to connect to On Demand side. The

interval between checks (in seconds) is configurable: “<add key="**TimesBetweenAttempts**" value="**00:00:30**" />”

12. Send/Receive timeout settings:

a. “<binding name="OnDemandGatewayPortBinding" closeTimeout="00:02:00" openTimeout="00:02:00" **receiveTimeout** ="**00:10:00**" **sendTimeout** ="**00:05:00**"/>”

b. Setting for the new flow (version 3.0): “<add key="**SendReceiveTimeout**" value="**00:05:00**" />”

13. This setting could be used if it is needed to change the ***deployment model*** of Visma Cloud Gateway: “<add key="**LocalInstall**" value="**1**" />” (0 means centralized deployment, 1 - local. See *Centralized Deployment* and *Local Deployment*). Do not forget to re-start Visma Cloud Gateway Service

14. Configuration of the number of listeners that will send messages to On Demand Gateway: <add key="**ToMRQueueNoListeners**" value="4"/>

15. “<addkey="**LogOPSentData**" value="**1**" />”. The default value “1” - to store everything in VCG logs what is sent by a client; “0” - the content of sent data by On Premises client will not be stored in VCG logs. This setting is actually only together with SeverityLevel equals All (Debug mode logging level) and is needed in case an On Premises client sends security sensitive data (like salary information) to On Demand and does not want the support team to see such information in VCG logs.

16. “<addkey="**LogOPReceivedData**" value="**1**" />”. The default value “1” - to store everything in VCG logs what is received by a client; “0” - the content of received data by On Premises client will not be stored in VCG logs. This setting is actually only together with SeverityLevel equals All (Debug mode logging level) and is needed in case an On Premises client receives security sensitive data (like salary information) from On Demand and does not want the support team to see such information in VCG logs.

17. “<add key="**ProxyIsUsed**" value="**False**" />”. The default value “False” - no proxy. “True” - is needed in order for VCG to work through proxy and will require IP address and port (see the below settings).

18. “<add key="**ProxyIp**" value="**xx.xx.xx.xx**" />”. The IP address of the proxy. Should be used together with **ProxyIsUsed**" value="**True**" and **ProxyPort**

19. “<add key="**ProxyPort**" value="**XXXX**" />”. The proxy port. Should be used together with **ProxyIsUsed**" value="**True**" and **ProxyIsUsed**

20. <add key=“ProxyUser” value=“**<proxy user name>**” />. User for your proxy. Will work together with other proxy settings

21. <add key=“ProxyPasswordEncrypted” value=“**<proxypassencrypted>**”/>. Password for proxy user. Works only together with **ProxyUser**

22. <add key=“LogLevel” value=“**''Info''**”/>. This show is the log is on Debug or Info

23. <add key=“BlockListTime” value=“**''00:01:00''**”/>.

24. <add key=“OPGHttpsPort” value=“**''55556''**”/>. This port is used for HTTPS requests.

Privileges to run ssh process on a client side

Visma **Cloud Gateway** windows service will be run as LOCAL SYSTEM by default. It is possible to use NETWORK SERVICE or LOCAL SERVICE. For this operation the NETWORK SERVICE must have the correct user policy rights to be able to start a service, otherwise it will not be possible to start the ssh process.

How to verify Windows account policy rights needed to run a service

How to verify user policy rights - valid for Windows 7 and later:

1. Open "Local Security Policies" (in Control Panel - Administrative Tools).

2. Open Local Policies -> User Rights Assignment.

3. View the properties of the "log on as a service" Policy.

4. Make sure that "LOCAL SYSTEM" user for Visma Update Service exists in the list of user who have the above permission

5. Make sure that "LOCAL SYSTEM" (or "LOCAL SERVICE", or "NETWORK SERVICE") user for Visma Cloud Gateway Service exists in the list of users who have the above permission.

6. If needed users are absent then add them manually.

7. After any modification in order to apply new settings the group Policies should be restarted. In the Command prompt run the command `gpupdate`.

Messages

This section is about messages. On Premises applications could use msmq messages or Active MQ and at On Demand side - jms

During Visma Cloud Gateway installation the installer activates MSMQ (see *Microsoft Message Queuing Introduction*) and creates default outgoing queue “opgtomrqueue” with needed security for Visma Cloud Gateway Service to take messages from this queue and send it further to Visma On Demand Gateway at On Demand side via invocation. Then Visma On Demand Gateway transfers a message into a jms (*http://en.wikipedia.org/wiki/Java_Message_Service*)message and sends it to the Visma Message Router. Message Router routes messages to the final destination which is defined in On Demand Platform. And vice versa for the opposite direction.

In the case if something went wrong during VCG installation it is possible to activate MS MQ later manually. See *Installation or activation of MSMQ Windows Component* chapter.

It is important to make sure that your application has appropriate permissions on the outgoing queue to be able to publish messages into it. In the case when an ingoing queue is needed - it can be created manually in MSMQ or programmatically from your application. All queues should be private, transactional and have appropriate security settings.

Starting from the 5.3 version VCG supports Active MQ, which can be installed during VCG installation and used instead of MSMQ.

Limit of message to be sent/received to/by the On Premises applications is 4 MB

Please note, that to receive messages at On Premises side is needed to register your ingoing queue with appropriate subscription in On Demand Platform. It could be done programmatically via VCG by calling a specific method in On Demand Platform and using On Premises library (provided by Integration Platform team)

In the case of several VCG instances outgoing queues for each instance will be created automatically during an instance creation and will contain an instance name. Ingoing queues should be created by On Premises application per each VCG instance.

For any technical details about messaging integration into your system please contact the Integration Platform team. Please note that your user guide should contain needed user information and instructions in the case if it is needed to follow any manual steps for message configuration.

Microsoft Message Queuing

Microsoft Message Queuing or MSMQ is a Message Queue implementation developed by Microsoft and deployed in its Windows Server operating systems since Windows NT 4 and Windows 95. MSMQ is essentially a messaging protocol that allows applications running on separate servers/processes to communicate in a failsafe manner. A queue is a temporary storage location from which messages can be sent and received reliably, as and when conditions permit. In other words it works on disconnected or connected mode and provides Asynchronous Programming. If the client is disconnected from the network, in that scenario, MSMQ is the most preferable method because in this case the Server does not need to wait for the client to read the data and send back the acknowledgement to the server.

VCG will activate MSMQ for you or it can be activated from Control Panel (Control Panel->Programs and Features-> Turn Windows features on or off->Microsoft Message Queue (MSMQ) Serve), or from VCG Diagnosis application.

For more information read:
- *MSMQ - Overview, Setup and Sample Codes in C#*
- *Destination Queues*
- *Message Queuing Messages*
- *Transactional and Nontransactional Messaging*
- *Sending Messages to a Transactional Queue*
- *Retrieving Messages from a Transactional Queue*

Installation or activation of MSMQ Windows Component

Since MSMQ is part of Windows Operating System it is very easy to activate it. Please follow the instructions from the link: *Installing Message Queuing (MSMQ)*

The activation also can be done via scripts: *Minimalist setup script for MSMQ unattended installation*

To verify MSMQ activation follow the instruction: *How to tell if MSMQ is installed*

MSMQ tips and tricks

- **Where to find MSMQ settings:** “Control Panel\All Control Panel Items\Administrative Tools\Computer Management->Services and Applications->Message Queuing” and “Control Panel\All Control Panel Items

\Administrative Tools->Services->Message Queuing”

- **MSMQ and Citrix** together on the same machine: we recommend to uncheck the "Server Security" setting on the Message Queuing
- **Machine cloning:** we do not recommend to clone MSMQ otherwise it will cause problems. If the cloning was done, please deactivate and reactivate MSMQ again and make sure that queue names are unique in MSMQ and corresponding the queue names in OP applications. For more details please read this article *MSMQ prefers to be unique*
- ***MSMQ Messages Are Stuck In The Outgoing Queue***: to solve this problem please open the Message Queuing properties dialog of the receiving server and on the Server Security tab uncheck the box for "Disable unauthenticated RPC calls":
- When specifying the destination computer using the computer address, either the fully qualified domain name or the NetBIOS name of the computer can be used if the specified name can be resolved to an IP address. • In case if your **On Premises Application and VCG are *NOT* on the same machine**

1. It is required to add proper access rights for the ANONYMOUS User for the “opgtomrqueue” queue on the machine/server with VCG installed. For example VCG is installed on server AAA and Document Center with Sync Engine are installed on server BBB. Please go to server AAA and Message Queuing, find “opgtomrqueue” queue and give ANONYMOUS “Full control” on. The please restart MSMQ (Message Queuing Service in the list of Windows services) on both machines, restart VCG and Sync Engine. Try to run a test from your On Premises Application.
2. It is necessary to allow network access

Active MQ

Short introduction, how to install and how to check the status

Apache Active MQ is an open source message broker written in Java together with a full Java Message Service (JMS) client. Active MQ is recommended instead of MSMQ in the case if the On Premises application is not .net based or can’t/don’t want to use Windows default messaging system MSMQ.

At installation of VCG it is possible to choose to install ActiveMQ service on a VCG machine. In the case if the“Active MQ” option is unchecked it is possible to download, install and enable later at any time from the VCG Diagnosis application.

In case if your On Premises application is on a different machine than VCG, then ActiveMQ port on VCG machine should be open for incoming connections (can be found either in VCG Diagnosis Application / Check Machine after run Check or in VCG configuration file. The default port is 61616 but if it is occupied by another process then it will be the next available port. Also it is needed to allow outcomming connections to the Active MQ port on On Premises Application machine to VCG machine.

Please note that ActiveMQ requires the latest version of Java and VCG installer can download and install it for you.

ActiveMQ as local message broker will use *http://localhost:8161/admin/queues.jsp*

IMPORTANT - For VCG to download ActiveMQ, it needs to have access to **archive.apache.org** on port 80

If you encounter any problems with ActiveMQ please have a look at this pages

https://confluence.visma.com/display/IS/IPP+Support+ActiveMQ+OPG

For more detailed information please contact IPP team and ask for “GuideForOPApplicationDevelopers” document

Error handling

This section contains information where to find logs, how to interpret error codes, where to find more details for each type of errors and some possible error situations and possible solutions.

Errors diagnosis

This section contains instructions on what to do if you get problems.

What to do in the case of problems

1. In the case of problems first of all check logs for more information. In the case of problems during Visma Cloud Gateway installation see installation logs. In the case of problems during using the gateway see Visma Cloud Gateway Service logs. Use *Where to find LOGs* section.
2. Find correct error code and read error code details. See *How to use error codes* section.
3. Read *Some possible problems and recommendations on how to solve them*.
4. If the problem still is not solved please run *VCG Diagnosis Application* and then contact support
   Please do not forget to provide logs!

How to use error codes

Each error has its own unique error code. The error message contains several error codes and a unique error identificator (GUID). This section provides some instructions on how to read and interpret error codes.

Error message contains several codes and the most important one is the last one before GUID. Error codes are grouped by Module from which error comes.

Example 1:

5003 would be the code with problem if user got 312_5003_827284fb-69ef-4632-863c-435e20ed6000

- 312 is the first error code
- 5003 is the second one (the last one before GUID)
- 827284fb-69ef-4632-863c-435e20ed6000 is error GUID

Error code 5003 came from **On Demand Platform** and means: "ODP Web Service not available".

Example 2:

5014 would be the code with the problem if user got 312_5300_ 5014 _720e508a-d534-417f-89c5-a12fcc938587

- 312 is the first error code
- 5300 is the second one
- **5014** is the last and the most important one
- 720e508a-d534-417f-89c5-a12fcc938587 is error GUID

Error code **5014** came from ODP and means something is wrong with ODP data (for example company information) used at client side.

Where to find LOGs

Installation logs: C:\ProgramData\Visma\Visma Installer\Log

Visma Cloud Gateway Service logs: C:\ProgramData\Visma\CloudGatewayService\7.6\Logging\ - main VCG instance logs and C:\ProgramData\Visma\CloudGatewayService\7.6\<VCG instance name> - logs for each additional VCG instance

Check Machine results logs: C:\ProgramData\Visma\CheckMachineApp\7.6\Logging\log

Possible Problems and How to Solve

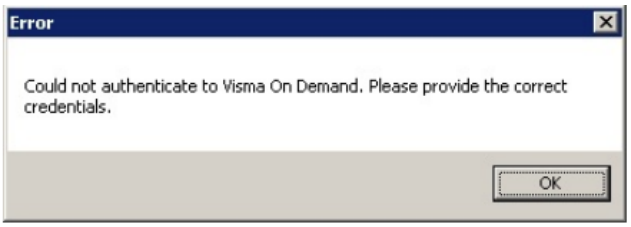
Please note that each VCG installation has a corresponding unique SSH tunnel due to certificate usage and security requirements. Please do NOT clone VCGs, it will make VCG (SSH) tunnel not unique and your VCG will stop working. In case if you machine is cloned, please uninstall VCG and make a fresh install

If you have problems with ActiveMQ please follow this page, or contact support

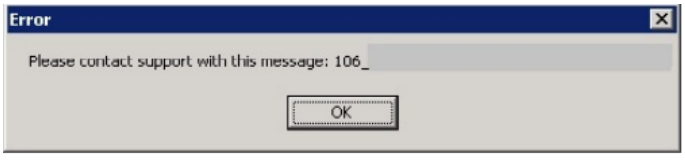
https://confluence.visma.com/display/IPE/IPP+Support+ActiveMQ+VCG+%3E%3D+7.3

Some possible errors while Visma Cloud Gateway installation

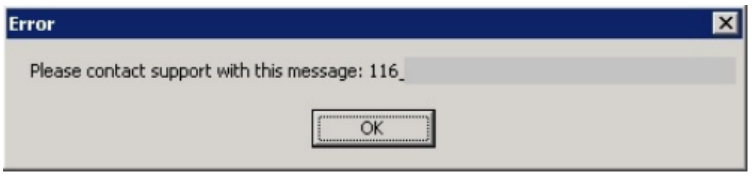
1. Wrong credentials: Error code **5006** in logs. Please, check that your credentials are correct. If you do not remember your password it is possible to use “Forgot password?”



2. Your user does not have a Customer **Administrator** role for any Customer. Error code **106**. Contact the person responsible for the Customers in the On Demand Platform.



3. Communication exception. Error code **116**. Please, pay attention to *Visma Cloud Gateway Requirements*.



116 error can be also related to a proxy settings:

- Go to Internet Explorer
- Tools->Internet Options->Connections tab->LAN settings
- "Use a proxy for your LAN" should be unchecked

4. Error code **301**. VCG can't connect to ODG. It could be several possible cause of the problem:

a. Visma Cloud Gateway Service is in started mode. We recommend you wait for a while and try later.

b. Network problems: check your internet connection and verify that your network is complied with *Visma Cloud Gateway Requirements*

c. SSH connection is not allowed (your firewall/network blocking ssh connection to On Demand Gateway)

d. It is possible that "LOCAL SYSTEM" Windows account does not have enough permissions to start ssh or Visma Cloud Gateway Service, please try to switch to Local System and restart the service.

e. On Demand Gateway or SSH server on Visma side is down.

5. If you find in VCG logs: "Error - OPGatewayService.ProcessErrorDataReceived:0 Error: **remote port forwarding failed for listen port** <port number>" - it can be related to some not closed ssh connections left from previous version of VCG or from other programs / services:

a. If you have more than one default VCG instance and/or service, please set them to run under Local System Windows account (Network Service does not have enough privileges to fix ssh processes);

b. Re-start your VCGs: it should kill all not needed ssh processes.

Another possible cause of this error can be machine cloning. If it is the case please re-install your VCG on the cloned machine

6. Error copying/creating files for OpenSSH connection. Error code **111**. Some error happened when trying to copy folders or create private key needed for SSH. Might be that folders/files don't exist, or can't create ssh private key, or permissions on folder, etc.. Please, *check logs* for more information.

In the case of problem with permissions for the folder possible fix is:

1. Delete all files and folders from `C:\Program Files (x86)\Visma\CloudGateway\VCGService\` (folder - where Visma Cloud Gateway is located).

2. Right click VCGatewayService folder, Sharing and Security, then Security tab and make sure you give Full control to following:

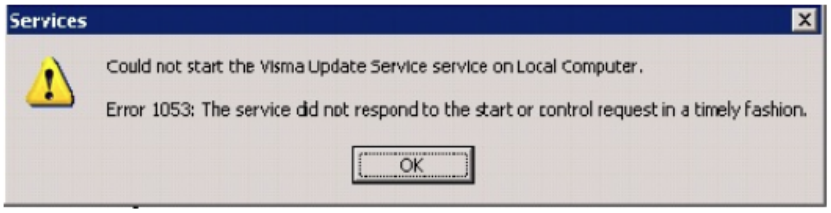
- Administrators
- NETWORK SERVICE
- SYSTEM
- Local Service

3. Make sure the user installing the VCG is in Administrators group.

4. Start the VCG installation again.

7. Service was created successfully but could not be started. Error 1053.





The installer creates a windows service and attempts to start it.

Visma Update windows service should be run under the LOCAL_SYSTEM user account. For this operation to complete successfully the LOCAL_SYSTEM account must have the correct user policy rights to be able to start a service.

Visma **Cloud Gateway** windows service will be run as LOCAL SYSTEM by default. It is possible to use NETWORK SERVICE or LOCAL SERVICE. For this operation the NETWORK SERVICE must have the correct user policy rights to be able to start a service, otherwise it will not be possible to start the ssh process.

How to verify user policy rights - valid for Windows 7 and later:

1. Open "Local Security Policies" (in Control Panel - Administrative Tools).
2. Open Local Policies -> User Rights Assignment.
3. View the properties of the "log on as a service" Policy.
4. Make sure that "LOCAL SYSTEM" user for Visma Update Service exists in the list of user who have the above permission
5. Make sure that "LOCAL SYSTEM" (or "LOCAL SERVICE", or "NETWORK SERVICE") user for Visma Cloud Gateway Service exists in the list of users who have the above permission.
6. If needed users are absent then add them manually.
7. After any modification in order to apply new settings the group Policies should be restarted. In the Command prompt run the command `gpupdate`.

Check *generatePublisherEvidence* setting. See *Visma Cloud Gateway Configuration File* (see page 47). The same setting should be included into the Visma Update configuration file in the case of a problem with Visma Update Service starting.

If the above recommendations do not help please try to start Visma Cloud Gateway as a Local System account.

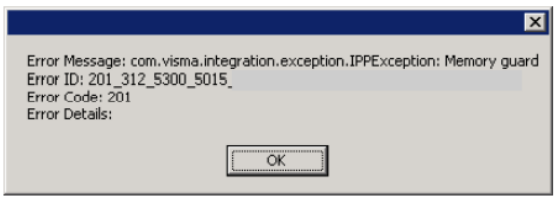
8. Message: “Not all config values were set!” while Visma Cloud Gateway service started. This error could be found in the VCGatewayService log file.

Information about configuration settings can be found here: *Visma Cloud Gateway Configuration File* (see page 46).

In the case of problems while Visma Cloud Gateway installation please run *VCG Diagnosis Application*, send a mail to support and attach the latest log file.

Some possible problems while working of Visma Cloud Gateway Service

1. Memory guard error message. Error code **5015**. The memory guard does not let On Demand Gateway runs out of memory. Any requests are refused until currently processing requests are done. Please try again later. If this message repeats again contact support.



2. Error code **321** (VCG call to ODG timeout). The reason: sending request or receiving response from On Demand Gateway took longer than timeout values in Visma Cloud Gateway configuration file. How to fix: Increase send/receive timeout settings in Visma Cloud Gateway Configuration. See *Visma Cloud Gateway Configuration File* (see page 47)

3. Error code **212** (OP Plugin call to VCG timeout). The reason: sending request or receiving response from Visma Cloud Gateway took longer than timeout values in application configuration. How to fix: Increase send/receive timeout settings of your application:
   a. Application configuration file "<ippOPGConfig sendTimeout ="00:10:00" receiveTimeout ="00:10:00">"
   b. Programmatically: the value of SendTimeout/ReceiveTimeout properties of OPGContext object, if your application does not have configuration file:
   - "OPGContext opgContext = new OPGContext();"
   - "opgContext.SendTimeout = new TimeSpan(0, 10, 0);"
   - "opgContext.ReceiveTimeout = new TimeSpan(0, 10, 0);"
4. Error code **323**. Call is not local. Visma Cloud Gateway was invoked from another machine of the network and it has a local deployment option set to allow calls only from local machine. See Visma Cloud Gateway Deployment models see *Deployment Models* (see page 13). It is possible to change deployment model after Visma Cloud Gateway installation see *Configuration* (see page 46)
5. It is possible to have some problems with publishing of Visma Cloud Gateway address on the network, but it is possible to find the Visma Cloud Gateway address manually in logs.

- IMPORTANT! In case you installed VCG without credentials by mistake and you are getting **351** error, please add the Credentials from the DiagnosisApp->Add credentials tab, or directly from your On Premises application if possible.
- To have more information in logs turn on Debug mode. See *Configuration* (see page 46).

Upgrade

This section contains information on how to upgrade Visma Cloud Gateway (automatically and manually). If you need to make a fresh installation you need to follow the instructions from Visma Cloud Gateway Installation chapter.

The latest released version of Visma Cloud Gateway is available here: *VCG Installer package*.

Messages at Upgrade

In the older version of Visma Cloud Gateway there is no MSMQ activated and no ActiveMQ, the upgrade will activate MSMQ. ActiveMQ can be enabled from the VCG Diagnosis application. In order to use messages it is a job of applications to register needed queues.

Automatic upgrade of Visma Cloud Gateway

The Installer package contains the latest available version of Visma Cloud Gateway and Visma Update. If Visma Update is already installed then it will upgrade Visma cloud Gateway automatically as soon as a new release of VCG is put out for Visma Update. In this case there is no need to do anything because every time you will have installed the latest version.

Please, note, that it is possible to configure Visma Update only to check if any new updates are available and to not install it automatically. If you want to have the Visma Cloud Gateway version under control but to be informed about updates we recommend you to install Visma Update but set it up only for updates checking. Please read the Visma Update user guide.

Manual upgrade of Visma Cloud Gateway

It will be needed to upgrade Visma Cloud Gateway manually in the case if Visma Update was not installed. There are 3 ways to upgrade Visma Cloud Gateway manually.

The first way

- Uninstall the old version of Visma Cloud Gateway following *Visma Cloud Gateway Uninstallation* instructions
- Download the latest package installer package from: *VCG Installer package*
- Follow *Visma Cloud Gateway Installation* instructions

The second way

- Follow *Manual upgrade of Visma Cloud Gateway* instructions

The third way

It is possible to use scriptable upgrade. It is similar to *Scriptable installer*. Please note that scriptable update should be run from the machine where the previous version of Visma Cloud Gateway is installed. Follow the instruction:
- Download the latest package installer package from: *VCG Installer package*
- Extract the installer from the archive
- Run this command: `msiexec /i "<path>VCGatewayService.msi" /qn /l* msi.log`

- Check “msi.log” file for errors

Multiple instances and services upgrade

In case if there are several VCG instances and/or Service (besides the default/main one) on the same machine (see *Multiple Visma Cloud Gateway Instances*) VCG upgrade should be executed the same way as normally: using automatic manual upgrade. In this case all additional VCG instances and/or services will be upgraded together with the main VCG and will all have the same version (see *Visma Cloud Gateway Configuration File*).

Please note that the 7.6 version is backward compatible with the previous one. This means that old already installed Visma Cloud Gateway should work without any problems but new features will not be available.

Manual upgrade of Visma Cloud Gateway

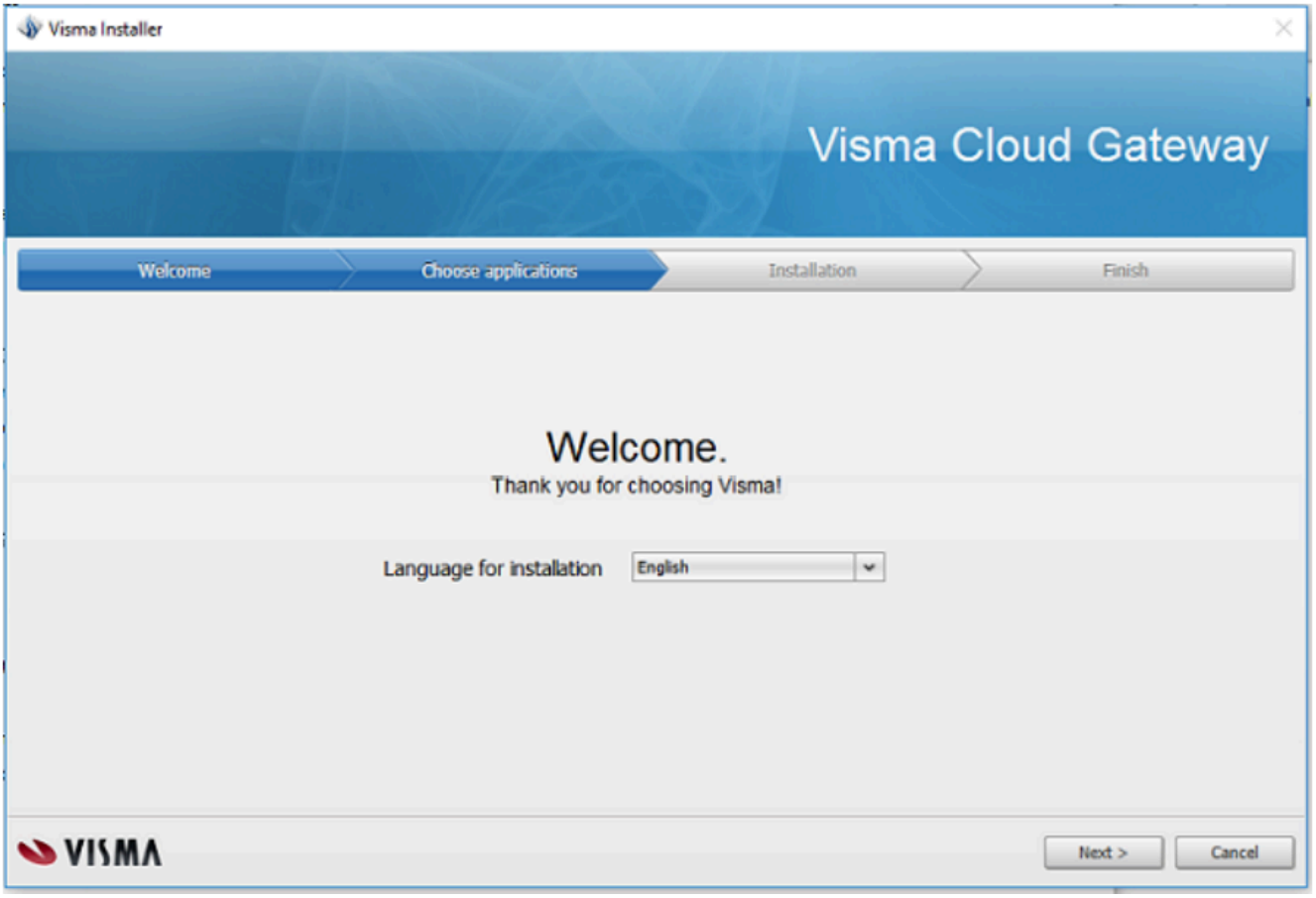
Optional: In preferably one paragraph, describe the situation when someone would need to follow this procedure.

1. Download the latest version of VCG installer package from: *VCG installer package*.

2. Extract the installer from the archive.

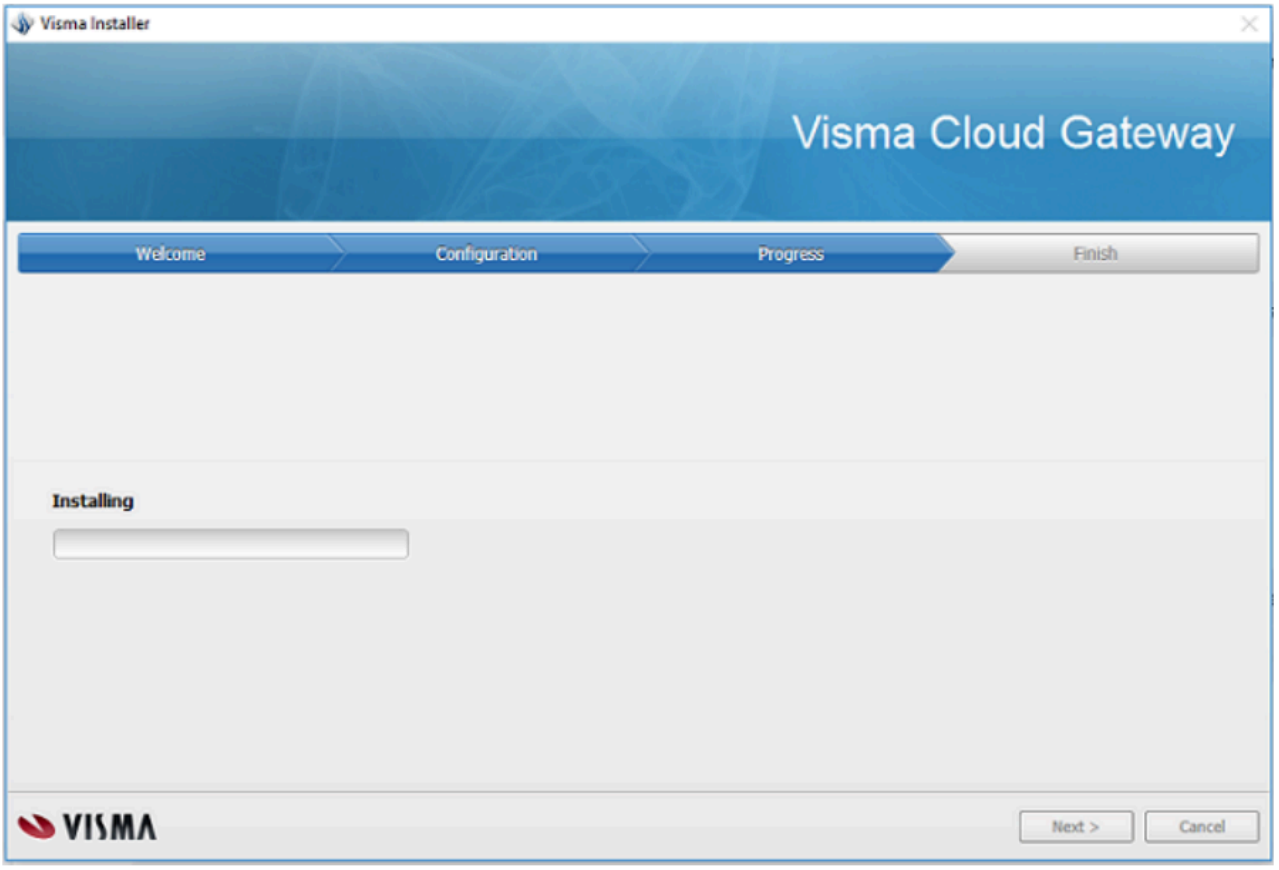
3. Run setup.exe

Welcome screen should be displayed:



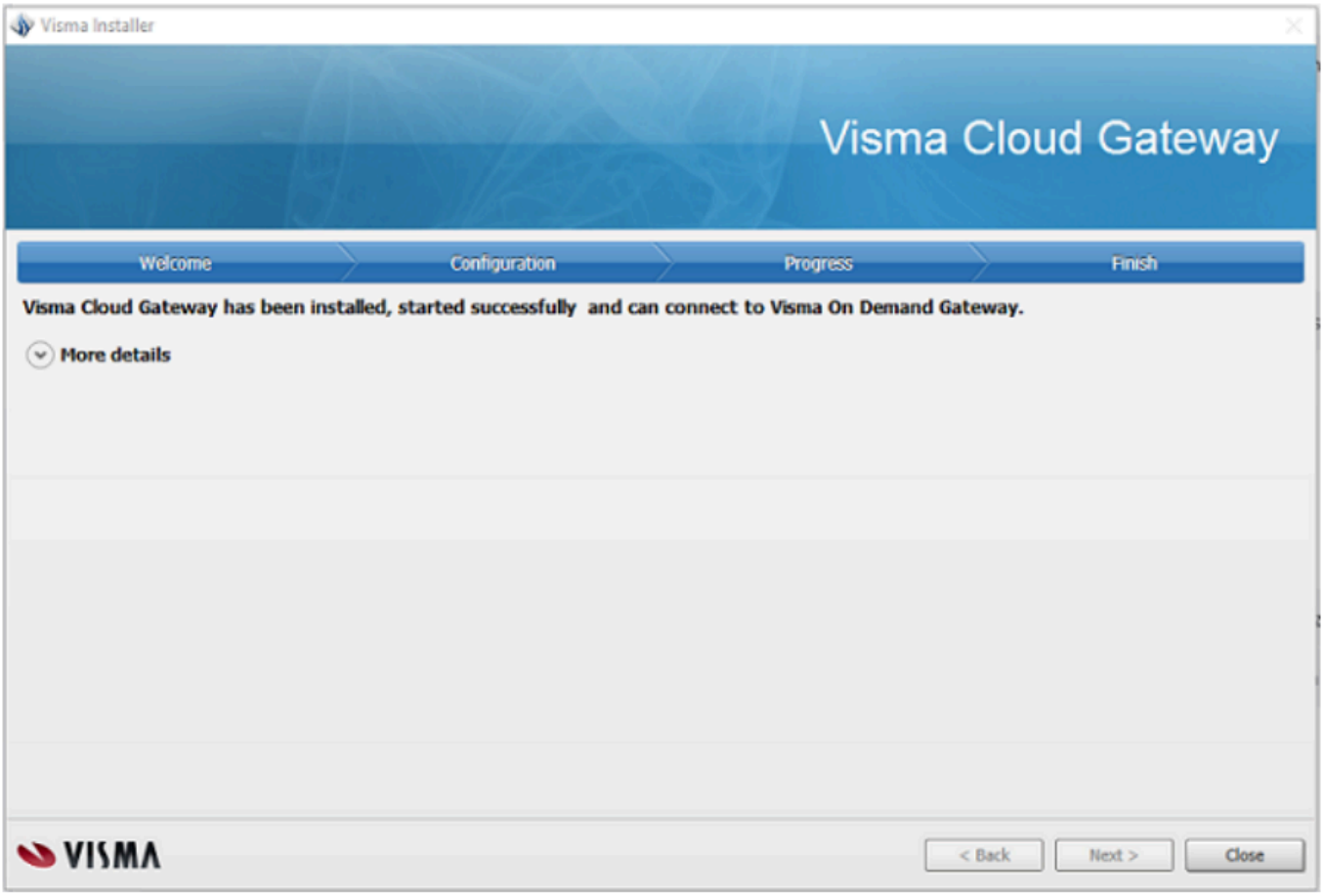
4. Press **Next** in **Welcome** screen

5. Wait while upgrade process is finished



6. When the upgrade is completed the below status page is displayed.

Please click **Finish** in the below screen



7. When Visma Cloud Gateway is upgraded successfully press **Close** in the below screen.

8. Check state of Visma Cloud Gateway

a) Go to folder where Visma Cloud Gateway is installed (*Default VCG Location*) and check version of Visma.Services.OPGateway.OPGatewayService.exe (Select the file, open context menu, choose Properties, go to Details tab)

b) Make sure that Visma Cloud Gateway Service is started (Go to Control Panel->Administrative tools->Services)

Uninstallation

Please, note that it is possible to choose to keep the encrypted tunnel and configuration for On Premises applications connected to the VCG during Visma Cloud Gateway uninstallation by checking the appropriate options. It is recommended to execute uninstallation later in the case if it is not possible to connect to On Demand Gateway or network problems.

Visma Cloud Gateway uninstallation requires Administrator permissions. We recommend using the "run as Administrator" option for uninstallation, otherwise it could fail.

There are 2 ways to run uninstall of Visma Cloud Gateway:

- Run to uninstall.exe from Visma Cloud Gateway folder
- Run a scriptable uninstallation via command in cmd. See *Visma Cloud Gateway Scriptable uninstallation* (see page 64)

Please note,

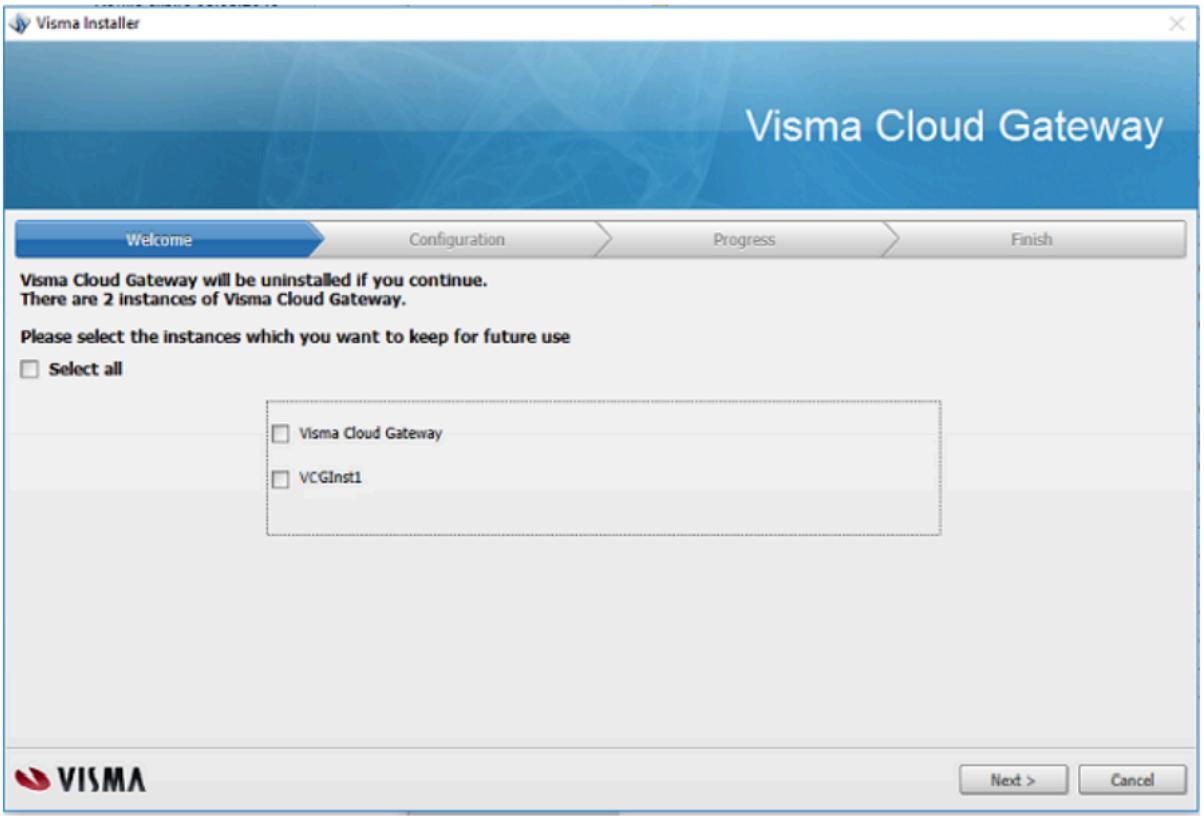
Uninstallation of the main (default VCG) will also uninstall all additional VCG instances and services. If you want to uninstall / remove only some additional instances / services then please follow *Instances and Services Uninstallation*

Follow instructions from *Visma Cloud Gateway Uninstallation Steps*

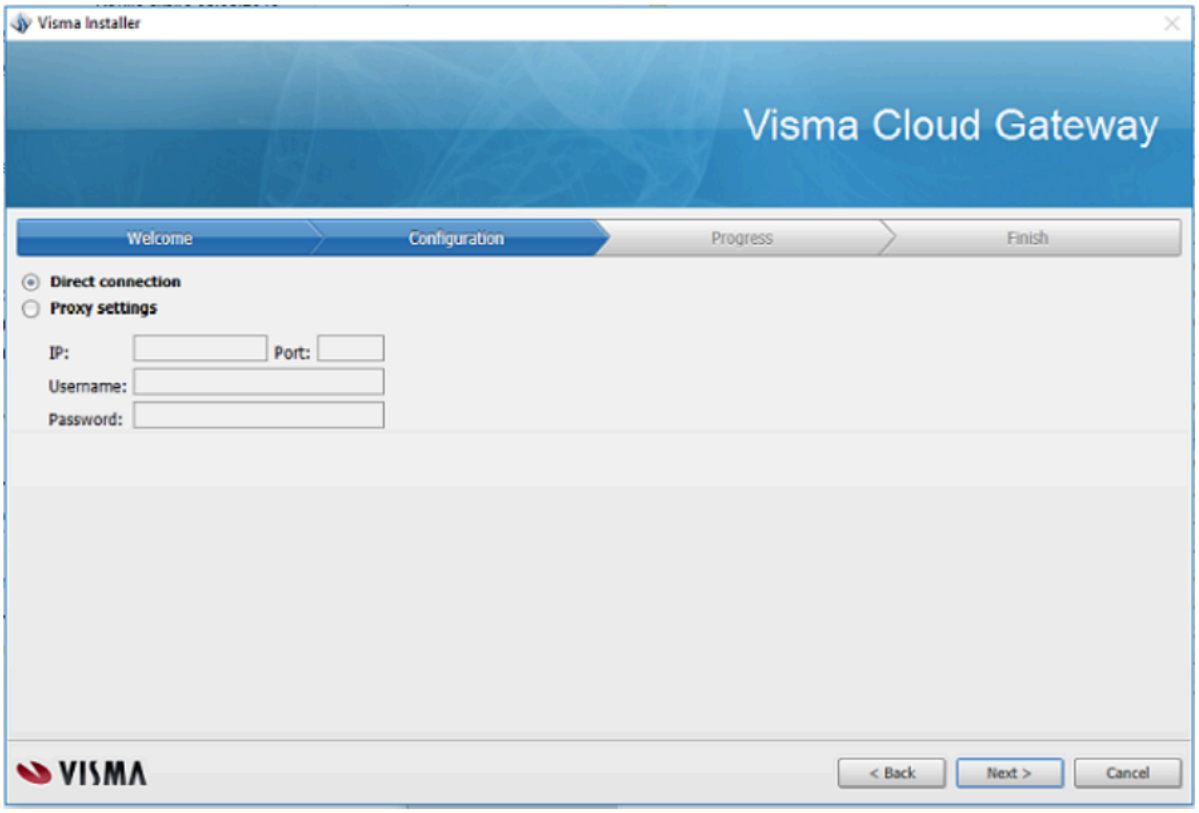
Visma Cloud Gateway Uninstallation Steps

Visma Cloud Gateway Uninstallation steps

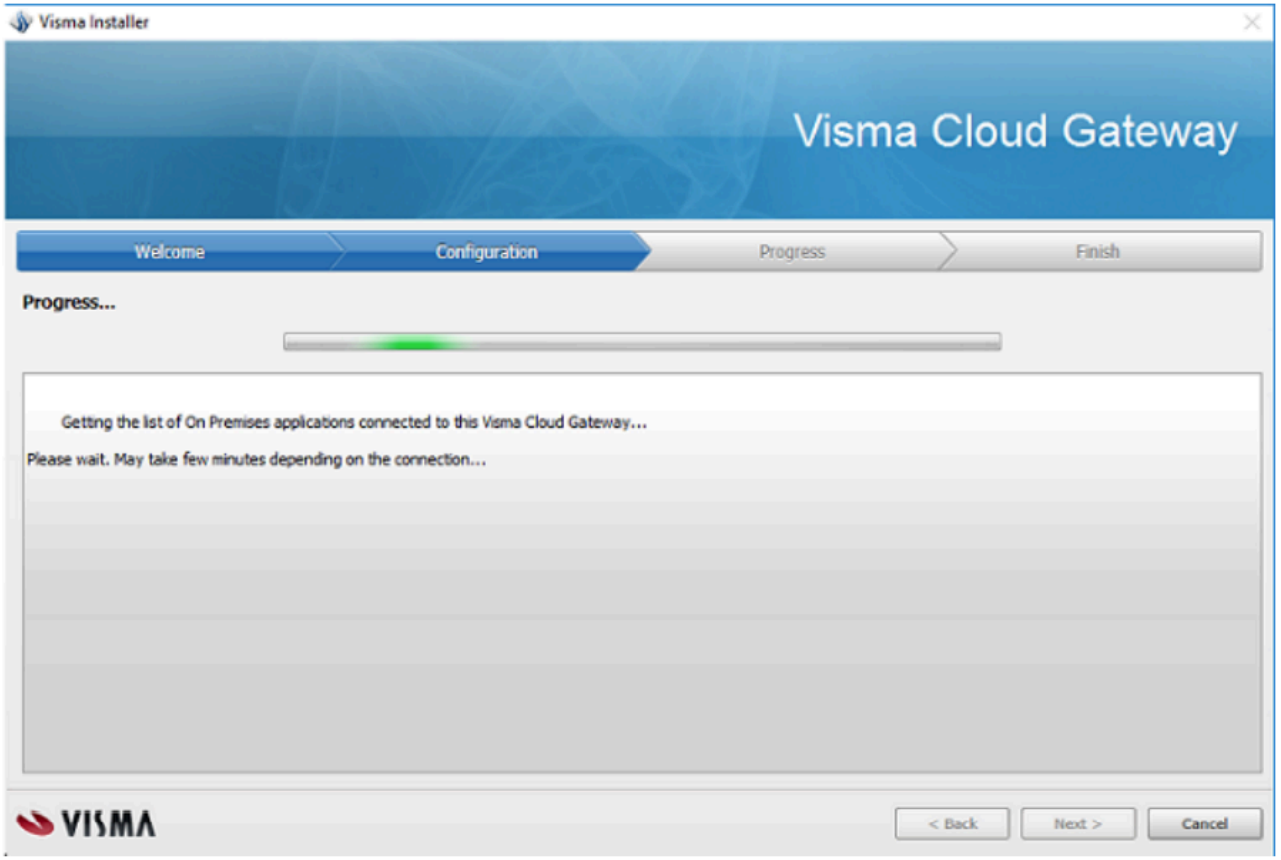
1. VCG instances which are installed on your servers or machine will be uninstalled but you can choose if you would like to keep the configuration for some of the instances. ***Visma Cloud Gateway*** is the main instance and will be kept by default if you choose to keep any additional instances. All instances are unchecked and all the configuration will be removed by default, please chose if you would like to change it and press **Next** to **uninstall Visma Cloud Gateway**



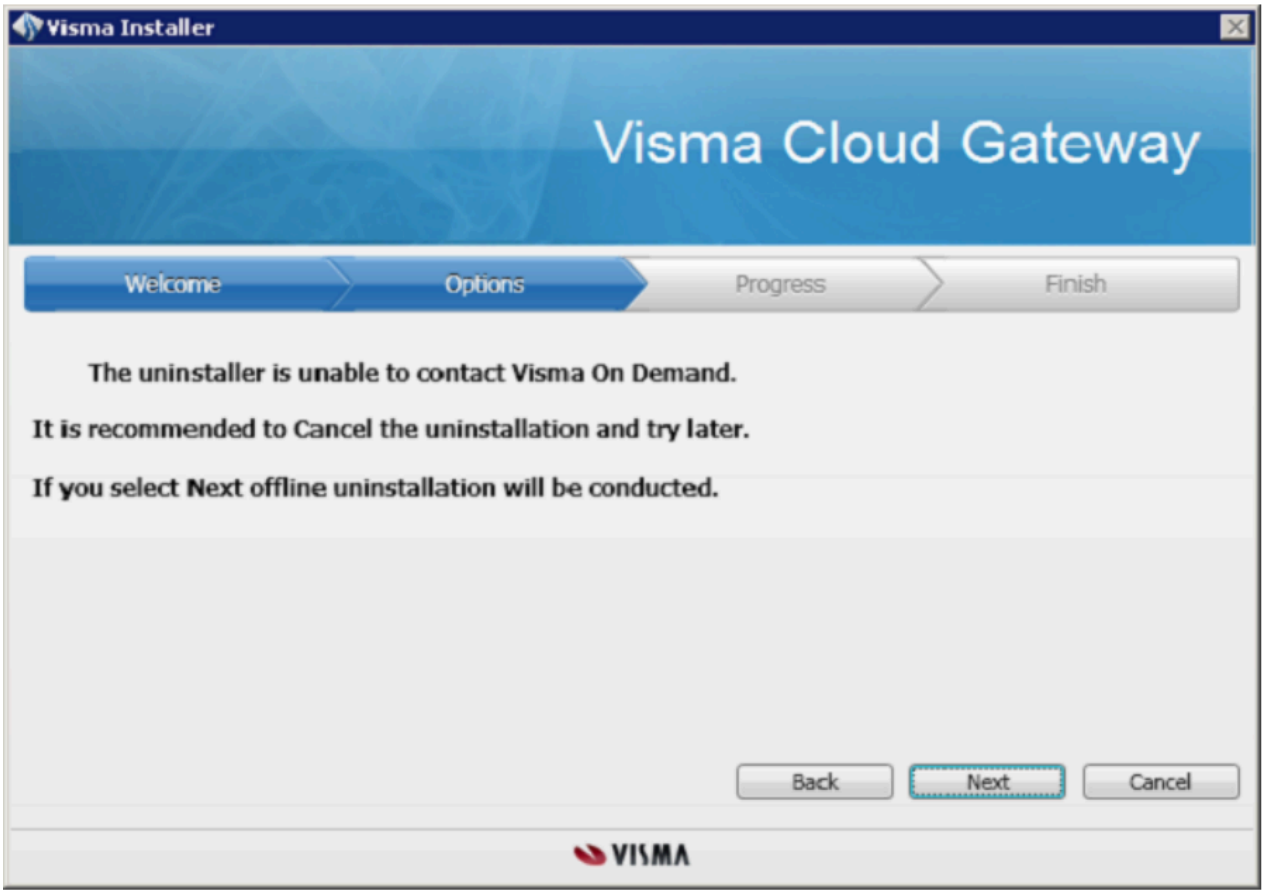
2. Proxy on uninstallation



3. While Visma Cloud Gateway uninstallation the encrypted tunnel and configuration for On Premises applications connected to the Visma Cloud Gateway should be deleted. The installer needs to contact On Demand to remove the data.



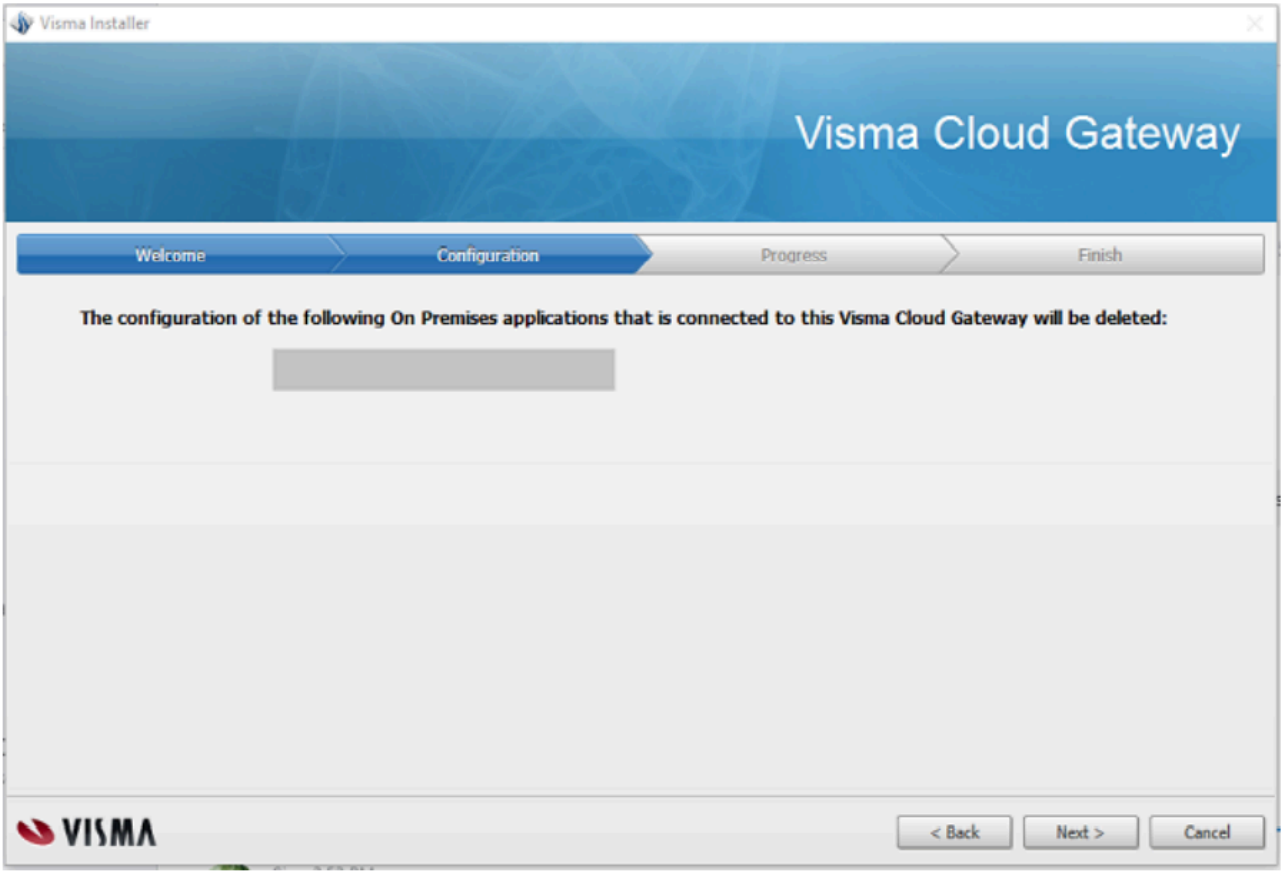
4. If configuration data is **not** critical it is possible to conduct "off-line" uninstallation of Visma Cloud Gateway even though there are some connection problems (network problems or something is down on On Demand side), **but** the encrypted tunnel and configuration for On Premises applications connected to the Visma Cloud Gateway **will not be deleted** from the On Demand side. It is recommended to Cancel uninstallation and try again later when "on-line" uninstallation is possible.



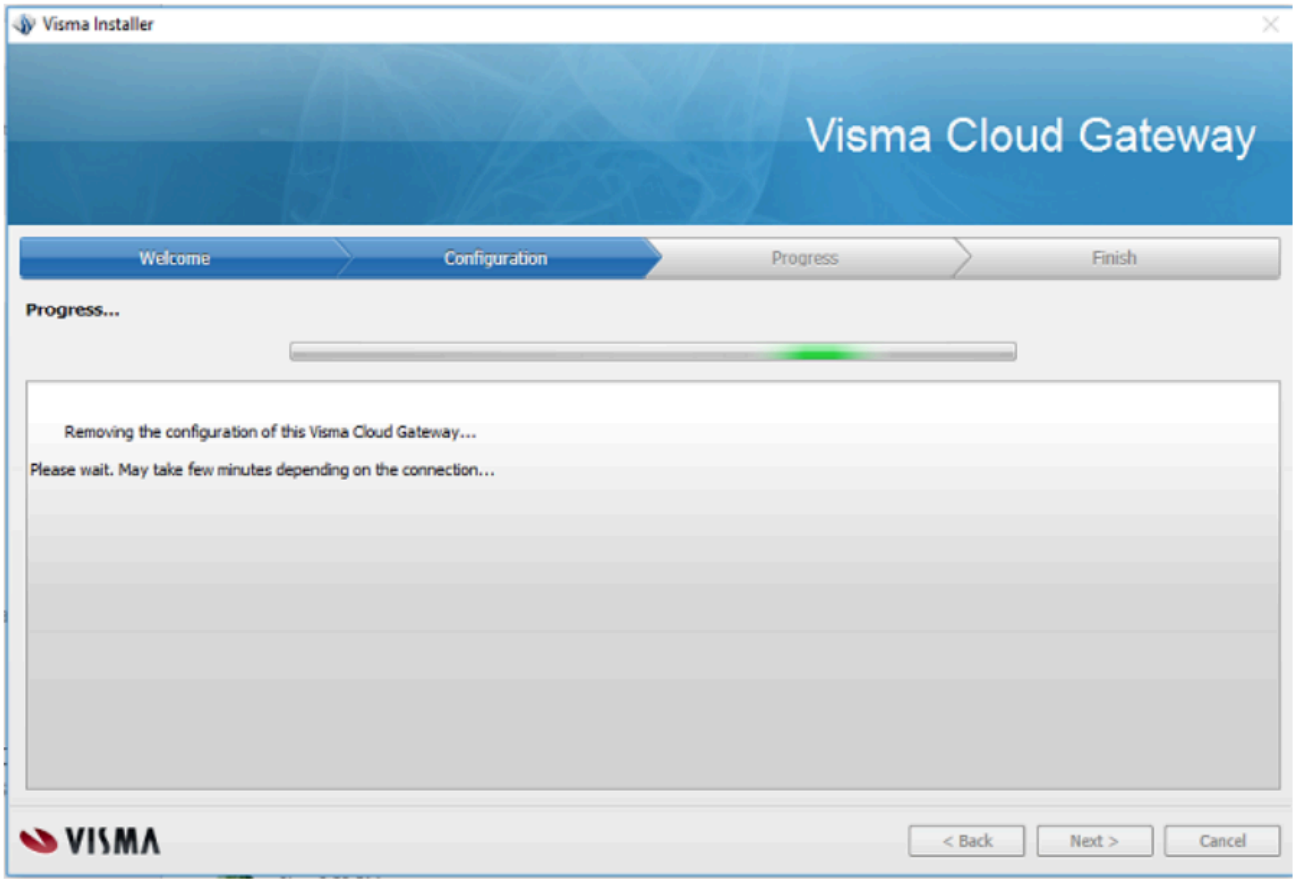
5. If configuration data is critical it is not possible to uninstall Visma Cloud Gateway in the case of connection problems (network problems or something is down on On Demand side). Check your network connection and try to uninstall Visma Cloud Gateway later. If you still see the same message please contact support to check On Demand components.



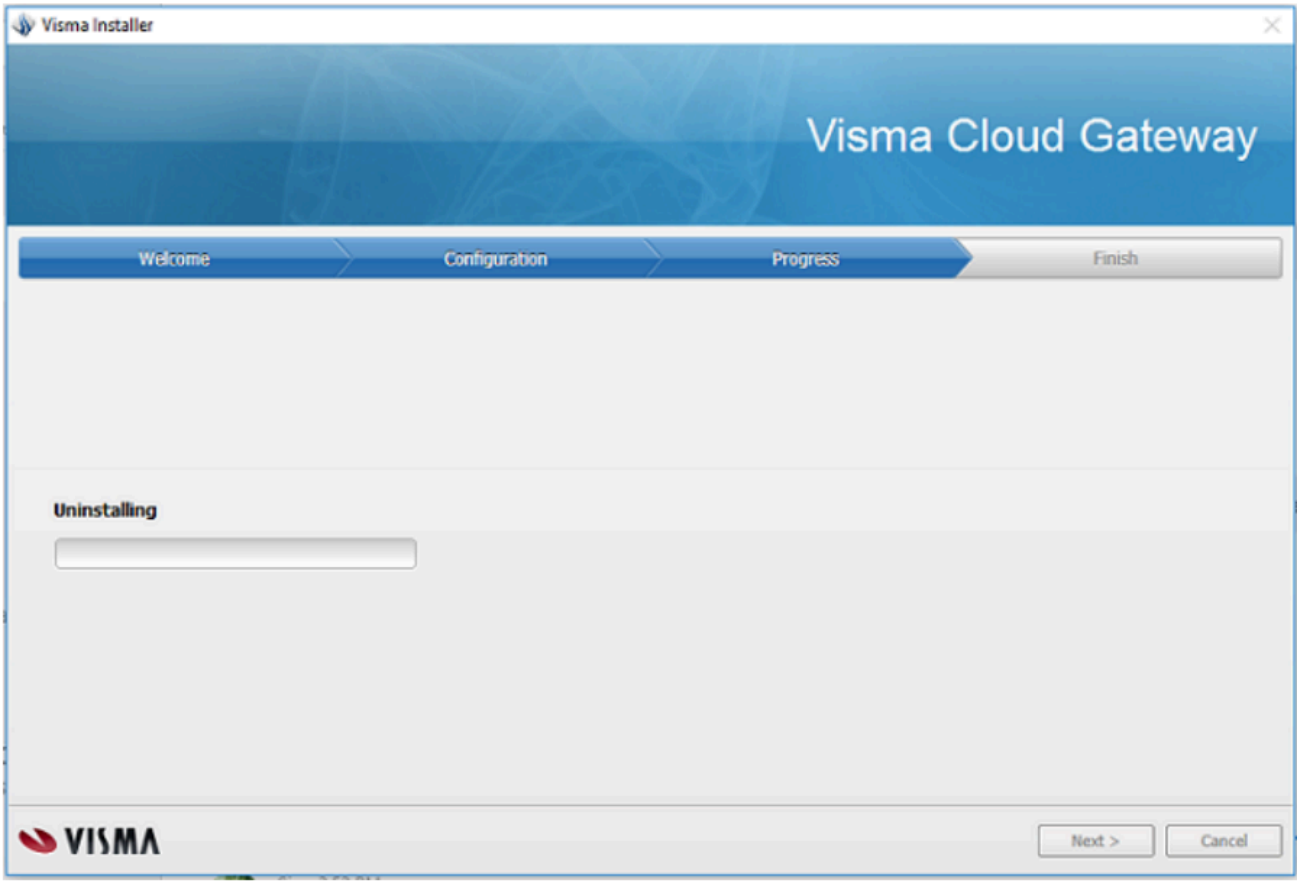
6. During Visma Cloud Gateway uninstallation your configuration of the On Premises applications will be deleted (in case you chose to not keep some of the instances on the first step of the uninstallation). If you do not have such data or you decided to keep everything then the below screen will not be shown.



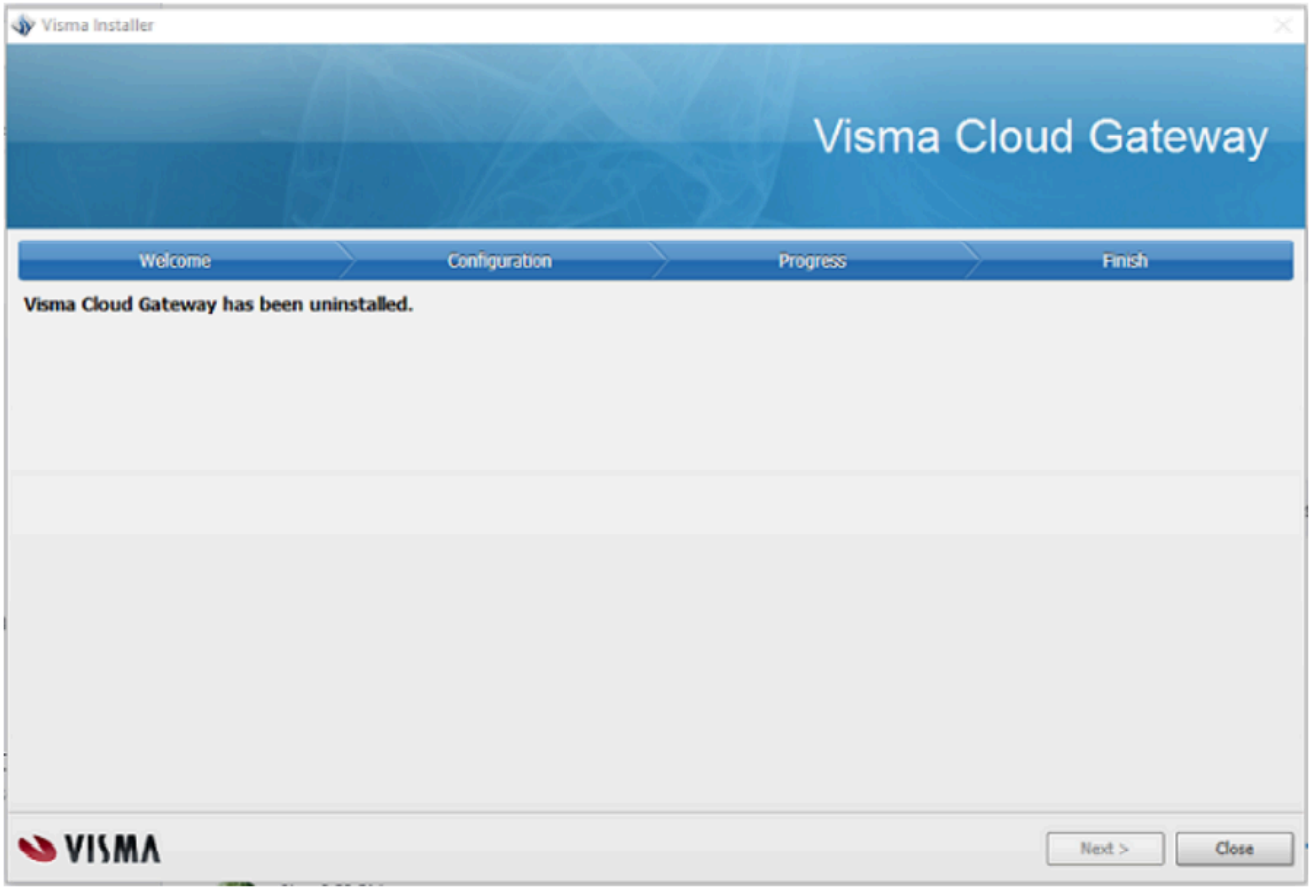
7. Wait while the configuration is being removed.



8. Wait for uninstallation to be completed. It will take some time.



9. Press **Finish** to close the window when uninstallation is completed.



10. Check **Visma Cloud Gateway** service does not exist in the list of services.

11. In case if you did not choose to keep any VCG configuration (instances) `..\Visma\CloudGateway\VCGService` folder is **empty** or **removed**
12. If you decide to keep all or some of the instances then `..\Visma\CloudGateway\VCGService` folder will contain the needed info. Please do not remove the folder if you want to re-use the VCG configuration later

Visma Cloud Gateway Scriptable uninstallation

Visma Cloud Gateway Scriptable Uninstallation

Run cmd as Administrator and use the following commands:

- Uninstallation with saving visma.net data: `Uninstall.exe "SAVEOPGDATA=1 /qn /l*v c:\vcguninstall.txt"`
- Uninstallation with discarding visma.net data: `Uninstall.exe "/qn /l*v c:\vcguninstall.txt"`
- Uninstallation with the proxy will require: `PROXYISUSED="True" PROXYIP="<value>" PROXYPORT="<value>"`

Uninstallation error handling

This section contains some possible problems during of Visma Cloud Gateway uninstallation and recommendations how to fix them

- Please do not try to uninstall Visma Cloud Gateway from Visma Installer Package. In the case when VCG is upgraded by Visma Update with the higher versions the installer will not be able to uninstall the higher version but it will say that uninstallation is successful.
- Please do not remove the VCGService folder if Visma Cloud Gateway is not uninstalled because it will cause problems during the new VCG installation.

If Visma Cloud Gateway was not uninstalled properly but VCGService folder was removed follow one of the below alternatives

Alternative 1

What to do if Visma Cloud Gateway was not uninstalled properly but the VCGService folder was

removed **Alternative 1**. Follow the below steps:

1. Please download and install *Revo Uninstaller Freeware*
2. Open Revo Uninstaller and go to Options->Uninstaller->check Show system components-> Ok
3. Select Visma Cloud Gatewayfrom the list and click Uninstall
4. Select an uninstall mode and press Next
5. Visma Cloud Gateway uninstaller will be started and proceed with the uninstallation
6. restart machine

Alternative 2

What to do if Visma Cloud Gateway was not uninstalled properly but VCGService folder was removed

Alternative 2. Follow the below steps

1. Open a command prompt as Administrator
2. Input WMIC and press Enter. You will see a prompt that looks like this: wmic:root\cli>
3. At the new prompt, execute the following command: `product get name`
   This will generate a list of installed applications
4. At the prompt, execute the following command:
   - if you see Visma Cloud Gateway in the previous list run the command:`product where name="Visma Cloud Gateway" call uninstall`
   - if you see Visma Cloud Gateway (without space between Visma and Cloud) in the previous list then it should without space in the command as well:`product where name="VismaCloud Gateway" call uninstall`
5. When prompted, input y to confirm that you wish to uninstall the application and press Return.
   The application will be uninstalled.
6. Restart the machine

Alternative 3

Problems with uninstalaltion of Visma Cloud Gateway

Alternative 3.
In case if Visma Cloud Gateway is not found in Revo list from Alternative 1-2 but service appears "Disabled" in Windows services list then a simple reboot of the machine can help to delete the service. It is a Windows issue that might happen if the uninstallation was done when Windows services list was open. More info here: *How to force uninstallation of windows service*

In case if for any reason it is not possible (because of some other applications running or any other reasons) to reboot your machine please try these steps:

1. Start CMD (Command Prompt) in elevated mode

2. sc queryex <SERVICE_NAME>

3. You will get some info. A PID number will be displayed

4. taskkill /pid <SERVICE_PID> /f

/f is to force stop

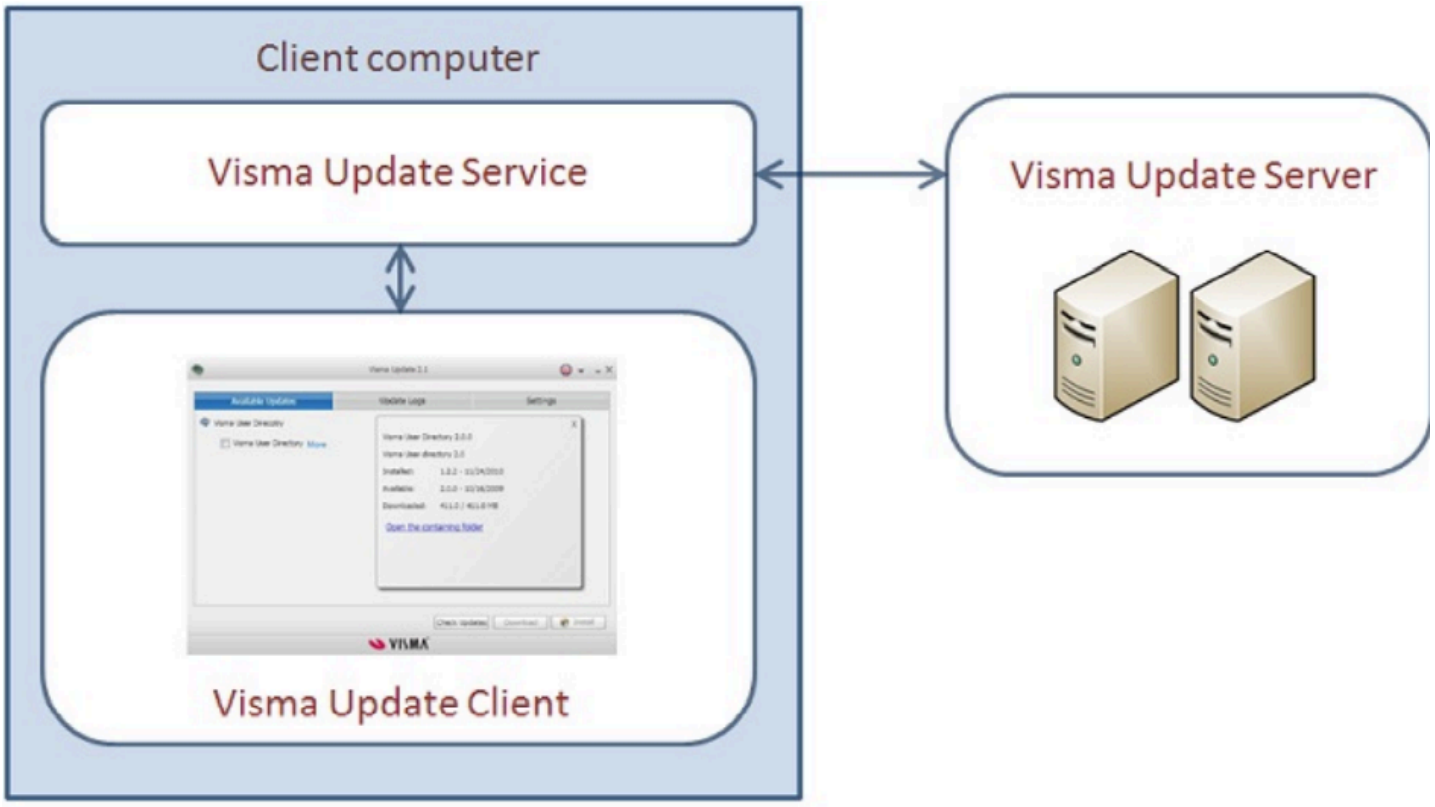
5. Now you can install or launch your service.

Visma Update

What is *Visma Update*

Visma Update(VU) is an application used for managing Visma software packages on Windows based operating system.

Visma Update is responsible for those Visma Applications which need to be always up to date. Also it can be used to browse, install and update Visma Applications manually.



Visma Update consists of the Client Application and VU Server. VU Server is responsible for supplying the updates. Client Application has 2 parts: VU Service which runs in the background and is connected to VU Server, and VU Client which allows to configure the update process, perform manual installation and updates, and shows updates log.

Prerequisites for Visma Update

Visma Update will go to check and download updates to *https://vcg-update.visma.net/VismaPackageManagerService/ VismaPackageManager*. Please, check if it is allowed.

VU Client Installation and Uninstallation

This section contains Visma Update Client information and uninstallation Guide.

In the case of receiving and installing any automatic updates for Visma Cloud Gateway it should be installed together with Visma Update Client. Please note, that it is possible to configure Visma Update Client only download updates and do not install them automatically.

Visma Update Client is installed automatically in a silent mode as part of *Visma Installer Package* (see page 16).

For uninstallation please use:

- Uninstall.exe located in the Visma Update Client folder(ex: C:\Program Files (x86)\Visma\CloudGateway \VismaUpdate)

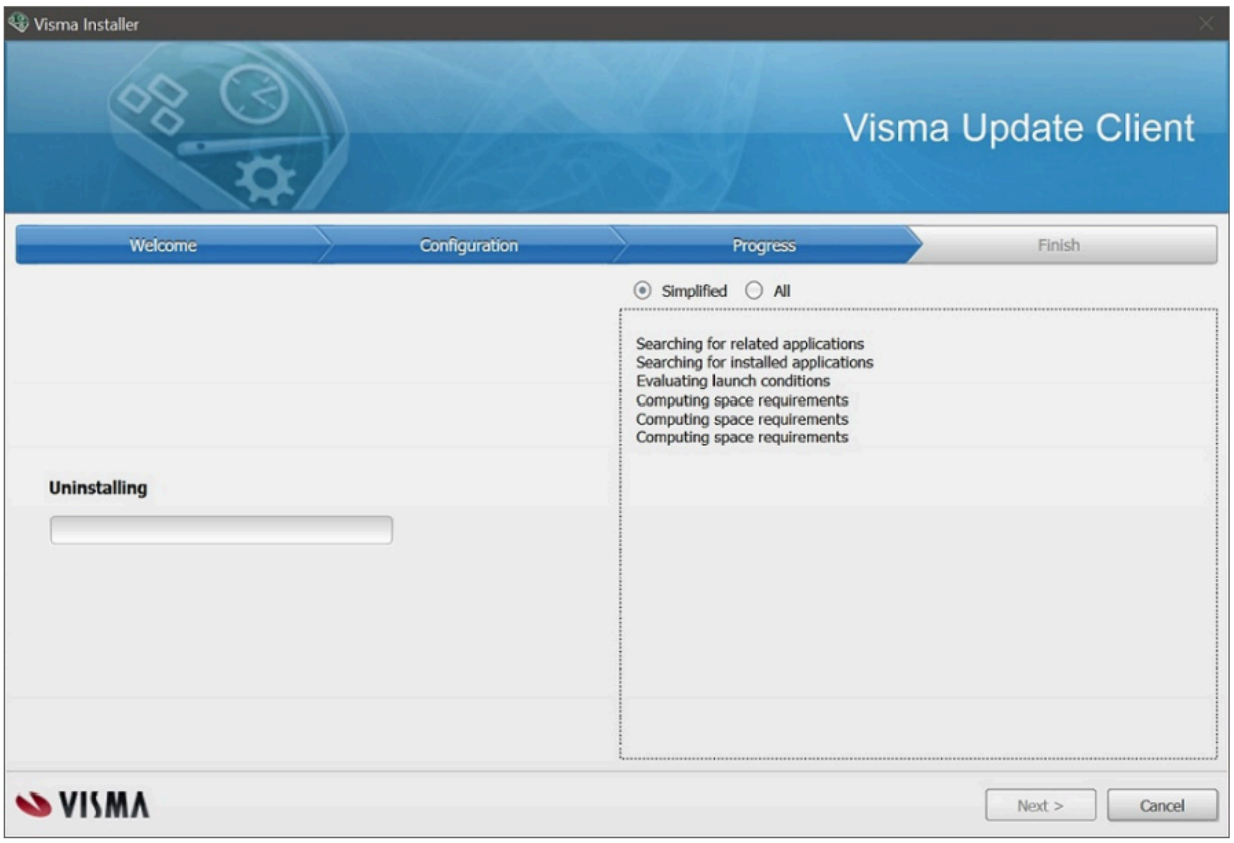
and follow instructions from *Visma Update Uninstallation Steps*.

If you have any problems with installation please read *Troubleshooting Guide* and contact support.

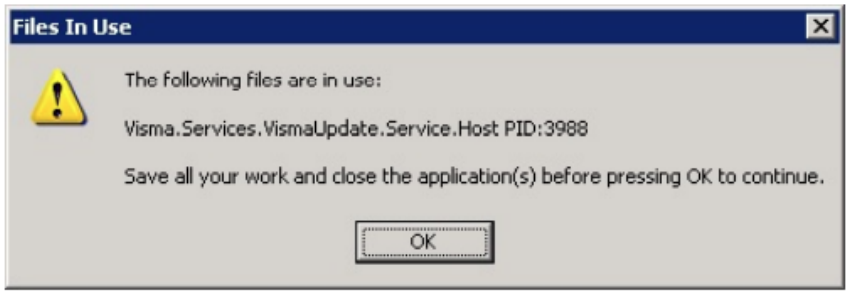
Visma Update Uninstallation Steps

Visma Update uninstallation steps

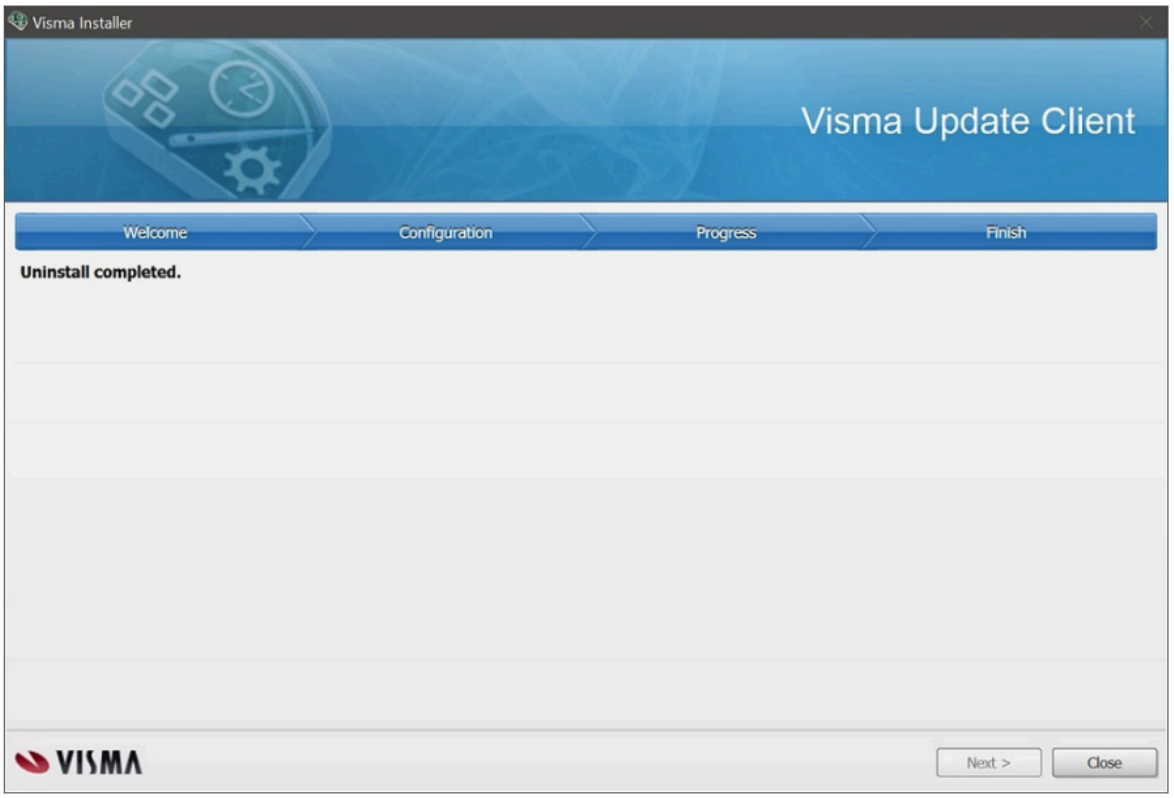
1. Wait while uninstalling.



2. You will get the below warning message. Please press **OK**.



3. Press **Finish** to close the window.



4. Please check Visma Update Service does not exist any more in the list of services.
5. Please check **..Visma\CloudGateway\VismaUpdate** folder is removed or empty.

Troubleshooting Guide

This section contains known issues.

> **Note: Before you contact Visma support with the problem description, please collect the logs from the following locations and attach them to your request.**

- %PROGRAMDATA%\Visma\Visma Installer\Log
- %PROGRAMDATA%\Visma\VismaUpdate\3.0\Logging
- %PROGRAMDATA%\Visma\VismaUpdate\Downloads\[Your Application with highest version number]\[Your Application with highest version number]\ApplicationNameSetup.log

Below you can find descriptions of several known issues and workarounds for these issues:

1. Problem: Visma Update service doesn't start

1. VU is installed successfully
2. Windows user is a local administrator
3. It is possible to start VU service executable file
4. It is **not** possible to start Visma Update Service

The solution:

1. Open for edit **Visma.Services.VismaUpdate.Service.Host.exe.config** file, which is located in C:\Program Files (x86)\Visma\CloudGateway\VismaUpdate for 64-bit systems
2. Add the following settings: <runtime> <generatePublisherEvidence enabled="false"/> </runtime> After configSections section and Save
3. Re-start Visma Update service

2. Problem: certificate of the vcg-update.visma.net server isn't validated on the machine running Visma Update

The machine from where the connection was initiated does not trust the Certificate Authority that signed the certificate we use for vcg-update.visma.net.

The solution:

Add the Certificate Authority (CA) to the trusted providers – install the CA Root certificate on that machine.

How to do this: http://technet.microsoft.com/en-us/library/cc750534.aspx

The address where the certificate can be found: https://www.entrust.net/downloads/binary/entrust_2048_ca.cer

While doing this, stop the Visma Update Service.

Starting *Visma Update* Client

Describing how to start *Visma Update* Client

Visma Update service will start itself after installation. If you want to browse and/or install any Visma Application manually, you need to start the *Visma Update* Client interface from the location were it was installed(ex: C:\Program Files (x86)\Visma\CloudGateway\VismaUpdate\VismaUpdateClient.exe .

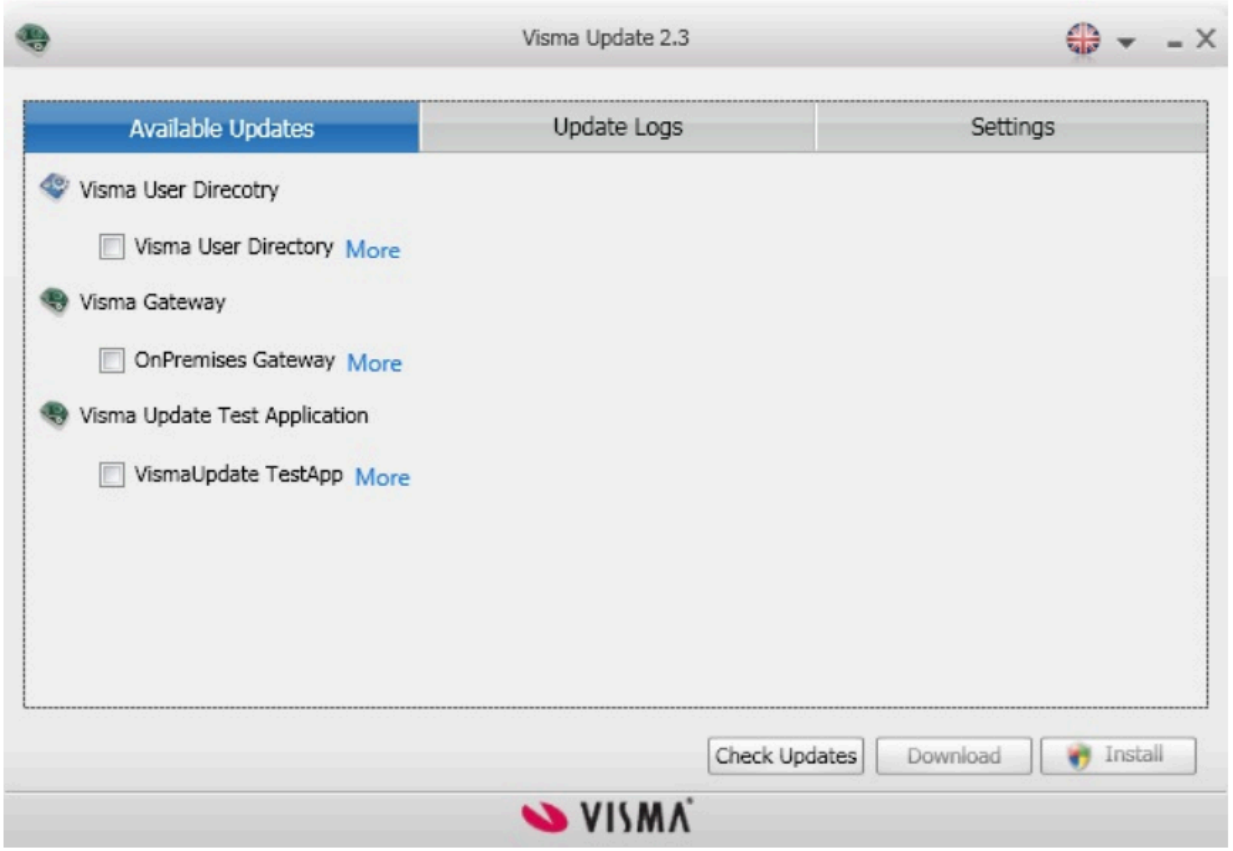
Downloading New Updates

Describing how to download a package

In *Visma Update*, you can change the settings in the settings tab to make *Visma Update* download a package automatically for you, also you can download a package manually.

1. Start *Visma Update*
2. Select **Available Updates** tab.

A list of available updates will be displayed



3. Select the component you want to download and click **Download** button

You can select **More** to see more description of the package.

Opening the Downloaded Packages

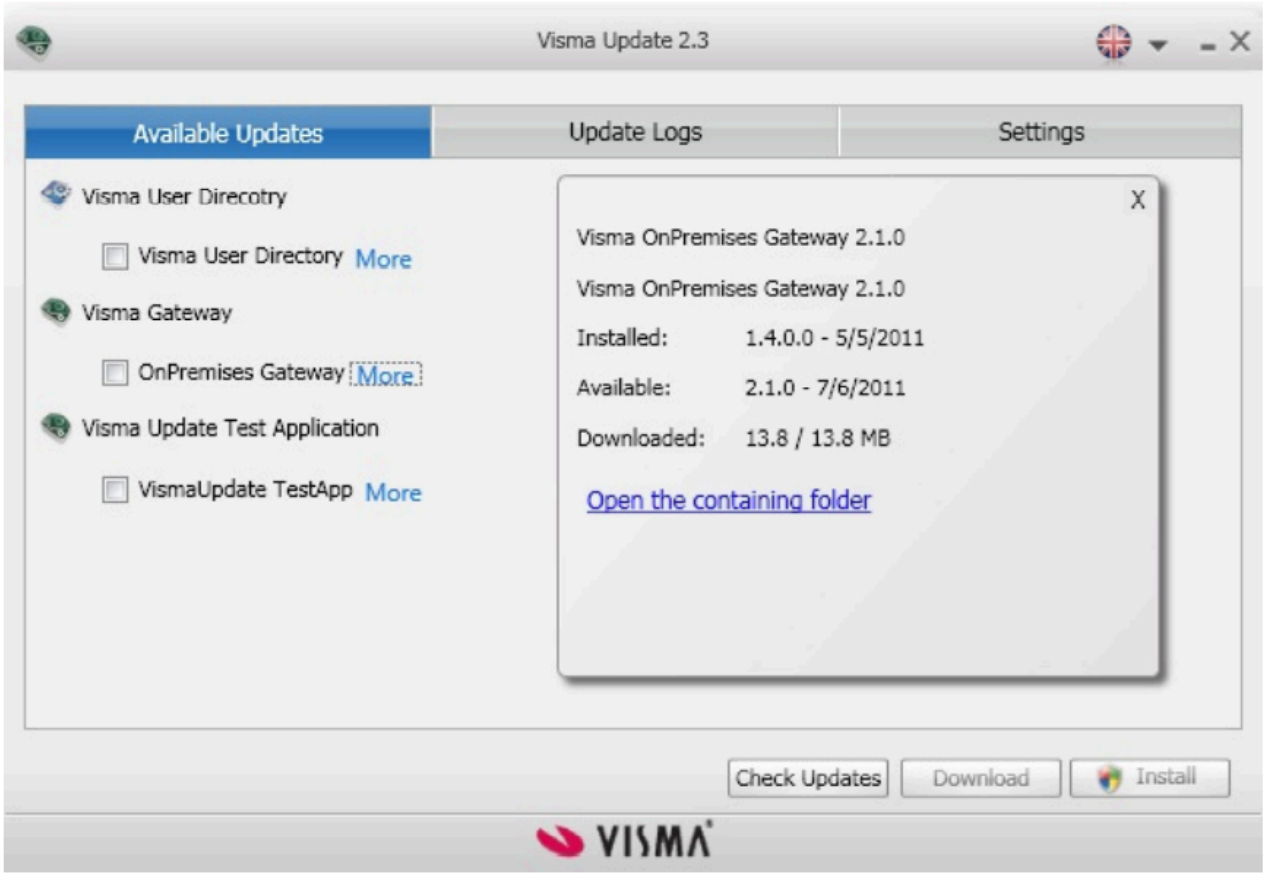
Describing how to open containing folder of downloaded packages from *Visma Update* interface

All the downloaded packages from Visma Updates are storing on the local disk. In case you want to delete all the downloaded packages or start the installer manually from the downloaded package, you can open the folder which contains all downloaded packages easily from Visma Update interface.

1. Start *Visma Update*

2. Select **Available Updates** tab

A list of updates will be displayed.



Updates with blue **Open the containing folder** links are those where the update has already been downloaded.

3. Click the appropriate **Open the containing folder** link to open the containing folder of downloaded packages

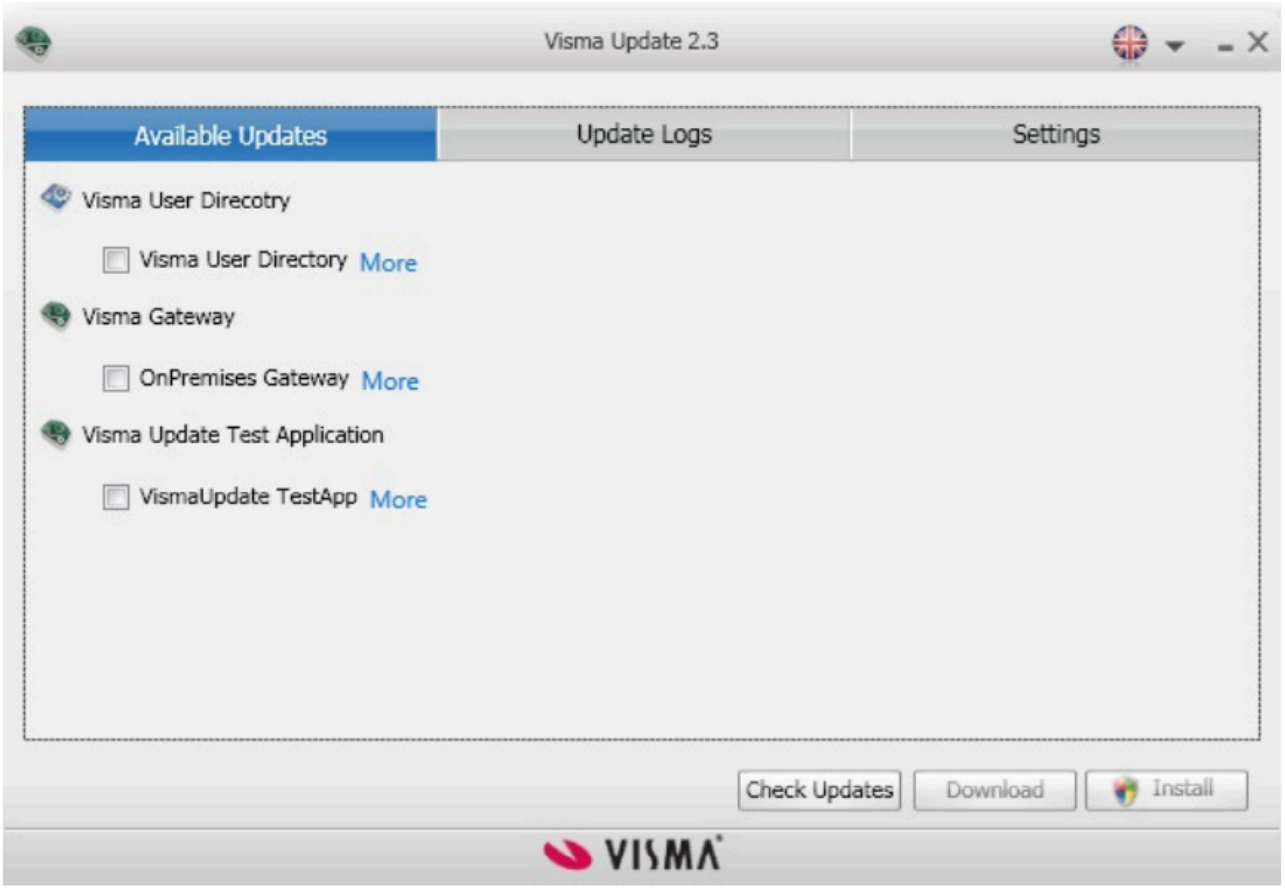
You can select the **More** link to see more information about each component.

Installing New Updates

Describing how to install a package manually

1. Start *Visma Update*

2. Select **Available Updates** tab.
A list of updates will be displayed.



3. Select the component you want to install and click **Install**.

You can select the **More** link to see more information about each component.

Changing Settings for the Components

Describing where and how to change setting of each component

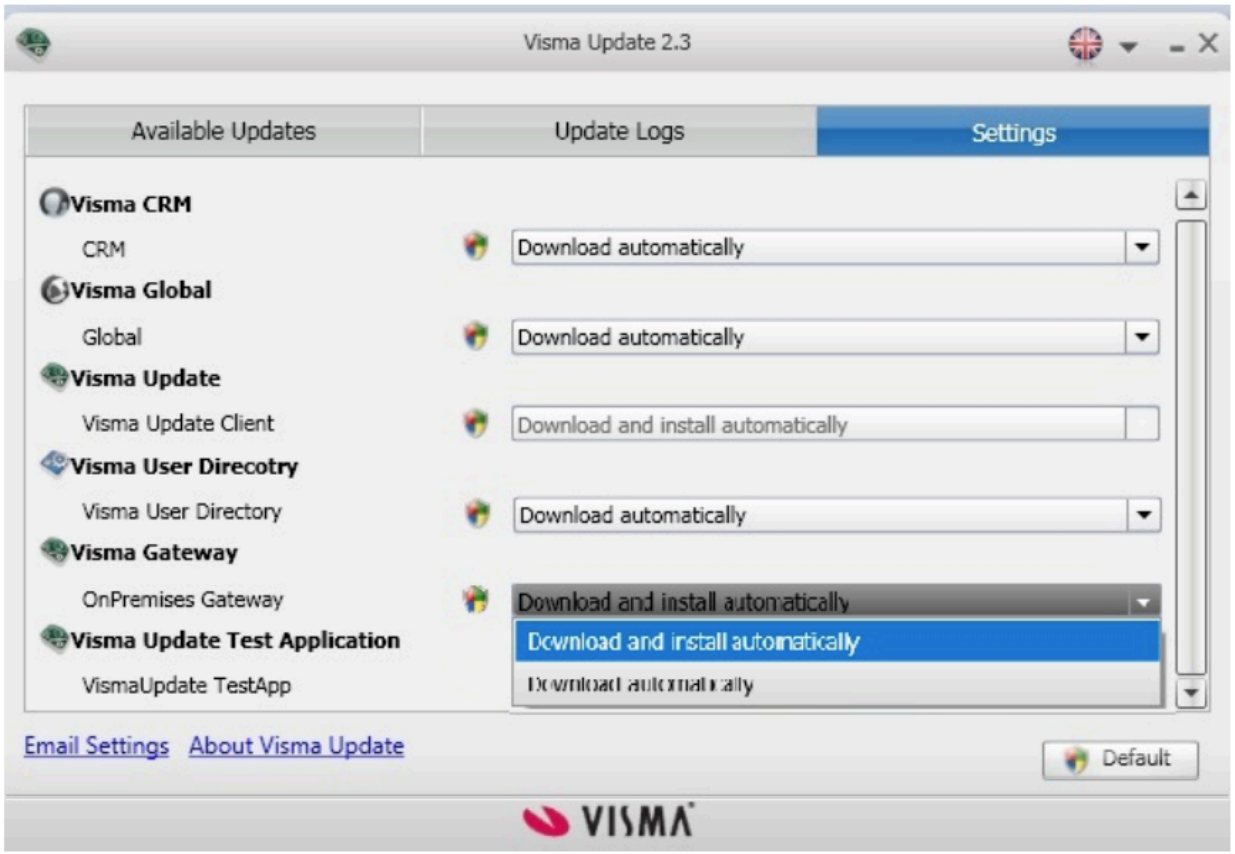
You can change the settings from the defaults set by Visma. If you want to go back to default settings, click the *Default* button.

In order to keep *Visma Update* running well, you cannot change the settings for *Visma Update*. *Visma Update* will always be updated automatically.

Click About Visma Update link, to open About Dialog Box with information about version and Client ID.

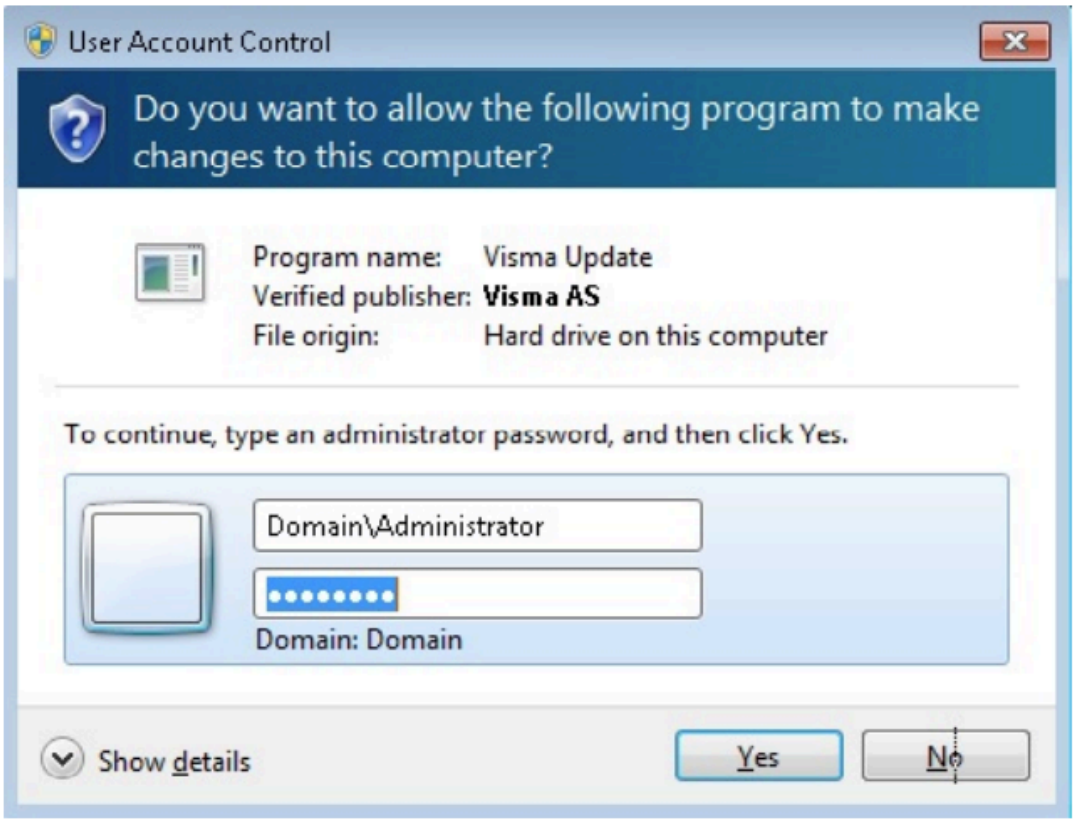
1. Start *Visma Update*

2. Select the **Settings** tab.
A list of all Visma applications installed on your computer, and their update settings, will be displayed.



3. Select the setting you want the component to have in the combo box.

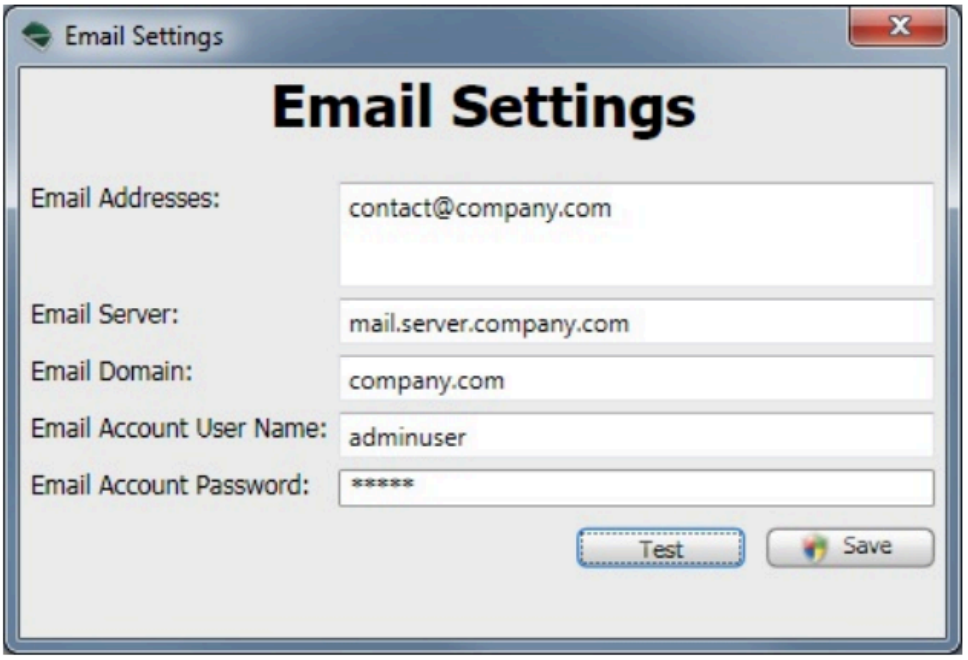
If your account doesn't belong to the Administrators group, the User Account Control window will pop up and ask you to enter the Administrator's Login and Password.



Visma Update Email Settings

Getting *Visma Update* Client ID and version info

Email Settings window is opened by clicking the link on the Settings Page.



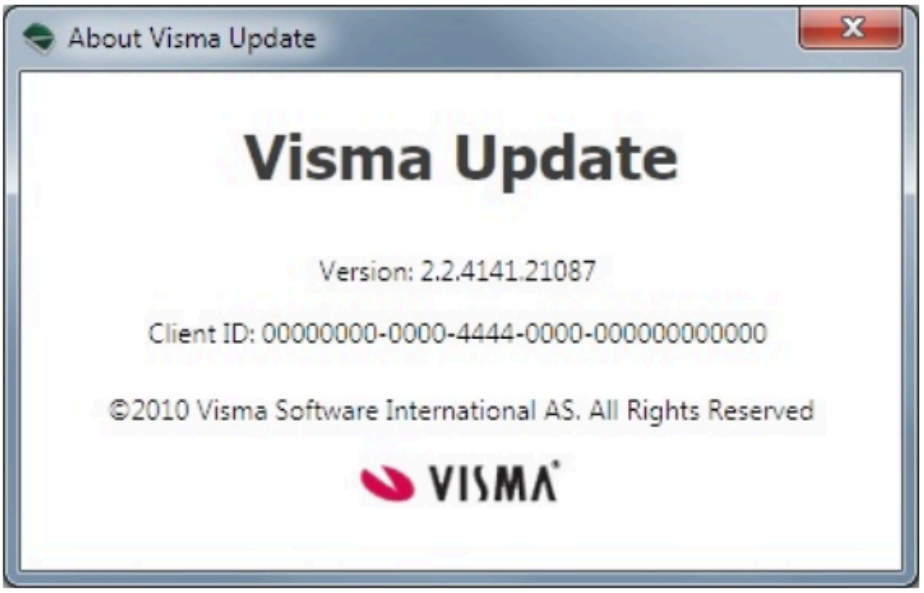
- **Email Addresses** - the email addresses of the persons who will get notifications about new releases. Can be several items divided by ";".
- **Email Server** - the address of the server which sends notifications.
- **Email Domain** - domain that is used to connect to the email server.
- **Email Account User Name** - domain user name to connect to the email server.
- **Email Password** - domain user password.
-

Test button is used to check if the settings are correct. In case of error you will see a message with additional information.

Visma Update About Box

Getting *Visma Update* Client ID and version info

About Box is available by clicking the link on the Settings Page.



You can see the version information here for the current Visma Update Client. Also there is Client ID information. Client ID data allows you to participate in the pilot projects for the latest updates for the installed Visma Applications.