



Heimdal



Overview

- Hcrypto
- Interop
- Deployment
- Obtaining

Deployment Model

Side-by-side Assemblies

Current Deployment Model

- Kerberos for Windows included with application

Include binaries in application directory.

- Libraries can't be updated independently
- Multiple copies

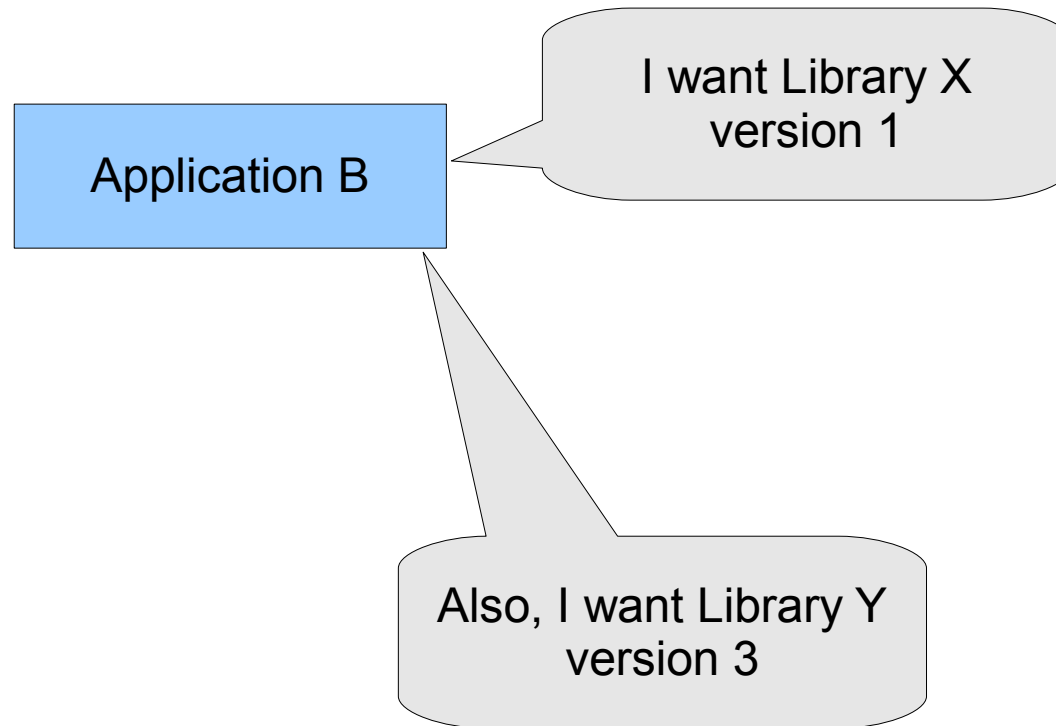
Current Deployment Model

- Kerberos for Windows as a standalone application

Shared binaries located through system PATH

- No library versioning
- Only one set of libraries
 - (Perhaps two)

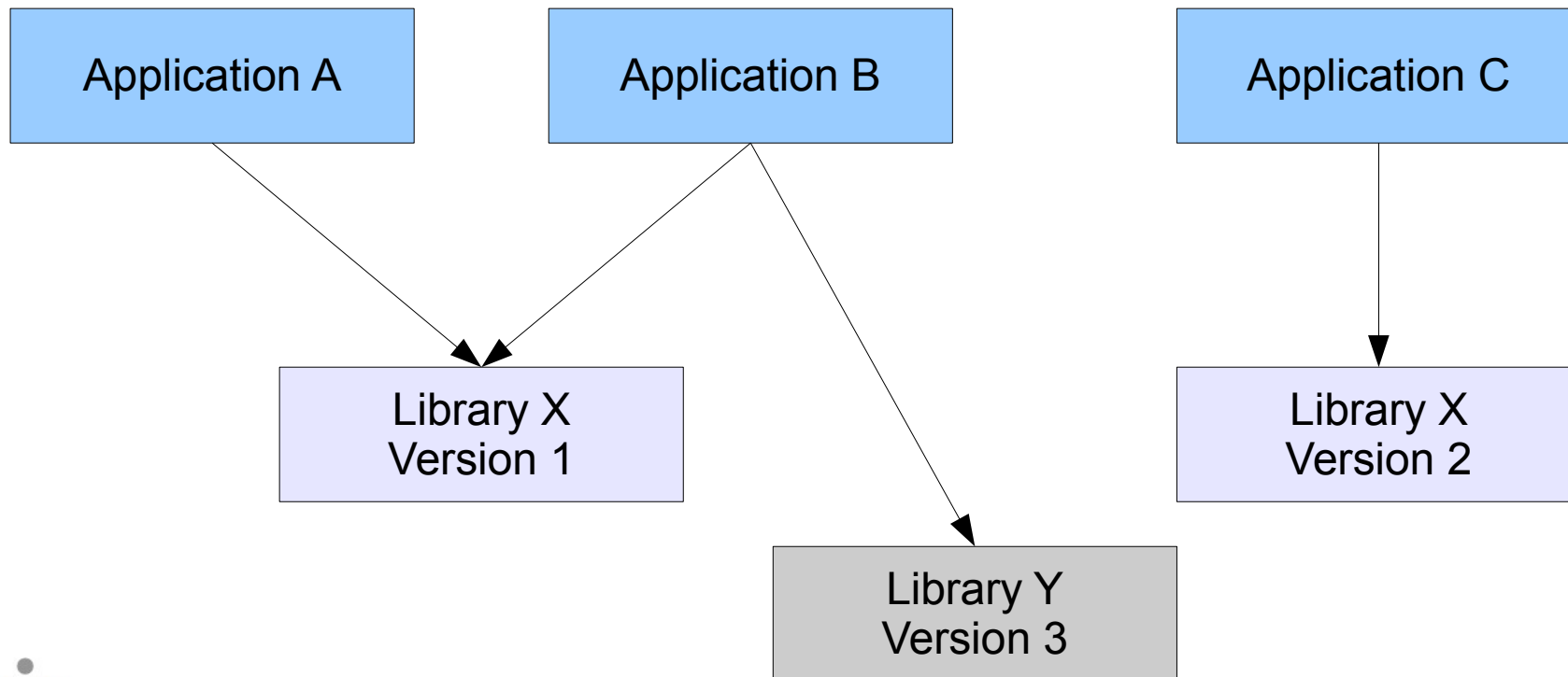
Application Isolation



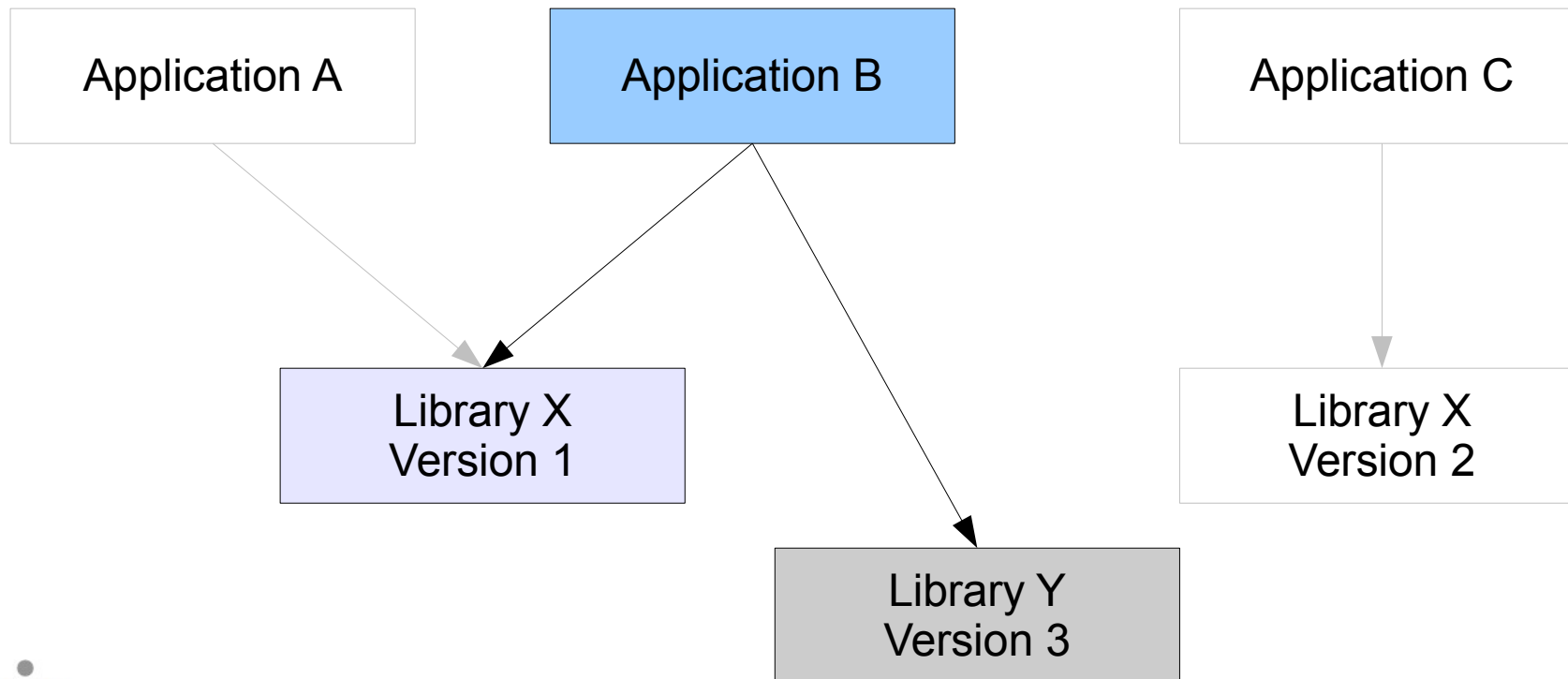
Application Isolation

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<assembly xmlns="urn:schemas-microsoft-com:asm.v1" manifestVersion="1.0">
  <assemblyIdentity type="win32" name="Bar.Company.Application.B" version="3.0"
    processorArchitecture="x86" publicKeyToken="0000000000000000" />
  <dependency>
    <dependentAssembly>
      <assemblyIdentity type="win32" name="Foo.Company.Library.X" version="1.0"
        processorArchitecture="X86" publicKeyToken="0000000000000000" language="*" />
    </dependentAssembly>
    <dependentAssembly>
      <assemblyIdentity type="win32" name="Baz.Company.Library.Y" version="3.0"
        processorArchitecture="X86" publicKeyToken="0000000000000000" language="*" />
    </dependentAssembly>
  </dependency>
</assembly>
```

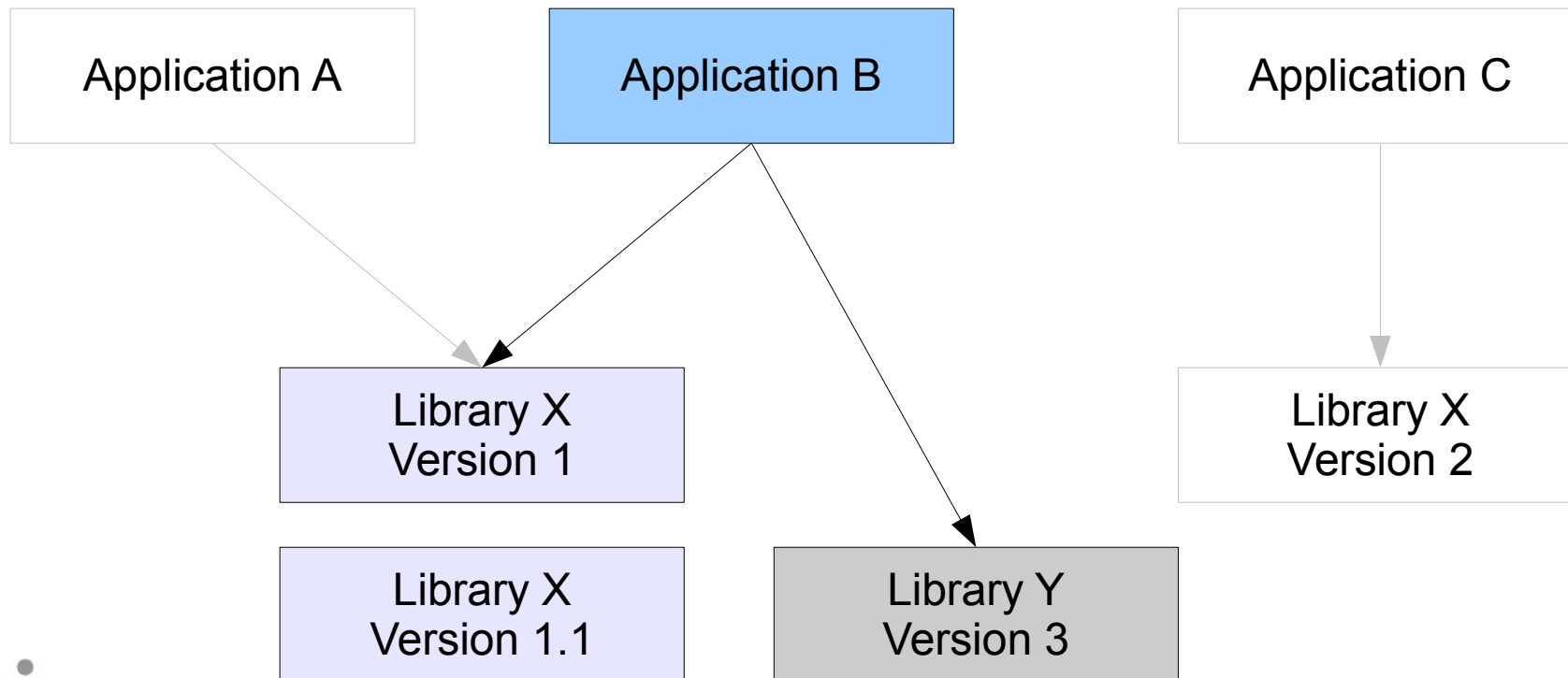
Application Isolation



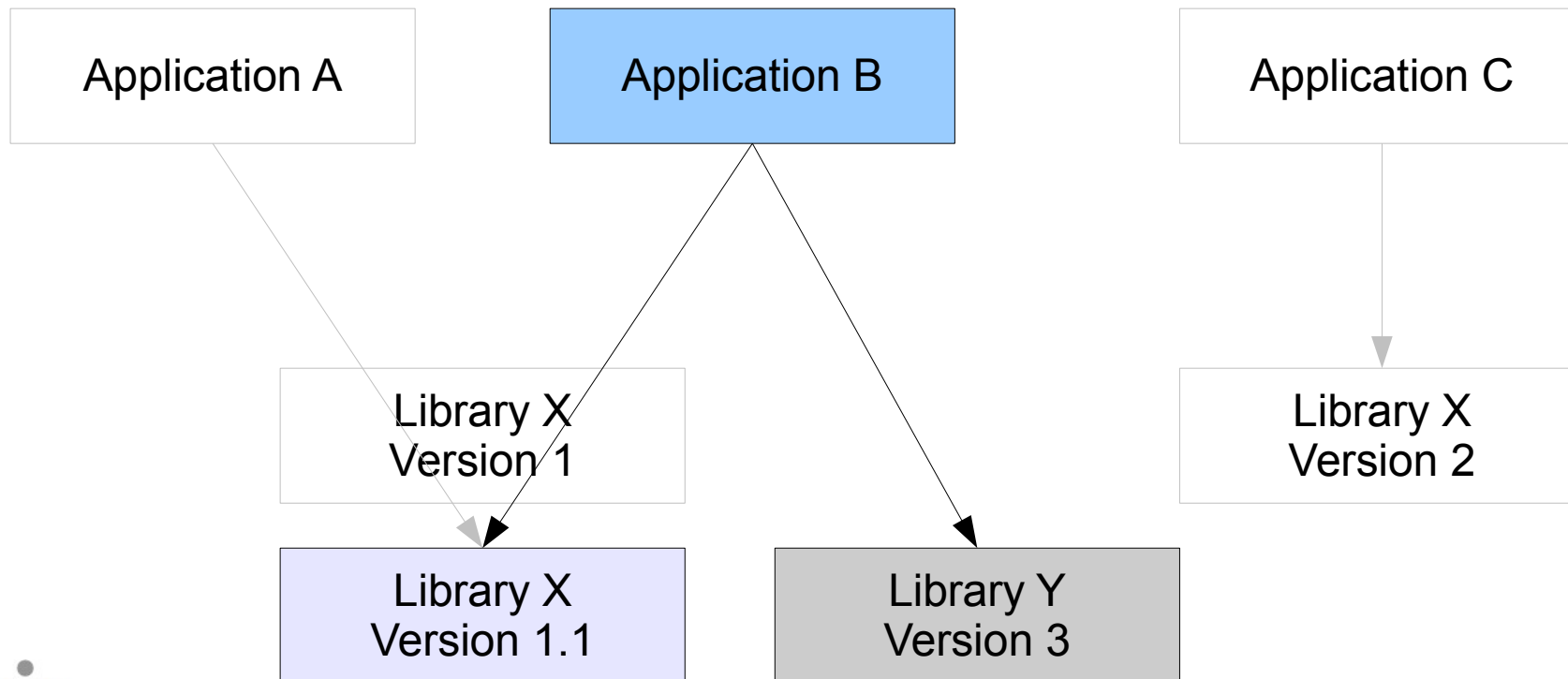
Application Isolation



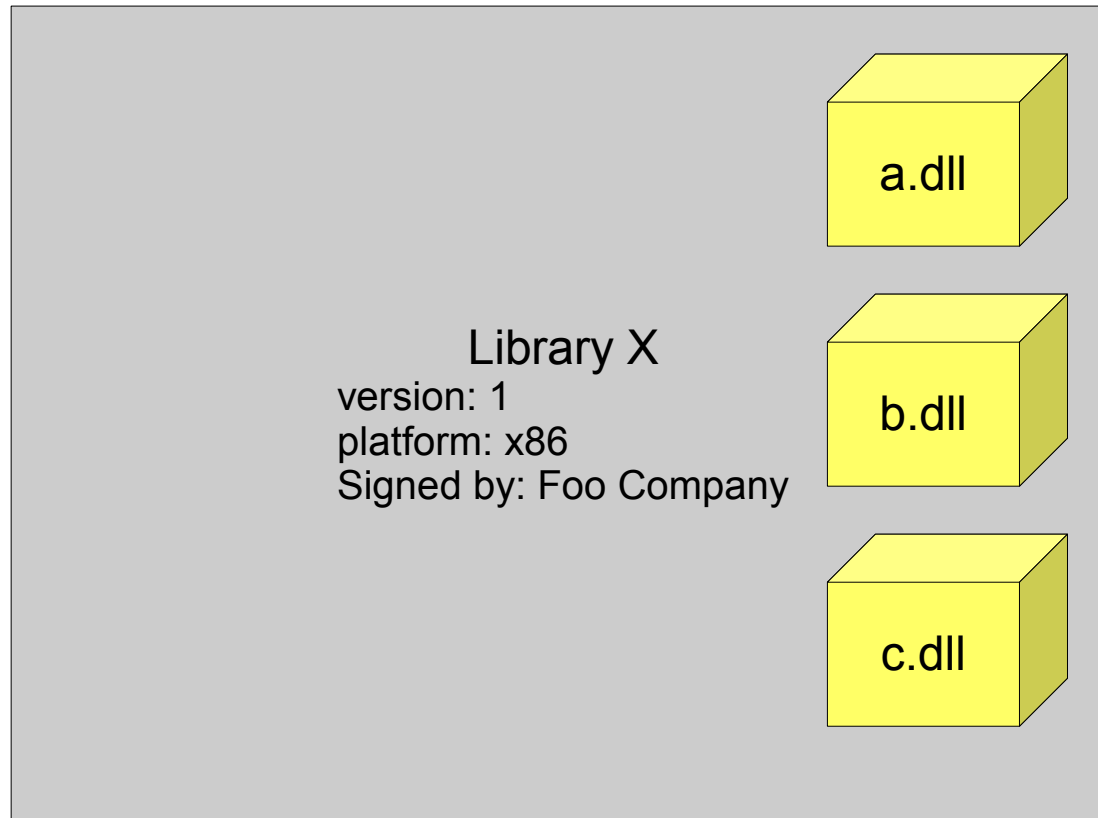
Application Isolation



Application Isolation



Side-by-side Assemblies



Side-by-side Assemblies

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"?>
<assembly xmlns="urn:schemas-microsoft-com:asm.v1" manifestVersion="1.0">
  <assemblyIdentity type="win32" name="Foo.Company.Library.X" version="1.0"
    processorArchitecture="x86" publicKeyToken="0000000000000000"/>
    <file name="a.dll" hash="3eab067f82504bf271ed38112a4ccdf46094eb5a" hashalg="SHA1" />
    <file name="b.dll" hash="ac72753e5bb20446d88a48c8f0aaae769a962338" hashalg="SHA1"/>
    <file name="c.dll" hash="a7312a1f6cfb46433001e0540458de60adcd5ec5" hashalg="SHA1"/>
</assembly>
```

Assembly Based Deployment

- Shared assembly
 - Versioned binaries
 - One copy (of each version)
- Private assembly
 - Easier deployment

Assembly Based Deployment

- Can handle multiple versions of a library on the same machine
- Application installation/removal doesn't affect other applications
- Side-by-side assemblies can be independently updated

Assembly Based Deployment

Heimdal libraries as redistributable assemblies

hcrypto

Using CryptoAPI

CryptoAPI provider for hcrypto

- Native cryptography library
- Support for hardware devices
- Performance

Hardware

- HSM backed KDC
(See last year's)

Additional Issues

Credentials Caches

- Interoperability with Kerberos for Windows
 - Should be able to share credentials caches
 - Use CCAPI
- Access to MSLSA: cache

NIM Plug-in

- Network Identity Manager plug-in that uses Heimdal

Current Status

Current Status

- Functional client libraries
- Server components (not quite yet)

Where is it?

Help us test

Email: heimdal@secure-endpoints.com



Automatic Updates

Automatic Updates

- Available through Secure Endpoints Update Service

Secure Endpoints Update Service

 secureendpoints > [Update Service \(Beta\)](#)

About

Secure-Endpoints Update Service is a software auto-update service built on the open source [Omaha \(a.k.a. Google Update\)](#) framework.

This service is currently in **Beta** testing. There may be service outages and changes to how the service operates. Please consider subscribing to the [Secure Endpoints Update Announcements](#) mailing list to be notified of such changes. If you encounter any problems while using the service or have any comments, please see the [Reporting Bugs](#) section.

Applications

The following applications are currently available for automatic updates:



Kerberos for Windows (32 bit)

[Click here for installers](#)



Kerberos for Windows (64 bit)

[Click here for installers](#)



Network Identity Manager (32 bit)

[Click here for installers](#)

Update Service

- Built on Omaha (Google Update) client and proprietary server
- Silent
- Frequent updates

Supported Applications

Only binaries signed by Secure-Endpoints



Supported Applications

- Network Identity Manager
- OpenAFS for Windows
- Kerberos for Windows
- Heimdal (When beta testing begins)
- KCA Client

Supported Applications

- Bundles
 - Jumbo Installer

Sign in


Sign-in with your password


Email


Password

Sign in

Other ways to sign in:

 Sign in using your Google account

 Sign in using your Yahoo ID

 Sign in using LiveJournal



Sign in with OpenID

Don't have an account? [Register](#), or sign-in using OpenID or another account provider.

Lost your password or can't log in with OpenID? [Recover your account](#).

Network Identity Manager (64 bit)

 secureendpoints > [Update Service \(Beta\)](#) > [Network Identity Manager \(64 bit\)](#)

The installers on this page will install and automatically update Network Identity Manager (64 bit) on your computer.



Prerequisites

- Windows® XP or newer **64-bit** operating system.
- [MIT Kerberos for Windows \(64-bit\)](#)
- An internet connection for initial installation and subsequent updates.

Please note that these installers only install and manage Network Identity Manager. They do not install Kerberos. Network Identity Manager will not function without it. You should install MIT Kerberos for Windows separately.



Network Identity Manager (64 bit) installer

(Current version: 2.0.0.304)

[Click here to install](#)

This is the recommended option for most users. You will receive stable updates for Network Identity Manager (64 bit).

By installing this application, you are agreeing to the [licensing terms](#) for Network Identity Manager (64 bit).



Network Identity Manager (64 bit) - Dev channel installer

(Current version: 2.0.1.428)

[Click here to install](#)

This option is only for those who would like to test the latest builds of Network Identity Manager (64 bit). Updates may be frequent at times.

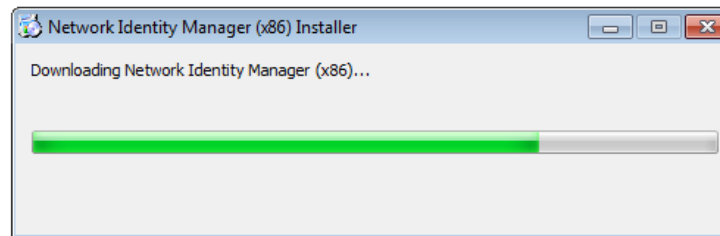
By installing this application, you are agreeing to the [licensing terms](#) for Network Identity Manager (64 bit).

Select "Run" again.

3. The updater downloads and runs the application installer

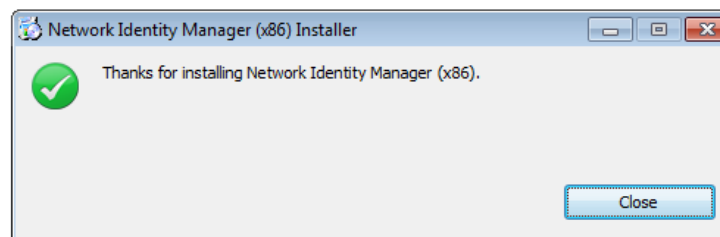
The installer that you downloaded in step 2 is for the Secure-Endpoints Updater. Once the updater starts, it will:

1. connect to the internet,
2. determine the latest version of the application that is available,
3. download the installer for that version, and
4. run the downloaded installer.



4. Done

If all goes well, you will see the installation completed dialog:



Your application has been installed successfully. Note that some applications (such as OpenAFS), require a reboot for the installation to complete. The Updater application does not initiate a reboot automatically. In this case, your application will be ready for use after the next reboot.

Update Channels

- **Default**
Receive only stable updates
- **Dev**
Receive development builds
- **Daily**
Receive daily builds

Custom Update Channels

- Foo Company Channel
(for Application X)
- Foo Company Dev Channel
(for Application X)
- Foo Company Daily Channel
(for Application X)

Current Status

- Service up and running
- Closed Beta
 - Email: update-support@secure-endpoints.com

Q?

Heimdal

heimdal@secure-endpoints.com

Update Service

update-support@secure-endpoints.com

