



# PROXY Pro Server Installation Guide

**Release 10.4**  
**June 2021**

Proxy Networks, Inc.  
1234 Chestnut Street, Suite 201  
Newton MA 02464  
617-453-2700  
<http://www.proxynetworks.com>

© Copyright 2006-2020 Proxy Networks, Inc. All rights reserved.

PROXY is a trademark of Proxy Networks, Inc. Microsoft, Windows, Windows NT, Windows Server, and other Microsoft products referenced herein are either trademarks or registered trademarks of the Microsoft Corporation in the United States and other countries. Apple, AirPlay, Finder, iPad, iPhone, iPod, iPod touch, iTunes, Keychain, Mac, Macintosh, Mac OS, OS X, Retina, and Safari are trademarks of Apple Inc., registered in the U.S. and other countries. App Store is a service mark of Apple Inc. IOS is a trademark or registered trademark of Cisco in the U.S. and other countries. Novell and NetWare are registered trademarks of Novell, Inc. All other trademarks are the property of their respective owners. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>), cryptographic software written by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)), and compression software from the ZLIB project (<http://www.zlib.net/>).

## Table of Contents

PROXY Pro Server Overview .....	3
PROXY Pro Gateway Server (GWS) .....	3
PROXY Pro Identity Manager (PIM).....	3
PROXY Pro Web Console (WC) .....	3
PROXY Pro Server Requirements.....	4
Server Hardware Requirements.....	4
Server Operating System Requirements.....	5
Server Database Requirements .....	5
PROXY Pro Server Installation .....	5
Fresh Install vs. Upgrade.....	5
Account Performing the Install .....	5
Service Accounts Specified/Created During the Install .....	5
Domain/Non-Domain and Multi-Server Install Options .....	6
Redistributables Needed for Installation.....	6
Installation Steps .....	6
SQL Server Configuration .....	8
PROXY Pro Server Configuration Check.....	8
PROXY Pro Web Console Account Management .....	8
Documentation .....	9
Additional Resources .....	9

## PROXY Pro Server Overview

The PROXY Pro Server is part of the PROXY Pro RAS Edition of the PROXY Pro Remote Desktop solution from Proxy Networks, Inc. This includes the following individual components:

- PROXY Pro Gateway Server (GWS)
- PROXY Pro Identity Manager (PIM)
- PROXY Pro Web Console (WC).

These individual components are commonly installed on the same machine as part of the bundle installer. However, it is possible to separate these components onto different servers. It is important to note that all 3 of these components share a SQL database. The SQL instance can also be installed on the same server using the bundle installer, which offers to install SQL Express, or you can specify an existing off-box SQL instance instead during the installation. In all configurations, all components must have access to the SQL database in order to function properly. For complete instructions on how to go about decoupling the components, please see our guide on [www.proxynetworks.com/documentation](http://www.proxynetworks.com/documentation).

### ***PROXY Pro Gateway Server (GWS)***

The Pro Gateway Server (GWS) is the component that acts as a hub and connection broker between Masters and Hosts. It serves as a central point of security management for remote access activities and facilitates such things as off-LAN access, many-to-one connections, Wake on LAN, screen recording, and more.

### ***PROXY Pro Identity Manager (PIM)***

The PROXY Pro Identity Manager (PIM) is the authentication service for the PROXY Pro Server. It manages authentication using Windows accounts by default and can be configured to integrate with Azure Active Directory services.

### ***PROXY Pro Web Console (WC)***

The PROXY Pro Web Console (WC) provides browser-based management and administration of the Gateway server. This includes the importing of Windows users and groups, the specification of security for managed Hosts, initiation of clientless remote control connections right from the browser, initiation of recordings, central audit logging etc. The Host on Demand is also launched from the landing page of the Web Console initiated when clicking the SHARE button.

## PROXY Pro Server Requirements

The following sections describe requirements and prerequisites for installing and running the PROXY Pro Server:

### *Server Hardware Requirements*

The following section describes minimum recommended specifications for the hardware needed to install the PROXY Pro Server. There are a couple of assumptions made when coming up with these recommendations:

- 1) The chart below assumes all PROXY Server components (GWS, WC, and PIM), along with the SQL instance are installed on the same machine.
- 2) Although the chart below is sizing based on the number of managed Hosts, we assume a relationship to the number of concurrent support sessions.

Scenario	Server Hardware Requirements
<b>Up to 100 Hosts / (4 support sessions)</b>	<ul style="list-style-type: none"> <li>• 2 cores CPU at 2 GHz or faster</li> <li>• 4 GB RAM or more</li> <li>• SQL Server configured for “Max Server Memory” of 2048MB</li> </ul>
<b>Up to 1000 Hosts / (20 support sessions)</b>	<ul style="list-style-type: none"> <li>• 4 cores CPU at 2 GHz or faster</li> <li>• 8 GB RAM or more</li> <li>• SQL Server configured for “Max Server Memory” of 4096MB</li> </ul>
<b>Up to 5000 Hosts / (60 support sessions)</b>	<ul style="list-style-type: none"> <li>• 8 cores CPU at 2 Ghz or faster</li> <li>• 12 GB RAM or more</li> <li>• SQL Server configured for “Max Server Memory” of 6144MB</li> </ul>
<b>Up to 10,000 Hosts / (100 support sessions)</b>	<ul style="list-style-type: none"> <li>• 12 cores CPU at 2 Ghz or faster</li> <li>• 16 GB RAM or more</li> <li>• SQL Server configured for “Max Server Memory” of 8192MB</li> </ul>

## Server Operating System Requirements

The server components are supported on the following operating systems:

- Microsoft Windows Server 2012 (any edition)
- Microsoft Windows Server 2012 R2 (any edition)
- Microsoft Windows Server 2016 (any edition)
- Microsoft Windows Server 2019 (any edition)

**NOTE:** Web Console installation is not supported on a Windows Domain Controller and should not be installed on a machine that also runs Windows Server Update Services (WSUS).

## Server Database Requirements

Microsoft SQL Server 2012 or later (any edition) is supported. Note that the bundle installer will offer to install SQL Server Express on the server machine. Optionally you can point to an off-box SQL Server instance.

## PROXY Pro Server Installation

In version 10, the installation process of PROXY Pro Server has been streamlined by allowing all components to be installed from a single bundle installer. If you intend to install components across multiple servers, it is possible to do so by using the advanced mode options of the installer.

### *Fresh Install vs. Upgrade*

Version 10 of the PROXY Pro server software does not support upgrade from earlier versions, although the non-server components (e.g., Host, Master) do have upgrade options. Upgrade from version 10 to a later release of version 10 is supported.

We suggest a migration approach to transition from v9 to v10 and doing so results in zero downtime. Please see our Best Practices for Migrating Gateways PDF located on our documentation page at [www.proxynetworks.com/documentation](http://www.proxynetworks.com/documentation).

### *Account Performing the Install*

The account used to perform this installation needs to be a machine administrator in order to install the software and a Domain Administrator to set the SPNs correctly. If SPNs are not established at install time, a domain administrator can fix them later by running the CheckSPNs tool on the Gateway Server machine. This account should be designated a SQL administrator as well if you choose to install to an off-box SQL Server.

### *Service Accounts Specified/Created During the Install*

The accounts specified during the installation process for the various PROXY services should be domain accounts but should not have administrative rights. These services were specifically designed to run with a minimal set of privileges and do not require administrative privileges to function properly. For security purposes, we recommend that the Console and Gateway Server accounts be separate accounts and not used for anything else. The default account names used will be DOMAIN\RemoteControlConsole, used by both the Web Console and PIM, and DOMAIN\RemoteControlGateway, used by the Gateway service.

## Domain/Non-Domain and Multi-Server Install Options

We support both domain and non-domain installation of the server. Installing in a domain requires that service accounts be “Domain Users”, and components can be installed on a single machine or spread across up to 3 machines: (off-box SQL, Gateway Server, Web Console and PIM). In a non-domain installation, everything is installed on one machine and machine-local service accounts (which must be in the “Users” group) are used.

Web Console (WC) and PROXY Pro Identity Manager (PIM) must be installed on the same machine. The Gateway Server (GWS) can be optionally put on a separate machine, and the SQL Server should either be a separate machine managed by your DBA, or you can use SQL Express on the same machine as WC and PIM.

**NOTE:** Although you can choose to point to an existing off-box SQL Instance, manual database creation of the PROXY database is not recommended. However, “Advanced Installation” can be run to set up the database only. Once the database is setup, log files can be moved as appropriate by your DBA.

## Redistributables Needed for Installation

The provided installation folder contains the PROXY Pro installers and redistributable components that you are most likely to need. Optional components, specifically the .NET Framework 4.7.2 and SQL Server 2016 Express, are not included in the main distribution. These components are automatically downloaded if needed at installation time.

If the machine you are installing on has no, or limited, internet connectivity, or if there are any concerns about downloading the redistributable software at installation time, a Redistributables.ZIP file is available from the PROXY Pro Downloads site (<https://products.proxynetworks.com/downloads/>). The contents of that ZIP can be placed in the “PROXYProServer” folder along with the required installers. If these files are present in the folder, they will be detected (by exact file size and file name) and the download will be skipped.

## Installation Steps

<b>Optionally:</b> Follow along with our installation video: <a href="https://www.youtube.com/watch?v=-Z-Hs6oz5z0">https://www.youtube.com/watch?v=-Z-Hs6oz5z0</a>	
Step	Actions
1	Begin installation by double-clicking on <b>PROXYProServerProducts.exe</b>
2	<p>Select “New Installation (quick mode)”</p> <p>You will have the option to choose between installing SQL Express locally on this machine or to use an existing database server. If a SQL instance named “SQLEXPRESS” already exists on the machine, the “Use existing...” option will be selected for you.</p> <p>If you select “Use existing...” you will be prompted for the instance name. You can also browse for it if you do not know what it is or it is not found by default.</p> <p>The default database name to be created is “RemoteControlGatewayDb”.</p> <p>Note that SQL Server authentication is available for the purposes of installation only. The PROXY Pro services will do Windows authentication to the SQL Server as their service accounts.</p>

## PROXY Pro Server Installation Guide

3	Read and accept the license agreement.
4	<p>Enter the fully qualified domain name that will be used to access the PROXY Pro services on this machine. The PIM requires that it be accessed by the same name (and port) both internally and externally if also exposed to the internet. That DNS name is what needs to be entered here and should match what is on the SSL certificate to be used on this server.</p> <p>The Web Console and Gateway Server can have different names and ports if desired.</p>
5	Enter the ports that the PROXY Pro Gateway (GWS) and the PROXY Pro Web Console (WC) will be listening on. Note that it is possible to enter a 2 <sup>nd</sup> port for the WC in the case that internal and external access require it (configured in IIS).
6	Select the SSL certificate to be used on this machine. This certificate will be selected in IIS for the WC and PIM applications, and is also selected in the GWS. You must have a certificate to select in order to proceed. If a desired certificate is not listed, you can click on the "Launch Wizard" button to generate a new certificate or to import an existing certificate. We strongly recommend that you use a trusted SSL certificate – either from a trusted 3 <sup>rd</sup> party or from a domain CA.
7	Select how you will access the On Demand applications (ClickOnce Master connection window, Host on Demand). A default will be chosen based on the certificate selected. If the certificate was a valid 3 <sup>rd</sup> party trusted certificate, the URL will default to "Web Console Installation". If it was a self-signed certificate, the default will be to download these applications from the cloud. If you later install a 3 <sup>rd</sup> party trusted certificate, you can change this setting in the WC - "On Demand Application Access".
8	Enter the user account information under which the WC service will run (default account is RemoteControlConsole). If this account does not already exist, you will be prompted to create it.
9	<p>Enter the user account information under which the PIM service will run (default account is the same as for the WC service, RemoteControlConsole). If this account does not already exist, you will be prompted to create it.</p> <p>NOTE: A domain user account is recommended. If a local account is specified instead of a domain account, only local accounts can be imported to the Web Console's "Accounts" tab once installed. Utilizing a local service account will not be a problem if you plan to use Azure AD or will not be importing local Active Directory accounts. Also, if this is a local account, a local SQL instance must be used.</p>
10	<p>Enter the user account information under which the GWS service will run (default account is RemoteControlGateway). If this account does not already exist, you will be prompted to create it.</p> <p>NOTE: A domain user account is recommended. The Gateway server running as a local account results in all Host &lt;-&gt; Gateway relationships defaulting to the "Shared Secret" handshake. If a domain account is used, the Host &lt;-&gt; Gateway relationships will default to "Windows Authentication" when available. Also, if this is a local account, a local SQL instance must be used.</p>
11	Enter the server license or select the 14 day trial
12	Review summary action page and start the install process.

## SQL Server Configuration

Step	Actions
1	Open SQL Server Management Studio, click <b>Connect</b> on the “Connect to Server” screen.
2	Right-click the server name in the “Object Explorer” pane and click <b>Properties</b>
3	Highlight <b>Memory</b> and assign the appropriate value for the “Max Server Memory” field. These values are given in the “Server Hardware Requirements” earlier and are generally half of the total memory of the system.

## PROXY Pro Server Configuration Check

PROXY v10 includes a new utility, Server Configuration Check, which is installed along with the Server product and is accessible on the Start menu. This utility does a basic sanity-check of the PROXY configuration and can update entries in the registry and SQL database for consistency and to ensure proper operation. It is recommended to use this utility to make changes like changing the server DNS name, changing IIS port bindings, and selecting a new SSL certificate. If changes like that are made manually (e.g., adjusting IIS port bindings in IIS Manager), you must run Server Configuration Check so that related entries PROXY needs to function properly get updated.

## PROXY Pro Web Console Account Management

Each user account imported into your Web Console's **Accounts** tab will be designated as one of the following three account types: **Administrative** users, **Master** users, or **Personal** users.

**NOTE:** The installation process automatically imports the “**BUILTIN\Administrators**” group (machine local Administrators) as an administrative category in the Web Console. Any member of that group can then import other users or groups.

- **Administrative Accounts** are users who are expected to have Full Control/Administration rights, including the ability to view & modify Gateway Server settings, configure access rights for all other users of the Master and Personal account types, and run usage reports. A user of an administrative account type will see all tabs in the Web Console.
- **Master Accounts** are users who will need day-to-day access to Host desktops for remote support and remote collaboration. Users of this account type typically do not have administration rights over the Gateway Server. They may be granted a broad level of access to Hosts and Groups, but will see only the Home, Hosts and Recordings tabs.
- **Personal Accounts** are users who log into Web Console for access to a specific Host computer – usually their desktop PC at the office. Personal Accounts are ideal for work-from-home and on-the-road employees, and for guest employees who need access to one and only one Host desktop.

Accounts can be imported, modified, or deleted by Administrative Account Users on the **Accounts** tab in the Web Console. Please see the “[PROXY Pro Web Console Operations Guide](#)” for more information.



## Documentation

Documentation is available at:

- **PROXY Pro Web Console Operations Guide:** <https://products.proxynetworks.com/docs/proxy/v100/wc/>
- **PROXY Pro Host Guide:** <https://products.proxynetworks.com/docs/proxy/v100/host/>
- **PROXY Pro Master Guide:** <https://products.proxynetworks.com/docs/proxy/v100/master/>
- **PROXY Pro Deployment Tool Guide:** <https://products.proxynetworks.com/docs/proxy/v100/pdt/>

## Additional Resources

Further information is available upon request that covers:

- **PROXY Pro Host Configuration Tips:** <https://www.proxynetworks.com/sites/default/files/Proxy-Host-Settings-Checklist.pdf>
- **PROXY Pro RAS - First Time Setup Video:** <https://www.youtube.com/watch?v=-Z-Hs6oz5z0>
- **PROXY Pro Server Migration Guide:** <https://www.proxynetworks.com/sites/default/files/support/RAS-Server-Migration-Steps-2019.pdf>
- **PROXY Pro RAS Azure AD Setup Guide:** <https://www.proxynetworks.com/sites/default/files/PROXY-Pro-Azure-Portal-Setup-June-2021.pdf>
- **PROXY Pro Deployment Tool Walk-Through Video:** [https://www.youtube.com/watch?v=LwvM6gYCv\\_c](https://www.youtube.com/watch?v=LwvM6gYCv_c)
- **PROXY Pro RAS Connectivity Diagram:** [https://www.proxynetworks.com/sites/default/files/ProxyDeployment\\_v10\\_RAS\\_External.pdf](https://www.proxynetworks.com/sites/default/files/ProxyDeployment_v10_RAS_External.pdf)
- **PROXY Pro RAS Connectivity Diagram with Azure AD:** [https://www.proxynetworks.com/sites/default/files/ProxyDeployment\\_v10\\_RAS\\_Azure.pdf](https://www.proxynetworks.com/sites/default/files/ProxyDeployment_v10_RAS_Azure.pdf)
- **De-coupling PROXY Pro Server components:** <https://www.proxynetworks.com/sites/default/files/De-Coupling-PROXY-Pro-RAS-Components.pdf>