EveryonePrint 4.3

Installation and Configuration Guide

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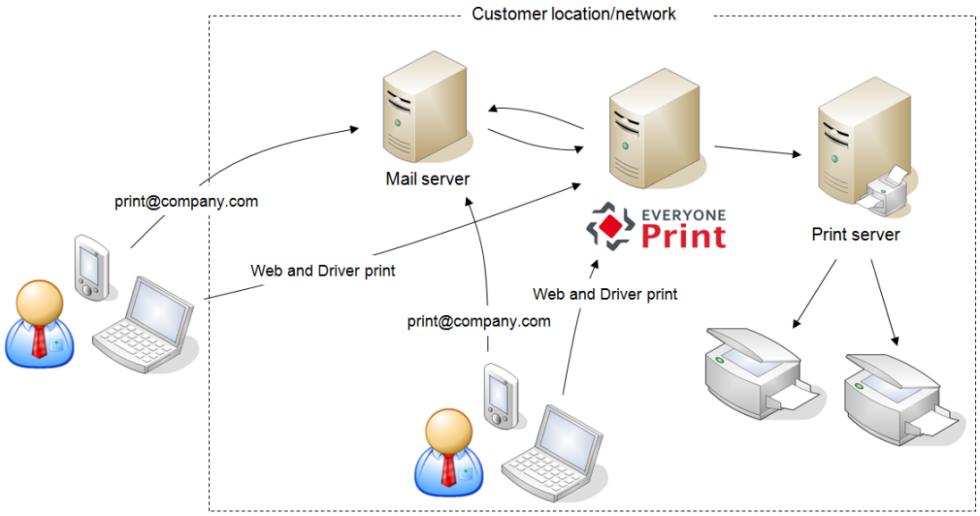
1. EveryonePrint Overview

1.1 What is EveryonePrint?

EveryonePrint is a server based secure and mobile printing solution that allows users to print from their workstation PC's, laptops and notebooks, mobile devices and tablets with ease, using Web print, driver printing, email, WiFi or Google Cloud printing.



Web print — Users can upload documents to print via a Web portal, optionally with login validation.

Driver print — Users can print from within their programs and applications on workstations or notebooks, with or without a driver installation, directly to the EveryonePrint server, optionally with authentication.

Email print — Users can send documents to print from mobile devices, by sending an email with documents attached, to an email address configured for the purpose. EveryonePrint retrieves emails and processes to the relevant print queues, optionally allowing for secure printing with login validation or privacy release codes.

Mobile print — Users can send documents to print using the native Apple iOS AirPrint capability on iPhones and iPads, Google Android based smartphones and tablets, or Windows Phone devices, with optional authentication or release code print.

Google Cloud Print — Users can print from their Google Chromebook, phone or tablets, Google Apps such as Gmail, Google Docs, Google Sheets, or using any other application or device that supports Google Cloud Print, to the printers you select in EveryonePrint.
After 31 December 2020, Google Cloud Print will no longer be supported.

What printing methods are available to users can be customized in the administration interface.

Print jobs can be held in secure private print clouds, until user walks up to their printer of choice and release their print jobs, either by entering a private release code, login credentials, or by card swipe.

EveryonePrint can be configured for many different uses and different integrations with existing environments, integrating with existing print accounting or print management systems and much more. If in doubt about the best setup for your organization, please contact EveryonePrint support or your local EveryonePrint solution specialist.

1.2 Prerequisites and Requirements

EveryonePrint is available for installation on both Windows and Linux server operating systems. For more information about installing EveryonePrint on Linux Enterprise, refer to the specific EveryonePrint for Linux Enterprise documentation.

The following are required for a successful EveryonePrint installation:

- A server with the following minimum specifications:
    - Supported servers include: Windows 2008 Server SP1 (32 or 64 bit), Windows 2008 R2 Server (32 or 64 bit), Windows 2012 or Windows 2012 R2, Windows 2016, Windows 2019
    - Recent generation server CPU processor, such as Intel Xeon 64 or equivalent (see below for important note about performance). Desktop CPU's are NOT recommended for production use.
    - Minimum 4 GB free RAM memory (minimum 8 GB free RAM memory recommended for higher volume processing)
    - Minimum 20 GB free hard disk space for print job spooling and processing (40 GB free disk space recommended for higher volume processing)
    - No anti-virus program monitoring or interrupting the EveryonePrint directories
- For Microsoft Office document support, either use the built-in conversion engine (see separate licensing requirements) or Microsoft Office installed on the EveryonePrint server
    - For Microsoft Office document support using Microsoft engine, the following must be installed:
        - Microsoft Office 2007 SP2, Microsoft Office 2010 or Microsoft Office 2013 installed with minimum Word, Excel and PowerPoint. Both 32 bit and 64 bit editions are supported.
        - Microsoft Office must be activated.
- For OpenOffice document support, either use the built-in conversion engine (see separate licensing requirements) or OpenOffice installed on the EveryonePrint server
    - For OpenOffice or LibreOffice document support (odt, ods, odp) using OpenOffice engine, OpenOffice 3.3 or 3.4 must be installed. (LibreOffice and other OpenOffice variants are supported, but install OpenOffice to support these OpenOffice document variants)
- No proxy server interrupting local communication on the server (localhost/127.0.0.1)
- A local administrative user

If Email Print is enabled, the following are minimum specifications:

- A POP3/IMAP (SSL or non-SSL), Exchange MAPI or Exchange Web Services email account configured on a mail server to which users can send email print jobs, for example print@yourcompany.com
- EveryonePrint can support Microsoft Exchange with the following:
    - Microsoft MAPI via RPC protocol with NTLM authentication
    - Microsoft Exchange Web Services over HTTPS with Basic, NTLM, or forms-based authentication. Kerberos, ADFS and RPC over http(s) authentication is not supported.

  See section 18.2 for information about how to check and verify Exchange support.
- An SMTP server for sending release code or authentication emails from EveryonePrint to the users email address

1.3 Important note about performance

EveryonePrint can be a resource demanding application, as the EveryonePrint typically handle many of the tasks done by a normal workstation.

In a normal client/server environment, when a user prints a Word document, Office on the client PC renders the document to print. With EveryonePrint, if a user uploads a Word document, that conversion and rendering now takes place on the server, and effectively EveryonePrint assumes the workload of many clients.

It's therefore essential that the EveryonePrint server is fitted with proper sufficient CPU and memory to handle the print volume.

EveryonePrint contains multiple ways to print, Web upload, Driver Print, Email Print and Mobile/App print. Each of these perform differently, and performance further depends on the document type and complexity of the document

Web Print	Upload of Microsoft Office or OpenOffice documents is most resource demanding, with each job processing taking from 1-2 seconds for simple jobs to 15-20 seconds for more complex documents. PDF documents and images require very little server processing, and are processed typically in less than 2 seconds.
Email Print	Office, PDF and images attached to emails are processed similar to Web Print jobs, and take the same time and resources to process.
Driver Print	With Driver Print there are 2 different core methods: "Simple" which uses a generic driver the user have already got on their machine, meaning no need to download and install a driver for the user; and "Advanced" where the user uses a manufacturer Postscript or PCL driver, for example, to use finishing options like stapling and binding. Driver Print fundamentally is very efficient. With "Simple" driver print, users print with a generic Postscript driver, and this data is converted and ultimately sent to the final destination printer using the driver installed on the EveryonePrint server.
Mobile Print	Print jobs from native app printing from mobile devices is typically very efficient, as little processing is required.

In case of excessive print job volume within a short time, the server will simply let jobs it cannot handle expire.

The following numbers are based on load testing with mixed Office and PDF documents, various number of pages and complexity, to simulate a typical customer environment.

The server was an Intel i7-level server CPU with 4 GB ram on Windows 2008 R2 only running EveryonePrint and Microsoft Office. This server could process and print:

Web/Email print:	800	Jobs per hour
Simple Driver Print:	1500	Jobs per hour
Advanced Driver Print:	12000	Jobs per hour
Mobile Print:	1500	Jobs per hour

So the usage pattern, volume of jobs, features used and the documents printed fully determines how many servers are needed. Target the number of servers for the peak load. If using a high-end server and the expected print volume is less than above test results, a single server should be sufficient.

1.4 Ports and protocols

Web interfaces and Web Print

EveryonePrint includes Web interfaces for administrator configuration, Web print upload and user print release. Per default the following ports are used:

HTTP (non-SSL)	TCP port 7290
HTTPS (SSL)	TCP port 9443

Driver Print

Printing to EveryonePrint via driver, is either through HTTP/HTTPS IPP printing protocol or the LPD server for LPR print. Per default, the following ports are used:

IPP print	TCP port 631
IPP print (SSL)	TCP port 9443
LPR print	TCP port 515

Email Print

The EveryonePrint server will communicate with external mail servers on the network when retrieving and sending emails. The ports used depend on the mail servers configuration, but typical ports are:

POP3 non-SSL:	TCP port 110
POP3 SSL:	TCP port 995
IMAP non-SSL:	TCP port 143
IMAP SSL:	TCP port 993
SMTP non-SSL:	TCP port 25
SMTP SSL:	TCP port 465
Exchange MAPI:	TCP port 135 and Windows RPC protocols
Exchange WS:	HTTP TCP port 80 and HTTPS TCP port 443

Mobile Print

Refer to separate EveryonePrint Mobile Gateway documentation for details on Mobile Print ports and protocols requirements.

Google Cloud Print
The EveryonePrint server communicates with the Google Cloud Print services hosted with Google through the following ports:

TCP port 80 and 443
XMPP protocol TCP port 5222

Important! The Google Cloud Print service is marked as a BETA software by Google. This means that Google could change anything and everything at anytime, interrupting or breaking the integration between EveryonePrint and Google Cloud Print.

After 31 December 2020, Google Cloud Print will no longer be supported.

Other ports
When EveryonePrint releases print jobs to Windows print queues, internal Windows printing protocols are used, RPC, IPP, LPR etc, depending on the printers driver configuration.

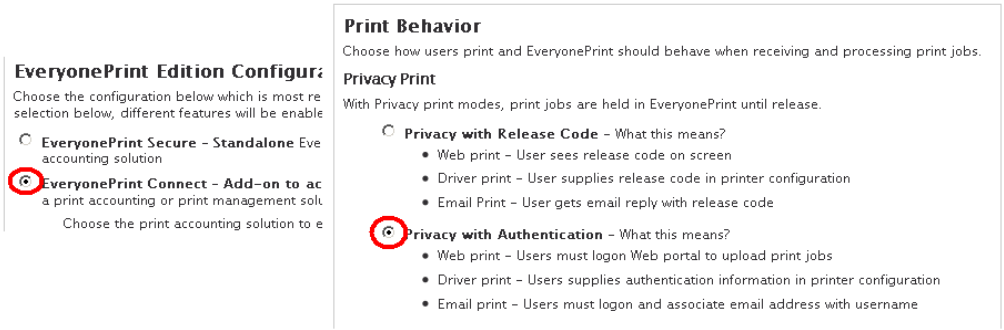
1.5 Supported documents

The following document formats are supported via Web and Email Print. All document formats are supported under Driver Print.

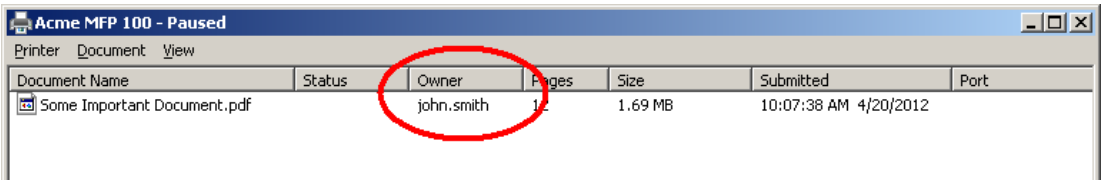
File format	Requirements
Pdf, html, htm, gif, png, jpg, tif, bmp, txt	No special requirements
doc, docx, xls, xlsx, ppt, pptx, rtf	Requires Microsoft Office or EveryonePrint built-in conversion engine (see separate licensing requirements)
odt, ods, odp	Requires OpenOffice or EveryonePrint built-in conversion engine (see separate licensing requirements)

1.6 EveryonePrint with print accounting solutions

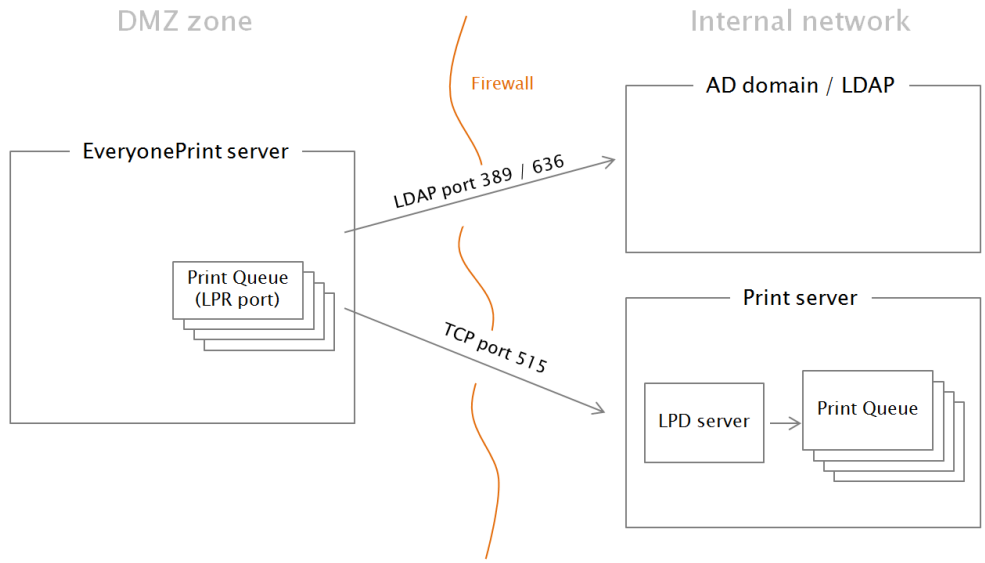
EveryonePrint can work seamlessly as an add-on to nearly all print accounting or print management solutions. Set the EveryonePrint edition to **EveryonePrint Connect** (see section *3.4 Choose EveryonePrint Edition*) and under Printing and Security *(see section 3.11 Printing and Security)*, choose either **Privacy with Authentication** or **Direct with Authentication**, so users and their print jobs are authenticated.



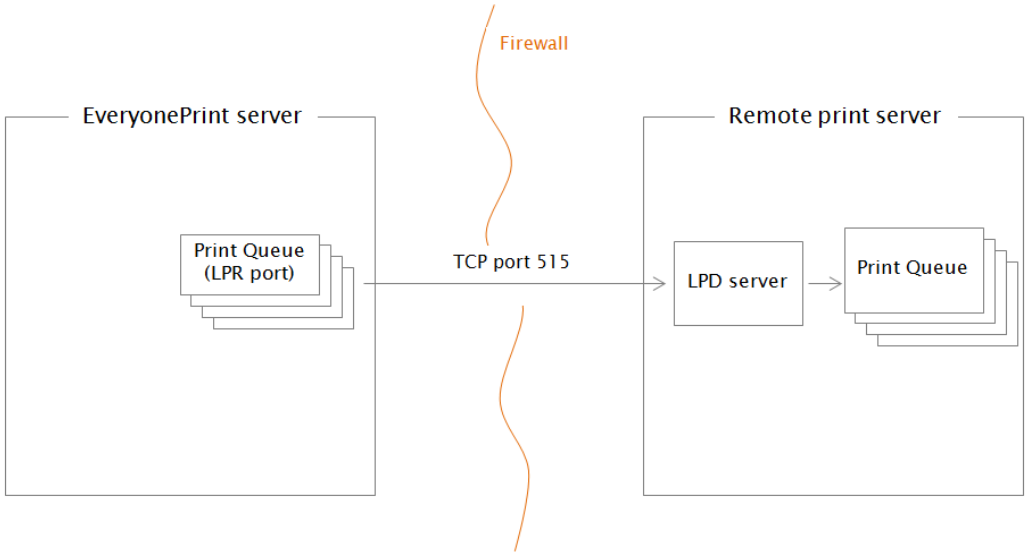
When a user sends a print job via EveryonePrint, EveryonePrint will send the print job into the associated print queue with the user's username as the print job owner, and print accounting solutions monitoring the Windows print queue, will use this information to track and account the print jobs.



EveryonePrint can either be installed directly on the print server or on a separate server, for example in a DMZ zone.



If EveryonePrint is installed on its own separate server, and not the print server, EveryonePrint can still send print jobs to the print servers where the print accounting solution is installed. See section *12 Printing to remote print servers* for more information about sending jobs to remote servers.



EveryonePrint has deep integration with several of the most popular print accounting and print management solutions in the market, to allow for advanced guest printing scenarios, displaying user account balances inside of EveryonePrint, and more. Contact EveryonePrint support to obtain details, on how to enable these integration features for your accounting or print management solution.

2. Quick Start Guide

The following section walks through a simple setup of EveryonePrint, with a user uploading a document to print via the Web portal.

2.1 Installation Summary

These are the overall steps involved in setting up and configuring an EveryonePrint server.

Setup email account	If email printing is to be used (optional), start by configuring the pop3/imap/MAPI/EWS email account to which users send their print jobs, for example print@yourcompany.com
Prepare server	Prepare the server on which to install EveryonePrint, ensure that it meets the minimum requirements for memory and disk space.
Prepare printers	Prepare the printers on the server on which users should be able to print
Install and configure EveryonePrint	Run the installer, configure in EveryonePrint Admin, do a test print job to selected printers

If the server has been prepared, the basic EveryonePrint installation and configuration takes less than 10 minutes.

2.2 Configure Email Account

An essential component in the mobile printing process with EveryonePrint, is the email account to which users send emails with documents attached to print.

The EveryonePrint server supports POP3, IMAP4, Microsoft Exchange MAPI or Exchange Web Services email accounts, either with or without SSL encryption. There are no limitations to the mail servers supported, as long as they adhere to standard POP3, IMAP4 or MAPI mail specifications.

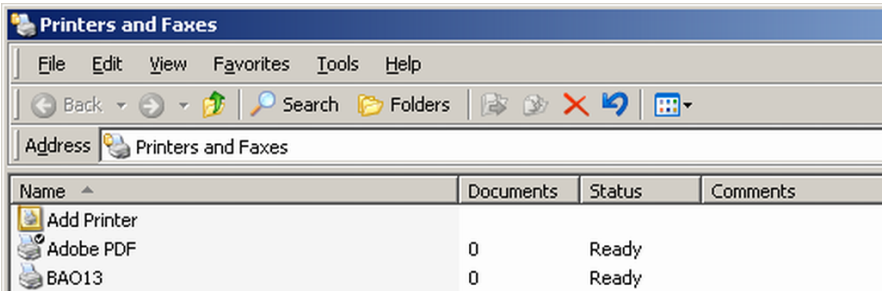
Most enterprise email systems, such as Microsoft Exchange and Lotus Domino/Notes, fully support IMAP email access and SMTP for sending emails.

Note that email printing is not required for EveryonePrint to function. The Email Print features can be disabled, if the wish is to only use, for example, Web and Driver print.

If for some reason you are unable to configure an email account, please contact EveryonePrint support, and we can provide you with a temporary account on the EveryonePrint mail servers for initial setup and demo purposes, such as your-company@everyoneprint.net.

2.3 Prepare printers on the server

If the server on which to install EveryonePrint is not already a print server containing printers, install the relevant printers on the server.



EveryonePrint can print to locally installed printers or local print queues which point to other print servers with printing via LPR or using other printer ports. For printing to remote print servers, see the section *12 Printing to remote print servers.*

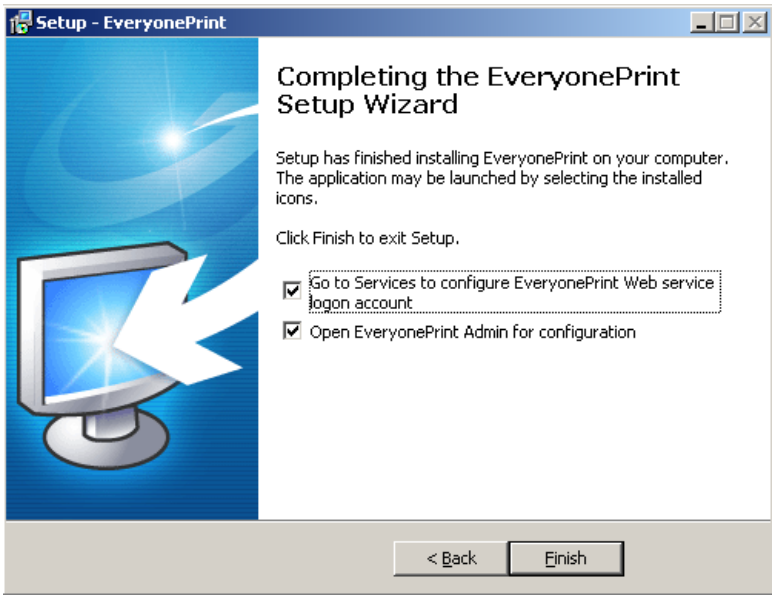
There are no known limitations to the type of printer, driver or the communication protocol of the printer. If you can print to the printer from Word without any special configuration with each print job, then users printing via EveryonePrint, should be able to print to it as well.

2.4 Installing EveryonePrint

Before running the EveryonePrint installer, make sure that you are logged on as local administrator.

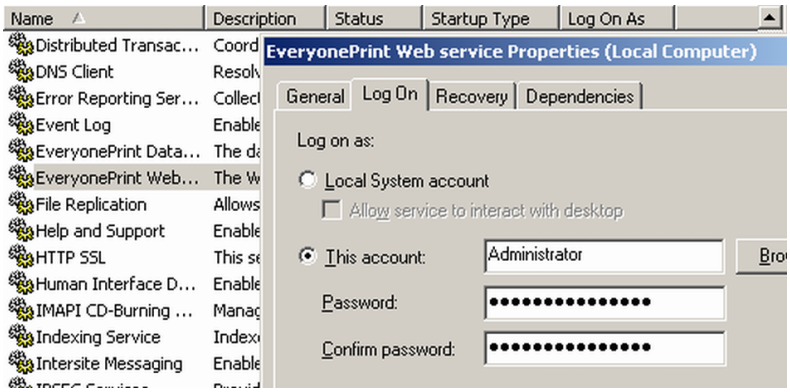
Install EveryonePrint by running the installer EveryonePrintSetup.exe. The installer will let you select destination directory, start menu name and other similar basic settings. EveryonePrint will install by default in c:\Program Files (x86)\EveryonePrint or equivalent for localized versions of Windows.

At the last screen of the installer, you're presented with two options:



EveryonePrint is installed as a Windows service, and automatically starts with Windows.

For EveryonePrint to successfully convert documents and print, the EveryonePrint Web service in Windows Services must be logged on as a user with local administrative rights. You can open Windows Services by checking the “Go to Services” in the above dialog.

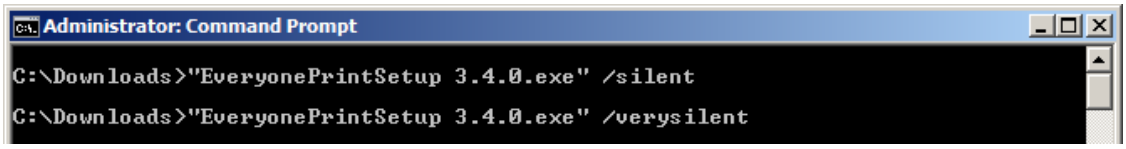


Make sure that you’re using a local administrative user. It does not have to be .\Administrator specifically, but a local user account which is member of Administrators group.

Only the EveryonePrint Web service should be started as local administrator. Other EveryonePrint Windows services such as “EveryonePrint Data service” and “EveryonePrint Print Service” should run as LocalSystem.

2.4.1 Unattended/Silent installation or update of EveryonePrint

The EveryonePrint installer program accepts optional command line parameters. These can be useful when deploying new EveryonePrint servers, or updating existing EveryonePrint installations.



/SILENT or **/VERYSILENT**
Instructs installer to be silent or very silent. When installer is silent the wizard and the background window are not displayed but the installation progress window is. When a setup is very silent this installation progress window is not displayed. Everything else is normal so for example error messages during installation are displayed.

If a restart is necessary and the '/NORESTART' command isn't used (see below) and installer is silent, it will display a Reboot now? message box. If it's very silent it will reboot without asking.

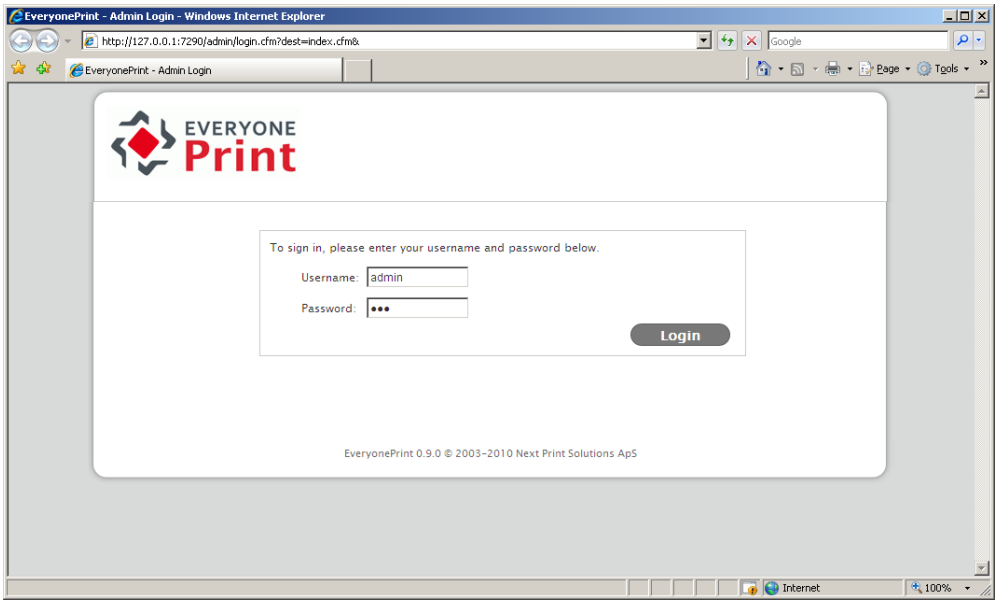
/NORESTART
Instructs installer not to reboot even if it's necessary.

/DIR="x:\dirname"
Overrides the default directory name displayed on the Select Destination Location wizard page. A fully qualified pathname must be specified. Should only be used on new installations!

2.5 EveryonePrint Admin

To configure EveryonePrint start the EveryonePrint Admin from the shortcut either in the Windows start menu, the desktop icon or by entering the URL for the admin interface:

http://127.0.0.1:7290/admin or https://localhost:9443/admin



2.5.1 Access EveryonePrint Admin remotely

The admin interface can be accessed remotely from any client with access to the IP address of the computer hosting the EveryonePrint service, through the URL: http://{server-ip}:7290/admin where {server-ip} is the IP address of the server, or https://{server-ip}:9443/admin, if the network and firewall configuration permits it.

2.5.2 Default EveryonePrint Admin login

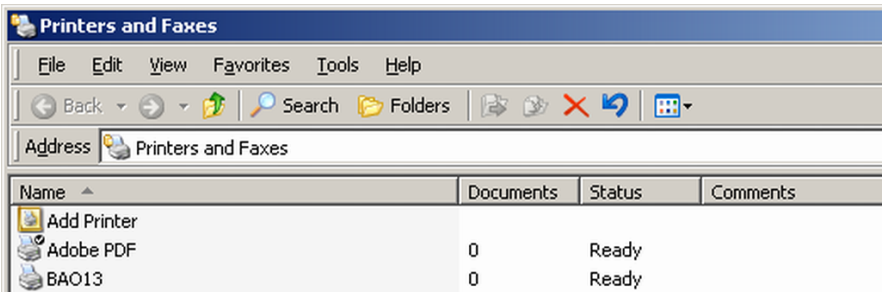
The default username and password for the EveryonePrint Admin is:

Username: admin
Password: eop

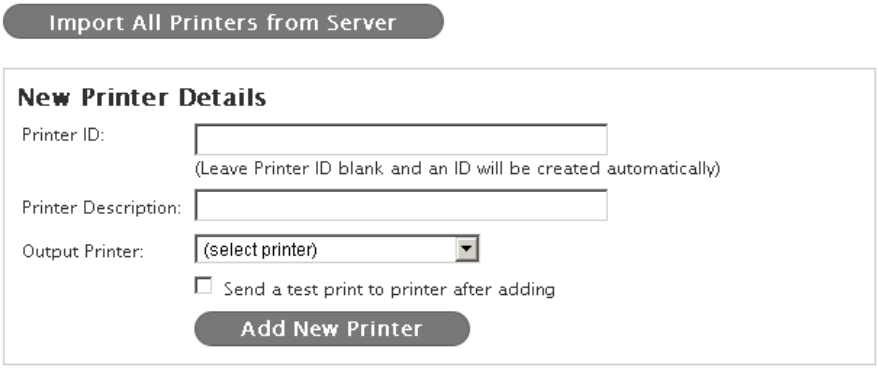
It is strongly recommended to change this password after logging on, by going to **Administrator Login** in the Settings section.

2.6 Adding Printers to EveryonePrint

A server on which EveryonePrint is installed may contain many printers that may or may not be used in EveryonePrint. It is therefore necessary to add the printers to be used in EveryonePrint, via the admin interface.



Go to **Devices** in the admin site. If no printers have been added previously, it will automatically show the "Add New Device" page.



Click "Import All Printers from Server" to automatically add all printers that exist on the server on which EveryonePrint is installed. Imported printers can be changed or removed at any time afterwards, if any adjustments are necessary later.

A printer can also be added manually for more control.

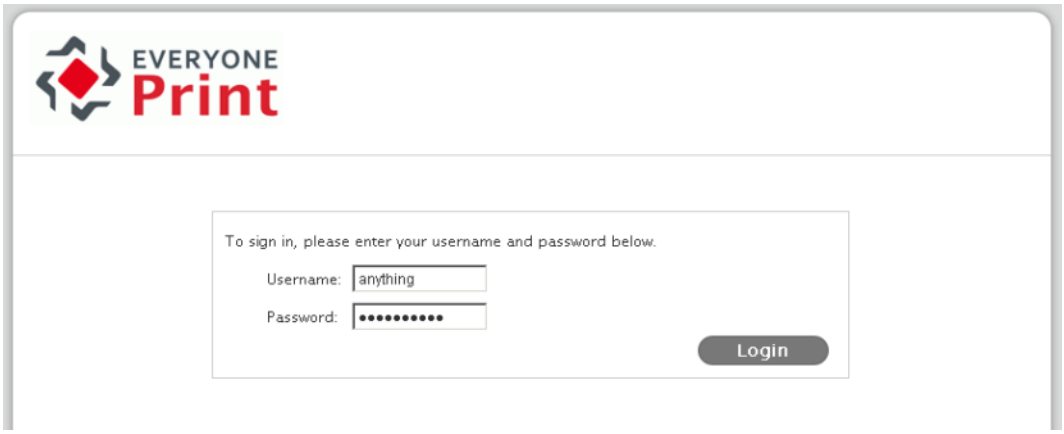
Printer ID — A unique identifier for the printer. Can be a number, serial number, IP address or similar.

	Important: If using EveryonePrint with release terminals, make sure the Printer ID is as defined by the release terminal supplier, for example the output device IP address.
Printer Description	A user friendly description of the device, to identify the printer to the end user
Output Printer	The corresponding Windows print queue as installed on the EveryonePrint server.

Check the box **Send a test print** to send a test print job from the EveryonePrint application after adding the printer, useful for verifying the configuration of the device.

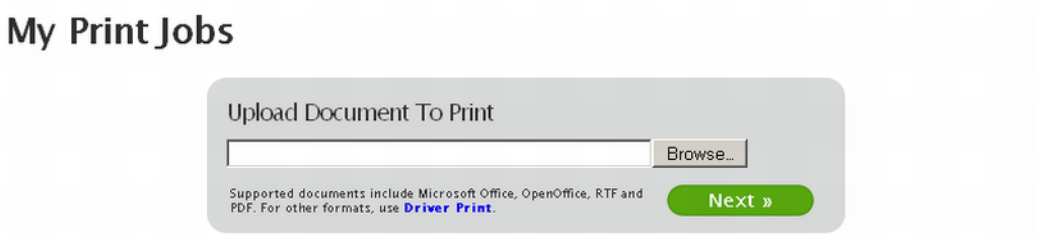
2.7 Access user Web portal and do simple test print

To complete a simple test print, access the user Web portal (covered in detail later in this guide), by going to http://127.0.0.1:7290.



You will be presented with a login screen. Enter any username and password, no validation of the entered login takes place, if no authentication has been configured in EveryonePrint Admin -> Settings -> User Authentication.

From the main **My Print Jobs** page, upload a simple text document.



The document will be processed and once complete, a list of the available printers will be shown.

Release to a printer and confirm the output.

You have successfully completed the basic EveryonePrint installation!

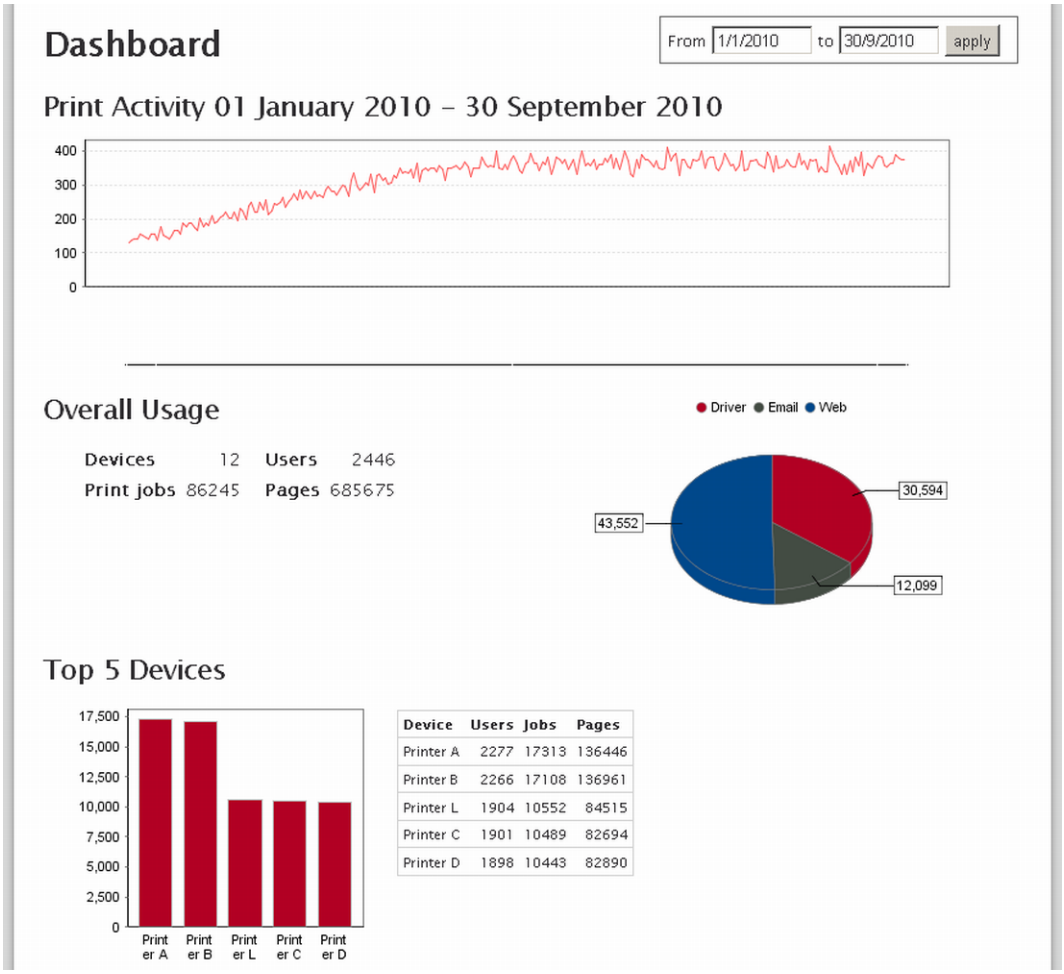
Please see the next sections for configuring the EveryonePrint server further, with user authentication, printing behavior, additional print methods and so on.

3. Configuring EveryonePrint

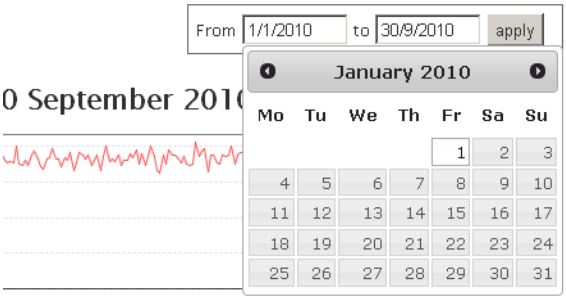
The following section covers the configuration screens in EveryonePrint Admin.

3.1 Dashboard with statistics

The **Dashboard** is an overall view of completed print job usage and activity in the EveryonePrint system.



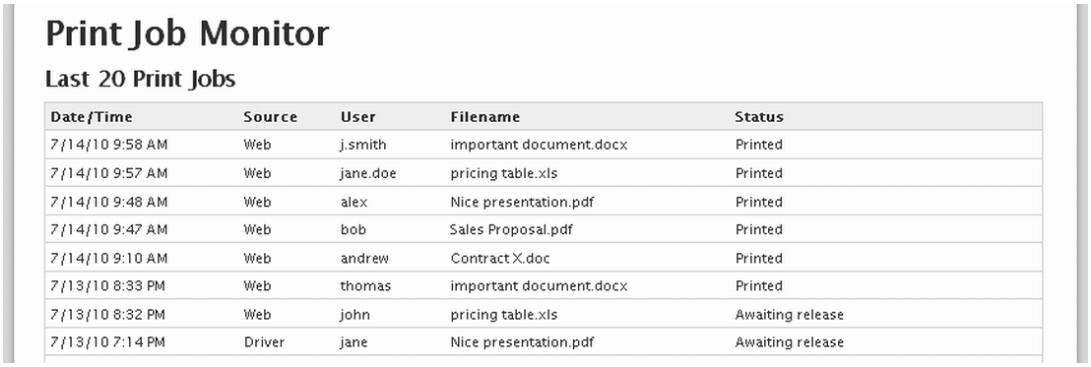
Select a reporting date range for the dashboard by selecting the **date from** and **date to** fields, and clicking **Apply**.



The number of pages reported in the Dashboard does not reflect the accurate printed output on device, as EveryonePrint reports the number of pages contained in the document, not the actual output. For accurate output tracking, use EveryonePrint together with a print accounting system.

3.2 EveryonePrint Monitor

The **Monitor** in the admin shows recent print jobs and email activity in the EveryonePrint server, useful for verifying the status of certain print jobs or just monitoring activity.



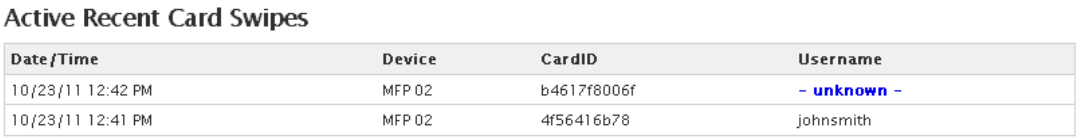
Print Job Monitor

Last 20 Print Jobs

Date/Time	Source	User	Filename	Status
7/14/10 9:58 AM	Web	j.smith	important document.docx	Printed
7/14/10 9:57 AM	Web	jane.doe	pricing table.xls	Printed
7/14/10 9:48 AM	Web	alex	Nice presentation.pdf	Printed
7/14/10 9:47 AM	Web	bob	Sales Proposal.pdf	Printed
7/14/10 9:10 AM	Web	andrew	Contract X.doc	Printed
7/13/10 8:33 PM	Web	thomas	important document.docx	Printed
7/13/10 8:32 PM	Web	john	pricing table.xls	Awaiting release
7/13/10 7:14 PM	Driver	jane	Nice presentation.pdf	Awaiting release

Print jobs not actively being processed or printing, can be deleted by clicking the red cross.

If the card server service is enabled, the Monitor will also show recent active card swipes.



Active Recent Card Swipes

Date/Time	Device	CardID	Username
10/23/11 12:42 PM	MFP 02	b4617f8006f	- unknown -
10/23/11 12:41 PM	MFP 02	4f56416b78	johnsmith

If an unknown card has been swiped, click the “unknown” username, to associate that card with an actual username.

If a user logs out on the release terminal, the relevant card swipes sessions are cleared from the Monitor.

3.2.1 Hide user and document information in Monitor

For situations where administrators should not be able to view user names and/or document names in the Monitor, for privacy reasons, a settings parameter can be added to the main EveryonePrint configuration file eop.xml found in the installation directory.

1. Stop EveryonePrint Web service
2. Open eop.xml in a text editor such as Notepad
3. Add/edit the following parameter:

   <adminprivacy>0</adminprivacy>

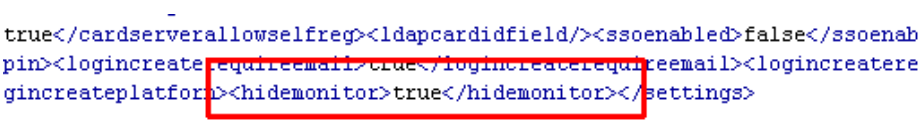
   0 = Normal operation
   1 = User name is hidden
   2 = Document name is hidden

3 = User name and Document name are hidden

4. Start the EveryonePrint Web service

3.2.2 Hide the Monitor completely

For situations where the Monitor view should be hidden completely from the EveryonePrint administration interface, a settings parameter can be added to the main EveryonePrint configuration file eop.xml found in the installation directory.



1. Stop EveryonePrint Web service
2. Open eop.xml in a text editor such as Notepad
3. Add/edit the following parameter:

   <hidemonitor>true</hidemonitor>

4. Start the EveryonePrint Web service

3.3 Licensing

In EveryonePrint Admin and General Settings, are overall application settings for EveryonePrint.

EveryonePrint installs with a 60 day trial license. An EveryonePrint license can be purchased from most print/copy manufacturers, resellers and print solution providers worldwide or by contacting EveryonePrint.

License keys are unique to the particular server where EveryonePrint is installed. If the server where EveryonePrint is installed is renamed or changed significantly, a new license key must be issued. Changes to server which will trigger a new license key requirement include CPU or primary MAC address changes.

To obtain a license key, supply your EveryonePrint representative with the *Server name* and *Server ID*.

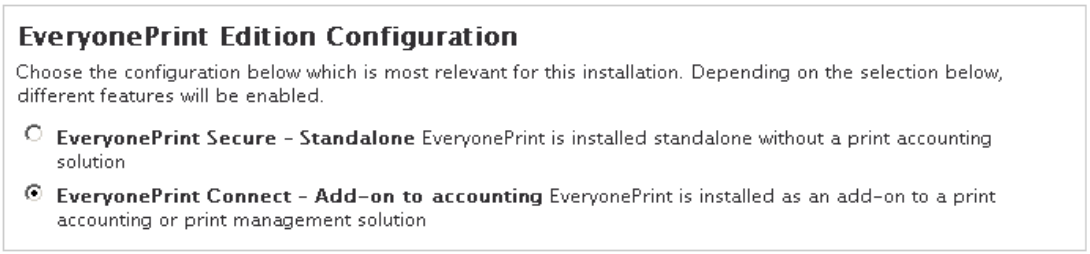
A license for EveryonePrint gives access to a specific edition of EveryonePrint, either EveryonePrint Standalone or EveryonePrint Connect. A license for Connect cannot be used with Standalone edition, and vice versa. See section *3.4 Choose EveryonePrint Edition* for more information about editions.

3.4 Choose EveryonePrint Edition

An important setting in EveryonePrint, is the selection of edition. EveryonePrint can be used in many different environments and configurations depending on customer needs. This setting turns on and off features relevant to overall configurations:

- If EveryonePrint is used as a standalone secure and mobile print solution, or
- If EveryonePrint is an add-on to a print accounting solution.

Depending on the choice, different features only relevant for that type of configuration are enabled.



Please refer to EveryonePrint current price list for a list of features available in different editions of EveryonePrint.

3.5 Logging and Troubleshooting

All errors and other information from EveryonePrint are logged to the central EveryonePrint log "eopapp_yyyy_mm_dd.log" located by default in c:\Program Files (x86)\EveryonePrint\logs

Other EveryonePrint components, such as the built-in IPP print server also creates log files in the \logs directory.

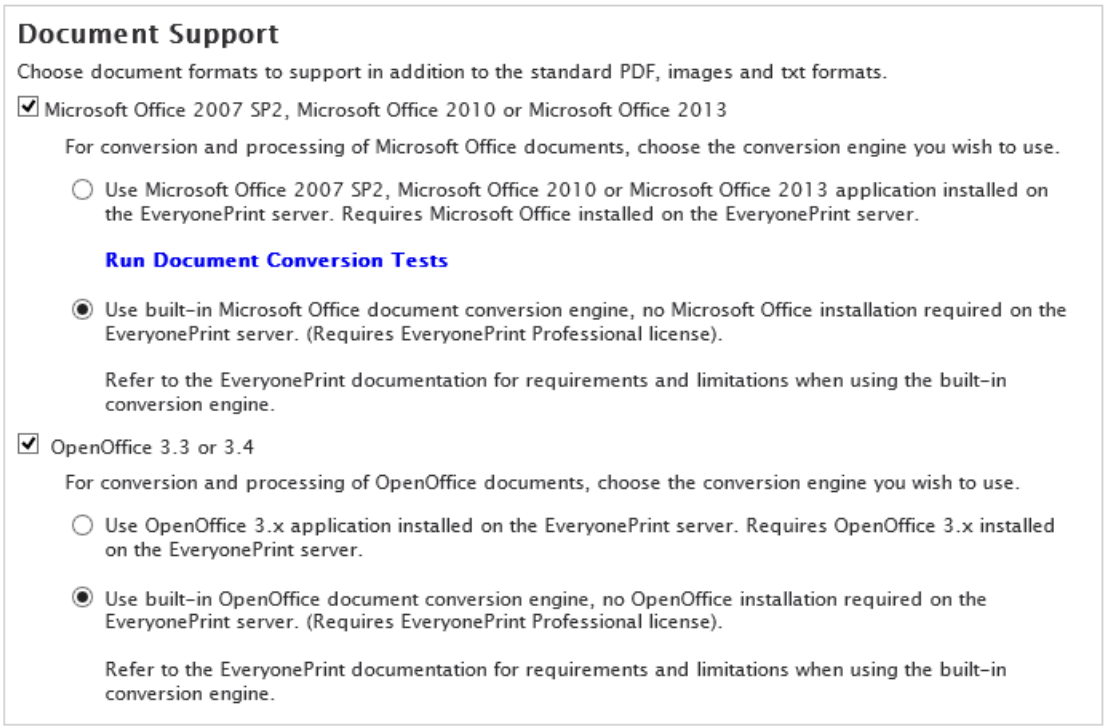
For troubleshooting, enable "Debug Logging" in the EveryonePrint admin interface, and the logs generated become very detailed with all activity in the EveryonePrint server.

Do not use debug logging in production unless necessary for troubleshooting, as debug logging can create very large log files.

3.6 Document Support

EveryonePrint includes a built-in Microsoft Office and OpenOffice conversion engine, which means that users can send Office documents to print, and EveryonePrint can convert and print those documents without relying on any outside third party applications.

The built-in conversion engine is enabled by default, but you can choose to either use the built-in engine or use Microsoft Office and OpenOffice to convert and print documents.



The built-in conversion engine requires a license with the feature enabled. Refer to the section *3.4 Choose EveryonePrint Edition* for licensing requirements.

Important! The built-in conversion engine cannot guarantee 100% accurate print output. For environments where document output fidelity is critical, such as higher education environments, where students pay for their prints, it is strongly recommended to use Microsoft Office engine for conversion.

Enabling the option to use Microsoft Office or OpenOffice for conversion, without first installing the supporting application (MS Office or OpenOffice) will result in conversion errors. You can install Microsoft Office and OpenOffice and enable additional document support at any time, including after installing EveryonePrint.

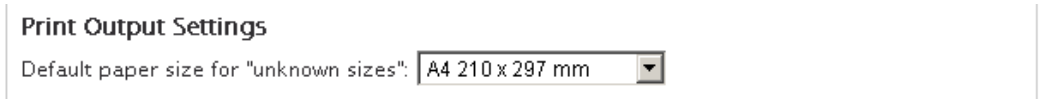
For more information about installing Microsoft Office and OpenOffice for document conversion, refer to section *13 Installing document support applications*.

3.7 Application Settings

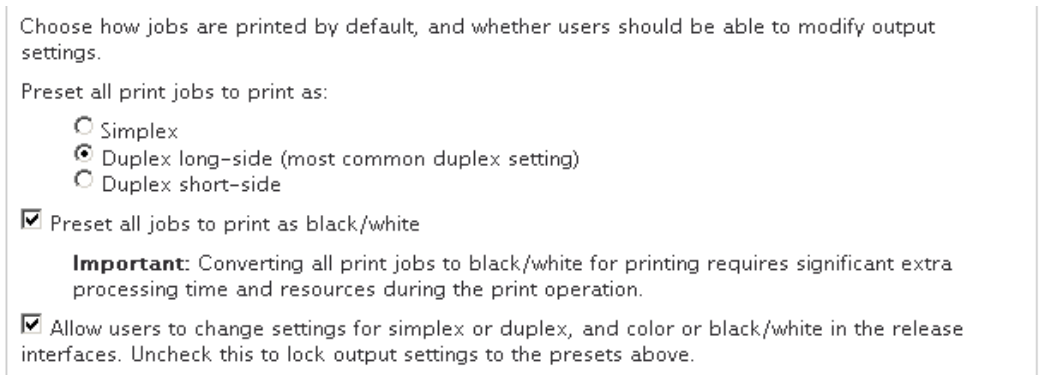
When EveryonePrint is configured in a privacy mode, prints are held in EveryonePrint until release. Adjust the timeout for when unreleased jobs are cleaned up and auto deleted. Default value is 1440 minutes (24 hours).

3.8 Print output settings

For documents which do not have a set size, such as Microsoft PowerPoint presentations, choose the default paper size, either A4 (default in Europe) or Letter (default in North America).



By default EveryonePrint will print jobs as simplex in color. Under Print Output Settings, different default settings can be chosen, for example, presetting all jobs to be printed as duplex in black/white.



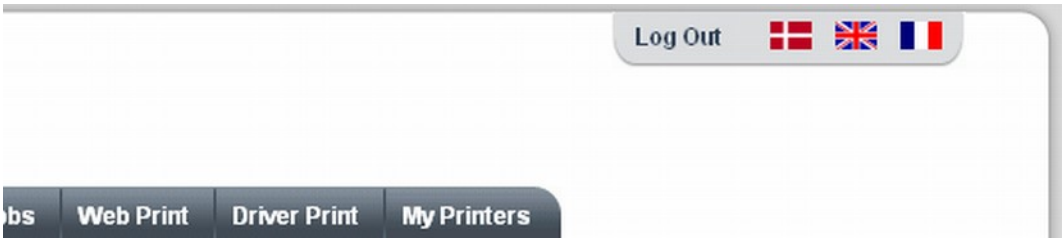
Settings can further be restricted, so users are not able to modify the presets.

The settings apply to Web upload, Email print jobs and simple Driver print jobs.

3.9 Languages and Location

EveryonePrint support multiple languages and locale for displaying dates and numbers in local formats.

Select the languages that should be available to use for users. Selected languages will appear in the top navigation of the user interfaces.



Choose the default language that appears, and the language used in email responses sent from EveryonePrint, such as emails containing release codes and similar.

Select the locale determining how numbers and dates should be formatted relevant to your location.

3.10 Modifying language text strings

All text strings used in the EveryonePrint end-user Web interfaces are part of a translation system, so users easily can change from one language to another.

It's possible to manually edit the language files containing the raw text, and change any text appearing in EveryonePrint.

The language files are located in

<install-directory>\eop\languagefiles

Files are named public_ for the end-user interface and the language abbreviation _en for English _se for Swedish and so on.

To edit, for example, the English text strings in the end-user interface, open public_en.xml in an editor such as Notepad, and carefully edit the text. Both plain text and HTML tags are possible.

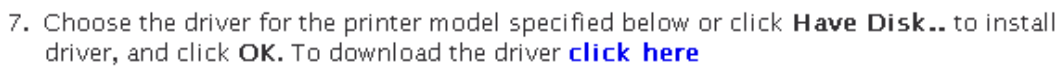
For example, to change the Advanced Driver Print instructions for Windows 7 English, to insert a link, edit the following from:

```
<cfcase value="dp_win7_7b">Choose the driver for the printer model specified below or click <strong>Have Disk..</strong> to install driver, and click <strong>OK</strong>.</cfcase>
```

To:

```
<cfcase value="dp_win7_7b">Choose the driver for the printer model specified below or click <strong>Have Disk..</strong> to install driver, and click <strong>OK</strong>. To download the driver <a href="http://www.acme.com/driver.zip">click here</a>.</cfcase>
```

This would change the appearance in the EveryonePrint Web interface to:



IMPORTANT: Language files are provided as is. It's strongly recommended to backup the language files prior to editing. EveryonePrint provide no assistance or support relating to changing of language files. Any changes done to language files will automatically be overwritten by any EveryonePrint update.

3.11 Printing and Security

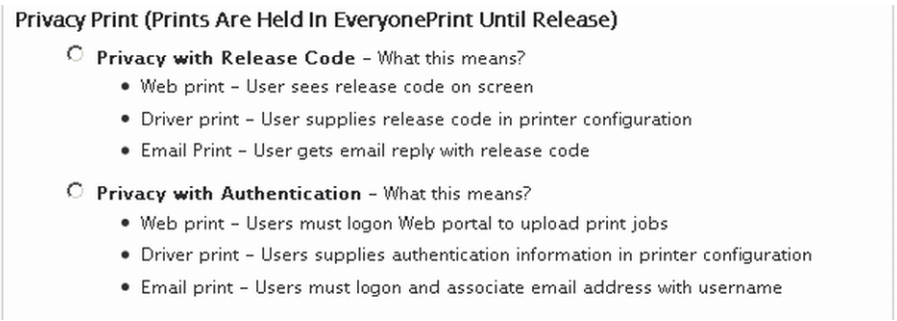
The Printing and Security screen contains the primary settings that determine the overall printing behavior of EveryonePrint. Decide here how EveryonePrint will behave when a user sends an email print job, whether a user can print with or without authentication, and so on.

There are 2 overall modes for Printing and Security, where one keeps prints in EveryonePrint until they're released (Privacy Print), and another releases prints to a pre-selected print queue immediately following processing (Direct Print).

Please note that changing Printing and Security mode changes how EveryonePrint features work, so if you for example use Driver Print in one mode, but then change mode, the Driver Print configuration changes, and it is therefore necessary to add your Driver Print printer again.

Privacy Print

Privacy print is used if users print jobs should be stored in EveryonePrint until the user releases the print, either in one of the EveryonePrint Web interfaces or on a release terminal dedicated to EveryonePrint.



Privacy Print has 2 modes:

Privacy with Release Code

When this mode is selected, users can print without authentication via Web, driver and email.

Web Print in Privacy with Release Code:
Users can access the Web print interface without having to log on. A release code is shown on screen. Users can either release jobs to print in the Web interface, or enter the release code on a supported release terminal.

Driver Print in Privacy with Release Code:
Users add a printer to their computer which is preconfigured with a fixed release code, they can use to release print jobs, either in the EveryonePrint release Web interface, or on a supported release terminal.

Email Print in Privacy with Release Code:
When a user has sent documents to print via email to EveryonePrint, the user will get a reply email from the system, with a release code for the job, to use for release either in EveryonePrint release Web interface or on a release terminal.

Privacy with Authentication:
When this mode is selected, users must enter a username and password to print, which is authenticated as per the settings in the **User Authentication** screen.

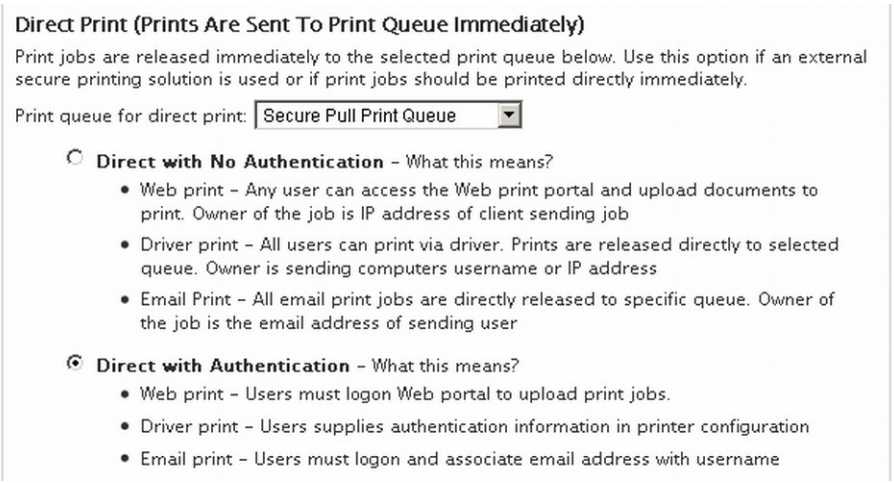
Web Print in Privacy with Authentication:
Users log on the user Web printing portal and upload their documents to print, which are stored in EveryonePrint. The user can release using the Web interface, or by authenticating at a release terminal.

Driver Print in Privacy with Authentication:
Users add a printer to their computer which will be configured in such a way that authentication details are sent with the print job. Users can release print jobs sent via Driver Print, either by logging on to the Web interface or by authenticating at a release terminal.

Email Print in Privacy with Authentication:
Users send documents to print as attachments in an email, which are picked up by EveryonePrint. The first time a user sends an email print job, they are asked to authenticate with their username and password. After successful authentication, the users email address is associated with their username, and all subsequent jobs from that address are processed without delay. A user can have an unlimited number of associated email addresses, which means a user can print from an employee device and from home etc. Users can release print sent via Email Print, either by logging on to the Web interface or by authenticating at a release terminal.

Direct Print

The Direct Print mode is used if an external secure printing solution is used or if print jobs should be printed directly immediately, either anonymously or with authentication.



Driver Print has 2 modes:

Direct with No Authentication:
This is the most direct and open configuration setting. Any user can send print jobs, and they are released automatically to the selected print queue.

Web Print with Direct with No Authentication:
Users can access the Web Print portal and upload a document to print. It is immediately released to the printer selected in the EveryonePrint Admin by administrators. The owner of the print job in the print queue, is the users sending IP address.

Driver Print with Direct with No Authentication:
Users provide no special authentication information when sending print jobs via Driver Print. Prints are released to the preselected print queue automatically. The owner of the job in the queue, is the username of the sending clients computer, if available, otherwise the sending users IP address.

Email Print with Direct with No Authentication:
Any user can send an email with documents attached to print. The processed jobs are released immediately to the preselected print queue. The owner of the job in the print queue, is the users email address.

Direct with Authentication:
The Direct with Authentication mode is used primarily if an external secure print accounting system or print management system, is configured with one central "follow me" pull-queue. Users authenticate to print, and prints sent via EveryonePrint are released directly into this external print queue, from where users can release using, for example, embedded MFP release terminals.

Web Print in Privacy with Authentication:
Users log on the user Web printing portal and upload their documents to print. Print job is released directly to preselected queue.

Driver Print in Privacy with Authentication:
Users add a printer to their computer which will be configured in such a way that authentication details are sent with the print job. Print job is released directly to preselected queue.

Email Print in Privacy with Authentication:
Users send documents to print as attachments in an email, which are picked up by EveryonePrint. The first time a user sends an email print job, they are asked to authenticate with their username and password. After successful authentication, the users email address is associated with their username, and all subsequent jobs from that address are processed without delay. A user can have an unlimited number of associated email addresses, which means a user can print from an employee device and from home etc. Print jobs received via email in this mode are released directly to preselected queue.

3.12 User Authentication

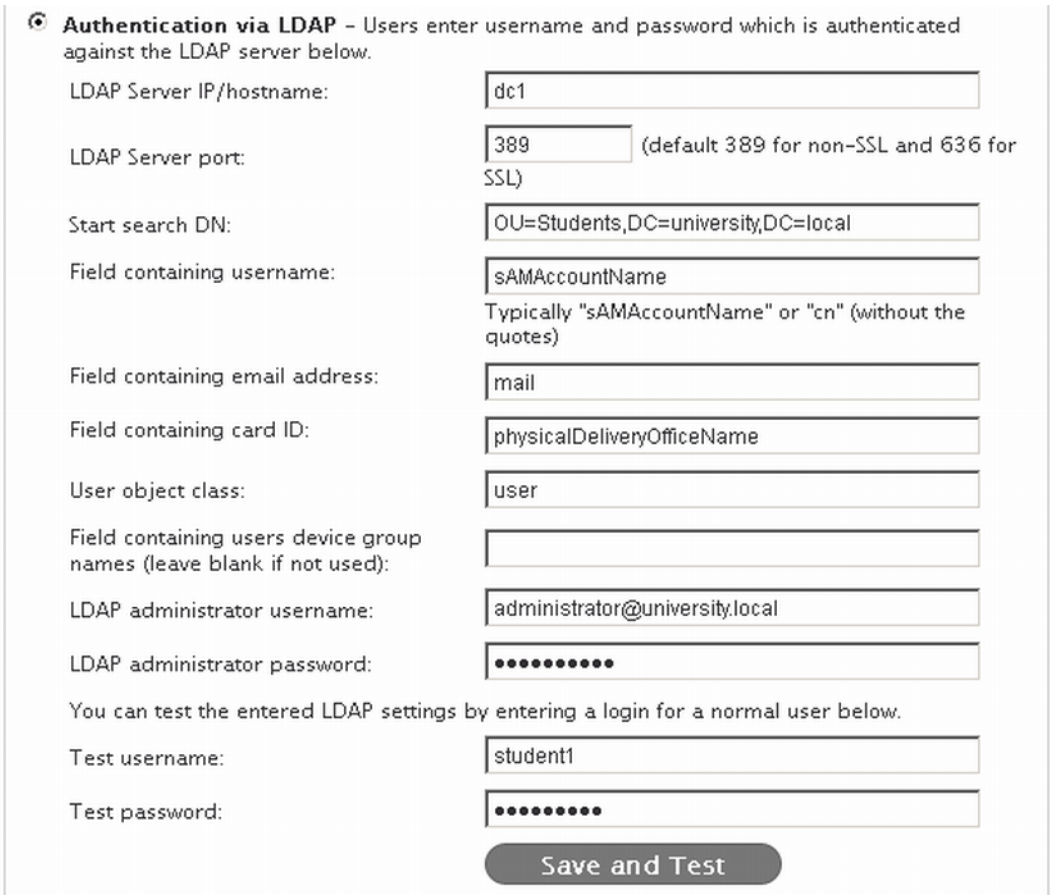
If Printing and Security is set to either **Privacy with Authentication** or **Direct with Authentication**, then the actual authentication method, how user logins are validated, is configured in the User Authentication screen. If a different Printing and Security mode is used, then settings in the User Authentication screen are ignored.

Per default no authentication method is chosen, which means that any entered username and password is accepted as valid. This is useful for initial setup and testing, but should not be used in production.

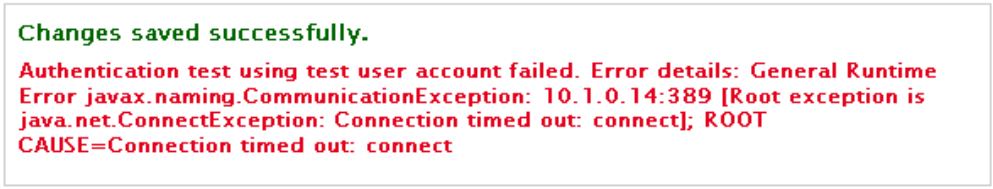
EveryonePrint supports Authentication via LDAP, which includes Windows Active Directory.

3.12.1 LDAP Authentication

Enter the details for the LDAP authentication server, including a test username and password of a valid user account in the LDAP, and click **Save and Test** to verify the configuration.



A highly recommended tool for identifying proper LDAP settings to use, is **LDAP Browser 2.6**, which can be downloaded for free via http://www.ldapadministrator.com



If test authentication fails, an error message will be shown. See common LDAP error codes and typical causes in the Troubleshooting Tips section of this guide.

3.12.2 Prepend/append username with domain information

The ability to prepend or append the username with certain information, is relevant in authenticated print environments, where EveryonePrint integrates with accounting solutions, which depend on extended domain information in the print job owner details.

Leave the prepend/append value field blank unless specifically required.

Prepend extends the username, by inserting additional information, such as a domain, before the username. For example, if the simple username is "john", but print jobs should be appear with the username "domain\john", add the setting:

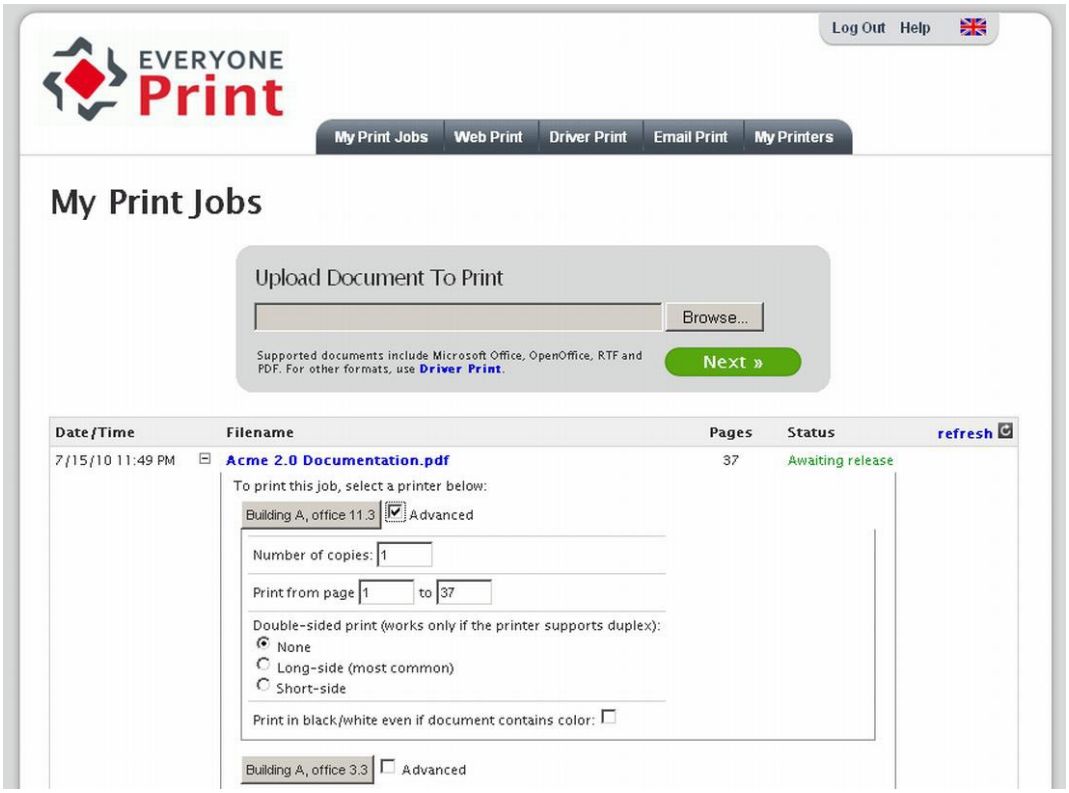
prepend:domain\

Append extends the username by appending additional information, such as a domain name, at the end of the username. For example, if the simple username is "john", but print jobs should be appear with the username "john@domain.com", add the setting:

append:@domain.com

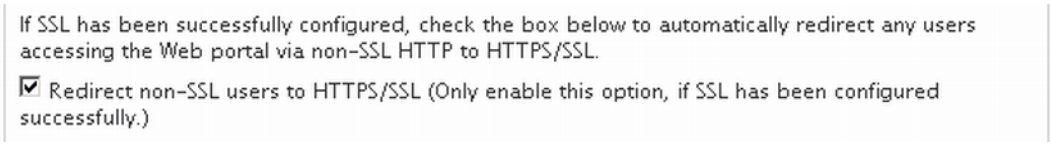
3.13 User Web Portal Configuration

A central interface in EveryonePrint is the Web portal, where end users will go to upload documents to print via Web Print, see instructions for how to use Driver Print and guide for Email Print.



The user Web portal is accessible per default on http://127.0.0.1:7290 or https://localhost:9443 for HTTPS/SSL.

Since this Web interface may be accessed from users outside of the local server, provide a Web URL address for the Web interface, that is accessible to users externally.



If an SSL certificate has been successfully installed and configured, the redirect option can be enabled to automatically redirect users that access the Web portal with non-SSL HTTP to HTTPS/SSL. Before enabling this option, ensure that HTTPS/SSL is fully working.

Customize the Web interfaces easily by uploading a new logo file. The logo uploaded can be a GIF, JPG or PNG file. There are no fixed size restrictions. The logo replaces the EveryonePrint logo in the header.

Check the **Reset logo to default logo** at any time to clear a custom logo and revert back to EveryonePrint logo.

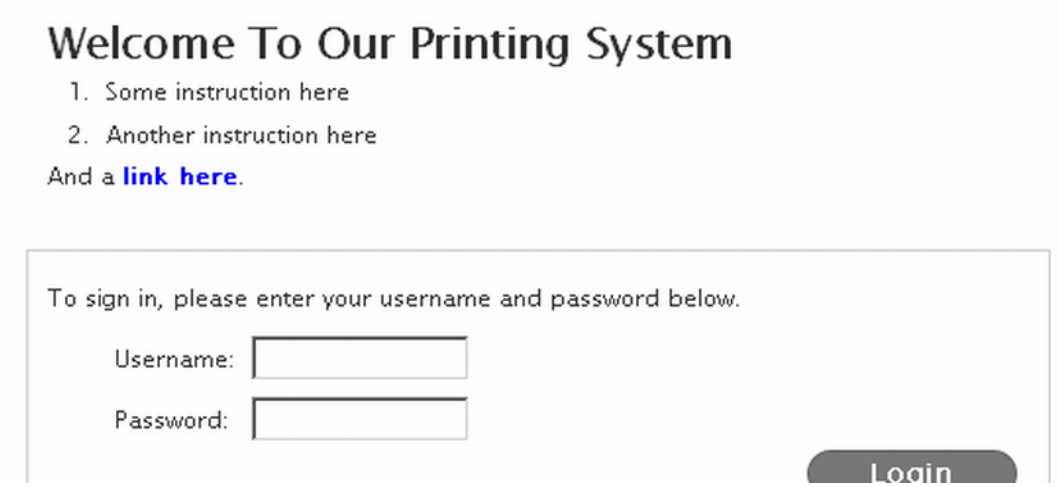
The "My Print Jobs" screen is the main page that users see in the EveryonePrint end-user Web interface. Customize what is displayed in this page by enabling or disabling the options.

3.13.1 Customize login text on Web portal

It's possible to customize the login screen of the user Web portal, with a welcome message or special login instructions.

Any text or HTML, including CSS formatting, can be inserted.

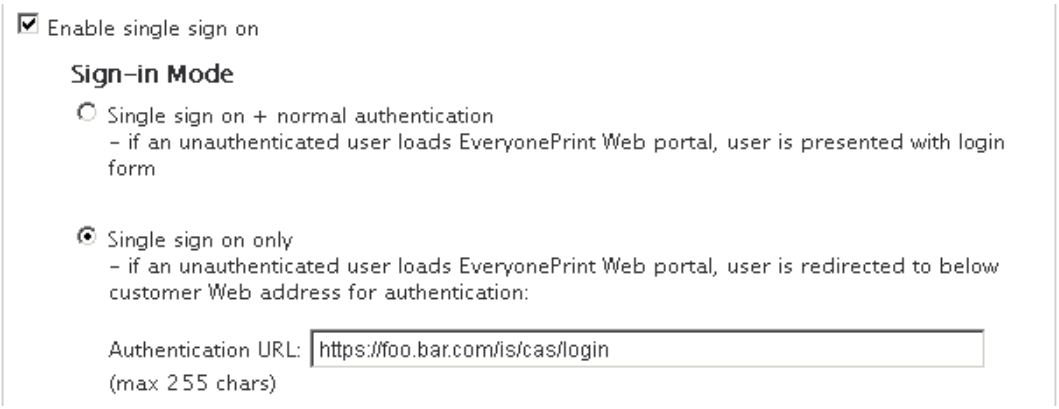
Any inserted text or HTML will appear above the login dialog box.



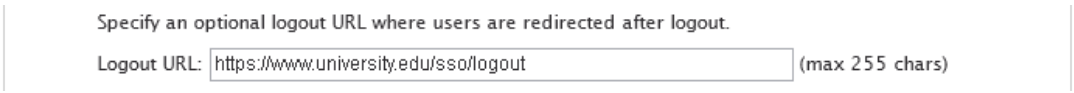
Customization is only relevant if authentication is selected in Printing and Security, so users see the login screen, otherwise it's just ignored.

3.13.2 Web Portal single-sign-on

EveryonePrint can be configured to either allow both traditional form login on the EveryonePrint Web Portal as well as single-sign-on in parallel, or allow only single-sign-on, using one of the supported systems.



If Single-Sign-On only is chosen, a Web URL is entered, and any unauthenticated user accessing EveryonePrint, will be redirected to this URL for authentication by the single-sign-on system.

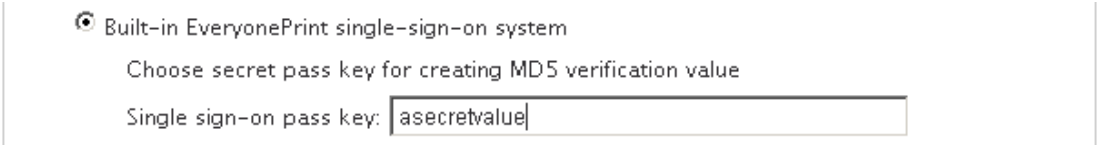


It's further possible to specify an optional logout URL to where users are redirected after a logout.

EveryonePrint can support two different single-sign-on systems:

1. Internal built in single-sign-on system
2. CAS Jasig Central Authentication Service (http://www.jasig.org/cas)

3.13.2.1 Internal built in single-sign-on



EveryonePrint includes a very simple single sign on system for easy implementation in any programming language and platform.

Implement user authentication in any way required, and pass users to EveryonePrint using either HTTP/S POST or a HTTP header redirection. Two variables are included, the username and an MD5 check hash value consisting of the username and a pass key only known by administrator and EveryonePrint.

When an authenticated user is passed to EveryonePrint, the user is automatically authenticated, and have usual functionality presented to them. To finish the session, the user can press “Log Out” in the navigation or close the browser window, and be logged out of the EveryonePrint session.

Example authentication

Username = john
SSO Pass Key = asecretvalue

check = md5(“johnasecretvalue”)

If user is transferred to EveryonePrint using a Web form:

```
<form action="https://servername/ssologin.cfm" method="post">
<input type="hidden" name="username" value="john">
<input type="hidden" name="check" value=" 4137e7b6413db3cb3a5b8da9bd5b6e27">
<input name="submit" type="submit" value="continue" />
</form>
```

If user is transferred to EveryonePrint using HTTP header redirect:

https://servername/ssologin.cfm?username=john&check=4137e7b6413db3cb3a5b8da9bd5b6e27

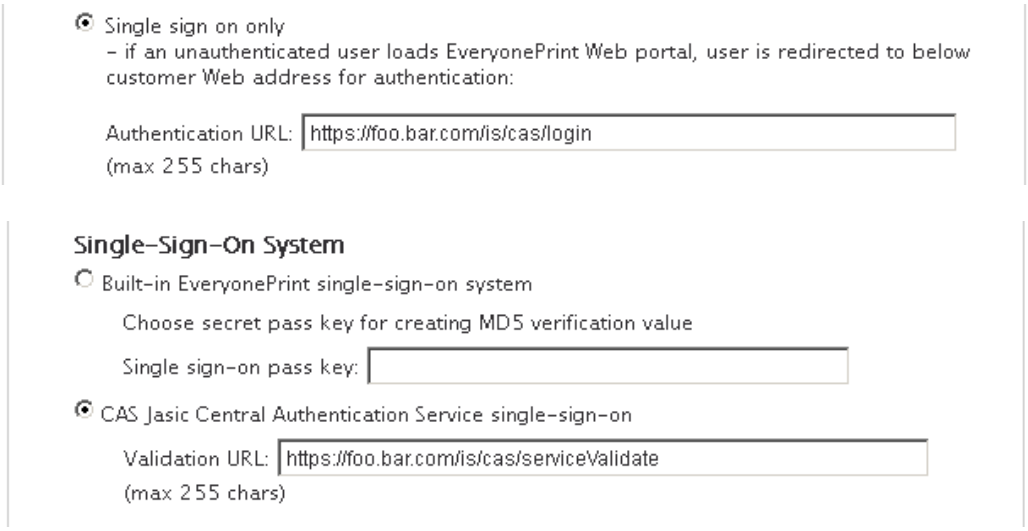
Due to browsers caching of URL’s, it is strongly recommended that a “301 permanently moved” status code redirect is used for HTTP header redirect, and NOT traditional HTML anchors, ie. click here.

See below URL for examples of HTTP header redirect:

http://www.stevenhargrove.com/redirect-web-pages

3.13.2.2 CAS Jasig Central Authentication Service

To enable CAS authentication enter the authentication and validation URL's of the central CAS service.



It's only necessary to enter the main URL addresses to login and serviceValidate interfaces. EveryonePrint will append the relevant *service* variables based on *External Web Portal URL* setting configured in **Web Portal Settings**.

When testing CAS single-sign-on, make sure to **enable the debug logging** in General Settings, and both successful and unsuccessful authentication attempts will be written to the main application log file in \logs directory, such as:

12/01/13 14:12.49: error; EOP; ssologincas; Authentication failed ticket: no authenticationsuccess
12/01/13 14:13.53: error; EOP; ssologincas; SSO login failed missing ticket. Source 192.168.0.187

And successful:

12/01/13 14:16.49: debug; EOP; ssologincas; Authentication ticket: ST-956-Lyg0BdLkgdrBO9W17bXS raw response:
<cas:serviceResponse xmlns:cas='http://foo.bar.com/is/cas'>
<cas:authenticationSuccess>
<cas:user>john</cas:user>
</cas:authenticationSuccess>
</cas:serviceResponse>
12/01/13 14:16.49: debug; EOP; ssologin; Successful SSO CAS login. Username: john

3.13.3 Change default Web ports from 7290 and 9443

The Web interfaces in EveryonePrint, run on TCP ports 7290 (http) and 9443 (https) per default. These can be changed to common HTTP ports 80 and HTTPS port 443 if no other Web server software is running on the server.

Before changing default ports, ensure there are no port conflicts with other software running on the same server.

To change the default HTTP port:

1. Open the file C:\Program Files (x86)\EveryonePrint\etc\jetty.xml
2. Find the line:

   <Set name="port"><SystemProperty name="jetty.port" default="7290"/></Set>

3. Change from 7290 to the port of your choice, and save the file.
4. Open the file C:\Program Files (x86)\EveryonePrint\eop.xml
5. Find the line:

   <eopapiendpoint>http://127.0.0.1:7290/api/</eopapiendpoint>

6. Change from 7290 to the same port as used in jetty.xml above.
7. Restart EveryonePrint Web service

To change the default HTTPS port:

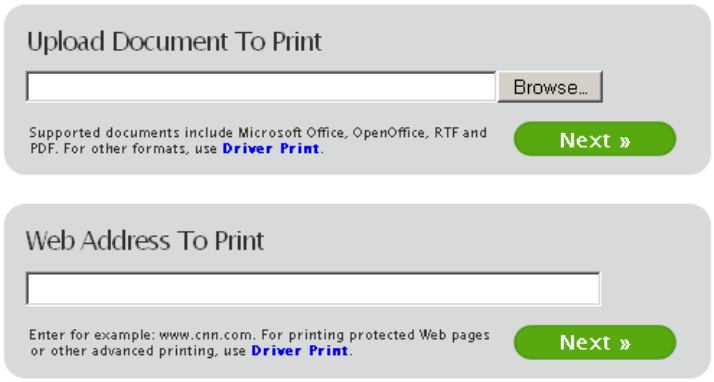
1. Open the file C:\Program Files (x86)\EveryonePrint\etc\jetty-ssl.xml
2. Find the line:

   <Set name="Port">9443</Set>

3. Change from 9443 to the port of your choice, and save the file.
4. Restart EveryonePrint Web service

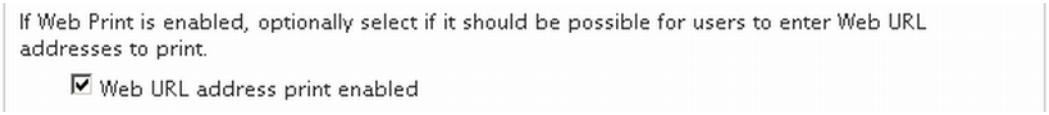
3.14 Web Print configuration

Web Print is the feature in the user Web portal that allows users to upload a document to print or print by entering a Web URL address.

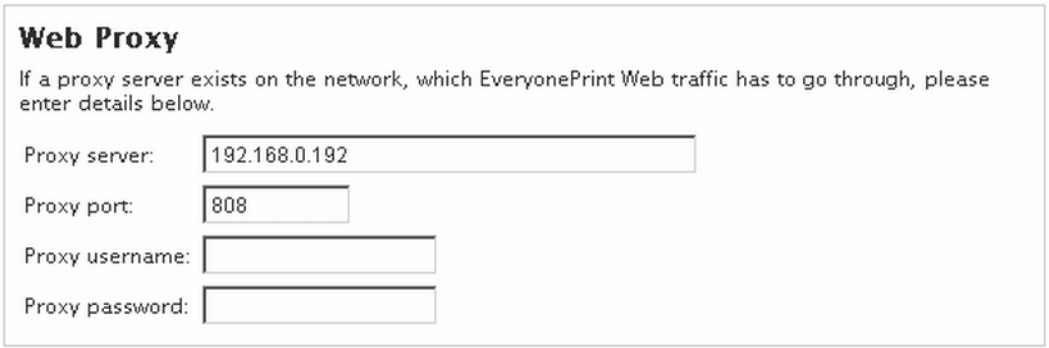


This feature is enabled per default in EveryonePrint.

If Web Print should not be available to users, disable it from the Web Print configuration page in the EveryonePrint Admin.



If Web Print is enabled, it's further possible to enable/disable the Web URL address printing feature. If disabled, the Web Address to Print box will not appear.

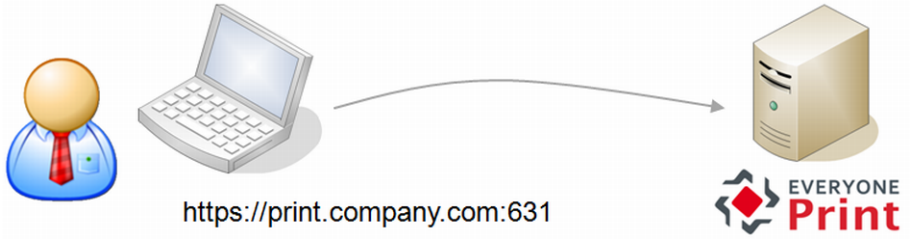


When users enter a Web URL address to print, EveryonePrint will connect to the Internet to retrieve the contents of the entered address and convert to print data. If EveryonePrint must go through a proxy server to reach the Internet, enter the proxy server details.

By default the server has no limit to the file sizes that can be uploaded, but a limit can be put in place.

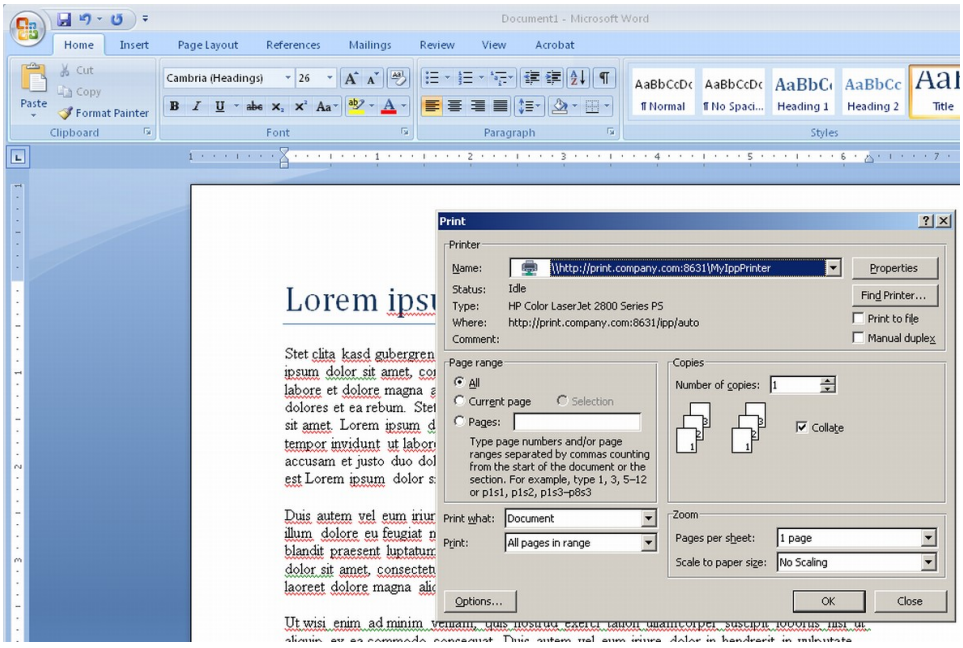
Please note that due to browser limitations, the EveryonePrint server does not know the actual size of the upload until the upload has completed. If the limit is set to 10 MB, a user can still upload a 20 MB job, it will however be deleted and an error be shown, once upload has completed, which ensures no excessive jobs beyond the limit are processed.

3.15 Driver Print configuration



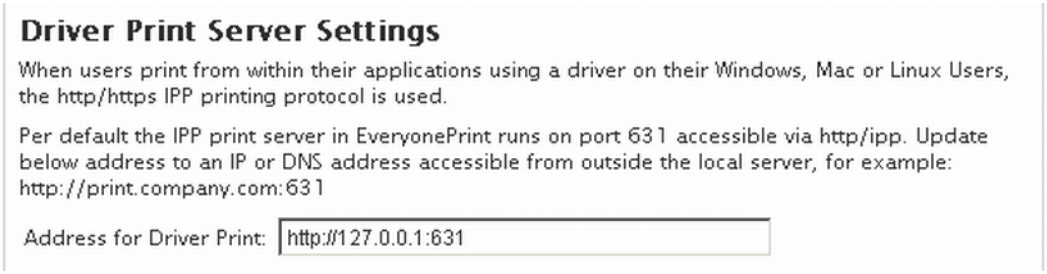
EveryonePrint includes an IPP print server that allows users to print directly from within their programs and applications, on Windows, Mac and Linux, across the network or Internet, to the local EveryonePrint server.

In the Driver Print configuration page you can enable or disable this printing method.



Simple Direct driver print allows users to create a print queue on their local machine that sends print jobs through EveryonePrint and to the output print queue of their choice. This Driver Print option is enabled by default.

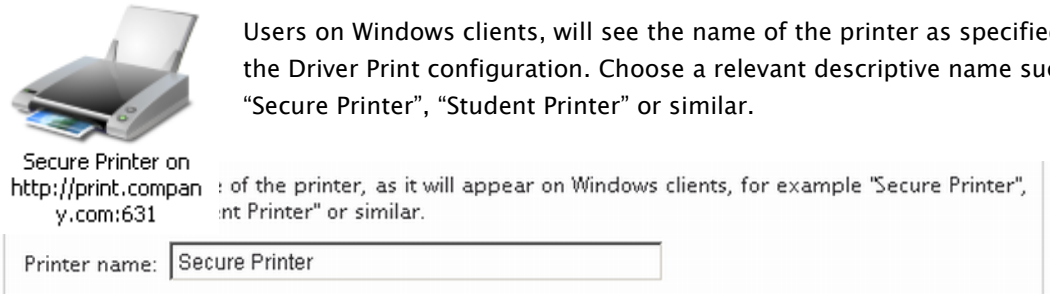
It is the network configuration surrounding the EveryonePrint server that determines from where users can print. If the network is opened for communication from outside to the IPP print server in EveryonePrint on the ports used (default TCP 631), then external users can print, which is useful, for example, for students at a university using a public WiFi connection, or corporate employees printing from satellite offices in remote locations or users printing from home.



The printing protocol used in Driver Print to EveryonePrint, is IPP via HTTP (default port 631) or HTTPS/SSL (default port 9443).

Default address for Driver Print is http://127.0.0.1:631 or https://localhost:9443. But since this is a local address, only usable on the local server, it's necessary to enter an address that is accessible from outside the server, for example: http://print.companyname.com:631

Before using HTTPS/SSL, make sure a valid SSL certificate is created for the Web server by a certified authority, or IPP printing will fail on clients using Windows.



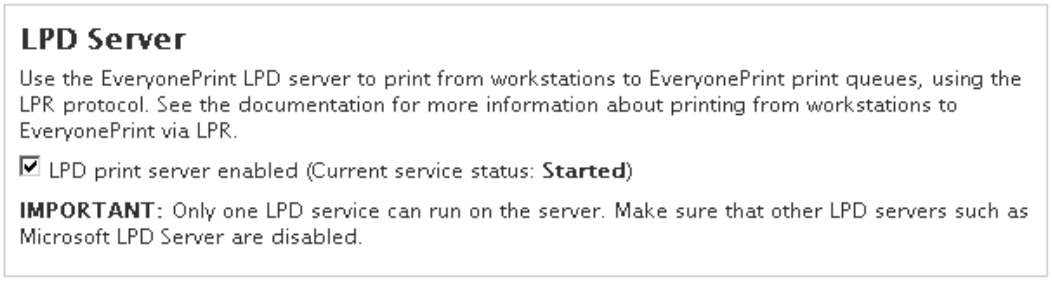
Users on Windows clients, will see the name of the printer as specified in the Driver Print configuration. Choose a relevant descriptive name such as "Secure Printer", "Student Printer" or similar.

To learn more about how to do printing via Driver Print, please see the section "Sending print jobs via Driver Print" elsewhere in this guide.

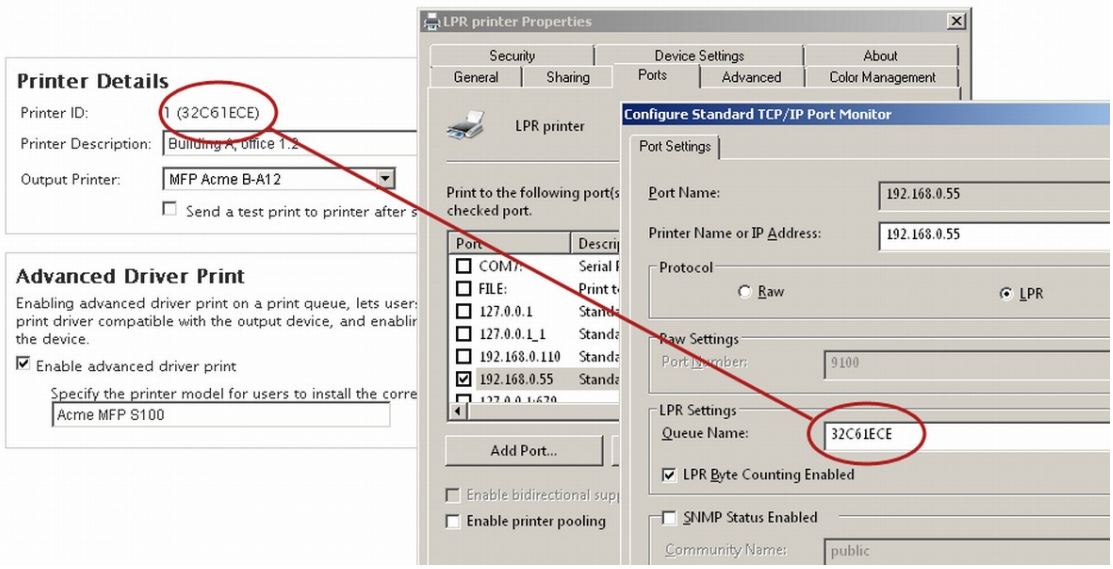
3.15.1 LPD Server

EveryonePrint includes an LPD server which makes it simple to print from workstations in network environments, such as business PC's or workstations.

LPR/LPD is a printing protocol commonly used in TCP/IP networks and is very simple to implement and widely supported on all clients.



To print to the EveryonePrint server, first enable the LPD server under the Driver Print settings in EveryonePrint Admin, and then add a printer on a client using standard TCP/IP port with LPR protocol.



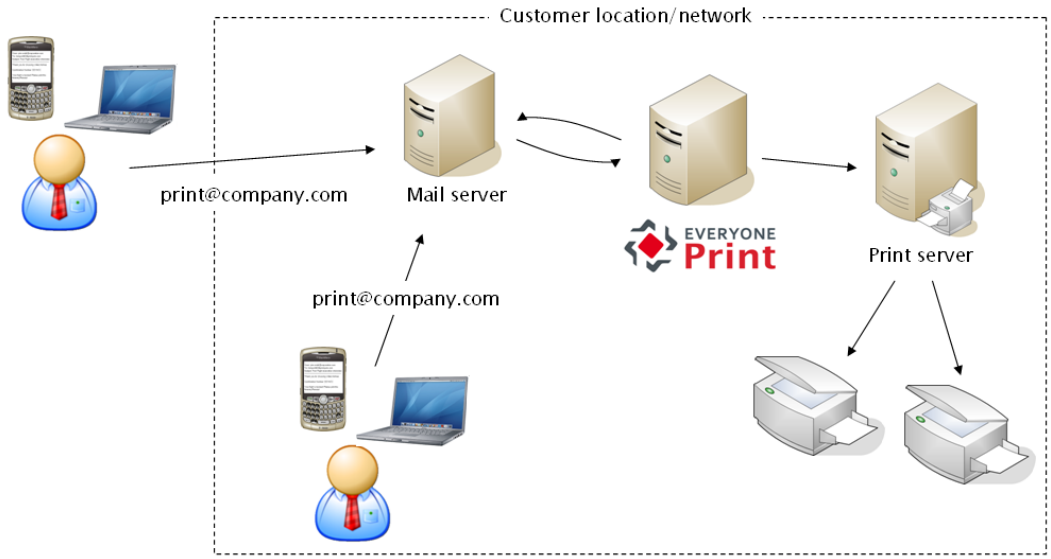
The **Printer Name or IP Address** is the IP or hostname of the EveryonePrint LPD server.

For LPR **Queue name**, use either the PrinterID or the External ID in parentheses under a printer in EveryonePrint. Make sure **LPR Byte counting Enabled** is **checked**.

Choose a printer driver which is compatible with the output device. Print jobs sent to the LPD server are not modified, the original print data (Postscript, PCL etc) is sent untouched to the output queue, which means that any output settings selected in the driver, duplex, binding etc, are also sent to output device.

3.16 Configure Email Print

With EveryonePrint users can send emails from their mobile devices or computers to your mail server. EveryonePrint will then retrieve and process those emails.

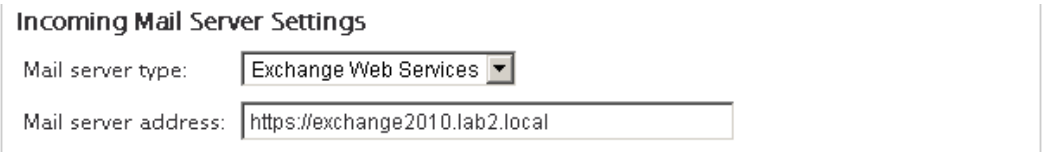


The Email Print feature is not enabled per default, as it will only work successfully, if mail server settings, both incoming and outgoing, have been setup correctly.

In the Email Print section in the Admin, you can configure the connection information for EveryonePrint to connect to your email server.

Start by providing the email to which users send their email print jobs.

Enter the server address details of the mail server, including the protocol with or without SSL encryption and server address.



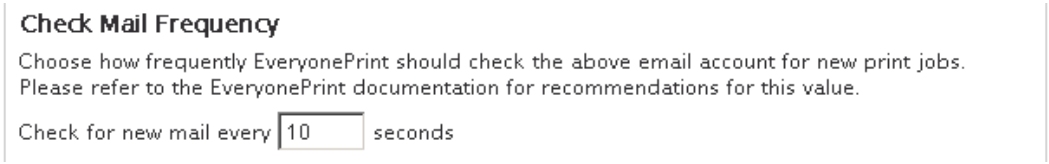
For Microsoft Exchange Web Services enter the fully accessible URL including protocol (http or https) to the Exchange Web interface. For Microsoft Exchange MAPI, enter just the server name or IP address (no http or https).

When Microsoft Exchange is selected, enter also the Mail Domain Name, which is the domain name for email known by the Exchange server.

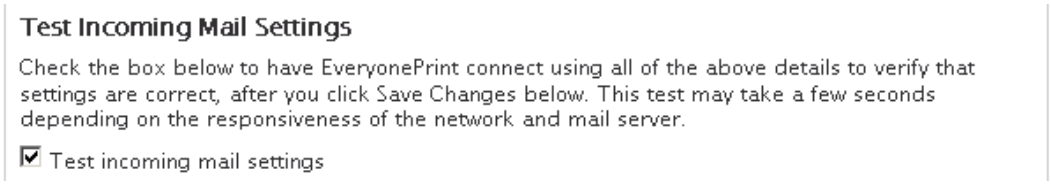
For Microsoft Exchange:

- EveryonePrint can support Microsoft MAPI via RPC protocol with NTLM authentication, which can be verified with Outlook (2010): Go to the File tab, click Account Settings. On the list of accounts, select an account and click Change, then More Settings on the dialog that appears. On the Connection tab, the "Connect to Microsoft Exchange using HTTP" should be unchecked.
- EveryonePrint can support Microsoft Exchange Web Services over HTTPS with Basic, NTLM, or forms-based authentication, which can be verified by accessing the web service URL. This is typically https://<server>/news/exchange.asmx. Kerberos, ADFS and RPC over http(s) authentication is not supported.
- EveryonePrint can support Microsoft Office365 Outlook online over HTTPS with Oauth2 authentication using client ID and client secret.

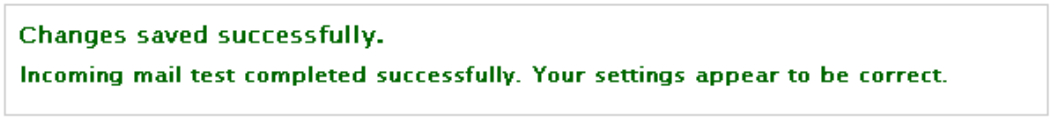
Enter the account login details for the account from which to retrieve email.



Choose how frequently EveryonePrint should check for new emails. The default is every 10 seconds, but if the mail server is not on the same internal network, a higher interval, such as every 30 seconds, is recommended.

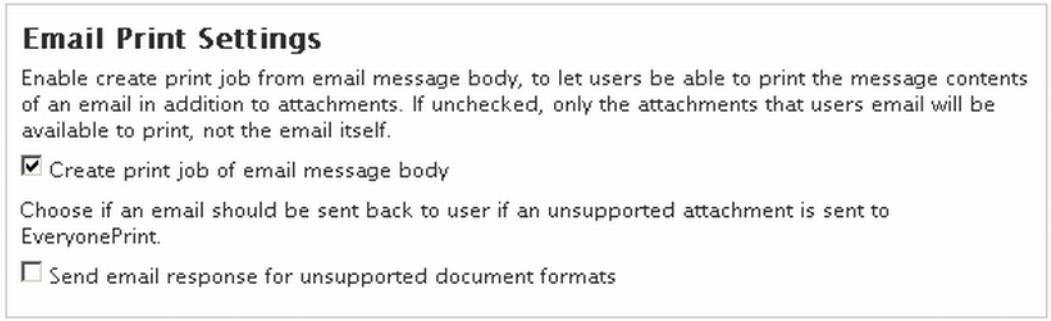


Test the entered email settings to ensure that EveryonePrint can connect successfully, by checking the box. When you save the changes, EveryonePrint will make a connection test.



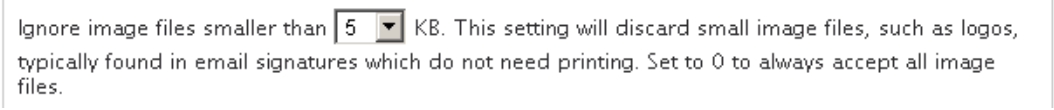
Important: Before you enable email printing, with modes "Privacy Print", which means that an email is sent to the user with either a release code or authentication request, make sure that you have configured outgoing mail settings!

After having saved and tested your settings, check the box at the top of the Email Print page to enable the retrieval of email print jobs. Remember to save changes after enabling Email Print.



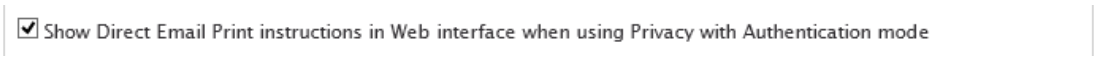
Per default when users send an email with attachments to print, both the attachments and the email message itself will be considered a print job. Users may want to print the email message itself. It's possible to disable that the email message itself is made as a print job, but if disabled, users can only print attachments, not the email messages themselves.

It's also possible to send an email from the system back to the user, when an email is received with a document attached, which is not supported.

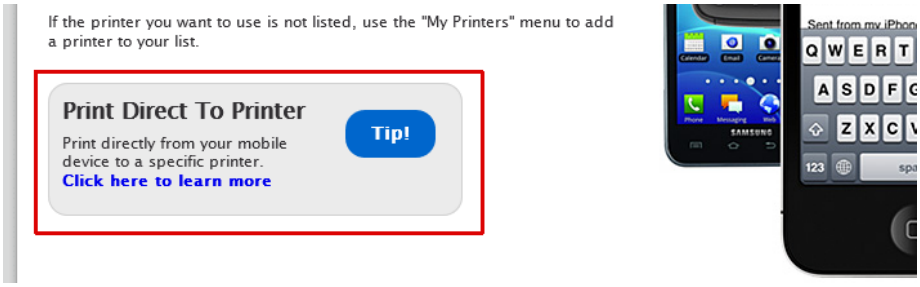


If a user sends an email with an email signature containing an image, such as a logo, EveryonePrint can be configured to ignore these suspected small signature images.

If using *Privacy with Release Code* mode, emails sent from EveryonePrint containing release codes, by default contain a link the Web release interface. Use this setting to toggle the display of this link in the release code email.



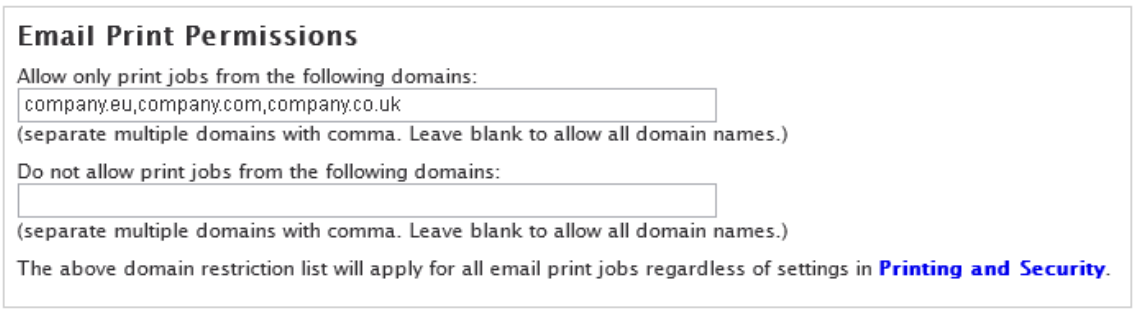
If using Privacy with Authentication mode, then by default instructions are shown in the Web interface to end-users, how to send print jobs direct to specific printers.



Uncheck this option, to hide these instructions.

Choose the option to send confirmation email to users, if users should receive an email confirmation when their job has been received and processed by the server, for example being ready to print, or after having been sent to a print management solutions “follow me” queue.

This setting applies to Email Print only and “Privacy with Authentication” and “Direct with Authentication” modes, as “Privacy with Release Code” mode by itself will send an email with release code.



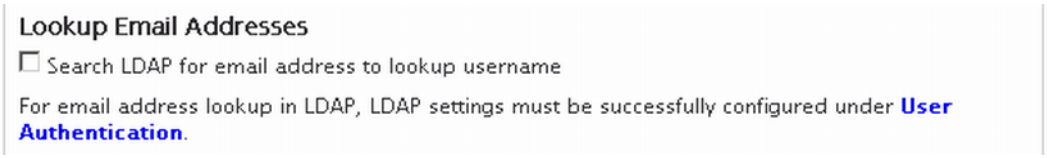
Restrict senders to only approved domains, by entering domain names (multiple separated by comma), or blacklist certain domains. Emails not matching the criteria are automatically discarded.

3.16.1 Email Authentication

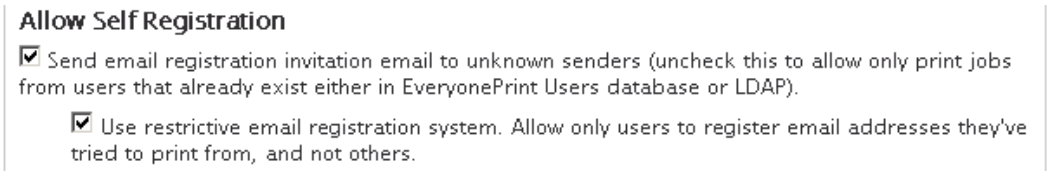
If email printing is enabled and print behavior is set to require authentication under Printing and Security (either Privacy with Authentication or Direct with Authentication), and if Allow Self Registration below is enabled, then the first time an unknown user sends a print job via email to EveryonePrint, they will be asked to register their email address in the system.

Users will visit a simple registration page, included in EveryonePrint, sign in with their username and password, and EveryonePrint will then know that the email address is approved and associated with the right user.

If users are known in the system, either because their email address has been manually added or imported from a CSV, or if LDAP email address lookup is enabled, then no registration is necessary.

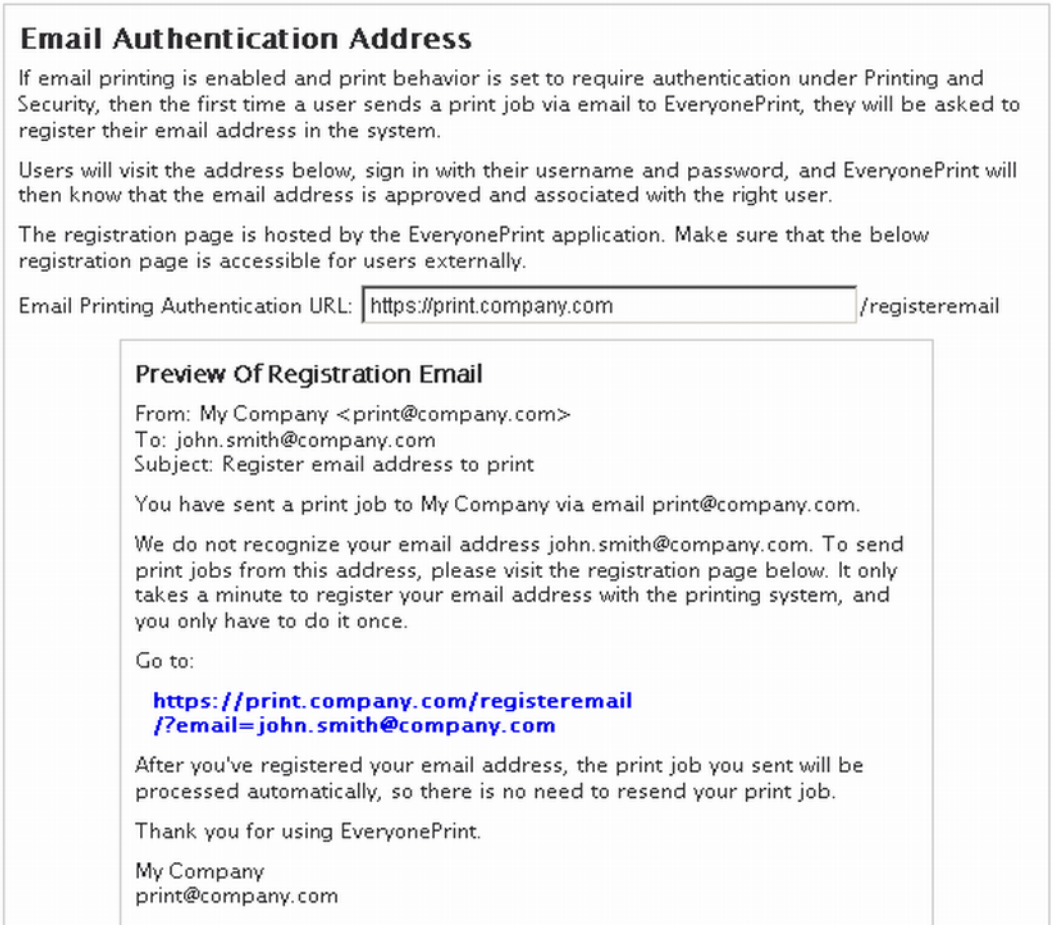


Uncheck Allow Self Registration, if the system should only allow print jobs from users that either exist in the internal EveryonePrint users database or in LDAP.



If the email address used for email printing, eg. print@company.com, is configured to allow external users to email print jobs, then make sure that the Web URL to the registration page is accessible from external computers.

By choosing *Use restrictive email registration system* users can only register email addresses from which they've sent email print jobs.



A user can have an unlimited number of email addresses associated with their account, so a user can print from any of their email addresses.

3.16.2 Note when using Exchange MAPI for internal email

If using the Exchange MAPI protocol for Email Print, and using EveryonePrint internally in your organization, Exchange via MAPI does not always share the senders full email address, ie user@domain.com, which will cause email authentication in EveryonePrint to fail.

A workaround to this behavior of Exchange via MAPI, is to let EveryonePrint check the Active Directory via LDAP, for the users email address. Simply configure LDAP authentication under User Authentication, and EveryonePrint will automatically attempt to retrieve the email address of internal company users as needed.

3.17 Mobile Print configuration

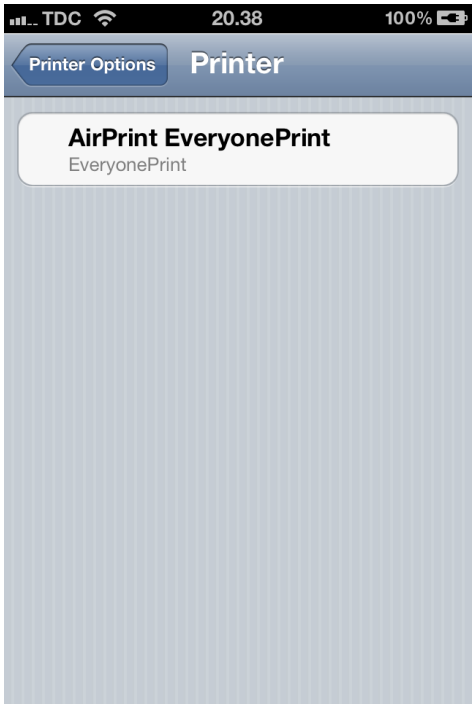
To enable native printing from supported mobile devices, the EveryonePrint Mobile Gateway must be installed and configured. See the separate documentation for details.

Configure the name of the main printer as it will appear on users mobile devices, for devices that support printer naming.

In the Mobile Print screen, manage feature behavior for native printing from mobile devices, such as AirPrint on Apple iOS devices (iPhone and iPads) and Android based smartphones and tablets.

Depending on the configuration in Printing and Security, different behavior is available. Choose relevant setting for the current configuration.

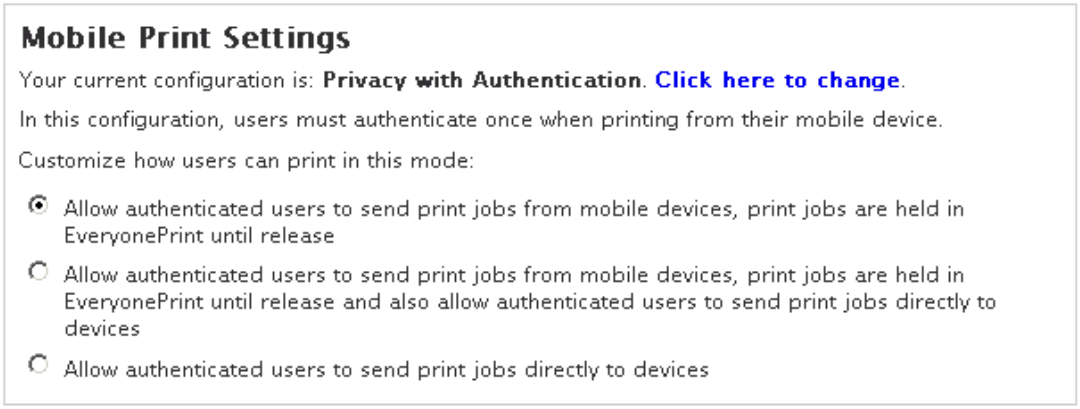
For example, are users allowed to only send print jobs to EveryonePrint in general, or are users allowed to send print jobs directly to all devices configured in EveryonePrint.



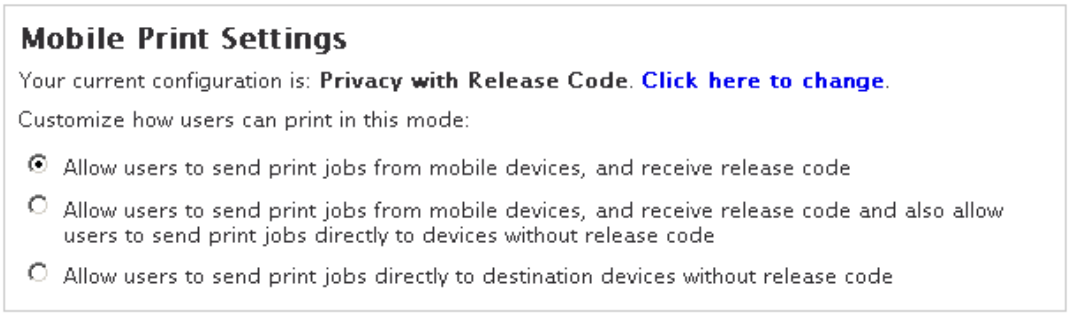
Central EveryonePrint

Also allowing direct printing

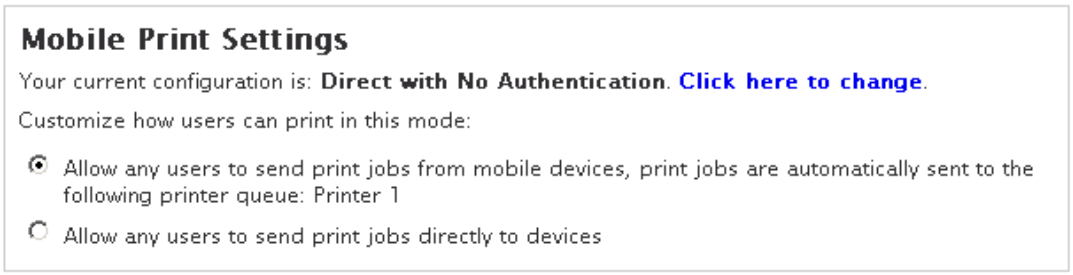
Privacy with Authentication



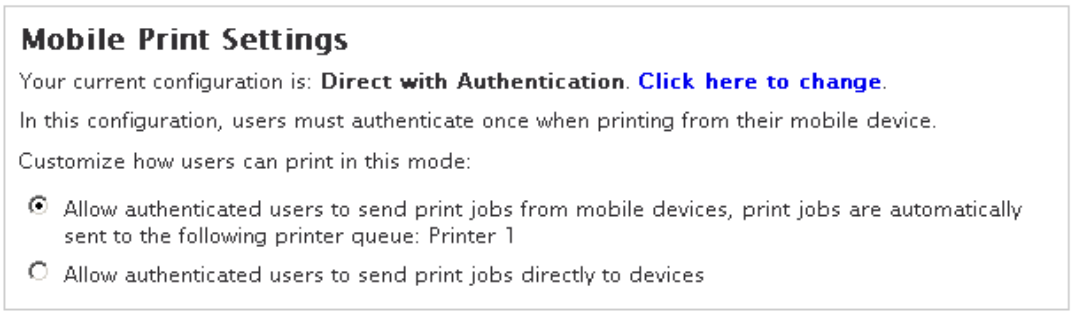
Privacy with Release Code



Direct with No Authentication



Direct with Authentication

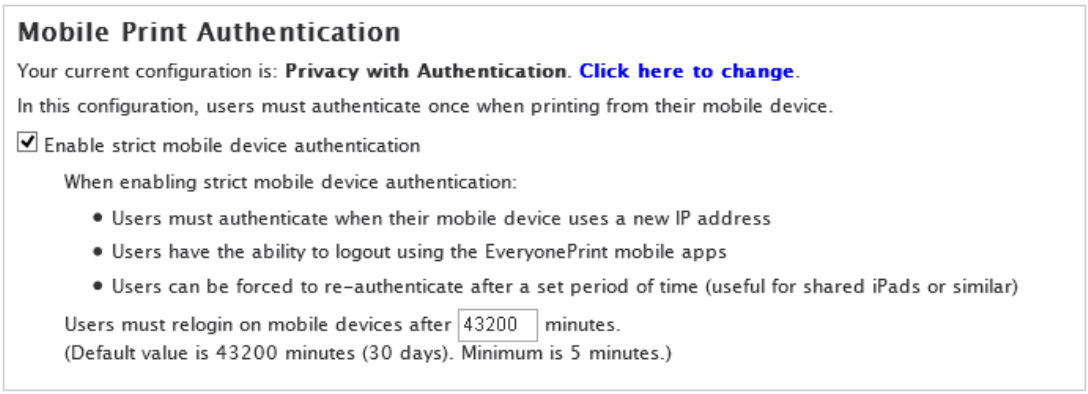


3.17.1 Strict Mobile device authentication

Strict Mobile device authentication applies to Mobile Print using Apple iOS and Android printing.

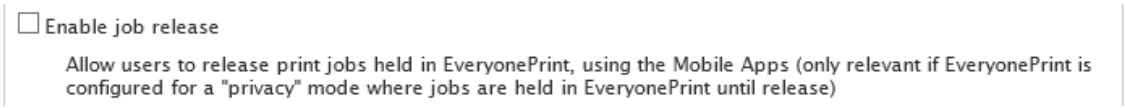
When enabling strict mobile device authentication:

- Users must authenticate when their mobile device uses a new IP address
- Users have the ability to logout using the EveryonePrint mobile apps
- Users can be forced to re-authenticate after a set period of time (useful for shared iPads or similar)

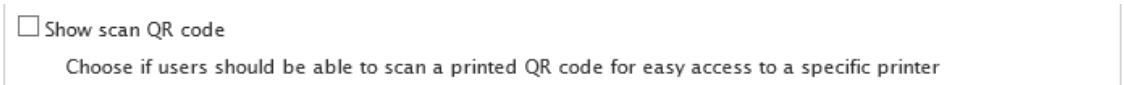


3.17.2 Mobile App Settings

It's possible to enable and disable various features of the EveryonePrint Mobile Apps from the Mobile Print administration screen.



If EveryonePrint is configured in a Privacy Mode, such as "Privacy with Release Code" or "Privacy with Authentication" where jobs are held in EveryonePrint until release, users can optionally use the Mobile Apps to release print jobs to the printer of their choice.

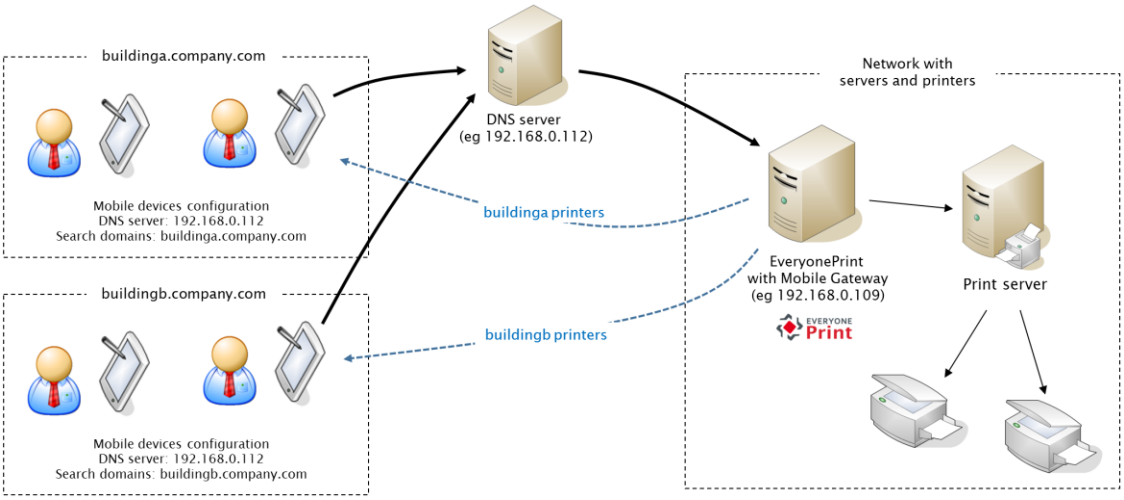


The QR Code Printer Access feature lets users easily access print job submission and print job release on their mobile device. Generate and print QR codes for each printer and place it near the printer. If the "Show scan QR code" feature is enabled, users can then scan the QR code at the printer of their choice using their smartphone.

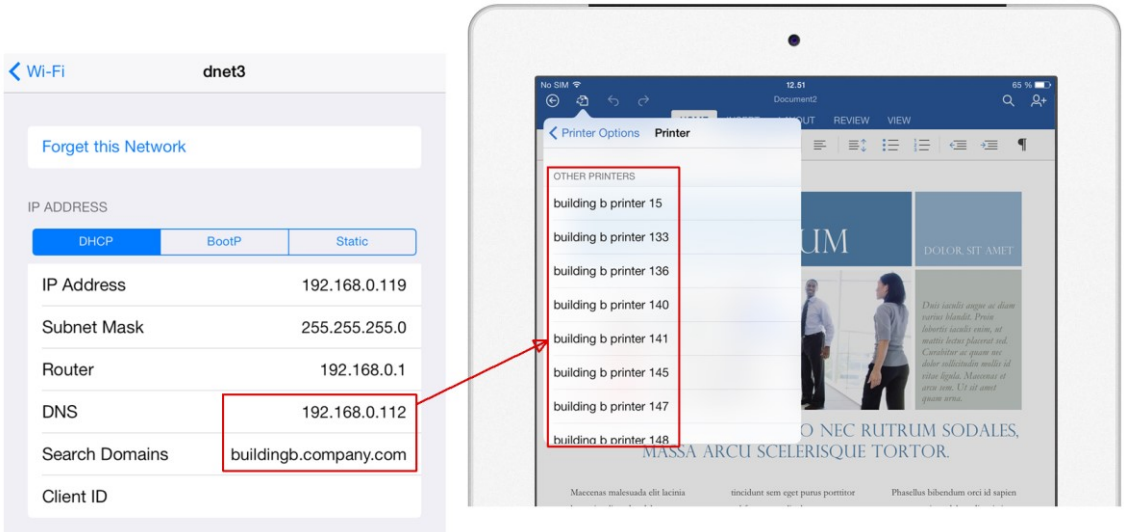
3.18 Wide Area Mobile Print

Wide Area Mobile Print is a highly flexible and powerful alternative to Apple's multicast DNS Bonjour method of announcing printers to Apple iOS devices.

Wide Area Mobile Print uses Unicast DNS-SD, and announcing available printers in EveryonePrint to Apple iOS devices, can be achieved with extreme ease using the Wide Area Mobile Print feature combined with simple standard DNS records created on the DNS server. With Wide Area Mobile Print, AirPrint can be enabled across large and complex networks.



In above example, 2 subdomains have been created, one for each building, Building A and Building B. Mobile devices in each network, query the DNS server, which forwards DNS requests to the EveryonePrint Mobile Gateway. EveryonePrint Mobile Gateway responds with relevant printers for the sub domain(s) available to specific mobile device.



An Apple iOS device with buildingb sub domain specified, see only those printers in that sub domain. Multiple sub domains can be specified as needed.

The following assumes that EveryonePrint has been configured and one or more printers have been added to EveryonePrint.

The Wide Area Mobile Print feature is available in EveryonePrint Professional and EveryonePrint Enterprises editions only.

3.18.1 Configuration overview

The Wide Area Mobile Print configuration involves the following overall steps:

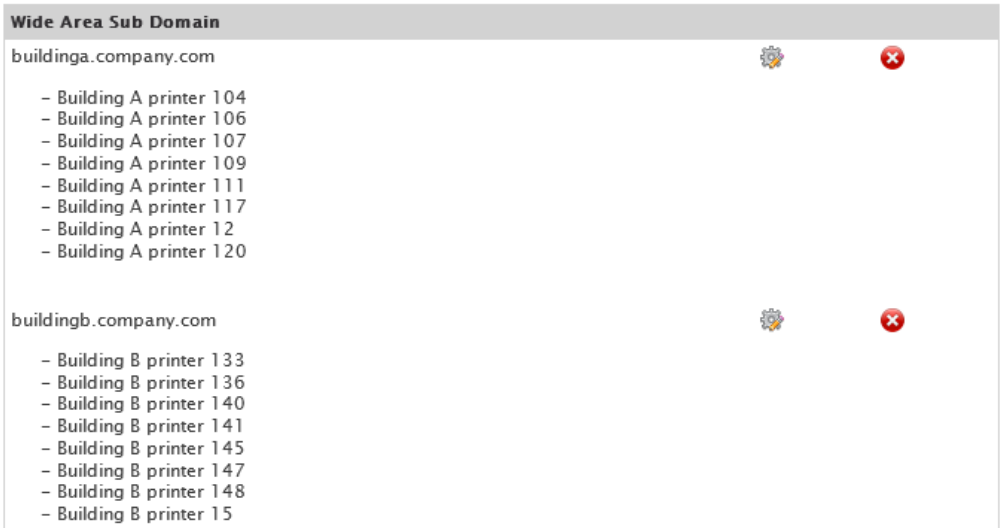
1. Create one or more Wide Area Mobile Print sub domains in EveryonePrint Admin
2. Install and configure the EveryonePrint Mobile Gateway
3. Configure the network DNS server
4. Set search domain on mobile devices

3.18.2 Create Wide Area Mobile Print sub domains

Start in the EveryonePrint administrator interface and the section Wide Area Mobile Print, and create one or more sub domains for the printers.

Multiple sub domains can be created, to separate access to printers, for example:

- By location (one sub domain per building, campus, city, department)
- By user access level (one sub domain for teachers, another for students, or one sub domain for employees, another sub domain for guests)



In this example 2 sub domains have been created, one for each building.

There are no limitations in EveryonePrint as to how the separation can be configured, as it all depends on which of the sub domains created in EveryonePrint that a particular mobile device has access to.

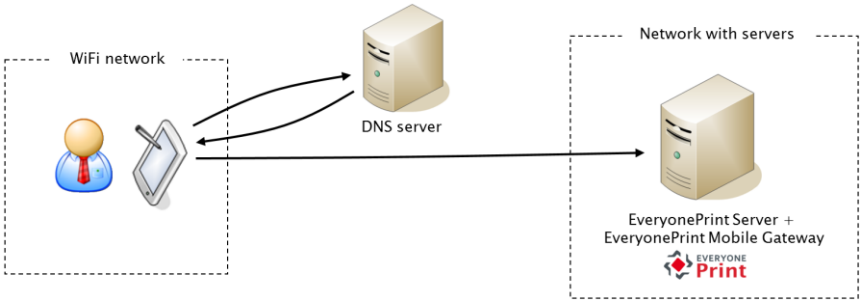
Creating just 1 sub domain for all Wide Area Mobile Print, for example "mobileprint.company.com" containing all the printer(s) that should be available to mobile

devices, is strongly recommended, as it greatly simplifies the later setup of search domain, as will be described in section below.

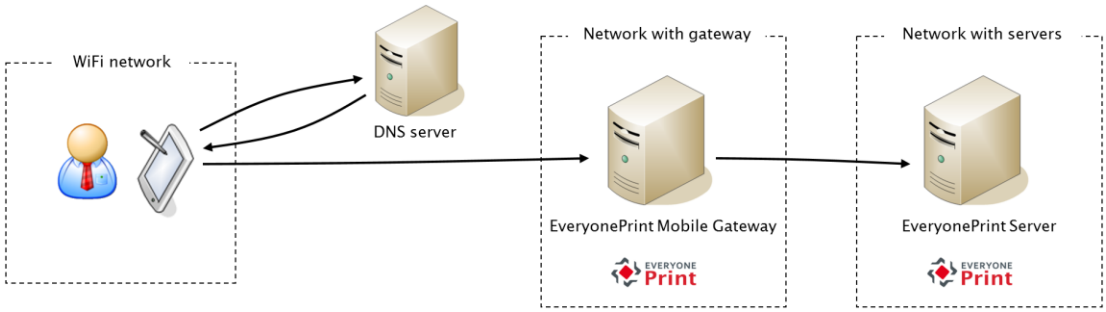
3.18.3 Configure EveryonePrint Mobile Gateway

Install the EveryonePrint Mobile Gateway, either on the EveryonePrint server or on its own server.

Mobile devices will communicate with the Mobile Gateway and not directly to the EveryonePrint server, so the gateway can be placed in a DMZ zone or similar, to further separate mobile devices from the secure printing infrastructure.

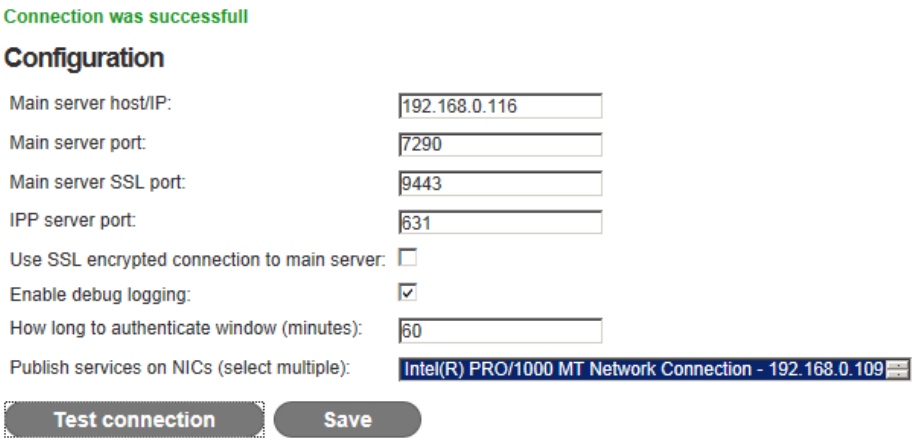


EveryonePrint Mobile Gateway installed on the EveryonePrint server



EveryonePrint Mobile Gateway installed on its own server

With EveryonePrint Mobile Gateway installed, open the gateway admin Web interface, configure the server connection details, test and save.



3.18.4 Configure DNS server

For each created Wide Area Mobile Print sub domain, the DNS requests for those sub domains, should be delegated to the EveryonePrint Mobile Gateway, so EveryonePrint can respond with relevant printer details for the sub domains.

For more information about Zone Delegation, refer to the following articles:

http://en.wikipedia.org/wiki/DNS_zone

http://technet.microsoft.com/en-us/library/cc771640.aspx

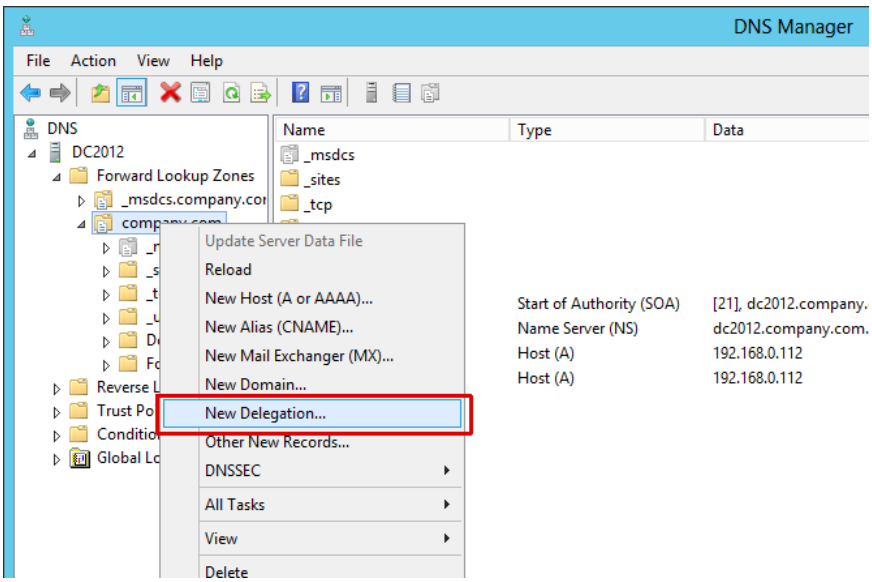
http://technet.microsoft.com/en-us/library/cc753500.aspx

For example configurations of the zone delegation, refer to below two sections on Microsoft Windows DNS or BIND (Mac OSX or Linux).

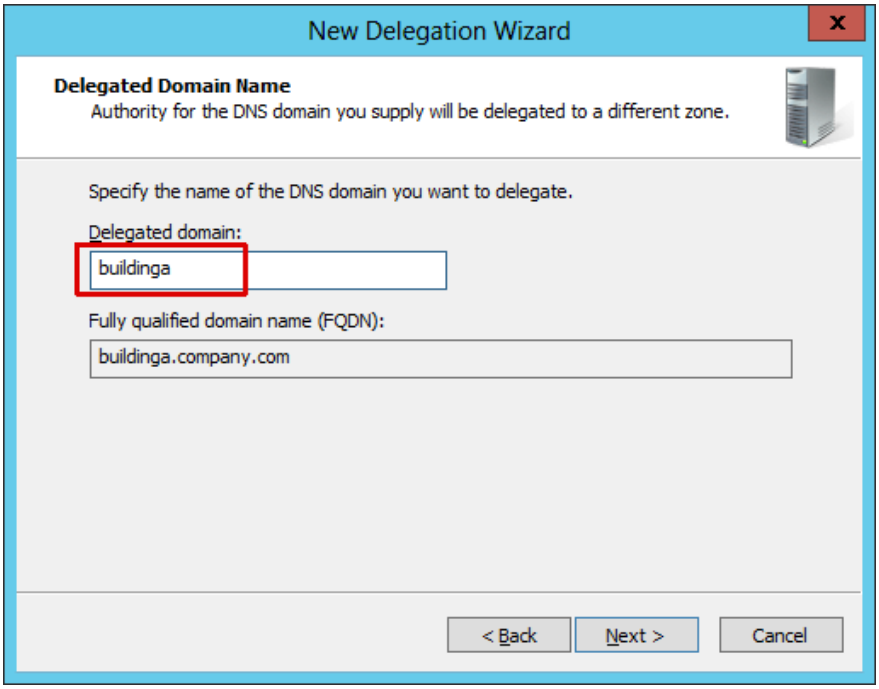
3.18.4.1 Configure Windows DNS

To configure zone delegation for the created Wide Area Mobile Print sub domains on Windows DNS, open Windows DNS on the DNS server that mobile devices use.

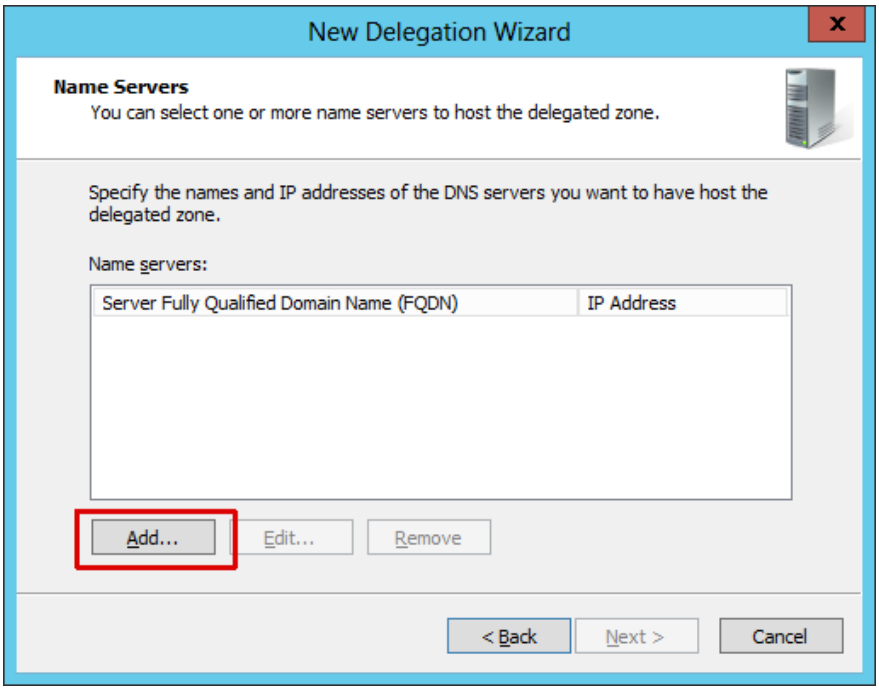
1. Right-click domain and choose **New Delegation**.



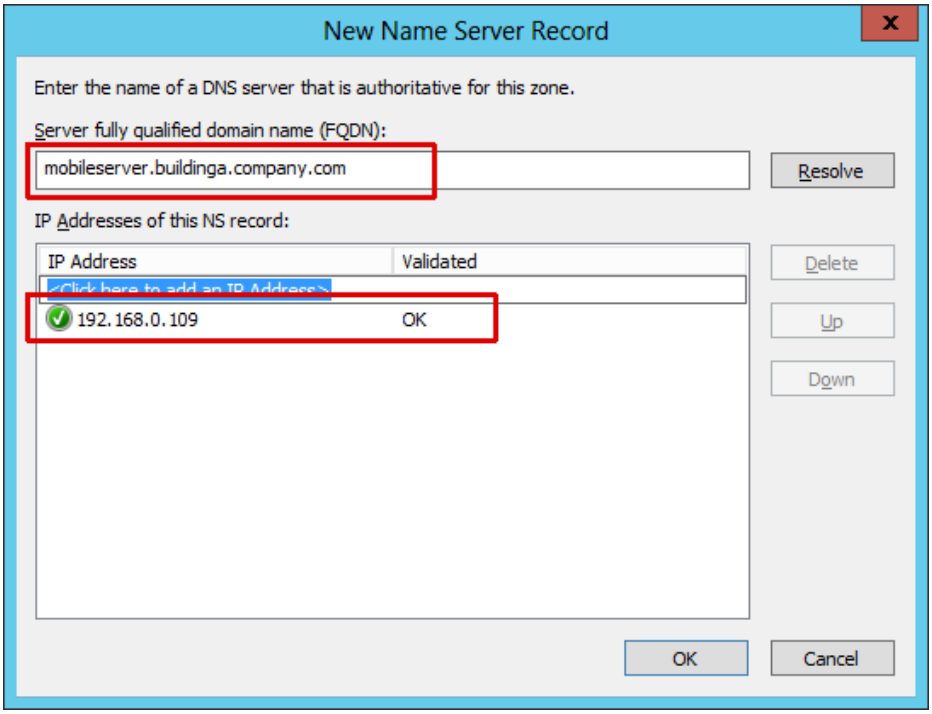
2. Enter the sub domain name as created in EveryonePrint



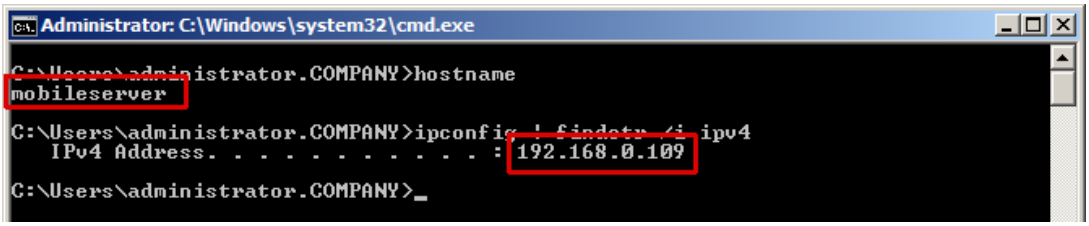
3. Choose to **Add** a name server



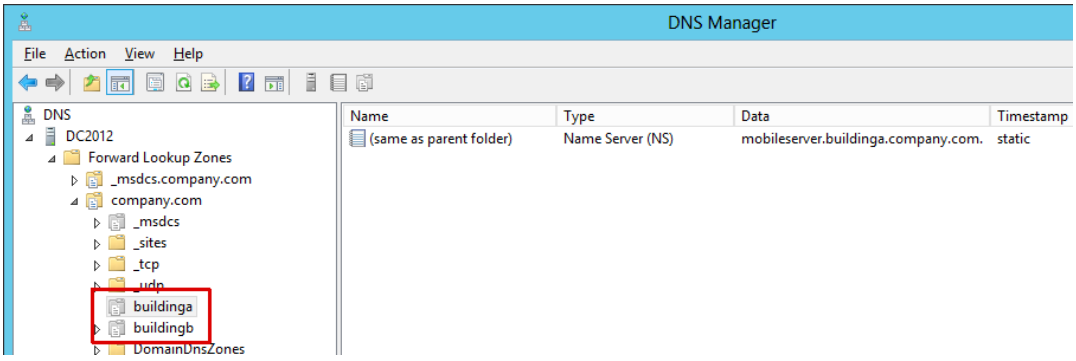
4. Enter the **server name/hostname** of the EveryonePrint Mobile Gateway server followed by the Wide Area Mobile Print sub domain and Active Directory domain, and then enter the **IP address** of the EveryonePrint Mobile Gateway server.



In this example, the hostname of the EveryonePrint Mobile Gateway server is “mobileserver” and its IP address is 192.168.0.109



5. Repeat for each created sub domain



3.18.4.2 Configure BIND

Configure zone delegation for the created Wide Area Mobile Print sub domains on BIND running on Mac OSX or Linux, by adding the sub domains to the domains master zone file.

1. In this example, the sub domains are added to the BIND master zone file for the domain “company.com”.

```
;
; Zone file for company.com
;
$TTL 360
@       IN      SOA     ns.company.com. root.company.com. (
                        201404011       ; serial, todays date + todays serial #
                        8H              ; refresh, seconds
                        2H              ; retry, seconds
                        4W              ; expire, seconds
                        1D )            ; minimum, seconds

                NS      ns              ; Inet Address of name server
ns              A       192.168.0.139

; Delegation for Wide Area Mobile Print sub domains
$ORIGIN buildinga.company.com.
@       IN      NS      mobileserver.buildinga.company.com.
mobileserver IN      A       192.168.0.109

$ORIGIN buildingb.company.com.
@       IN      NS      mobileserver.buildingb.company.com.
mobileserver IN      A       192.168.0.109

$ORIGIN buildingc.company.com.
@       IN      NS      mobileserver.buildingc.company.com.
mobileserver IN      A       192.168.0.109
```

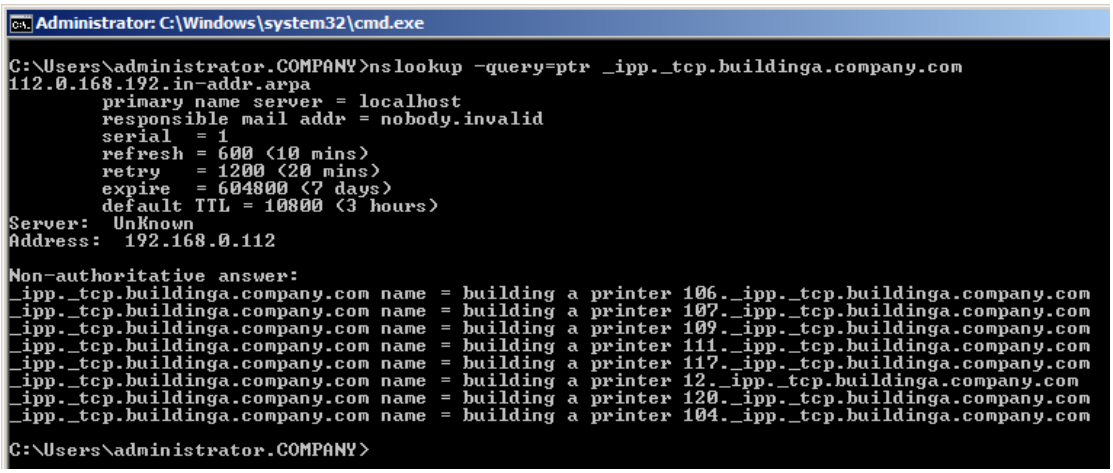
Now any DNS requests for one of the sub domains to the primary DNS server, will be forwarded to the EveryonePrint Mobile Gateway server.

3.18.5 Verifying DNS configuration

To confirm the proper DNS configuration with either Windows DNS or BIND on Mac OSX or Linux, run the nslookup command for each of the sub domains:

nslookup -query=ptr _ipps._tcp.buildinga.company.com

If successfully configured, this will return a list of the printers in the sub domain as configured in EveryonePrint.



Nslookup result from Windows

```
[root@lab4linuxdev1 /]# nslookup -query=ptr _ipp._tcp.buildinga.company.com
Server:         192.168.0.139
Address:        192.168.0.139#53

Non-authoritative answer:
_ipp._tcp.buildinga.company.com name = Building\032A\032printer\032104._ipp._tcp.buildinga.company.com.
_ipp._tcp.buildinga.company.com name = Building\032A\032printer\032106._ipp._tcp.buildinga.company.com.
_ipp._tcp.buildinga.company.com name = Building\032A\032printer\032107._ipp._tcp.buildinga.company.com.
_ipp._tcp.buildinga.company.com name = Building\032A\032printer\032109._ipp._tcp.buildinga.company.com.
_ipp._tcp.buildinga.company.com name = Building\032A\032printer\032111._ipp._tcp.buildinga.company.com.
_ipp._tcp.buildinga.company.com name = Building\032A\032printer\032117._ipp._tcp.buildinga.company.com.
_ipp._tcp.buildinga.company.com name = Building\032A\032printer\03212._ipp._tcp.buildinga.company.com.
_ipp._tcp.buildinga.company.com name = Building\032A\032printer\032120._ipp._tcp.buildinga.company.com.

Authoritative answers can be found from:
buildinga.company.com   nameserver = mobileserver.buildinga.company.com.
```

Nslookup result from Linux

If no printers appear, confirm with telnet that a connection can be established to the EveryonePrint Mobile Gateway ip address on port 53.

Remember that mobile device clients must have access to the EveryonePrint Mobile Gateway server on port 53, to retrieve the printer lists.

3.18.6 Set search domains on mobile devices

For Apple iOS mobile devices to retrieve the printers available for Wide Area Mobile Print, the iOS devices must be instructed to query the sub domains, using DNS-SD.

This can be done in one of two ways, depending on one or multiple sub domains having been created in EveryonePrint. Refer to the

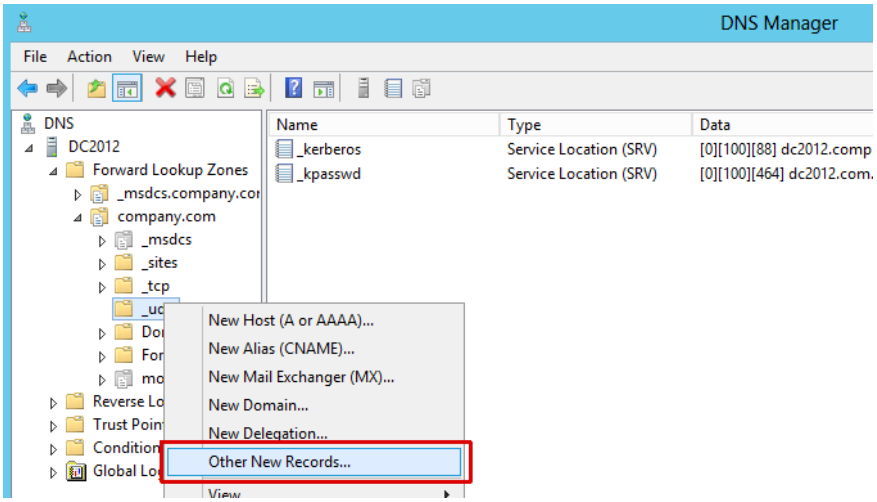
3.18.7 One Wide Area Mobile Print sub domain

If only one Wide Area Mobile Print sub domain has been created (recommended) the configuration needed to instruct Apple iOS devices to query the domain is simple.

3.18.7.1 Single sub domain configuration on Windows DNS

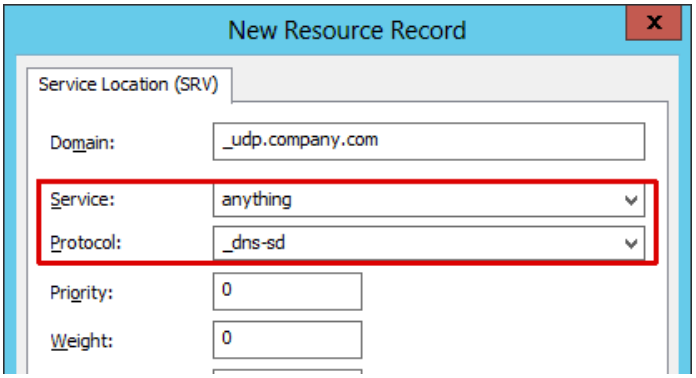
In addition to a delegation DNS record for the single “mobileprint.company.com” sub domain as outlined in section *3.18.4.1 Configure Windows DNS*, create DNS-SD discovery record in Windows DNS.

1. Under the domain (in this case company.com) right-click on _udp and select **Other new records..**

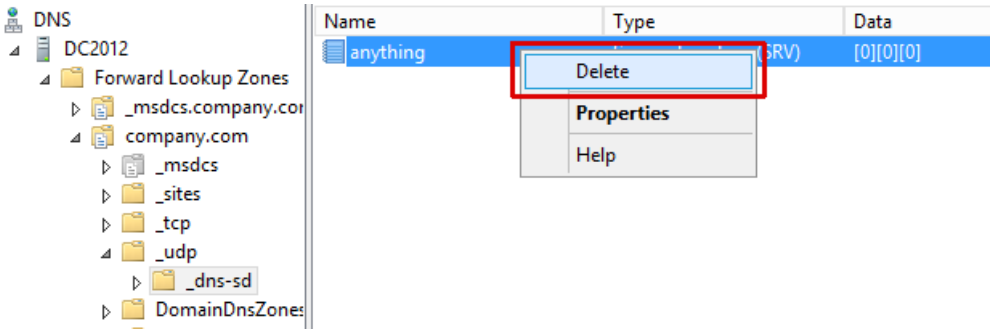


2. Select to insert a **Service Location (SRV)** record

3. In the Service field, type in any characters, and in Protocol enter **_dns-sd**

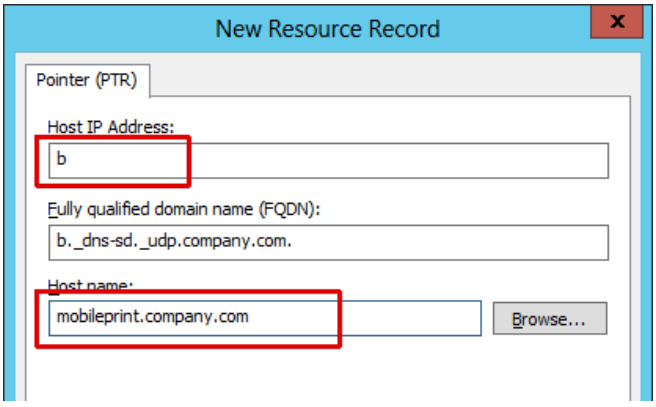


4. There should now be an _dns-sd folder under _udp. Delete the SRV record from within the _dns-sd folder that was created.



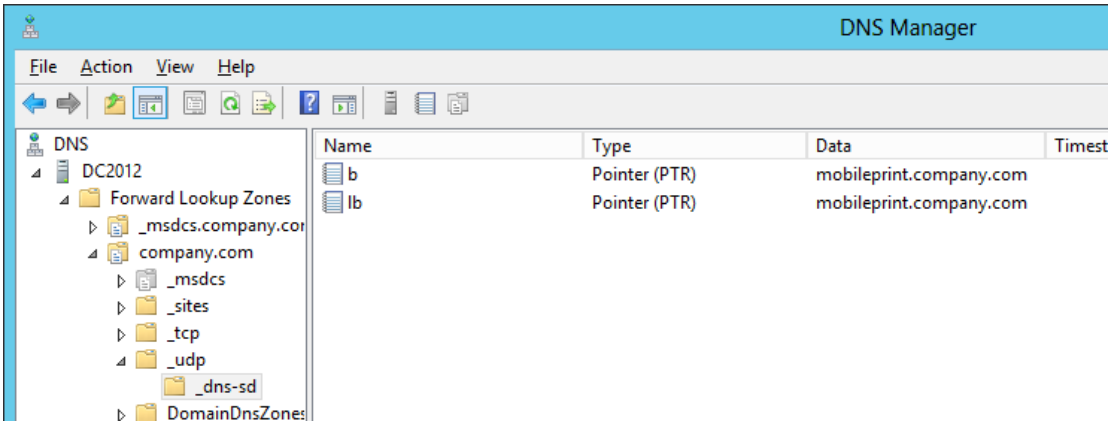
5. Right-click the _dns-sd folder and select **Other new records...** and select to insert a **Pointer (PTR)** record.

6. In *Host IP Address* enter the letter **b** and in *Host Name* enter the Wide Area sub domain such as **mobileprint.company.com**



7. Create an additional **Pointer (PTR)** record with letters **lb** also pointing to the same sub domain

The final structure should look like below.



Now any Apple iOS device with the search domain set to just “company.com”, will discover the “mobileprint” sub domain and query the EveryonePrint Mobile Gateway for printers.

3.18.7.2Single sub domain configuration on BIND

In addition to a delegation DNS record for the single “mobileprint.company.com” sub domain as outlined in section *3.18.4.2 Configure BIND*, create DNS-SD discovery record in BIND.

1. In the domains master zone file, insert the following two DND-SD records:

   b._dns-sd._udp IN PTR mobileprint.company.com.
   lb._dns-sd._udp IN PTR mobileprint.company.com.

   (replace “mobileprint.company.com.” with the actual sub domain as created in EveryonePrint)

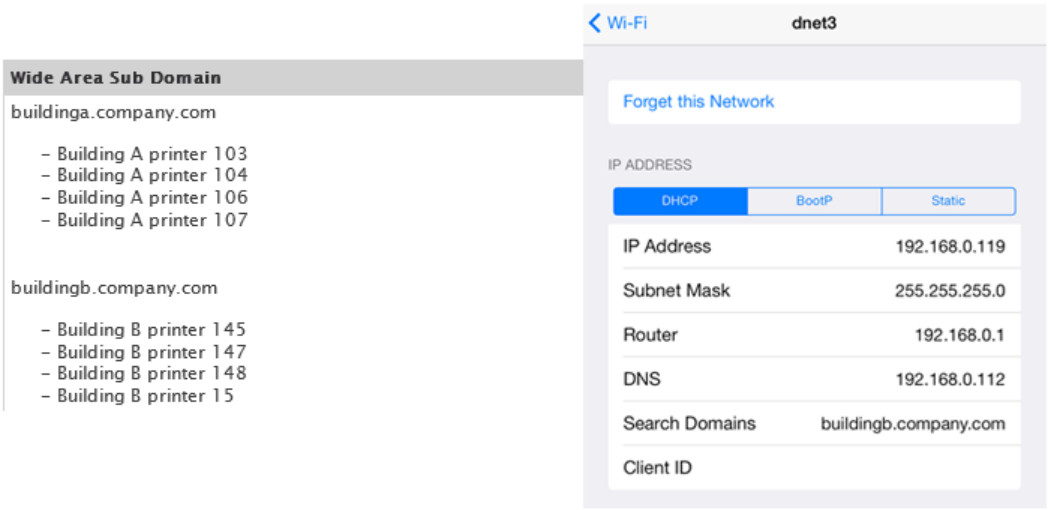
```
;
; Zone file for company.com
;
$TTL 360
@       IN      SOA     ns.company.com. root.company.com. (
                        201404011       ; serial, todays date + todays serial #
                        8H              ; refresh, seconds
                        2H              ; retry, seconds
                        4W              ; expire, seconds
                        1D )            ; minimum, seconds

                NS      ns              ; Inet Address of name server
ns              A       192.168.0.139


b._dns-sd._udp IN PTR mobileprint.company.com.
lb._dns-sd._udp IN PTR mobileprint.company.com.

; Delegation for Wide Area Mobile Print sub domains
$ORIGIN mobileprint.company.com.
@       IN      NS      mobileserver.mobileprint.company.com.
mobileserver IN      A       192.168.0.109
```

Sample BIND zone configuration file for the domain “company.com” with a single “mobileprint.company.com” Wide Area Mobile Print sub domain.

Now any Apple iOS device with the search domain set to just “company.com”, will discover the “mobileprint” sub domain and query the EveryonePrint Mobile Gateway for printers.

3.18.8 Multiple Wide Area Mobile Print sub domains

If multiple Wide Area Mobile Print sub domains have been created, access to the sub domains on Apple iOS devices is given, by populating the “search domain” on the mobile device, with the search domain or domains that the particular device should have access to.



This can be done either manually, or by having the DHCP server provide this value, using what is called “DHCP option 119”.

See below sections for instructions on how to populate “search domain” using Windows and Linux DHCP.

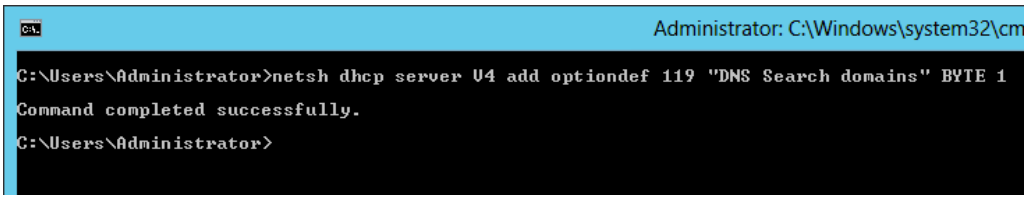
3.18.8.1 Multiple sub domains configuration on Windows DHCP

Microsoft Windows DHCP does not provide a friendly configuration interface for the DHCP option 119.

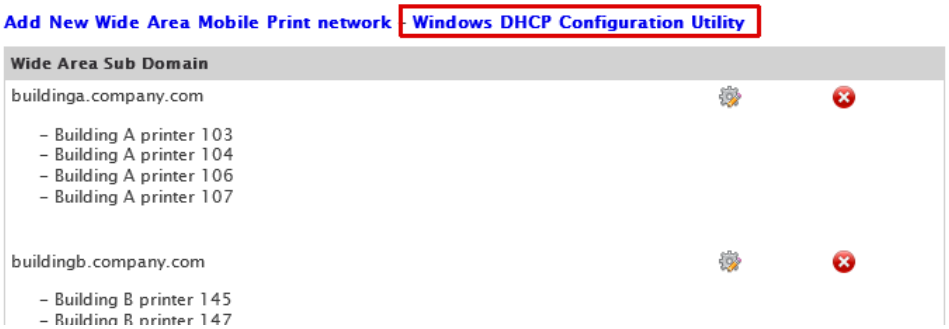
Configuration of DHCP option 119 on Windows DHCP involves the following steps:

1. If not done previously, first define the DHCP option 119 to the Windows DHCP server by running the following command on the DHCP server

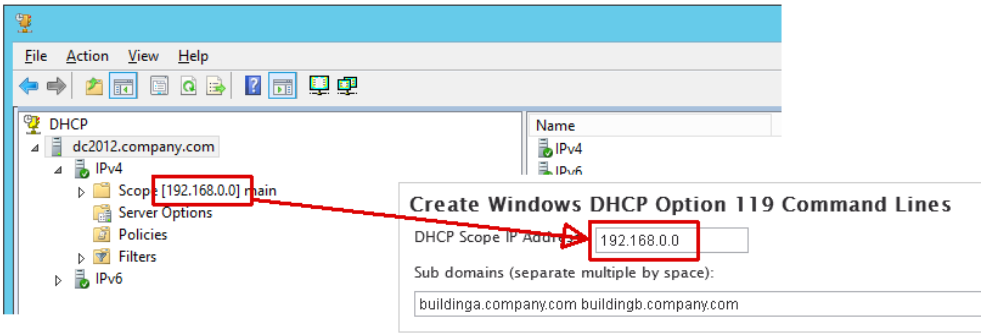
   netsh dhcp server V4 add optiondef 119 "DNS Search domains" BYTE 1



2. In the EveryonePrint Administrator interface, go to Wide Area Mobile Print and click the **Windows DHCP Configuration Utility**



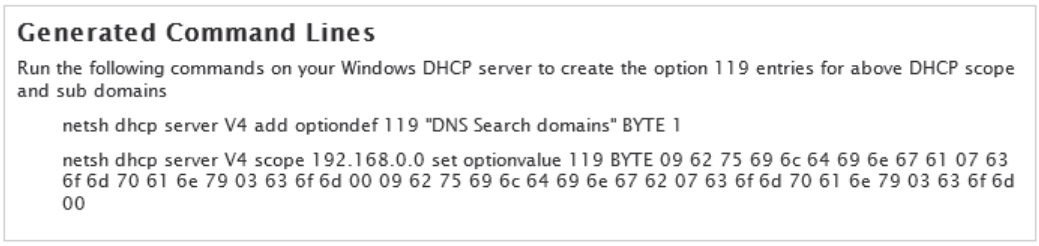
3. Enter the DHCP scopes IP address



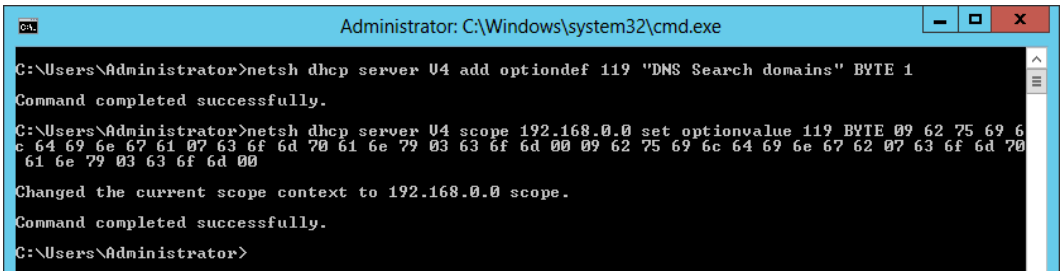
4. Enter the Wide Area Mobile Print sub domains that should be published to this DHCP scope

Separate multiple sub domains with a space.

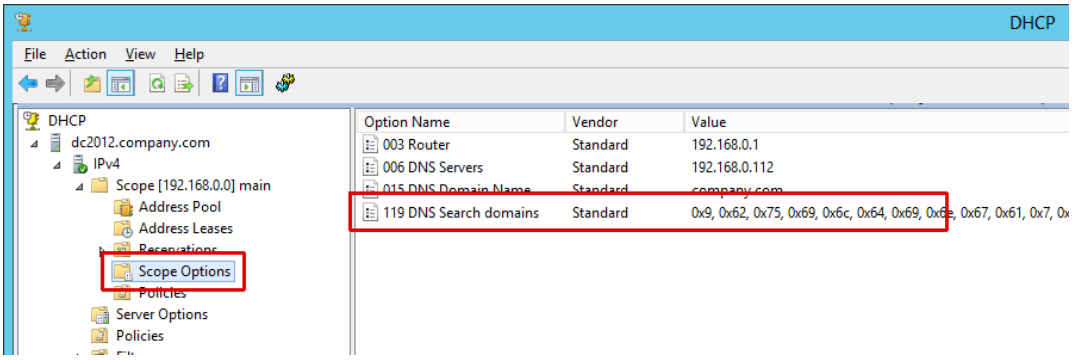
5. Click **Continue** when ready, and the needed commands are shown on screen



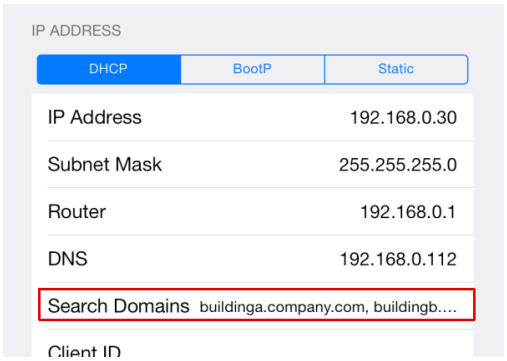
6. Copy/paste and run these commands on the DHCP server to create the DHCP entries



7. Confirm the entries appear under Scope Options in the DHCP server (refresh the DHCP server view to show the new settings).



8. Mobile devices obtaining a new lease from the DHCP should now show the correct search domains.



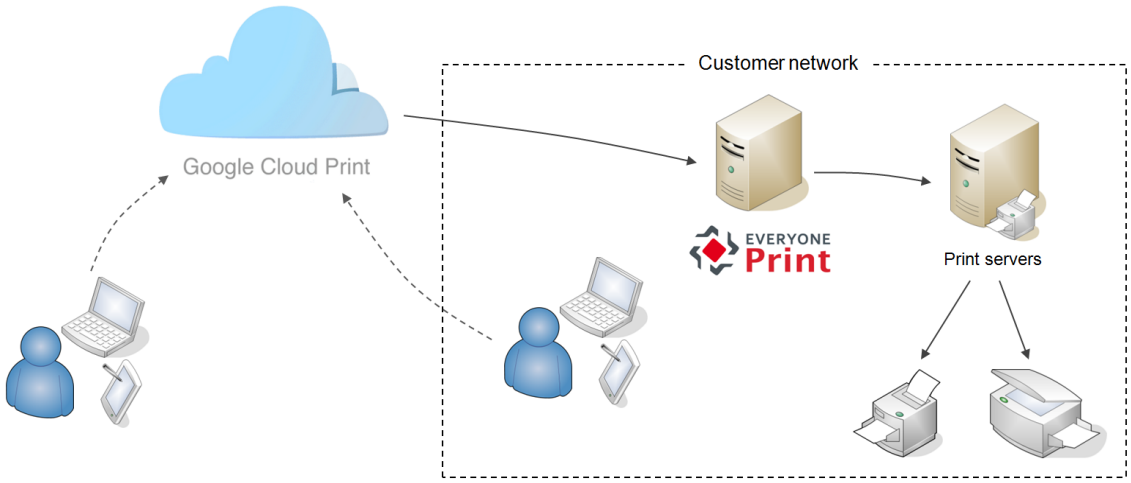
3.18.8.2 Multiple sub domains configuration on Linux DHCP

To specify search domains for a subnet on Linux DHCP, edit the dhcpd.conf file and insert a **domain-search** option with the sub domains to publish.

```
subnet 192.168.0.0 netmask 255.255.255.0 {
    range 192.168.0.101 192.168.1.199;
    option domain-name "company.com";
    option domain-search "buildinga.company.com", "buildingb.company.com";
    option domain-name-servers 192.168.0.139;
    option routers 192.168.0.1;
}
```

3.19 Configure Google Cloud Print

With Google Cloud Print support in EveryonePrint, users can print from their Google Chromebook, phone or tablets, Google Apps such as Gmail, Google Docs, Google Sheets, or using any other application or device which supports Google Cloud Print, to the printers you select in EveryonePrint.



Any authentication settings in EveryonePrint *Printing and Security* such as Release Code or Authenticated printing, still applies for Google Cloud Print.

Privacy with Release Code

If EveryonePrint is configured for "Privacy with Release Code" and a user prints via Google Cloud Print to EveryonePrint general printer, the user will receive a release code back via email, just as they receive release codes for Email Print.

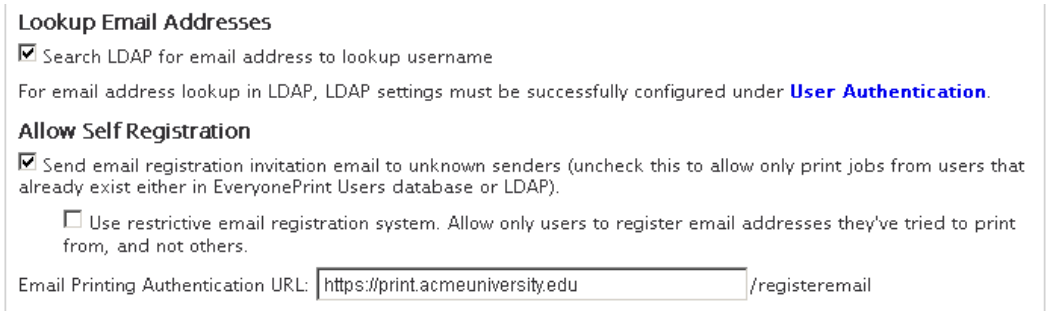
Users do not receive release codes for jobs sent via Google Cloud Print through EveryonePrint directly to specific printers.

Privacy with Authentication or Direct with Authentication

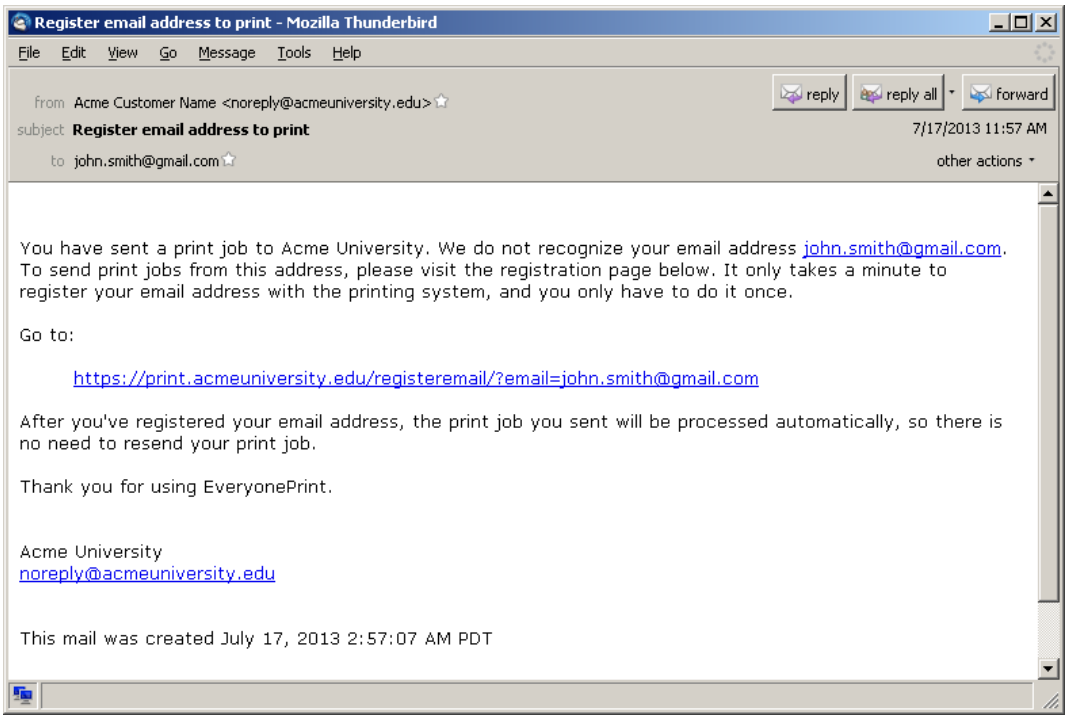
In an Authentication mode, where users are required to authenticate to print, the authentication settings in *User Authentication* apply.

When a user sends a print job via Google Cloud Print, their Google Account email address is "sender" of the job as it arrives in EveryonePrint.

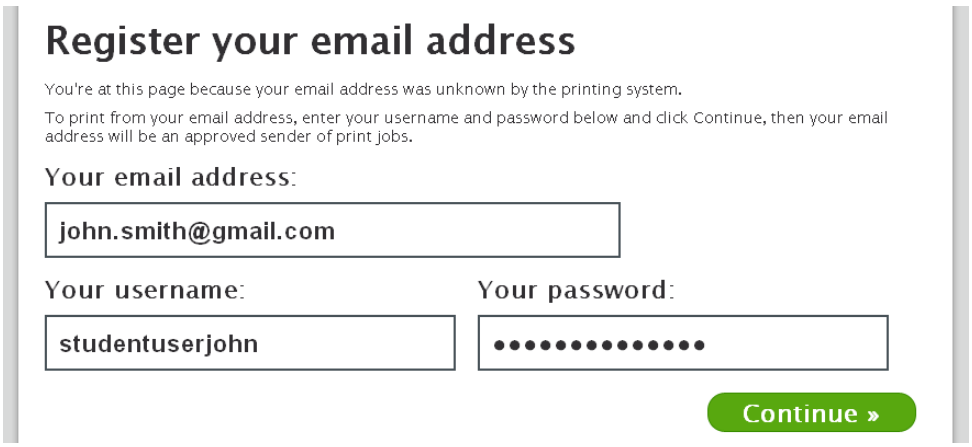
EveryonePrint will first check its internal user database, and if the user is not found there, it will search LDAP, if LDAP search is enabled.



If the user is not found in LDAP, a self-registration email invitation is sent to the user, if **Allow Self Registration** is enabled.



The user must enter their network username and password, to register their Google Account with the system. This is only needed once for the user.



In above example, the job sent from john.smith@gmail.com will after processing, be sent to the print queue on the EveryonePrint server as the user “studentuserjohn”.

3.20 Google Cloud Print configuration summary

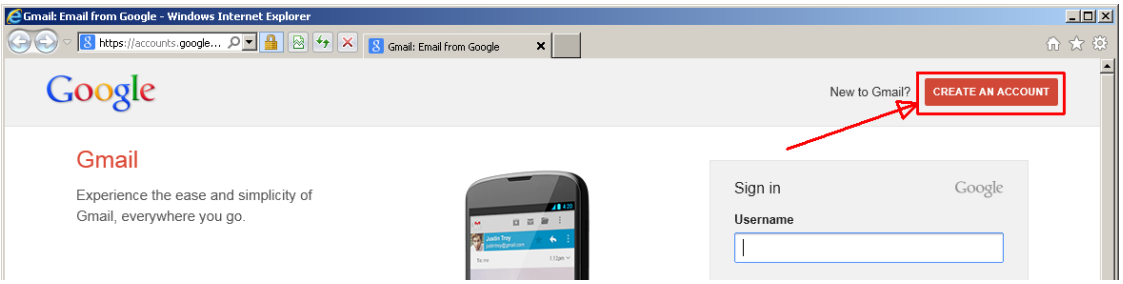
Summary of steps included to enable Google Cloud Print support in EveryonePrint:

1. Create an organization Google Account
2. Enable Google API access on the Google Account
3. Register printers from EveryonePrint in Google Cloud Print
4. Enable “Public Link” sharing for Google Cloud Print registered printers

Important! The Google Cloud Print service is marked as a BETA software by Google. This means that Google could change anything and everything at anytime, interrupting or breaking the integration between EveryonePrint and Google Cloud Print.

3.20.1 Create a Google Account

First create a normal Google Account. This can be done most easily by creating a Google Gmail account.

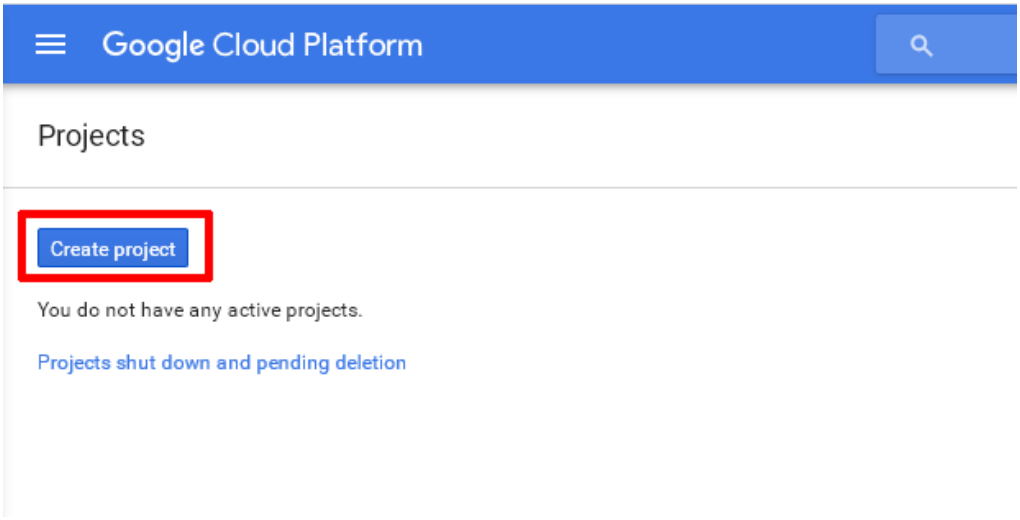


3.20.2 Enable Google API access on Google Account

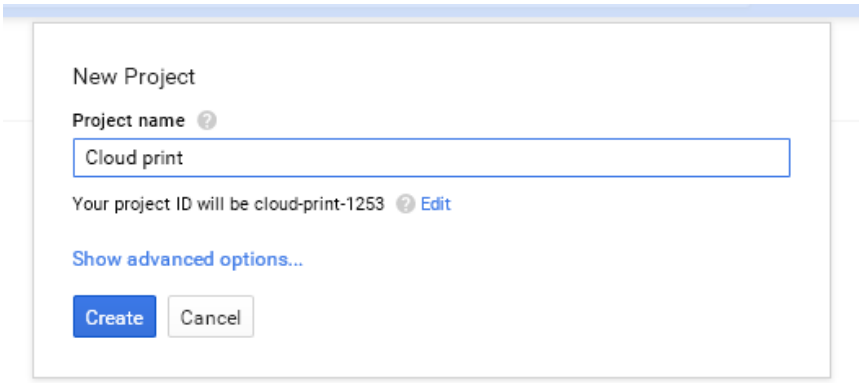
With a Google Account created, in order for an external application such as EveryonePrint, to interact with Google services, an authorized API access must be established.

1. Start by going to Google Cloud Console at https://console.cloud.google.com

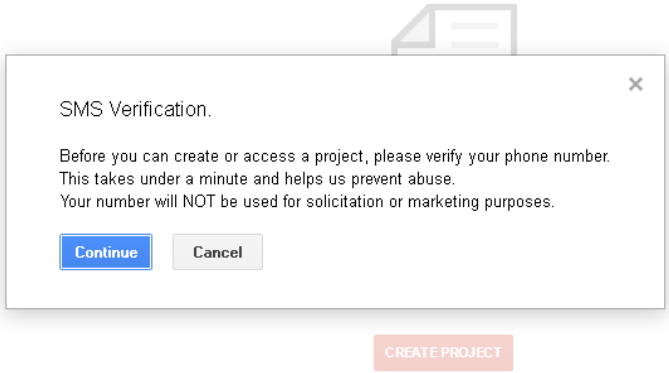
2. Click Create project



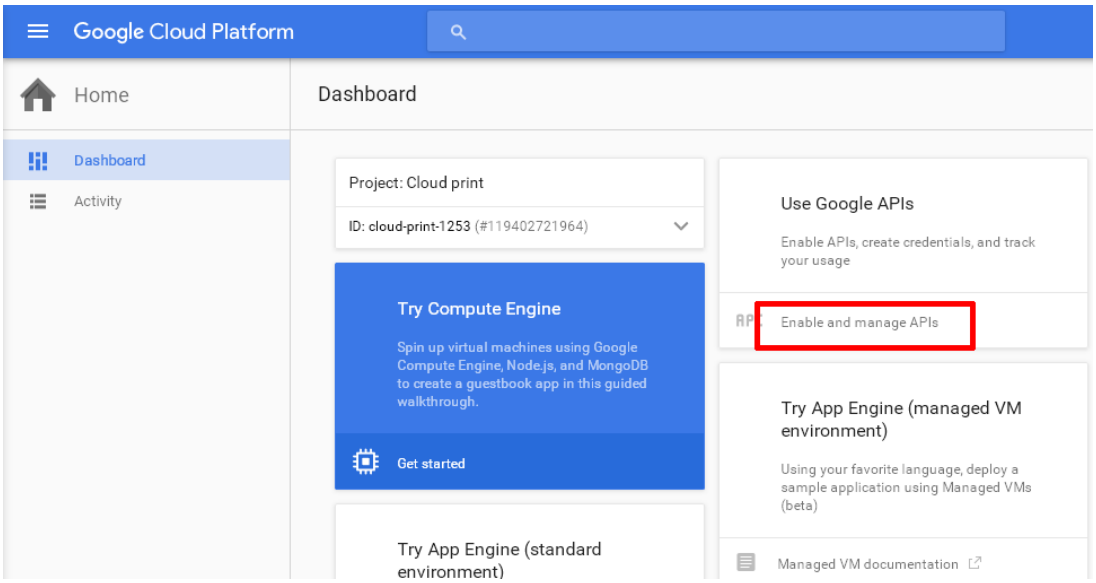
3. Enter a project name, used only internally in the Cloud Console for reference. Google suggests a Project ID, which can be used as is.



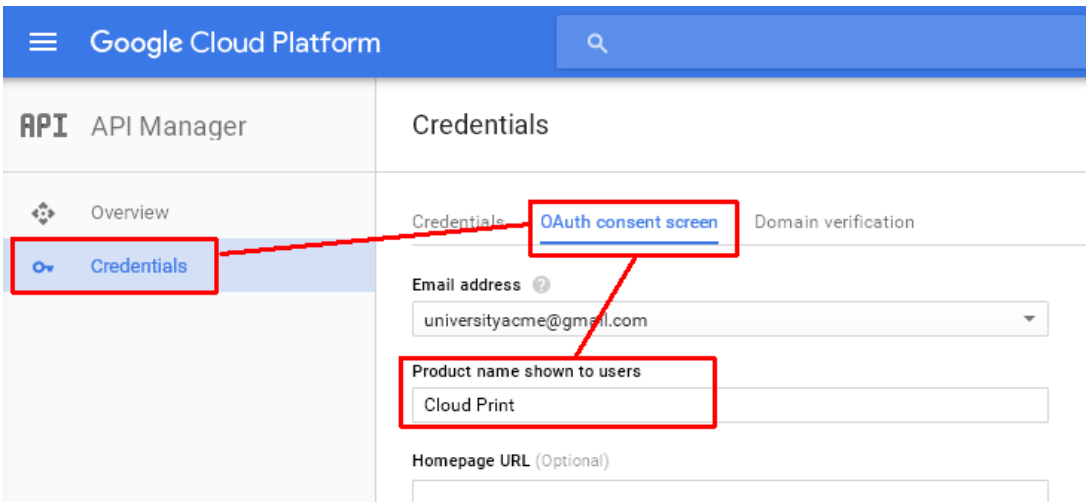
4. Depending on your account status, you may be asked to verify your account via SMS



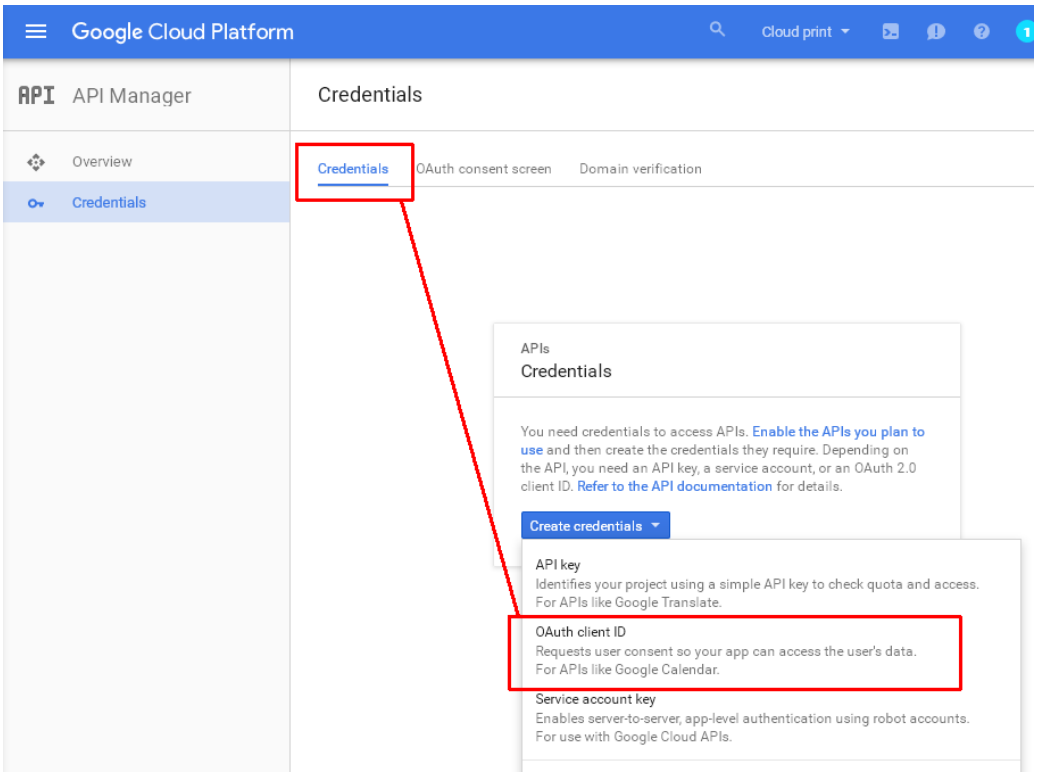
5. Under **Use Google API's** choose **Enable and Manage APIs**



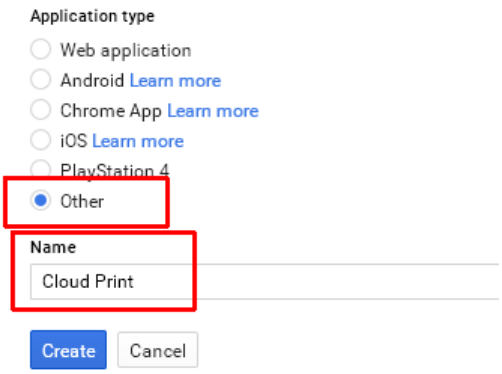
6. Choose **Credentials** on the left, then **OAuth consent screen** and fill out a **Product name**. Other details can be entered as well, but are not required. When done, click **Save** at the bottom.



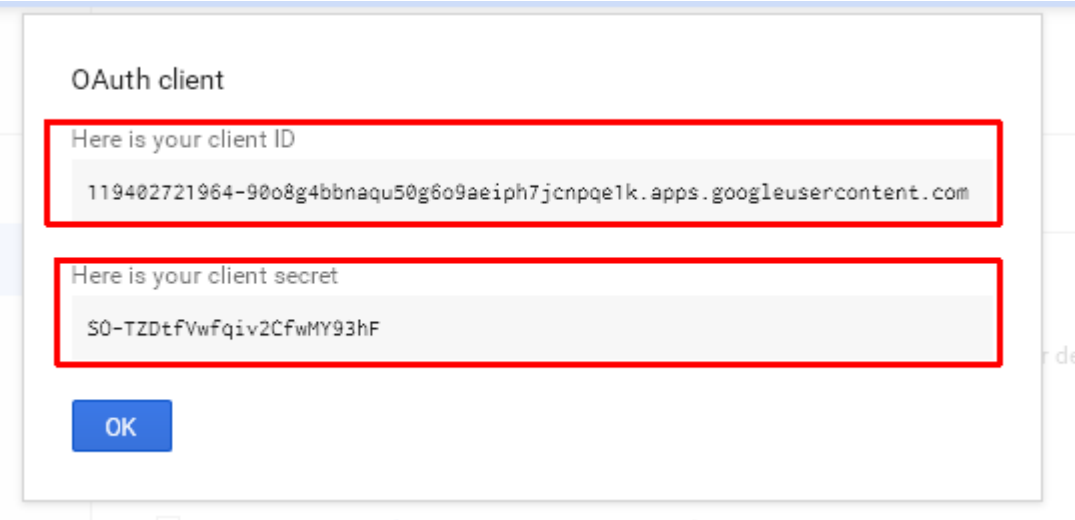
7. In **Credentials** choose **Create credentials** and an **OAuth client ID**



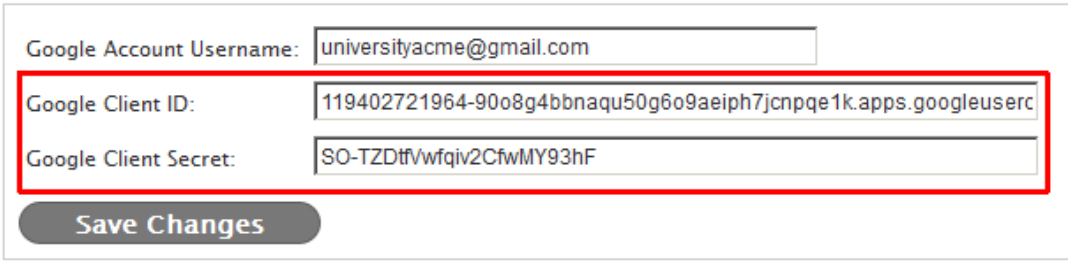
8. Under **Application type** choose **Other** and enter a **Name** used only internally.



9. The Google account Client ID and Client Secret needed for integration are now created and displayed on screen.



10. Copy/paste the Client ID and Client Secret into the EveryonePrint Google Cloud Print configuration screen.



The overall connection between Google and Google Cloud Print has now been established, and printers in EveryonePrint can now be registered with Google Cloud Print.

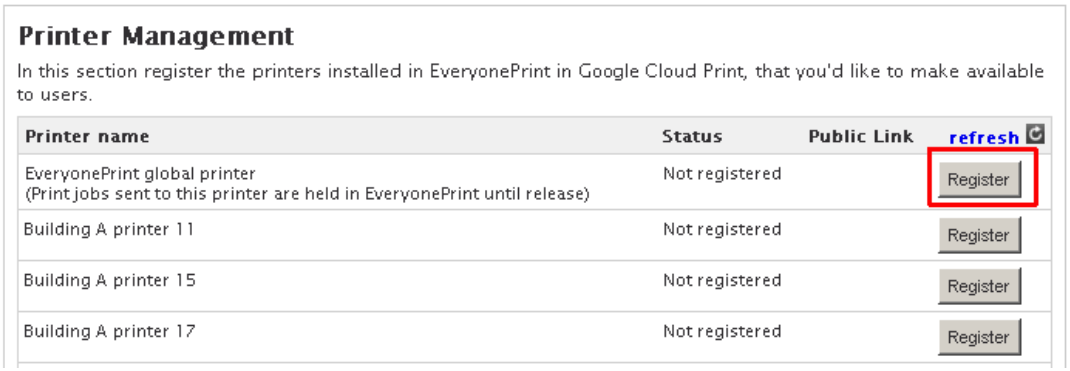
3.20.3 Register printers from EveryonePrint in Google Cloud Print

It's assumed that printers have already been configured in EveryonePrint.

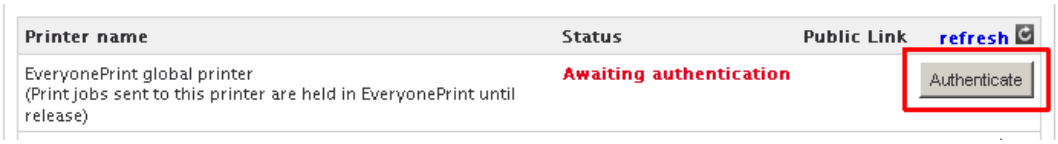
For each of the printers in EveryonePrint, that you would like to make available to users via Google Cloud Print, 3 steps must be performed:

1. Register printer in Google Cloud Print
2. Authenticate the printer
3. Share the printer

First click **Register** for each of the printers that you would like to make available in Google Cloud Print.

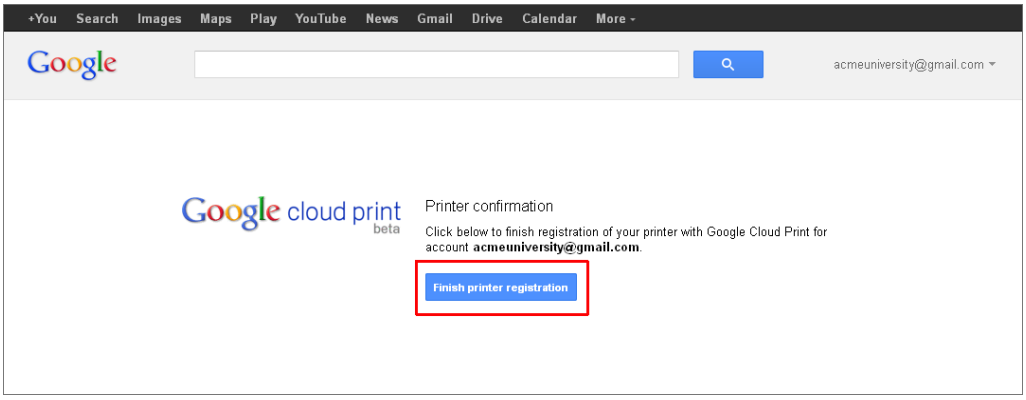


After a few seconds, the status will change to *Awaiting authentication* and a new button will appear. Click **Authenticate** to continue.

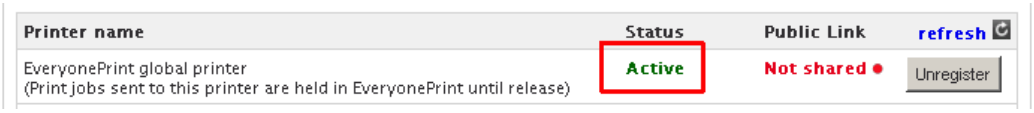


A new window will open with a Google Printer registration page. Click the link in the middle of the page.

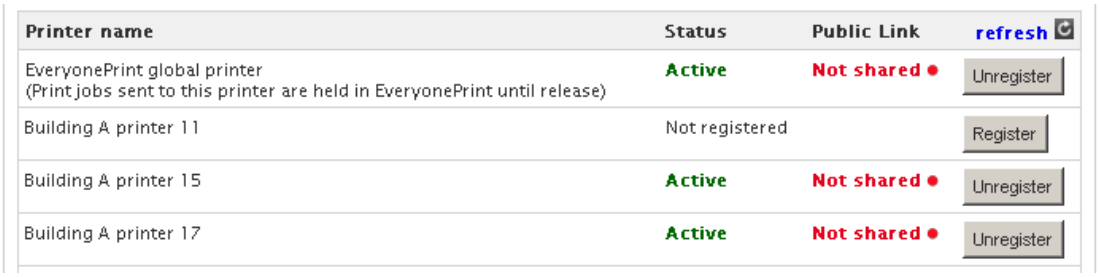
Finally click the **Finish printer registration** button

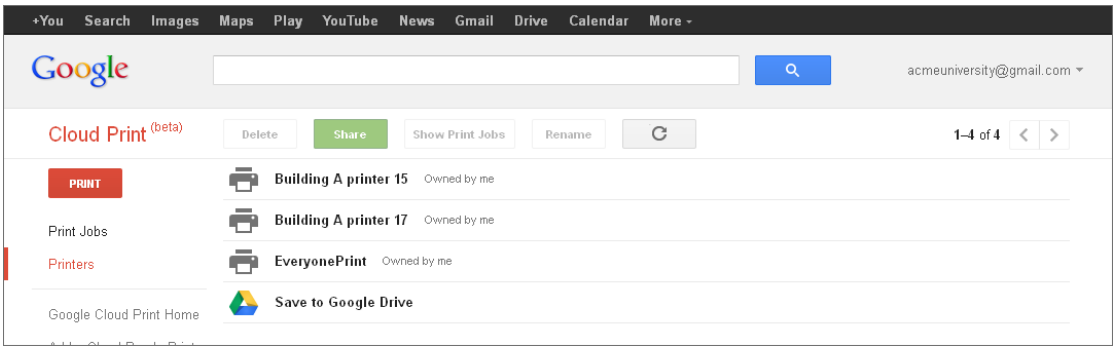


After 20-30 seconds the *Status* of the printer in the EveryonePrint configuration page will change to **Active**, and the registration of the printer is now complete.



All registered printers are visible in the Google Cloud Print Manage Printers page at https://www.google.com/cloudprint#printers





Next it's important to share the printer, otherwise no users have access to the printers.

3.20.4 Enable “Public Link” sharing for printers

When a printer has been added to Google Cloud Print, by default, it’s only available to the Google Account owner.

It's strongly recommended to share printers using a Google Cloud Print "Public Link", otherwise users can only print to the printer via Google Cloud Print, if they're explicitly invited to the printer from the Google Cloud Print management pages.

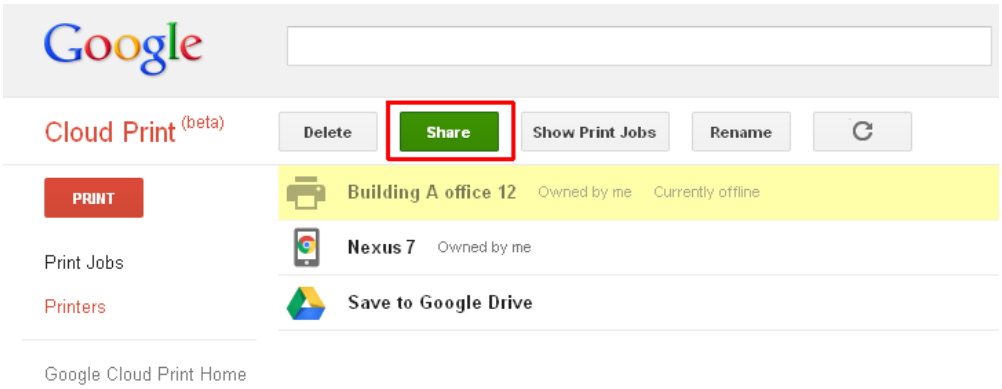
Don’t be confused by the term “Public Link”. Depending on authentication settings in EveryonePrint, a user attempting to print via Google Cloud Print, will always be authenticated first in EveryonePrint to ensure only authorized users can print.

To create a *Public Link* for a printer:

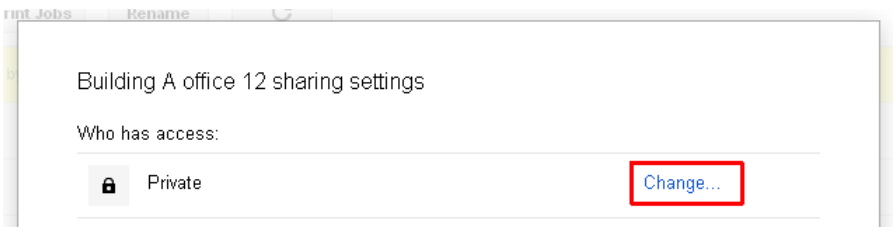
1. Click the **Not shared** link next to a printer

2. Go to Google Cloud Printer Manage Printers page at https://www.google.com/cloudprint#printers

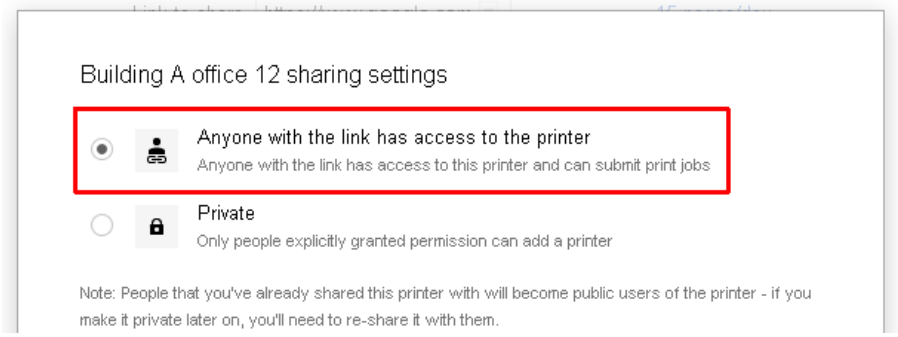
3. Select the printer to modify, and click **Share**



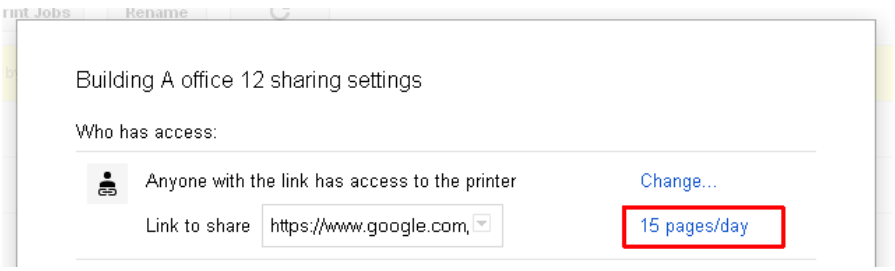
4. To change from Private access, click **Change**



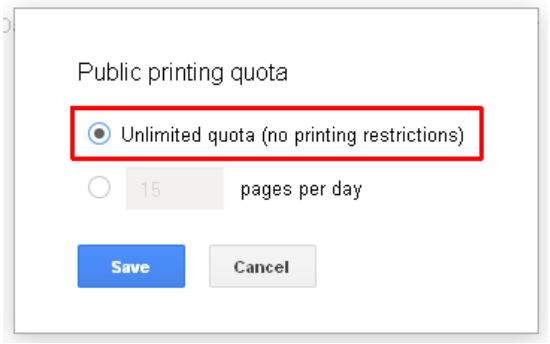
5. Choose **Anyone with the link has access to the printer**



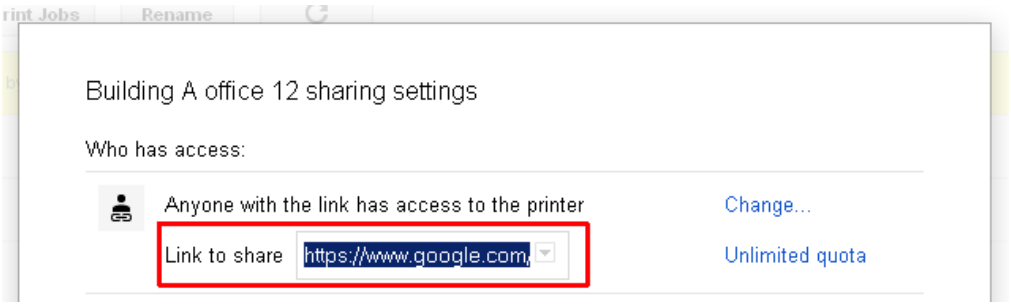
6. Change the limit of how much users can print to this printer, by clicking the **15 pages/day**



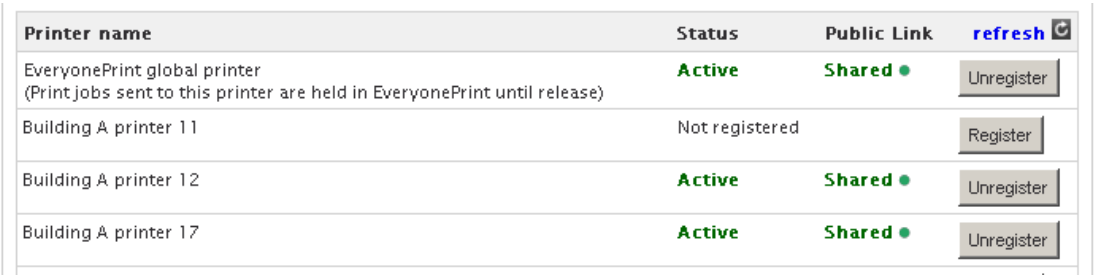
7. Choose **Unlimited quota**



8. Finally copy the "Link to share" and insert this link in the printers Public Link page in EveryonePrint and click **Save Changes**.



When printers are shared via *Public Link*, a user can log on to the EveryonePrint Web interface, and view printers available to them from the Google Cloud Print page in the end user Web interface in EveryonePrint.



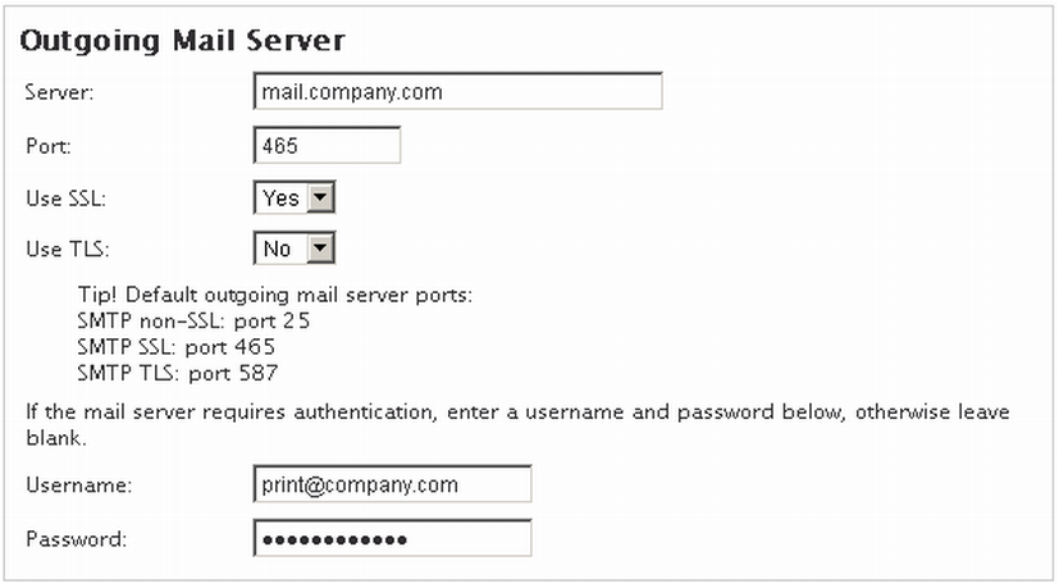
Only printers which have been shared with Public Link, are listed in this page.

Device groups and device group printer permissions still apply, so on the Google Cloud Print page within EveryonePrint, a user will only see printers listed that they have access to. If no device group permissions are set, users will see all Google Cloud Print printers with a Public Link.

When a user clicks **Add Printer** the printer will be added to their Google account, and they can print from Google Apps, ChromeBook and similar.

3.21 Configure Outgoing Mail

EveryonePrint must be able to send outgoing email, both with friendly error messages, if someone sends a print job in a format which is not supported, a too large email or when sending release codes or authentication requests to users.



Under Outgoing Mail Server in Settings, enter the mail servers SMTP settings for outgoing email, including choosing relevant ports and security protocols as needed for the SMTP mail server.

Enter the details that will appear as “Sender” on the email. It’s important to use a different address than the Email Print address, otherwise you risk creating an infinite email print loop.

You can test the settings by entering an email address to receive a test email, and checking the box saying “Send test email”. When you click Save changes, a test email will be sent, to confirm

that EveryonePrint can successfully transmit emails to end-users. It's recommended to choose an external test email address, to confirm that EveryonePrint can send emails to all users.

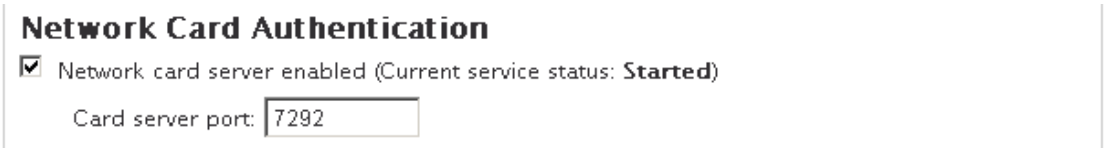
Tip: If EveryonePrint says email was sent successfully, but no email is received, check the file C:\Program Files (x86)\EveryonePrint\temp\cfmail\mail.log (or alternate install directory) for errors such as:

> 02/10/11 13:29.27: MailOutFail: To=john.smith@company.com; From=Company <support@company.com>; Subject=Outgoing test mail from EveryonePrint; Server=mail.company.com;25; Size=515 bytes:javax.mail.MessagingException: Could not connect to SMTP host: mail.company.com, port: 25; nested exception is: java.net.ConnectException: Connection timed out: connect

With the above error message in mail.log, EveryonePrint could not successfully deliver the test email to the mail server due to lack of connection. Make sure that no firewalls are interrupting the connection.

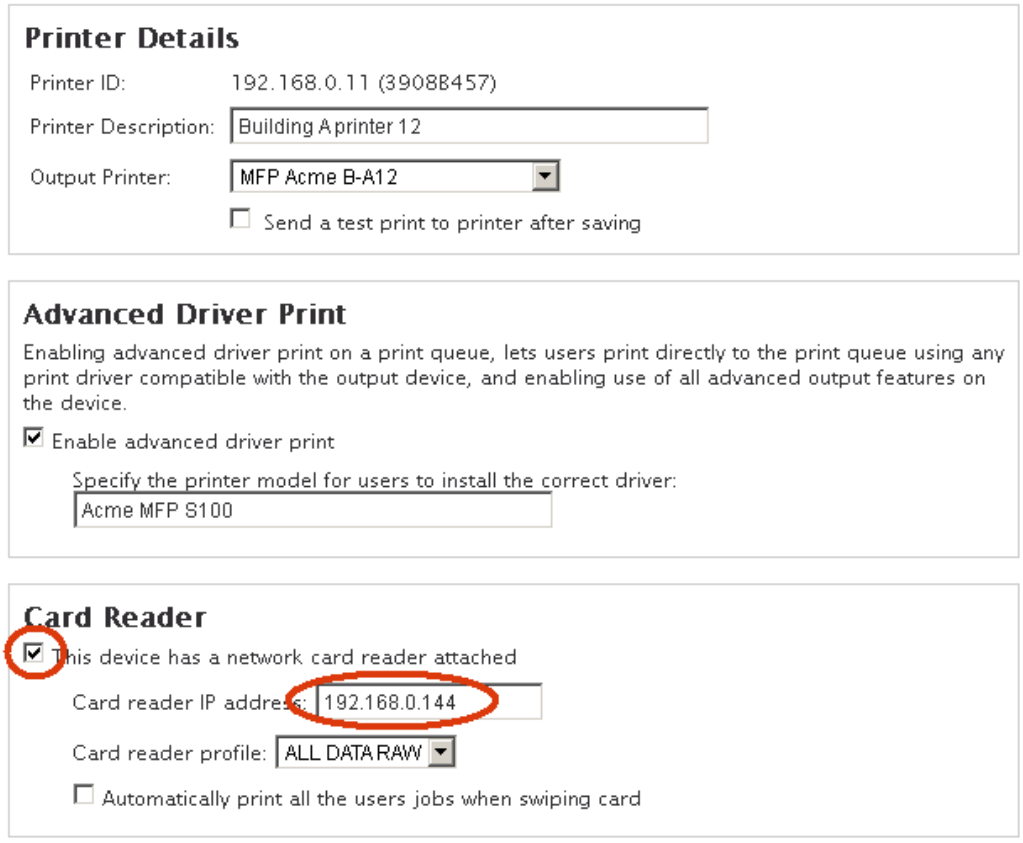
3.22 Card server

EveryonePrint includes a card server for network TCP/IP based swipe card readers. This enables card swipe authentication on printers or multi function devices, so a user walks up to a device of their choice, equipped with a reader, then swipe their door access card or similar, at which point the user is authenticated at the device. No need to enter login credentials.



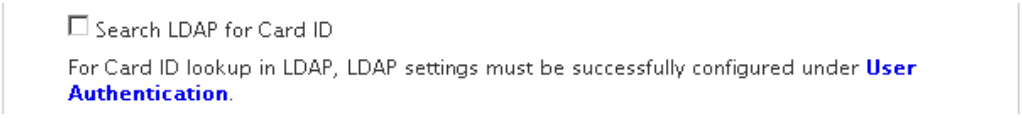
The card server runs on TCP port 7292 per default. Configure the network card readers to send data to the EveryonePrint servers IP on this port.

Associate the network card reader with a device added in EveryonePrint, by going to the Device enabling card reader, and entering the IP address of the network card reader.

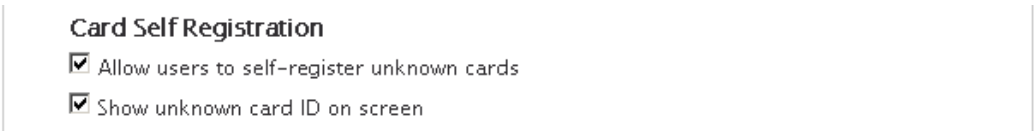


Card swipe timeout is the time from when the user swipes their card, and until the swipe authentication expires.

Per default, the user has 30 seconds from swiping their card to activating the release application on the device.

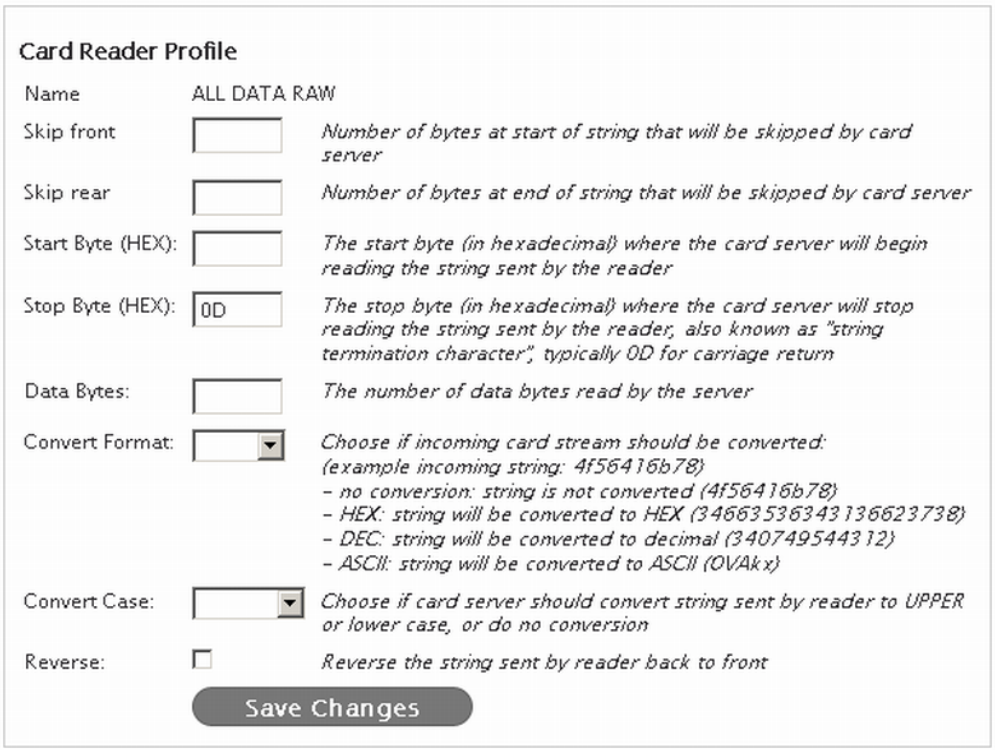


EveryonePrint can lookup usernames by searching the LDAP for card ID numbers. For card ID LDAP lookup to function, the LDAP settings under User Authentication must be configured successfully.



Card self registration settings are relevant for multi function device terminals, so if a user swipes an unknown card, the user can associate the card with their network username, by authenticating with username and password.

3.23 Card Reader Profiles



There are many different types of cards and card number formats. Use card reader profiles to modify the incoming data stream from the card reader to match a predefined format, for card numbers imported to the EveryonePrint database or stored in LDAP.

If no special card number translation is needed, just use the general ALL DATA profile.

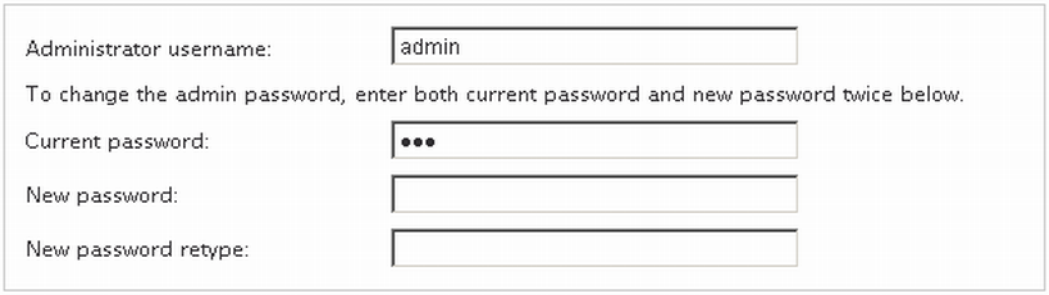
3.24 Administrator Alert Notifications

EveryonePrint includes an administrator notification feature, to alert administrators in case of critical faults, such as licensing errors.

Configure Outgoing Mail settings and then enter the administrators email address.

3.25 Change Administrator login

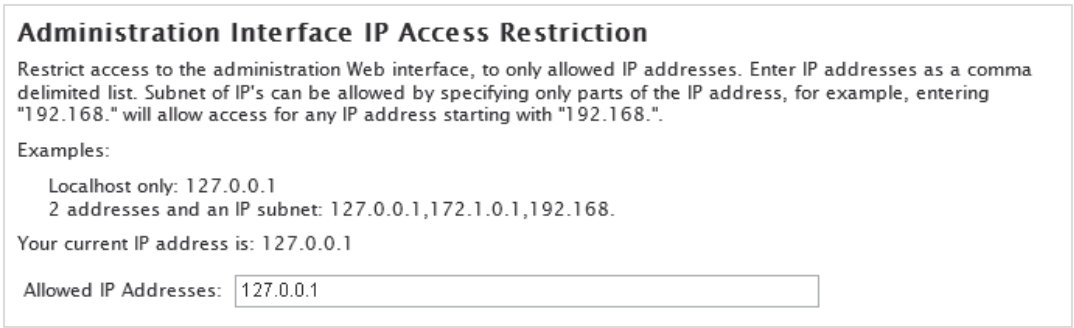
Use the Administrator Login screen in the EveryonePrint Admin to change the default admin password.



If the password to the admin is lost, it is necessary to contact EveryonePrint support.

3.26 Restrict access to administration Web interface based on IP address

Easily restrict access to the EveryonePrint administration Web interface, to only allowed IP addresses.



IP addresses are entered a comma delimited list. Subnet of IP's can be allowed by specifying only parts of the IP address, for example, entering "192.168." will allow access for any IP address starting with "192.168.".

By default, all IP addresses are allowed.

3.27 Managing Users

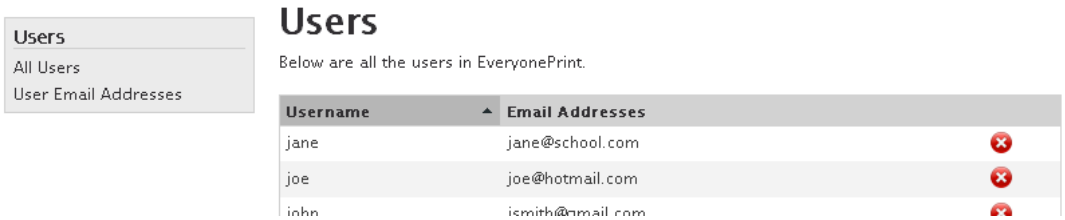
Users in EveryonePrint are users which have an email address or a card associated with them.

If EveryonePrint is configured for an authentication mode in **Printing and Security** then when users send email print jobs the first time, they will be asked to authenticate with the printing system, so EveryonePrint can link their email address together with their username. See section *3.16.1*

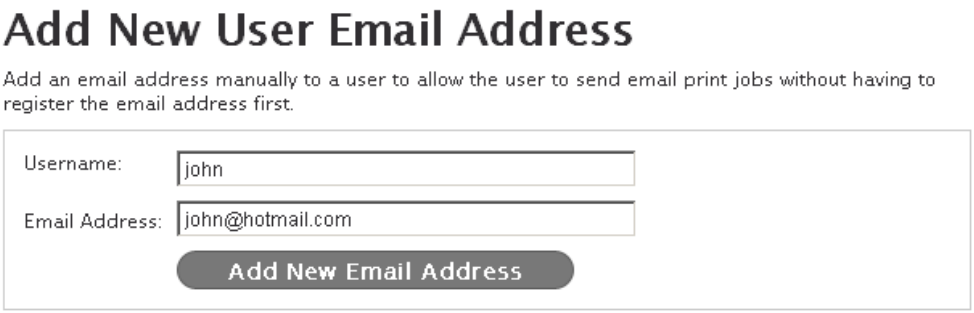
Email Authentication for more information about Email Authentication.

EveryonePrint can also be configured to lookup user email addresses directly in LDAP. See *Email Print* and *User Authentication* settings for more details.

In the **Users** section of the EveryonePrint Admin, you can manage users email address associations.



Click red X to delete an existing email address association.
Under **User Email Addresses** you can manually link an email address to a username, so the user can send email print jobs without registering with the system as per the Email Authentication section above.



3.27.1 Import User Email Addresses from CSV file

To let users print via Email Print from mobile devices without having to register, users email addresses can be imported into EveryonePrint from a comma separated file (CSV) in the following format:

```
username,emailaddress
```

For example:

```
user1,user1@domain.com
user2,user2@domain.com
user2,user2@anotherdomain.com
```

One user can have many email addresses.

3.28 Managing Cards

If using the network card server feature in EveryonePrint for users to authenticate themselves using swipe card on printers, the Cards section of the Admin site, contains the associations between users and their cards.

Username	CardID	
janedoe	7c8f873e9	
johnsmith	4f56416b78	

See section *3.22 Card server* for more information about configuring the card server. Card server can be configured to look realtime in LDAP for card ID's.

Card associations can also be imported from a comma separated file (CSV) in the following format:

username,cardid

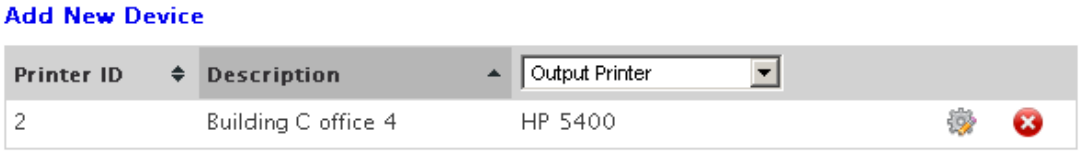
For example:

user1,8312A780
user2,686C5966
user2,DB0F2148

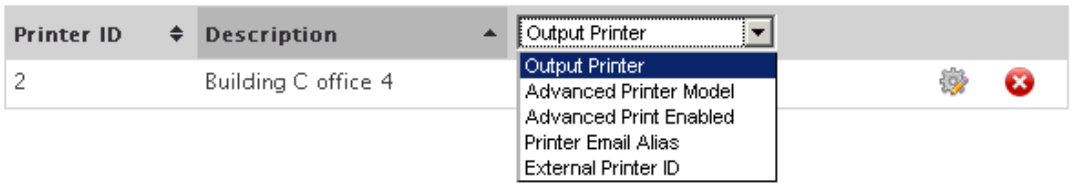
One user can have many cards.

3.29 Managing Devices

If printers have been added to EveryonePrint, the **Devices** page will automatically list installed printers.



Click the edit icon to change settings or send a test print to the selected printer. Click the delete icon to delete the printer from EveryonePrint.

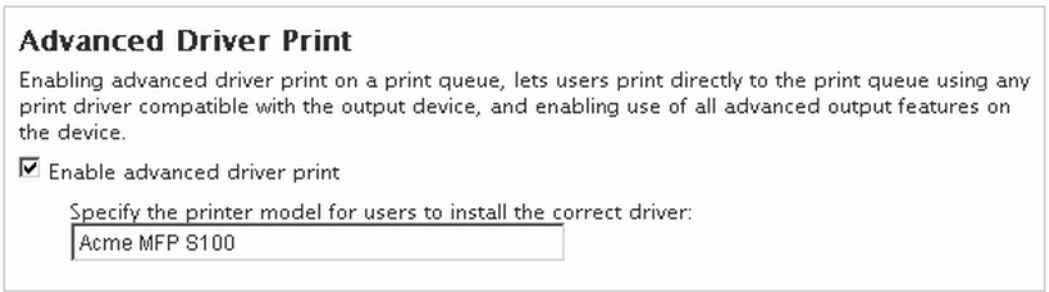


The dropdown will let you view different settings for the listed printers.

Output printer	– The corresponding Windows print queue
Advanced Printer Model	– The printer model specified under Advanced Driver Print
Advanced Print Enabled	– If Advanced Driver Print is turned on for the device
Printer Email Alias	– What, if any, printer email address alias has been configured
External Printer ID	– The external Printer ID for the device for use in IPP or LPD print

3.29.1 Advanced Driver Print

When Advanced Driver Print is enabled on a print queue, it's possible to print to the print queue using any printer driver which is compatible with the destination output device.

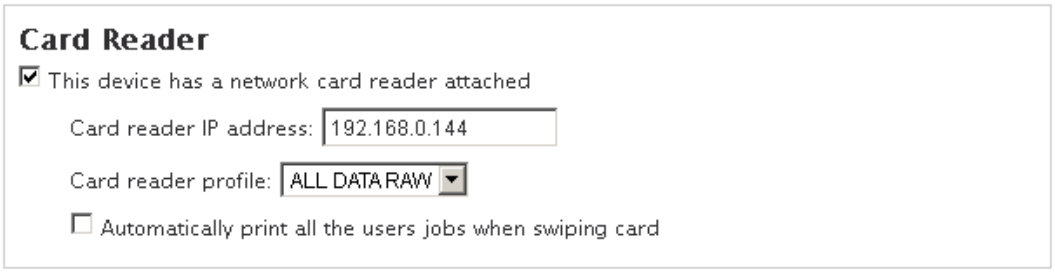


Make sure that the printer model description is accurate, so end users choose the proper printer driver for the output printer.

See section *5 Sending print jobs via Driver* for more information about simple versus advanced driver print.

3.29.2 Associating network card reader with device

If using the built in card server in EveryonePrint with network based card readers, under a Device, associate the network card reader with a device added in EveryonePrint, enabling card reader, and entering the IP address of the network card reader.



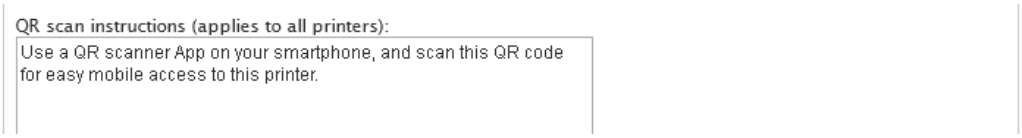
Checking **Automatically print all users jobs when swiping card** is a useful setting to enable if using card readers on simple network printers. Enabling this, and all the print jobs being held in EveryonePrint, will be released when user swipes their card.

3.29.3 Generate QR codes for easy printer access

Let users easily access print job submission and print job release from their mobile devices, by printing a QR code for each printer and placing it near the printer. Users can then scan the QR code at the printer of their choice using their smartphone.

Generate a QR code for a printer device:

1. In EveryonePrint Admin, go to **Devices**
2. Choose to **Edit** the device
3. Customize any QR text instructions (CSS and HTML can be entered as well)



4. Click the desired print size: **small, medium or large**

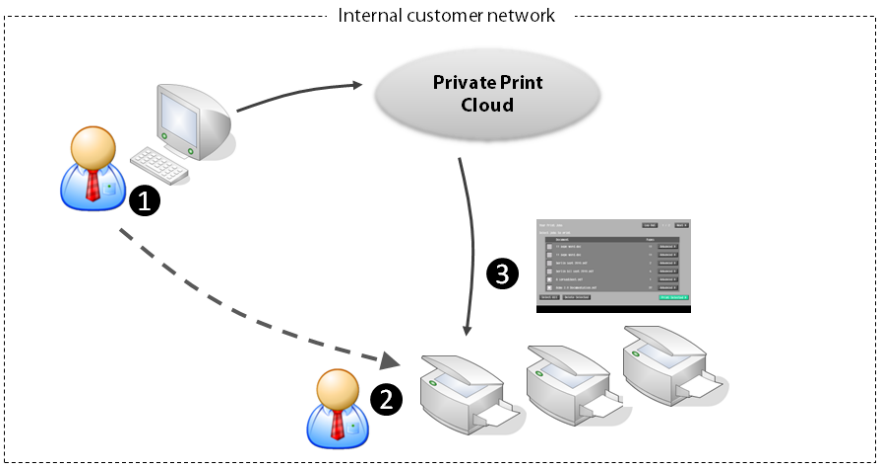
Small size contains only the QR code and instructions, medium contains smaller QR code, instructions as well as logo, and large is a full page sheet with logo, large QR code and instructions.

The logo displayed on the QR code sheet, can be customized by uploading a logo under the Web Portal settings.

3.30 Private Print Clouds

With Private Print Clouds, users can print from their laptops or workstations using Advanced Driver Print, to a virtual print queue on the EveryonePrint server. Jobs are held paused in this queue, until the user walks to a device and pull their jobs. Users can release jobs in a number of ways, including from a Web interface, on the panel display of multi function devices, or by swiping a card on a card reader.

Virtual print clouds and pull printing is often referred to as other terms such as follow me printing.



Typical user flow is:

1. User prints from their workstation to the virtual print queue (pull queue, follow queue etc) on the EveryonePrint server
2. User walks to the device of their choice and logs in with swipe card, release code or entering their username and password, depending on configuration
3. User can view waiting jobs on panel display, and can select jobs to print, which are then pulled from virtual cloud queue on the EveryonePrint server and sent to print on the device

A release printer is not required to have a full panel display for release. A network printer can be used with a network attached card reader as an alternative. Print jobs in the private print cloud, can also be released from the EveryonePrint Web interfaces.

3.30.1 Pull print essentials

When a user prints a job on the client workstation or laptop using Driver Print, the print job is rendered using a manufacturer's printer driver, in a print language such as Postscript or PCL. This rendered print data is sent to the EveryonePrint server where it is stored as is, until the user decides to release job. When print job is released, the EveryonePrint server will send the raw print data as delivered from the original printer driver, via the Windows spooler system, to the output printer.

It's essential that users print using a driver which is compatible with the output device. If the user prints using a Postscript driver, but the output device only understands PCL, then the print job will fail.

When you create the Private Print Cloud queue in EveryonePrint, specify what driver that users should use, and if deploying printers via login script or group policies, use the appropriate compatible driver.

If you have a mixed fleet of devices with multiple manufacturers and models, you can create multiple Private Print Cloud queues, with separate drivers.

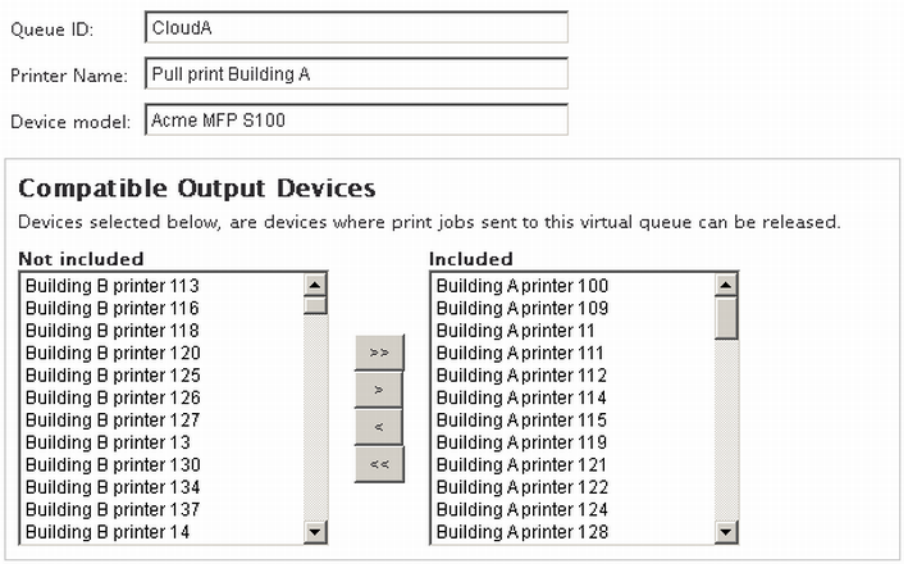
The same output device can also be associated with multiple Private Print Clouds.

It is strongly recommended to thoroughly test driver compatibility if you have a mixed printer environment.

3.30.2 Create Private Print Cloud

To create a virtual private print cloud, first add output devices with Advanced Driver Print enabled as illustrated in *2.6 Adding Printers to EveryonePrint*.

Then click Private Print Clouds and click to add new queue.

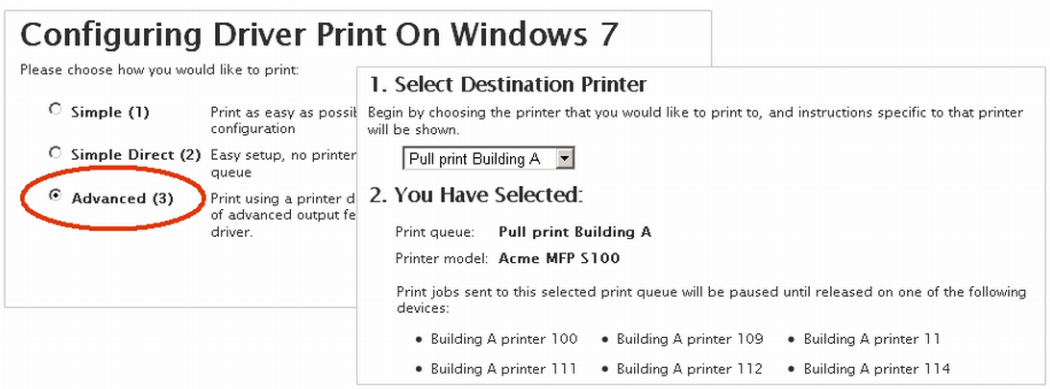


Create a recognizable Queue ID, as this is can later be used for printing to the queue. Enter a descriptive Printer Name and the Device Model for the output devices.

3.30.3 Print to Private Print Cloud

Print to the private print clouds using Driver Print feature in EveryonePrint, either via http/https IPP printing or using the built in LPD server.

To print to the queue created above via IPP, make sure Driver Print has been configured and enabled in the EveryonePrint Admin. Then log on to the EveryonePrint end user Web portal, and choose **Driver Print** and **Advanced**.



Select the print queue, and instructions for that queue and operating system will appear.

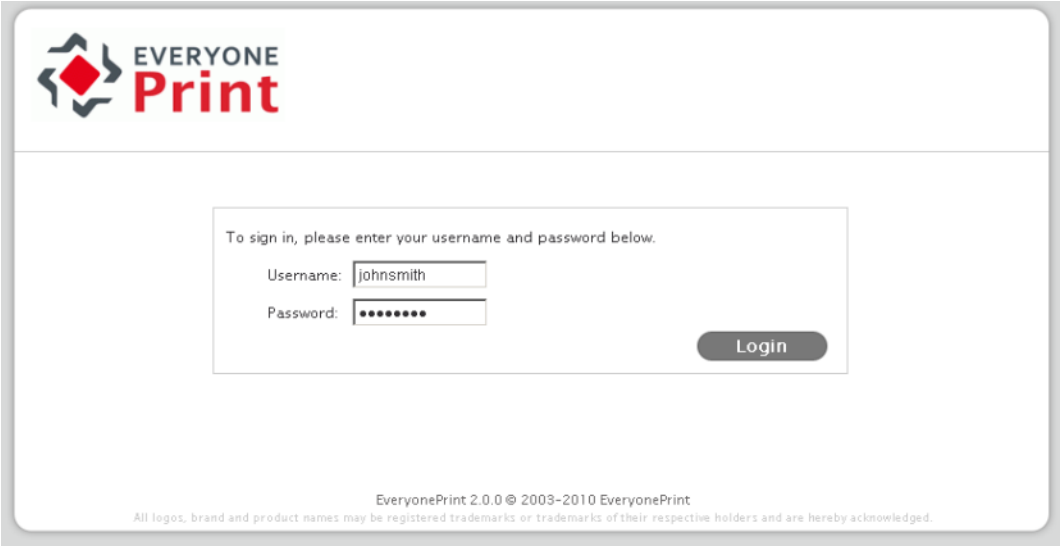
See section *5 Sending print jobs via Driver* for more information about printing using Driver Print, and more about how to deploy printers to workstations.

4. Sending print jobs via Web

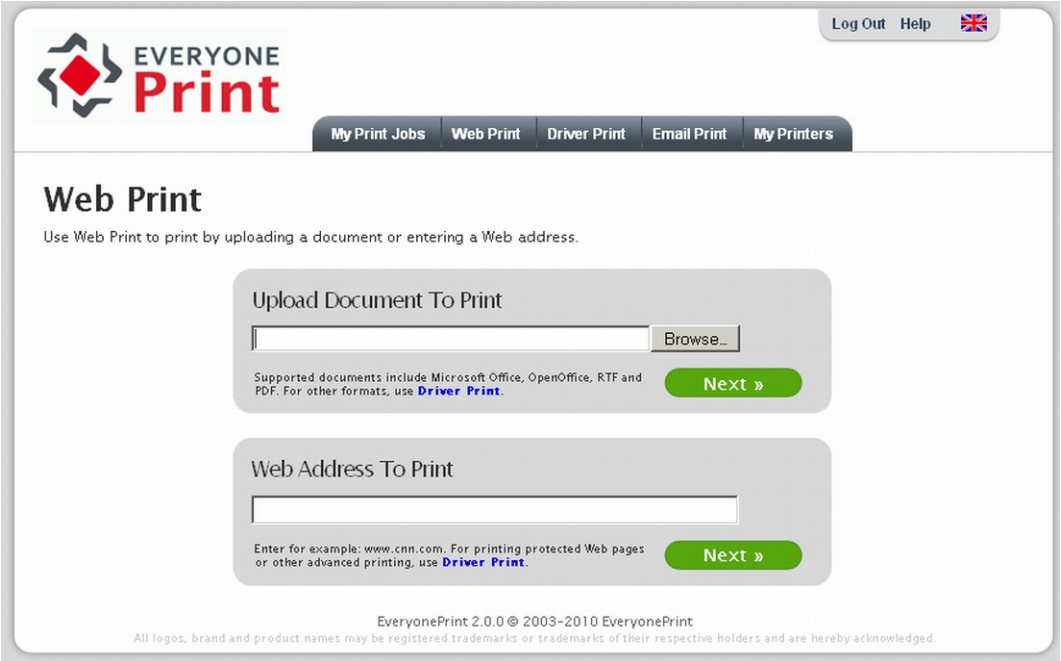
A simple way for users to print, is by simply uploading a document to print via the user Web portal.

The user Web portal is accessible per default on http://127.0.0.1:7290 or https://localhost:9443 for HTTPS/SSL, or as specified in the **Web Portal Configuration** in EveryonePrint Admin.

If the selected mode in Printing and Security is set to authentication, the user will be asked to enter login details.



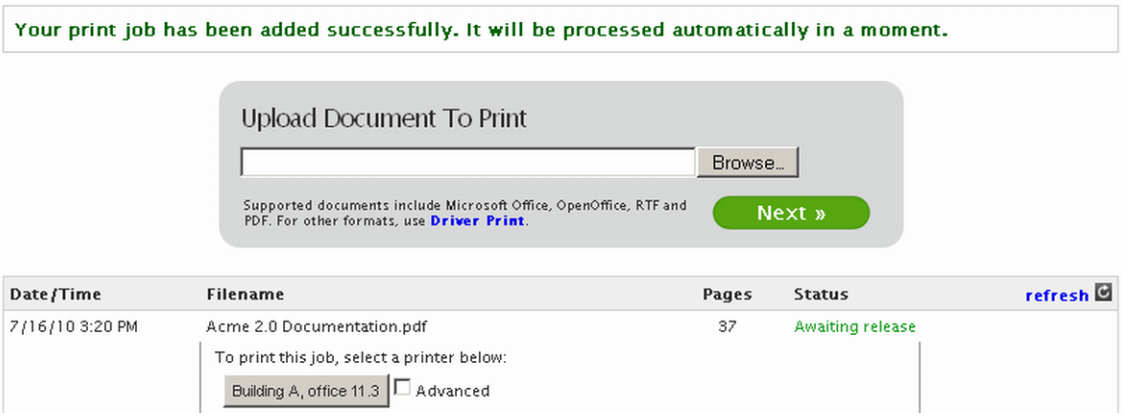
The user can either upload a document from the main **My Print Jobs** screen or click on **Web Print** in the top navigation.



Users can upload Microsoft Office (doc, docx, xls, xlsx, ppt, pptx), PDF, TXT and RTF documents. Simply select the file locally and click **Next**. The document will be uploaded to the server and processing begin.

Users can also print Web addresses, such as www.cnn.com or http://www.google.com. The addresses entered must be publicly accessible. EveryonePrint cannot access URL's that require authentication or a specific user session, as EveryonePrint will connect to the URL directly as a new user and attempt to retrieve the contents.

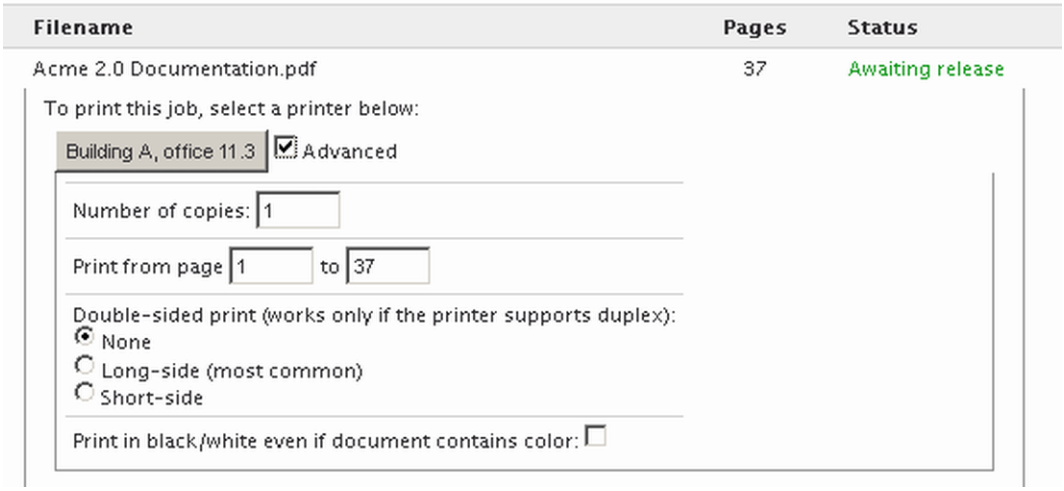
It's also possible to print documents by simply entering the Web link to them, so for example, if a user has a link to a document such as www.acmesoftware.com/brochure.docx, instead of the user download and then uploading or printing, the user can simply enter that address in the **Web Address To Print** and EveryonePrint will download and process the document directly.



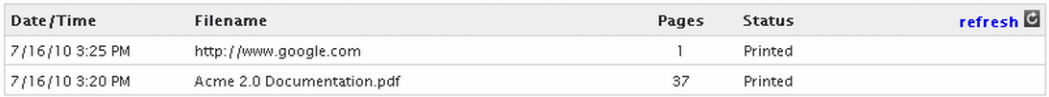
After uploading or entering a Web address, the user will be redirected to the **My Print Jobs** page.

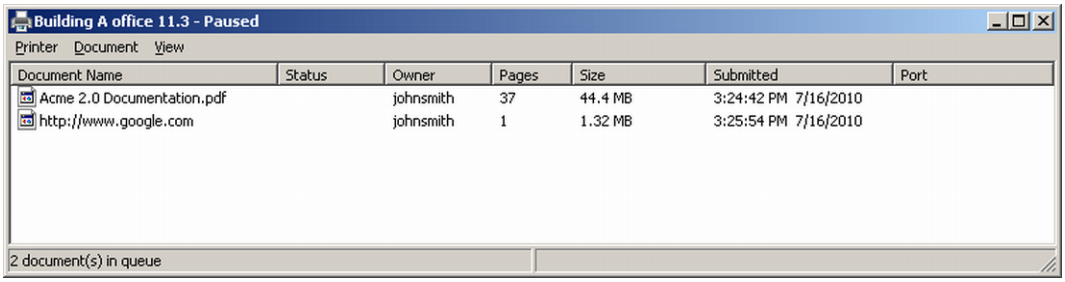
Depending on the configuration in **Printing and Security** in EveryonePrint Admin, the print job may or may not be released to a printer immediately. In this example the **Privacy with Authentication** mode has been selected, and prints are therefore held in EveryonePrint until released to a printer.

The user can simply click the button for the printer on which to print the job (or select in dropdown if many printers are installed).



Users can check the box **Advanced** next to a printer to select advanced options, such as duplex, number of copies, printing the job in black/white etc.





When clicking the button to print, they are sent to the selected print queue, as configured in **Devices** in EveryonePrint Admin.

5. Sending print jobs via Driver

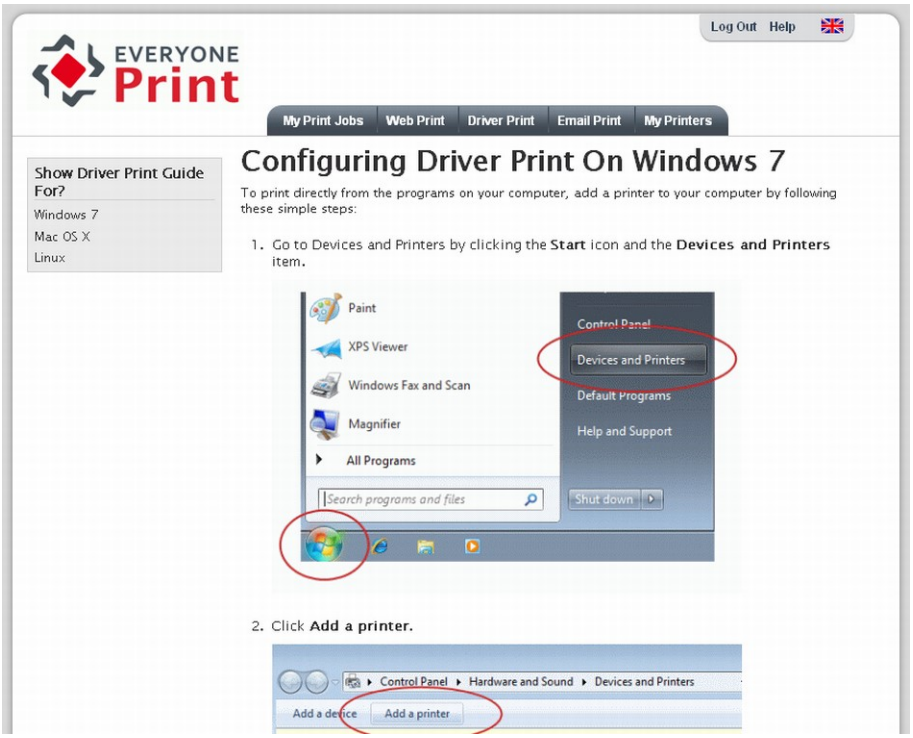
The most efficient method for users that print frequently, is the Driver Print method, that allows users to print directly from within the programs and applications they use, on Windows, Mac and Linux.

It lets users print from anywhere, including securely and encrypted across the Internet, if the network configuration permits it.

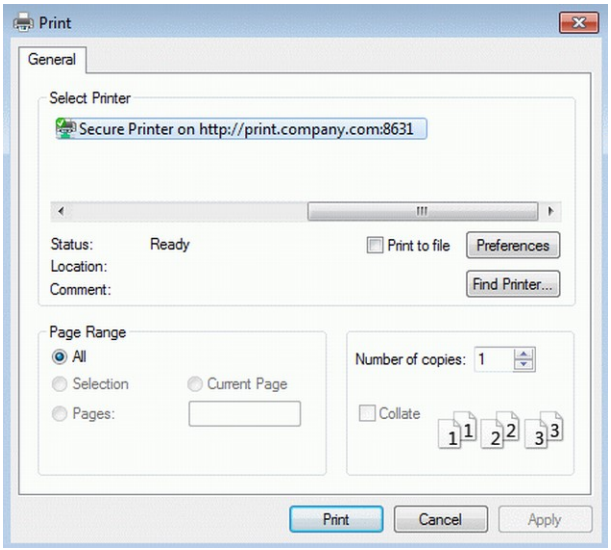
Users begin by clicking **Driver Print** in the top navigation of the user Web portal.

Depending on the configuration chosen in **Printing and Security** in the EveryonePrint Admin, the instructions and information in the Driver Print pages will change. In this example **Privacy with Authentication** mode is active, and the instructions therefore include driver setup instructions that include authentication details for the user.

The user first clicks the logo of the platform they're using, whether it's Windows, Mac or Linux. Instructions are included for most common platforms and versions, including Windows, Mac OS X and Linux (most distributions include CUPS for IPP printing per default, otherwise RPMS is available from www.cups.org).

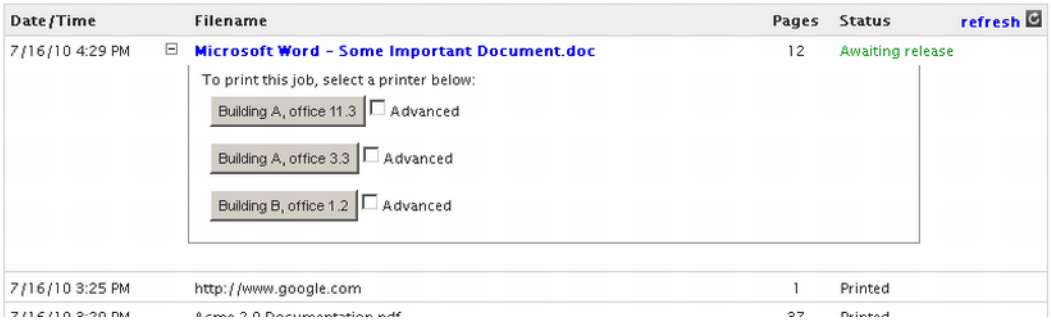


Step-by-step instructions are provided for the chosen platform, with information tailored to the specific users authentication information.



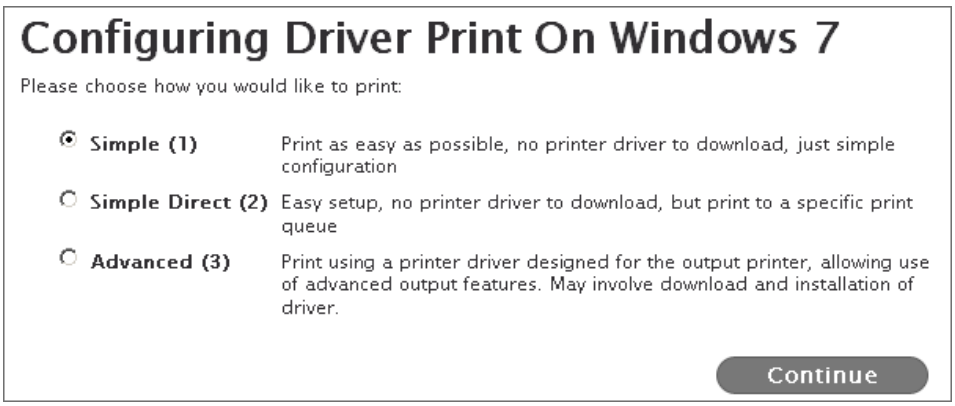
Completing the simple step-by-step instructions should take no more than a few minutes, and is only needed once. The user will now have a printer installed on their computer they can use to print from anywhere.

In this example, an active mode is chosen where prints are released using the Web interface or a release terminal.



Prints sent via Driver Print appear alongside other prints in the Web interface, ready for release.

5.1 Simple vs. Advanced Driver Print



With **simple print**, users print using a generic PostScript driver they already have on their computer. Setup is very quick and simple, users can print without downloading and installing special drivers. EveryonePrint will convert the PostScript on the server to PDF and store encrypted. When the user releases the job, the PDF is printed using the correct driver installed on the EveryonePrint server compatible with the output device.

With **advanced print** users use a printer driver which is compatible with the printers they want to print to, which will make it possible to use the advanced features of the output printer, such as binding and stapling. EveryonePrint does not convert or modify the print data stream when sending Advanced. It is forwarded as is to the destination print queue, when released.

Users can create multiple printers on their computer for different print queues in the EveryonePrint system.

5.2 Deploying EveryonePrint printers to workstation PC's

EveryonePrint can be integrated seamlessly as a secure print solution in existing print and workstation environments.

Deploying EveryonePrint print queues to workstations involve:

1. Configure device in EveryonePrint with advanced print enabled
2. Create IPP or LPR print queue on print server

3. Deploy print queue from print server to workstations using Windows Group Policy or Logon Script

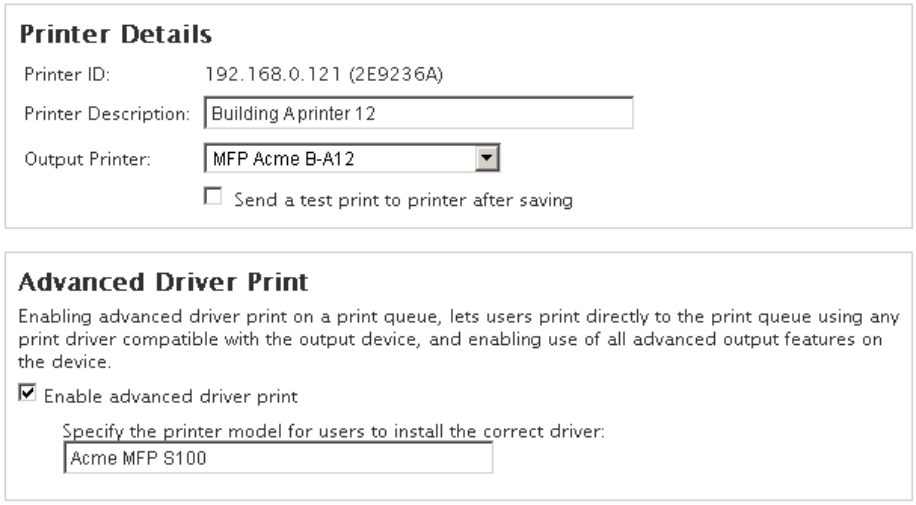
The following outline applies to Windows environments, but similar procedures can be used in other environments.

5.2.1 Configure Device in EveryonePrint

Start by configuring a device in EveryonePrint with Advanced Driver Print enabled.

If using EveryonePrint standalone without a print accounting solution, you have the option to create Private Cloud Print queues, which are virtual printers users can print to, where jobs are held paused, until the user selects a destination printer, either in the Web interface, or on a release terminal at a device and pull print jobs.

You can also configure a normal EveryonePrint device for deployment, just by enabling Advanced Driver Print.

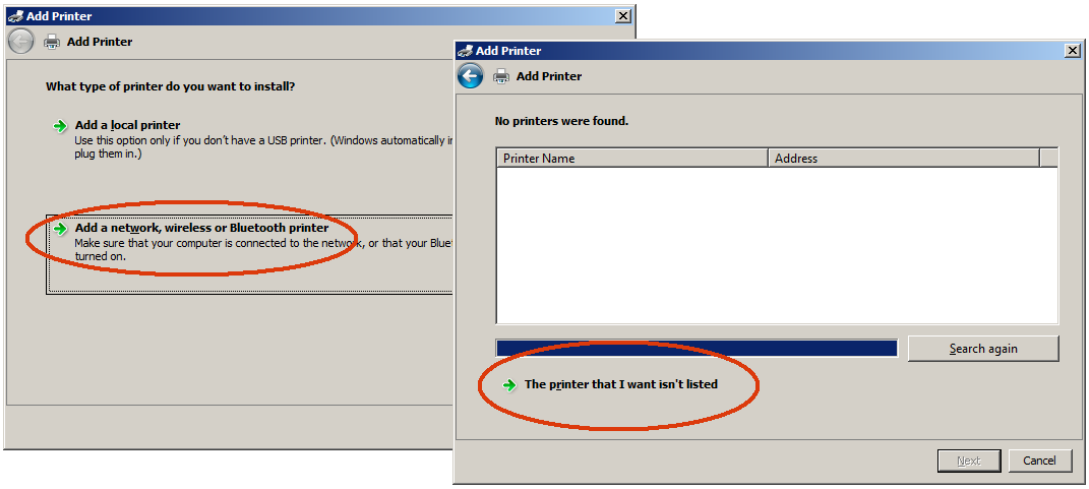


When users print to this queue, the print jobs will automatically be sent directly to the output queue on the EveryonePrint server, without being paused for release.

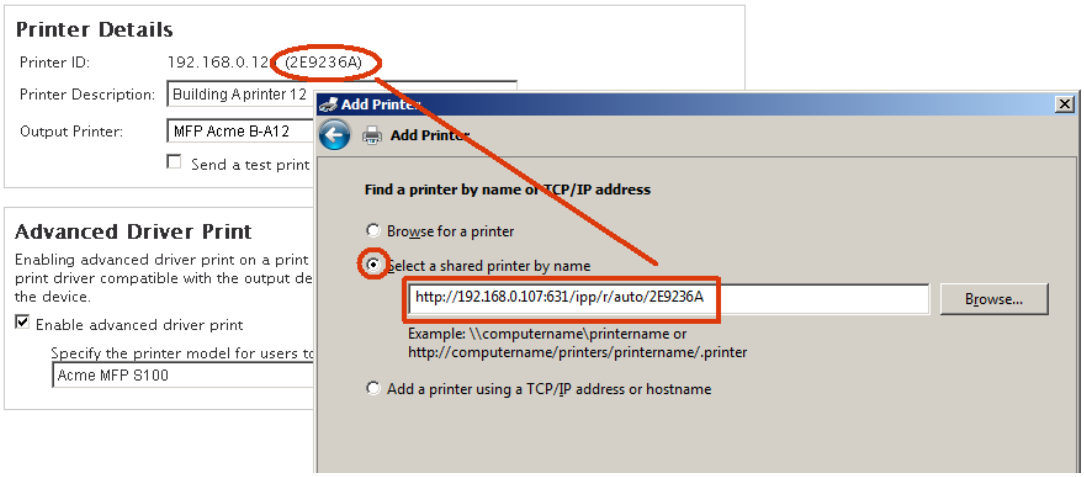
5.2.2 Create IPP print queue on print server

To create an IPP based printer to deploy to workstations, ensure that workstation PC's have the Windows IPP print client installed (this may not be installed per default depending on domain policies).

On the Windows print server from where you're deploying printers, choose to add new printer.



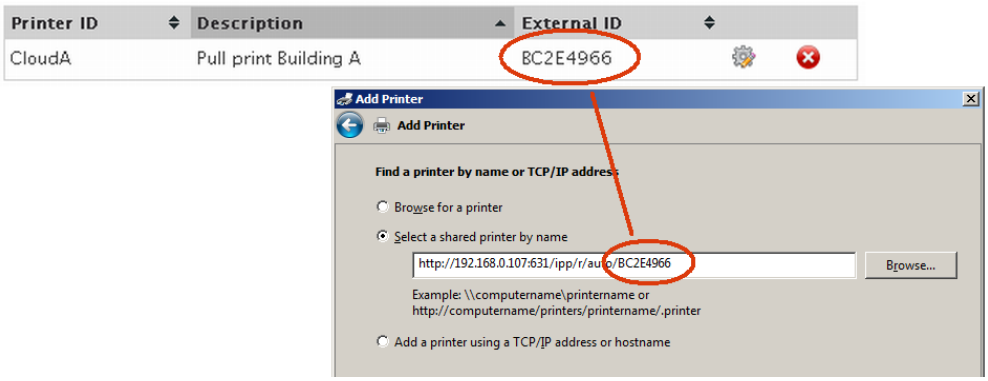
Choose **Add a network** printer and **The printer that I want isn't listed.**



Enter the Advanced Driver Print address, which includes the server name or IP address of the EveryonePrint server, the Driver Print server port (default 631 for http and 9443 for https) and the printer ID at the end:

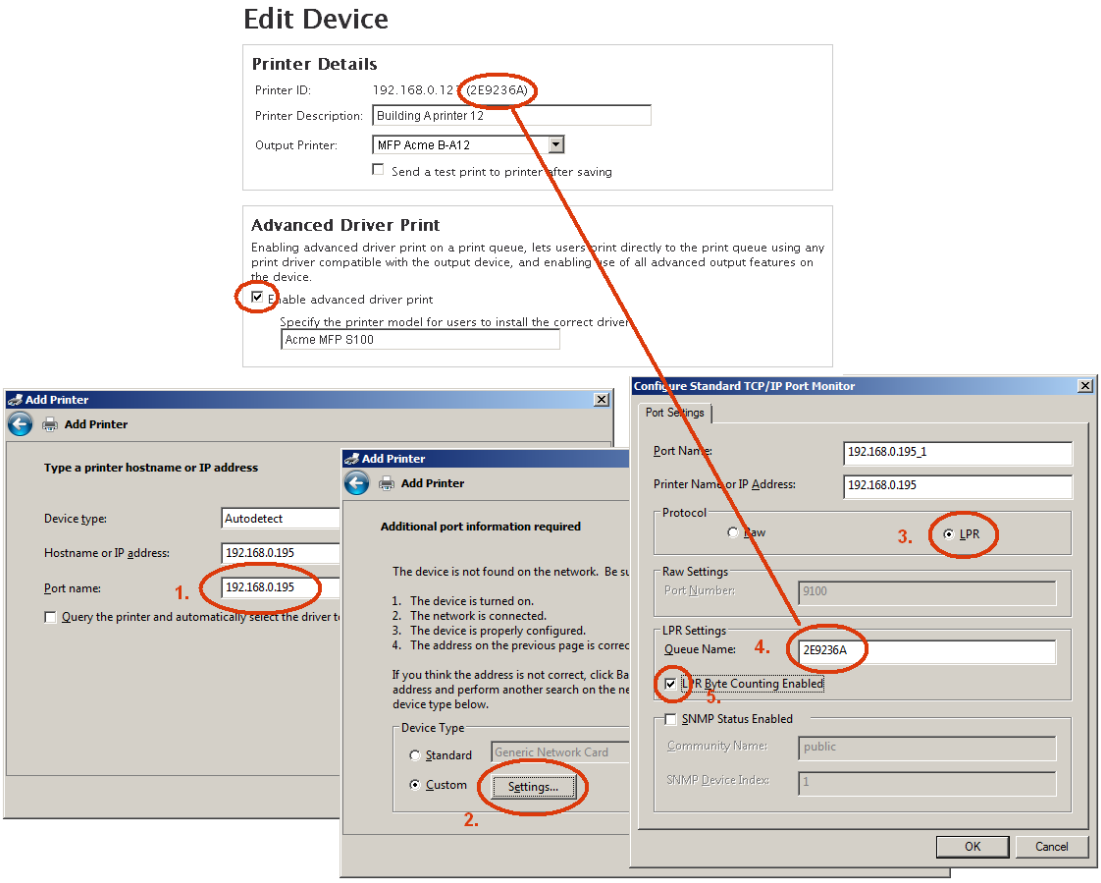
http://**{serverip}**:**{port}**/ipp/r/auto/**{printerID}**

The printer ID can be ID of a specific print queue, or private cloud print queue.



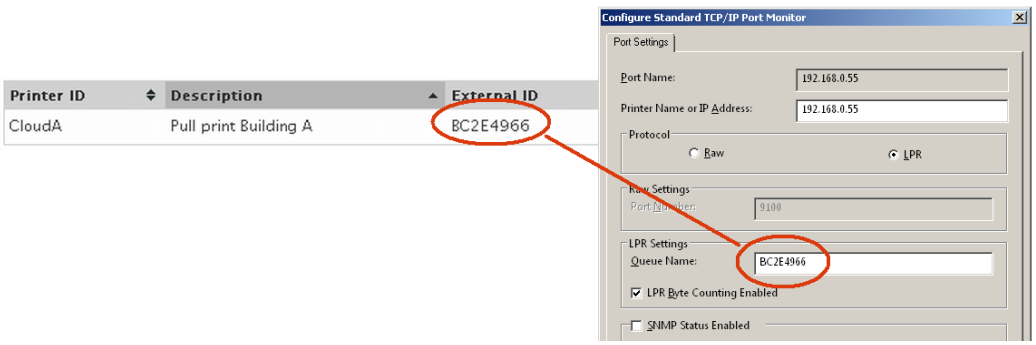
5.2.3 Create LPR print queue on print server

To create an LPR based print queue on the server for deployment onto workstations, create a new network printer.



1. Enter the IP address or hostname of the EveryonePrint server
2. Choose Custom Settings
3. Choose LPR printing protocol
4. Enter the printer ID of the queue in EveryonePrint
5. Check the box **LPR Byte Counting Enabled**

The printer ID can be ID of a specific print queue, or private cloud print queue.



LPR printing using the standard TCP/IP port in Windows, is a widely supported method on most Windows workstations from Windows XP and onwards.

5.2.4 Deploy print queue using Group Policy or Logon Script

With print queues created on the print server, deploy to workstation using Windows Domain Group Policy or using Logon Script.

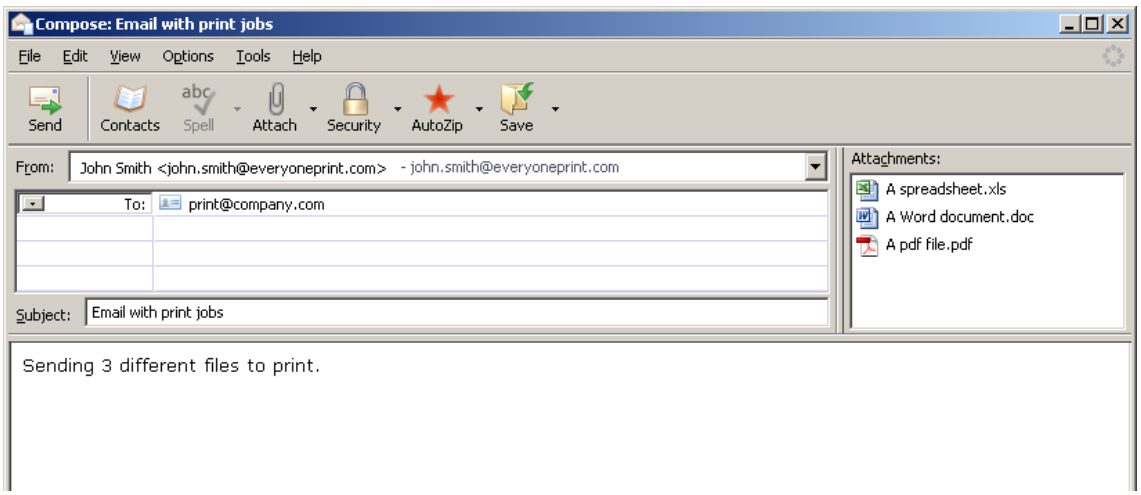
Please consult with Microsoft Windows server documentation for more information about using group policies or logon scripts.

6. Sending print jobs via Email

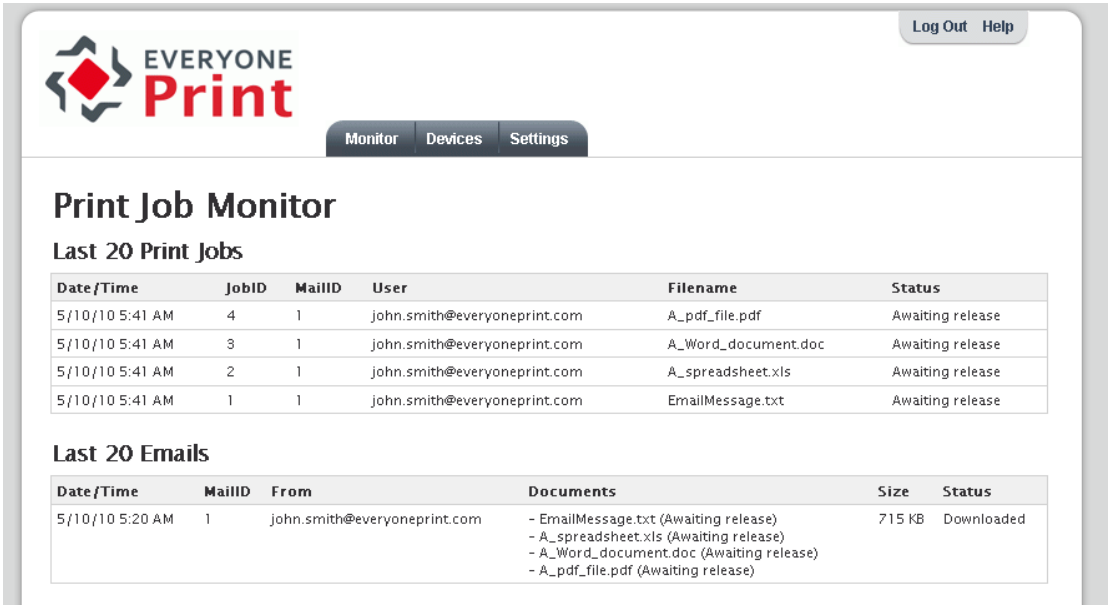
If Email Print is enabled in the EveryonePrint Admin, the user Web portal will include a link to Email Print, containing instructions for the user on how to print via email.

Depending on the configuration chosen in **Printing and Security** in the EveryonePrint Admin, the instructions and information in the Email Print pages will change. In this example **Privacy with Release Code** mode is active, and the instructions therefore include instructions that include release codes sent back to the user via email.

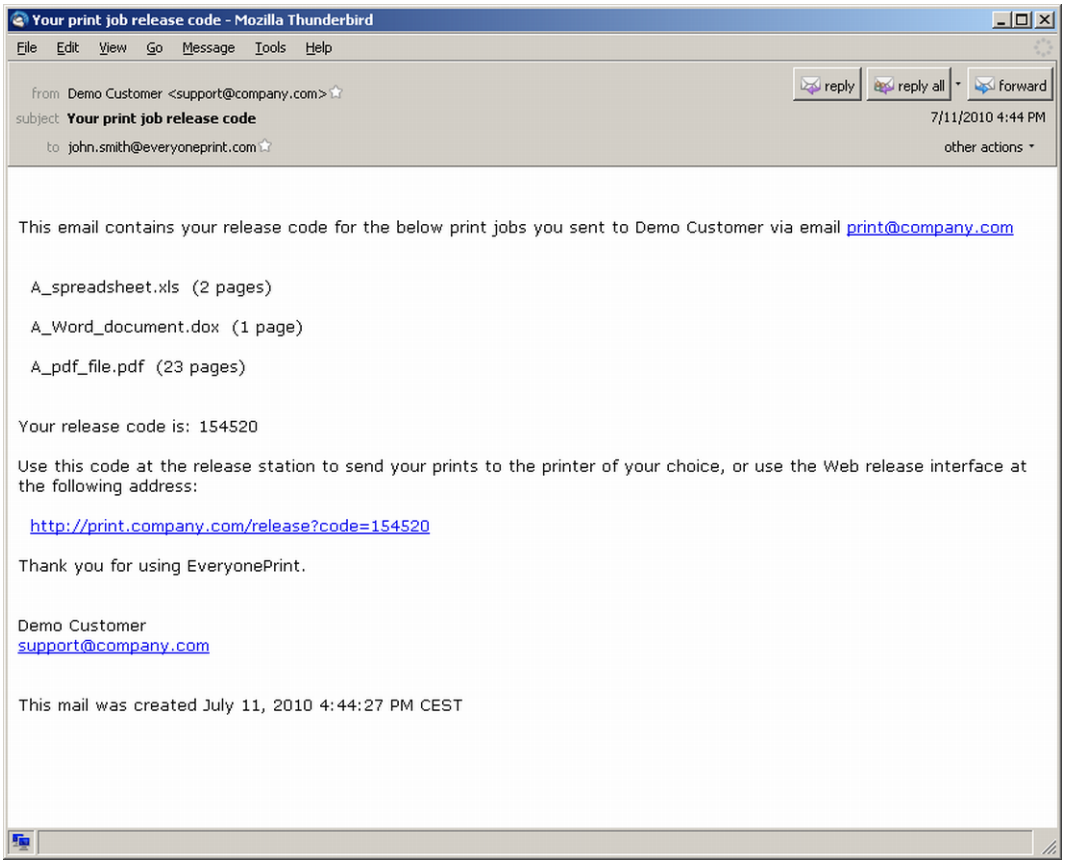
Either from a computer, a mobile device or any other email client, the user can compose or forward an email to the email print address.



The EveryonePrint server will collect this email and depending on the settings in Printing and Security either send back a release code, ask for authentication if it's a new user, process and hold or release to direct print queue.



The print job will appear in the Monitor in the Admin. In this example the mode is Privacy with Release Code and a release code was sent to the user. The print jobs are now awaiting release.



6.1 Direct Email Print

EveryonePrint allows for two different methods for sending print jobs directly to a specific output queue.

6.1.1 Direct Email Print using mail subject

If EveryonePrint is configured for **Privacy with Authentication**, users can send print jobs from their mobile device via email, directly to a specific printer, just by entering the name of the printer in the subject of the email with documents to print, and EveryonePrint will send the print jobs to the selected queue.

For example:

Subject: P:Building B, office 1

Users can also print directly by giving their favorite printers a shorter personal name.

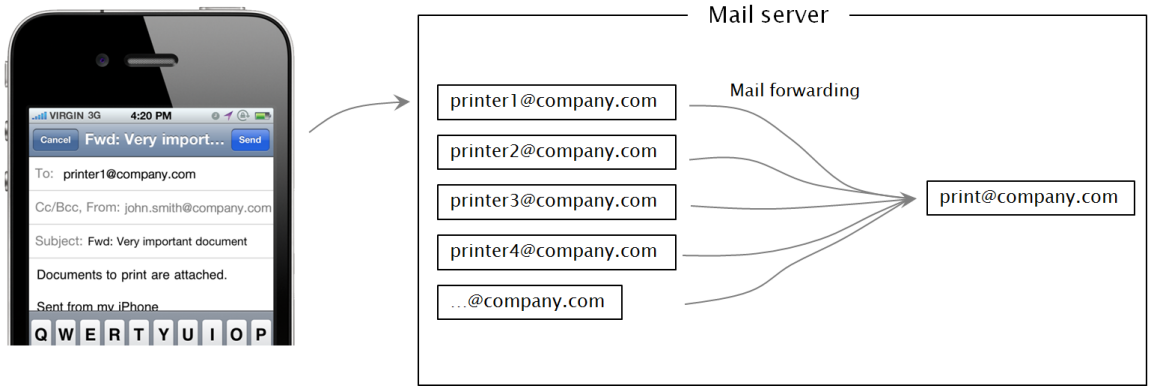
1. Users select their favorite printers under My Printers
2. Give their printers a simple name they can remember and easily enter on thei mobile device, for example "x"
3. Enter the printer nickname in email subject when sending a job, for example "P:x"

The print job will then be sent to the favorite printer the user called "x".

6.1.2 Direct Email Print to Printer Email Alias

EveryonePrint supports email addresses for specific printers, making it possible for users to send print jobs directly to a print queue, simply by emailing a specific email address.

Email forwarding accounts should be created on the email server for each printer, which forwards emails to the central Email Print account.



EveryonePrint will retrieve email from the central Email Print account, and if an email was sent to an alias email address, EveryonePrint will immediately forward the print job to the relevant print queue.

To configure Printer Email Alias:

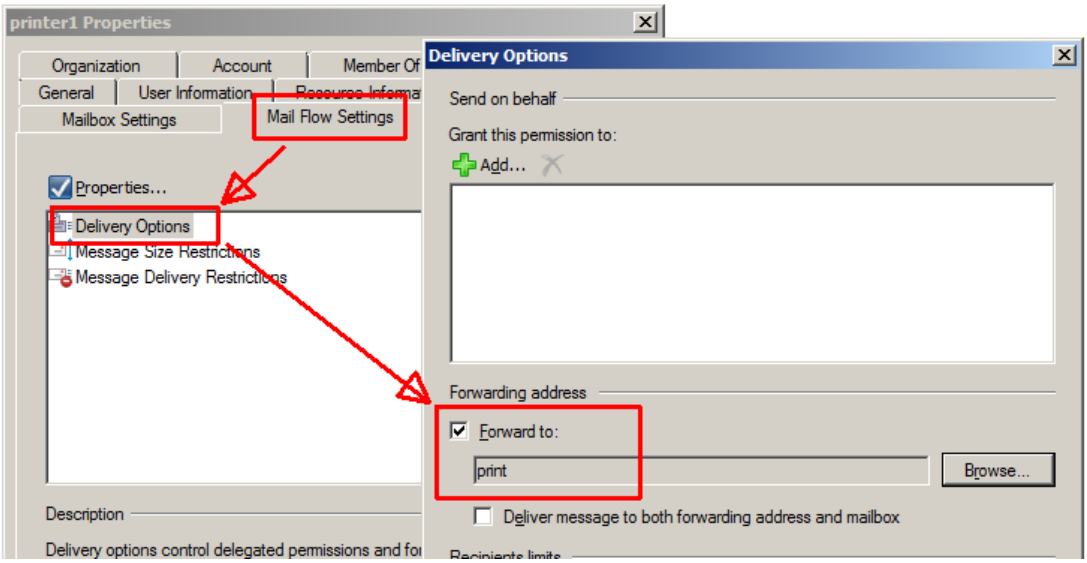
1. Create email accounts for each printer which forward to main email print account
2. Add the email address to the devices in EveryonePrint Admin

The configuration of email forwarding addresses vary from mail server to mail server.

6.1.2.1 Configuring a mail forwarding account on Microsoft Exchange

Configuring forward accounts on Microsoft Exchange involves creating a standard mailbox, then setting a forwarding address.

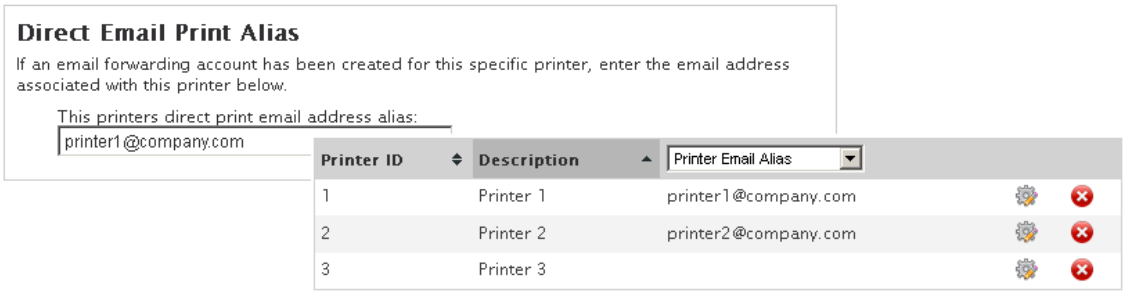
Go to the individual printers email account properties, choose **Mail Flow Settings** then **Delivery Options** and finally check the **Forward to** and choose the main Email Print account. Repeat this for all individual printer email addresses.



Any emails sent to printer1 in the above example, and Exchange will forward to “print” email account.

6.1.2.2 Configuring Email Print Alias in EveryonePrint

In the EveryonePrint Admin under each output device, add the email address for each printer.



Any print job now sent to printer1@company.com will be sent to the Printer 1 queue. The usual authentication settings apply.

7. Sending print jobs from mobile devices

EveryonePrint supports printing natively from Apple iOS devices (iPhones and iPads) and Google Android based smartphones and tables.

Install and configure the EveryonePrint Mobile Gateway on a server which is hosted in the same sub network as the mobile device clients. This can either be the same server as the EveryonePrint server or a different server, depending on the network configuration.

Once configured, users can print from any app that can support printing.

If EveryonePrint is configured to require users to authenticate or if EveryonePrint is configured for release code print, then users must install the EveryonePrint app from the iTunes AppStore to authenticate their mobile print jobs to the EveryonePrint server.

See the EveryonePrint Mobile Gateway installation guide for further details.

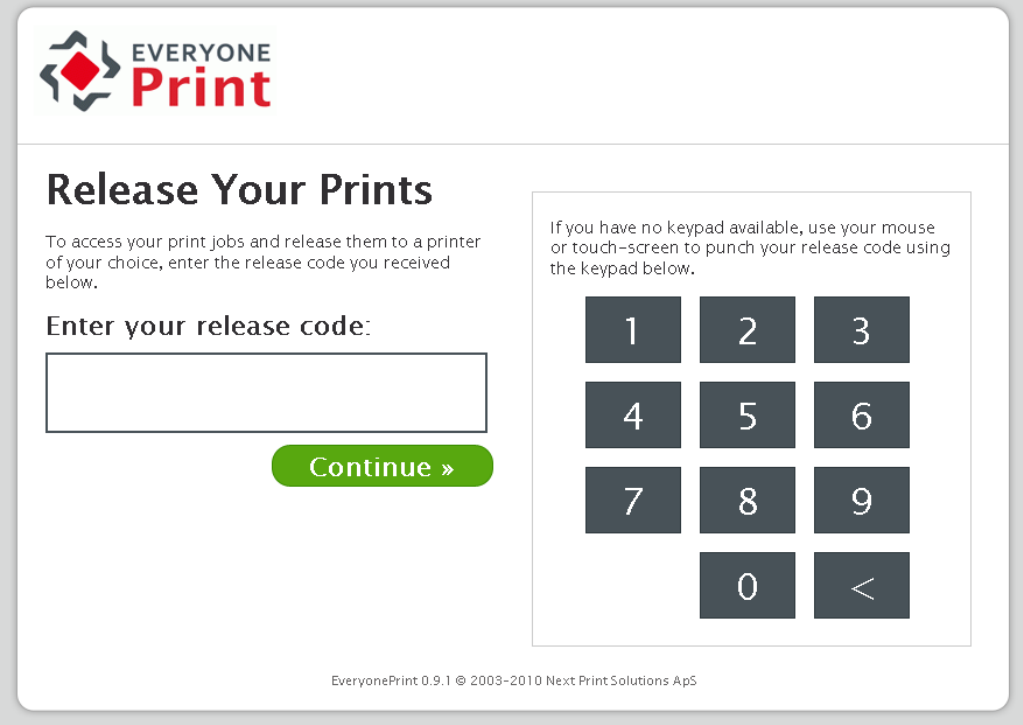
8. Releasing Print Jobs (release codes)

If the EveryonePrint server is configured for **Privacy with Release Code** print mode, then users get release codes which they must enter in an EveryonePrint release station, before obtaining their print jobs. This section covers releasing prints in this mode.

If your EveryonePrint server is configured for Direct print, then prints will automatically be sent to the selected Windows print queue, and there is no release in EveryonePrint.

8.1 Web release interface

The EveryonePrint server includes a Web interface for releasing print jobs to a printer.



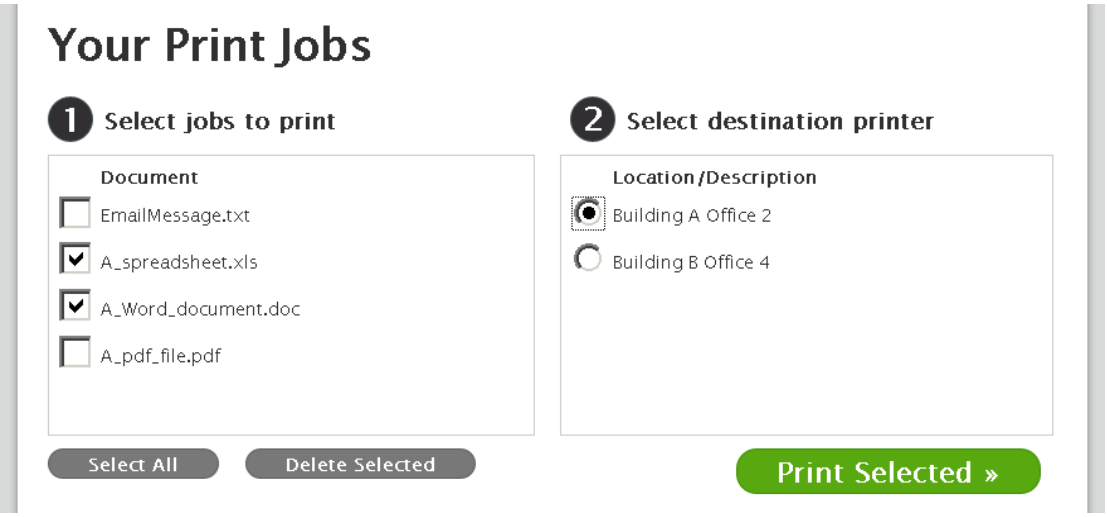
Start the EveryonePrint Web release interface from the shortcut either in the Windows start menu, the desktop icon or by entering the URL below into a Web browser:

http://127.0.0.1:7290/release or https://localhost:9443/release

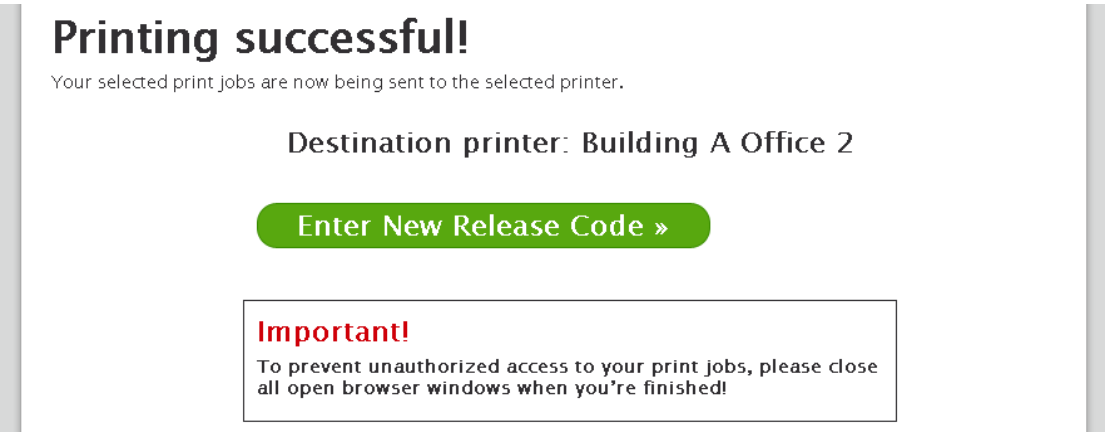
The Web release interface can be accessed remotely from any client with access to the IP address of the computer hosting the EveryonePrint service, through the URL: http://{server-ip}:7290/release where {server-ip} is the IP address of the server, or https://{server-ip}:9443/release, if the network and firewall configuration permits it.

Enter the release code:

The documents related to the entered release code is shown, along with the printers available:



Select documents to print and the destination device, and click Print Selected.



The documents have been sent to the printer successfully.

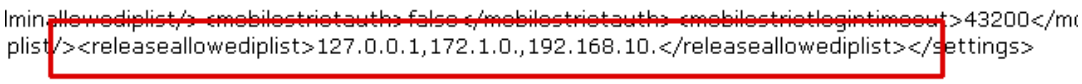
8.1.1 Restrict Access to Web release interface

It's possible to restrict access to the Web release interface to certain IP or IP subnets.

To configure IP access restrictions:

1. Stop the EveryonePrint Web Service
2. Open the EveryonePrint configuration file eop.xml in an editor such as Notepad
3. Find or create the entry <releaseallowediplist></releaseallowediplist>
4. Enter either specific IP addresses or partial IP's separated by comma. Subnets can be specified by entering only part of the IP address, for example, entering "192.168.10." will allow access for any IP address starting with "192.168.10.".

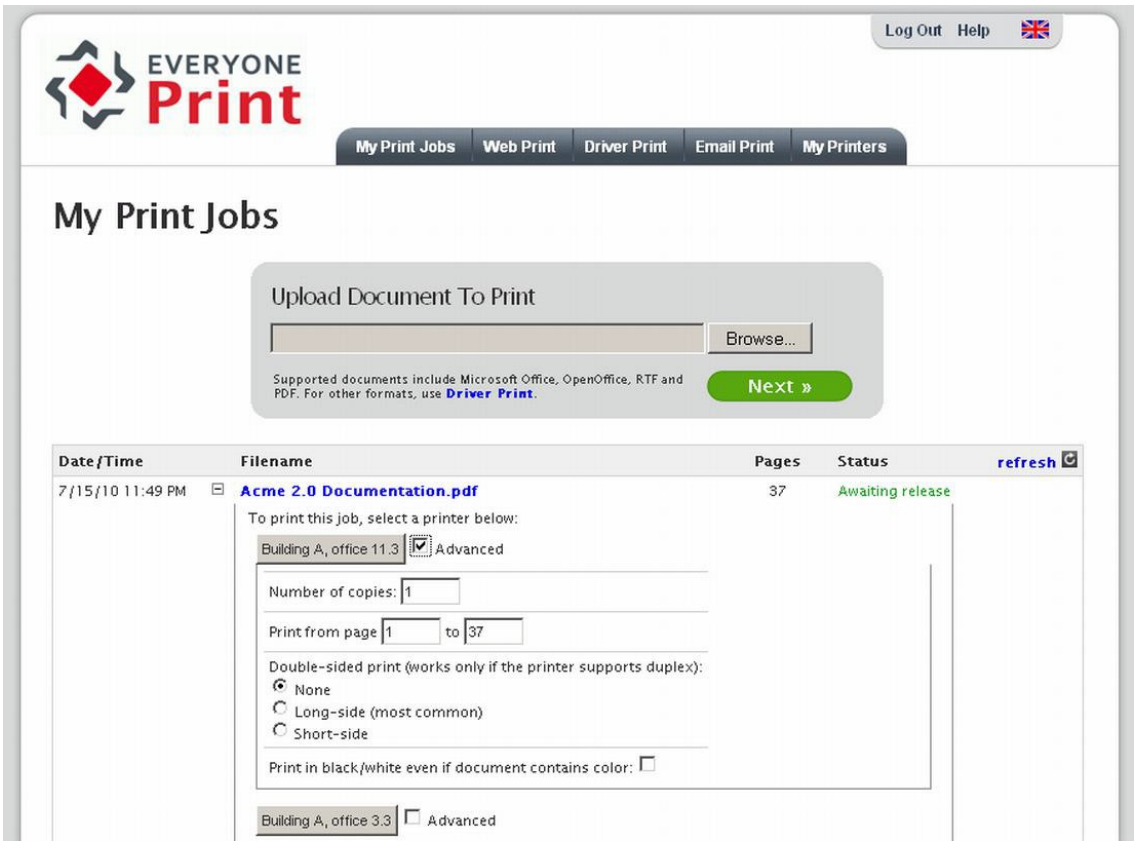
   Example: 1 address (localhost) and 2 IP subnets: 127.0.0.1,172.1.0.,192.168.10.



Save the eop.xml file and start the EveryonePrint Web Service

9. Releasing Print Jobs (authentication)

If the EveryonePrint server is configured for **Privacy with Authentication** then a user can log on to the user Web portal to release their print jobs in the **My Print Jobs** page, or release at a release terminal using their username and password.

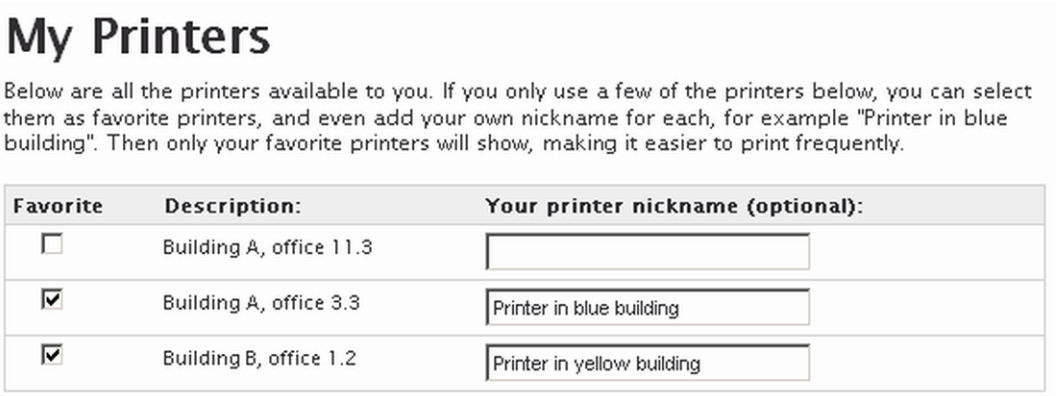


The user Web portal is accessible per default on http://127.0.0.1:7290 or https://localhost:9443 for HTTPS/SSL, or as specified in the **Web Portal Configuration** in EveryonePrint Admin.

The My Print Jobs page contains all the users print jobs sent via Web, Driver or Email, for a simple and consistent experience for the user.

9.1 Users selecting favorite printers in My Printers

If using the **Privacy with Authentication** mode in **Printing and Security**, a navigation item in the user portal called **My Printers** appear.



The My Printers page allows users to select certain printers as their favorite printers, to show only printers relevant to them in the My Print Jobs page.

This feature is useful if the printer list includes many printers.

10. Using Device Groups

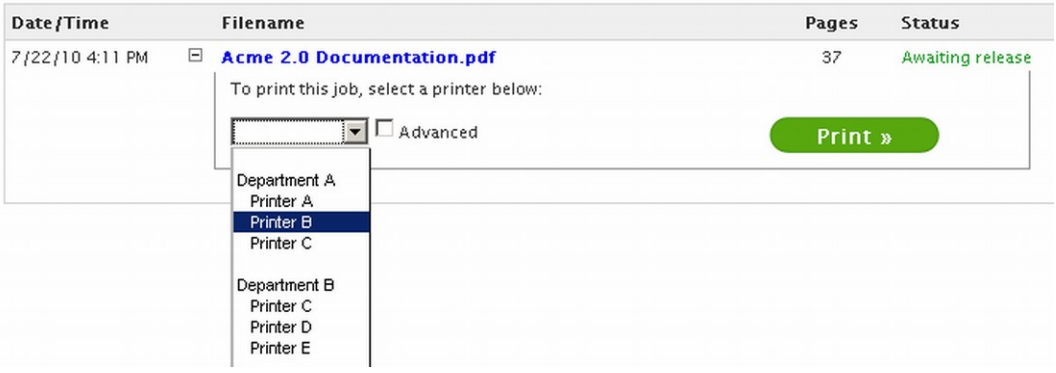
Device Groups in EveryonePrint is a highly useful feature for either grouping devices in a long list, for example by department, location or similar, or to limit what printers are shown and available to users.

This section covers two different configuration examples.

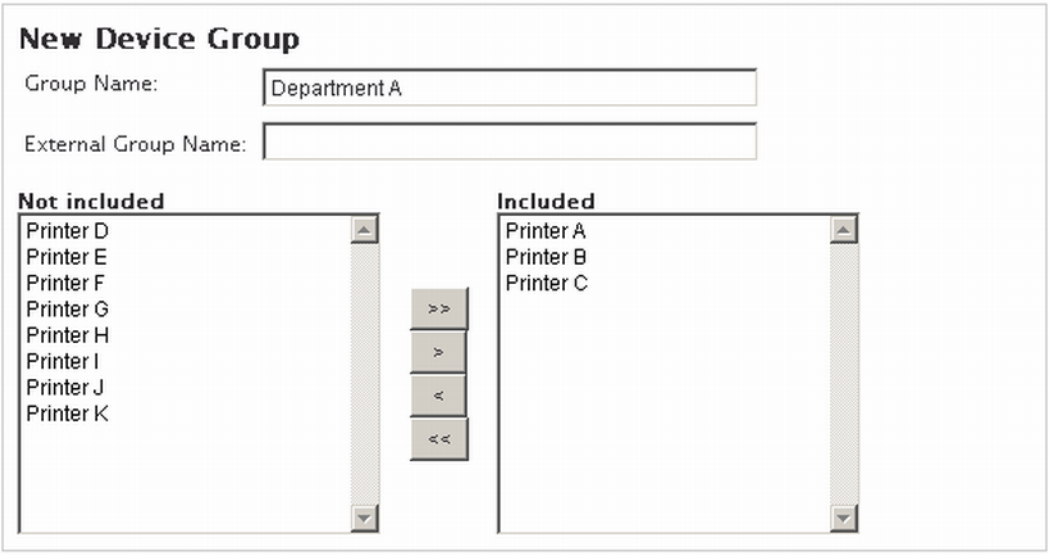
Device Groups are only relevant for Privacy modes, Privacy with Release Code or Privacy with Authentication. If a Direct Print mode is used, the device group settings are ignored, as prints are released directly to a print queue.

10.1 Example 1: Grouping devices for more friendly viewing

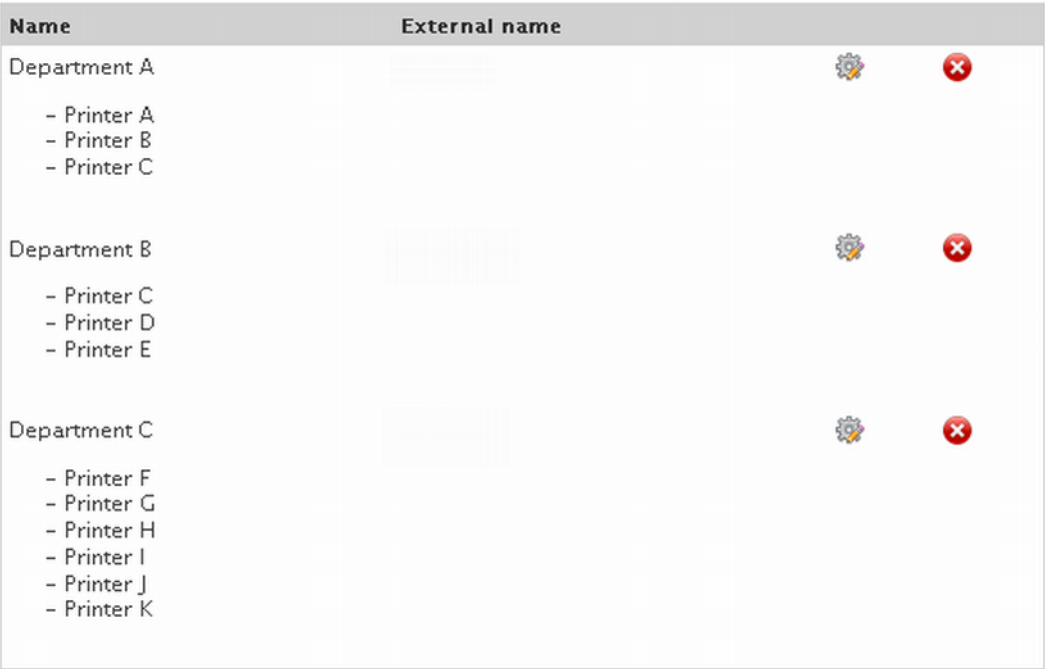
For better using long list of printers, it can be helpful to users, if printers are grouped by department, location or similar.



Create Device Groups by going to **Device Groups** in EveryonePrint Admin, and click **Add New Device Group**.



Enter a friendly name for the group, leave external group name empty for this first example, and select the devices that should be included in the group, and save changes. Repeat for each group.



Notice how printers can appear in multiple groups. In above example, Printer C, appears in both Department A and B.

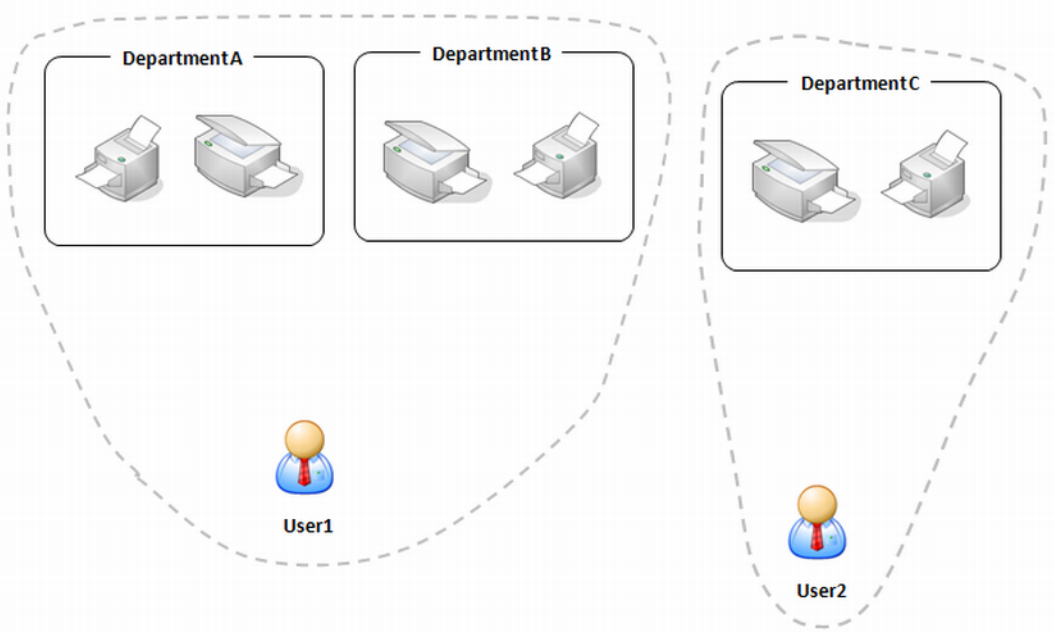
Now when users see printer listings in the EveryonePrint Web interfaces, they are grouped as above.

10.2 Example 2: Limit what printers are visible

To limit the visibility of printers to specific users, a simple LDAP attribute can be used where groups are entered as a comma delimited list, or alternatively using the Windows security group membership features in a Windows Active Directory.

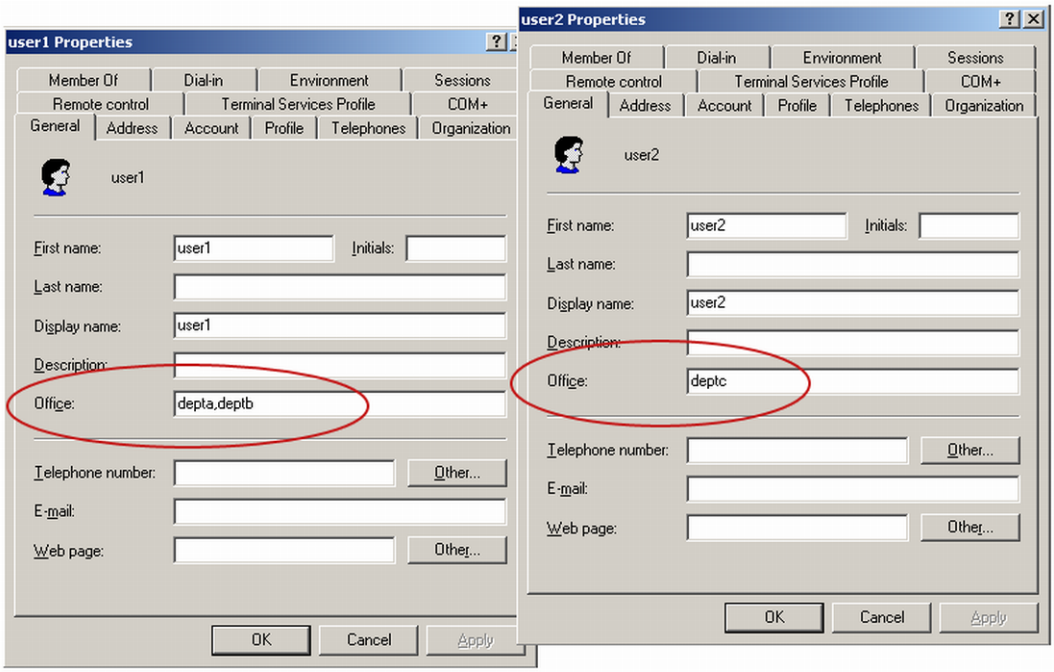
10.2.1 Using simple LDAP attribute

The following describes using a simple LDAP attribute, with device groups entered as comma delimited list.

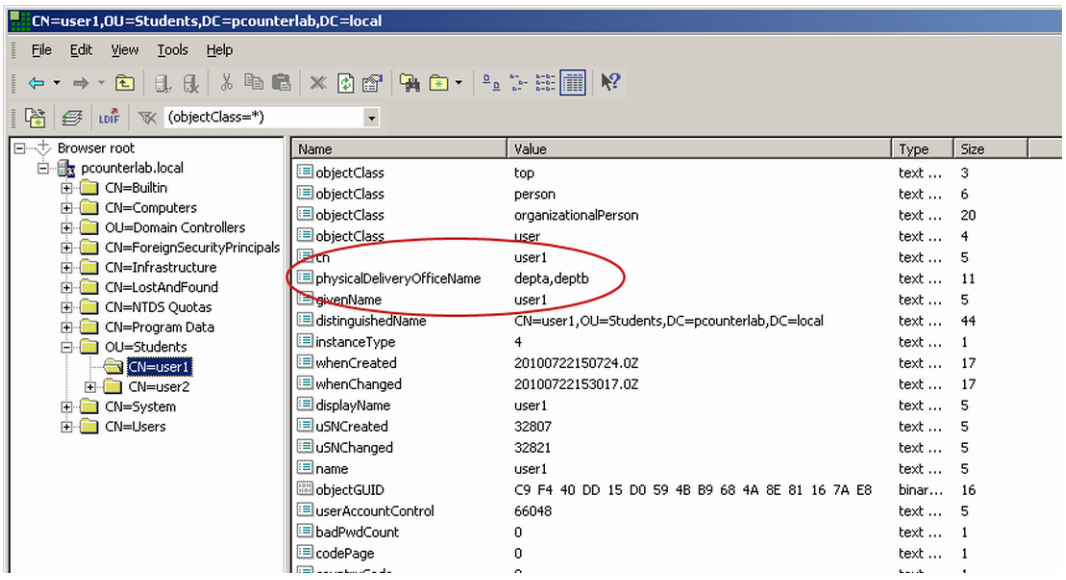


In the above example User1 should only be able to view printers in Department A and B, and User2 can view printers in Department C.

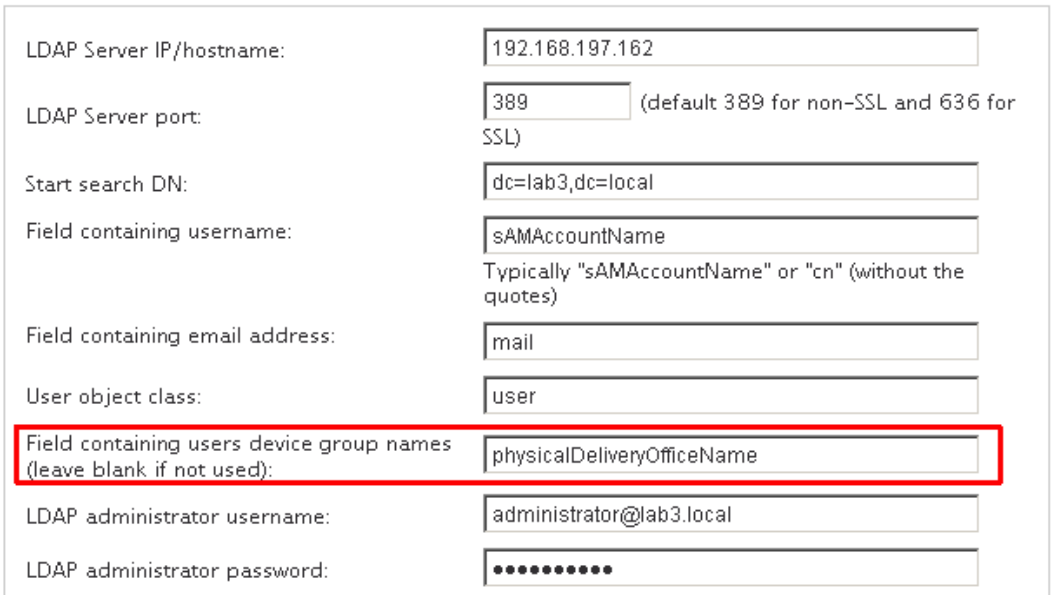
To limit what printers are visible when users log on, designate a field in LDAP, for storing group information.



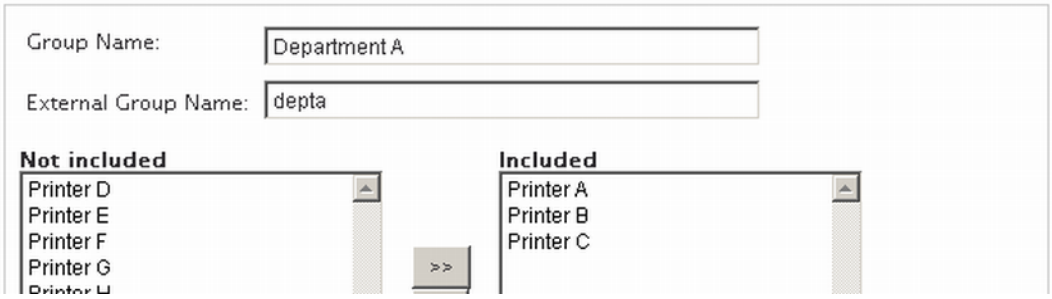
In this example in a Windows Active Directory, we have selected the Office field, which we can see using the LDAP Browser from Softerra, is called **physicalDeliveryOfficeName**. Any available field in LDAP can be used.

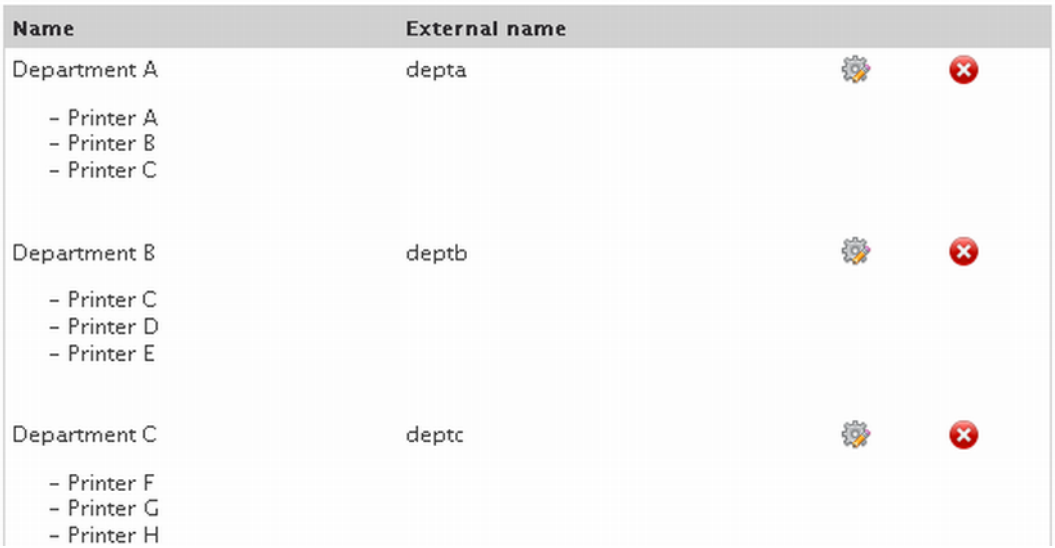


Under the LDAP settings in **User Authentication** screen in EveryonePrint Admin, enter this field in **Field containing users device group name**.

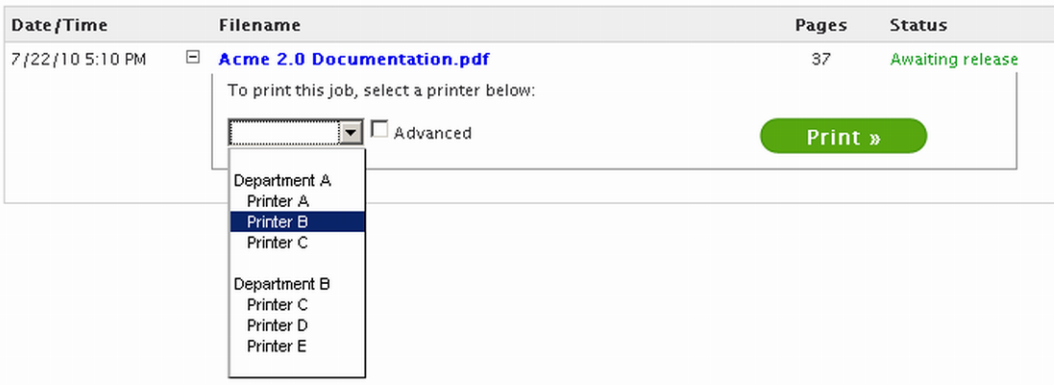


To associate the “depta” and “deptb” from LDAP with an actual Device Group in EveryonePrint, either add or edit Device Groups, and enter the relevant group name under **External Group Name**.





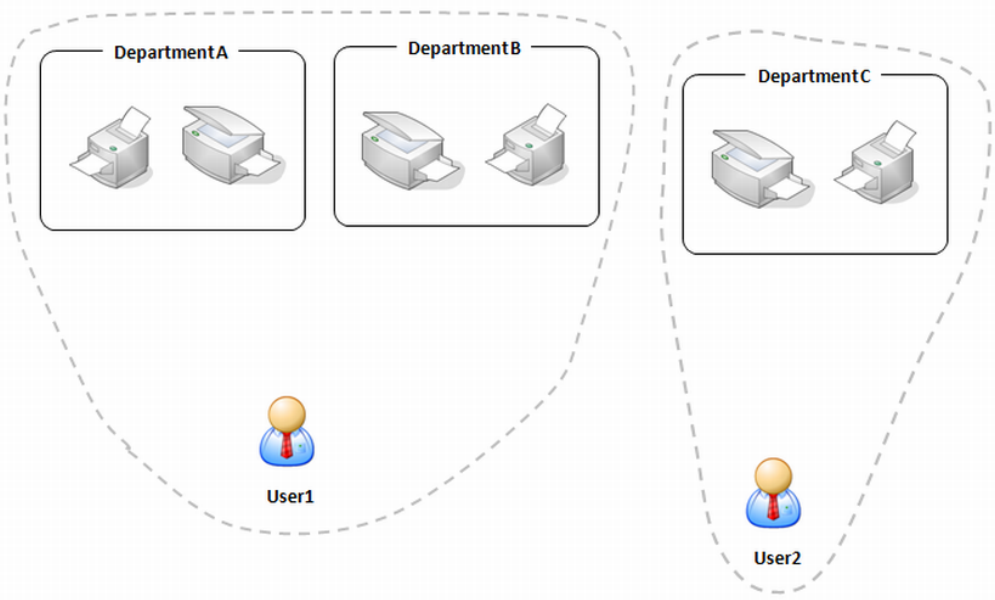
User1 we had given permission to both depta and deptb (separated with comma in LDAP field), and when user1 now logs on, user1 can see only those printers from “depta” and “deptb”.



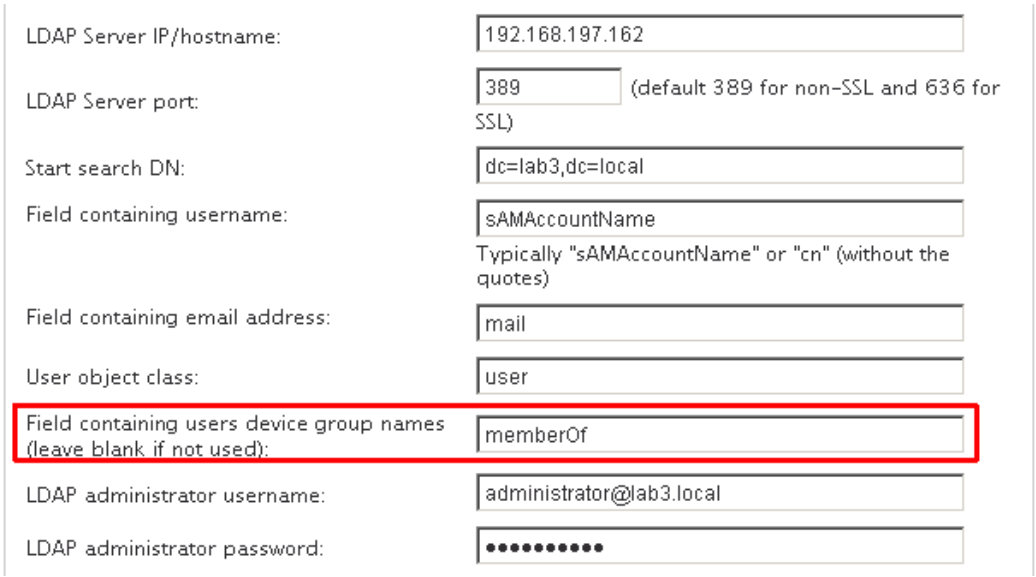
10.2.2 Using Windows Active Directory Group membership

For easier management of users association with different groups, the Windows global security groups can be used.

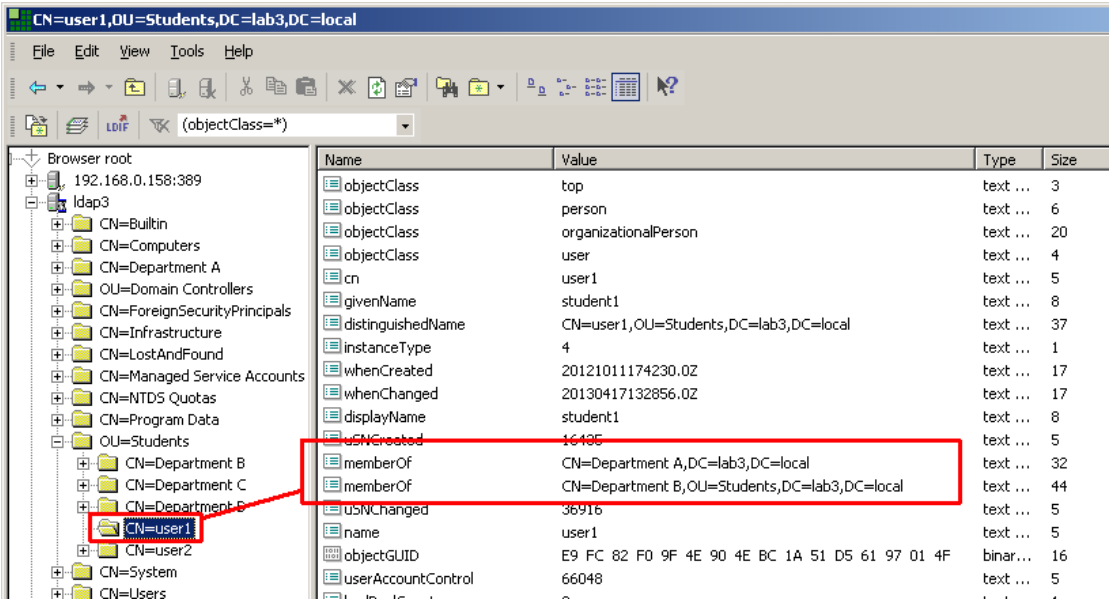
In this example we will create 3 groups of printers in EveryonePrint, create equivalent Windows groups and make User1 a member of only Department A and Department B, for access only to those department printers.



First we must configure the LDAP authentication to look in the **memberOf** attribute of the LDAP server (Active Directory).



Note that using Windows group memberships for printer grouping, requires that the group membership attribute in LDAP is called *memberOf*. The attribute name can be confirmed with an LDAP browser tool such as Softerra LDAP Browser.

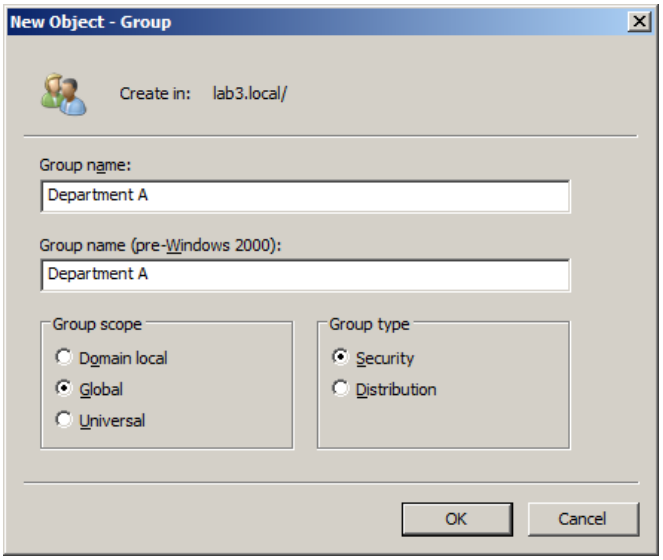


Create the groups of devices in EveryonePrint.

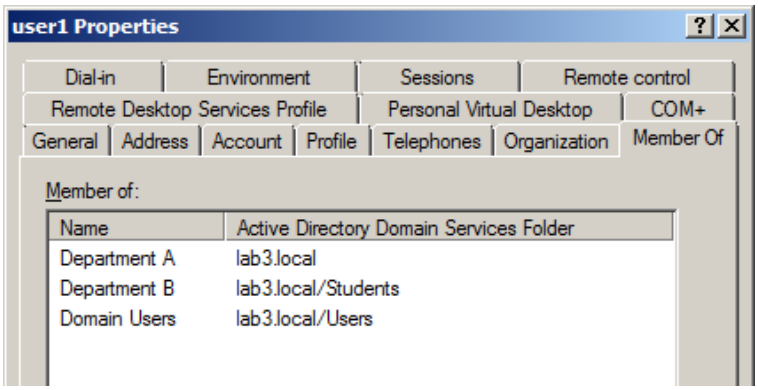
Name	External name
Department A - Printer A - Printer B - Printer C	Department A
Department B - Printer C - Printer D - Printer E	Department B
Department C - Printer F - Printer G - Printer H	Department C

Notice that the *External Name* must match the name of the Windows group name. The *Name* is a friendly description that appears to users, and can be different from the external name.

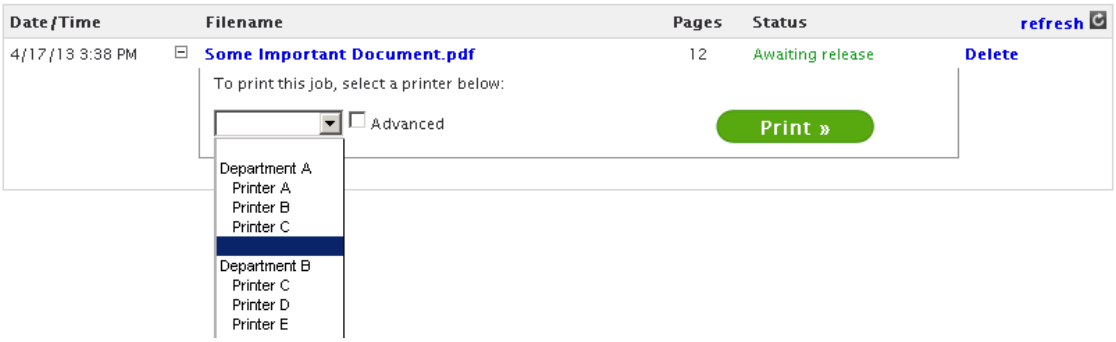
In the Windows Active Directory domain, Windows Global Security Groups are created.



User1 is made member of Department A and B.



Now when User1 logs on to EveryonePrint and submits a document, only the printers of selected groups are available.



11. Using SSL with EveryonePrint

SSL, or Secure Socket Layer, allows Web browsers and Web servers to communicate over a secured connection using the HTTPS protocol where both the server and the browser encrypt data before transmission.

To establish an SSL encrypted connection between a client browser and the EveryonePrint embedded Web server, the EveryonePrint server must have an SSL certificate configured.

What is an SSL certificate?
A certificate is a document which describes a network host's identity. It contains, among others, the DNS name of the host, the name and ID of the certificate issuer, an expiry date and a digital signature.

Certificates are created together with a host's private key. The certificate is either self-signed or signed by a certification authority (CA). Safe communication requires the certificate to be signed by a CA. Basically, a self-signed certificate can never be used to verify the identity of a server, but it can be used to seed the ciphers used to encrypt communication. For this reason, self-signed certificates are often used in test systems, but seldom in production systems.

Official CAs sign public certificates for a certain price. Well-known official CAs are Thawte (http://www.thawte.com/), GeoTrust (http://www.geotrust.com/) and Verisign (http://www.verisign.com/). To obtain a CA signed certificate, a "certificate request" (unsigned certificate) is generated and sent to CA's as part of the SSL certificate purchase process.

All major Web browsers, such as Internet Explorer, Firefox etc, access a local database containing the certificates of the official CAs. CA signed certificates can only be verified by this local database that contains trusted CA certificates.

It is quite possible to set up one's own local CA and use that to sign servers' certificates. Although this avoids the expense of using an official CA, all clients must then have a local copy of your own CA's SSL certificate.

What is a certification authority (CA)?
A certification authority (CA) is a trusted third party that two Internet hosts can use to verify the identity of their peers.

Every CA has its own SSL certificate, and this certificate must be known for all applications that use the CA to verify certificates. Most operating systems are bundled with a file containing such certificates, so most PC's and Web browsers already know CA's that can be trusted.

What is a private key?
A private key is a string of arbitrary data that is secret for the host on which it was generated. This key is used to encrypt the data sent from the host. No two SSL hosts should share the same private key, as this greatly degrades the level of security. If the private key is compromised, the encrypted link will no longer be safe.

The private key ensures that the data transmitted to and from the host is infeasible to decode even if the algorithms used to produce the cipher are known.

11.1 Obtaining an SSL certificate from a trusted Certificate Authority

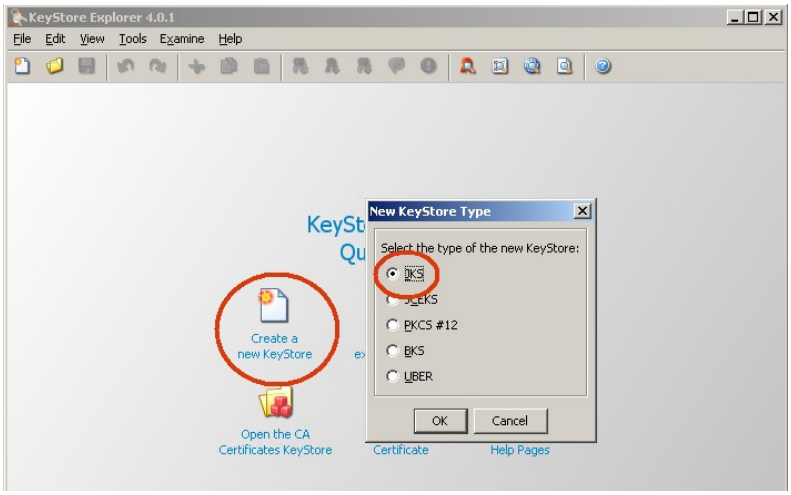
The following is a step-by-step guide on how to obtain a certificate from a trusted Certificate Authority. In this example the certificate will be created for the EveryonePrint demo server, on the domain demo.everyoneprint.com using GeoTrust as the Certificate Authority.

The free Keystore Explorer tool available at http://keystore-explorer.sourceforge.net, will be used in this guide. For experienced users, the Keytool included in C:\Program Files (x86)\EveryonePrint\jre\bin can also be used, however this guide will focus entirely on the easier GUI based application Keystore Explorer.

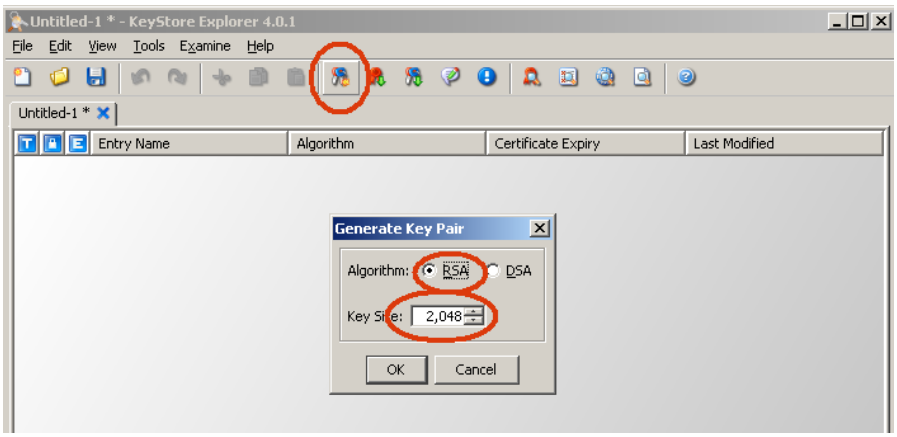
This guide will assume that this configuration is done on a working and configured EveryonePrint server.

11.1.1 Create new keystore and generate private key

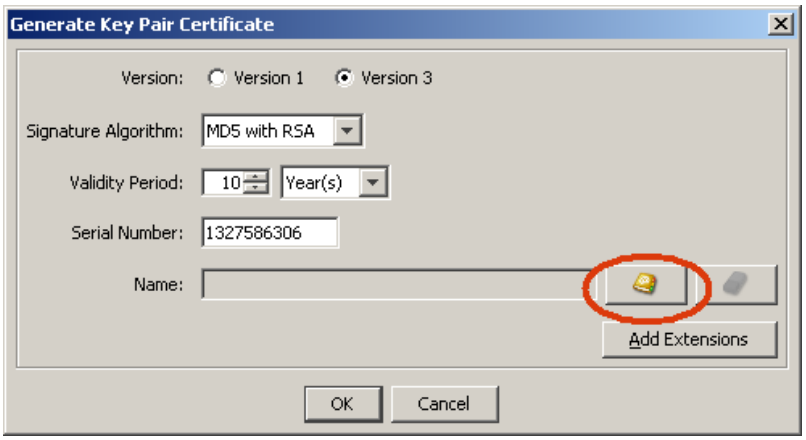
Begin by creating a new keystore that will contain our certificate. Open the Keystore Explorer tool, and choose to create a new keystore of the type JKS (Java Key Store).



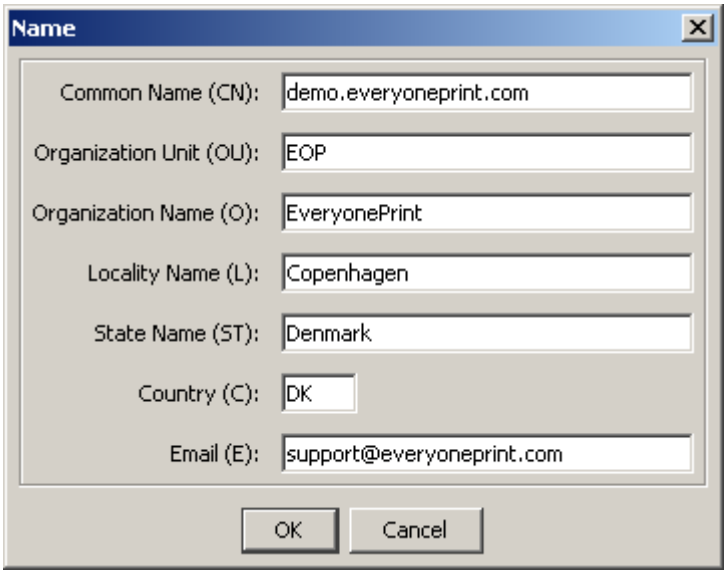
Next with an empty keystore open, choose to create new key pair. Choose RSA and key size 2048.



When prompted, choose Version 3, MD5 with RSA and validity of 10 years. This doesn't determine the expiration of the final SSL certificate, but only the validity of the key pair. Choose the Edit Name button.



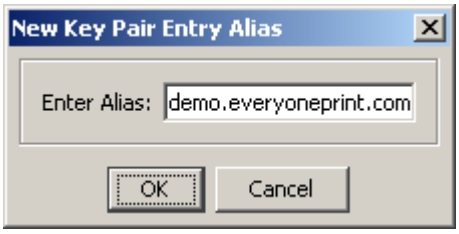
Enter the details of the SSL certificate.



Common name is the FQDN (fully qualified domain name), the exact Web URL that users will use to access the EveryonePrint server. This could be print.company.com or similar. Make sure the CN is correct matching your DNS, or you will have to issue a new certificate.

OU means the department or similar. O is the company name; L is for example the city; ST means the Country or State, C is the country code and finally email is a working email address belonging to the domain.

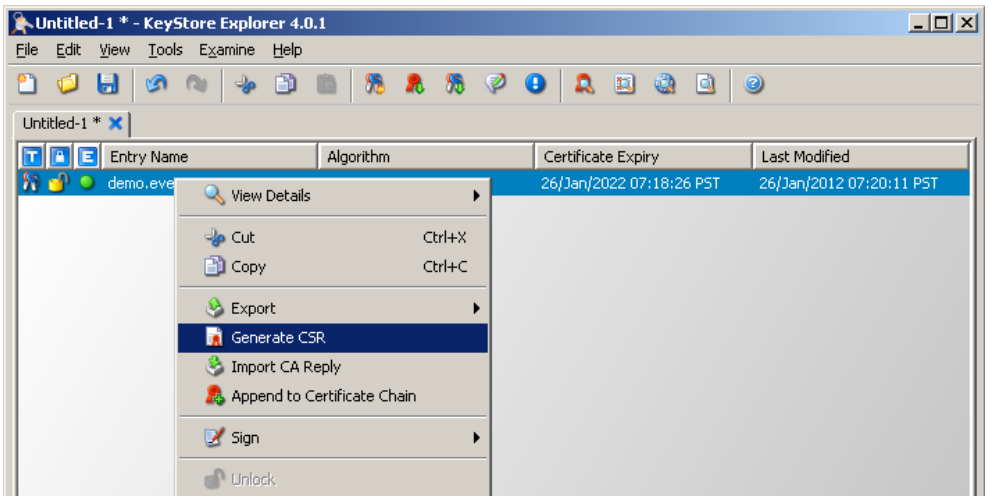
When clicking OK, enter an "alias" which is just an internal recognizable name for the certificate. Using the CN is best practice.



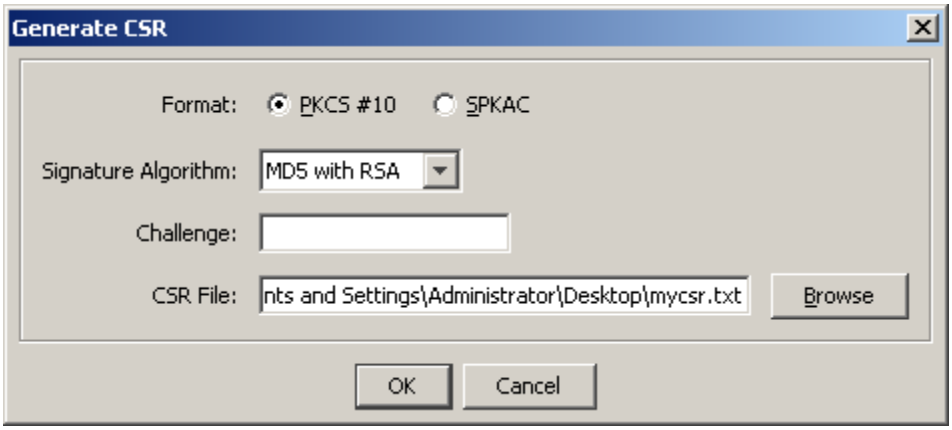
Finally, you're prompted for a key password. This must be a password that is kept secret, not shared with anyone, used later for the configuration of EveryonePrint.

You're now ready to create the "Certificate Signing Request" which the Certificate Authority (SSL issuer) will need to create a signed certificate.

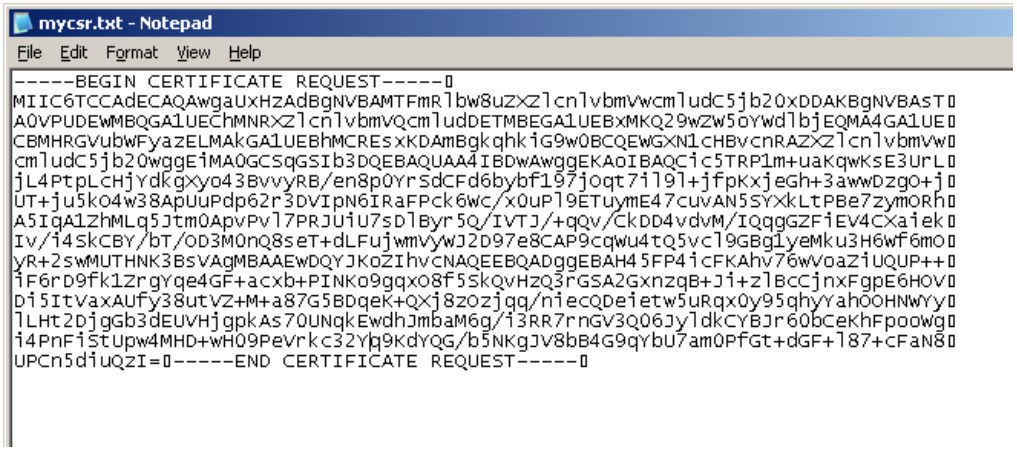
Right click the key pair entry and choose **Generate CSR**.



Under Signature Algorithm, choose MD5 with RSA. Leave Challenge blank, as this is not needed. For CSR, choose where to save the CSR request. In this example we choose to save it to desktop as a txt file as we will need to open and copy text from this later.

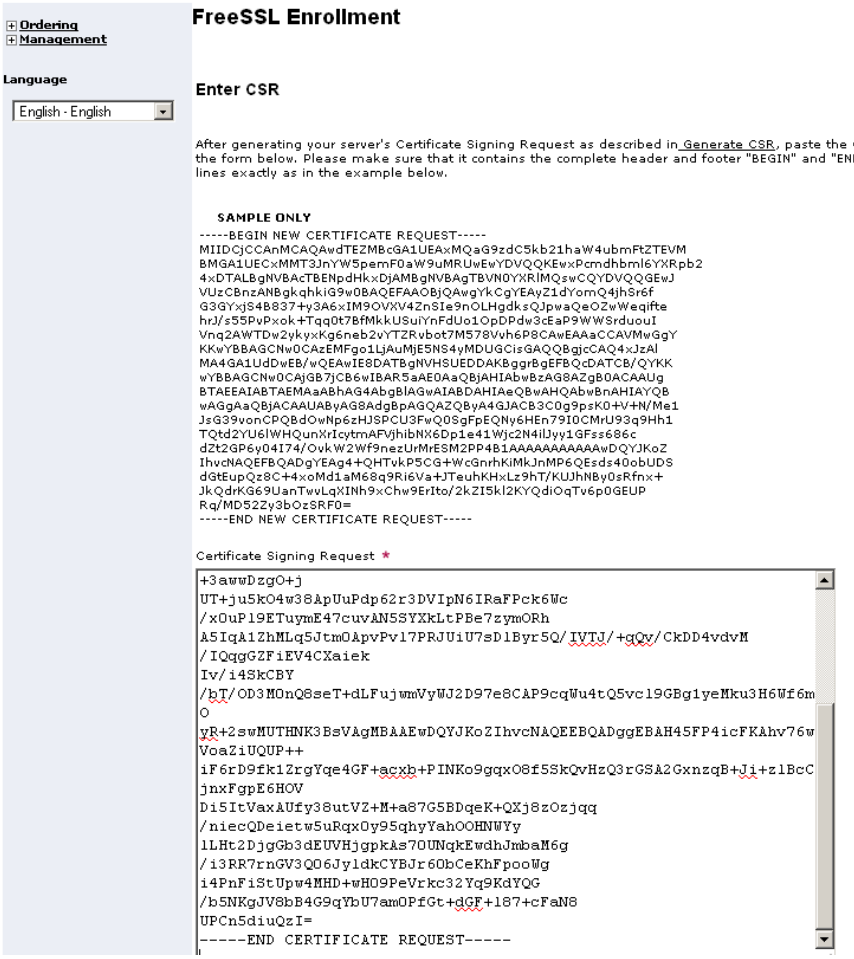


Clicking OK and a mycsr.txt is created on the desktop. Open the file and you can see the full CSR request as an encrypted string.



For this demonstration we're using GeoTrust to create us a 30 day free test SSL certificate (http://www.freessl.com).

As part of the purchasing process, the CSR is supplied, simply by pasting the entire contents of the CSR generated on the server.


Ordering
Management
Language
English - English
FreeSSL Enrollment
Enter CSR
After generating your server's Certificate Signing Request as described in Generate CSR, paste the CSR in the form below. Please make sure that it contains the complete header and footer "BEGIN" and "END" lines exactly as in the example below.
SAMPLE ONLY
-----BEGIN NEW CERTIFICATE REQUEST-----
MIIDCjCCAnMCAQAwdTEZMBcGA1UEAxMQaG9zdC5kb21haW4ubmFtZTEVM
BMGA1UECxMMT3JnYW5pemF0aW9uMRUwEwYDVQQKEwxPcmdhbml6YXRpb2
4xDTALBgNVBAcTBENpdHkxDjAMBgNVBAgTBVN0YXRlMQswCQYDVQQGEwJ
VUzCBnzANBgkqhkiG9w0BAQEFAAOBjQAwgYkCgYEAyZ1dYomQ4jhSr6f
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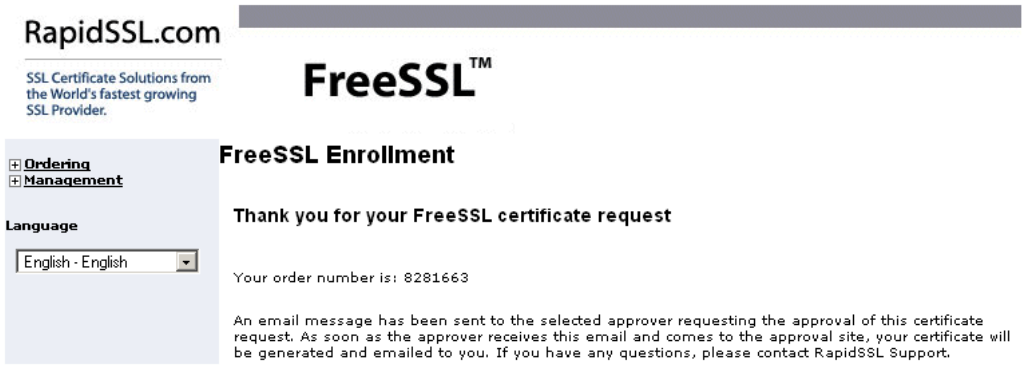
Vnq2AWTDw2ykyxKg6neb2vYTZRvbot7M578Vvh6P8CAwEAAaCCAVMwGgY
KKwYBBAGCNw0CAzEMFgo1LjAuMjE5NS4yMDUGCisGAQQBgjcCAQ4xJzAl
MA4GA1UdDwEB/wQEAwIE8DATBgNVHSUEDDAKBggrBgEFBQcDATCB/QYKK
wYBBAGCNw0CAjGB7jCB6wIBAR5aAE0AaQBjAHIAbwBzAG8AZgB0ACAAUg
BTAEEAIABTAEMAaABhAG4AbgBlAGwAIABDAHIAeQBwAHQAbwBnAHIAYQB
wAGgAaQBjACAAUAByAG8AdgBpAGQAZQByA4GJACB3C0g9psK0+V+N/Me1
JsG39vonCPQBdOwNp6zHJSPCU3FwQ0SgFpEQNy6HEn79I0CMrU93q9Hh1
TQtd2YU6lWHQunXrIcytmAFVjhibNX6Dp1e41Wjc2N4iIJyy1GFss686c
dZt2GP6y04I74/OvkW2Wf9nezUrMrESM2PP4B1AAAAAAAAAAAwDQYJKoZ
IhvcNAQEFBQADgYEAg4+QHTvkP5CG+WcGnrhKiMkJnMP6QEsds40obUDS
dGtEupQz8C+4xoMd1aM68q9Ri6Va+JTeuhKHxLz9hT/KUJhNBy0sRfnx+
JkQdrKG69UanTwvLqXINh9xChw9ErIto/2kZI5kl2KYQdiOqTv6p0GEUP
Rq/MD52Zy3bOzSRF0=
-----END NEW CERTIFICATE REQUEST-----
Certificate Signing Request *
+3awwDzgO+j
UT+ju5kO4w38ApUuPdp62r3DVIpN6IRaFPck6Wc
/xOuPl9ETuymE47cuvAN5SYXkLtPBe7zymORh
A5IqA1ZhMLq5JtmOApvPvl7PRJUiU7sDlByr5Q/IVTJ/+qQv/CkDD4vdvM
/IQqgGZFiEV4CXaiek
Iv/i4SkCBY
/bT/OD3MOnQ8seT+dLFujwmVyWJ2D97e8CAP9cqWu4tQ5vcl9GBg1yeMku3H6Wf6m
O
yR+2swMUTHNK3BsVAgMBAAEwDQYJKoZIhvcNAQEEBQADggEBAH45FP4icFKAhv76w
VoaZiUQUP++
iF6rD9fk1ZrgYqe4GF+acxb+PINKo9gqxO8f5SkQvHzQ3rGSA2GxnzqB+Ji+zlBcC
jnxFgpE6HOV
Di5ItVaxAUfy38utVZ+M+a87G5BDqeK+QXj8zOzjqq
/niecQDeietw5uRqxOy95qhyYahOOHNWYy
lLHt2DjgGb3dEUVHjgpkAs7OUNqkEwdhJmbaM6g
/i3RR7rnGV3QO6JyldkCYBJr60bCeKhFpooWg
i4PnFiStUpw4MHD+wHO9PeVrkc32Yq9KdYQG
/b5NKgJV8bB4G9qYbU7amOPfGt+dGF+l87+cFaN8
UPCn5diuQzI=
-----END CERTIFICATE REQUEST-----

RapidSSL.com
SSL Certificate Solutions from the World's fastest growing SSL Provider.
FreeSSL™
Ordering
Management
Language
English - English
FreeSSL Enrollment
Verify Server URL
The CSR you generated is designed to work with the following URL:
https://demo.everyoneprint.com
If this is not the correct URL (computed from the Common name in the CSR), or if any of the CSR Information below is incorrect, then please generate a new CSR and click the Replace CSR button.
Replace CSR
CSR Information
Common Name: demo.everyoneprint.com
Organization: EveryonePrint
Org. Unit: EOP
Locality: Copenhagen
State: Denmark
Country: DK
Note: The value for the Common Name must exactly match the name of the server you plan to secure.
Continue

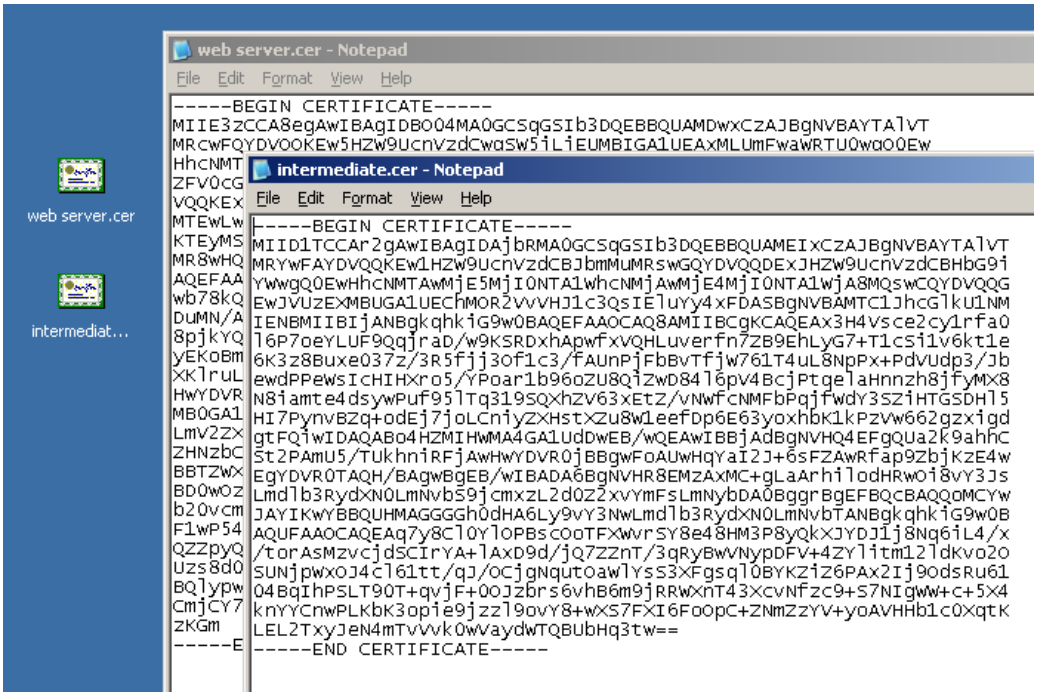


Each certificate authority has their own way of validating the request. Some use a phone call verification.

Following approval and completed purchase, the CA will either send the certificate via email, or will let you download the certificate from a Web site.

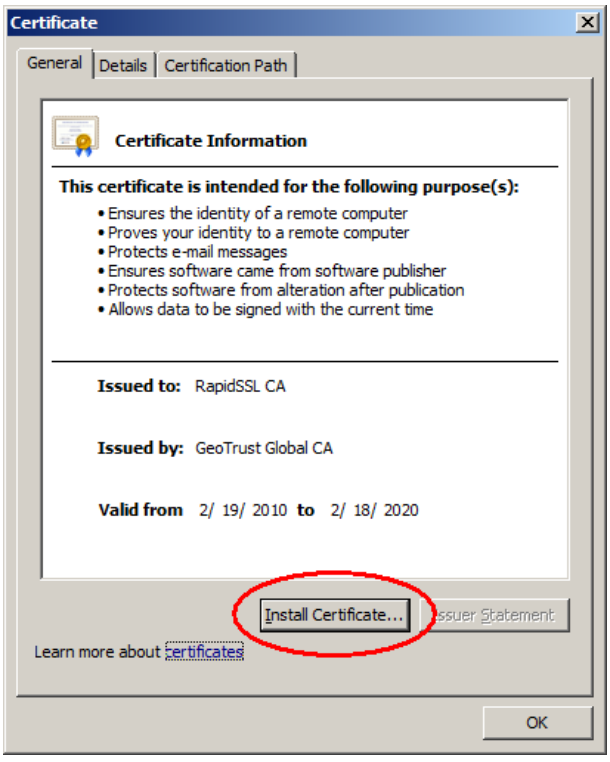
Most CA's use an intermediate certificate, between their CA root certificate, which is known by the server and client PC, and the certificate issued. All certificates must be chained, in order to establish the trust of the certificate generated for the server. If only the Web server certificate is imported without chain through intermediate certificates, the client browser will see the certificate as invalid/untrusted.

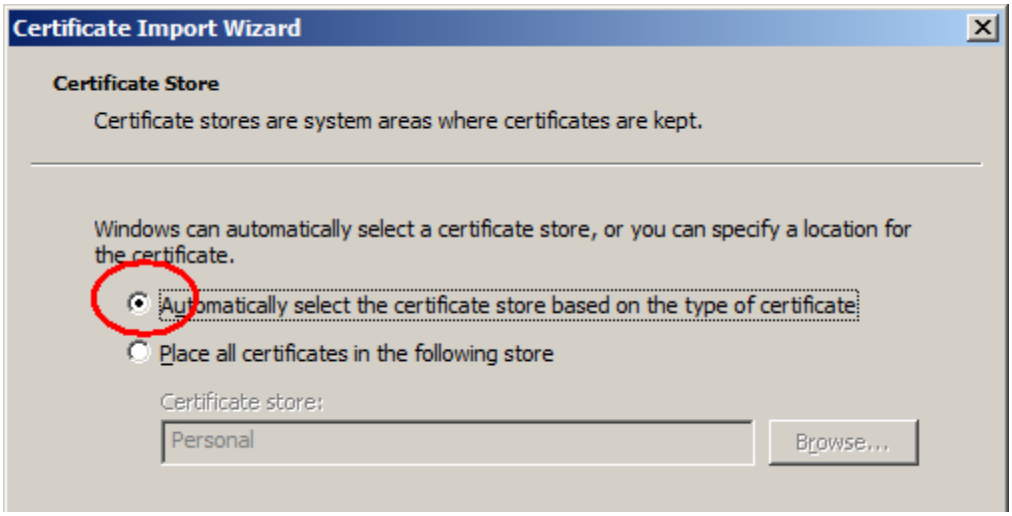
In this example, GeoTrust delivered an intermediate certificate and the Web server certificate, both saved as .cer files on the desktop.



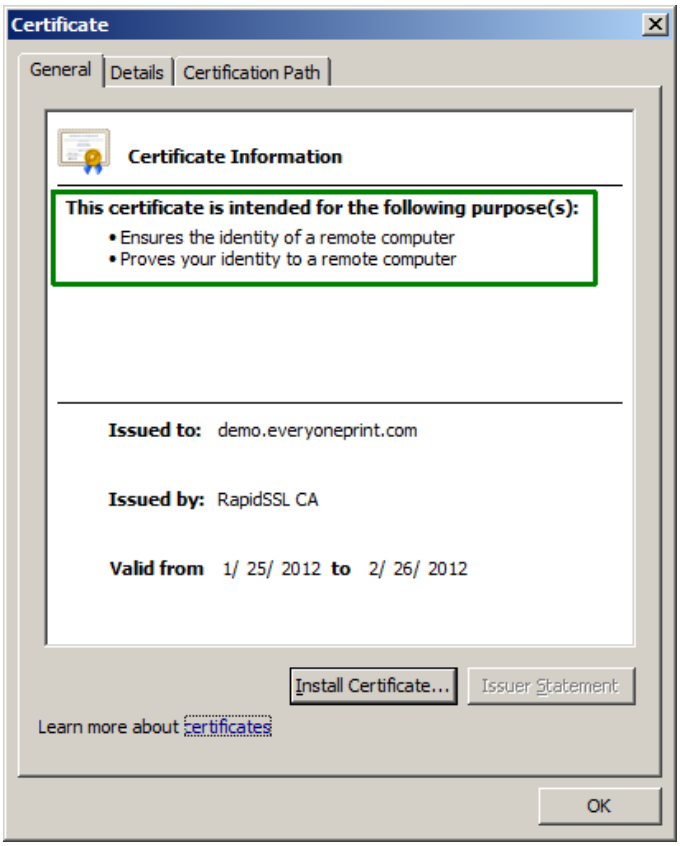
Certificates must be chained before importing into the keystore created for EveryonePrint server. The easiest way to establish a chain between certificates, is to use the Windows certificate store.

Simply double-click each certificate file you received from the CA. Make sure you choose to import any root and intermediate certificates first, or the web server certificate may not be chained properly!

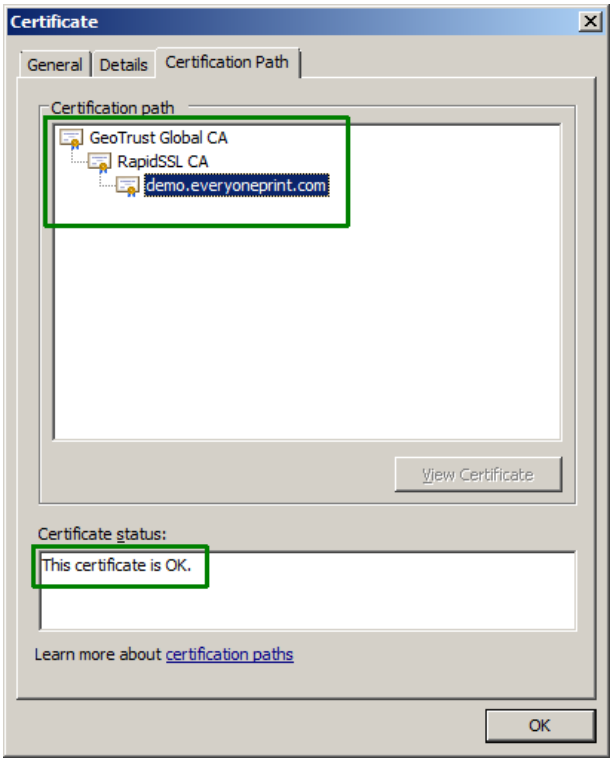




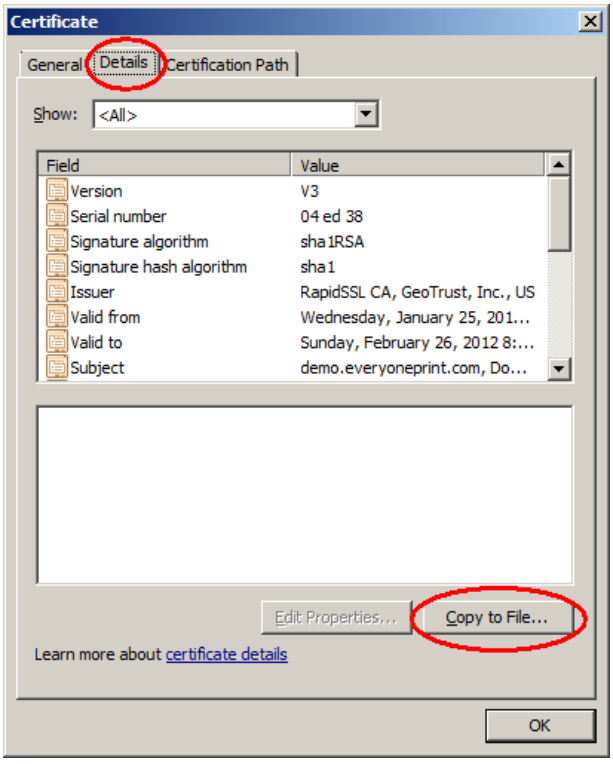
Import all certificates like this, ending with the Web server certificate. Confirm that the Web server certificate appear as trusted.



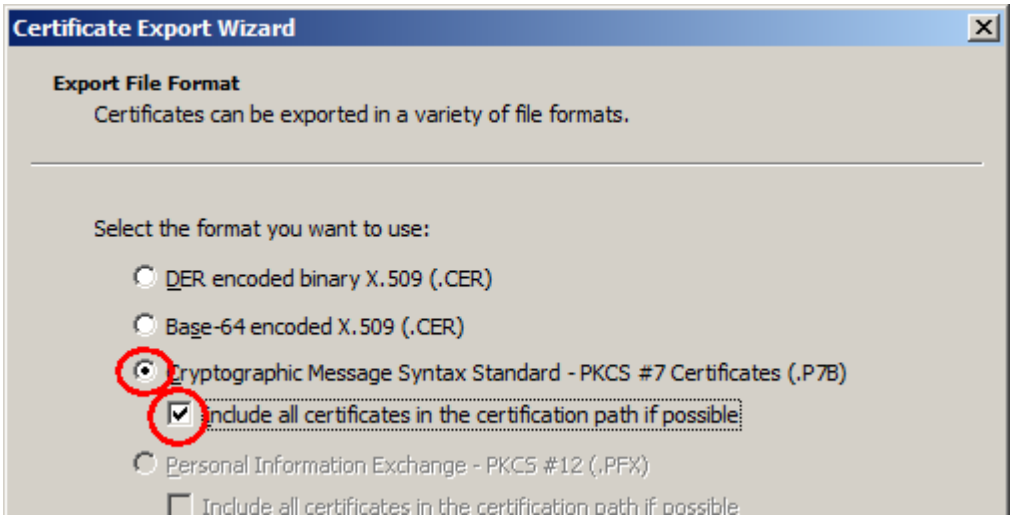
Verify that the certificate has the proper chain from Web server all the way up to root.



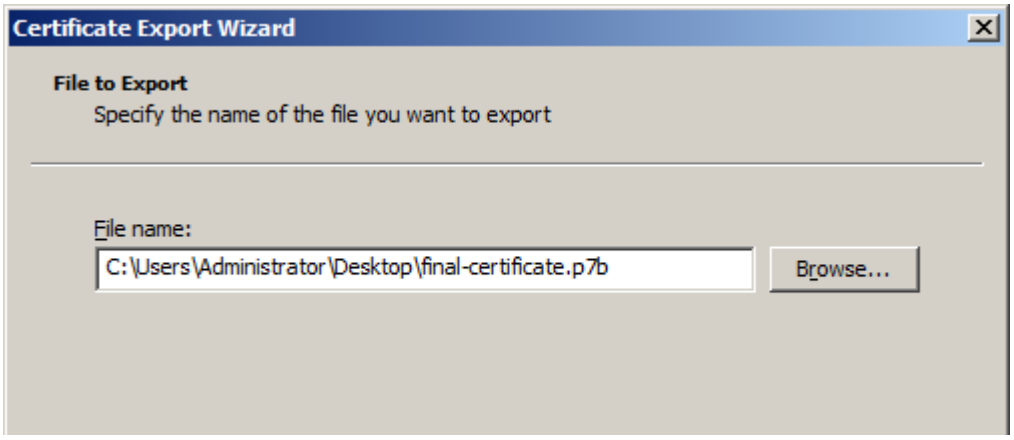
With the import and chaining complete, we can now export the certificate to a file, which we can import into the keystore file created for EveryonePrint.



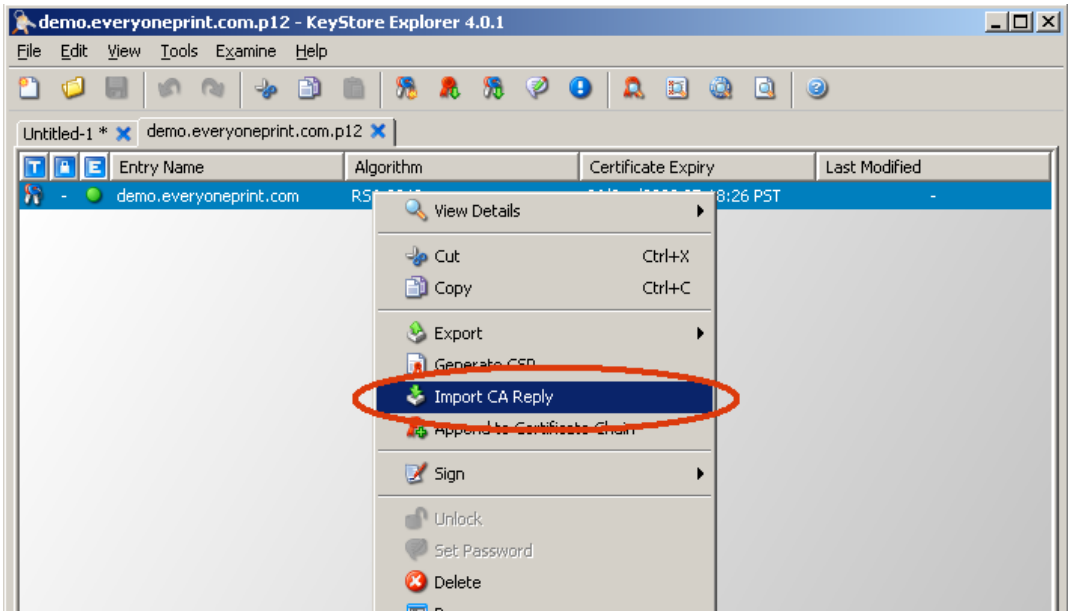
Choose Copy to file.. and as export file format choose .P7B and make sure to check to include all certificates in the path.



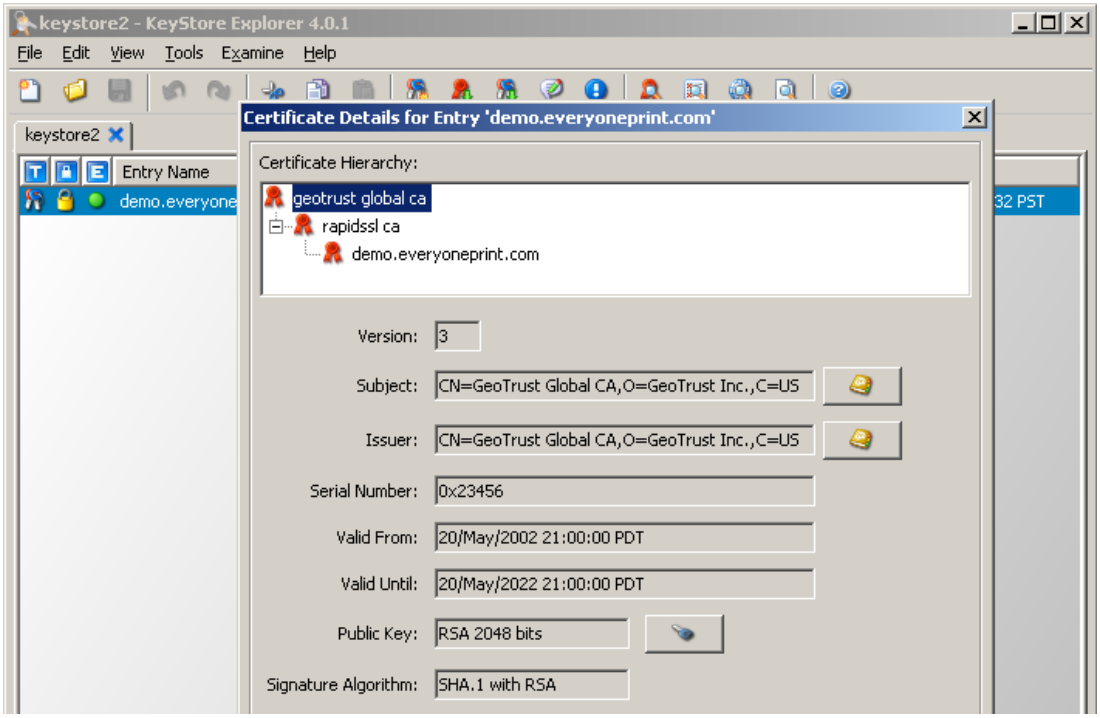
Save as .p7b file



Now return to the Keystore Explorer tool with the private key pair created in the beginning. Right-click this entry and choose **Import CA Reply**.

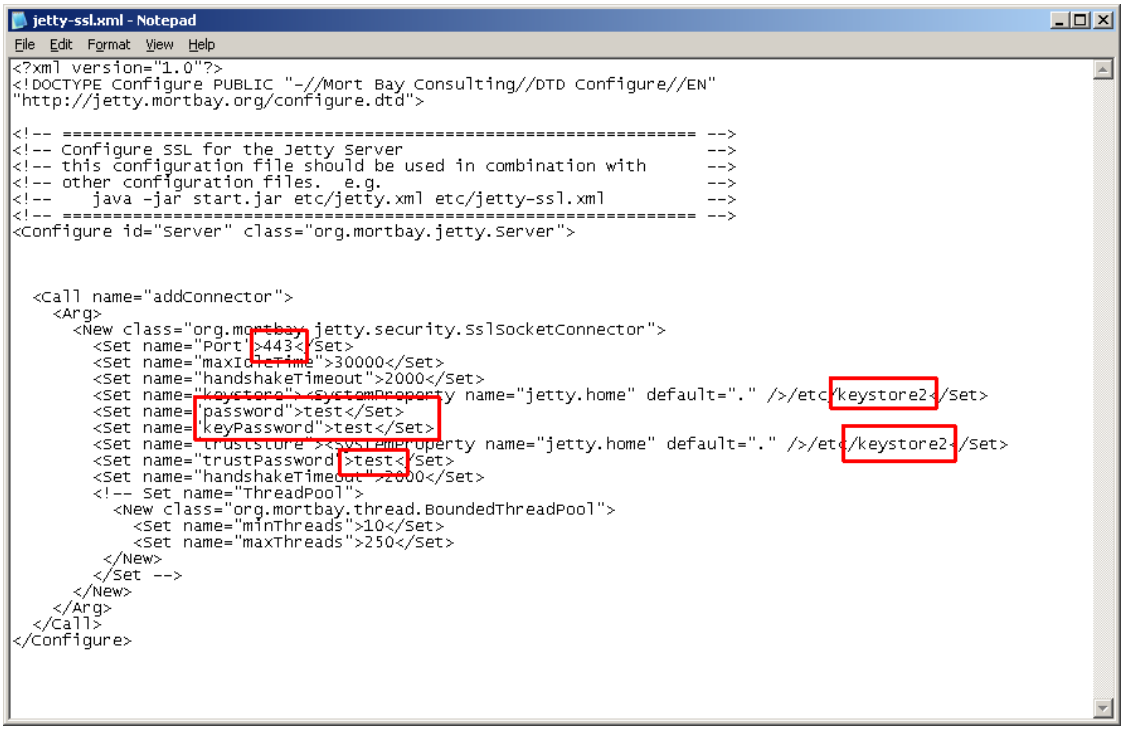


Confirm the certificate chain by right clicking and choosing View Certificate.

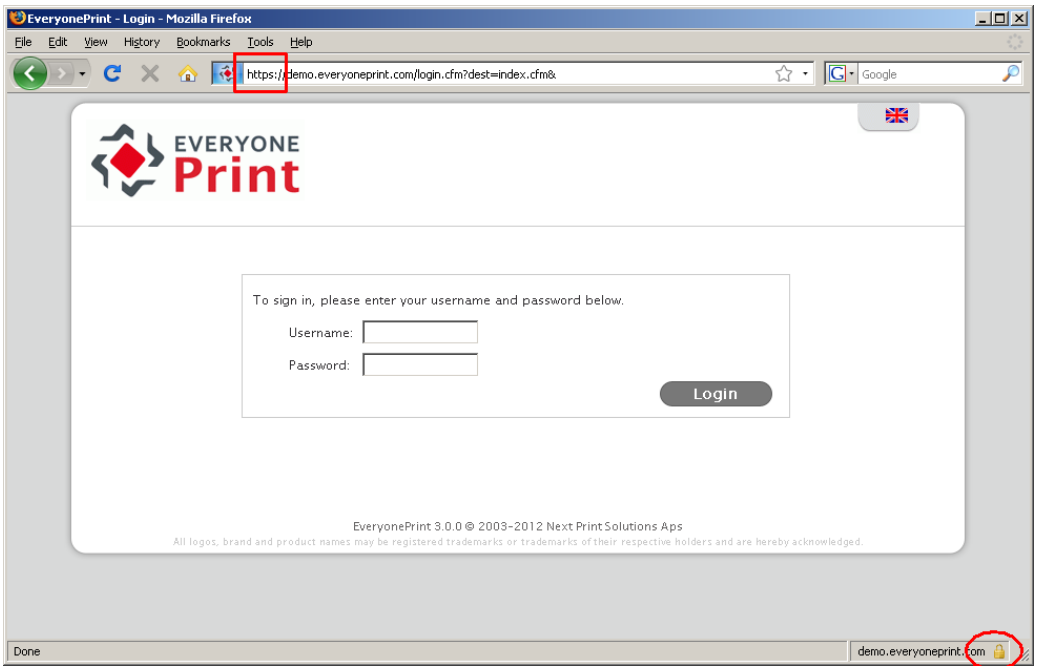


Now save the keystore file and set a password on the keystore, if prompted.

The last step is to instruct the EveryonePrint Web server to use the new keystore. This must be modified in 2 files: jetty-ssl.xml and jetty-ssl-terminalapi.xml. Open the xml files stored in the folder C:\Program Files (x86)\EveryonePrint\etc



Restart the EveryonePrint Web service, and open up a browser and confirm the SSL certificate is working, by loading the https version of the URL, for example https://demo.everyoneprint.com



11.2 Generating a Test Certificate

A keystore containing a public key/private key pair and a certificate for testing SSL can be generated using keytool, a command-line utility provided in the Java JDK. The following instructions allow you to generate a simple key pair and certificate keystore that is valid for three months. This keystore allows you to test that the SSL listener can run, but its certificate is self-signed and is not trusted by the browser.

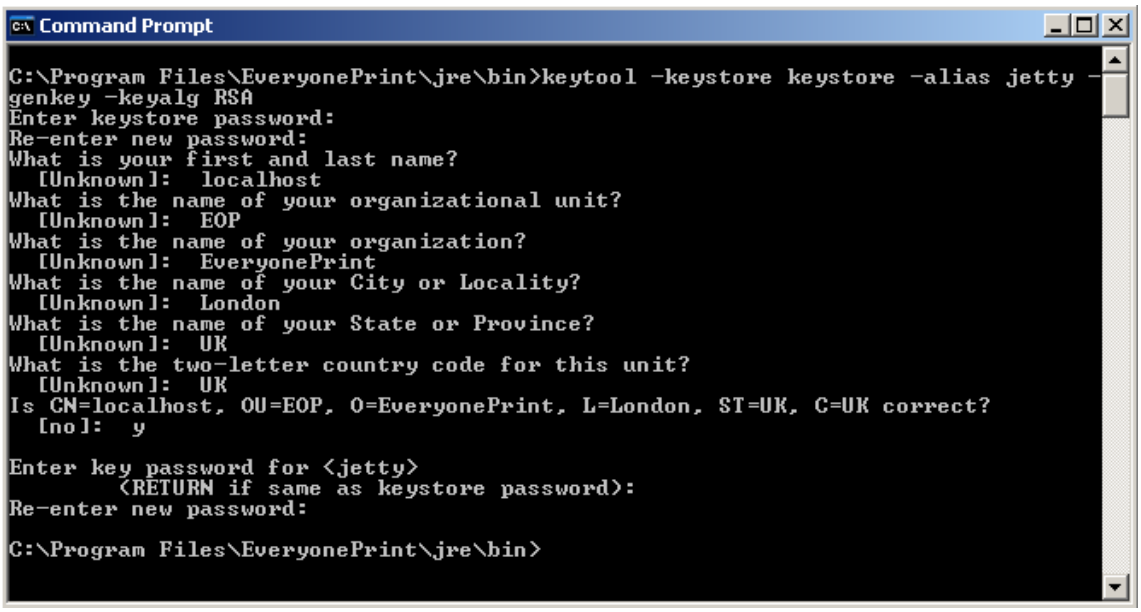
To generate a test certificate:

1. Locate the Java keytool utility. By default, the keytool utility can be found in: C:\Program Files (x86)\EveryonePrint\jre\bin
2. Generate a simple key pair and non-trusted certificate into a keystore file named keystore by typing:

   keytool -keystore keystore -alias jetty -genkey -keyalg RSA

A highly recommended graphical user interface alternative to the command line keytool is the free Keystore Explorer available at http://keystore-explorer.sourceforge.net

You are prompted to provide answers to several questions for the certificate. Press the "Enter" key to submit each of your answers.



Note: When prompted for "What is your first and last name?" enter the fully qualified domain name of the EveryonePrint server machine, ie. "localhost" or "print.company.com"

Note the two passwords that you enter. In the next section, "Configuring EveryonePrint with the Test Certificate," you enter these passwords to configure the SSL functionality. If you answer these questions accurately for the test certificate, the certificate that you generate can be used as the basis of your trusted certificate that you obtain from a certificate authority.

The generated keystore file is located in the directory in which you ran the keytool. If connections to EveryonePrint come only from inside your organization, a nonexpiring, self-signed certificate that is added to each internal user's Web browser certificate store may be adequate. See the options for keytool to generate a nonexpiring, self-signed certificate.

11.2.1 Configuring EveryonePrint with the Test Certificate

To configure EveryonePrint with the test certificate you just generated, you will copy the keystore into the EveryonePrint directory structure, make a configuration change in a Web configuration file, then restart EveryonePrint Web services.

1. Copy the keystore file, keystore, to EveryonePrint\etc. (C:\Program Files (x86)\EveryonePrint\etc)
2. Open the configuration file jetty-ssl.xml located in the folder \etc (C:\Program Files (x86)\EveryonePrint\etc)

3. Change the password, keyPassword and trustPassword values to the passwords chosen when generating the certificate.
4. If you want the port to be something other than 9443, change the Port value.
5. Save the file and restart EveryonePrint Web service.

If you are already running a Web server with SSL encryption enabled on the same server on which EveryonePrint is installed, it will be necessary to change the port on which SSL is running for either EveryonePrint or the other Web service. SSL default listens on port 9443. Change to a different port in jetty-ssl.xml and restart EveryonePrint Web services if there is a port conflict.

11.2.2 Verifying the Test Certificate

Now that you have reconfigured EveryonePrint to accept HTTPS requests and restarted it, verify that you can log in to EveryonePrint using HTTPS.

1. Open a browser and type the following URL. Use the fully qualified domain name for host that you specified when you generated the keystore. Replace 9443 with the HTTPS port number you configured.

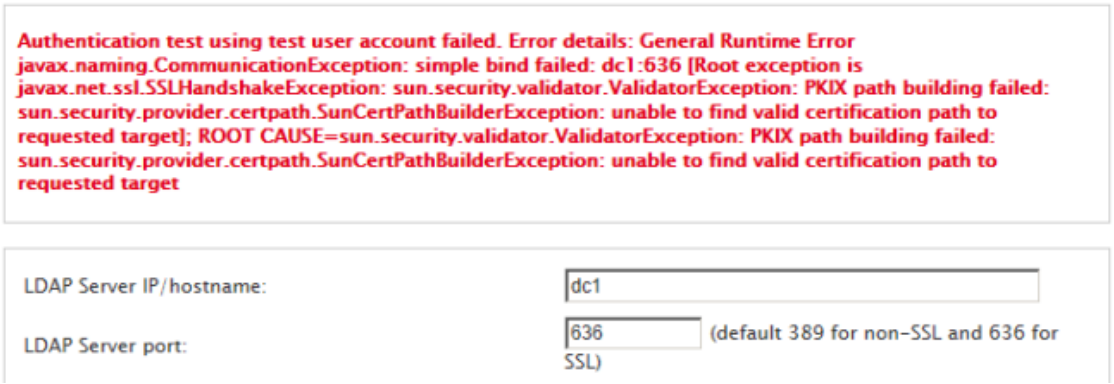
https://localhost:9443/admin

2. Because you generated the certificate yourself, a dialog box appears, warning that the EveryonePrint Web site is certified by an unknown authority. Choose to accept this certificate temporarily for this session and select OK. The login page for EveryonePrint Admin is displayed.

11.3 Import SSL certificates for LDAPS or mail servers

The following describes a very simple way to import SSL certificates from remote LDAP or mail servers.

If you'd like to connect to an LDAP/Active Directory or mail server over SSL, and the certificate is not issued by a trusted Certificate Authority, then the connection will fail with an SSL error, that typically looks like:



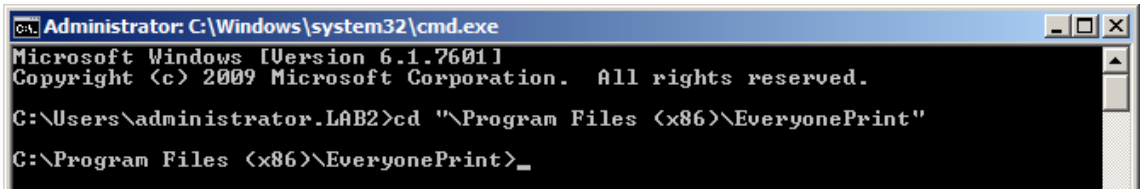
To establish a trusted SSL connection to the remote LDAP/AD or mail server, the SSL certificate from the remote server must be imported into the SSL Keystore in EveryonePrint.

EveryonePrint uses Java keystores, so any Keystore management tool, can be used, but EveryonePrint includes 2 simple command line scripts, that makes it very easy to import remote certificates.

The scripts below work identical for LDAPS and mail server certificates, just enter the corresponding port:

LDAPS SSL: port 636
POP3 SSL: port 995
IMAP SSL: 993
Exchange Web Services: 443

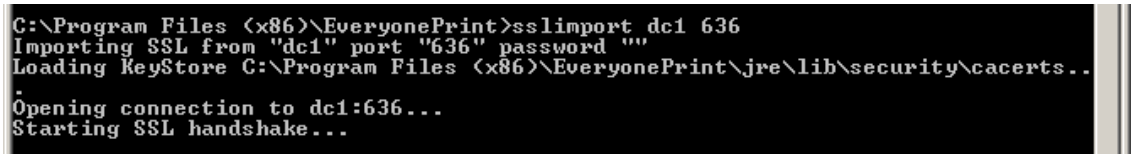
First, on the EveryonePrint server, open a command as administrator and change to the EveryonePrint directory



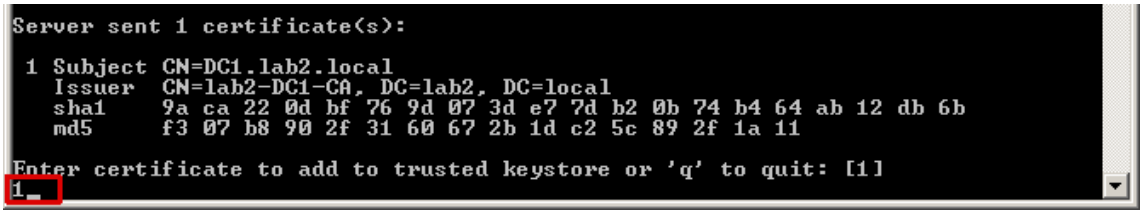
Run SSLTest to confirm if a successfully trusted SSL connection can be established with the existing keystore.

In this example, the connection fails with the untrusted error message, so let us import the certificate.

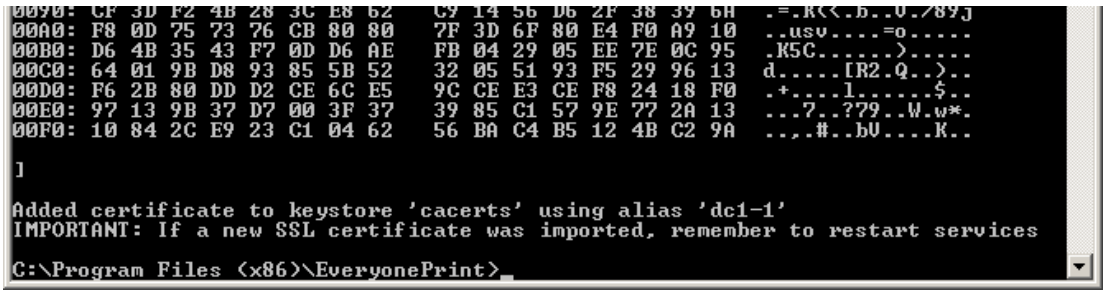
Run SSLImport {server} {port} and the tool will connect to the remote server and retrieve a list of all certificates available.



In this example, 1 certificate is listed. There may be multiple certificates, including root CA, intermediate etc.

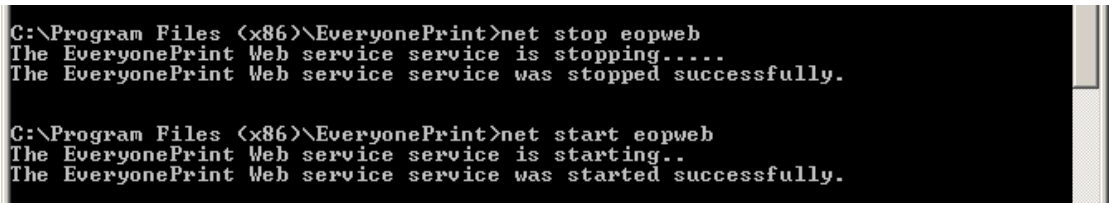


In this example, we will enter "1" to import the listed certificate. If multiple certificates are listed, import them one by one, starting with number 1.

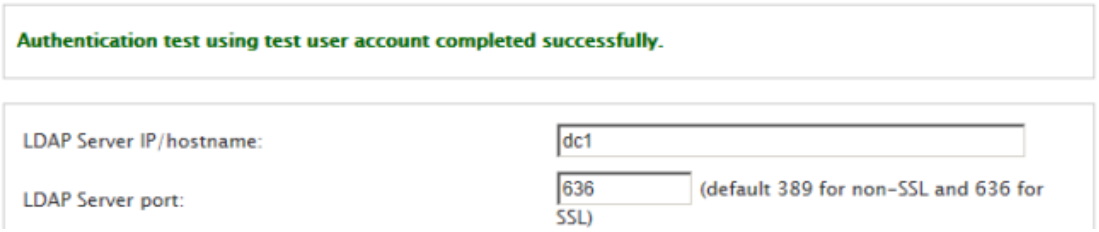


The certificate is imported to keystore successfully.

Restart the EveryonePrint Web service, for the certificate keystore to be reloaded. This can be done either via Windows services or via the command line:

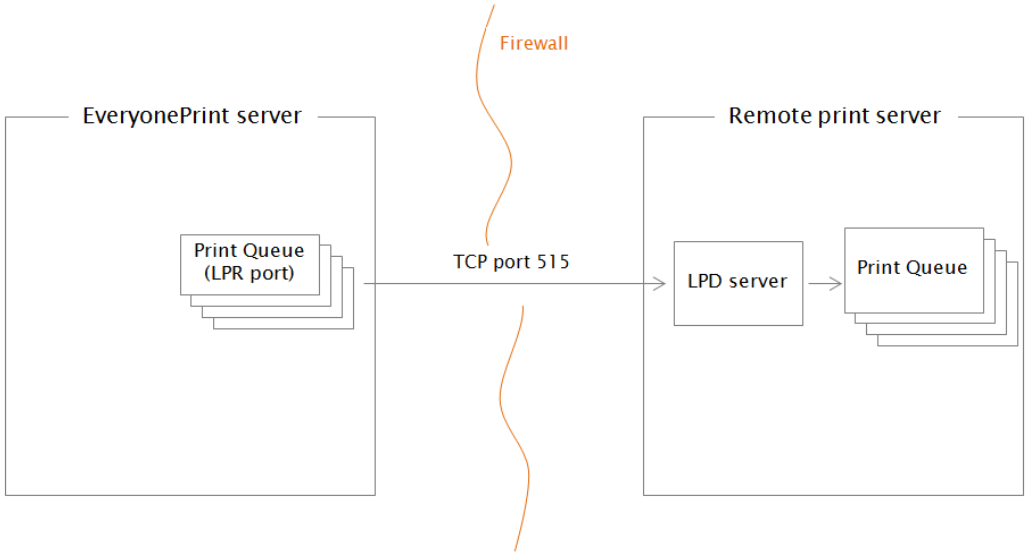


Now the SSL connection can be established successfully.



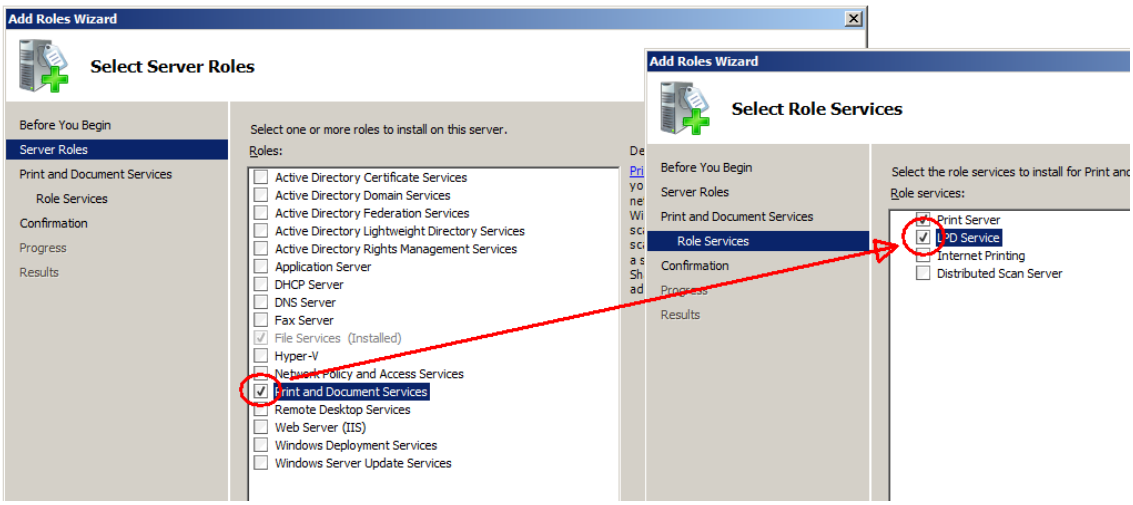
12. Printing to remote print servers

It's a common configuration, that EveryonePrint is added to an existing print environment, perhaps with a print accounting or print management system already in place.



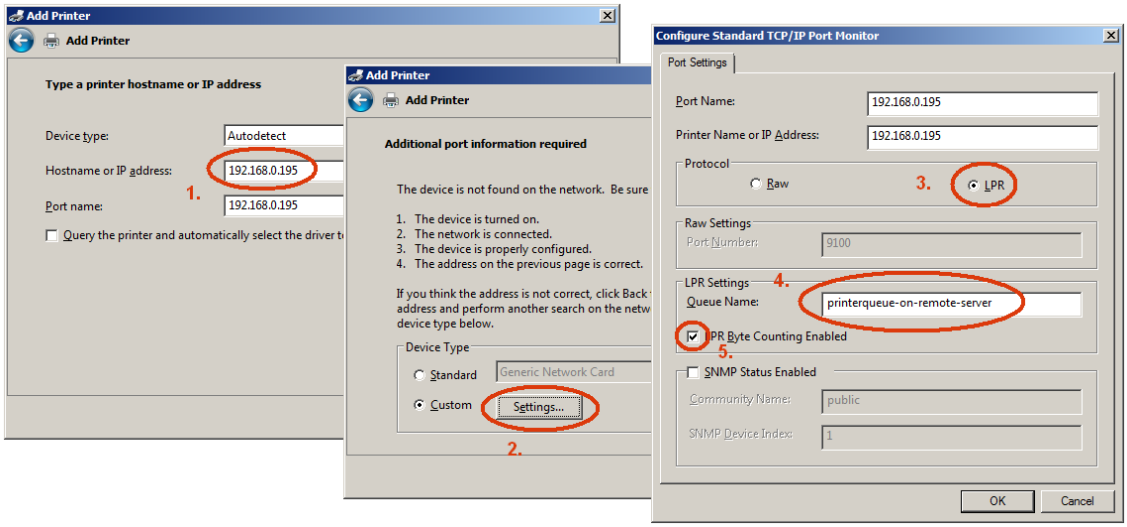
In the above diagram, EveryonePrint is installed on its own server, in a DMZ zone separated from the print servers by a firewall. Print jobs can be transferred from the EveryonePrint print server to the print server queues within the firewall, via LPR printing protocol, communicating on TCP port 515.

On the remote print server: configure an LPD server, either as part of the print accounting system, or using Microsoft's LPD server. Consult Windows or print accounting solutions documentation for more information on how to install and configure LPD server on the remote print server.



1. Add the **Print and Document Services** role
2. Add **LPD Server** role service

On the EveryonePrint server: create LPR printer queues, which point to equivalent queues on the remote print server.



1. Enter the IP address/hostname of the remote print server with LPD server
2. Choose custom settings
3. Choose LPR print protocol
4. Enter the print queue name on the remote server (avoid spaces or special characters)
5. Select LPR byte counting enabled

Choose the same driver on this LPR print queue, as on the remote print server print queue.

The created LPR print queue on the EveryonePrint server, can then be added to EveryonePrint via the EveryonePrint Admin -> Devices. When users print to this queue, it will be spooled and then transferred via LPR to the remote print server.

13. Installing document support applications

The following sections apply to those not using the built-in conversion engines, but wish to use external applications for specific formats, such as the Microsoft Office engine for converting and printing Office documents, Word, Excel and PowerPoint.

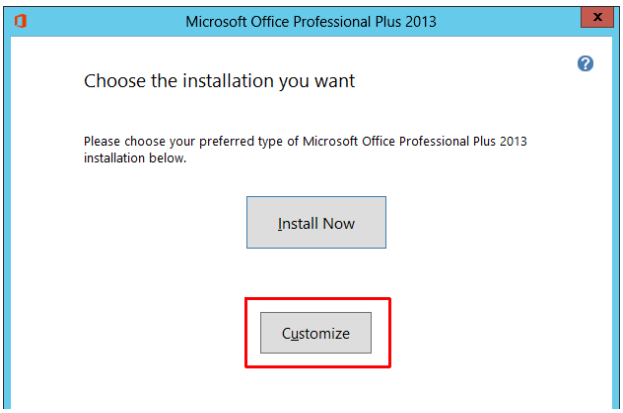
13.1 Install Microsoft Office 2007, Office 2010 or Office 2013

If using Microsoft Office for conversion, Office 2007 SP2, Office 2010 or Office 2013 must be installed.

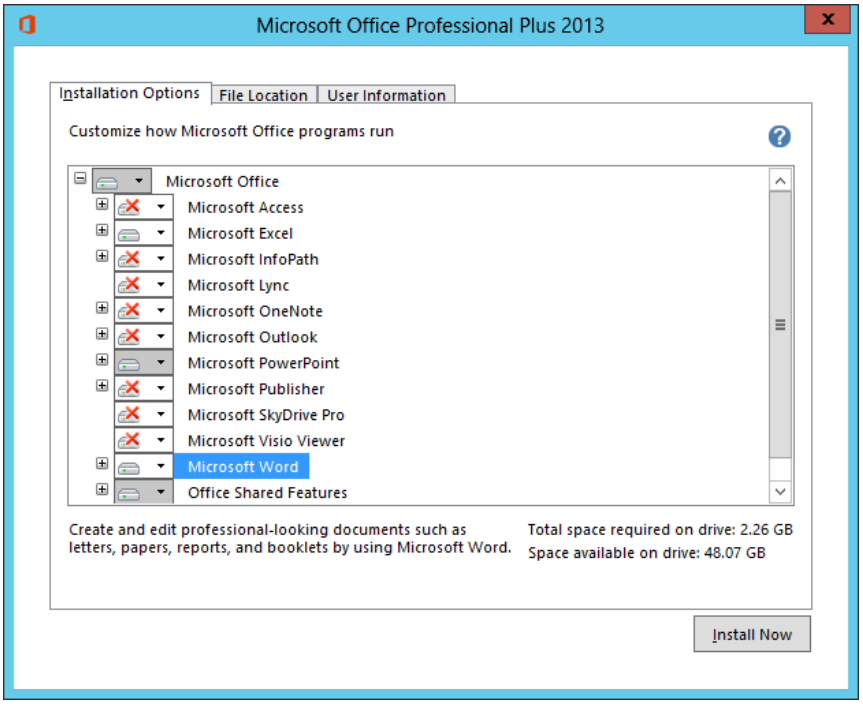
13.1.1 Install Microsoft Office 2007, Office 2010 or Office 2013

The following section refers to Office 2013, but the same instructions apply to Office 2007 and 2010.

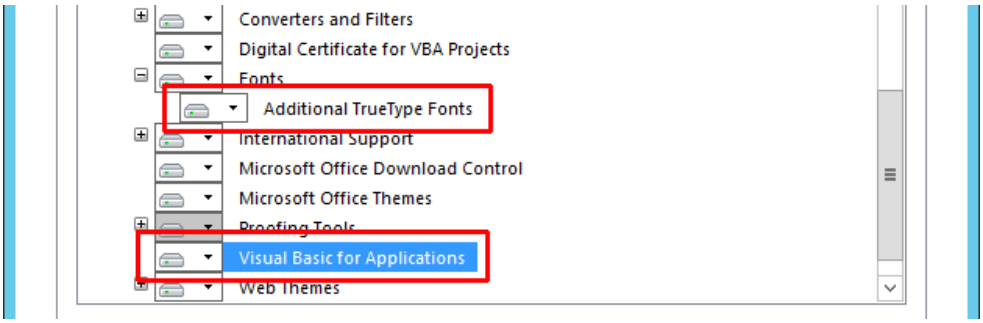
First, install Microsoft Office 2007 SP2, 2010 or 2013 with at least Word, Excel and PowerPoint. By default all necessary programs are installed, but the installation can be customized to only install programs to use.



There is no need to install any other Office suite programs, such as OneNote, Access or similar.

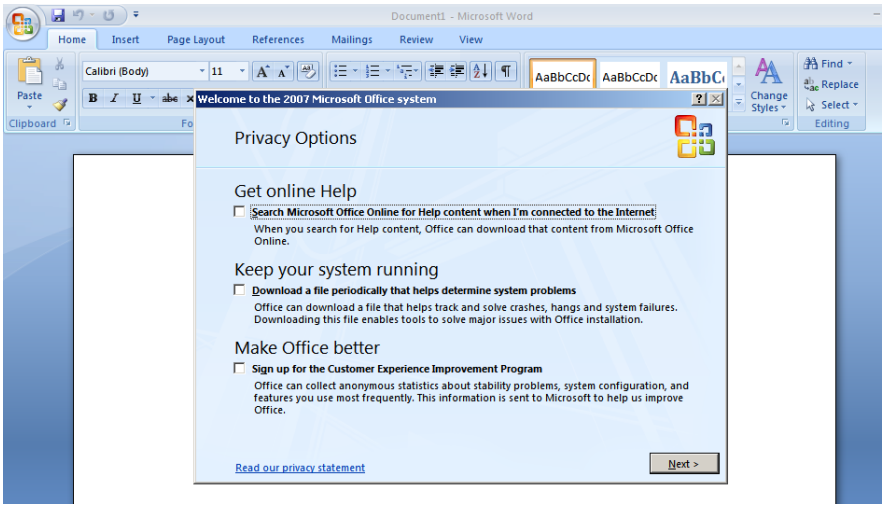


If you customize the installation, make sure that *Fonts* and *Additional TrueType Fonts* under *Office Shared Features* are installed, for broadest font support. And make sure that *Visual Basic for Applications* is also installed.

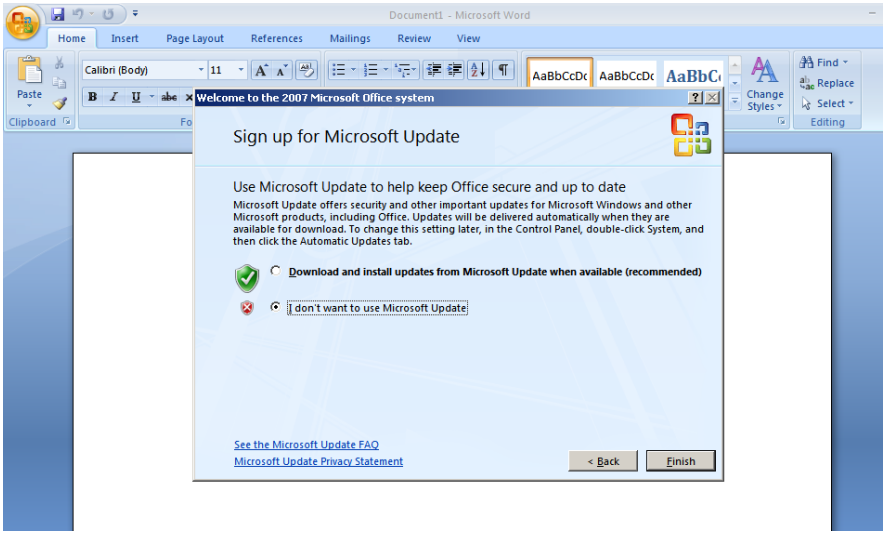


13.1.2 Open Microsoft Word

After installation it is necessary to open Microsoft Word, as it shows a dialog which will otherwise prevent printing.



Uncheck all Privacy Options.



To avoid Office restarting and doing server reboots on its own, disable automatic update service.

Now exit and reopen Word. If Word opens to a blank page, you have completed the Office installation.

For any issues with Microsoft Office conversion, refer to the troubleshooting section, at the end of this guide, for step-by-step troubleshooting tips.

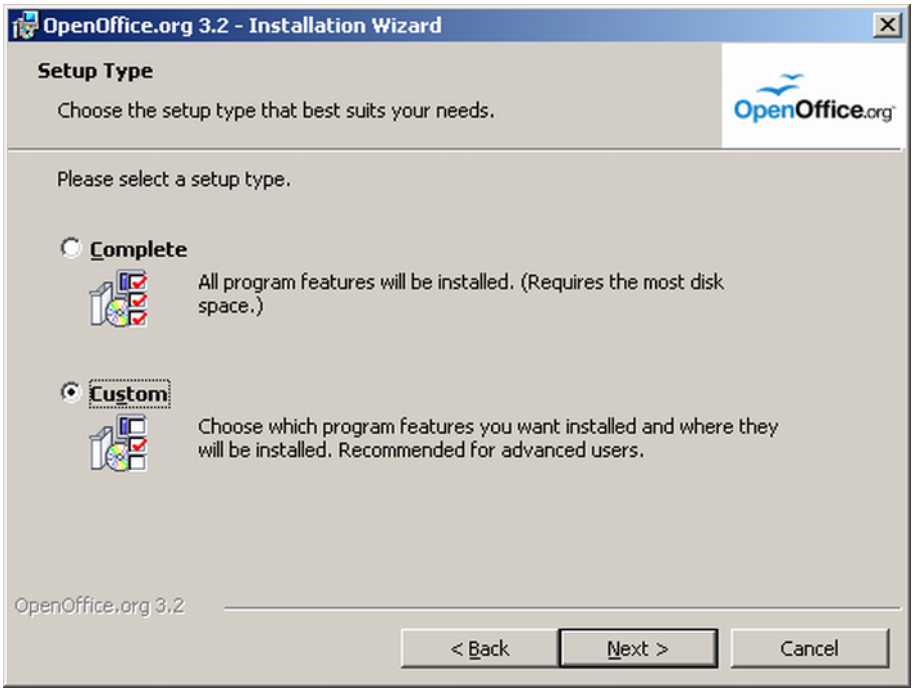
13.2 Install OpenOffice 3.x

Installing OpenOffice is optional, it is only needed if OpenOffice should do the conversion and printing of OpenOffice documents (odt, ods and odp).

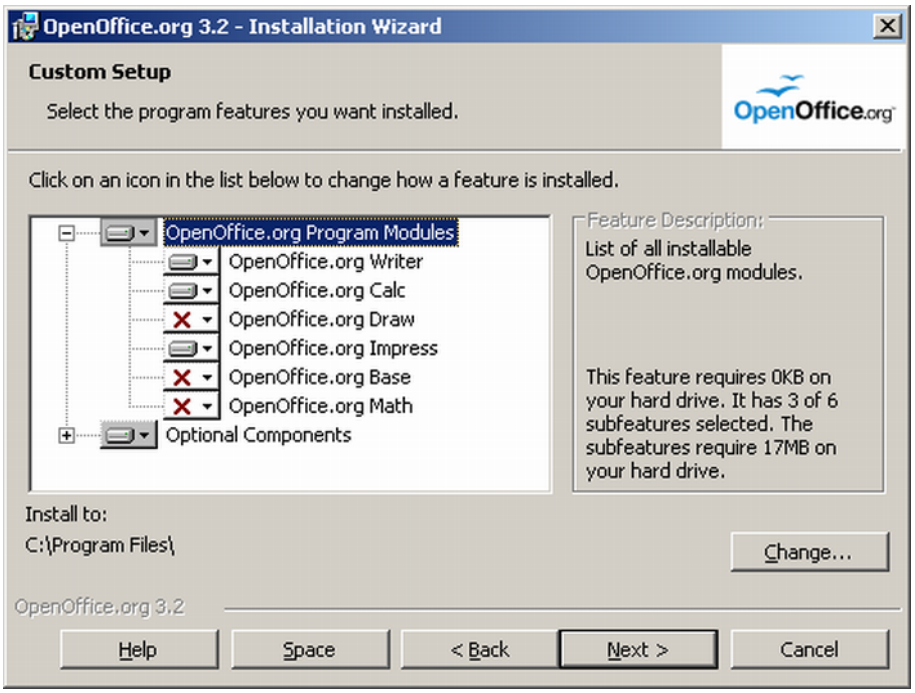
13.2.1 Installing OpenOffice 3.3.0

It is recommended to install the standard version of OpenOffice which includes JRE (Java Runtime Engine). Filename of downloaded installer file is for example: **OOo_3.4.0_Win_x86_install-wJRE_en-US.exe**. Make sure the installation is done as a local administrator user.

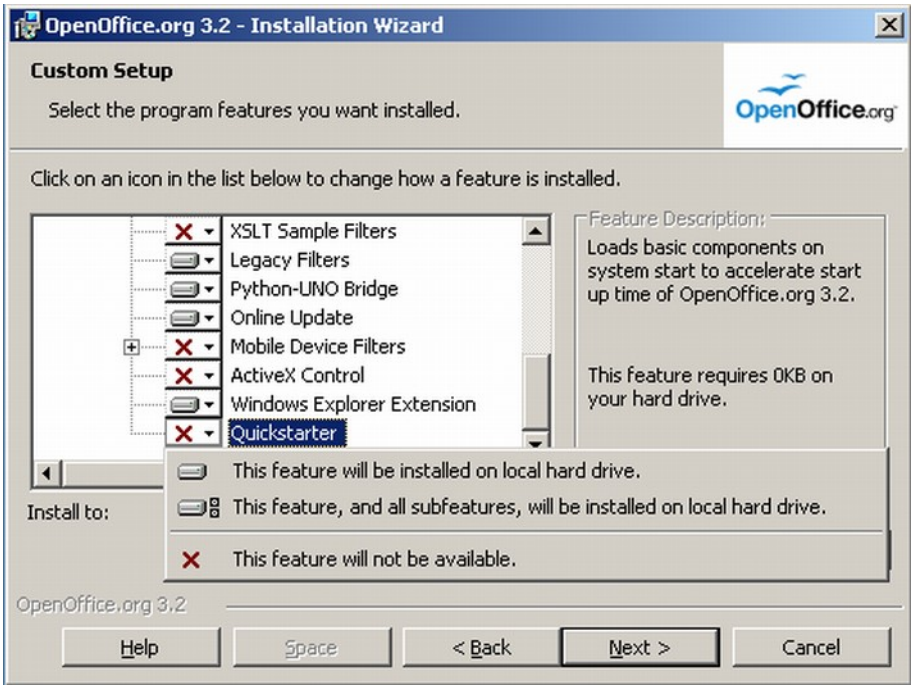
During installation, choose **Custom** setup type.



Under OpenOffice Program Modules, select to install only Writer, Calc and Impress.



Under Optional Components scroll to the bottom and for the component **Quickstarter**, choose **This feature will not be available**, so the Quickstarter is not installed.

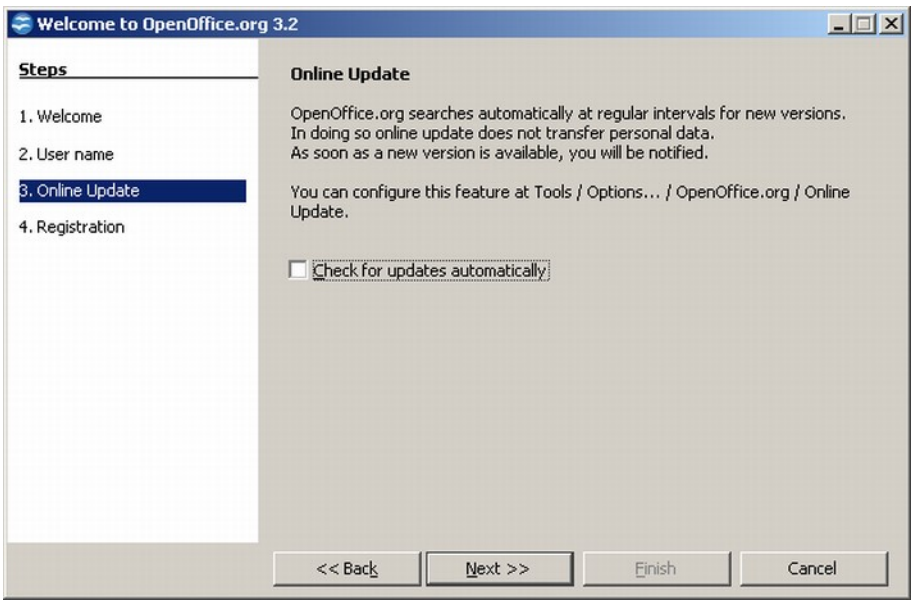


Continue the rest of the installation with default settings.

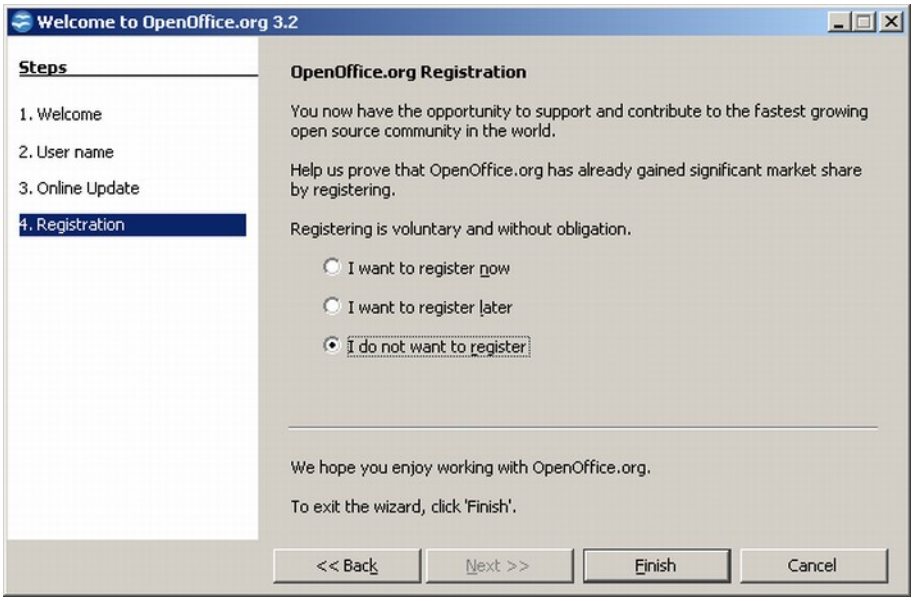
These are installed with the standard installation. Other OpenOffice programs are not supported and therefore not needed, but can be installed.

13.2.2 Open Writer

After installation it is necessary to open OpenOffice Writer, as a dialog is shown on first launch, which will otherwise prevent proper conversion.



During the setup wizard, uncheck the option Check for updates automatically and choose to not register.



Now open and close OpenOffice. Then re-open OpenOffice Writer and the following dialog will show.

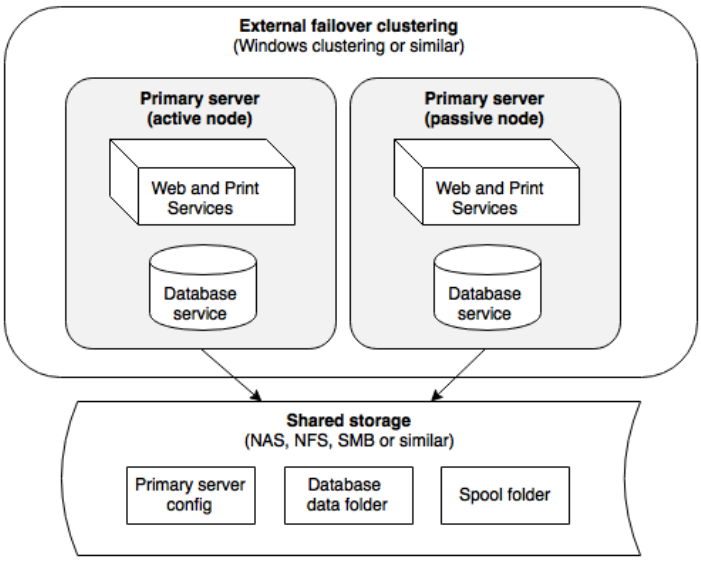
Choose **No, I do not wish to participate** and click **OK**, and OpenOffice will open. Close and the installation of OpenOffice is complete.

14. EveryonePrint clustering for high-availability and high scalability

With the EveryonePrint clustering features, it's possible to configure EveryonePrint for enterprise scalability through load balancing, multi-server deployments and high-availability through failover and redundancy.

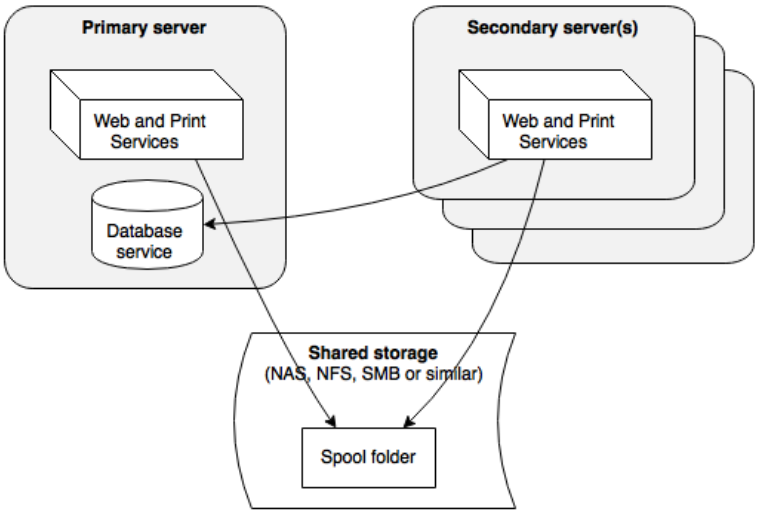
The cluster configuration options are many, some typical configuration would be:

1. **High availability redundancy with multiple servers in failover cluster**



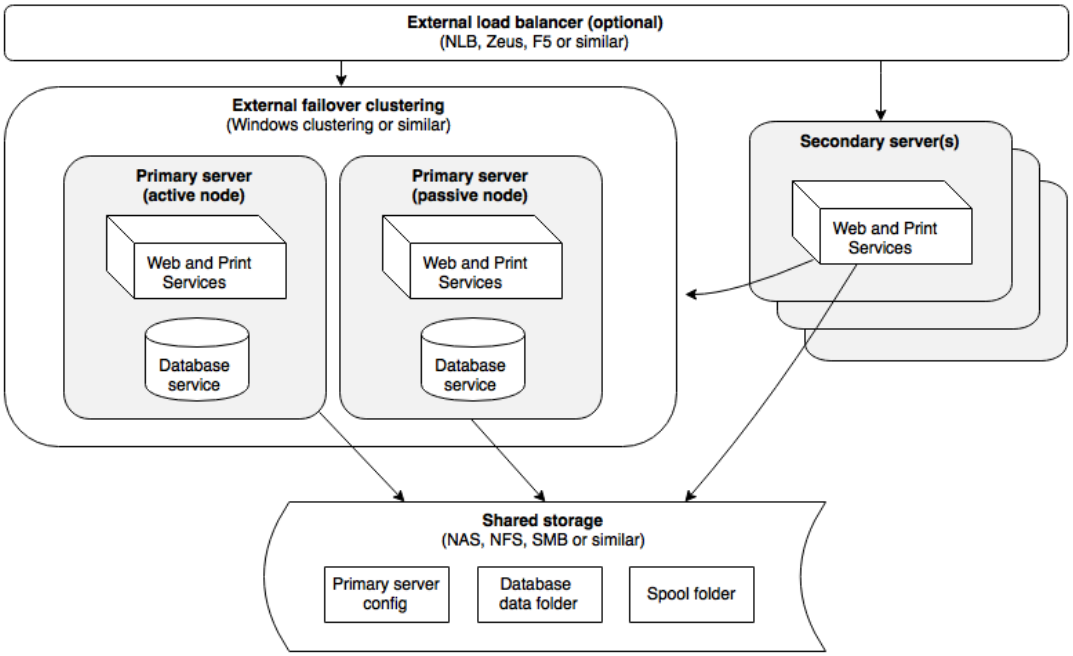
Primary servers in a failover cluster configuration, with 1 active primary server and any number of passive standby server node(s) in case the active fails.

2. **High scalability with many additional servers for load balancing and job processing**



A single primary server and any number of additional secondary servers for load balancing and job processing for very high print job volumes.

3. **High availability and high scalability combining both failover clustering and load balancing.**



A configuration for highest availability and redundancy, and highest scalability for very large job processing, with multiple primary servers in a failover cluster and multiple secondary servers for scalability behind a load balancer.

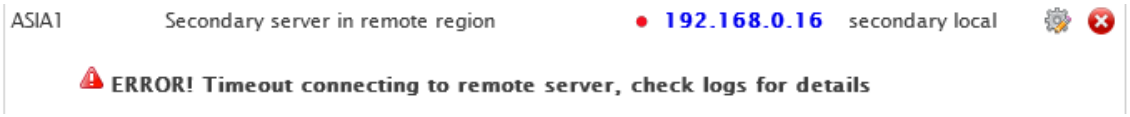
The configuration possibilities with high availability and scalability are endless, and these examples and guides are for common configurations only. For the best configuration for a particular project, please contact your EveryonePrint specialist for guidance and recommendation.

14.1 Cluster Servers Overview

When an EveryonePrint server starts up and connects to the EveryonePrint database, it will register itself in the EveryonePrint system.

Server name	Description	Address	Configuration
LONDON1	Server 1 in failovercluster A	192.168.0.11	primary shared
LONDON2	Server 2 in failovercluster A	192.168.0.12	primary shared
ASIA1	Secondary server in remote region	192.168.0.16	secondary local
LONDON3	Additional server for load balancing	192.168.0.13	secondary shared
LONDON4	Additional server for load balancing	192.168.0.14	secondary shared
MAIL1	Dedicated server to just downloading emails	192.168.0.15	secondary local
NEWYORK1	Secondary server in remote region	192.168.0.10	secondary local

Servers are continually checked for status. If a server fails, an alert is shown in the view and a notification email is sent to the administrator notification email address, if configured.



Clicking the address of the server, will open a new browser window with the destination servers administration interface.

14.1.1 Server Types

There are 2 types of servers:

Primary Servers – Primary servers run all the EveryonePrint Web, Print and Database services, and manages overall internal processes as well as licensing when using Enterprise licenses. A single EveryonePrint server installation will always run as a primary server.

IMPORTANT! There must only be 1 active primary server in a cluster configuration, as the primary server run essential database and management tasks.

Secondary Servers – Secondary servers run the EveryonePrint Web and Print services, and are designed to be additional servers for load balancing, additional job processing and printing, or additional servers configured for specific roles, such as servers dedicated to downloading emails and similar.

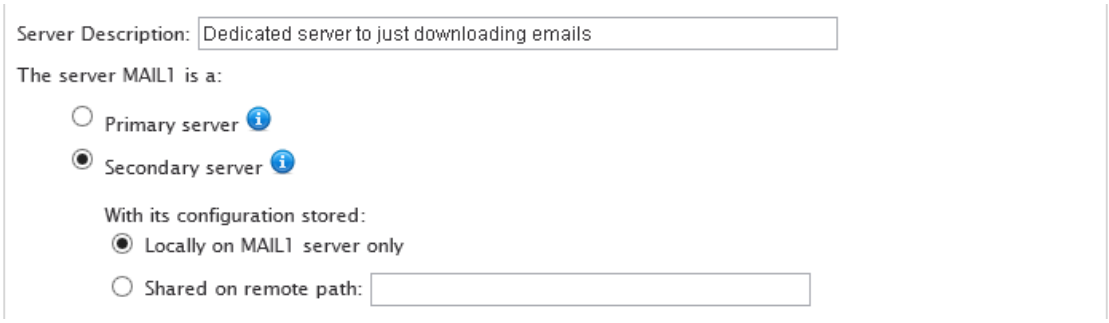
Functions possible	Primary	Secondary
Web services	Yes	Yes
Print Service	Yes	Yes
Database Service	Yes	No
Job conversion and printing	Yes	Yes
Web Print	Yes	Yes
Driver Print	Yes	Yes
Email Print	Yes	Yes
Mobile Print	Yes	Yes
Google Cloud Print	Yes	No
Management of Devices	Yes	No
Configuration of Wide Area Mobile Print	Yes	No

Google Cloud Print services run only from the Primary server.

14.1.2 Configuration types

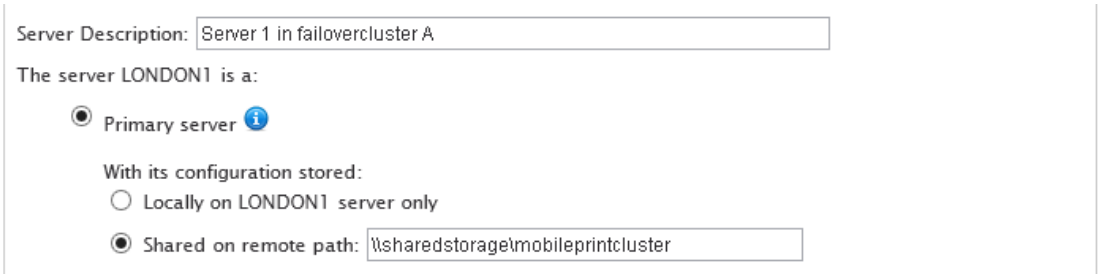
An EveryonePrint server in a cluster configuration can use either its own configuration, or it can use a configuration shared by multiple servers.

Local configuration



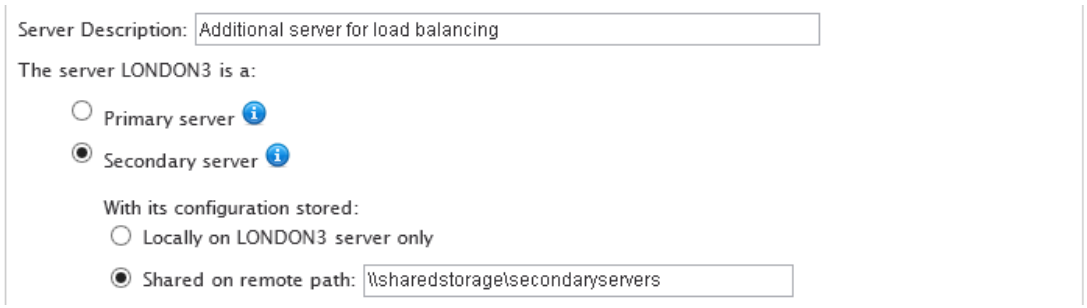
A local configuration means the server uses its own configuration stored locally on the server. It will use printers from the central system database, but all other settings, such as email or authentication configuration, are set locally. This is useful in cluster configuration, if adding additional secondary servers which perform a dedicated role, such as downloading email from a mail server.

Shared configuration



A shared configuration means that the configuration is stored in a shared location such as a network file share or similar, and shared between multiple servers. Configuration can be set from any of the shared servers, using that same shared configuration.

In a cluster configuration with many servers with different roles, different groups of servers can share different configurations, for example, a group of secondary servers dedicated to job processing can share their own specific configuration.

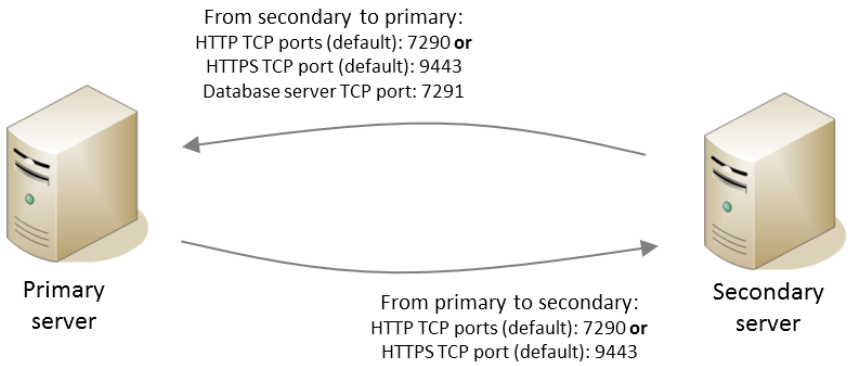


14.2 Prerequisites for a cluster configuration

For a successful EveryonePrint cluster configuration, all servers in the cluster must have stable and fast network connections.

- High speed network, such as 1 Gigabit Ethernet
- Highly available shared storage, such as NAS or SAN
- Firewall ports open for servers:
    - Primary server type:
        - HTTP tcp port (default): 7290 **or**
        - HTTPS tcp port (default): 9443
        - Database server port 7291
    - Secondary server type:
        - HTTP tcp port (default): 7290 **or**
        - HTTPS tcp port (default): 9443

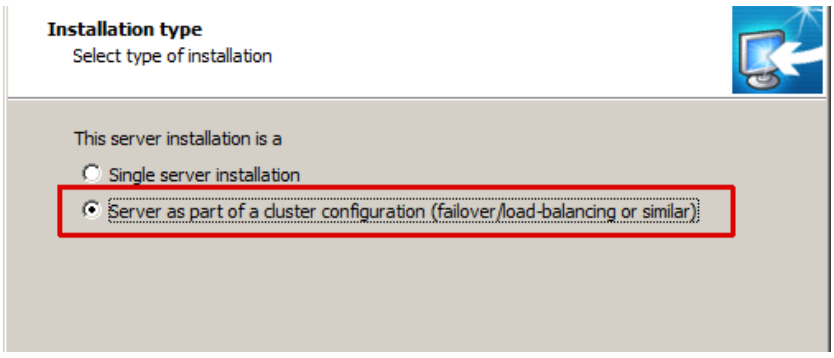
Secondary servers connect to the primary server for job information, licensing validation and similar. The primary server connect to the secondary server for regular status checks.



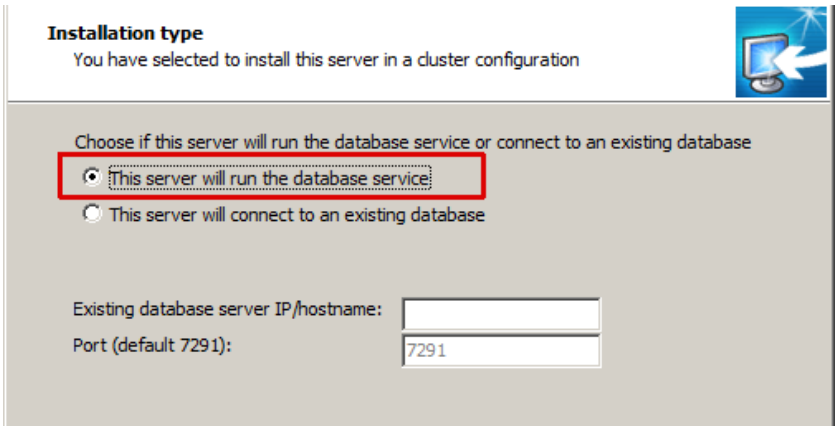
14.3 Configuring a primary server

A primary server in a cluster configuration is a standard EveryonePrint server, running all the usual EveryonePrint Web, Print and Database services. An existing single EveryonePrint can automatically be a primary server for other secondary servers in a cluster configuration.

Install a primary server simply by running the EveryonePrint installer, and choose to install **Server as part of a cluster configuration**.



And then **This server will run the database service**.



This will install a server with the standard Web, Print and Database services, as a standard single EveryonePrint server.

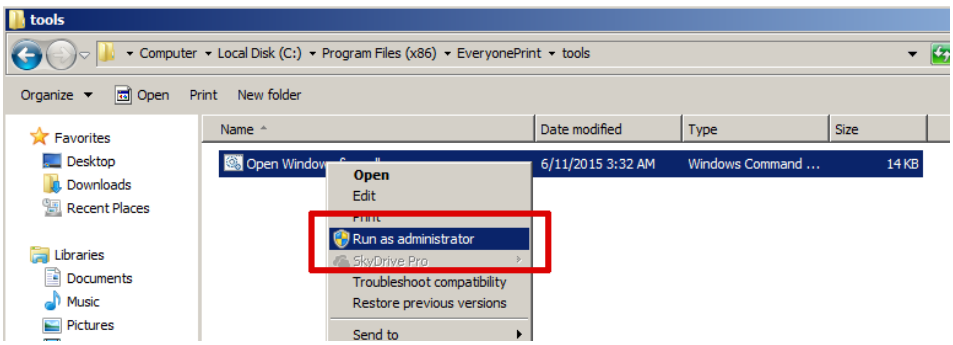
14.3.1 Open firewall on primary server

Since secondary servers will communicate with the database running on the primary server, ensure that any firewalls allow incoming traffic on default database TCP port 7291.

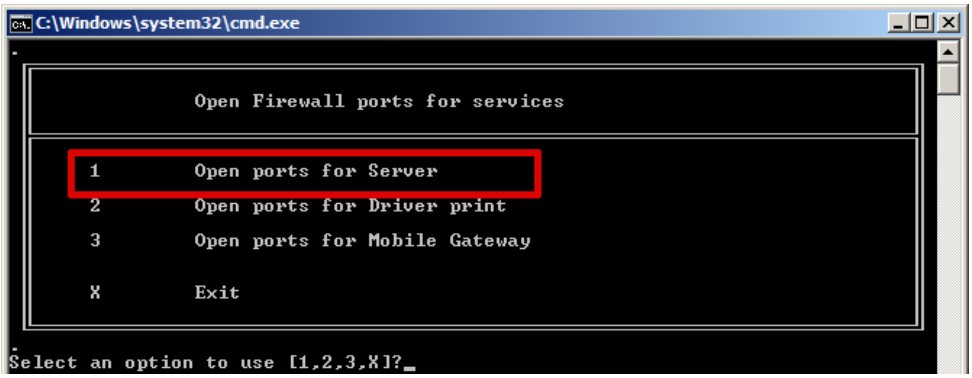
EveryonePrint includes a command line script for easily configuring the Windows firewall on the server.

The script is located in the tools sub folder of the EveryonePrint installation folder, typically C:\Program Files (x86)\EveryonePrint\tools

Run this cmd line script as Administrator.



Choose option 1 to open ports for server.



This will create the necessary rules in the local Windows firewall.

14.3.2 Configure shared spool

Aside from the normal configuration of EveryonePrint, such as creating and adding print queues to EveryonePrint, it's necessary to configure the spool directory where EveryonePrint stores files that have been received from users, are being processed and stored until printing.

Open the EveryonePrint Administrators interface and go to General Settings. Under **Application Settings** change the **Application spool folder** to a highly available shared storage, accessible by all servers in the cluster.

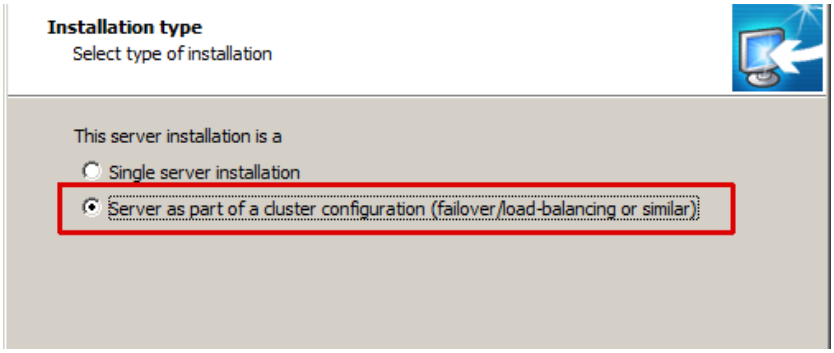
This must be entered as a full path to the directory, either a network share UNC path, eg \\fileserver\spool or a local mapped drive and folder, eg. x:\spool.

Confirm that the user account under which the EveryonePrint Web service is running has read and write rights to the shared path.

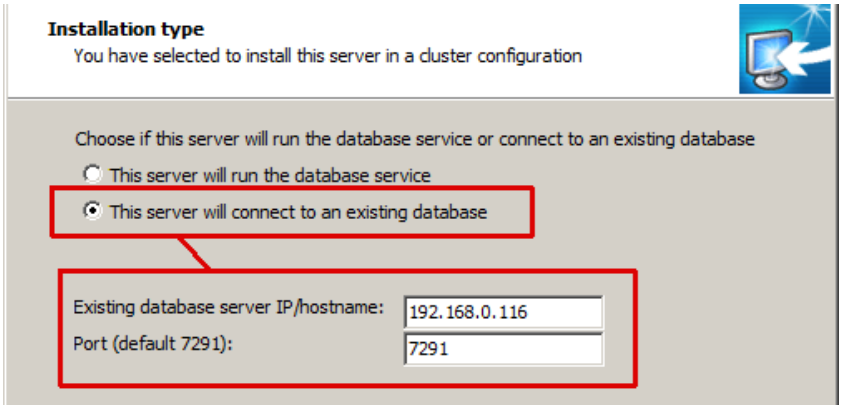
14.4 Configuring additional secondary servers

Secondary servers run the EveryonePrint Web and Print services, and are designed to be additional servers for load balancing, additional job processing and printing, or additional servers configured for specific roles, such as servers dedicated to downloading emails and similar.

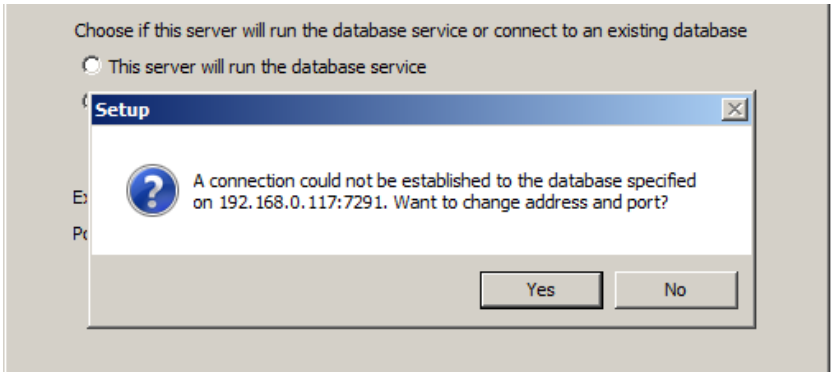
Install a secondary server simply by running the EveryonePrint installer, and choose to install **Server as part of a cluster configuration**.



Then choose **This server will connect to an existing database** and enter the server IP/hostname of the primary server or primary server failover cluster IP address.



When clicking **Next** a connection is attempted to the database service, which may take a few seconds.



If a connection cannot be made and an error is shown, it is possible to either go back and change the parameters or continuing. However, the secondary EveryonePrint server will not function without a working connection to the primary database.

14.4.1 Configure shared spool

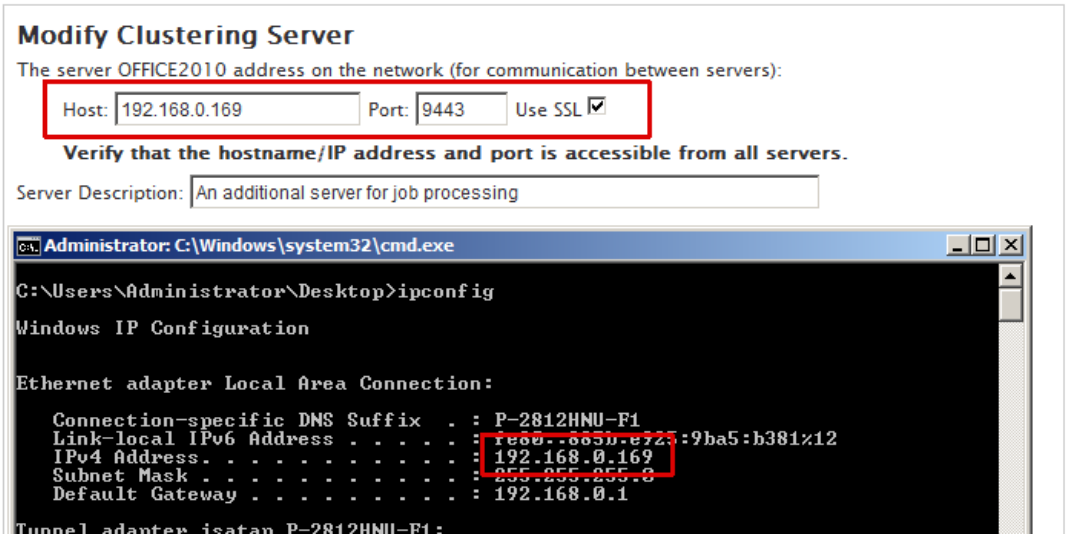
After installation, open the EveryonePrint Administrators interface on the secondary server, and go to General Settings. Under **Application Settings** change the **Application spool folder** to the same shared storage, as the primary server.

Confirm that the user account under which the EveryonePrint Web service is running has read and write rights to the shared path.

14.4.2 Modify secondary servers cluster configuration

In the EveryonePrint Admin to go Clustering and choose to edit the new servers entry.

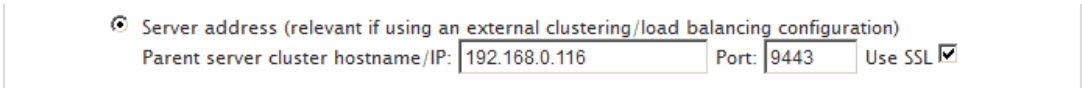
Enter the secondary servers hostname or IP address and port on the network, so other servers in the cluster can communicate with the server. For your own reference, enter a server description as well.



Choose whether the seondary servers configuration is local to the server, or if it should use a shared configuration.

Specify the parent server, as a specific primary server if there are no failover cluster configuration or external load balancers included in the configuration.

Or specify the parent server, if the primary server is behind a central failover cluster IP address/hostname or an external load balancer.



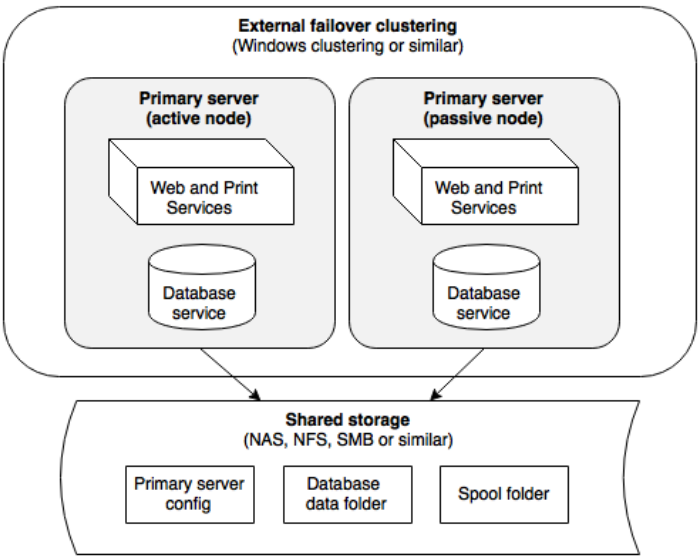
14.4.3 Replicate printers from primary

Printers that exist on the primary server, must be replicated to the secondary server.

See the section 14.7 Replicate printers across all servers for more information about replicating printers.

14.5 Installing EveryonePrint in a Windows failover cluster

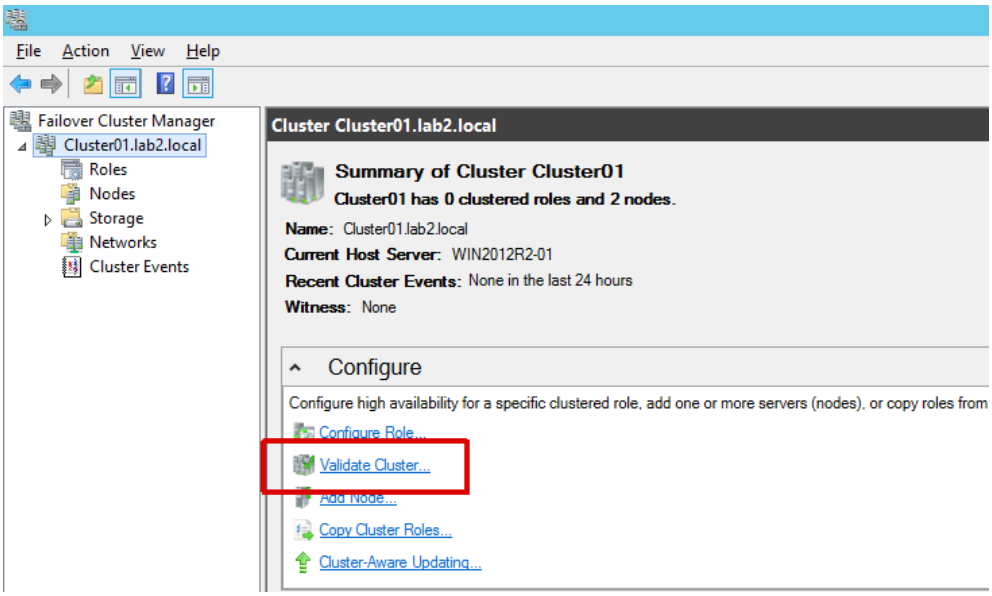
For high availability and redundancy, EveryonePrint can be installed in a Windows active/passive failover cluster, using Windows clustering services.



This guide does not cover the core setup and configuration of a Windows cluster, as comprehensive literature already exist on the subject, but assumes that Windows clustering services have been successfully installed.

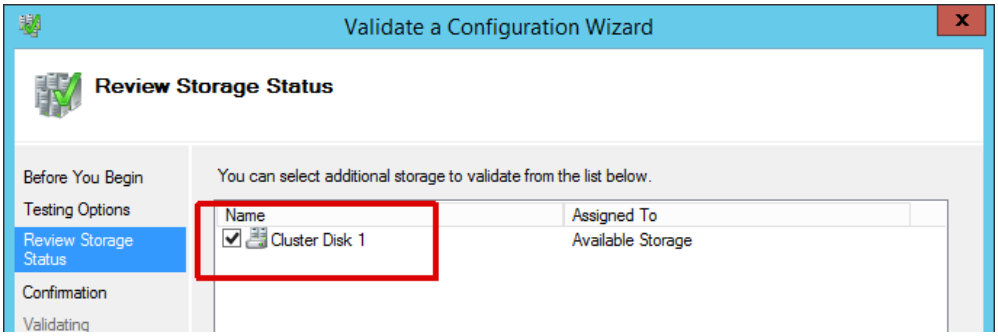
14.5.1 Validate cluster

Begin by validating the cluster.

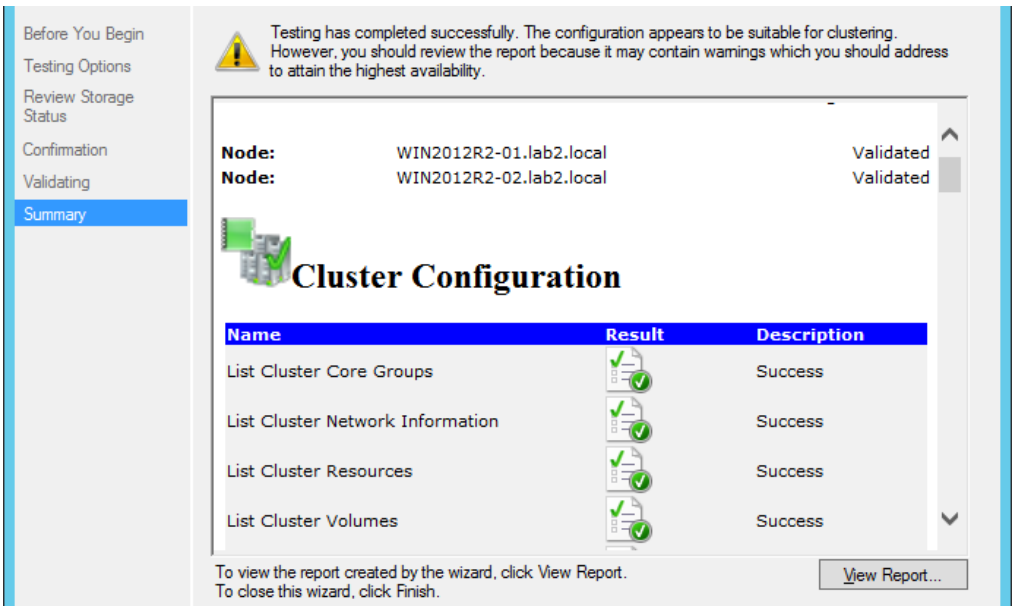


Choose to run all tests.

Include all cluster storage devices in the validation tests.

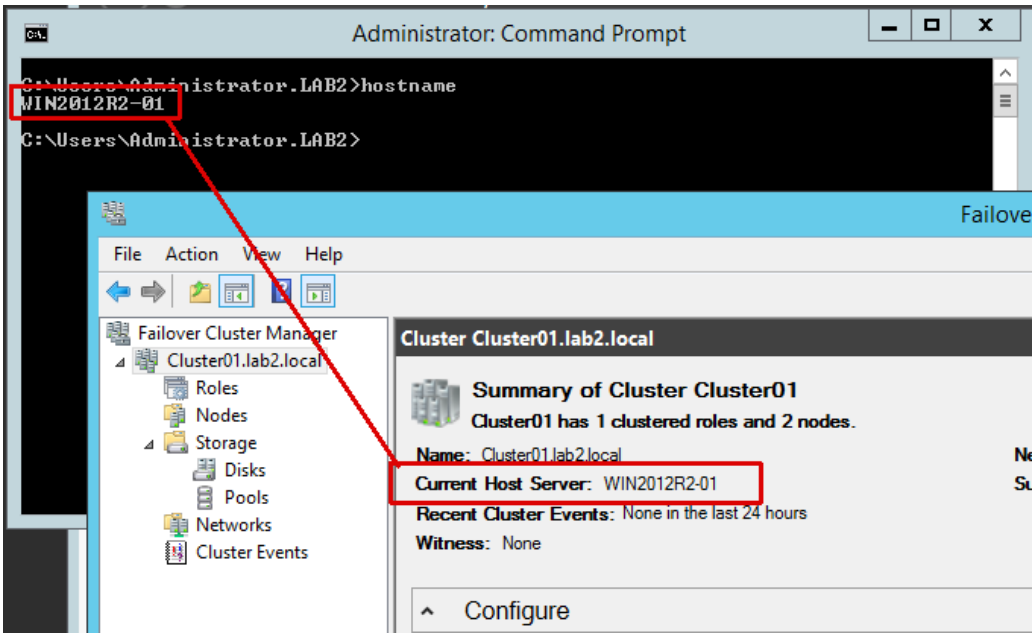


The tests must complete successfully without errors for EveryonePrint to run successfully in a failover cluster configuration.

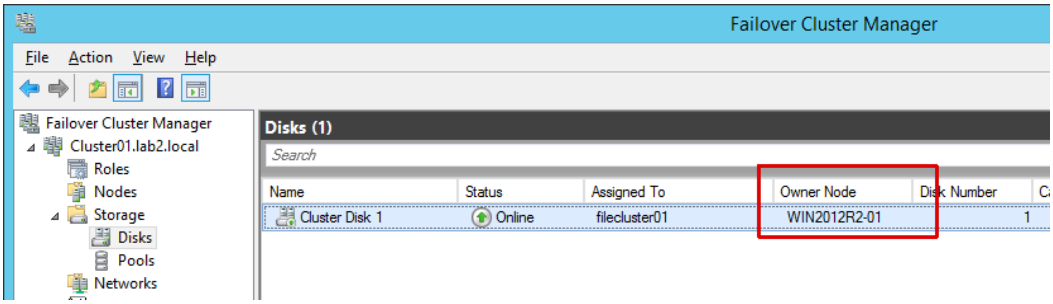


14.5.2 Install EveryonePrint on first active node

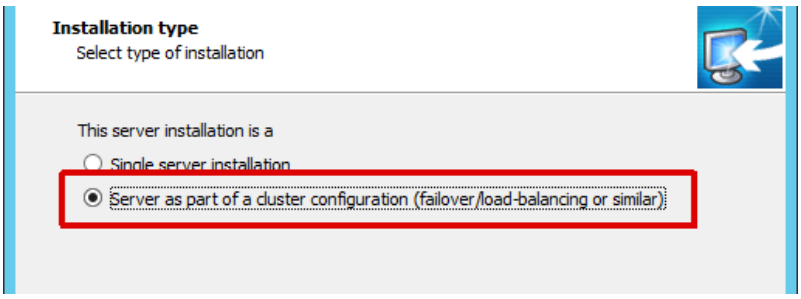
EveryonePrint must be installed on the active node. To make sure that EveryonePrint is installed on the active node, ensure that the current host is the current host owner.



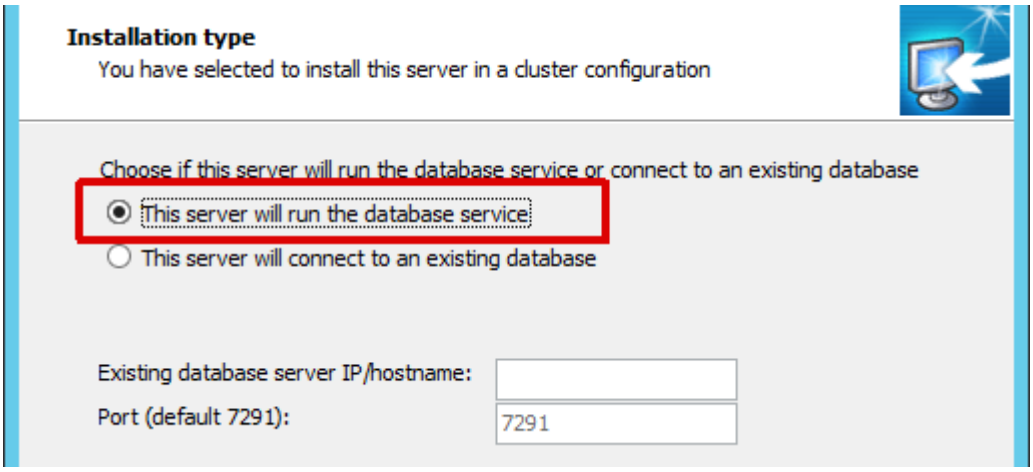
Confirm that the current active node has access to all relevant cluster disk storage.



Now run the installer, choosing any local directory on the server. Next choose Server as part of a cluster configuration.



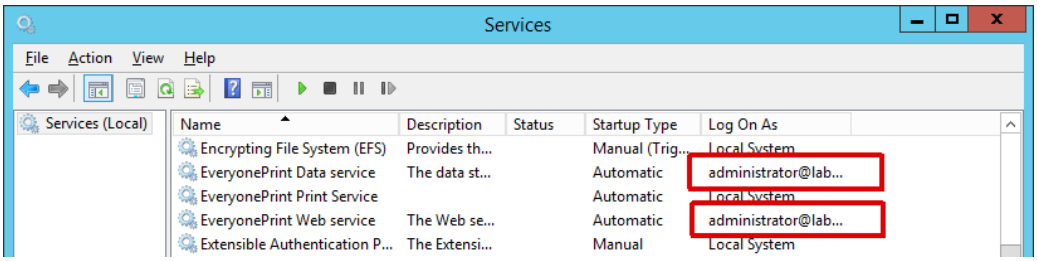
Then choose that this server will run the database service.



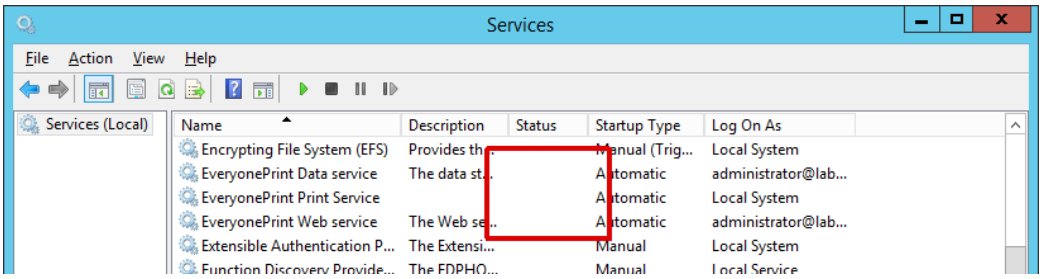
14.5.3 Change service logon accounts

After installer finishes, open the Windows services and change the logon account of the EveryonePrint Web service and the EveryonePrint Data service, not the EveryonePrint Print Service, the EveryonePrint Print Service must always run as localsystem.

The service logon account used must have full read/write rights to the shared cluster storage.



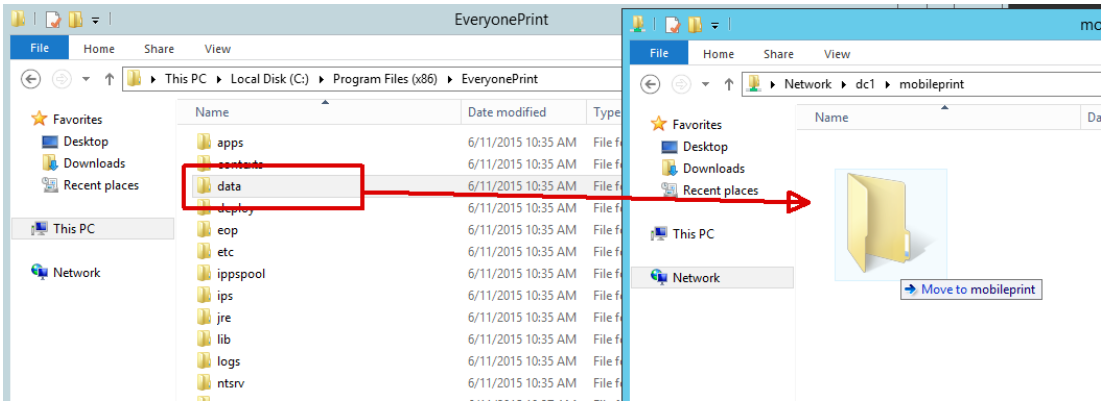
Restart services to confirm that the services can successfully start under the new accounts, then stop all services (start and stop of services will be controlled by the cluster services).



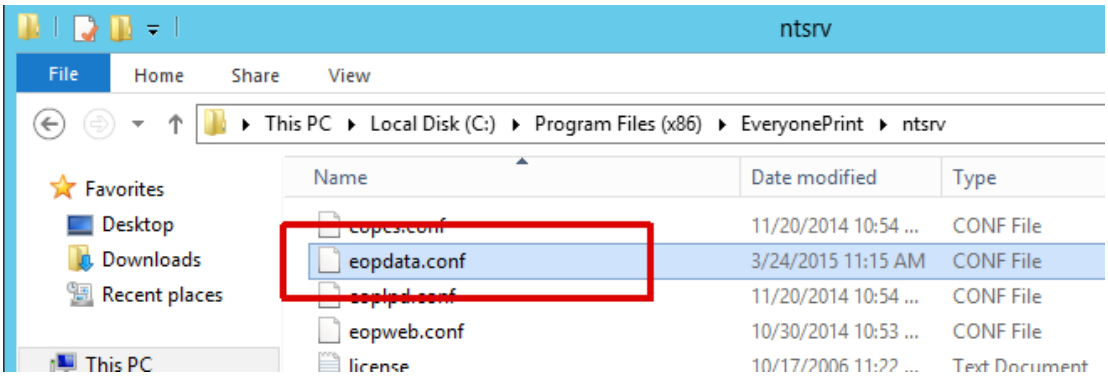
14.5.4 Move database to shared storage

As the database will be run by any of the nodes in the cluster, the database must be placed in a shared storage or cluster disk, accessible to all nodes in the failover cluster.

With services confirmed stopped, move the \data subfolder in the EveryonePrint installation folder, by default C:\Program Files (x86)\EveryonePrint to the shared storage, eg \\dc1\mobileprint in this example.



Next in the folder \ntsrv under EveryonePrint open the file eopdata.conf in an editor such as Notepad.



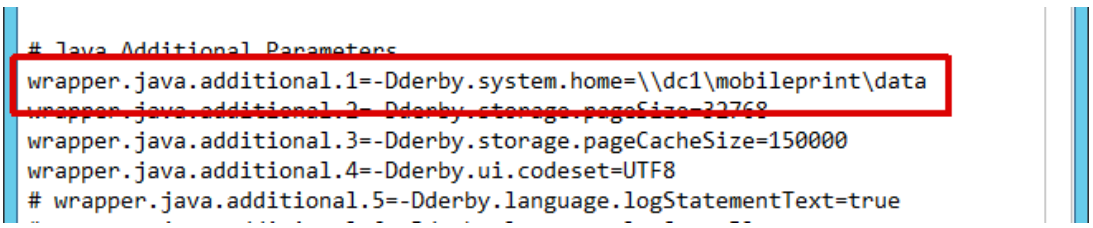
Modify the following entry from:

wrapper.java.additional.1=-Dderby.system.home=../data

To the absolute path of the new location of the data folder, for example:

wrapper.java.additional.1=-Dderby.system.home=\\dc1\mobileprint\data

Or another shared cluster disk path, such as z:\mobileprint\data



Save the file.

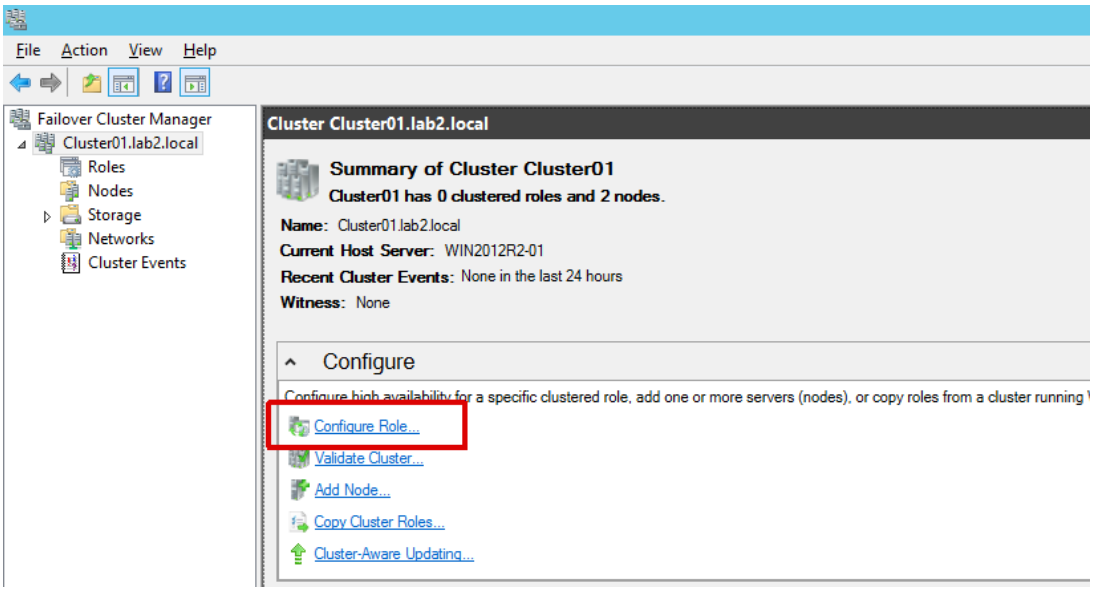
If the overall EveryonePrint cluster configuration is planned to include additional secondary role servers, make sure that the firewall on the primary node has been configured to allow for incoming connections on the database port 7291 (default). See section above on configuring Windows firewall with a script.

Repeat the above steps on all additional nodes:

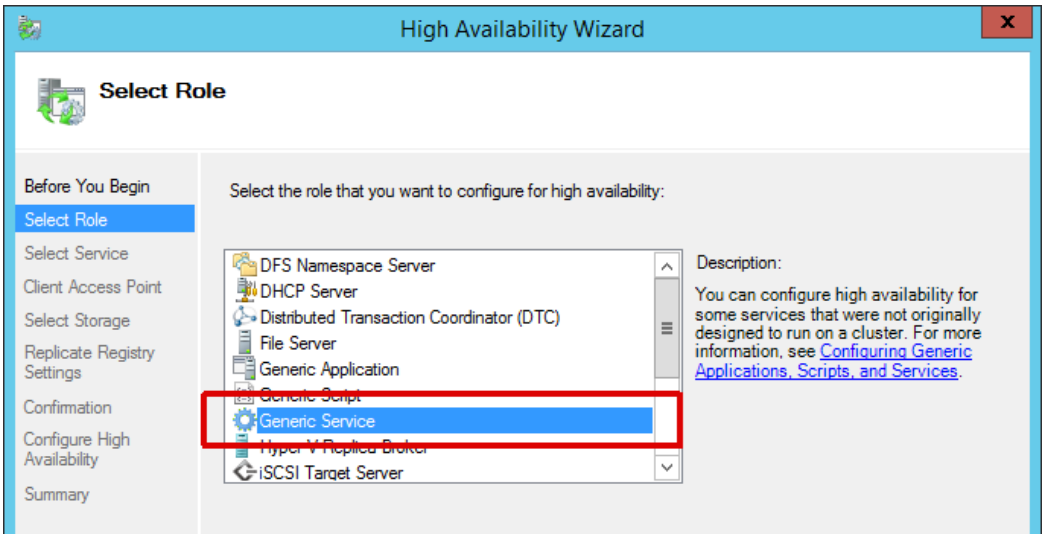
1. Run installer, choose server is part of cluster and that the server will run the database service
2. Change logon account on EveryonePrint Web and Database to the same service account
3. Stop all EveryonePrint services
4. Edit the ntsrv\eopdata.conf to have the EveryonePrint Data service use the shared \data folder.

When all nodes have the EveryonePrint services installed, it's time to configure the EveryonePrint cluster resource in the Windows cluster services.

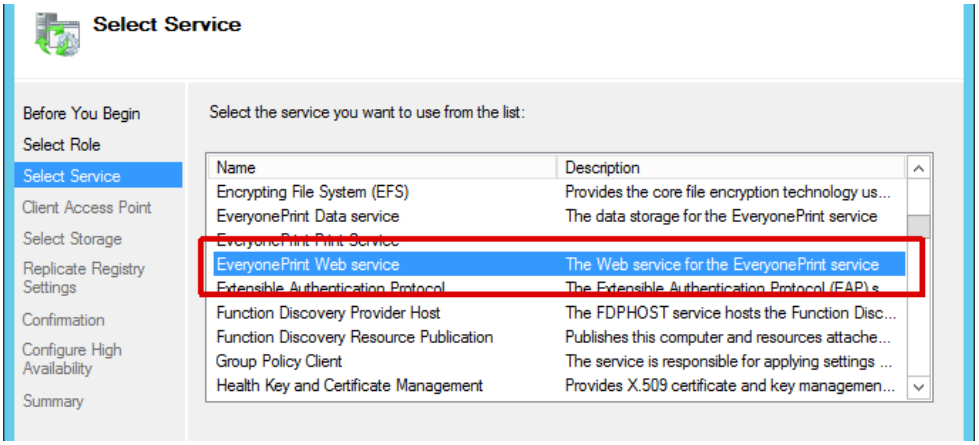
On the current cluster owner node, open Windows Failover Cluster manager, choose the cluster and **Configure Role**.



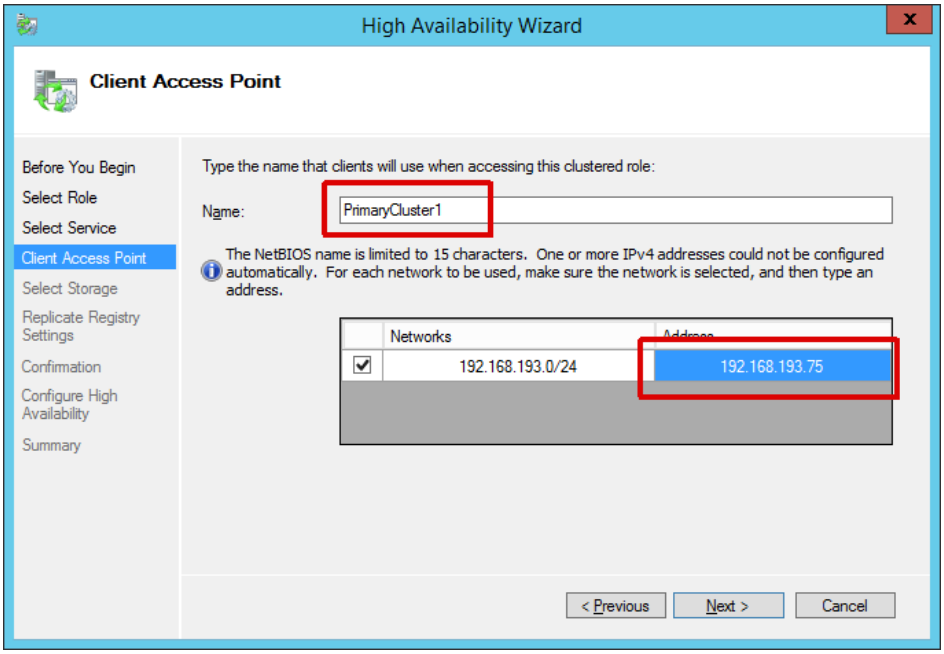
Choose to create a **Generic Service**.



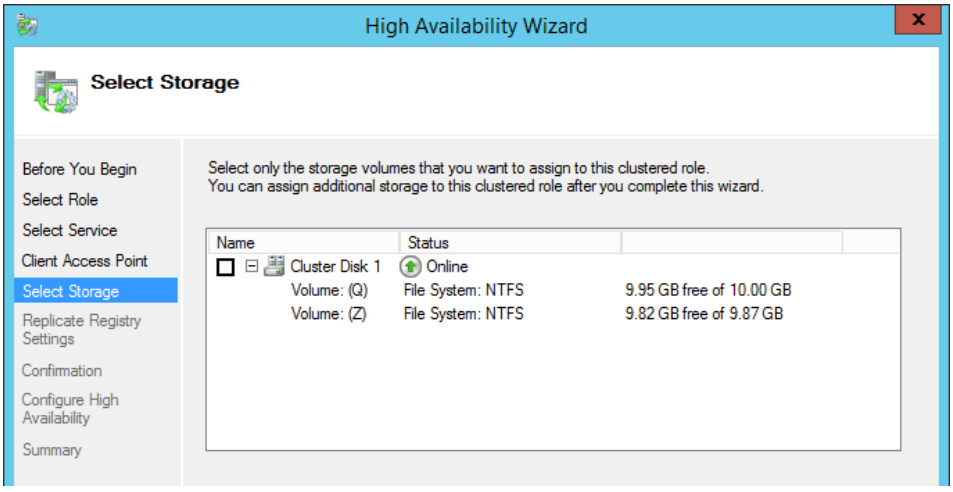
Select the **EveryonePrint Web service** and click **Next**.



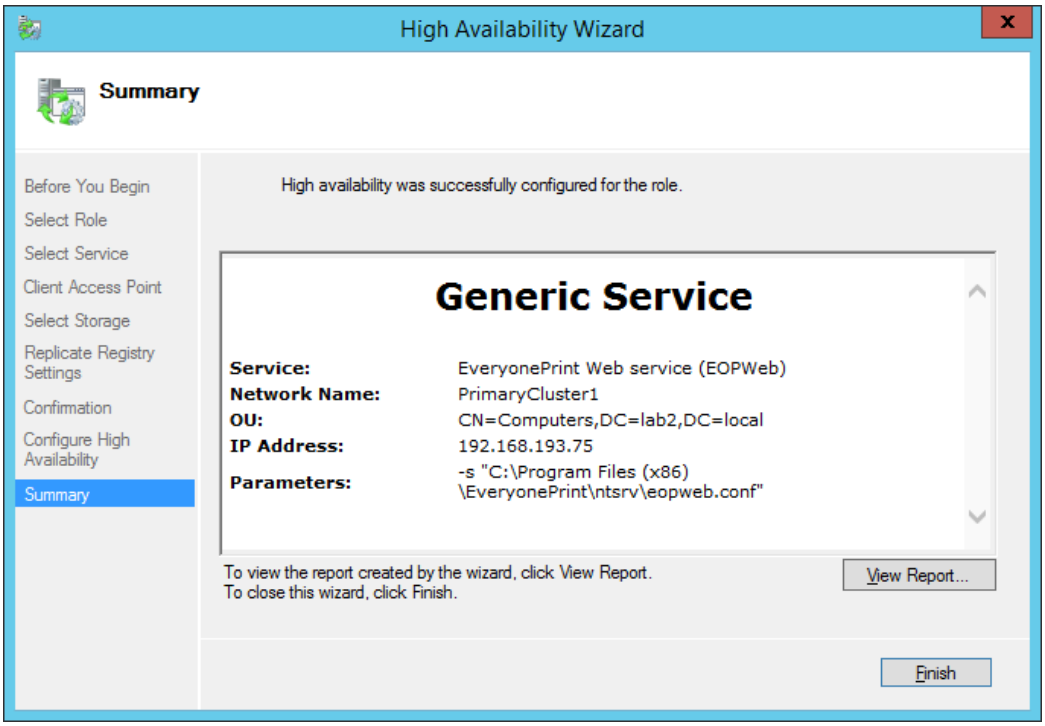
Enter a descriptive name for future reference, and the address for the EveryonePrint primary cluster as it will be accessed by users and other secondary EveryonePrint servers.



Select any storage as needed for the cluster configuration.

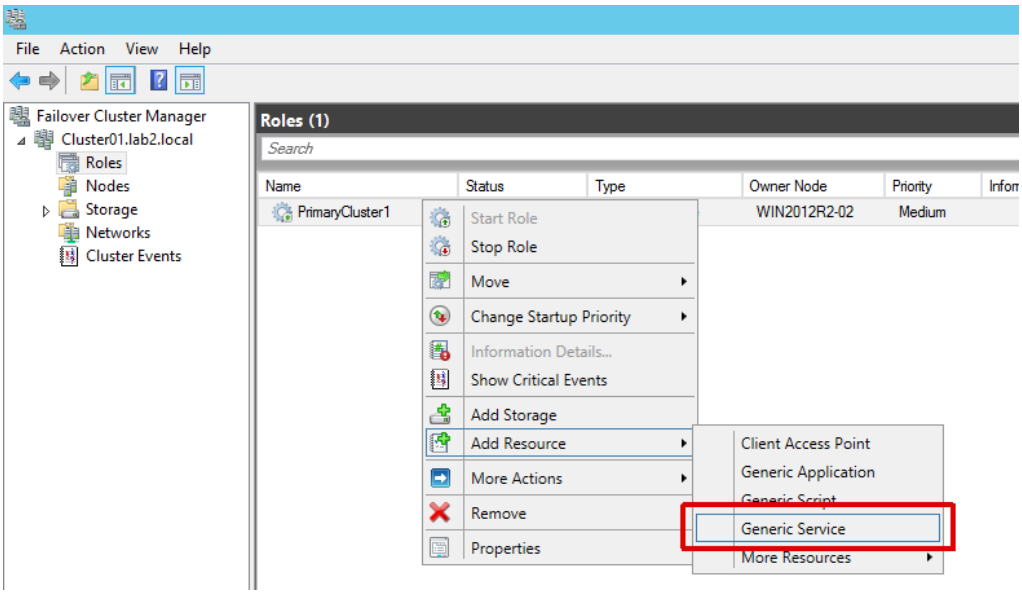


Skip the section on Windows registry replication, as EveryonePrint does not store values in the registry.

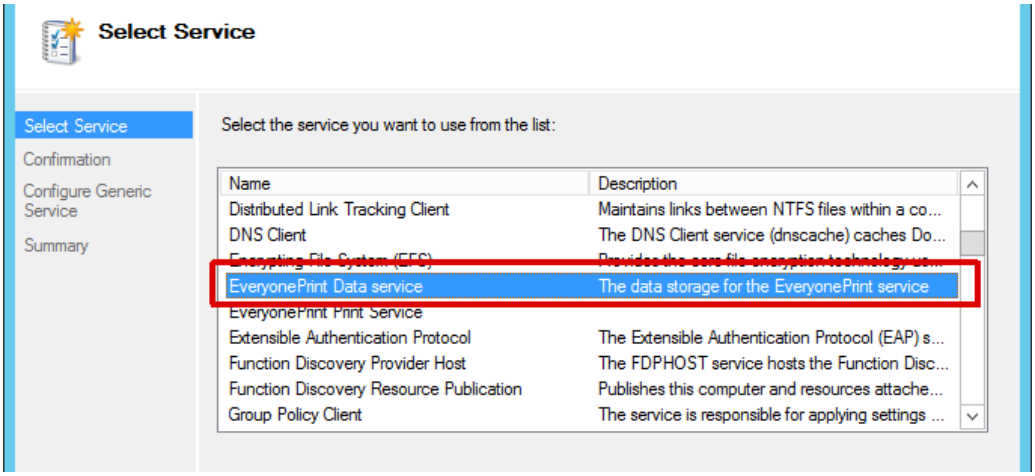


With the cluster resource created and first service added, it's time to add the two other services, EveryonePrint Data and EveryonePrint Print Services, to the cluster resource.

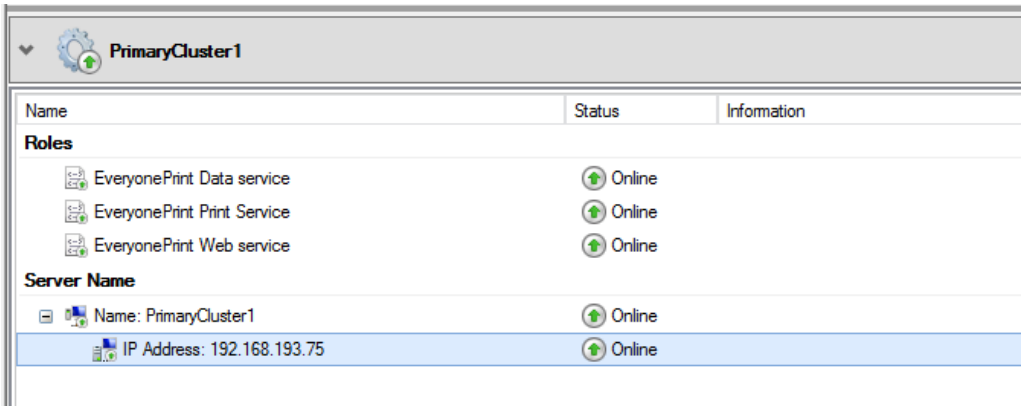
Under the **Roles** section, right-click the cluster resource, choose **Add Resource** and **Generic Service**.



Select the EveryonePrint Data service



Repeat for the EveryonePrint Print Service, and confirm that all services have been added by selecting the cluster group and viewing the resources, and bring all services online.

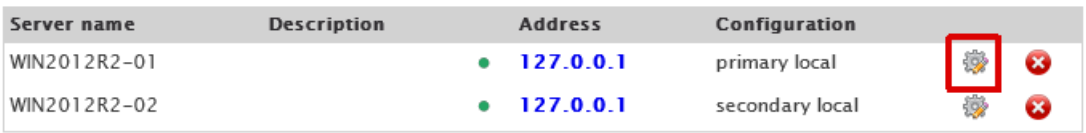


The EveryonePrint Web interface should now be accessible on the cluster IP address. If not accessible, confirm that there are no firewalls blocking access on the current active node, otherwise check logs on the active node.

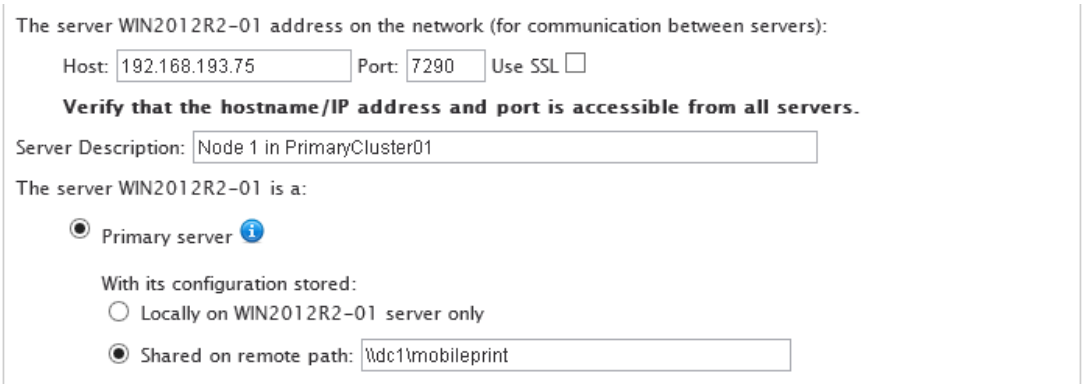
14.5.5 Modify primary cluster nodes configuration

Next it's necessary to configure the primary nodes to share the same configuration, so when the active node changes, everything remains the same.

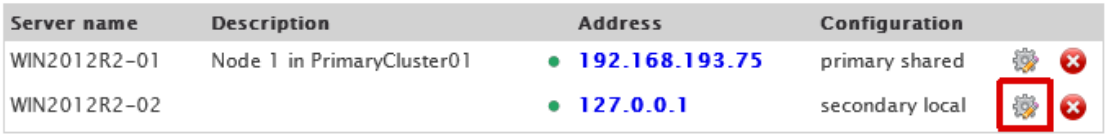
Confirm the current active node and go to EveryonePrint Admin interface and Clustering section, and click to edit the current active node.



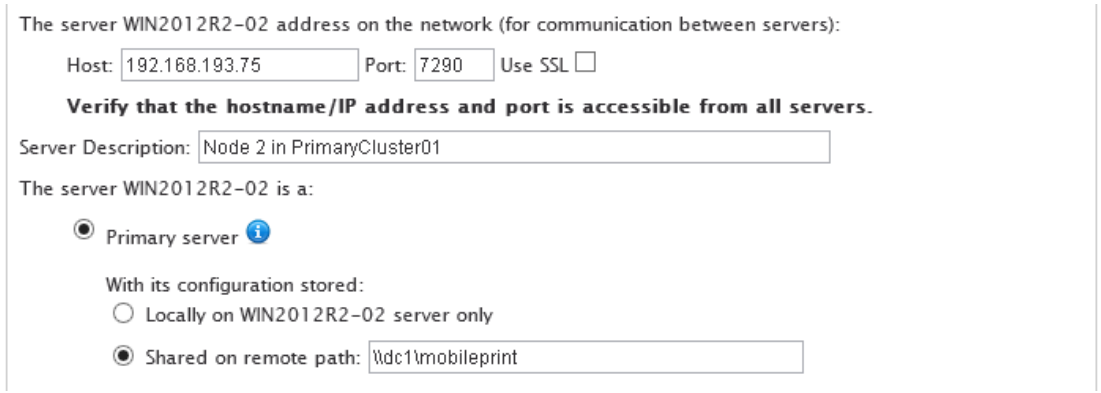
Enter the cluster IP address under Host, a description and choose to store configuration in a location accessible by all nodes in the cluster. This shared location can either be a network share, or a cluster disk which moves with the active node.



Repeat for all other primary cluster nodes.



Write the cluster host, description, choose it's a Primary server and to use the same shared configuration.



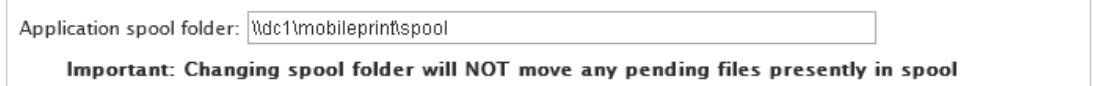
Save changes.

When returning to the list, a warning will be shown saying that only 1 primary server can run at the same time. With the failover configuration in place, Windows will start and stop services as necessary, so there exist only 1 active node.

14.5.6 Change the primary servers spool folder

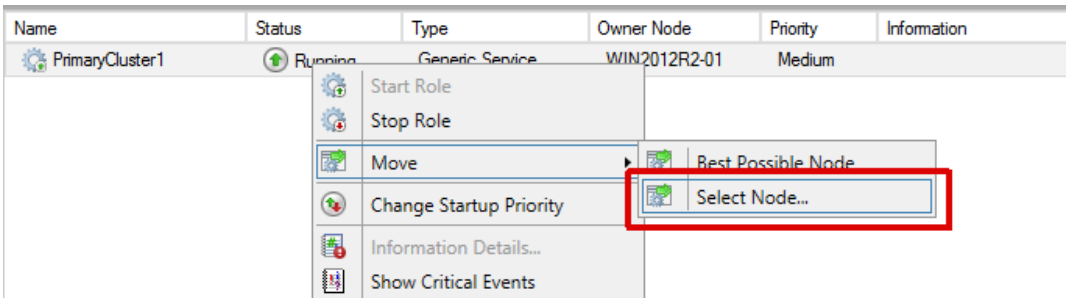
It's important that the spool directory of EveryonePrint, where print jobs are held while being processed, awaiting release etc, is located in a shared storage, such as network share or cluster disk volume that moves with the active node.

Create a dedicated folder, such as \\dc1\mobileprint\spool and then go to General Settings. Under **Application Settings** change the **Application spool folder** to the shared storage.



Confirm that the user account under which the EveryonePrint Web service is running has read and write rights to the shared path.

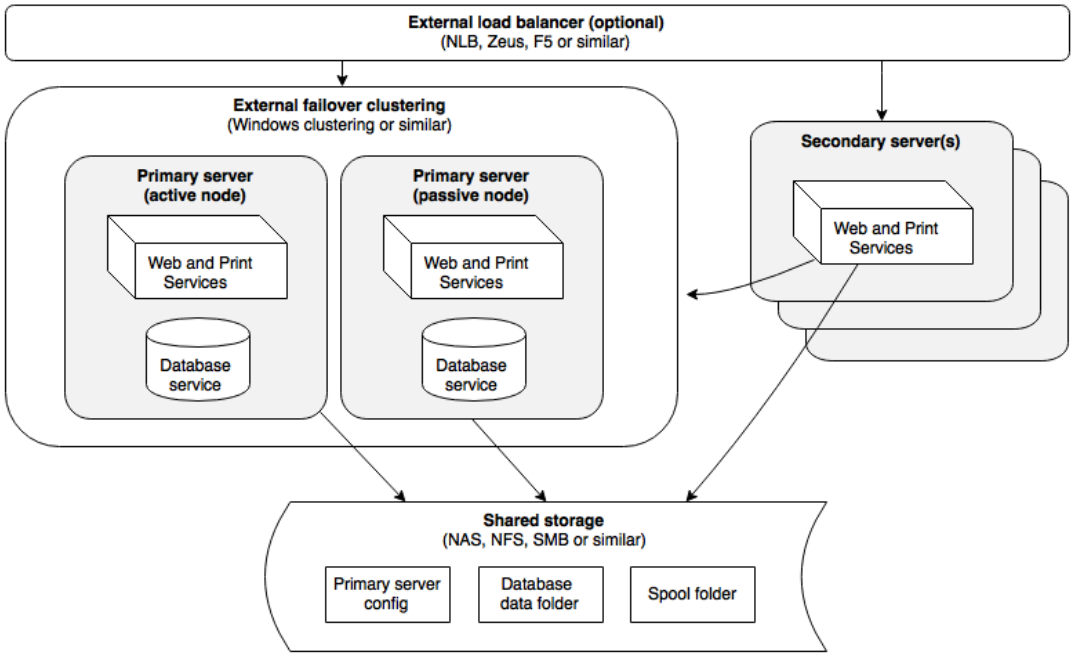
The cluster configuration is now complete. It is strongly recommended to thoroughly test failover, by simulating failures and changing the active node several times, confirming in between each switch, that EveryonePrint is functioning correctly.



IMPORTANT! Make sure that all printers created on the active primary server are replicated across all nodes in failover cluster, or printing will fail, when nodes failover.

14.6 Adding external load balancer for high front-end scalability

EveryonePrint clusters can be combined with external load balancing, to achieve very high scalability and redundancy.



Use an external load balancer, when many users will access the front-end interfaces, such as Web Print, Driver Print or Mobile Print, to balance the requests between many servers behind the load balancer.

Configure primary and secondary servers as needed, as described above, then add an external load balancer, such as F5 (https://f5.com) or Zen (http://www.zenloadbalancer.com) which be either a physical appliance or a software based load balancer, or Windows NLB (https://technet.microsoft.com/library/hh831698.aspx).

The configuration possibilities with high availability and scalability are endless, and these examples and guides are for common configurations only. For the best configuration for a particular project, please contact your EveryonePrint specialist for guidance and recommendation.

14.7 Replicate printers across all servers

Since any server in a cluster configuration can be sending print jobs to printers, all servers are required to have all print queues installed.

In many cases, customers using a single "follow me" print queue, this is trivial, since there has to be only a single print queue on each server. But for customers with thousands of printers, it's impractical to manually create and manage print queues across servers.

Fortunately, it's very simple to script print replication across many servers using the Windows Print Migration tools.

14.7.1 Using Windows Print Migration Printbrm.exe command-line tool

The Windows print migration tool, printbrm.exe, is an excellent tool for replicating printers across multiple servers.

For detailed information about print migration on Windows servers, see:

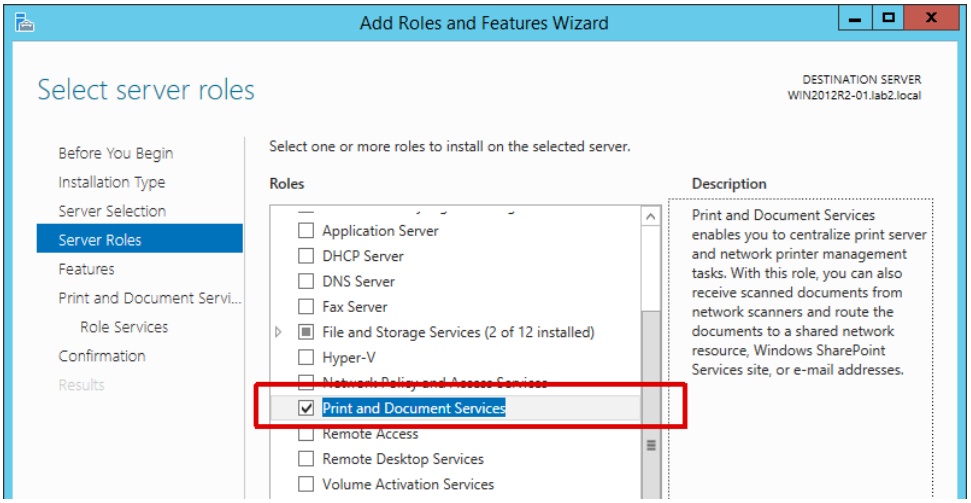
https://technet.microsoft.com/en-us/library/cc722360.aspx

https://technet.microsoft.com/en-us/library/jj134237.aspx

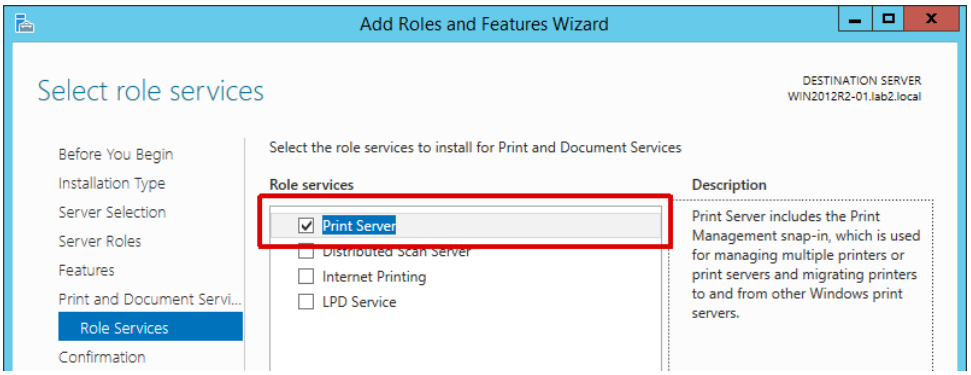
The migration tool is included in the Print Management Windows tools that come with the Print Server role service on Windows servers.

For Print Migration to work using printbrm.exe, at least 1 printer must be created and shared on all servers involved in replication.

Begin by adding the **Print and Document Services Role** on all servers.



Only the **Print Server** role service is required.

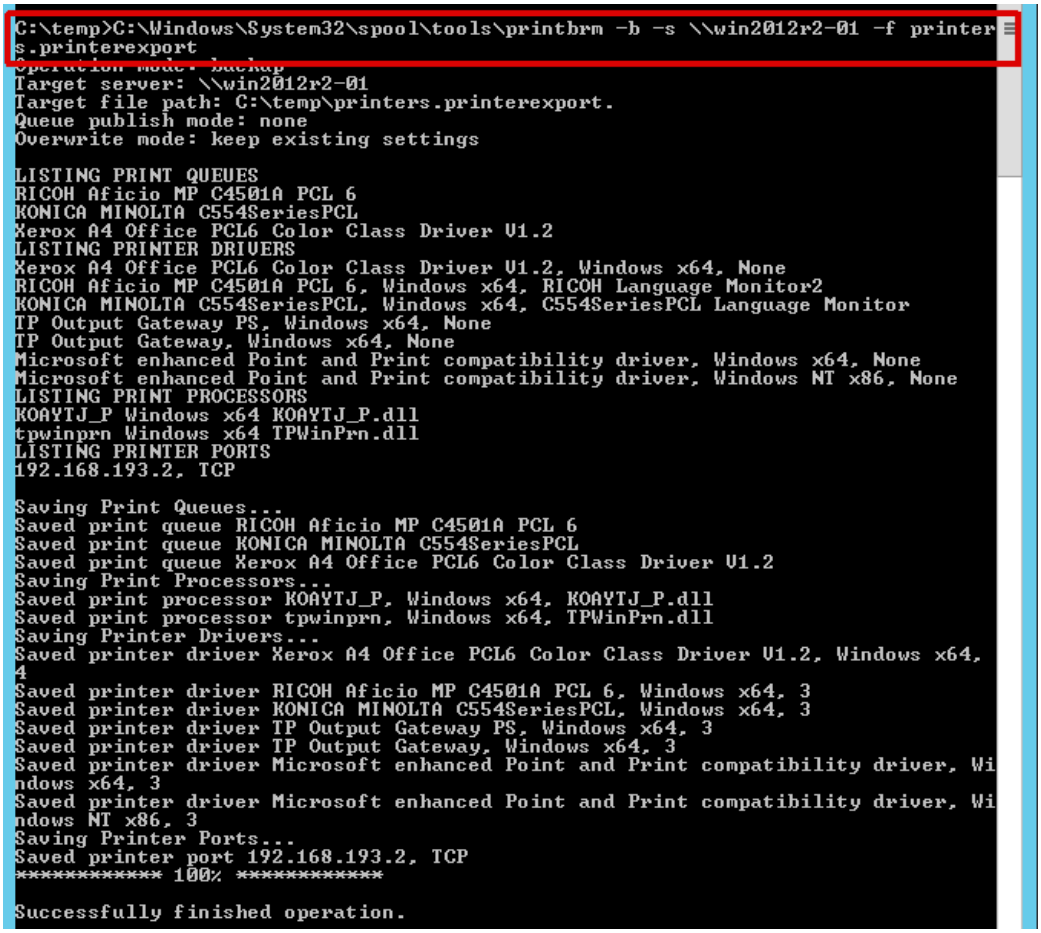


Create at least 1 print queue on all servers and share this queue, even if it's a dummy queue. Choose to not publish the shared printer in the domain directory, to avoid users printing to the queue directly.

With the Print Management tools installed, we can replicate printers. First open a command prompt as administrator, as a user with administrative rights on source and destination server on the source server, containing all the printers to replicate.

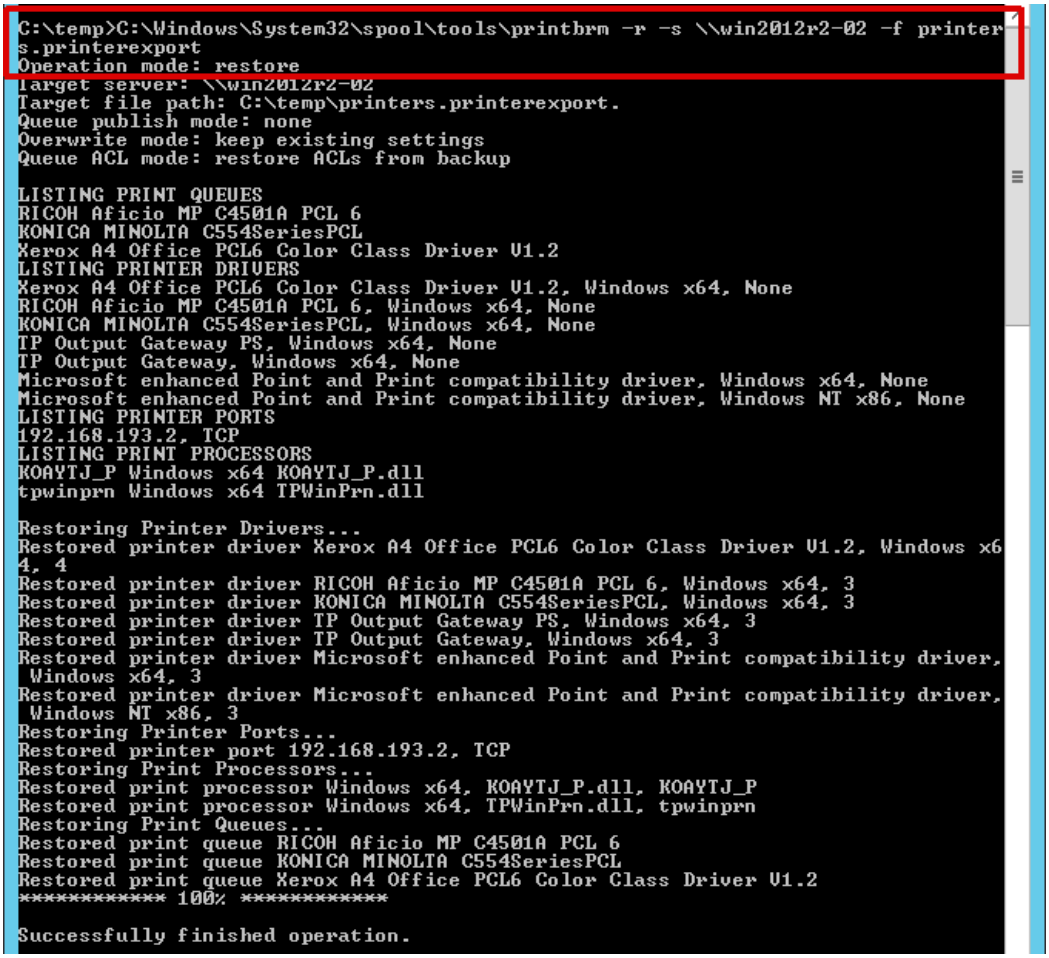
Backup the printers using the command line:

Printbrm.exe -b -s \\servername -f printers.printerexport



Now in the same command line window, run the command to restore the backup file to the new destination server.

Printbrm.exe -r -s \\newserver -f printers.printerexport



Printers will now exist on destination server, identical to the source.

The above commands can be included in a BAT or CMD file and be scheduled using Windows Task Manager, for example:

```
@echo off
C:\Windows\System32\spool\tools\printbrm -b -s \\primary -f c:\temp\printer
s.printerexport
C:\Windows\System32\spool\tools\printbrm -r -s \\secondary1 -f c:\temp\printer
s.printerexport
C:\Windows\System32\spool\tools\printbrm -r -s \\secondary2 -f c:\temp\printer
s.printerexport
```

14.8 Licensing in clustered configurations

EveryonePrint Clustering features are available in Trial, Professional and Enterprise license levels.

No license key required to deploy an EveryonePrint cluster during the initial trial license.

If using a Professional license, a Professional license key must be entered on each server in the cluster configuration.

If using an Enterprise license, an Enterprise license key is only needed on the first primary server. All other servers in the cluster configuration will validate its license from the parent server, the primary server containing the Enterprise license, and it's not necessary to enter any license keys on additional servers.

14.9 EveryonePrint clustering in high-availability virtual configurations

Virtual server platforms such as VMWare, Hyper-V and Xen offer features to achieve very high availability and very quick disaster recovery of individual virtual servers, and are generally recommended as part of a disaster recovery policy.

EveryonePrint can work seamlessly with virtual machine platforms, as the use of a virtual server is transparent to the EveryonePrint server application. This includes Windows print servers with Hyper-V high availability.

The high availability features offered by the virtual platforms, generally only apply to the individual virtual server instance as a whole, and does not in itself provide an application level redundancy, so a multi-server EveryonePrint cluster configuration is still recommended, if high application availability or redundancy is required.

15. Backup EveryonePrint data

To backup EveryonePrint settings, copy the following files or directories to a safe location:

C:\Program Files (x86)\EveryonePrint\eop.xml
C:\Program Files (x86)\EveryonePrint\printers.xml
C:\Program Files (x86)\EveryonePrint\data (entire folder with subdirectories)

If you have changed Web port configuration or configured SSL certificates, backup this folder:

C:\Program Files (x86)\EveryonePrint\etc

16. Upgrading or Uninstalling EveryonePrint

Before upgrading to a new version, verify that your license has valid maintenance for access to software updates! If maintenance has expired and a new version is installed, the program will cease to function until the license is renewed or upgraded.

Before uninstalling or upgrading EveryonePrint, make sure to backup any existing data and configuration files in EveryonePrint.

To upgrade EveryonePrint, simply download and run the installer with the latest version of EveryonePrint. The installer will update your existing installation.

After upgrading an existing installation, confirm your settings in EveryonePrint, and if necessary re-active the Driver Print and Email Print in the EveryonePrint Admin.

During an update, the \jre folder may be overwritten, including any imported SSL certificates from mail or LDAP servers. It may be necessary to re-import SSL certificates from LDAP and mail servers after an update.

17. EveryonePrint API

EveryonePrint includes an API to allow third parties to interact with the EveryonePrint server from scripts or other applications, performing many of the functions available in the administrative UI's.

17.1 API licensing requirements

Certain API functions in the EveryonePrint API require a valid EveryonePrint Enterprise license. A licensing note will appear under the API function description below, if an Enterprise license is required.

17.2 Communicating with EveryonePrint API

The EveryonePrint API is a REST HTTP/HTTPS based API, which accepts Web GET/POST/PUT/DELETE commands with URL parameters, and returns either JSON or XML.

For example calling:

GET http://127.0.0.1:7290/api/rest.cfm/ServerVersion

Could return:

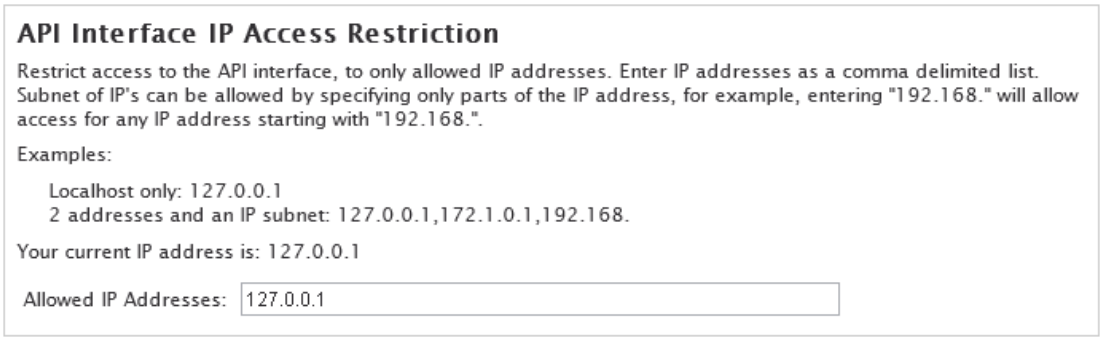
{"currentversion":"3.7.0"}

The API uses standard HTTP status codes, ie 200 for success, 401 for unauthorized and so on.

17.3 Securing API calls

Under Settings and API Access, specify the API authentication token, which must be supplied with each API call from third parties.

Further specify any IP addresses which are permitted to access the API.



If blank, any IP address is allowed to access the API.

17.4 Note about SSL and non-SSL communication

The EveryonePrint server fully supports HTTPS/SSL communication. A default self-signed SSL certificate for “localhost” is included in the EveryonePrint server, which allows for secure SSL communication such as:

```
https://localhost:9443/api/rest.cfm/ServerVersion
```

See the main documentation on how to create your own certificate.

By default EveryonePrint listens for non-SSL http traffic on port 7290 and SSL https on 9443, but please note that these ports may be changed by the EveryonePrint server administrator.

In this API documentation, we refer to the non-secure for consistency and simplicity.

It is strongly recommended to ONLY use SSL communication whenever possible, to reduce the risk of compromising authentication tokens and other similar sensitive data.

17.5 Logging and Troubleshooting

All errors produced by interaction with the API are logged to the central EveryonePrint log “eopapp.log” located per default in C:\Program Files (x86)\EveryonePrint\logs

The EveryonePrint Web server in addition writes a request log, logging all HTTP/HTTPS requests, also found in the \logs directory.

For troubleshooting, enable “Debug Logging” in the EveryonePrint admin interface, and the eopapp.log becomes very detailed with all API calls and responses.

17.6 Define return type format

By default the response format is JSON for any API calls which return data. The API can return either JSON or XML, which is controlled by specifying the Accept HTTP header in the request.

Example JSON (default):

```
curl.exe -X GET -i -H "X-EOP-AuthToken: xyz" -H "Accept: application/json" http://
127.0.0.1:7290/api/rest.cfm/ServerVersion

HTTP/1.1 200 OK
Content-Type: application/json

{"currentversion":"3.7.0"}
```

Example XML:

```
curl.exe -X GET -i -H "X-EOP-AuthToken: xyz" -H "Accept: application/xml" http://1
27.0.0.1:7290/api/rest.cfm/ServerVersion
```

HTTP/1.1 200 OK
Content-Type: application/xml

<apiresponse><currentversion>3.7.0</currentversion></apiresponse>

17.7 Examples with curl

In the documentation we provide examples of each function for use with curl.

Curl is a free command line tool used to simplify the interaction with API's such as the EveryonePrint API. Download curl from http://curl.haxx.se

17.8 API Functions and Methods

All calls must include the HTTP header X-EOP-AuthToken containing the API authentication token password as specified in the administrative interface.

17.8.1 Get Server Version

Returns the current version of the EveryonePrint server.

Request:

GET http://127.0.0.1:7290/api/rest.cfm/ServerVersion

Parameters:

(none)

Response:

currentversion	String (50)	The current server version

Example request:

curl.exe -X GET -i -H "X-EOP-AuthToken: xyz"
http://127.0.0.1:7290/api/rest.cfm/ServerVersion

Example response (success):

HTTP/1.1 200 OK
Content-Type: application/json

{"currentversion":"3.7.0"}

Example response (failure):

HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"

17.8.2 Add all printers from server

Add all print queues present on the host server to the EveryonePrint server.

Request:

PUT http://127.0.0.1:7290/api/rest.cfm/printers

Parameters:

(none)

Response:

success	Boolean	Returns true if import was successful
printersadded	Numeric	Returns the number of printers added to the EveryonePrint server

Example request:

```
curl.exe -X PUT -i -H "X-EOP-AuthToken: xyz"
http://127.0.0.1:7290/api/rest.cfm/printers
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true,"printersadded":5}
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

17.8.3 Get all printers from server

Retrieve all printers from server.

Request:

GET http://127.0.0.1:7290/api/rest.cfm/printers

Parameters:

(none)

Response:

An array of printers with each printer being a structure within the array.

printerid	String (50)	The ID of the printer.
Printername	String (255)	The printers friendly name
Printerpath	String (255)	The printers associated output print queue
PrinterEmailAlias	String (255)	The printers direct email alias address
altprinterid	String (50)	The printers external ID for use in IPP print queues, QR codes or similar

Example request:

```
curl.exe -X GET -H "X-EOP-AuthToken: xyz" -k
http://127.0.0.1:7290/api/rest.cfm/printers
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

[{"altprinterid":"A0877B6D","printeremailalias":"printer1@company.com","printerid":1,"pri
ntername":"Printer
1","printerpath":"printer1"},{"altprinterid":"36203EBF","printeremailalias":"printer2@comp
any.com","printerid":2,"printername":"Printer
2","printerpath":"printer2"},{"altprinterid":"332F4AD5","printeremailalias":"printer3@comp
any.com","printerid":3,"printername":"Printer 3","printerpath":"printer3"}]
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

-X GET -H ""X-EOP-AuthToken: xyz"" -k http://127.0.0.1:7290/api/rest.cfm/printers

17.8.4 Delete all printers from server

Delete all printer device entries in the EveryonePrint server.

Request:

```
DELETE http://127.0.0.1:7290/api/rest.cfm/printers
```

Parameters:

(none)

Response:

success	Boolean	Returns true if deletion was successful

Example request:

```
curl.exe -X DELETE -i -H "X-EOP-AuthToken: xyz"
http://127.0.0.1:7290/api/rest.cfm/printers
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true}
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

17.8.5 Get UserID Hash

Returns the UserID hash for a given username for use with EveryonePrint IPP Driver Print feature, ie http://127.0.0.1:631/ipp/{useridhash}

Request:

```
GET    http://127.0.0.1:7290/api/rest.cfm/useridhash/?username=johnsmith
```

Parameters:

username	String (255)	The username for which to return hash ID

Response:

username	String (255)	The username for which returned hash ID
useridhash	String (50)	Returned UserID hash

Example request:

```
curl.exe -X GET -i -H "X-EOP-AuthToken: xyz" -k
http://127.0.0.1:7290/api/rest.cfm/useridhash/?username=johnsmith
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"username":"johnsmith","useridhash":"570ec1806068989"}
```

Example response (failure):

```
HTTP/1.1 400 Bad Request
Content-Type: application/json

"Username parameter missing"
```

17.8.6 Add Email Address To Username

Adds an email address to a user. This function returns true if the email address was added successfully.

Request:

PUT http://127.0.0.1:7290/api/rest.cfm/useremails

Parameters:

Username	String (255)	The username on which to add the email address
EmailAddress	String (255)	The email address to add

Response:

success	Boolean	Returns true if adding was successful

Example request:

```
curl.exe -X PUT -i -H "X-EOP-AuthToken: xyz" "http://127.0.0.1:7290/api/rest.cfm/useremails/?username=johnsmith&EmailAddress=john@gmail.com"
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true}
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json
```

"Invalid AuthToken"

17.8.7 Delete Email Address From Username

Deletes an email address from a user. This function returns true if the email address was deleted successfully.

Request:

```
DELETE http://127.0.0.1:7290/api/rest.cfm/useremails
```

Parameters:

Username	String (255)	The username on which to delete the email address
EmailAddress	String (255)	The email address to delete

Response:

success	Boolean	Returns true if delete was successful

Example request:

```
curl.exe -X DELETE -i -H "X-EOP-AuthToken: xyz"
"http://127.0.0.1:7290/api/rest.cfm/u
seremails/?username=johnsmith&EmailAddress=john@gmail.com"
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true}
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

17.8.8 Submit print job file or URL for printing

Submit a file, Word document, PDF, image or other supported file type, to EveryonePrint as a user print job, for further processing.

Submit a Web address to print. EveryonePrint retrieves the content of the Web page and registers as a user print job, for further processing.

Request:

POST http://127.0.0.1:7290/api/rest.cfm/printjob

Parameters:

Type	String (5)	Whether the print job is a file or URL to print. Possible values: file = a file will be uploaded in PrintJobFile url = a Web address is provided in URLToPrint
ClientIPAddress	String (50)	The IP address of the sending client.
Username	String (50)	The username of the user which the ClientIPAddress belongs to (required for privacy-authentication and direct-authentication modes)
PrintJobTitle	String (255)	The originating jobs document name or title, can be the same as URLToPrint in case
PrinterID	String (50)	The PrinterID of the destination printer (optional)
MimeType	String (50)	The mimetype of the submitted document file (optional)
PrintJobFile	String (255)	The multipart form field containing the document to submit. Only if type=file
URLToPrint	String (255)	The Web address URL to print, ie “http://www.google.com”. Only if type=url
AdvOptCopies	Numeric	Optional. Number of copies (default 1)
AdvOptPageFrom	Numeric	Optional. Page to print from
AdvOptPageTo	Numeric	Optional. Page to print to
AdvOptDuplex	Numeric	Optional. Possible values: 1 = None/Simplex 2 = Duplex/Long-side (most common) 3 = Duplex/Short-side
AdvOptPrintBW	Numeric	Optional. Print in black/white even if document contains color. 0 = leave as is, ie color 1 = Force BW

Response:

success	Boolean	Returns true if submitting job was successful
jobreleasecode	String(50)	If privacy-releasecode mode, the release code is returned for the submitted job.

Example request (submitting a file):

```
curl.exe -X POST -v -H "X-EOP-AuthToken: xyz" -F PrintJobFile=@C:\ test.pdf -F
"type=file" -F "ClientIPAddress=1.2.3.4" -F "Username=johnsmith" -F
"PrintJobTitle=Test page" -k http://127.0.0.1:7290/api/rest.cfm/printjob
```

Example request (submitting a Web address):

```
curl.exe -X POST -v -H "X-EOP-AuthToken: xyz" -F
"URLtoprint=www.everyoneprint.com" -F "type=url" -F "ClientIPAddress=1.2.3.4" -F
"Username=q" -F "PrintJobTitle=www.everyoneprint.com" -k
http://127.0.0.1:7290/api/rest.cfm/printjob
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true}
```

Example response (success with release code):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true,"jobreleasecode":234056}
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

MimeTypes:

.xls mimetype: application/vnd.ms-excel
.xlsx mimetype: application/vnd.openxmlformats-officedocument.spreadsheetml.sheet
.doc mimetype: application/msword

.docx mimetype: application/vnd.openxmlformats-officedocument.wordprocessingml.document
.ppt mimetype: application/vnd.ms-powerpoint
.pptx mimetype: application/vnd.openxmlformats-officedocument.presentationml.presentation
.ods mimetype: application/vnd.oasis.opendocument.spreadsheet
.odt mimetype: application/vnd.oasis.opendocument.text
.rtf mimetype: application/rtf
.txt mimetype: text/plain
.html mimetype: text/html
.pdf mimetype: application/pdf
.jpg mimetype: image/jpeg
.png mimetype: image/png
.tiff mimetype: image/tiff

17.8.9 Add a printer

Add a printer to the server.

This API function requires a valid EveryonePrint Enterprise or evaluation license.

Request:

POST http://127.0.0.1:7290/api/rest.cfm/printer

Parameters:

printerid	String (50)	(Optional) The ID of the printer to add. Could be IP address, serial number or similar. If omitted (default), a numeric ID is generated automatically by server.
Printername	String (255)	The printers friendly name and description as it appears in end-user interfaces
Printerpath	String (255)	The printers associated output print queue
PrinterEmailAlias	String (255)	(Optional) The printers direct email alias address
BulkAdd	Boolean	(Optional) Default is false. When set to true, the server does not write the new printer to the configuration file, dramatically speeding up adding large imports of printers. If bulkadd is used, have the last printer use bulkadd=false, to make sure all the newly added printers are written to the configuration file.

Response:

success	Boolean	Returns true if successful

Example request:

```
curl.exe -X POST -H "X-EOP-AuthToken: xyz" -d "printerid=1&printername=Printer
1&printerpath=printer1&PrinterEmailAlias=printer1@company.com&AltPrinterID=XYZ" -
k http://127.0.0.1:7290/api/rest.cfm/printer
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json
```

{"success":true}

Example response (failure):

HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"

17.8.10 Get a printer

Retrieve specific printer(s) from the server, as array of results with each returned printer as a structure

This API function requires a valid EveryonePrint Enterprise or evaluation license.

Request:

GET http://127.0.0.1:7290/api/rest.cfm/printer

Parameters:

printerid	String (50)	(Optional) The ID of the printer to retrieve.
Printername	String (255)	(Optional) The name of the printer to retrieve
PrinterEmailAlias	String (255)	(Optional) The printers direct email alias address of the printer to retrieve

Response:

An array of printers with each printer being a structure within the array.

printerid	String (50)	The ID of the printer.
Printername	String (255)	The printers friendly name
Printerpath	String (255)	The printers associated output print queue
PrinterEmailAlias	String (255)	The printers direct email alias address
altprinterid	String (50)	The printers external ID for use in IPP print queues, QR codes or similar

Example request:

curl.exe -X GET -H "X-EOP-AuthToken: xyz" -k
http://127.0.0.1:7290/api/rest.cfm/printer?printerid=1

Example response (success):

HTTP/1.1 200 OK

Content-Type: application/json

[{"altprinterid":"XYZ","printeremailalias":"printer1@company.com","printerid":1,"printername":"Printer 1","printerpath":"printer1"}]

Example response (failure):

HTTP/1.1 400 Bad Request
Content-Type: application/json

"Error occurred while retrieving printer No valid query "

17.8.11 Update a printer

Update an existing printer. All values must be supplied.

This API function requires a valid EveryonePrint Enterprise or evaluation license.

Request:

PUT http://127.0.0.1:7290/api/rest.cfm/printer

Parameters:

printerid	String (50)	The ID of the printer to update.
Printername	String (255)	The printers friendly name
Printerpath	String (255)	The printers associated output print queue
PrinterEmailAlias	String (255)	(Optional) The printers direct email alias address
BulkUpdate	Boolean	(Optional) Default is false. When set to true, the server does not write the changed printer to the configuration file, dramatically speeding up updates of large number of printers. If BulkUpdate is used, have the last printer use BulkUpdate=false, to make sure all the newly updated printers are written to the configuration file.

Response:

success	Boolean	Returns true if successful

Example request:

curl.exe -X PUT -H "X-EOP-AuthToken: xyz" -d "printerid=1&printername=Printer 1 edited&printerpath=printer1edited&PrinterEmailAlias=printer1edited@company.com" -k http://127.0.0.1:7290/api/rest.cfm/printer

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true}
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

17.8.12 Delete a printer

Deletes an existing printer.

This API function requires a valid EveryonePrint Enterprise or evaluation license.

Request:

```
DELETE http://127.0.0.1:7290/api/rest.cfm/printer
```

Parameters:

Printerid	String (50)	The ID of the printer to delete.
BulkDelete	Boolean	(Optional) Default is false. When set to true, the server does not write the changes to the configuration file, dramatically speeding up updates of large number of printers. If BulkDelete is used, have the last printer use BulkDelete=false, to make sure all the changes are written to the configuration file.

Response:

success	Boolean	Returns true if successful

Example request:

```
curl.exe -X DELETE -H "X-EOP-AuthToken: xyz" -d "printerid=1" -k
http://127.0.0.1:7290/api/rest.cfm/printer
```

Example response (success):

HTTP/1.1 200 OK
Content-Type: application/json

{"success":true}

Example response (failure):

HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"

17.8.13 Add a device group or a printer to a device group

Add a device group or add a printer to an existing device group

This API function requires a valid EveryonePrint Enterprise or evaluation license.

Request:

POST http://127.0.0.1:7290/api/rest.cfm/printergroups

Parameters:

PrinterGroupID	Numeric	(Optional) Include the printergroupid if adding printers to an existing device group.
PrinterGroupName	String (50)	(Optional) Required if adding a new device group. Is not used if PrinterGroupID is supplied
ExternalGroupName	String (50)	(Optional) The device group external name in LDAP attribute or Windows membership security group
PrinterIDs	String (1024)	(Optional) Comma delimited list of the ID's of printers to add to the group. Required if adding printers to a device group.

Response:

success	Boolean	Returns true if successful

Example request adding a device group:

curl.exe -X POST -H "X-EOP-AuthToken: xyz" -d "PrinterGroupName=group1&ExternalGroupName=group1ext&printerids=1,2" -k http://127.0.0.1:7290/api/rest.cfm/printergroups

Example request adding a printer to existing device group:

```
curl.exe -X POST -H "X-EOP-AuthToken: xyz" -d "PrinterGroupID=1&printerids=2,3" -k
http://127.0.0.1:7290/api/rest.cfm/printergroups
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true}
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

17.8.14 Get a device group

Retrieve all or a specific device group.

This API function requires a valid EveryonePrint Enterprise or evaluation license.

Request:

GET http://127.0.0.1:7290/api/rest.cfm/printergroups

Parameters:

PrinterGroupID	String (50)	(Optional) The ID of the printer group to retrieve. If omitted all groups are returned

Response:

An array of device groups with each group being a structure within the array.

PrinterGroupID	Numeric	ID of group
PrinterGroupName	String (50)	Name of group
ExternalGroupName	String (50)	The device group external name in LDAP attribute or Windows membership security group
PrinterIDs	String (1024)	Comma delimited list of the ID's of printers in the group.

Example request:

```
curl.exe -X GET -H "X-EOP-AuthToken: xyz" -k
http://127.0.0.1:7290/api/rest.cfm/printergroups?PrinterGroupID=1
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

[{"externalgroupname":"","printergroupid":19,"printergroupname":"Group 2
","printerids":"1,3"},{"externalgroupname":"group1ext","printergroupid":54,"printergroup
name":"group1","printerids":"1,2"}]
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

17.8.15 Edit a device group

Update an existing device group name or external name.

This API function requires a valid EveryonePrint Enterprise or evaluation license.

Request:

PUT http://127.0.0.1:7290/api/rest.cfm/printergroups

Parameters:

PrinterGroupID	Numeric	The printergroupid of group to update
PrinterGroupName	String (50)	Name of group
ExternalGroupName	String (50)	(Optional) The device group external name in LDAP attribute or Windows membership security group

Response:

success	Boolean	Returns true if successful

Example request:

```
curl.exe -X PUT -H "X-EOP-AuthToken: xyz" -d
"PrinterGroupID=1&PrinterGroupName=group1edited&ExternalGroupName=group1exte
dited" -k http://127.0.0.1:7290/api/rest.cfm/printergroups
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true}
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

17.8.16 Delete a device group or remove a device from group

Delete a device group or delete a printer from an existing device group

This API function requires a valid EveryonePrint Enterprise or evaluation license.

Request:

DELETE http://127.0.0.1:7290/api/rest.cfm/printergroups

Parameters:

PrinterGroupID	Numeric	ID of group to delete or to delete printers from.
PrinterIDs	String (1024)	(Optional) Comma delimited list of the ID's of printers to delete from the group. Required if deleting printers from a device group.

Response:

success	Boolean	Returns true if successful

Example request deleting a device group:

```
curl.exe -X DELETE -H "X-EOP-AuthToken: xyz" -d "PrinterGroupID=1" -k
http://127.0.0.1:7290/api/rest.cfm/printergroups
```

Example request deleting a printer from an existing device group:

```
curl.exe -X DELETE -H "X-EOP-AuthToken: xyz" -d "PrinterGroupID=1&printerids=2,3" -
k http://127.0.0.1:7290/api/rest.cfm/printergroups
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true}
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

17.8.17 Add a Wide Area Sub domain or printers to a sub domain

Add a Wide Area Subdomain or add printers to an existing Wide Area Subdomain.

This API function requires a valid EveryonePrint Enterprise or evaluation license.

Request:

POST http://127.0.0.1:7290/api/rest.cfm/wideareas

Parameters:

name	String (255)	The Wide Area sub domain name.
PrinterIDs	String (1024)	The ID's of printers to add to the sub domain
BulkAdd	Boolean	(Optional) Default is false. When set to true, the server does not write the changes to the configuration file, dramatically speeding up large imports of printers. If bulkadd is used, have the last printer use bulkadd=false, to make sure all the newly added printers are written to the configuration file.

Response:

success	Boolean	Returns true if successful

Example request:

```
curl.exe -X POST -H "X-EOP-AuthToken: xyz" -d "name=test.name&printerids=1,2" -k
http://127.0.0.1:7290/api/rest.cfm/wideareas
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true}
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

17.8.18 Get a Wide Area Sub domain

Retrieve all or a specific wide area sub domain.

This API function requires a valid EveryonePrint Enterprise or evaluation license.

Request:

GET http://127.0.0.1:7290/api/rest.cfm/wideareas

Parameters:

name	String (255)	(Optional) The name of the sub domain to retrieve. If omitted all domains are returned.

Response:

An array of wide area sub domains with each domain being a structure within the array.

name	String (255)	Name of subdomain
PrinterIDs	String (1024)	Comma delimited list of the ID's of printers in the sub domain.

Example request:

```
curl.exe -X GET -H "X-EOP-AuthToken: xyz" -k
http://127.0.0.1:7290/api/rest.cfm/wideareas?name= test.name
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

[{"name":"building1.lab2.local","printerids":""},{"name":"test.name","printerids":"1,2,3"}]
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

17.8.19 Edit a Wide Area Sub domain

Update an existing Wide Area sub domain name.

This API function requires a valid EveryonePrint Enterprise or evaluation license.

Request:

PUT http://127.0.0.1:7290/api/rest.cfm/wideareas

Parameters:

name	String (255)	The name of the sub domain to change.
NewName	String (255)	The new name for the sub domain

Response:

success	Boolean	Returns true if successful

Example request:

```
curl.exe -X PUT -H "X-EOP-AuthToken: xyz" -d
"name=test.name&newname=newname.test" -k
http://127.0.0.1:7290/api/rest.cfm/wideareas
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true}
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
Content-Type: application/json

"Invalid AuthToken"
```

17.8.20 Delete a Wide Area Sub domain

Delete a wide area sub domain or delete a printer from a sub domain

This API function requires a valid EveryonePrint Enterprise or evaluation license.

Request:

DELETE http://127.0.0.1:7290/api/rest.cfm/wideareas

Parameters:

name	String (255)	The Wide Area sub domain name.
PrinterIDs	String (1024)	The ID's of printers to add to the sub domain
BulkDelete	Boolean	(Optional) Default is false. When set to true, the server does not write the changes to the configuration file, dramatically speeding up large changes. If bulkdelete is used, have the last printer use bulkdelete=false, to make sure all the deleted printers are written to the configuration file.

Response:

success	Boolean	Returns true if successful

Example request deleting a device group:

```
curl.exe -X DELETE -H "X-EOP-AuthToken: xyz" -d "PrinterGroupID=1" -k
http://127.0.0.1:7290/api/rest.cfm/printergroups
```

Example request deleting a printer from an existing device group:

```
curl.exe -X DELETE -H "X-EOP-AuthToken: xyz" -d "PrinterGroupID=1&printerids=2,3" -
k http://127.0.0.1:7290/api/rest.cfm/printergroups
```

Example response (success):

```
HTTP/1.1 200 OK
Content-Type: application/json

{"success":true}
```

Example response (failure):

```
HTTP/1.1 401 Unauthorized
```

Content-Type: application/json

"Invalid AuthToken"

18. Troubleshooting and other tips

18.1 Collecting log files for support

If you have encountered an issue in EveryonePrint and want to supply your support representative with recent log and configuration files of your EveryonePrint server, use the Collect Log Files feature in the Admin interface Help screen.

1. Log on to EveryonePrint Admin
2. Make sure that debug logging is enabled in General Settings, and repeat the issue if necessary
3. Click Help in upper right corner
4. Click the **Create Zip File For Support** button

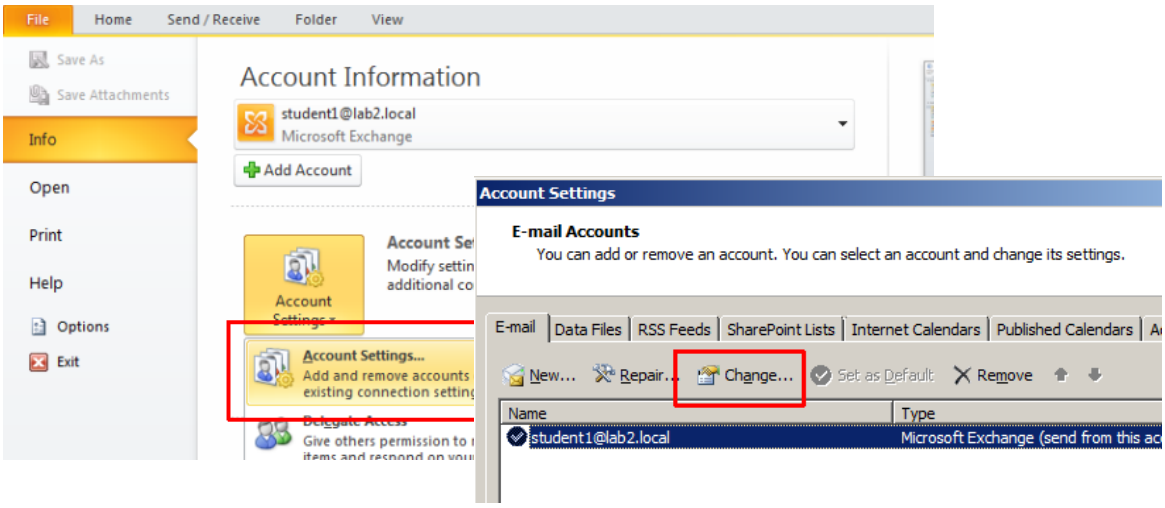
A zip file will be generated in the temp folder under your EveryonePrint installation folder containing most common log and configuration files.

18.2 Check and verify Microsoft Exchange email support

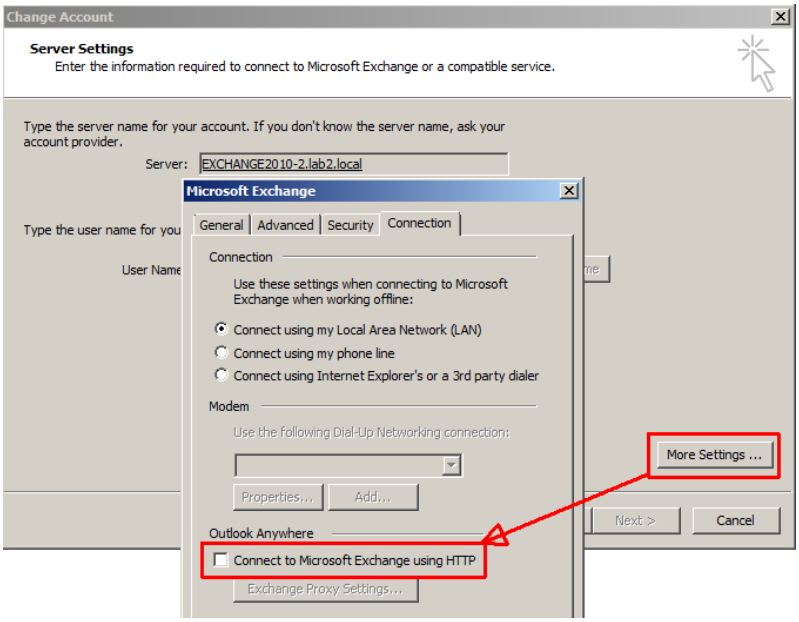
EveryonePrint includes support for native Microsoft Exchange protocols Microsoft MAPI via RPC protocol with NTLM authentication and Microsoft Exchange Web Services over HTTPS with Basic, NTLM, or forms-based authentication. Kerberos, ADFS and RPC over http(s) authentication is not supported.

18.2.1 Microsoft Exchange MAPI

Support for Microsoft Exchange MAPI can be verified with Outlook (2010).



Go to the File tab, click Account Settings. On the list of accounts, select an account and click Change, then More Settings on the dialog that appears.

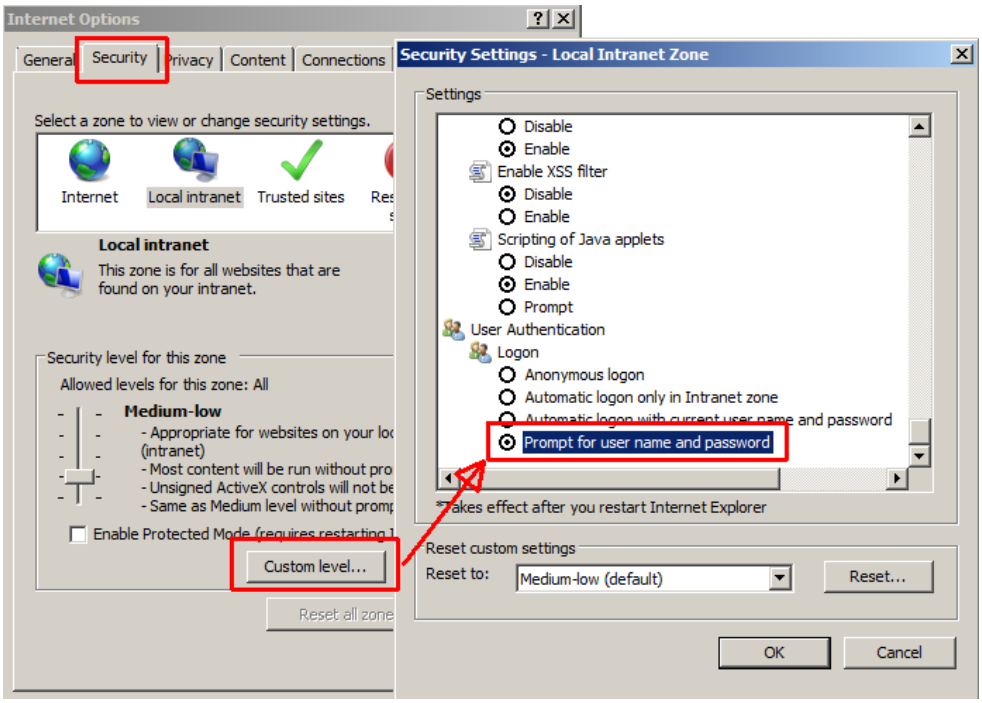


On the Connection tab, the "Connect to Microsoft Exchange using HTTP" should be unchecked.

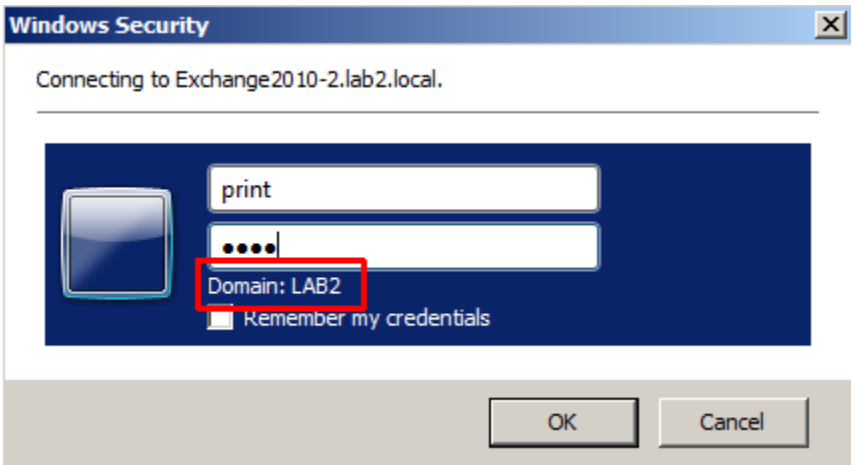
18.2.2 Microsoft Exchange Web Services

Support for Microsoft Exchange Web Services can be verified using Internet Explorer by accessing the Web service URL. This is typically https://<server>/ews/exchange.asmx

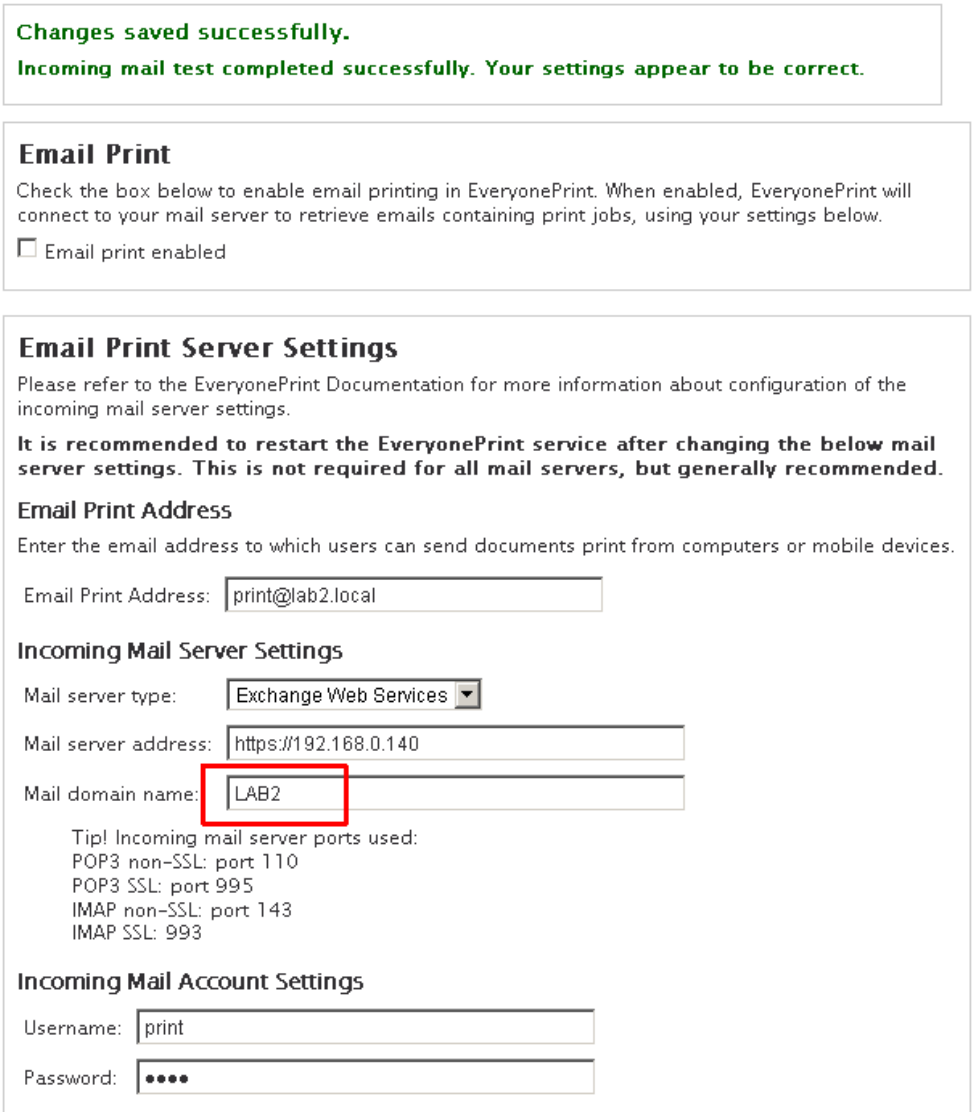
This should show a login prompt for username and password. If using Internet Explorer and no authentication prompt appears, go to *Internet Options* -> *Security* and choose **Custom Level** for the current zone. Then scroll to *User Authentication Logon* and choose **Prompt for user name and password**. Close and reopen all Internet Explorer Windows and access the Web services URL again.



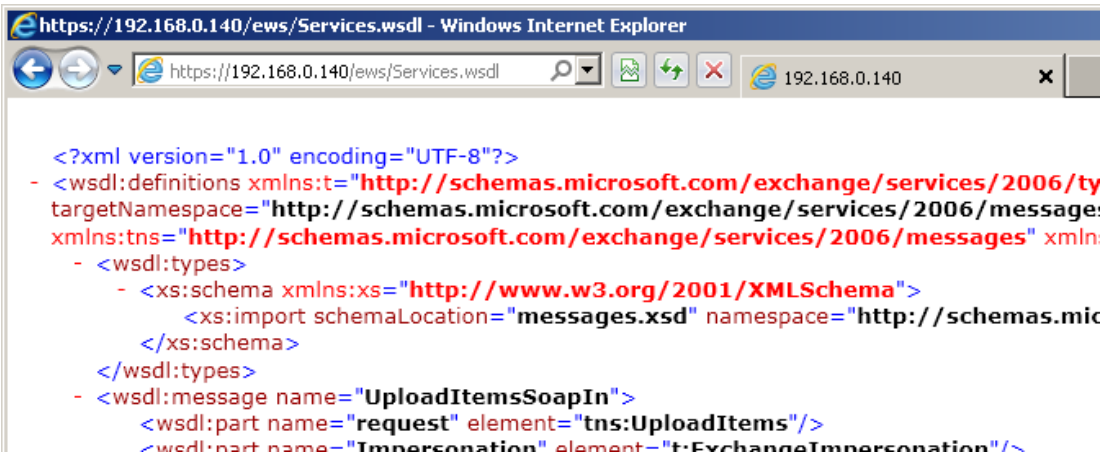
A prompt for username and password should appear.



Notice the Domain value, this will be used in the Email Print configuration in EveryonePrint.



Going to the /ews/exchange.asmx the Exchange server with a successful configuration will show a WSDL page similar to below. If this appears, the Exchange Web Services are confirmed accessible.



18.3 Common LDAP authentication error codes

Configuring Lightweight Directory Access Protocol (LDAP) can be complex. Included in EveryonePrint is a testing function, but before using the test function, you will need to obtain the path and settings for the internal LDAP system. With the path we recommend using a LDAP browser to view the directory to gain a better understanding of how LDAP is implemented at your company.

Using a LDAP browser

One example of a free LDAP Browser is available from Softerra. If you can connect with the Browser, you can navigate through the tree to see where the users are stored. When you find the directory with the users, look at the top bar of the LDAP Browser to get your Start Search DN path. Groups can be found similarly.

Using the LDAP Browser, you can verify a user's information. Typically you will use "sAMAccountName" or "cn".

Log files

When configuring LDAP authentication, it is useful to enable debug logging in **General Settings**. This will ensure that any relevant details are logged to file. Log files are located in \logs subdirectory of the EveryonePrint installation.

LDAP Specific Errors

1. Error: com.server.exception.DBException: Error in bind() from LDAP source: [server]:[port]

    Cause: This is a very general error, and it means something went wrong when trying to bind to LDAP/AD. Check to see if the LDAP/AD server name and/or port number you have specified is incorrect or an incorrect DN was specified as the administrator username.

2. Error: javax.naming.CommunicationException: [server]:[port] [Root exception is java.net.ConnectException: Connection refused: connect]

    Cause: The port name you have specified for the LDAP/AD server is incorrect.

3. Error: javax.naming.CommunicationException: [server]:[port] [Root exception is java.net.UnknownHostException: [server]]

    Cause: The LDAP/AD server name you have specified is incorrect.

4. Error: javax.naming.NamingException: Cannot parse url: [protocol]://[server]:[port] [Root exception is java.net.MalformedURLException: Not an LDAP URL: [protocol]://[server]:[port]]

    Cause: The protocol you have specified is not correct.

5. Error: javax.naming.AuthenticationException: [LDAP: error code 49 - Invalid Credentials]

    Cause: The DN path or password which you have specified for the administrator is invalid. Any of the below will result in this error:

* Pointed to non-user DN
* Pointed to a non-existent user, but in existing DN
* Pointed to non existent DN
* Pointed to an existing user, but non existing DN
* Pointed to an incorrect admin DN, uid instead of cn
* Pointed to a non administrator user
* Pointed to a valid admin but password is incorrect

6. Error: com.server.exception.DBException: Error in searchForUserList from LDAP plugin: [LDAP: error code 32 - No Such Object]

Cause: Very general error when there is a problem finding the users in LDAP/AD. Could be that the DN pointing to the users is pointing to the wrong place or is just incorrect and does not exist.

7. Error: javax.naming.NameNotFoundException: [LDAP: error code 32 - No Such Object]; remaining name '[DN]'

Cause: The DN path which points to where the users are located in the directory is invalid.

8. Error: com.server.exception.DBException: Error in searchForUserList from LDAP plugin: [LDAP: error code 2 - Bad search filter]

Cause: Invalid search filter passed to the LDAP/AD server.

9. Error: javax.naming.directory.InvalidSearchFilterException: Missing 'equals'; remaining name '[DN]'

Cause: The filter specified is wrong or CPS constructed a bad filter.

10. Error: javax.naming.directory.InvalidSearchFilterException: Unbalanced parenthesis; remaining name [DN]

Cause: You did not have correct opening and closing of parenthesis in your search filter.

11. Error: Error in bind from LDAP source: [LDAP: error code 49 - Invalid Credentials] javax.naming.AuthenticationException

Cause: Could not authenticate the user trying to login. This can be the result of an incorrect username or password, or an incorrect prefix and/or suffix specified in the LDAP Authentication screen, depending on the type of LDAP/AD system. Could also mean the authentication type is incorrect.

12. Error: Error in bind from LDAP source: [LDAP: error code 34 - invalid DN] javax.naming.InvalidNameException

Cause: This is caused by a bad prefix specified in the LDAP Authentication screen, on most LDAP/AD systems. This could mean you did not specify a prefix at all, which means the LDAP/AD server did not receive a full DN from EveryonePrint or that you did not specify a correct prefix, such as CN instead of UID, which results in the LDAP/AD

server not receiving a correct DN from EveryonePrint. Can also be caused by a missing comma at the beginning of the suffix or an extra comma at the end of the suffix. This error could also mean the authentication type is incorrect.

13. Error: NoSuchAttributeException

Cause: This is caused by providing a name for an attribute which is not correct or does not exist.

Active Directory Specific Errors

1. Error: com.server.exception.DBException: Error in bind() from LDAP source: [LDAP: error code 49 - 80090308: LdapErr: DSID-0C09030F, comment: AcceptSecurityContext error, data 525, vece] javax.naming.AuthenticationException

Cause: The administrator domain name, username, and or password is incorrect in the LDAP Authentication screen.

2. Error: com.server.exception.DBException: Error in searchForUserList from LDAP plugin: [LDAP: error code 32 - 0000208D: NameErr: DSID-031001C6, problem 2001 (NO_OBJECT), data 0, best match of: '[DN]'] javax.naming.NameNotFoundException

Cause: A non-existent DN specified in the Start Search field.

3. Error: javax.naming.PartialResultException [Root exception is javax.naming.CommunicationException: [server]:[port] [Root exception is java.net.UnknownHostException: [server]]]

Cause: An incorrect DN was specified in the Start Search field.

4. Error: com.server.exception.DBException: Error in searchForUserList from LDAP plugin: [DN]: [LDAP: error code 34 - 0000208F: NameErr: DSID-031001B3, problem 2006 (BAD_NAME), data 8350, best match of: '[DN],'] javax.naming.InvalidNameException

Cause: An incorrectly formatted DN was specified.

5. Error: javax.naming.NameNotFoundException: [LDAP: error code 32 - 0000208D: NameErr: DSID-03100198, problem 2001 (NO_OBJECT), data 0, best match of: '']; remaining name ''

Cause: This error appears if you do not have Group settings filled in, but have User Search filled in. Some systems do not care, while some systems experience problems with the empty DN.

6. Error: Error in bind from LDAP source: [LDAP: error code 49 - 80090308: LdapErr: DSID-0C09030F, comment: AcceptSecurityContext error, data 52e, vece] javax.naming.AuthenticationException

Cause: Could not authenticate the user trying to login. This can be the result of an incorrect username or password, or an incorrect prefix and/or suffix specified in the LDAP Authentication screen, depending on the type of LDAP/AD system. Could also mean the authentication type is incorrect. Also an incorrect username attribute or

incorrect name attribute can cause this. Common cause of this error is a user trying to login with DOMAIN\login instead of just login.

7. Error: javax.naming.NamingException: [LDAP: error code 1 - 000020D6: SvcErr: DSID-03100690, problem 5012 (DIR_ERROR), data 0];

Cause: The DN specified in the Start Search tab is incorrect, wrong, or incorrectly formatted.

18.4 Troubleshooting Microsoft Office conversion

The following section outlines possible steps to handle Microsoft documents that fail to process, resulting in jobs becoming "Expired" in EveryonePrint.

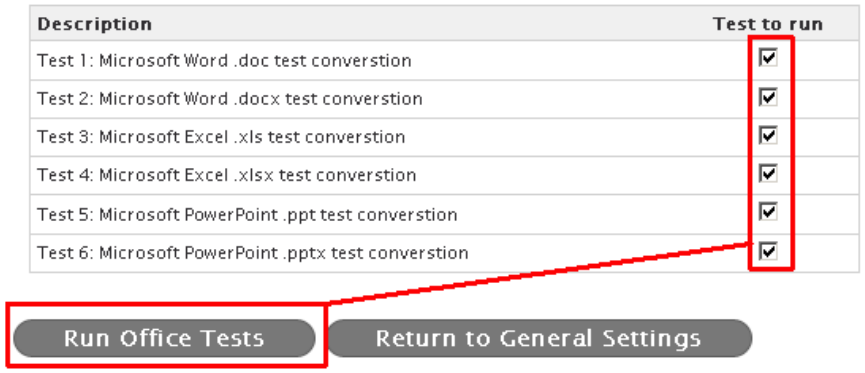
This section applies in particular to installations of EveryonePrint on Microsoft Windows Server 2012, which introduced a more restrictive permission system. Depending on the Windows domain security configuration in place, the below steps may be required for your Windows 2012 installation.

1. **Microsoft Office Test and Diagnostics tool**

   EveryonePrint includes a "self-test" Office test and diagnostics tool, which can be used to confirm if Office document processing works, and if not, return any error messages to help troubleshooting.

   First make sure that .Net Framework 3.51 SP1 or later is installed. This is required for the Office Test and Diagnostics tool.

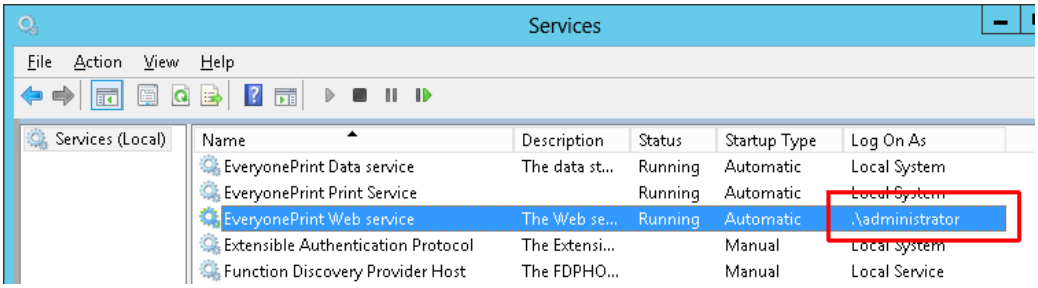
   Choose the tests to run and click **Run Office Tests**.



If a test fails, the error codes returned may not be friendly and helpful, so if a test fails, proceed with the below troubleshooting steps. If the problem persists, after following the steps below, contact your EveryonePrint support representative.

Test Run	Test Result
Test 1: Microsoft Office Word .doc	Not run
Test 2: Microsoft Office Word .docx	Success
Test 3: Microsoft Office Excel .xls	Success
Test 4: Microsoft Office Excel .xlsx	Not run
Test 5: Microsoft Office Powerpoint .ppt	Not run
Test 6: Microsoft Office Powerpoint .pptx	Failure
Version: 0.1.0 System.NotSupportedException: The given path's format is not supported. at System.Security.Util.StringExpressionSet.CanonicalizePath(String	

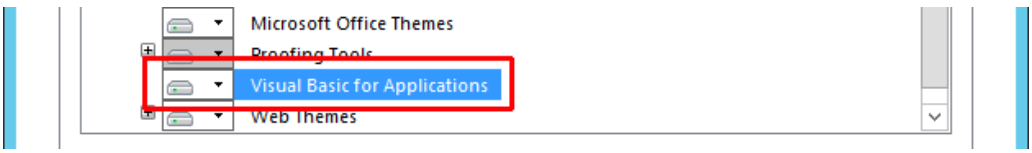
2. Confirm that the EveryonePrint Web service runs as a local administrative user.



3. Log on the server with the EveryonePrint service account, and start each of the Office applications, Word, Excel and PowerPoint, and activate if prompted.

4. Confirm that the Windows Printer Spooler Service is running and at least one local printer queue is installed on the server.

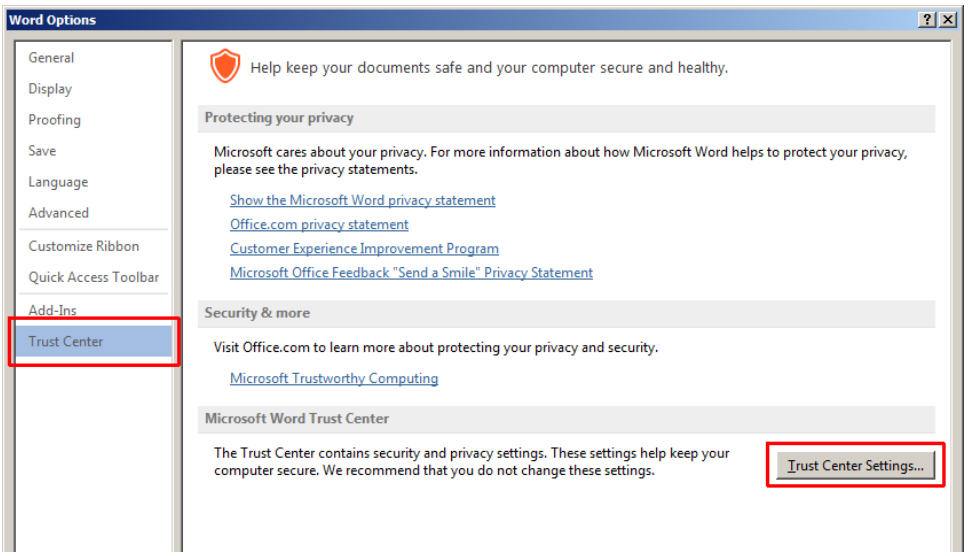
5. Confirm that *Visual Basic for Applications* is installed as part of the Office Installation.



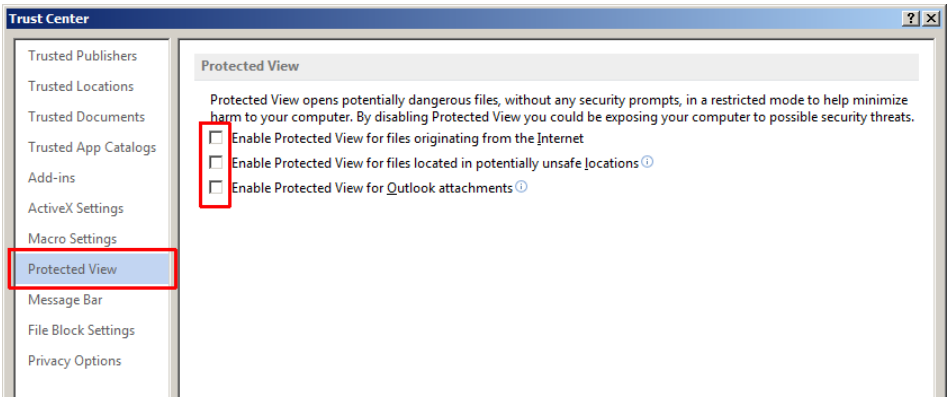
6. Disable Protected Mode in Office 2010 or Office 2013

   a. Open Microsoft Word 2010 and go to **File** and **Options**

   b. Choose **Trust Center** and **Trust Center Settings**



   c. Choose **Protected View** and uncheck all options on the right



   d. Repeat these steps for each of the Office applications, Word, Excel and PowerPoint.

7. Try running EveryonePrint Web Service using a different account with local Administrator rights. Make sure to log in using that account and launch each Office application once. Restart the EveryonePrint Web service after changing the logon account.

8. Change DCOM permissions for Office programs

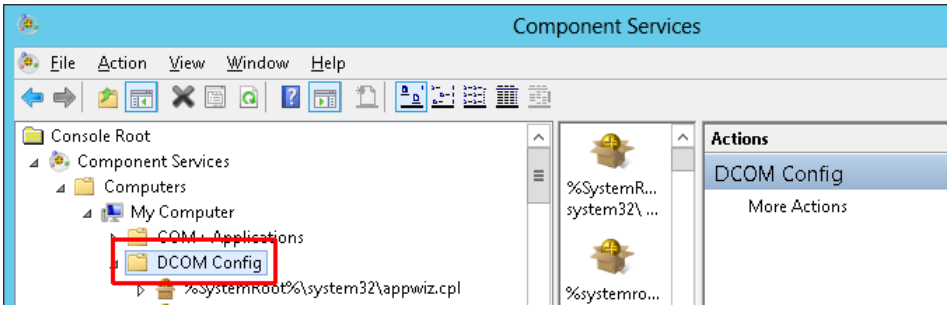
a. Open Component Services, by opening a command prompt as administrator and type:

mmc comexp.msc

If you're using a 64 bit operating system, such as Windows 2008 R2 or Windows 2012, but a Microsoft Office 32 bit, type:

mmc comexp.msc /32

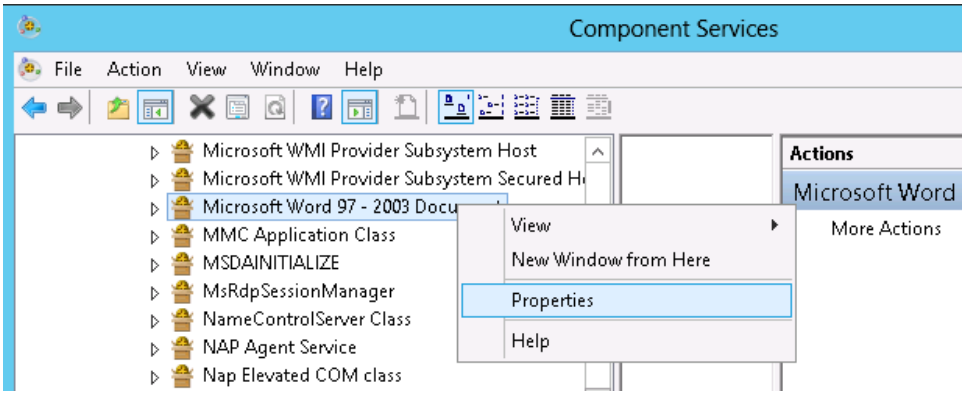
b. Navigate to Component Services -> Computers -> My Computer -> DCOM Config



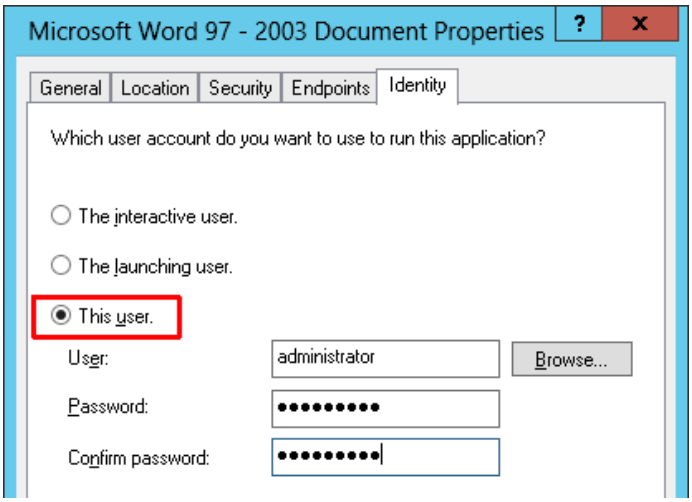
c. For each of the entries:

"Microsoft Word 97 - 2003 Document"
"Microsoft Excel Application"
"Microsoft PowerPoint Slide"

Right click and choose **Properties**



Under **Identity** choose **This user** and specify the same service account with local administrative rights, as used on the EveryonePrint Web Service.



If only a single document type failed to convert in the Office Test and Diagnostics in step 1 above, such as Word documents (doc and docx), then you can change only DCOM permissions for that relevant application that failed.

After setting DCOM permissions, either reboot the server, to ensure any new Office instances are launched with the proper rights, or confirm with Task Manager that no instances of Word, Excel and PowerPoint are running for any user on the server.

9. Repair Microsoft Office installation. If setting DCOM permissions did not resolve the Office processing errors, try and repair the Office installation, by running the Office installer again and choosing **Repair this installation** in the Office setup program.

18.5 Outgoing email are not received

If EveryonePrint says email was sent successfully, but no email is received, check the file C:\Program Files (x86)\EveryonePrint\temp\cfmail\mail.log (or alternate install directory) for errors such as:

> 02/10/11 13:29.27: MailOutFail: To=john.smith@company.com; From=Company <support@company.com>; Subject=Outgoing test mail from EveryonePrint; Server=mail.company.com;25; Size=515 bytes:javax.mail.MessagingException: **Could not connect to SMTP host: mail.company.com, port: 25;** nested exception is: java.net.ConnectException: Connection timed out: connect

With the above error message in mail.log, EveryonePrint could not successfully deliver the test email to the mail server due to lack of connection. Make sure that no firewalls are interrupting the connection between the EveryonePrint and the specified SMTP mail server.

18.6 Customize release code, username and password generation formatting

If using EveryonePrint in Privacy with Release Codes, by default EveryonePrint will generate a 6-digit numeric release code for the user.

If using EveryonePrint with an accounting solution, where EveryonePrint can create user accounts, by default, EveryonePrint will create numeric username and password for the user.

It's possible to customize the format of created release codes, usernames and passwords, for example to have a shorter or longer string, or one that also contains letters.

To modify the format of the generated release code, username or password, do the following:

1. Stop the EveryonePrint Web service
2. Backup the settings file EveryonePrint\eop.xml
3. Open the eop.xml in a text editor such as Notepad
4. Modify the relevant configuration:

```
<genreleasecode>numeric,6,0,0,,</genreleasecode>
<genusername>numeric,6,0,0,,</genusername>
<genpassword>numeric,6,0,0,,</genpassword>
```

5. Save the eop.xml and start EveryonePrint Web service

genreleasecode	The format for release code generation
genusername	The format for username generation
genpassword	The format for password generation

Each type, release code, username and password can have its own definition.

The configuration is stored as a comma delimited string in the format of:

```
format,length,numericPrefix,numericSuffix,fixedPrefix,fixedSuffix
```

format	Whether to generate numeric, string, alphanumeric
length	The length of the key to generate
numericPrefix	Number of random digits to start the key with (the rest of the key will be whatever the 'format' is)
numericSuffix	Number of random digits to end the key with (the rest of the key will be whatever the 'format' is)
fixedPrefix	A prefix prepended to the generated key. The length of which is subtracted from the 'length' argument

fixedSuffix A suffix appended to the generated key. The length of which is subtracted from the 'length' argument

Examples:

Definition	Description	Examples
numeric,6,0,0,,	Default. Numeric with length of 6.	190615 409881
numeric,12,0,0,guest-,	Length of 12 overall with a prefix of “guest-“	guest-696217 guest-940040
string,6,2,0,,	String of 6 with 2 leading numbers	38tepa 51uuaj
alphanumeric,8,0,0,,	Alphanumeric string of 8	cemfywf9 kw6h48nv

As an example, the following configuration:

```
<genusername>numeric,12,0,0,guest-,</genusername>
<genpassword>numeric,4,0,0,,</genpassword>
```

Would create a user such as:

Username: guest-940040
Password: 6701

18.6.1 Customize the time release code is retained for users

For user convenience, EveryonePrint will remember a users release code by default for 3 months, so if the user comes back within 3 months and sends another Email Print job, EveryonePrint will use and send back the previously used release code.

This time window can be changed from default 3 months (131487 minutes) to any value.

To modify the time EveryonePrint retains the release code for users, do the following:

1. Stop the EveryonePrint Web service
2. Backup the settings file EveryonePrint\eop.xml
3. Open the eop.xml in a text editor such as Notepad
4. Modify the genreleasecodemailtime value (in minutes)

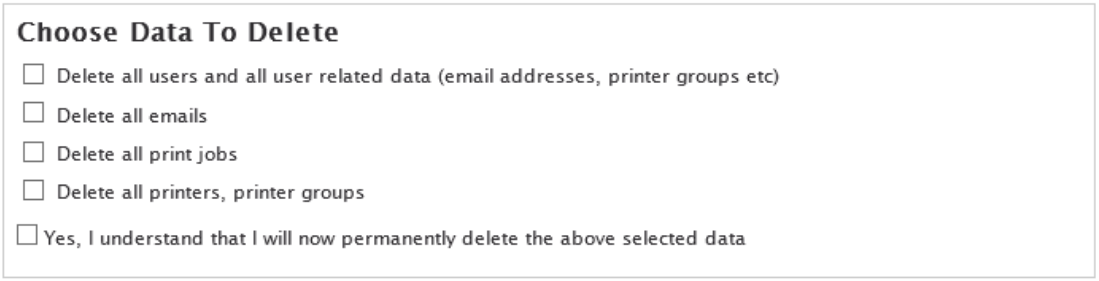
   ```
   <genreleasecodemailtime>131487</genreleasecodemailtime>
   ```

5. Save the eop.xml and start EveryonePrint Web service

The above only applies to Email Print. For Web Print, mobile print and similar, a new release code is assigned with each new session, or with Driver Print, based on the print queues configuration.

18.7 Selectively delete all users, print job history, emails and printers

EveryonePrint includes the possibility for administrators to selectively delete data from the EveryonePrint server, for example, to clean up test users and test print jobs before deploying a server in production, or for a reseller to clean prior to a demo for a customer.



Access the reset feature by loading the below page:

http://127.0.0.1:7290/admin/reset.cfm

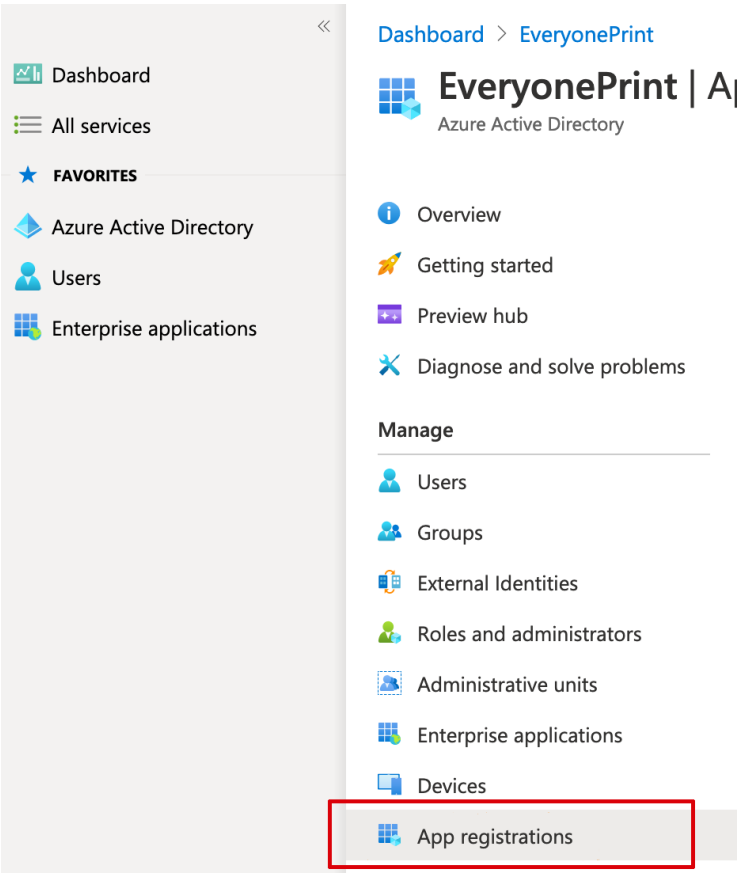
Or equivalent URL should the port or IP/hostname of the server have changed.

18.8 Configure Email Print with Microsoft Oauth2 Modern Authentication

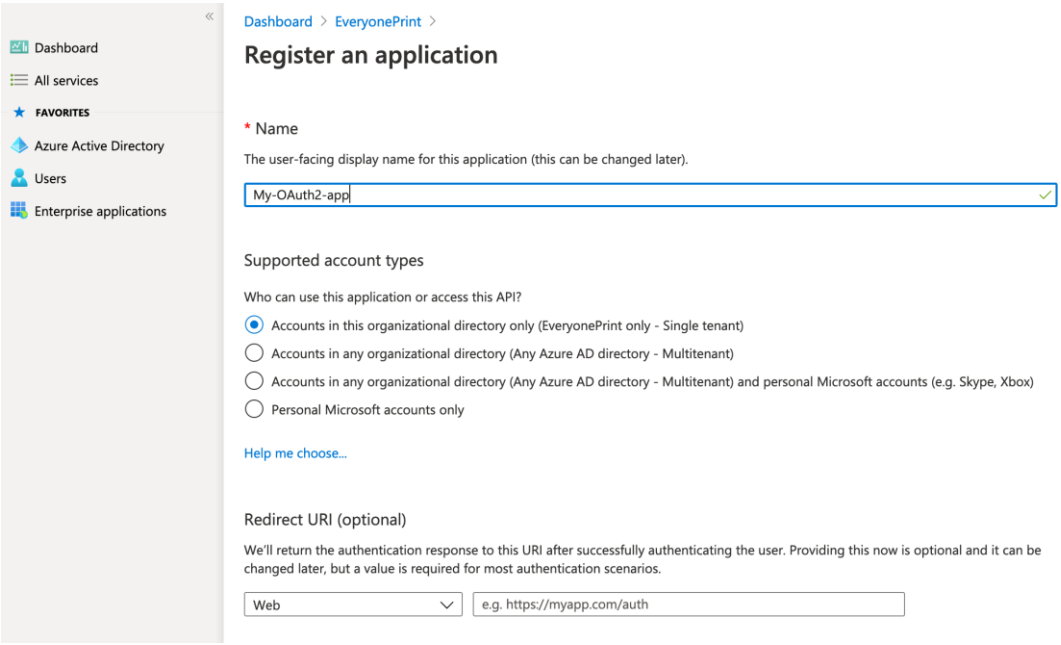
To enable EveryonePrint to retrieve emails from a Microsoft Office365 accounting using modern Oauth2 authentication, a configuration must be created to allow a service such as EveryonePrint to connect and collect emails in the background.

Make sure the following steps are created using an Azure administrative account with proper rights.

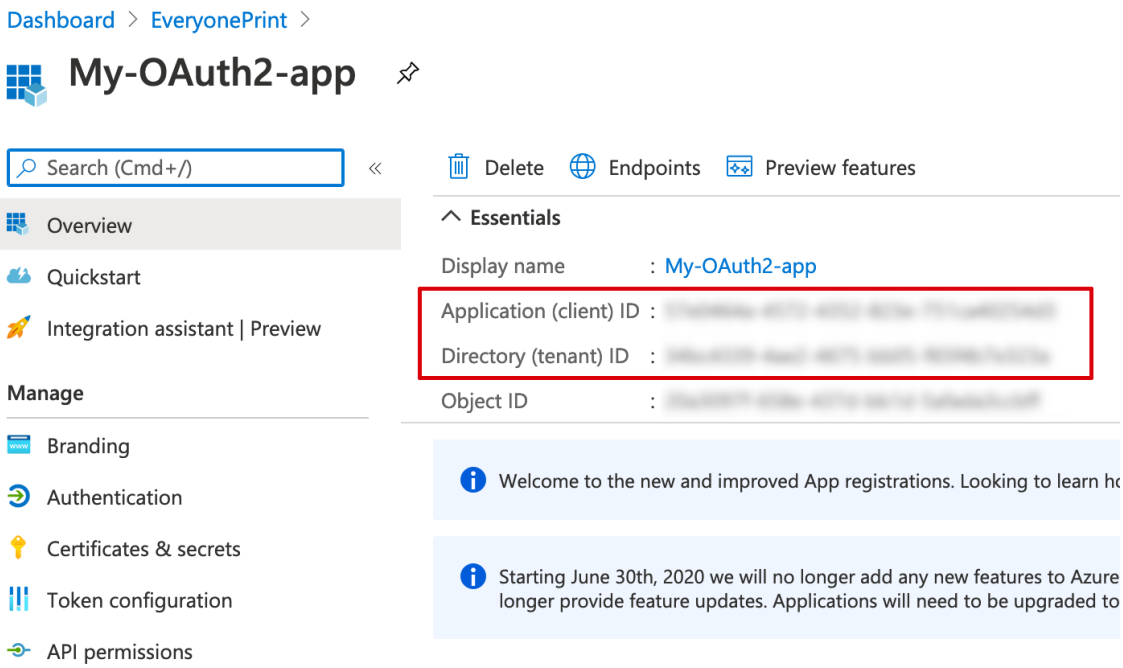
1. In Azure Active Directory Dashboard choose 'App registrations'



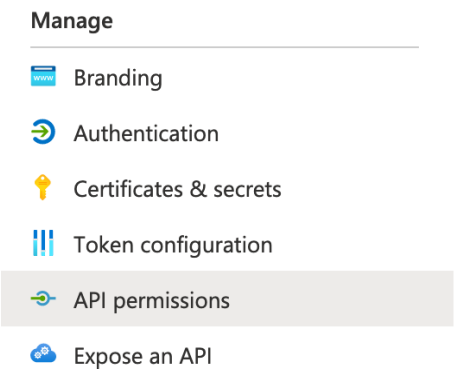
2. Create new app and select name.



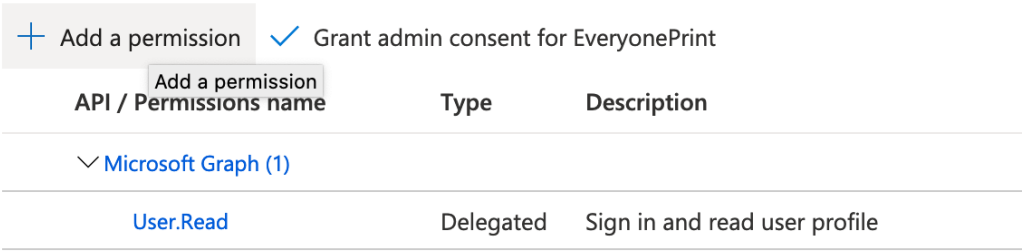
3. Notice the Application Client and Directory Tenant ID for later



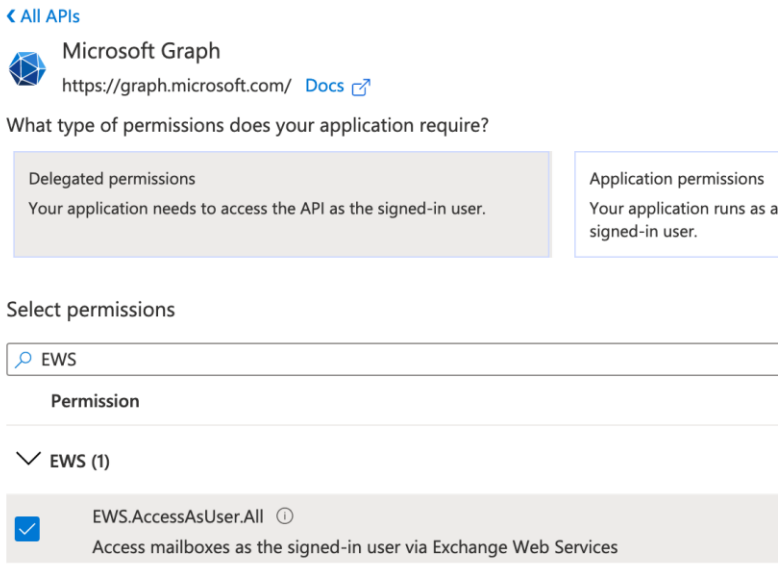
4. Select 'API permissions'



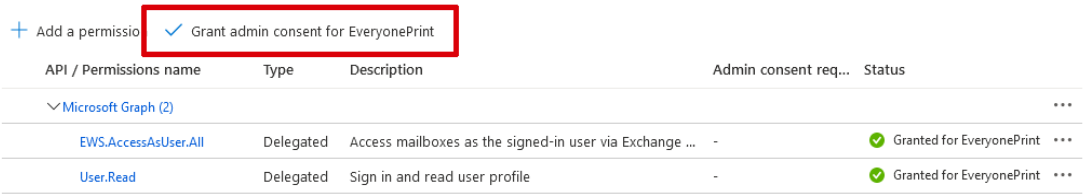
5. Select 'Add a permission'



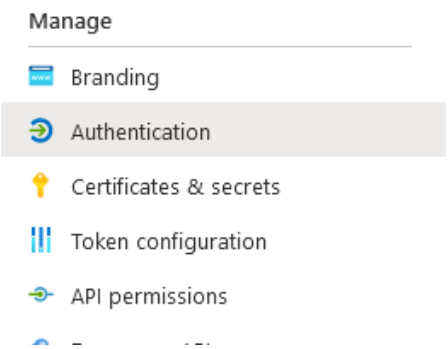
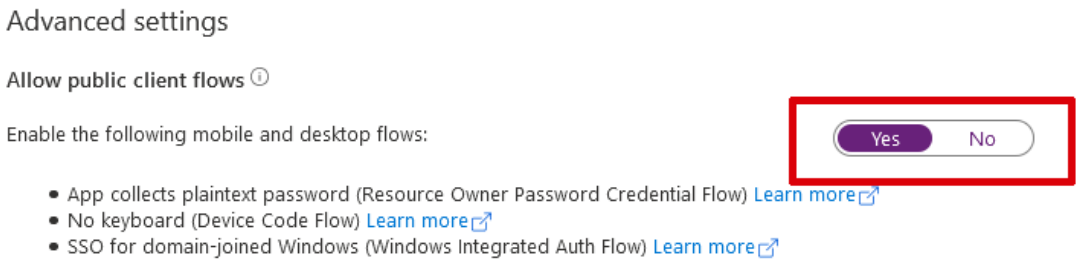
6. Choose 'Microsoft Graph', 'Delegated permission' and filter for 'EWS'.
Select 'EWS.AccessAsUser.All' permission.



7. Click Grant admin consent.. and grant access.



8. Click on Authentication



9. Choose Yes under Allow Public Workflows and click Save to save changes.