



MyID Enterprise

Version 12.2

Symantec (DigiCert) Managed PKI Integration Guide

Lutterworth Hall, St Mary's Road, Lutterworth, Leicestershire, LE17 4PS, UK
www.intercede.com | info@intercede.com | [@intercedemyid](https://twitter.com/intercedemyid) | +44 (0)1455 558111

Copyright

© 2001-2021 Intercede Limited. All rights reserved.

Information in this document is subject to change without notice. The software described in this document is furnished exclusively under a restricted license or non-disclosure agreement. Copies of software supplied by Intercede Limited may not be used resold or disclosed to third parties or used for any commercial purpose without written authorization from Intercede Limited and will perpetually remain the property of Intercede Limited. They may not be transferred to any computer without both a service contract for the use of the software on that computer being in existence and written authorization from Intercede Limited.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or any means electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of Intercede Limited.

Whilst Intercede Limited has made every effort in the preparation of this manual to ensure the accuracy of the information, the information contained in this manual is delivered without warranty, either express or implied. Intercede Limited will not be held liable for any damages caused, or alleged to be caused, either directly or indirectly by this manual.

Licenses and Trademarks

The Intercede® and MyID® word marks and the MyID® logo are registered trademarks of Intercede in the UK, US and other countries.

Microsoft and Windows are registered trademarks of Microsoft Corporation. Other brands and their products are trademarks or registered trademarks of their respective holders and should be noted as such. All other trademarks acknowledged.

Conventions used in this document

- Lists:
 - Numbered lists are used to show the steps involved in completing a task when the order is important.
 - Bulleted lists are used when the order is unimportant or to show alternatives.
- **Bold** is used for menu items and for labels.

For example:

 - Record a valid email address in '**From**' email address.
 - Select **Save** from the **File** menu.
- *Italic* is used for emphasis:

For example:

 - Copy the file *before* starting the installation.
 - Do *not* remove the files before you have backed them up.
- ***Bold and italic*** hyperlinks are used to identify the titles of other documents.

For example: "See the ***Release Notes*** for further information."

Unless otherwise explicitly stated, all referenced documentation is available on the product installation media.
- A `fixed width` font is used where the identification of spaces is important, including filenames, example SQL queries and any entries made directly into configuration files or the database.
- **Notes** are used to provide further information, including any prerequisites or configuration additional to the standard specifications.

For example:

Note: This issue only occurs if updating from a previous version.
- Warnings are used to indicate where failure to follow a particular instruction may result in either loss of data or the need to manually configure elements of the system.

For example:

Warning: You must take a backup of your database before making any changes to it.

Contents

Symantec (DigiCert) Managed PKI Integration Guide	1
Copyright	2
Conventions used in this document	3
Contents	4
1 Introduction	5
2 Before you start	6
2.1 ECC support	6
2.2 Hardware and software requirements	6
2.3 Communication and certificate requirements	6
2.4 Key Management Server	6
2.5 Upgrading to Symantec MPKI	7
2.6 Certificate start and expiry times	7
2.7 Updated MPKI 8 endpoints	8
3 Configuring MyID	9
3.1 Requesting RA certificates	9
3.2 Configuring the CA in the Certificate Authorities workflow	9
3.2.1 Enabling certificates on a CA	13
3.2.2 Editing CA options	17
3.2.3 Deleting a CA	17
3.3 Configuring additional attributes	18
3.3.1 Setting up the additional attributes	18
3.3.2 Mapping the additional attributes	19
3.4 Attribute mapping for PIV and PIV-I systems	19
3.4.1 Attribute configuration	19
3.4.2 Publishing policies	20
3.4.3 Attribute tables	21
3.4.4 PIV-I systems	23
3.5 Setting up KMS	23
3.5.1 Setting up KMS for MPKI 8 Cloud	23
3.5.2 Setting up KMS for MPKI 8 Enterprise	23
3.6 Setting up an authorized user list	24
4 Troubleshooting	25

1 Introduction

This document is a step-by-step guide to integrating the Symantec MPKI Certificate Authority with MyID®.

Note: Following the acquisition of Symantec PKI solutions by DigiCert, there may be differences in the branding of documentation and information supplied to you by DigiCert when compared to MyID. Throughout MyID, the brand name Symantec is used in user interface and lower level components. This approach has been taken to avoid backwards compatibility issues for customers who are upgrading from earlier product versions.

2 Before you start

This chapter contains information about system requirements and other considerations that you must read before you attempt to set up the CA within MyID.

2.1 ECC support

MyID has been tested with the following ECC capabilities of the Symantec MPKI 8 certificate authority:

- Smart card key generation using ECC using P256, P384, and P521 curves.

Note: Support for this feature is limited by smart card type – see the [Smart Card Integration Guide](#) for details.

The following features are not currently supported with the Symantec MPKI 8 certificate authority:

- Issuing certificates with ECC keys to a software local store (CSP).
- Issuing certificates with ECC keys as a .pfx file.
- Issuing certificates with ECC keys to a mobile device.
- Issuing certificates with ECC keys using the MyID SCEP interface.
- Issuing certificates with ECC keys to a Microsoft Virtual Smart Card.
- Issuing or recovering certificates with ECC keys using MPKI Enterprise or Cloud escrow.

2.2 Hardware and software requirements

The current version of MyID has been tested with:

- Symantec MPKI version 8.20.4.

Note: MPKI version 8.20.4 supports cloud dual recovery, and Enterprise Gateway 1.20.3 supports LKMS dual recovery.

See your Symantec MPKI documentation for recommendations of the hardware and software needed for Symantec MPKI.

2.3 Communication and certificate requirements

The MyID application server must be able to communicate using secure HTTP with the main Symantec CA.

If you are using the Key Management Server, the MyID application server also must be able to communicate using secure HTTP with the KMS server.

You must obtain an appropriate RA certificate for a configured Symantec jurisdiction.

MyID has been confirmed to operate correctly with the CA when TLS 1.2 is required; you can disable older TLS versions.

2.4 Key Management Server

You can optionally set up MyID to work with a Symantec Key Management Server (KMS). You must have a KMS if you want to archive and recover certificates.

See section [3.5, Setting up KMS](#) for details.

2.5 Upgrading to Symantec MPKI

Note: Symantec Certificate Authority was previously known as VeriSign.

If you want to upgrade your system from Local Hosting 6.1.3 to Symantec MPKI, you must first set up your Symantec MPKI – you can either upgrade your existing Local Hosting CA to MPKI, or set up an MPKI CA separate to the existing Local Hosting CA.

Note: Local Hosting is no longer supported as a CA with MyID as of version 9.0 SP1.

Whether you upgrade your existing CA or set up a new CA, you must still create a new entry in the **Certificate Authorities** workflow within MyID for the MPKI CA.

If you are upgrading an existing jurisdiction, you must set up your Symantec MPKI CA and enable its policies (see section 3.2, [Configuring the CA in the Certificate Authorities workflow](#) for details), then run a procedure on the MyID database to associate the existing certificates with the new CA entry.

Contact Intercede customer support for details quoting reference SUP-37.

2.6 Certificate start and expiry times

MyID requests certificate lifetimes on a "days from now" basis. However, Symantec MPKI uses specific times for certificate start and end dates.

There are some considerations that you should be aware of when requesting certificates, particularly where the exact timing of their validity may be important:

- All MPKI issuance is from midnight on the first day of the requested certificate.
- All MPKI expiry dates are just before midnight on the last day of the requested period.
- All times are UTC. (You may see dates and times on certificates in other time zones, but the underlying time zone for all CA operations is UTC.)
- MPKI can be configured to disallow MyID's ability to override validity.
- You cannot issue a one-day certificate; you can, however, issue a two-day certificate.

This also means that the lifetime of the certificate may not match the lifetime of the card; MyID's lifetimes are based on the time of issuance, while MPKI's lifetimes are based on midnight UTC.

Some example situations:

Requested lifetime	Card start date	Card expiry date	Certificate start date	Certificate expiry date	Result
1 day	2018-05-24 12:57:51.523	2018-05-25 12:57:50.000			MyID rejects the certificate request.
2 day	2018-05-24 14:26:56.983	2018-05-26 14:26:55.000	2018-05-24 00:00:00.000	2018-05-25 23:59:59.000	
365 days	2018-05-24 14:40:15.187	2019-05-24 14:40:14.000	2018-05-24 00:00:00.000	2019-05-23 23:59:59.000	

Requested lifetime	Card start date	Card expiry date	Certificate start date	Certificate expiry date	Result
970 days	2018-05-24 15:04:50.327	2021-01-18 15:04:49.000	2018-05-24 00:00:00.000	2021-01-17 23:59:59.000	
1234 days	2018-05-24 15:18:41.877	2021-10-09 15:18:41.000			Certificate failure A601 ¹

2.7 Updated MPKI 8 endpoints

DigiCert are changing the endpoints used for MPKI 8 systems from version 1.19.0; for example, the KMS is changing from:

`https://myserver.example.com:8443/symantec-escrow-recovery-service`
to:

`https://myserver.example.com:8443/escrow-recovery-service`

You must edit the **KMS URL** option in your existing CA within MyID to use the new endpoint. See section [3.2.2, Editing CA options](#) for details.

Contact DigiCert for details of any additional configuration required to connect to the certificate authority.

¹The requested lifetime exceeds the maximum allowed lifetime for the CA. This is dependent on the remaining lifetime of the issuing CA – contact your CA administrator for details.

3 Configuring MyID

This chapter contains information about configuring MyID to integrate with Symantec MPKI, including:

- Requesting RA certificates.
- Configuring the CA in the **Certificate Authorities** workflow.
- Deleting a CA.
- Configuring additional attributes.
- Setting up PIV and PIV-I attribute mapping.
- Setting up the Key Management Server.
- Setting up an authorized user list.

3.1 Requesting RA certificates

Before you configure your Symantec MPKI CA within MyID, you must request a Registration Authority certificate to secure communications between MyID and the Managed PKI web services. If you are using Dual Control for key recovery, you must request a second Registration Authority certificate. When requesting these certificates, make sure that the requests have **Export Private Key** set.

Note: These certificates are in addition to the RA certificate that secures communications between the KMS and Managed PKI web services.

When communicating with the Symantec MPKI CA, MyID uses the RA certificate as a TLS/SSL client authentication certificate. You can store your RA certificate in a software keystore or on an HSM; the method you use has implications on how you obtain your RA certificate.

See your Symantec documentation for details.

Note: For software keystores, you are recommended to use a CER file instead of a PFX file to avoid any overhead. Import the RA certificate into the MyID COM+ user's personal user store, then export the CER file and use that instead. Importantly, to import the certificate, you must use the `certutil` utility and specify a CSP that supports SHA256; for example:

```
certutil -csp "Microsoft Enhanced RSA and AES Cryptographic Provider" -user  
-importpfx RACert.pfx
```

3.2 Configuring the CA in the Certificate Authorities workflow

Configure the Symantec CA using the **Certificate Authorities** workflow.

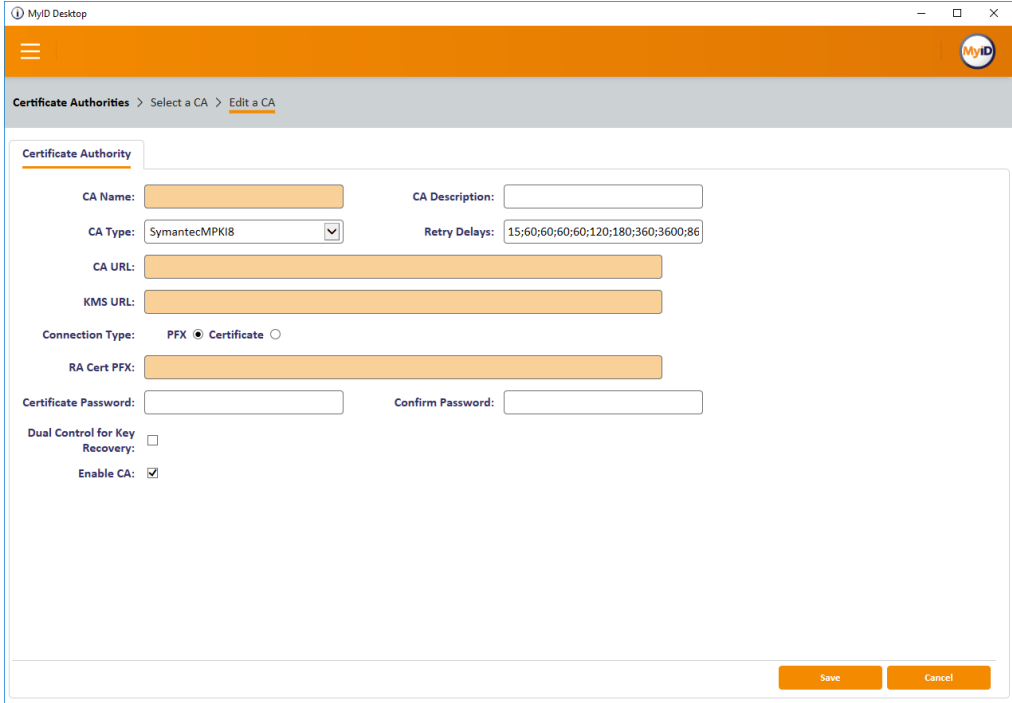
1. Put the RA certificate on the MyID application server.

Note: The MyID named COM+ user must have access to this file.

2. From the **Configuration** category, select **Certificate Authorities**.
3. Click **New**.

4. From the **CA Type** drop-down list, select **SymantecMPKI8**.

Note: SymantecMPKI was previously used for MPKI 7 systems, but is no longer a supported CA.



5. Type a **CA Name** and **CA Description**.

6. Type the **CA URL**.

This is the URL for the Symantec-hosted certificate authority.

For MPKI 8 systems:

`https://pki-ws.symauth.com`

7. If you are using a KMS, type the **KMS URL**.

This is the URL for your locally-hosted Key Management Server. For example:

`https://myserver.example.com:8443/escrow-recovery-service`

Important: This option is a mandatory field; you cannot leave it blank. If you are not using a KMS, type the following:

n/a

Note: The URL may depend on the version of MPKI you are using. Contact your CA provider for details. For example, versions before 1.19.0 used:

`https://myserver.example.com:8443/symantec-escrow-recovery-service`

8. If you are using a CER file; for example, for an HSM-based RA certificate, or for a software-based certificate that has been installed to the MyID COM+ user's personal user store:

- a. For the **Connection Type**, select the **Certificate** option.
- b. Type the location of the **RA Cert**.

For example:

`C:\Symantec\RACert.cer`

Note: The file must not be read-only.

- c. Type and confirm the password for the certificate.

Note: The password cannot contain a pipe | character.

9. If you are using a PFX file for a software-based RA certificate:

- a. For the **Connection Type**, select the **PFX** option.
- b. Type the location of the **RA Cert PFX**.

For example:

`C:\Symantec\RACert.pfx`

Note: The PFX file must not be read-only.

- c. Type and confirm the password for the certificate.

10. If you are using dual control for key recovery:

Dual Control for Key Recovery: ☒

2nd RA Cert PFX:

2nd Certificate Password: Confirm 2nd Password:

- a. Select the **Dual Control for Key Recovery** option.

Note: If you want to configure dual control for a CA you have already set up in MyID, contact Intercede customer support for help with reconfiguring your system, quoting reference SUP-23.

- b. Type the location of the **2nd RA Cert**.

For example:

`C:\Symantec\RACertTwo.pfx`

Or

`C:\Symantec\RACertTwo.cer`

Note: The PFX or CER file must not be read-only.

- c. If you are using a software-based certificate, type and confirm the password for the certificate.

Note: The password cannot contain a pipe | character.

11. Set the **Retry Delays**.

This is a semi-colon separated list of elapsed times, in seconds.

For example, 5;10;20 means:

- If the first attempt to retrieve details from the CA fails, a second attempt will be made after a 5 second delay.
- If this second attempt fails, the CA will be contacted again after 10 seconds.
- Subsequent attempts will be made to retrieve information every 20 seconds, until a response is received.

If you want to limit the number of retry attempts, enter 0 as the last number in the sequence.

The default is:

15;60;60;60;60;120;180;360;3600;86400;0

This retries after 15 seconds, then after a minute four times, then two minutes, three minutes, six minutes, an hour, 24 hours, then stops.

12. Make sure that the **Enable CA** checkbox is selected.

13. Click **Save**.

You can now go back into the **Certificate Authorities** workflow and set up your certificate templates.

3.2.1 Enabling certificates on a CA

Note: Because of the way Symantec MPKI 8 handles certificate template names, the friendly name is not available in MyID. The certificate names provided are not guaranteed to be unique; however, MyID displays the unique OID as part of the name (for example: 2.16.840.1.113733.1.16.1.2.3.5.1.239836912), and you can use this to match up with the certificate templates on the Symantec server.

Although all certificate templates are detected when you add the CA to MyID, they are all initially disabled. To enable them:

1. From the **Configuration** category, select **Certificate Authorities**.
2. From the **CA Name** drop-down list, select the certificate authority you want to work with.

MyID Desktop

Certificate Authorities > Select a CA > Edit a CA

Select a CA

CA Name: PTNR CA Description: MPKI8

CA Type: SymantecMPKI8

CA Enabled: ☒

Name	Description	Allow Issuance	Reverse DN	Archive Keys	Superseded
For S/MIME support. Enable digital signing and/or encryption of emails. (1) 2.16.840.1.113733.1.16.1.2.2.1.1.73203985 On https://ptnr-pki-ra.bbtest.net/ra/enrollmentService	2.16.840.1.113733.1.16.1.2.2.1.1.73203985	☒	☒	☒	☒
For S/MIME support. Enable digital signing and/or encryption of emails. (13) 2.16.840.1.113733.1.16.1.2.2.1.1.84313887 On https://ptnr-pki-ra.bbtest.net/ra/enrollmentService	2.16.840.1.113733.1.16.1.2.2.1.1.84313887	☒	☒	☒	☒
For S/MIME support. Enable digital signing and/or encryption of emails. (18) 2.16.840.1.113733.1.16.1.2.2.1.1.72490309 On https://ptnr-pki-ra.bbtest.net/ra/enrollmentService	2.16.840.1.113733.1.16.1.2.2.1.1.72490309	☒	☒	☒	☒
For S/MIME support. Enable digital signing and/or encryption of emails. (20) 2.16.840.1.113733.1.16.1.2.2.1.1.84313580 On https://ptnr-pki-ra.bbtest.net/ra/enrollmentService	2.16.840.1.113733.1.16.1.2.2.1.1.84313580	☒	☒	☒	☒
For S/MIME support. Enable digital signing and/or encryption of emails. (21) 2.16.840.1.113733.1.16.1.2.2.1.1.80684932 On https://ptnr-pki-ra.bbtest.net/ra/enrollmentService	2.16.840.1.113733.1.16.1.2.2.1.1.80684932	☒	☒	☒	☒
For S/MIME support. Enable digital signing and/or encryption of emails. (22) 2.16.840.1.113733.1.16.1.2.2.1.1.80755397 On https://ptnr-pki-ra.bbtest.net/ra/enrollmentService	2.16.840.1.113733.1.16.1.2.2.1.1.80755397	☒	☒	☒	☒
For S/MIME support. Enable digital signing and/or encryption of emails. (23) 2.16.840.1.113733.1.16.1.2.2.1.1.83804104 On https://ptnr-pki-ra.bbtest.net/ra/enrollmentService	2.16.840.1.113733.1.16.1.2.2.1.1.83804104	☒	☒	☒	☒
For S/MIME support. Enable digital signing and/or encryption of emails. (3) 2.16.840.1.113733.1.16.1.2.2.1.1.84187043 On https://ptnr-pki-ra.bbtest.net/ra/enrollmentService	2.16.840.1.113733.1.16.1.2.2.1.1.84187043	☒	☒	☒	☒

Delete New Edit

3. Click **Edit**.

4. Make sure **Enable CA** is selected.
5. Select a certificate template you want to enable for issuance within MyID in the **Available Certificates** list.
6. Click the **Enabled (Allow Issuance)** checkbox.
7. Set the options for the policy:

- **Display Name** – the name used to refer to the policy.

If you have more than one KMS, you may not be able to distinguish between the same type of certificate on different KMS servers when selecting certificates in a card profile, as the display names are the same. To avoid this problem, change the **Display Name** of each certificates for one of your KMS servers.

- **Description** – a description of the policy.
- **Allow Identity Mapping** – used for additional identities. See the *Additional identities* section in the [Administration Guide](#) for details.
- **Reverse DN** – select this option if the certificate requires the Distinguished Name to be reversed.
- **Archive Keys** – select whether the keys should be archived.
- **Certificate Lifetime** – the life in days of the certificate. You can request a certificate from one day up to the maximum imposed by the CA. For example, type 365 to request one-year certificates.
- **Automatic Renewal** – select this option if the certificate is automatically renewed when it expires.

- **Certificate Storage** – select one of the following:
 - **Hardware** – the certificate can be issued to cards.
 - **Software** – the certificate can be issued as a soft certificate.
 - **Both** – the certificate can be issued either to a card to as a soft certificate.
- **Requires Validation** – select this option if the certificate requires validation.
Note: This option is available only if you select **Software** or **Both** for the **Certificate Storage** option.
- **Recovery Storage** – select one of the following:
 - **Hardware** – the certificate can be recovered to cards.
 - **Software** – the certificate can be recovered as a soft certificate.
 - **Both** – the certificate can be recovered either to cards or to a soft certificate.
 - **None** – allows you to prevent a certificate from being issued as a historic certificate, even if the **Archive Keys** option is set. If the **Certificate Storage** option is set to **Both**, the certificate can be issued to multiple credentials as a shared live certificate, but cannot be recovered as a historic certificate.
- Additional options for storage:

If you select **Software** or **Both** for the **Certificate Storage**, or **Software**, **Both**, or **None** for the **Recovery Storage**, set the following options:

- **CSP Name** – select the name of the cryptographic service provider for the certificate. This option affects software certificates issued or recovered to local store for Windows PCs.
 The CSP you select determines what type of certificate templates you can use. For example, if you want to use a 2048-bit key algorithm, you cannot select the Microsoft Base Cryptographic Provider; you must select the Microsoft Enhanced Cryptographic Provider. See your Microsoft documentation for details.
- **Requires Validation** – select this option if the certificate requires validation.
- **Private Key Exportable** – when a software certificate is issued to local store, create the private key as exportable. This allows the user to export the private key as a PFX at any point after issuance.
 It is recommended that private keys are set as non-exportable for maximum security.
Note: This setting affects only private keys for software certificates – private keys for smart cards are never exportable.
- **User Protected** – allows a user to set a password to protect the certificate when they issue or recover it to their local store.
 This means that whenever they want to make use of the soft certificate, they will be prompted for a password before they are allowed to use it. This is a CSP feature that is enabled when you set this option, and affects only software certificates that are issued or recovered to local store for Windows PCs.

- **Key Algorithm** – select the type and length of the key-pairs used for certificate generation. A longer key length is more secure but certain manufacturers' CSPs do not support longer lengths. Select the appropriate key length from the list. This must match the key type and length set up in your CA.
- **Key Purpose** – select one of the following:
 - **Signature** – the key can be used for signing only.
 - **Signature and Encryption** – the key can be used for either signing or encryption.

Note: The **Key Purpose** option has an effect only where the device being issued supports the feature. PIV cards do not support this feature, while smart cards issued with minidrivers and software certificates issued to local store for Windows PCs do support this feature.

8. If you need to edit the policy attributes, click **Edit Attributes**.

Policy Attributes

Attribute	Type	Value
mail firstName *	Dynamic	First Name
mail lastName *	Dynamic	Surname
otherNameUPN *	Dynamic	Email
Seat Id *	Dynamic	Email
Common Name (Searchable) #	Not Required	Not Required
Email (Searchable) #	Not Required	Not Required
Additional Field 4 (Non-searchable)	Not Required	Not Required
Additional Field 5 (Non-searchable)	Not Required	Not Required
Employee ID (Non-searchable)	Not Required	Not Required

* = Mandatory attribute
 # = Recommended attribute

Hide Attributes

- For each attribute, select one of the following options from the **Type** list:
 - **Not Required** – the attribute is not needed.
 - **Dynamic** – select a mapping from the **Value** list to match to this attribute.
 - **Static** – type a value in the **Value** box.
- Click **Hide Attributes**.

For information on mapping attributes for PIV systems, see section [3.4, Attribute mapping for PIV and PIV-I systems](#).

Note: MyID may not override the settings of the CA. You need to obtain the correct settings from the administrator of your CA.

9. Click **Save**.

Note: Changes made to certificate profiles do not take effect immediately, as the normal interval for MyID to poll for updates is 50 minutes. To force MyID to poll for changes immediately, you must manually restart the eKeyServer service, then restart the eCertificate service.

3.2.2 Editing CA options

If you need to change the connection details for the CA, you can reset the connection.

1. From the **Configuration** category, select **Certificate Authorities**.
2. From the **CA Name** drop-down list, select the certificate authority you want to work with.
3. Click **Edit**.
4. Click **Reset Connection**.

The screenshot shows the 'MyID Desktop' application window. The breadcrumb navigation is 'Certificate Authorities > Select a CA > Edit a CA'. The 'Certificate Authority' tab is active. The form contains the following fields and options:

- CA Name:** PTNR
- CA Description:** MPK18
- CA Type:** SymantecMPK18
- Retry Delays:** 15;60;60;60;120;180;360;3600;86
- CA URL:** https://ptnr.pkriv.mil.mil
- KMS URL:** https://MMP2012R2WEDQ.DOMAIN.LOCAL:8443
- Connection Type:** PFX (selected), Certificate
- RA Cert PFX:** C:\Symantec\MPK18.pfx
- Certificate Password:** (empty)
- Confirm Password:** (empty)
- Dual Control for Key Recovery:** (unchecked)
- Enable CA:** (checked)
- Reset Connection:** (checked)
- Available Certificates:** A list of certificates, all with the display name 'For S/MIME support. Enable digital signing a'.
- Enabled (Allow Issuance):** (unchecked)
 - Display Name:** For S/MIME support. Enable digital signing a
 - Description:** 2.16.840.1.113733.1.16.1.2.2.1.1.72490309
 - Allow Identity Mapping:** (unchecked)
 - Reverse DN:** (unchecked)
 - Archive Keys:** None (selected)

At the bottom right, there are 'Save' and 'Cancel' buttons.

The CA connection options appear, and you can edit them. See section 3.2, *Configuring the CA in the Certificate Authorities workflow* for details of the options.

5. Click **Save**.

3.2.3 Deleting a CA

You can delete a CA from the list of available CAs if you no longer need to be able to work with it, or if you created it in error.

See the *Deleting a CA* section in the **Administration Guide** for details.

3.3 Configuring additional attributes

You can set up MyID to provide additional attributes to Symantec MPKI in the certificate request.

You can then use these fields in Symantec Managed PKI Control Center – you can use some fields to search for certificates, and the values for the other fields are displayed in the search results.

The Symantec documentation provides a list of which attributes you can use in the enrollment request. Some fields are searchable, while other fields are non-searchable but will be returned in the search results.

Currently, you can use the following fields as searchable fields:

Name	Type	Description
common_name	VT_PRINTABLE_STRING	Common name
mail_email	VT_IA5_STRING	Email

You can also use the following non-searchable fields:

Name	Type	Description
additional_field4	VT_T61_STRING	Additional Field 4
additional_field5	VT_T61_STRING	Additional Field 5
employeeID	VT_T61_STRING	Employee ID
mailStop	VT_T61_STRING	Address
country	VT_PRINTABLE_STRING	Two letter country code. For example, US, UK.
additional_field6	VT_T61_STRING	Additional Field 6
jobTitle	VT_T61_STRING	Job title
locality	VT_T61_STRING	Locality
state	VT_T61_STRING	State

3.3.1 Setting up the additional attributes

The availability of additional searchable and non-searchable attributes in the MyID **Certificate Authorities** workflow is determined by the `SymantecMPKIConnector.xml` configuration file in the MyID `Components` folder on the MyID application server; by default, this is:

```
C:\Program Files\Intercede\MyID\Components\
```

By default, the configuration file contains all of the available additional attributes. However, you can configure this file if necessary.

For example, for the Common Name searchable attribute, use an `<Extension>` block like:

```
<Extension displayType="recommended">
  <Name>common_name</Name>
  <DisplayName>Common Name (Searchable)</DisplayName>
</Extension>
```

with a `displayType` of "recommended".

For the Employee ID non-searchable attribute, use an `<Extension>` block like:

```
<Extension displayType="optional">
  <Name>employeeID</Name>
  <DisplayName>Employee ID (Non-searchable)</DisplayName>
</Extension>
```

with a `displayType` of "optional".

Note: After you have made any changes to this file, you must restart the service:

1. From the Windows Administrative Tools, double-click **Services**.
2. Right-click the **eCertificate Services Server** service, then from the popup menu click **Restart**.

3.3.2 Mapping the additional attributes

You must use the **Edit Attributes** option for each certificate policy in the **Certificate Authorities** workflow to set up a mapping or a static value for each of the additional attributes that you want to pass in the certificate request. See section [3.2.1, Enabling certificates on a CA](#) for details.

3.4 Attribute mapping for PIV and PIV-I systems

For PIV systems, you must set up the attributes of the PIV certificate policies to have specific Dynamic mappings.

The following tables provide an example configuration for PIV cards.

Note: The order of the attributes may be different on your system; it depends on how the CA is configured.

Important: The PIV Card Authentication certificate policy *must not* contain a mapping for Email.

3.4.1 Attribute configuration

When setting up your certificate policy attributes, you must consider the following:

- When you add a new certificate policy (Base Certificate Template – BCT) within the DigiCert management system, by default a **Common Name (CN)** field is included. Within MyID, this appears in the attribute mapping screen as two fields, **mail firstName** and **mail lastName**. You are recommended to delete the default **Common Name (CN)** field and manually add a new field with the same properties; in MyID, this will appear in the attribute mapping screen as a single **common name** field, which you can map dynamically to the **Common Name** field in MyID.
- It is expected that you are using the Common Name field, but depending on your system deployment you may need to add fixed values for the Country and Organization codes. Set the order to be Country > Organization > Common Name. Contact your DigiCert representative for more information.
- MyID includes as search elements all attributes that may be mandatory or recommended. You are recommended to map *all* attributes that are listed as searchable.

If you do not map an attribute, and MPKI considers it mandatory, the certificate issuance will fail. For example, DigiCert recommends that you include attributes that refer to the email address, even if they are not part of the certificate data, to allow searches in PKI manager.

3.4.2 Publishing policies

You are recommended to set the jurisdiction to allow the user to decide whether policies should be published, rather than setting the jurisdiction to Always Publish or Never Publish. The PIV signing and encryption certificates should be published, while the PIV authentication certificates should not be published.

The **publish flag** attribute appears if the jurisdiction is set to allow the user to decide whether the individual policies are published; The attribute must be set to **Static**, and can contain one of the following:

- **Yes** – the policy is published.
- **No** – the policy is not published.

The case is not important. If you use a value other than **Yes** or **No**, an error similar to one of the following will occur:

```
<Parameters>
  <Status>-6</Status>
  <CAType>SymantecMPKI</CAType>
  <Message>Error found in SendRequest: Unable to cast object of type
'Symantec.Cert.Policy.PublishCert' to type 'System.String'.</Message>
</Parameters>
```

or:

```
<Parameters>
  <Status>-6</Status>
  <CAType>SymantecMPKI</CAType>
  <Message>Error found in SendRequest: cACertPublishNameValuePair must be
yes or no, not clientProvided</Message></Parameters>
```

or:

```
<Parameters>
  <Status>-6</Status>
  <CAType>SymantecMPKI</CAType>
  <Message>Error found in SendRequest: Must specify valid information for
parsing in the string.</Message></Parameters>
```

Note: Using a value of 1 or 0 will not generate an error; however, as 0 is equivalent to **Yes** and 1 is equivalent to **No**, to prevent confusion, you are recommended to use **Yes** and **No** only.

3.4.3 Attribute tables

Note: The extended attribute configuration file contains an entry for seat ID. You are recommended to map this attribute to Email. See section [3.3.1, Setting up the additional attributes](#).

The following tables show the recommended options for attribute mapping.

ManagedPKI KeyEscrow DualKey Encryption	
Attribute	Value
mail email	Email
common name	Common Name
state	Not Required
country	Not Required
org unit	Organisational Unit
mailStop	Not Required
employeeID	EmployeeID
locality	Not Required
jobTitle	Not Required
corp company	Applicant Group
publish flag (Static)	No

ManagedPKI KeyEscrow DualKey Signing	
Attribute	Value
mail email	Email
common name	Common Name
state	Not Required
country	Not Required
org unit	Organisational Unit
mailStop	Not Required
employeeID	EmployeeID
locality	Not Required
jobTitle	Not Required
corp company	Applicant Group
publish flag (Static)	No

ManagedPKI PIV Account Signer	
Attribute	Value
common name	Common Name
publish flag (Static)	No

ManagedPKI PIV Authentication	
Attribute	Value
common name	Common Name
FASC-N	FASC-N (Hex)
UserPrincipalName	User Principal Name
Email	Not Required
UUID	UUID (ASCII)
NACI Check	NACI Status
publish flag (Static)	No

ManagedPKI PIV Card	
Attribute	Value
fascn printable	FASC-N (ASCII)
FASC-N	FASC-N (Hex)
UserPrincipalName	Not Required
Email	Not Required
UUID	UUID (ASCII)
NACI Check	NACI Status
publish flag (Static)	No

ManagedPKI PIV EndUser Encryption	
Attribute	Value
common name	Common Name
mail email	Email
publish flag (Static)	Yes

ManagedPKI PIV EndUser Signing	
Attribute	Value
common name	Common Name
mail email	Email
publish flag (Static)	Yes

3.4.4 PIV-I systems

The FASC-N mapping is required for standard PIV cards, but is not permitted for PIV-I cards. The Printable FASC-N mapping is set to FASC-N (ASCII) for PIV cards, and UUID (ASCII) for PIV-I cards. NACI is not required for PIV-I.

For example, for a PIV-I system, the following certificate policies would need to be different from the example for a PIV system above:

ManagedPKI PIV Authentication	
Attribute	Value
common name	Common Name
FASC-N	Not Required
UserPrincipalName	User Principal Name
Email	Not Required
UUID	UUID (ASCII)
NACI Check	Not Required
publish flag (Static)	No

ManagedPKI PIV Card	
Attribute	Value
fascn printable	UUID (ASCII)
FASC-N	Not Required
UserPrincipalName	Not Required
Email	Not Required
UUID	UUID (ASCII)
NACI Check	Not Required
publish flag (Static)	No

3.5 Setting up KMS

This section provides instructions on setting up the Key Management Server (KMS) for MPKI 8 (Cloud and Enterprise).

3.5.1 Setting up KMS for MPKI 8 Cloud

No additional steps are required to set up KMS for MPKI 8 Cloud.

Note: This means that Symantec are hosting your key material.

3.5.2 Setting up KMS for MPKI 8 Enterprise

You must install and configure Symantec Enterprise Gateway, and reconfigure your Symantec MPKI 8. You do not need to set up shared secrets.

MPKI 8 uses *two* RA certificates: one is for the IIS sites, and the other is for the Apache Tomcat site.

If you are using SSL, you must also have the local Symantec IIS websites' SSL server certificate as a trusted certificate. Add this certificate to the Trusted Root Certification Authorities certificate store for the MyID COM user on the MyID application server.

See your Symantec documentation for details.

3.6 Setting up an authorized user list

For MPKI 8, you must set up an authorized user list in the Symantec portal for your LKMS usage. If you do not set up a list, issuance will fail.

See the *Manage authorized user lists* topic in the PKI Manager documentation provided by Symantec.

4 Troubleshooting

This section contains details of any known issues and troubleshooting tips.

- **Error when adding a new CA**

You may see an error in the `LogEvents` table similar to the following after attempting and failing to add a new CA:

```
Error found in CheckPolicy: Request Enrollent Policy failed:
SetClientAuth fail. Certificate Store , C:\Symantec\ra2014.pfx. The
given path's format is not supported.
```

This is caused by the PFX file being read-only.

- **Multiple CAs with the same CA Path**

If you have multiple CAs sharing a CA Path, the first CA that is updated has all of the Published flags for its policies set to 0.

This is an issue for Symantec MPKI integration where different jurisdictions may be against the same back-end issuing CA.

- **Dual Control for key recovery**

If you have an existing Symantec MPKI connection in MyID, and you want to change it to use Dual Control for key recovery, you must contact Intercede customer support for help with reconfiguring your MyID system, quoting reference SUP-23.

- **Error A601**

Error A601 can appear when the `common_name` or `mail_email` name value pairs are missing; the message that appears is similar to:

```
Enrollment request is incomplete or incorrect. Correct the enrollment
request and retry the operation.
```

However, this error may also occur when the lifetime requested results in an invalid expiry date; for example, if the validity period of the certificates exceeds the expiration date of the issuing CA.

For more information on certificate lifetimes, see section [2.6, Certificate start and expiry times](#).

- **IKB-349 – Duplicated certificate records appear in the MyID database**

Duplicated certificate records appear in the MyID database; that is, certificates with the same serial number, but with mismatched key information. This may be caused by the following:

- Certificate renewals
- Temporary replacement cards (where short term certificates are issued whilst primary card is unavailable)
- Requests for replacement cards where the original certificates are not revoked (this has been a policy choice by some customers)
- User has multiple devices with certificates (e.g. Smart card, mobile device, Virtual Smart Card) holding same certificate policy

If this occurs, you are recommended to set the **Allow duplicate certificates** option to **NO** on DigiCert MPKI v8 certificate policies..