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# **Jexus Manager Documentation**

***Release 1.0***

**Lex Li**

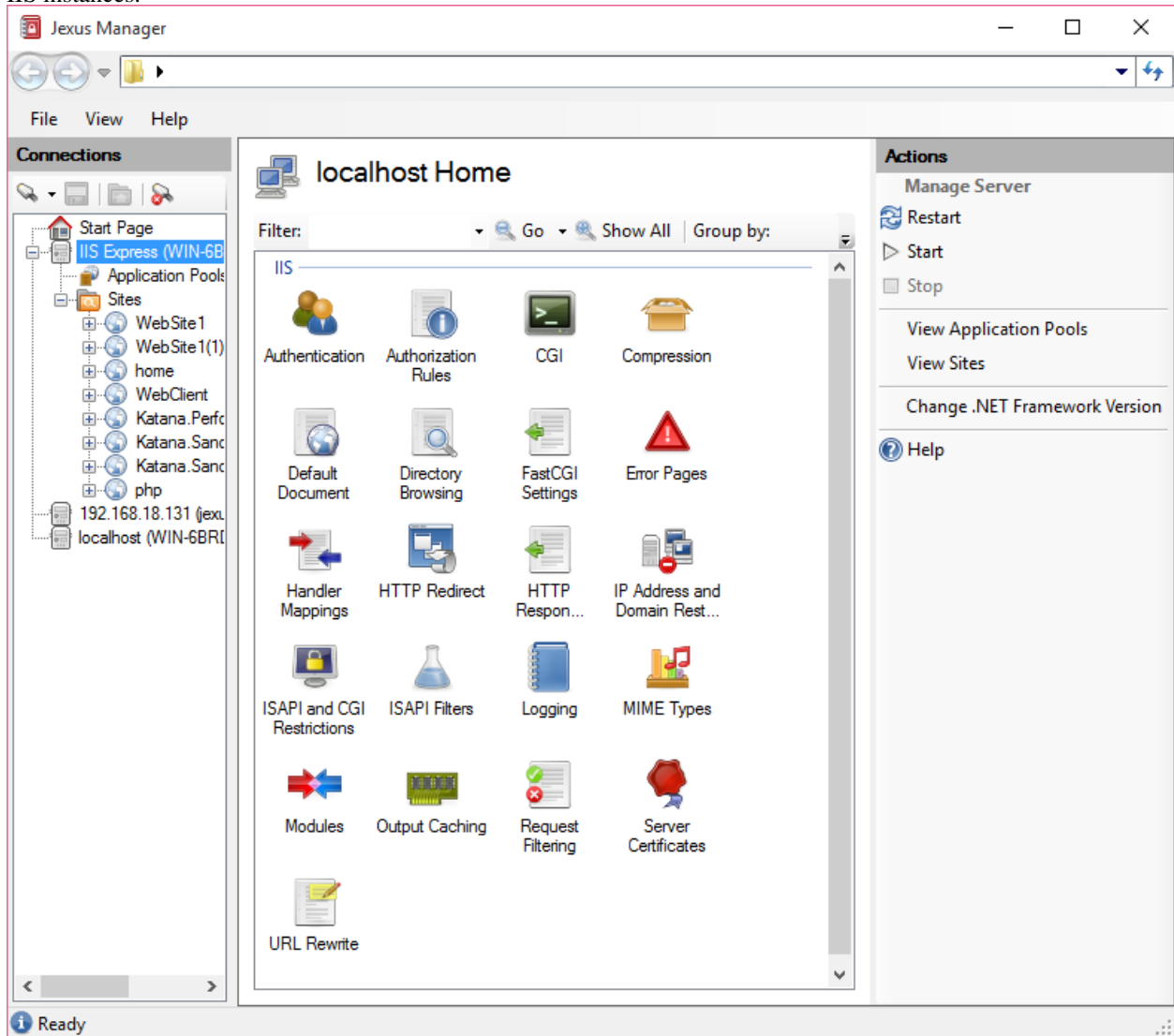
February 20, 2018



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Jexus Manager is the management console designed for Jexus web server. It can also manage IIS Express and local IIS instances.



It can be downloaded from [GitHub](#) .

The source code can now be found at [GitHub](#) .

Issues can be reported at [GitHub](#) .



## Getting Started

### Install on Windows

By Lex Li

This page shows you how to install Jexus Manager on Windows.

**In this article:**

- *Background*
- *Supported Platforms*
- *Installation*
- *Related Resources*

### Background

Jexus Manager is currently in beta and primarily tested on Windows.

### Supported Platforms

Jexus Manager requires .NET 4.5 and Windows Vista and above.

### Installation

1. Download the ZIP package from [GitHub](#) .
2. Unzip the package to a local folder.
3. Execute JexusManager.exe to launch the utility.

### Related Resources

- [Managing Servers](#)
- [Known Issues](#)

- [Troubleshooting](#)

## Managing Servers

By [Lex Li](#)

This page shows you the main features of Jexus Manager.

### In this article:

- [Background](#)
- [Default Servers](#)
- [Add New Servers](#)
- [Manage Servers](#)
- [Related Resources](#)

### Background

Jexus Manager is designed to be compatible with Microsoft IIS Manager. Though it is still in beta, many features are already well developed and tested.

The management features require a specific server to be connected to, and then you can review or change settings.

### Default Servers

Default server instances are displayed automatically if they are detected, so that they don't need to be manually added.

Jexus Manager detects the following servers and shows them under Connections panel.

### Global IIS Express

If a global IIS Express configuration file can be found at `%userprofile%\documents\iisexpress\config\applicationhost.config` or `%userprofile%\my documents\iisexpress\config\applicationhost.config`, a default server called "IIS Express" is automatically created by Jexus Manager.

### Local IIS

If local IIS is installed and its config file is at `%windir%\system32\inetsrv\config\applicationhost.config`, a default server with the machine name is automatically created by Jexus Manager.

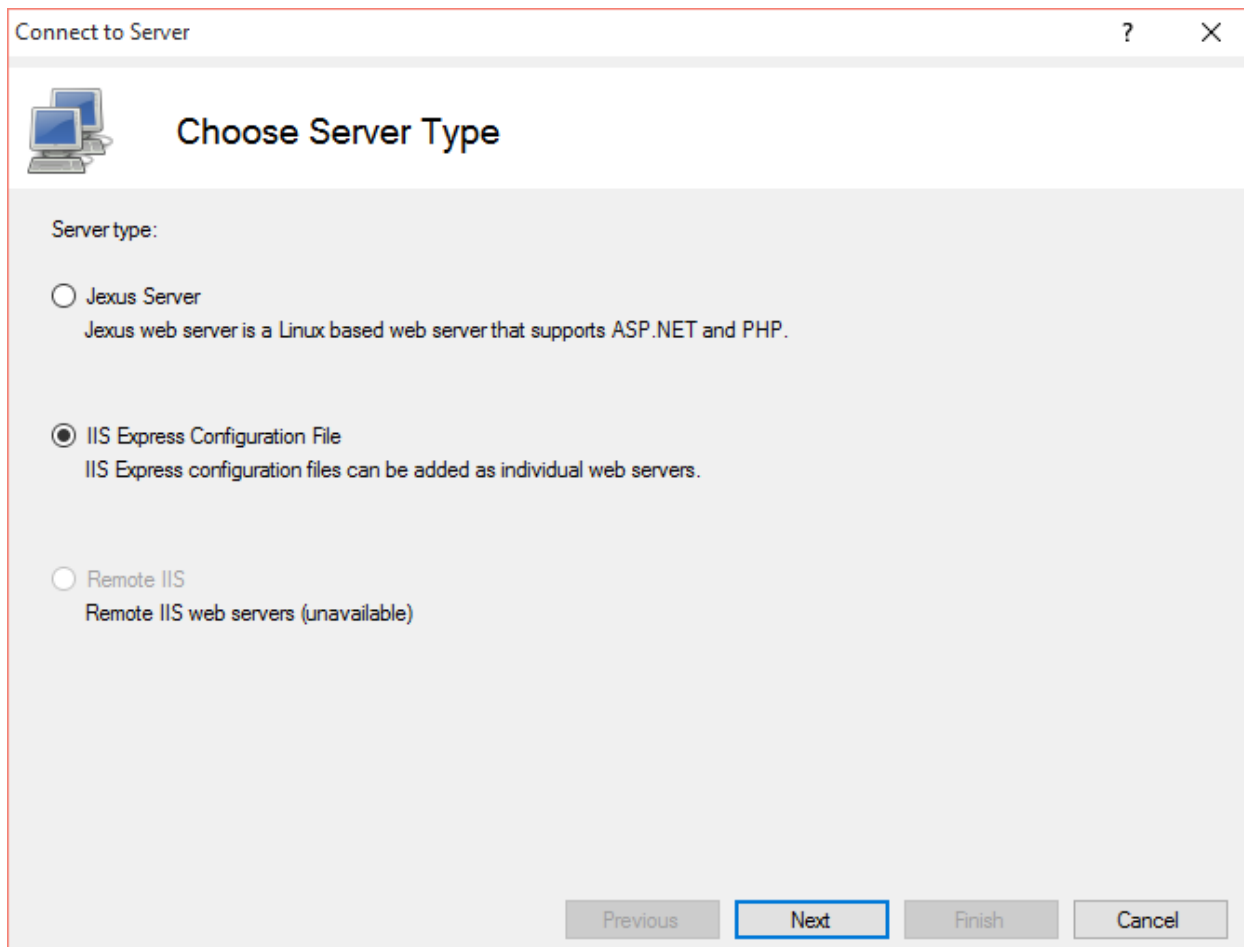
### Add New Servers

Different types of servers can be added to Jexus Manager, which includes IIS Express and remote Jexus web servers.

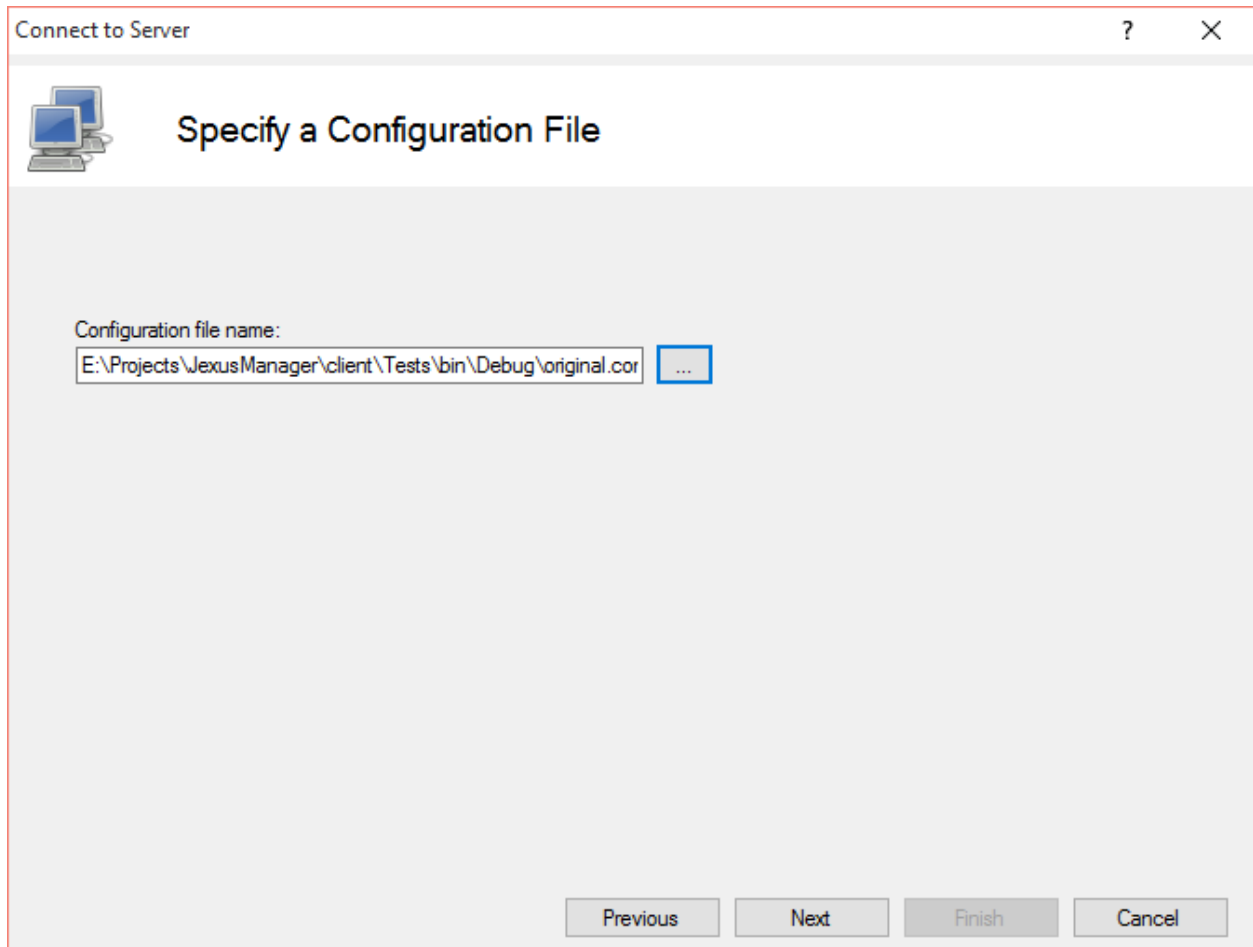
### Add IIS Express From Custom Configuration File

1. By clicking "File | Connect to a Server..." menu item, the wizard starts,

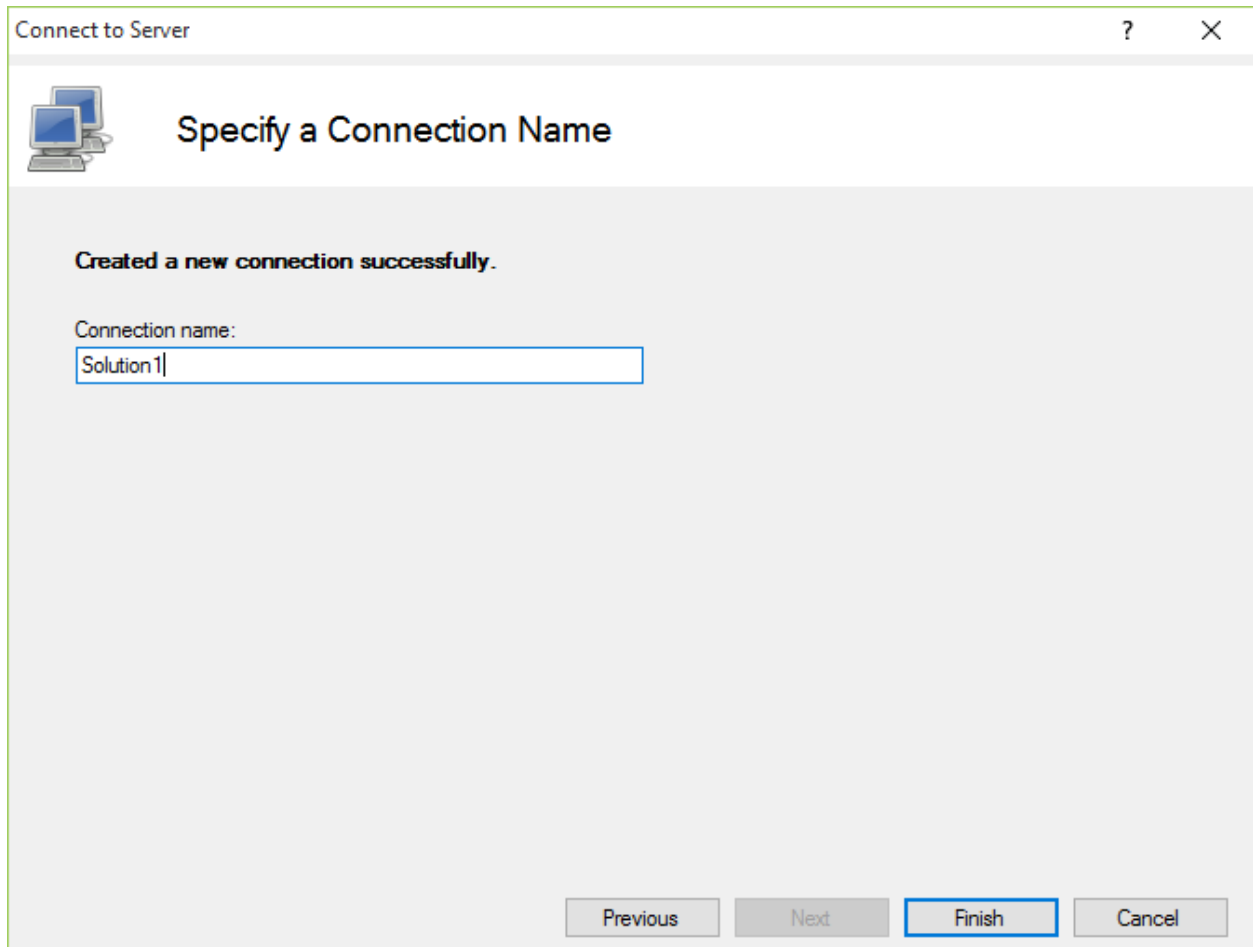




2. Choose IIS Express and click “Next” button.
3. Specify full path of the configuration file (.config) in the text box, or click “...” button to browse the file system,



4. Click Next button.
5. Give this connection a unique and meaningful name.



6. Click “Finish” button.

### Add IIS Express From Visual Studio 2015 Solution File

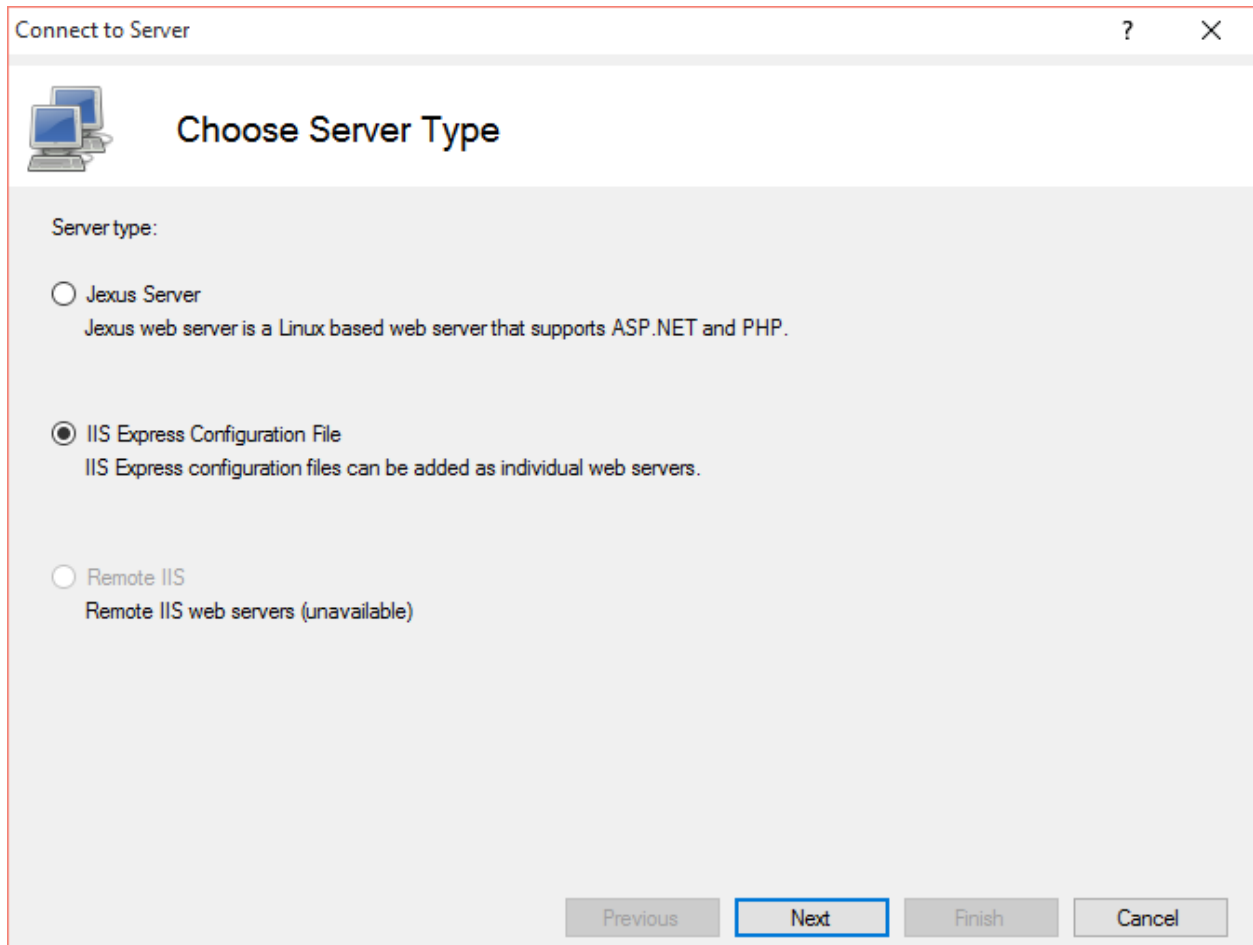
Visual Studio 2015 adds custom IIS Express configuration to new projects at `($SolutionDir)\.vs\config\applicationHost.config`, but this file is hidden by default.

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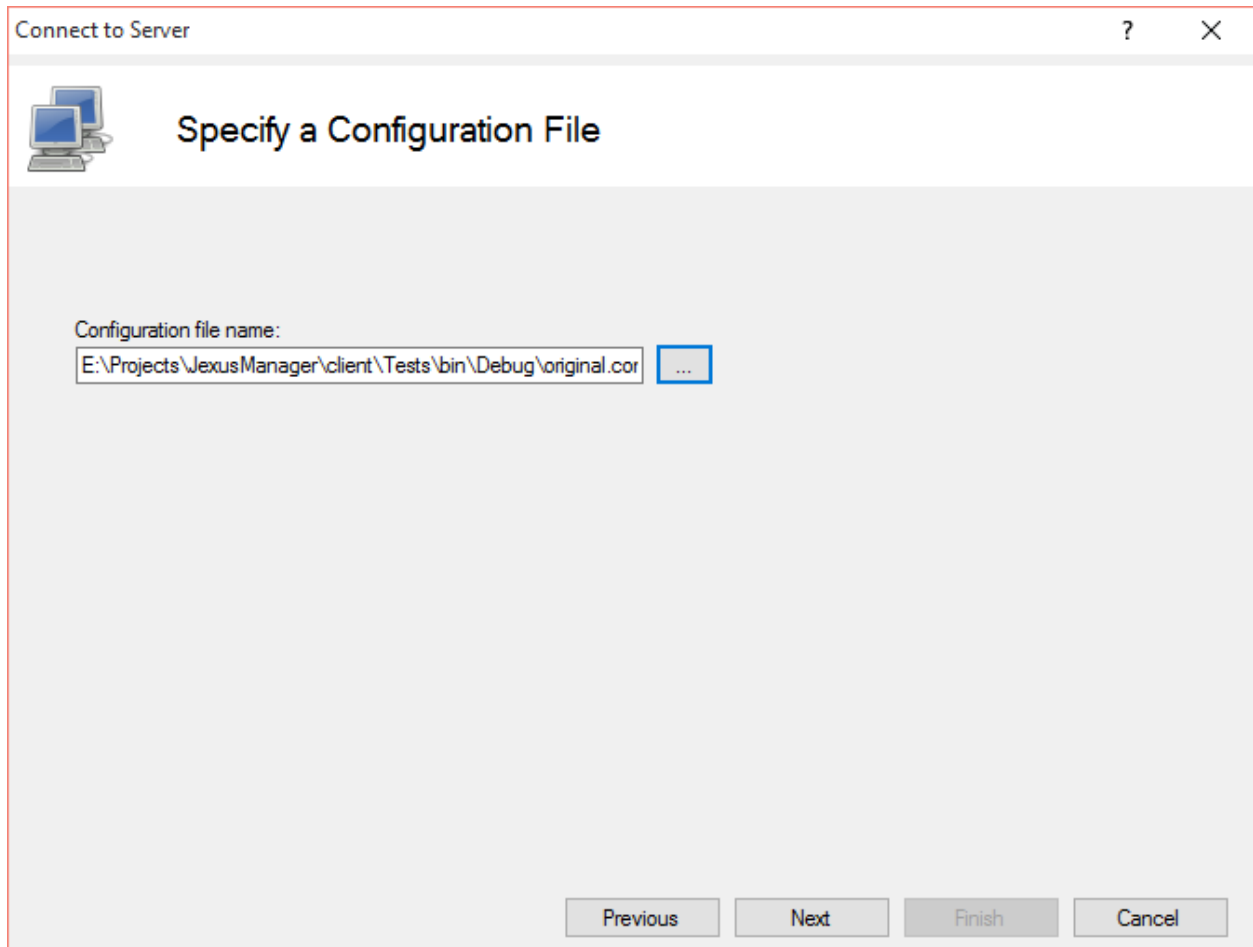
**Note:** IIS Express custom configuration is documented in [this blog post](#) .

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1. By clicking “File | Connect to a Server...” menu item, the wizard starts,

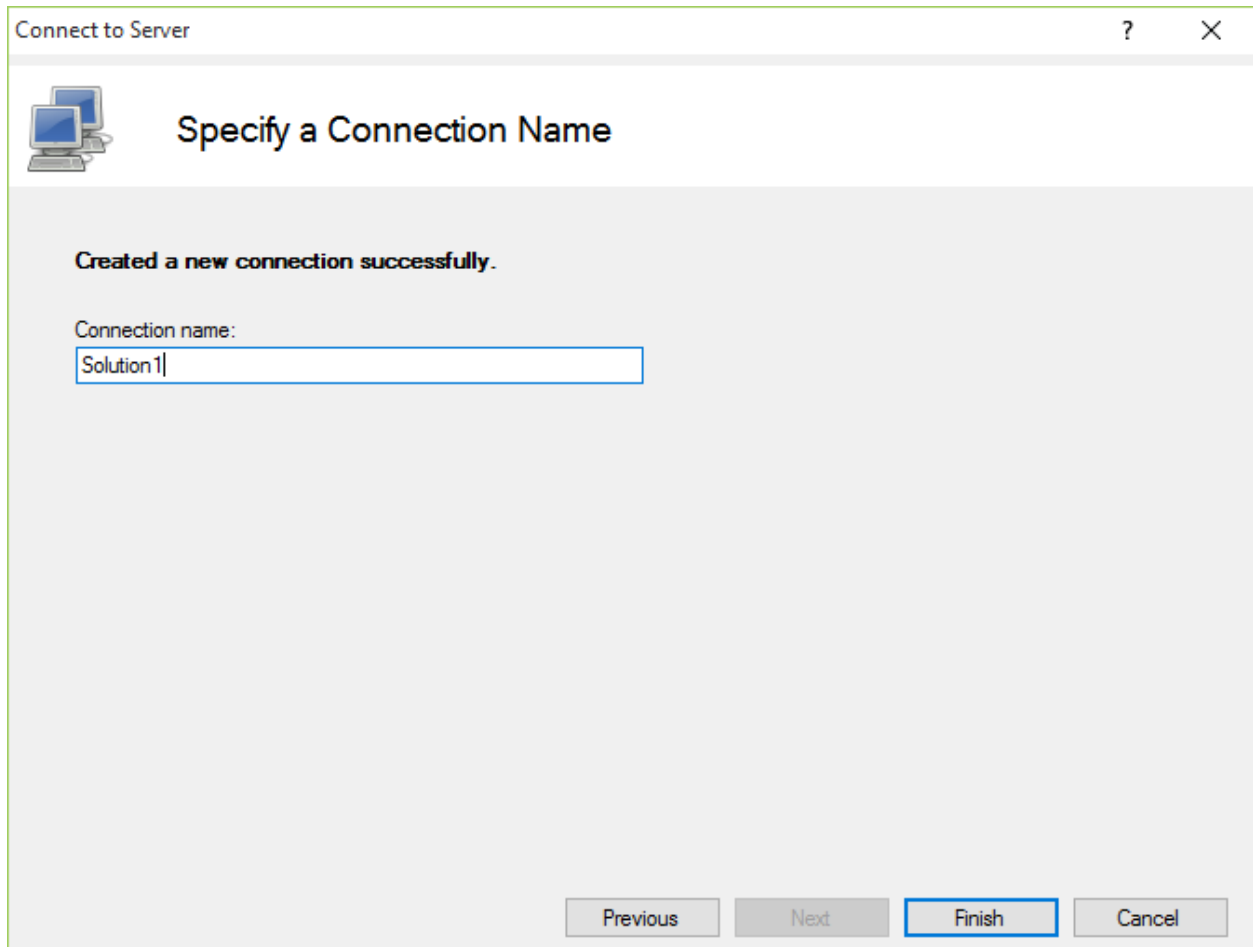


2. Choose IIS Express and click “Next” button.
3. Specify full path of the solution file (.sln) in the text box, or click ”...” button to browse the file system,



Jexus Manager takes care of the rest to manage web sites and applications.

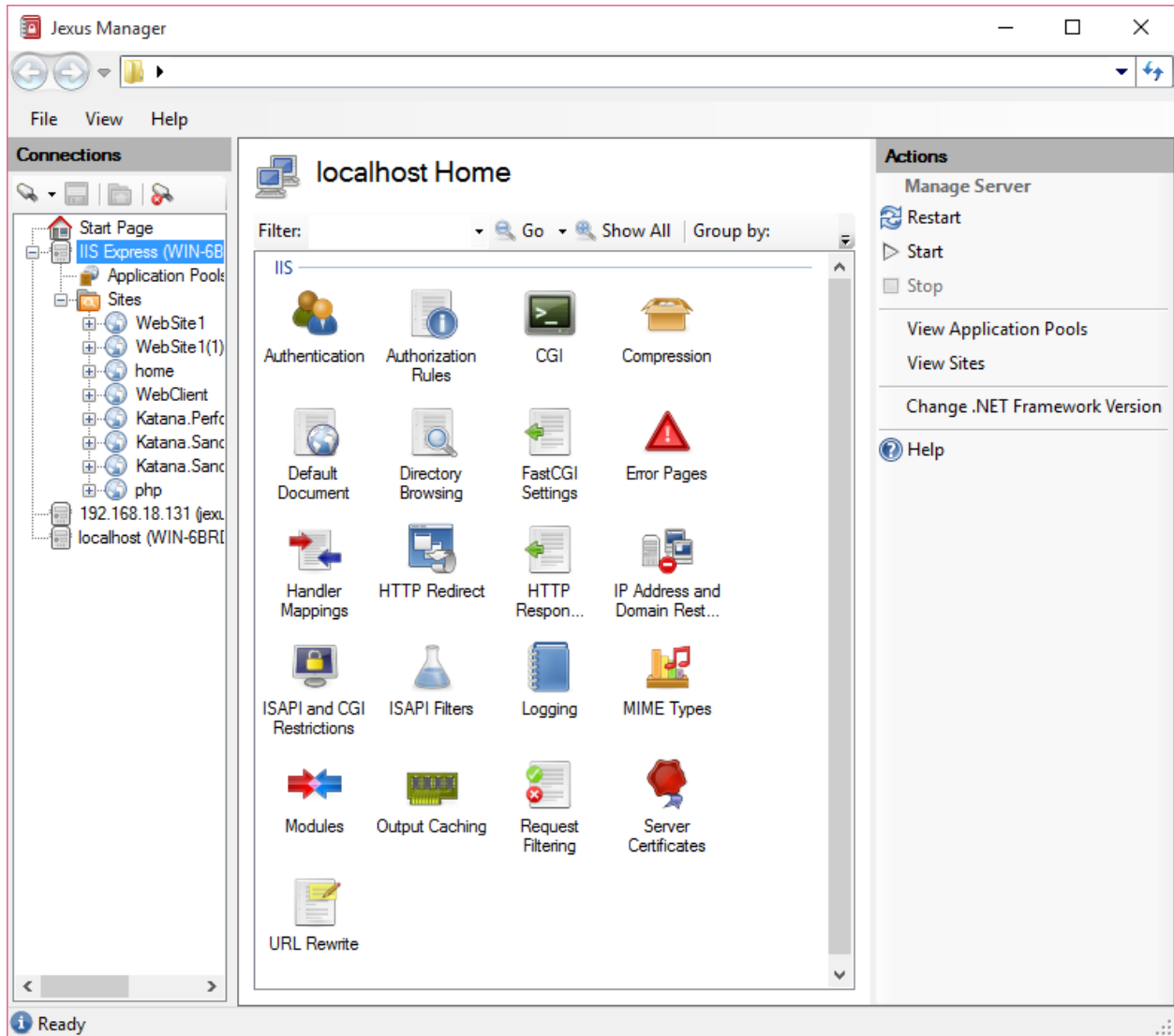
4. Click Next button.
5. Give this connection a unique and meaningful name.



6. Click "Finish" button.

## Manage Servers

Once a server is added, sites and applications can be managed by choosing one of the categories in the middle panel.



**Note:** If the server node is not yet expanded for management, double click the node so that Jexus Manager tries to load its configuration.

## Related Resources

- [Install on Windows](#)
- [Known Issues](#)
- [Troubleshooting](#)

## History of Jexus Manager

By [Lex Li](#)

The first commit of Jexus Manager was made on March 19, 2014 in a private Git repo. This project was designed to be the management console of Jexus web server, which at that time lacks of an easy to use GUI tool.

One of the initial goals was to attract IIS users, so its look and feel is almost the same as IIS Manager. This approach also led to the facts that `Microsoft.Web.Administration` API needs to be reimplemented. Mapping of all Jexus settings (both server and site levels) was done, and soon the work kicked off. Because Jexus only has a few settings, the needed features were finished with the first release candidate released on April 20, 2014. The 1.0 release came on May 30, 2014, which enables Jexus web server remote and local management.

Starting from May 10 2014, the project entered its second phase, trying to fully support Microsoft IIS/IIS Express servers. Microsoft did not provide a management console for IIS Express, so Jexus Manager can be a critical tool to fill the gaps. However, the work on a fully functional `Microsoft.Web.Administration` implementation took very long. Although the first 2.0 Alpha build was made available on November 16, 2014, it lacks of many important features. The work on `Microsoft.Web.Management` started on December 20, 2014, which soon enabled a redesign of all user interface elements to match IIS Manager more closely. Refactoring in July 2015 significantly speed up the development. In November this tool was demonstrated to some Microsoft guys. Scott Hanselman suggested it might be open sourced. On January 16, 2015, Jexus Manager's `Microsoft.Web.Administration` implementation went public on GitHub. The entire Jexus Manager source code was made available on June 25, 2015.

The 2.1 release candidates started to be available on July 11, 2017. On July 22, the 2.1 final release was shipped.

## Tutorials

### Self-Signed Certificate Generation

By [Lex Li](#)

This page shows you how to use Jexus Manager to generate self-signed certificates.

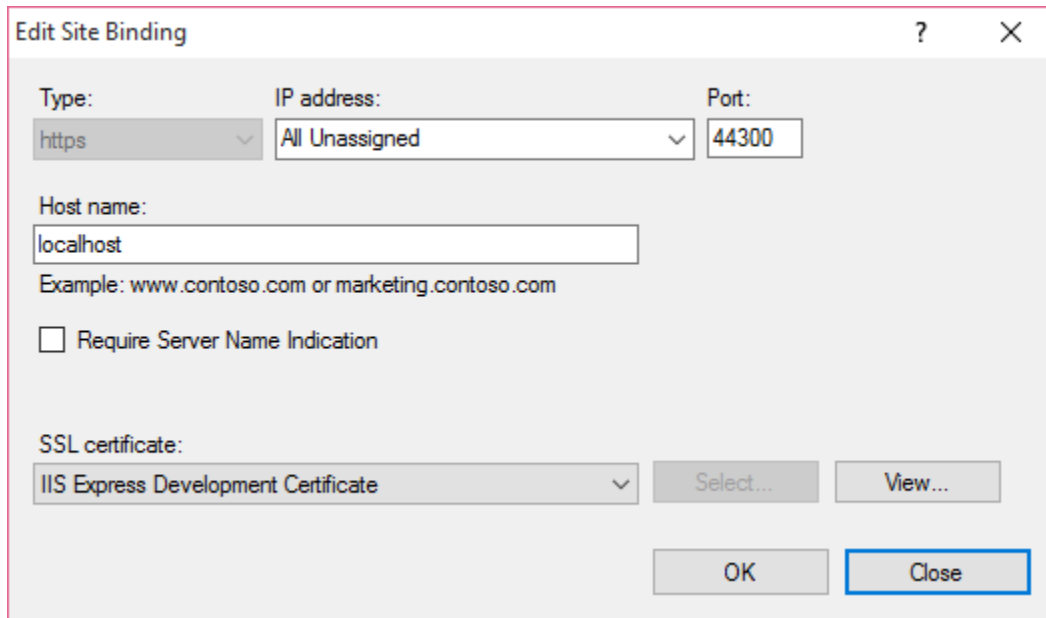
#### In this article:

- [Background](#)
- [Self-Signed Certificate Wizard](#)
- [To Trust Self-Signed Certificate](#)
- [Related Resources](#)

### Background

Before setting HTTPS bindings, it is very important to configure server certificates ahead.





The screenshot shows the 'Edit Site Binding' dialog box. It has a title bar with a question mark and a close button. The main area contains the following fields and controls:

- Type:** A dropdown menu set to 'https'.
- IP address:** A dropdown menu set to 'All Unassigned'.
- Port:** A text box containing '44300'.
- Host name:** A text box containing 'localhost'. Below it is an example: 'Example: www.contoso.com or marketing.contoso.com'.
- Require Server Name Indication:** An unchecked checkbox.
- SSL certificate:** A dropdown menu set to 'IIS Express Development Certificate'. To its right are 'Select...' and 'View...' buttons.
- At the bottom right are 'OK' and 'Close' buttons.

Self-signed certificates are usually used during testing.

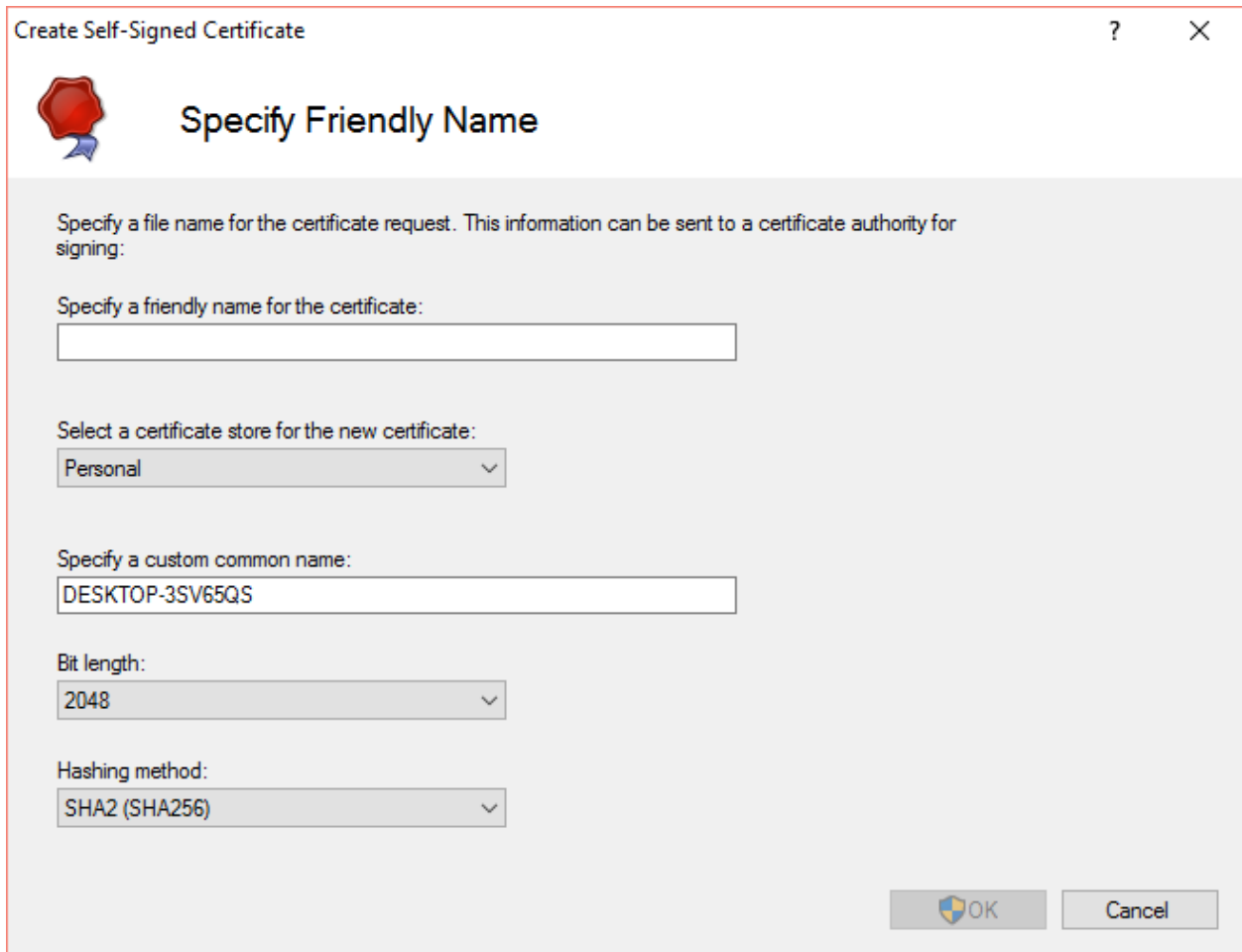
### Self-Signed Certificate Wizard

Jexus Manager's wizard is more powerful than the one IIS Manager offers as,

- It allows you to specify a custom common name field (CN) for the certificate.
- It offers SHA2 hashing method.
- It sets SAN to the value of CN, so the generated certificate is Chrome friendly.

In Jexus Manager, the self-signed certificate wizard can be opened as below,

1. Choose a server node in the Connections panel.
2. In the middle panel, click Server Certificates icon to open the management page.
3. Under Actions panel, click "Generate Self-Signed Certificate..." menu item.

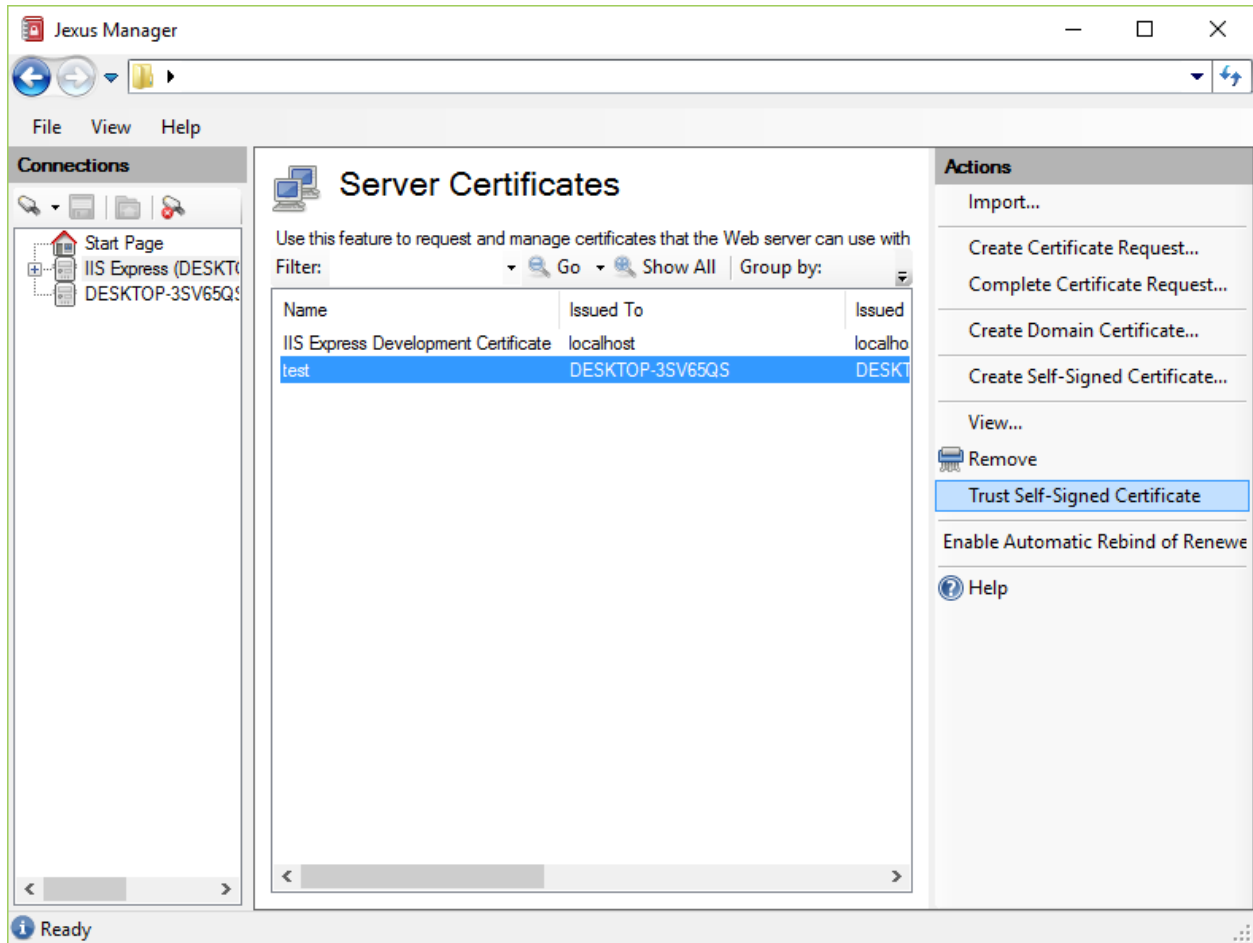


Fill in the necessary information in this wizard page, and then click OK. Jexus Manager will generate a new certificate and install it to the desired store.

### To Trust Self-Signed Certificate

Once a self-signed certificate is generated, it would be sometimes useful to add it to Trusted Certificate Authorities so that browser side errors are suppressed. Jexus Manager makes it easy to do so,

1. Choose the self-signed certificate from the list.
2. Under Actions panel, click “Trust Self-Signed Certificate”.
3. Accept the certificate in the following system dialog.



## Related Resources

- [Install on Windows](#)
- [Managing Servers](#)
- [HTTP API Page](#)
- [On Demand Elevation](#)
- [SSL Diagnostics](#)

## HTTP API Page

By Lex Li

This page shows you how to use Jexus Manager HTTP API page to review IIS/IIS Express HTTPS bindings.

**In this article:**

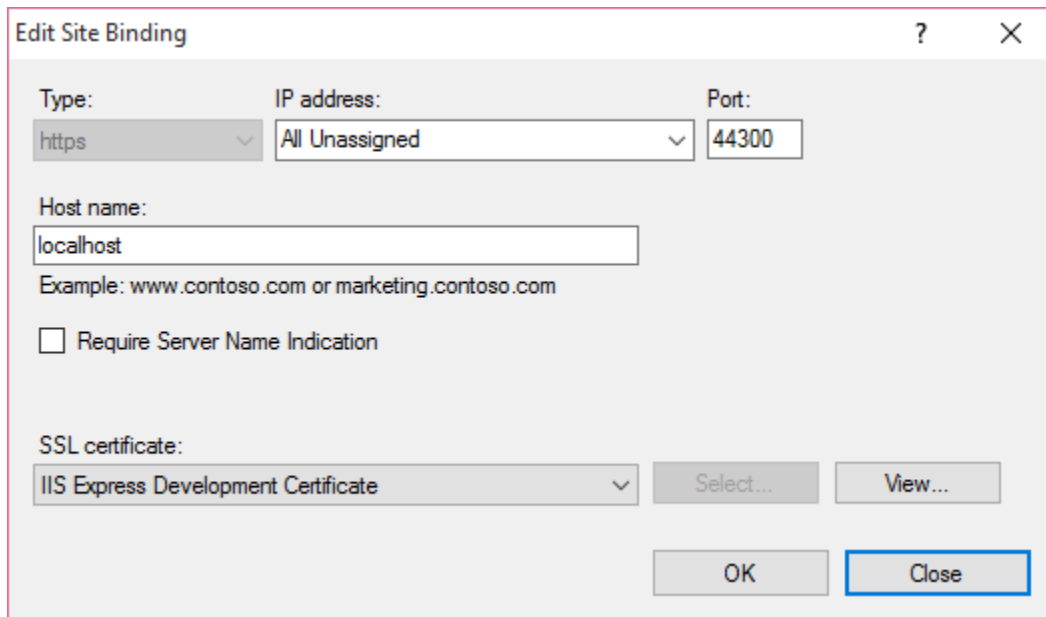
- [Background](#)
- [IP Based Bindings](#)
- [SNI Based Bindings](#)
- [Reserved URLs](#)
- [Related Resources](#)

## Background

If you have ever opened IIS 7+ configuration file (aka applicationHost.config), you probably know that an HTTPS binding of a site looks like below,

```
<site name="php" id="8">
  <bindings>
    <binding bindingInformation="*:58000:localhost" protocol="http" />
    <binding bindingInformation="*:44300:localhost" protocol="https" />
    <binding bindingInformation="*:4431:localhost" protocol="https" />
    <binding bindingInformation="*:4431:lexstudio.com" protocol="https" />
  </bindings>
  <application path="/" applicationPool="32bit">
    <virtualDirectory path="/" physicalPath="e:\test" />
  </application>
</site>
```

It is rather strange that no certificate information is available here, while in Jexus Manager we can see the certificate selected for each bindings,



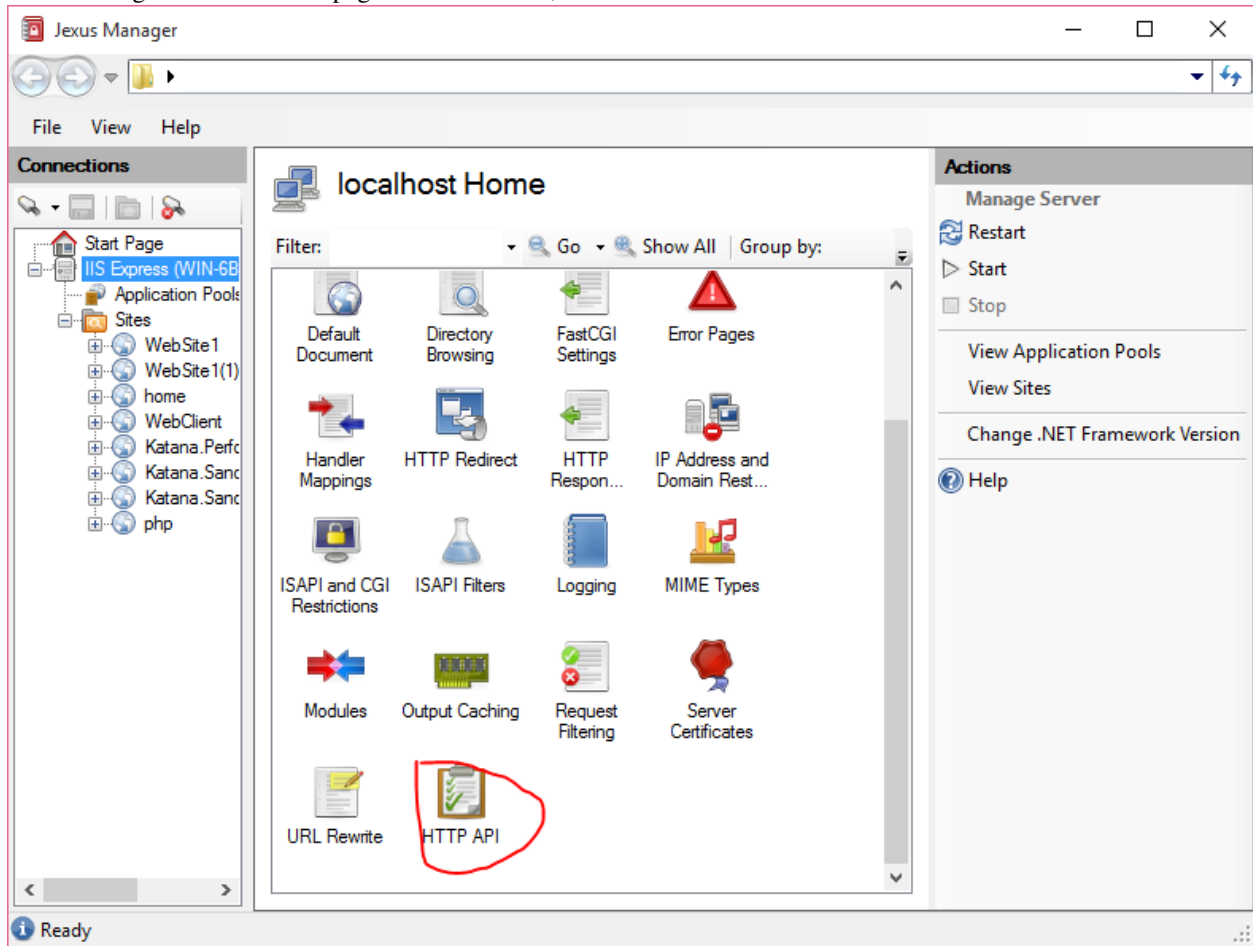
So from where does Jexus Manager find the proper certificate?

## IP Based Bindings

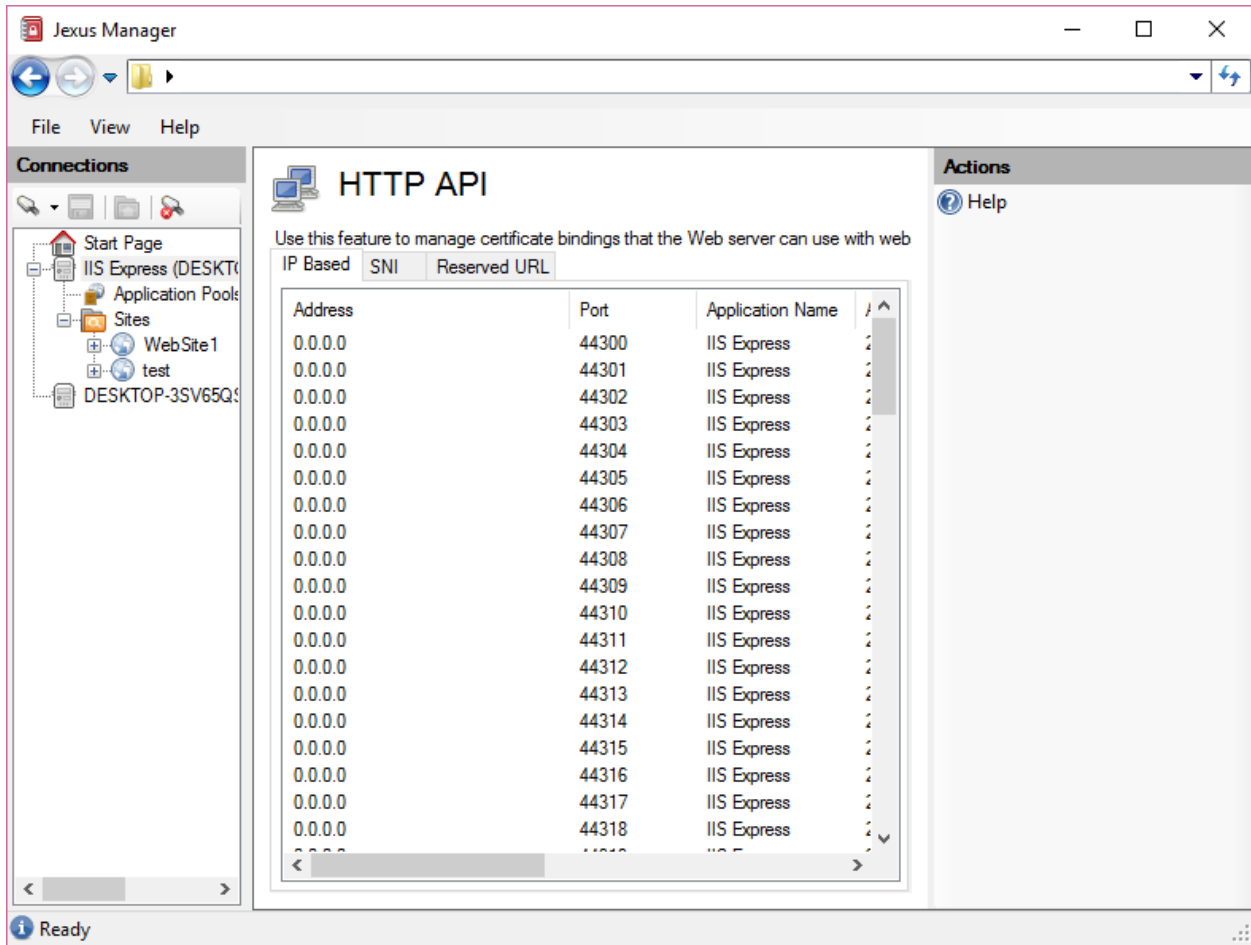
If “Require Server Name Indication” is not checked, then this binding is not SNI enabled. It also means for this binding, the certificate is registered to the IP address + port number (in this example, 0.0.0.0:44300). Windows

stores the certificate information in a private storage for http.sys to read, which can be queried via `netsh http show sslcert`.

Jexus Manager features a new page to show the list,



It is very clear that the certificate mappings are here.

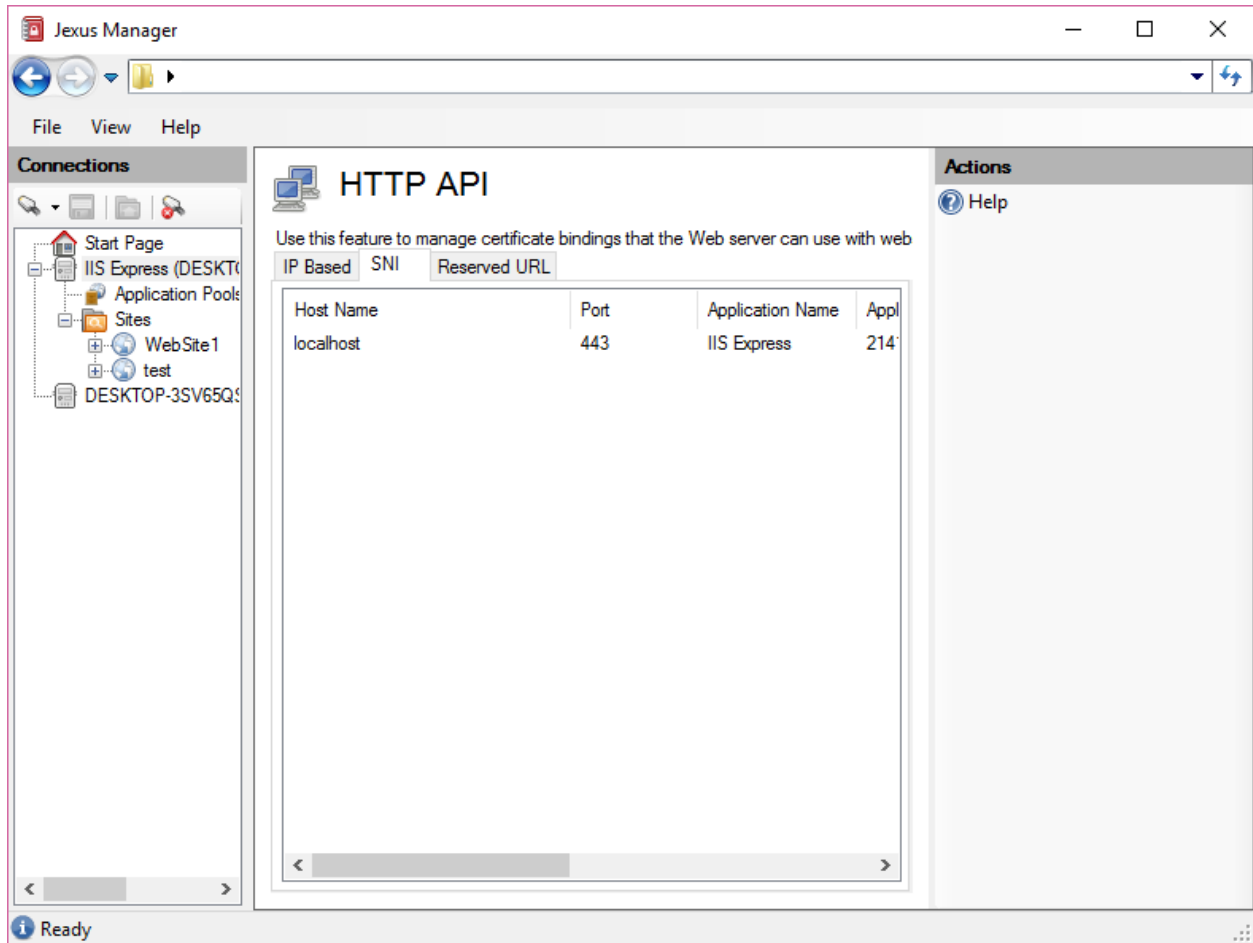


**Note:** IIS Express creates mappings for 0.0.0.0:44300 – 0.0.0.0:44399 during its installation, so that non administrators can bind HTTPS sites to such mappings.

Due to the limitation of such mappings, we know for a single IP end point, only a single certificate can be registered. That's why when we attempt to host multiple HTTPS sites on a single IP end point we could only use a wildcard certificate or a UC certificate.

### SNI Based Bindings

Starting from Windows 8/IIS 8 and above, we can create SNI based in addition to IP based bindings. This allows multiple certificates to be bind to a single IP end point.

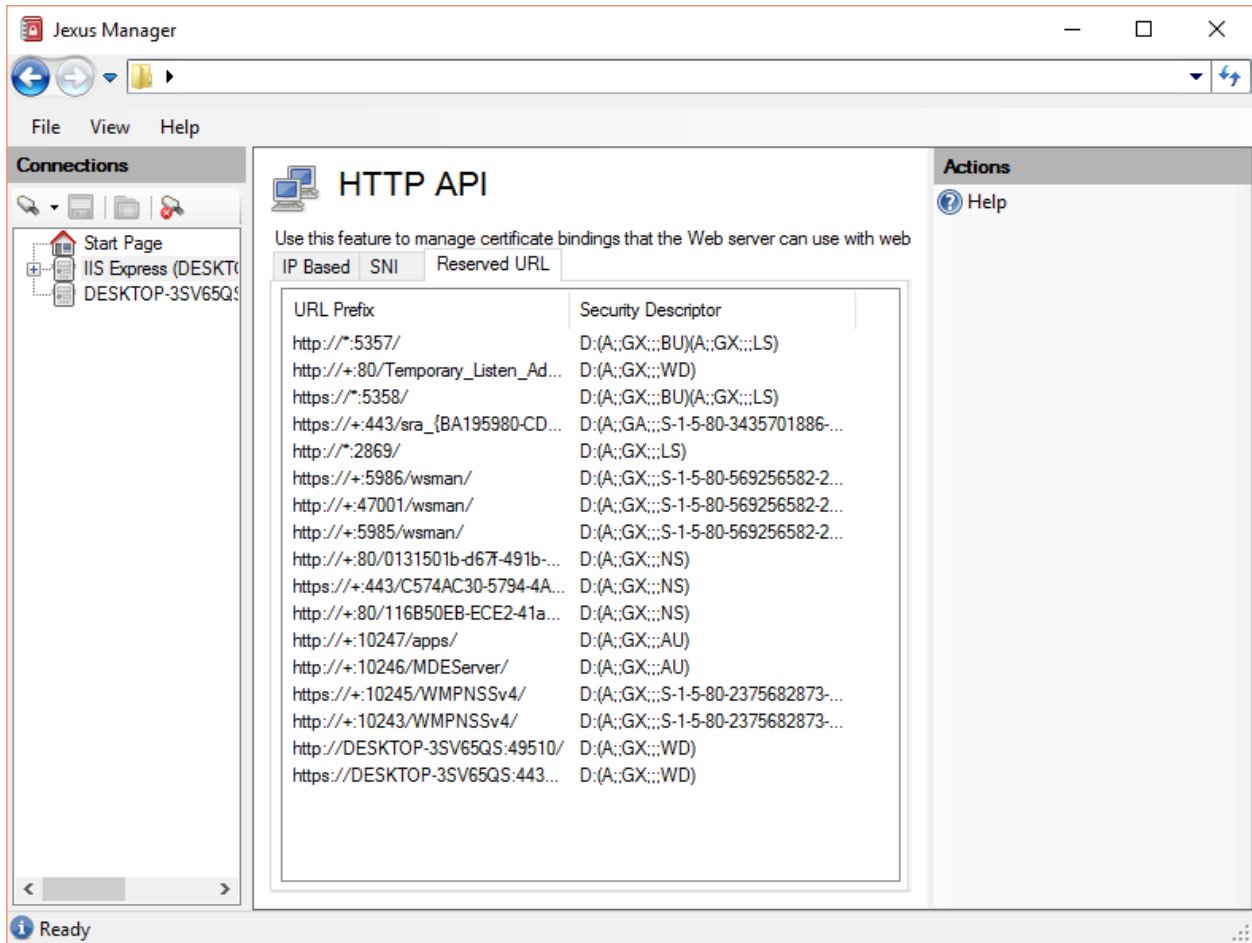


SNI based mapping for certificates is displayed under SNI tab. They are bind to host name + port number instead of IP end point + port number.

Such SNI based mappings are automatically created by Jexus Manager when you add SNI based bindings to web sites. They are also removed automatically when such bindings are removed from sites.

### Reserved URLs

Reserved URLs are displayed under Reserved URL tab.



## Related Resources

- [Install on Windows](#)
- [Managing Servers](#)
- [Self-Signed Certificate Generation](#)
- [On Demand Elevation](#)
- [SSL Diagnostics](#)

## SSL Diagnostics

By Lex Li

This page shows you how to use SSL Diagnostics.

### In this article:

- [Background](#)
- [The Built-in SSL Diagnostics in Jexus Manager](#)
- [Related Resources](#)



## Background

IIS 6 used to have a great troubleshooting tool called [SSL Diagnostics \(SSL Diag for short\)](#) . It relied on IIS ADSI API, so this tool was not made part of IIS 7 and above.

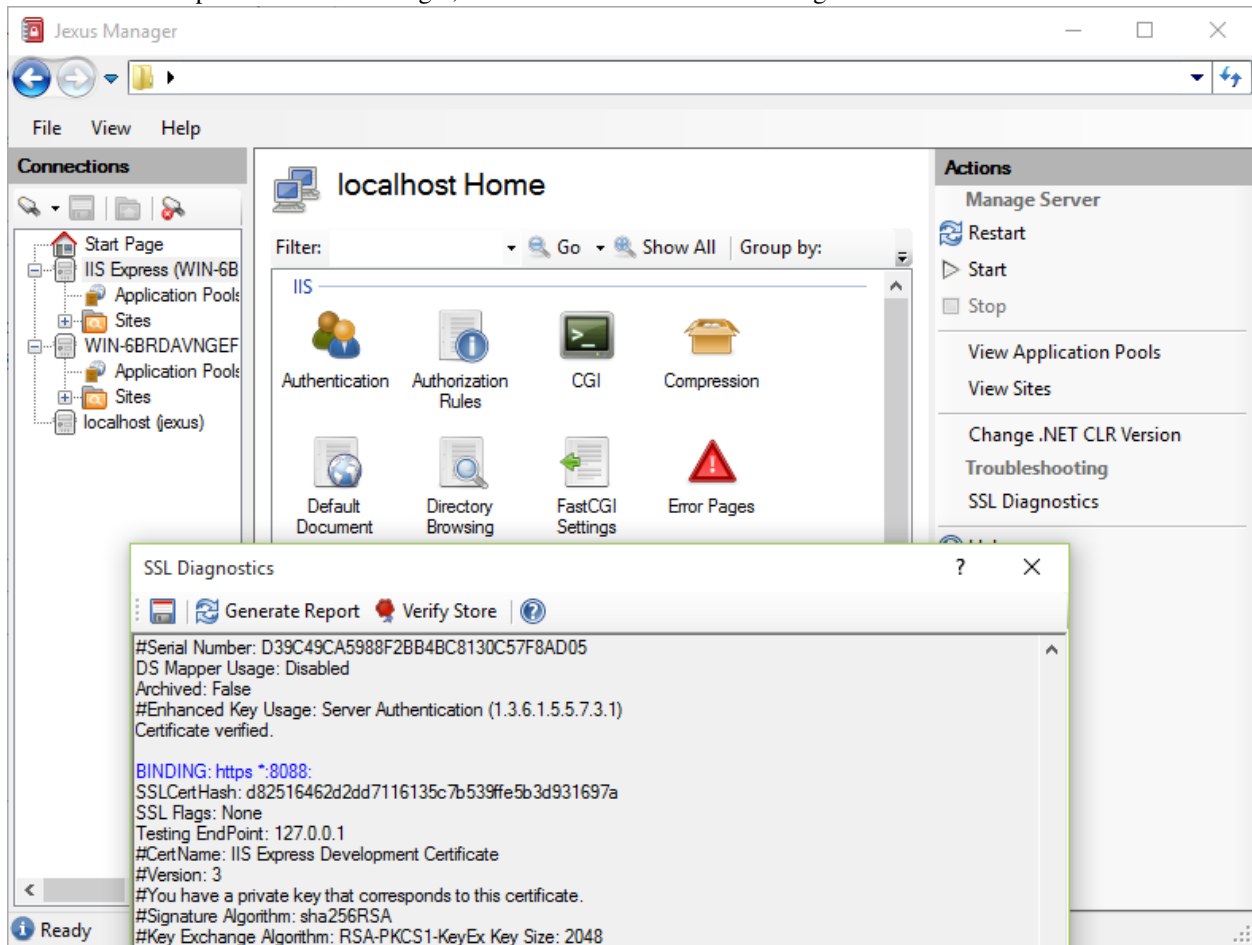
Of course you can use the IIS 6 version if you enable IIS 6 Compatibility component on IIS 7 and above, but it would be less convenient.

A Microsoft employee Vijayshinva Karnure developed a newer version that relied only on IIS 7+ new API, and [released it on IIS.net](#) .

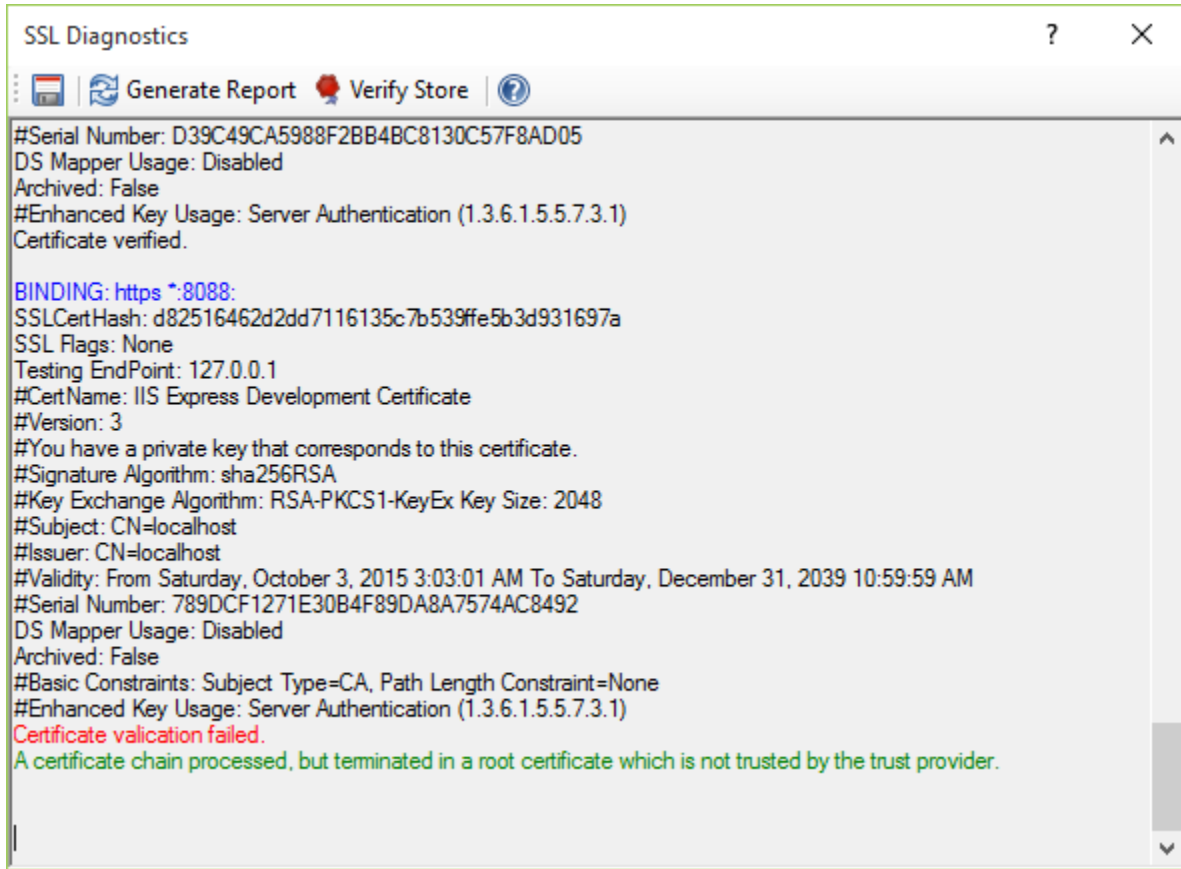
It works for all IIS versions (up to 10), but it does not work for IIS Express.

## The Built-in SSL Diagnostics in Jexus Manager

For web servers opened in Jexus Manager, there is an action called SSL Diagnostics showed.



A report is generated when “Generate Report” button is clicked.



## Related Resources

- [Install on Windows](#)
- [Managing Servers](#)
- [HTTP API Page](#)
- [On Demand Elevation](#)
- [Self-Signed Certificate Generation](#)

## Visual Studio Project Diagnostics

By Lex Li

This page shows you how to use Visual Studio Project Diagnostics.

### In this article:

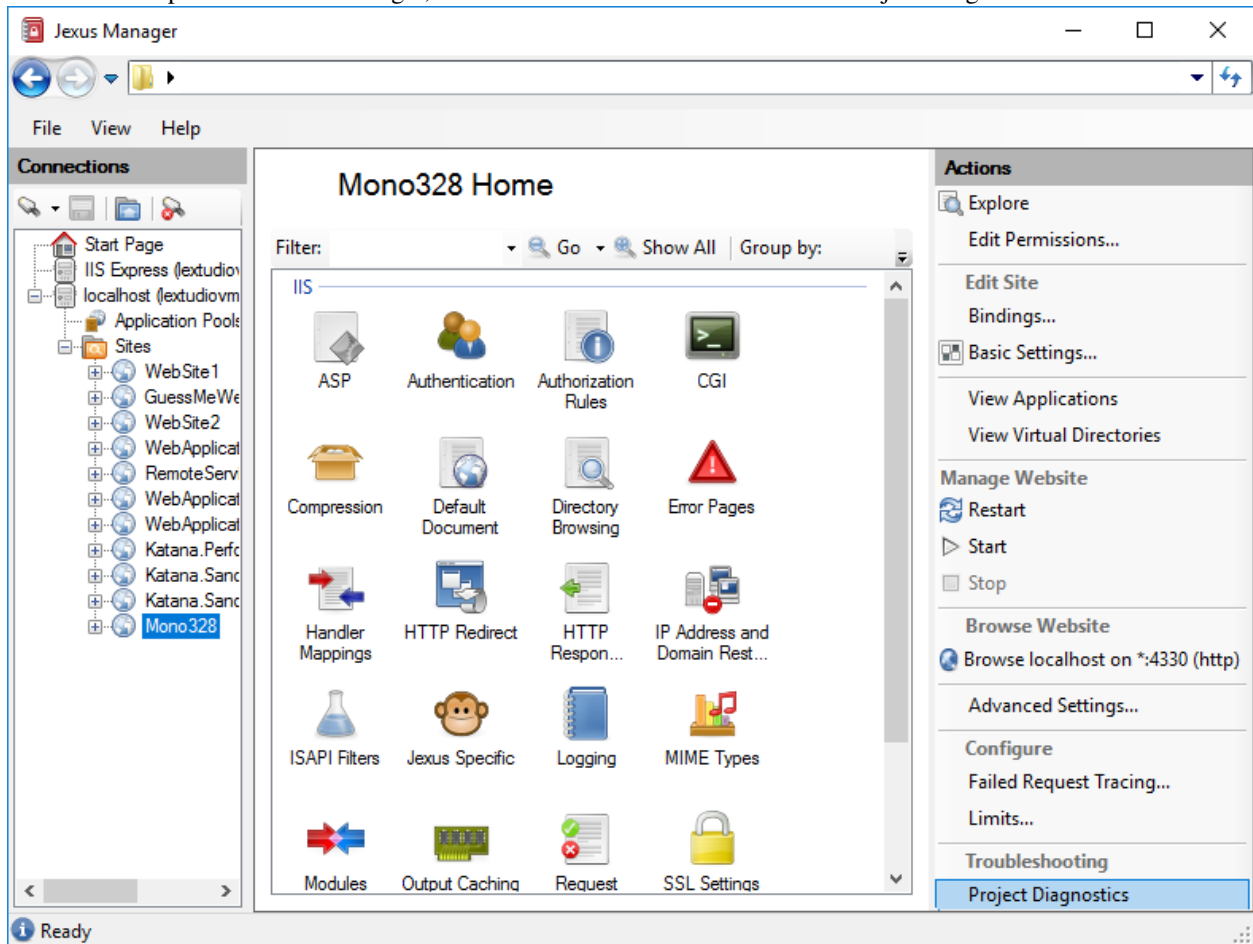
- [Background](#)
- [The Built-in Visual Studio Project Diagnostics](#)
- [Related Resources](#)

## Background

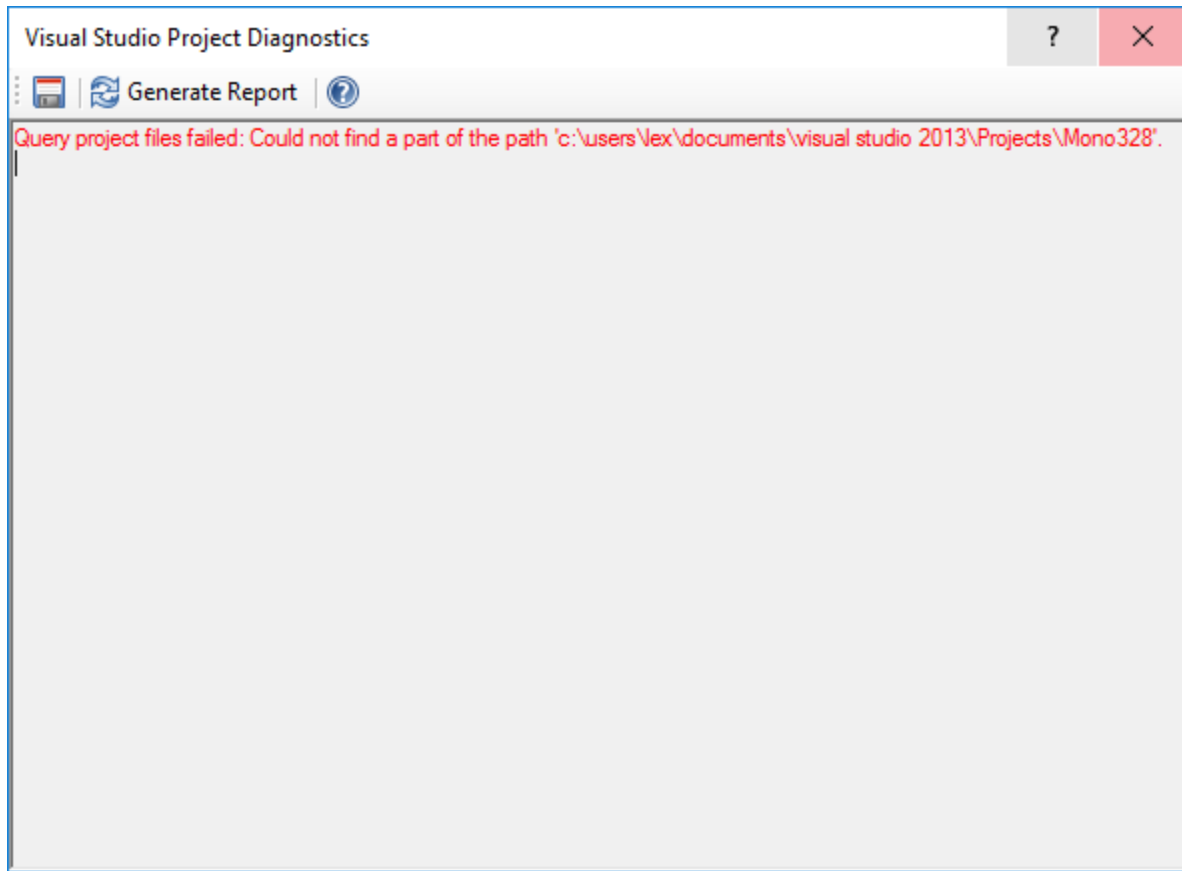
Visual Studio web projects contain some IIS settings, while VS also writes some settings directly to IIS/IIS Express configuration files. Sometimes such settings go out of sync and you simply hit the famous errors such as “Unable to launch the IIS Express Web server”.

## The Built-in Visual Studio Project Diagnostics

For web sites opened in Jexus Manager, there is an action called Visual Studio Project Diagnostics showed.



A report is generated when “Generate Report” button is clicked.



## Related Resources

- [Install on Windows](#)
- [Managing Servers](#)
- [HTTP API Page](#)
- [On Demand Elevation](#)
- [Self-Signed Certificate Generation](#)

## Binding Diagnostics

By Lex Li

This page shows you how to use Binding Diagnostics.

### In this article:

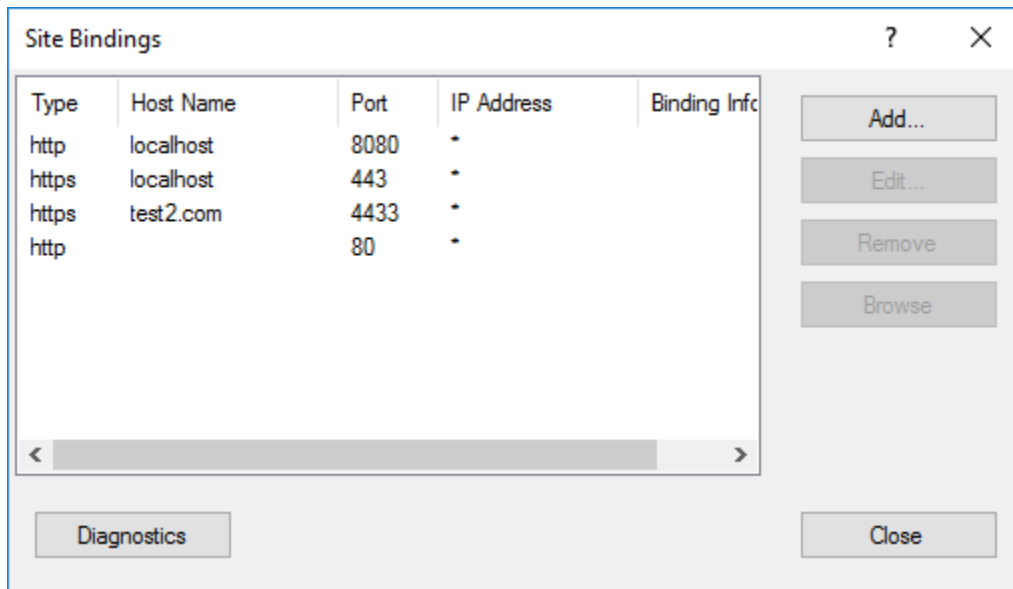
- [Background](#)
- [The Built-in Binding Diagnostics](#)
- [Related Resources](#)

## Background

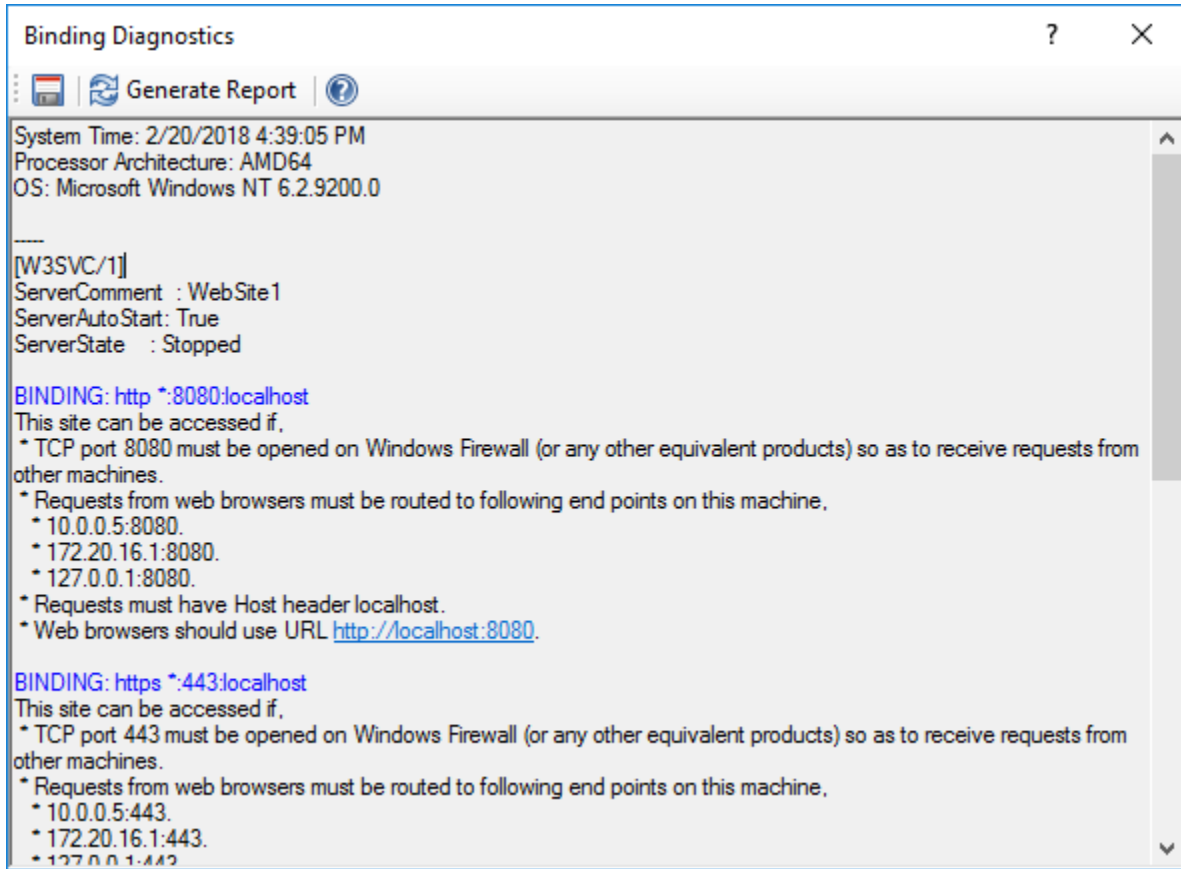
IIS sites use bindings to determine what kind of incoming HTTP requests they would handle. However, it is usually not intuitive to know what kind of requests go to which binding, without learning HTTP protocol itself and how web browser/IIS work together.

## The Built-in Binding Diagnostics

For web sites opened in Jexus Manager, there is now a Diagnostics button showing in the Bindings dialog,



Click this button and the Diagnostics dialog shows. A report is generated when “Generate Report” button is clicked.



## Related Resources

- [Install on Windows](#)
- [Managing Servers](#)
- [HTTP API Page](#)
- [On Demand Elevation](#)
- [Self-Signed Certificate Generation](#)
- [SSL Diagnostics](#)

## On Demand Elevation

By Lex Li

This page shows you how Jexus Manager informs that UAC elevation is required.

### In this article:

- [Background](#)
- [Elevation Shield](#)
- [Related Resources](#)

## Background

Jexus Manager can run as a normal user to navigate the settings. Meanwhile, web servers such as IIS Express can run as a normal user.

However, there are certain operations that require administrator permissions to execute. Some examples are certificate creation and HTTP API modification.

## Elevation Shield

The UAC shield icon appears whenever some operations require administrator permissions.

Create Site Binding

Type:  IP address:  Port:

Host name:   
 Example: www.contoso.com or marketing.contoso.com

Require Server Name Indication

SSL certificate:

Site Bindings

Type	Host Name	Port	IP Address	Binding Info
http	localhost	58000	*	
https	localhost	44300	*	
https	localhost	4431	*	
https	lextudio.com	4431	*	

By clicking such buttons, permission elevation is executed on demand. There is no need then to run Jexus Manager entirely as administrator.

For operations that do not require elevation, the buttons are displayed without the shield icon.

The 'Create Site Binding' dialog box contains the following fields and controls:

- Type:
- IP address:
- Port:
- Host name:
- Example: www.contoso.com or marketing.contoso.com
- Require Server Name Indication
- SSL certificate:
- 
- 
- 
- 

Type	Host Name	Port	IP Address	Binding Info
http	localhost	58000	*	
https	localhost	44300	*	
https	localhost	4431	*	
https	laxstudio.com	4431	*	

Buttons: , , , ,

### Related Resources

- [Install on Windows](#)
- [Managing Servers](#)
- [HTTP API Page](#)
- [SSL Diagnostics](#)
- [Self-Signed Certificate Generation](#)



## IIS Express Specific

By Lex Li

This page shows you how IIS Express works differently from other web servers.

### In this article:

- *Background*
- *Microsoft Documentation*
- *Enable External Access*
- *Enable Android Emulator Access*
- *Further Explanation*
- *Related Resources*

### Background

IIS Express is a development server that behaves differently from full IIS.

### Microsoft Documentation

Microsoft has listed several key differences in the article below,

<http://www.iis.net/learn/extensions/introduction-to-iis-express/iis-express-overview>

It might contain the key information but some users could not understand it easily.

### Enable External Access

IIS Express by default does not accept external requests. You can choose from the two approaches below to configure IIS Express to serve such requests.

#### Simplest Approach

1. Run Jexus Manager as administrator. Then IIS Express worker processes launched by it can hook to http.sys automatically.
2. Click the IIS Express server node you would like to manage.
3. Under Sites node, choose a site.
4. Click Bindings... menu item on Actions panel.
5. In Edit Bindings dialog, choose a binding that says “localhost” under “Host Name”, and click Edit... button.
6. In Edit Site Binding dialog, remove the host header value under “Host name:”, leave it blank, and click OK.
7. If a prompt says “The specific host name is not recommended for IIS Express...”, click OK.
8. In Edit Bindings dialog, click Close.
9. Click Start menu item on Actions panel. This launches an IIS Express worker process with external access enabled.

### Alternative Approach

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**Note:** This approach only requires one time elevation to configure reserved URLs.

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1. Run Jexus Manager normally.
2. Click the IIS Express server node you would like to manage.
3. Click HTTP API icon in the middle.
4. Switched to Reserved URL tab.
5. Click Add... menu item on Actions panel.
6. In Add Reserved URL dialog, type the URL prefix (for example, “[http://\\*:8080/](http://*:8080/)”) and click OK. Elevation would be required.
7. Under Sites node, choose a site which has a site binding of “localhost on \*:8080 (http)”.
8. Click Bindings... menu item on Actions panel.
9. In Edit Bindings dialog, choose a binding that says “localhost” under “Host Name”, and click Edit... button.
10. In Edit Site Binding dialog, remove the host header value under “Host name:”, leave it blank, and click OK.
11. If a prompt says “The specific host name is not recommended for IIS Express...”, click OK.
12. In Edit Bindings dialog, click Close.
13. Click Start menu item on Actions panel. This launches an IIS Express worker process with external access enabled.

### Enable Android Emulator Access

Sometimes application testing might requires mobile apps on Android Emulator to access web apps on IIS Express.

### Simplest Approach

1. Run Jexus Manager normally.
2. Click the IIS Express server node you would like to manage.
3. Under Sites node, choose a site which would be exposed to Android Emulator (assume its binding is “localhost on \*:8080 (http)”).
4. Click Bindings... menu item on Actions panel.
5. In Edit Bindings dialog, choose a binding that says “localhost” under “Host Name”, and click Edit... button.
6. In Edit Site Binding dialog, replace the host header value under “Host name:” with “127.0.0.1” (without quotes), and click OK.
7. If a prompt says “The specific host name is not recommended for IIS Express...”, click OK.
8. In Edit Bindings dialog, click Close.
9. Click Start menu item on Actions panel. This launches an IIS Express worker process.

As Google Android Emulator sends HTTP requests with host header set to 127.0.0.1, after changing the binding the web site should be accessible via <http://10.0.2.2:8080> (Android Emulator forwards requests from 10.0.2.2 to the local IIS Express).

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**Note:** Other Android Emulator might require some extra steps or special input.

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### Alternative Approach

Follow “Enable External Access” section, and then the Android Emulator should be able to access the site.

### Further Explanation

#### Application Pools

Though IIS Express uses the same format of configuration file (`applicationHost.config`), and each web sites has an application pool assigned, it does not support application pool at all. Every time an IIS Express instance is launched, it always uses the current user’s credentials, and ignore the identity setting in `applicationHost.config`.

As IIS Express is a single instance server, there is no application pool recycle either. You can manually stop and restart the process, but that’s different from application pool recycle (which by default uses the overlapped mode).

This is what Microsoft means by saying “user launches and terminates sites”.

### Related Resources

- [Install on Windows](#)
- [Managing Servers](#)

### Local IIS Instance

By Lex Li

This page shows you how to use Jexus Manager to manage local IIS instance.

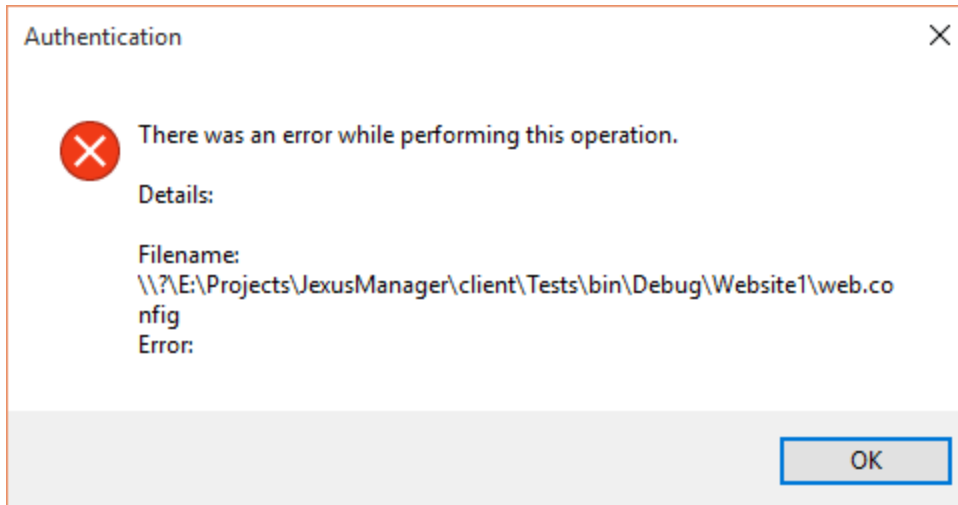
#### In this article:

- [Background](#)
- [Jexus Manager Benefits](#)
- [Related Resources](#)

### Background

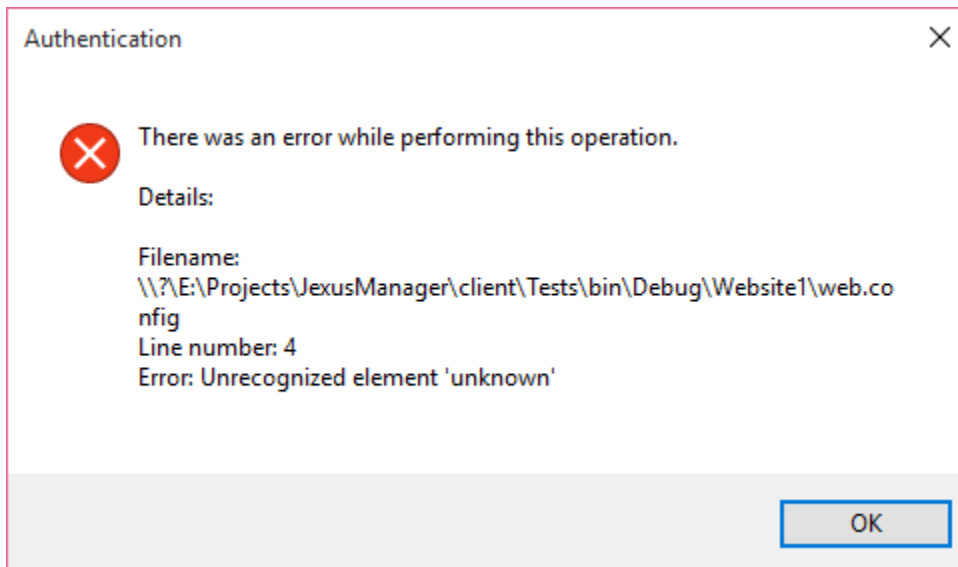
There are several issues with IIS Manager that you might not be able to use it to troubleshoot IIS configuration issues

- IIS Manager strictly requires administrator permissions.
- When a site configuration contains errors, IIS Manager shows an error dialog that tells nothing useful. (A 500.19 error page would be showed when accessing such a site.)



### Jexus Manager Benefits

Jexus Manager can run as a normal user to navigate the settings, and its exception dialog provides the same or even better error message when an error in configuration is detected.



### Related Resources

- [Install on Windows](#)
- [Managing Servers](#)
- [OOB Related 500.19 Errors](#)

### OOB Related 500.19 Errors

By Lex Li

This page shows you how to use Jexus Manager to analyze IIS Out-Of-Band (OOB) related 500.19 errors.

**In this article:**

- [Background](#)
- [Detailed Error Message by Jexus Manager](#)
- [Related Resources](#)

**Background**

IIS 7+ functionality can be extended by installing OOB modules. For example, the following configuration can be put in *web.config* of a web site,

```
<configuration>
  <system.webServer>
    <rewrite>
      <rules>
        <rule name="Rewrite to article.aspx">
          <match url="^article/([0-9]+)/([_0-9a-z-]+)" />
          <action type="Rewrite" url="article.aspx?id={R:1}&title={R:2}" />
        </rule>
      </rules>
    </rewrite>
  </system.webServer>
</configuration>
```

It relies on IIS URL Rewrite module, which is a separate download. If the web server does not yet have the module installed, an error page would occur,

**HTTP Error 500.19 - Internal Server Error**

The requested page cannot be accessed because the related configuration data for the page is invalid.

Detailed Error Information:			
<b>Module</b>	IIS Web Core	<b>Requested URL</b>	http://localhost:80/
<b>Notification</b>	Unknown	<b>Physical Path</b>	
<b>Handler</b>	Not yet determined	<b>Logon Method</b>	Not yet determined
<b>Error Code</b>	0x80070005	<b>Logon User</b>	Not yet determined
<b>Config Error</b>	Cannot read configuration file due to insufficient permissions		
<b>Config File</b>	\\?\C:\Users\vrmanjaneyulu\Downloads\basefarm\logstash\web.config		

Config Source:
-1:
0:

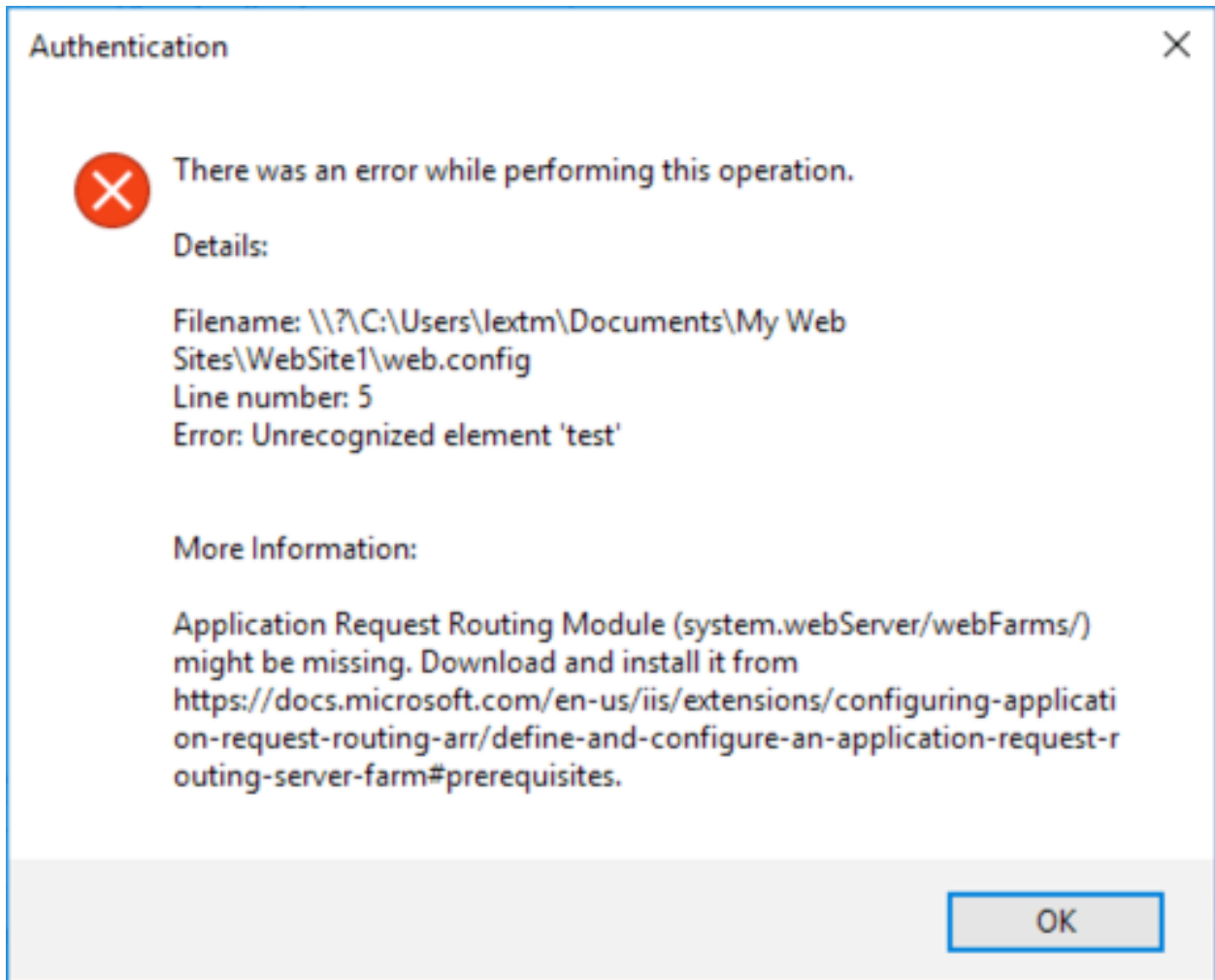
  

More Information:
This error occurs when there is a problem reading the configuration file for the Web server or Web application. In some cases, the event logs may contain more information about what caused this error. <a href="#">View more information &gt;</a>

The error message does not reveal enough information, nor the root cause.

**Detailed Error Message by Jexus Manager**

If you use Jexus Manager to open this web site and check any of its settings (like Authentication), a thorough analysis is performed on *web.config*, and such issues would be identified and reported



Clearly Jexus Manager not only shows the exact line number in the config file, but also indicates the OOB module name and its download link. Simply follow the link to download and install the module, and the errors would disappear.

### Related Resources

- Install on Windows
- Managing Servers
- Visual Studio Project Diagnostics
- IIS Express Specific
- Local IIS Instance

### Jexus Specific

By Lex Li

This page shows you how to use Jexus Manager to manage Jexus specific settings.

**In this article:**

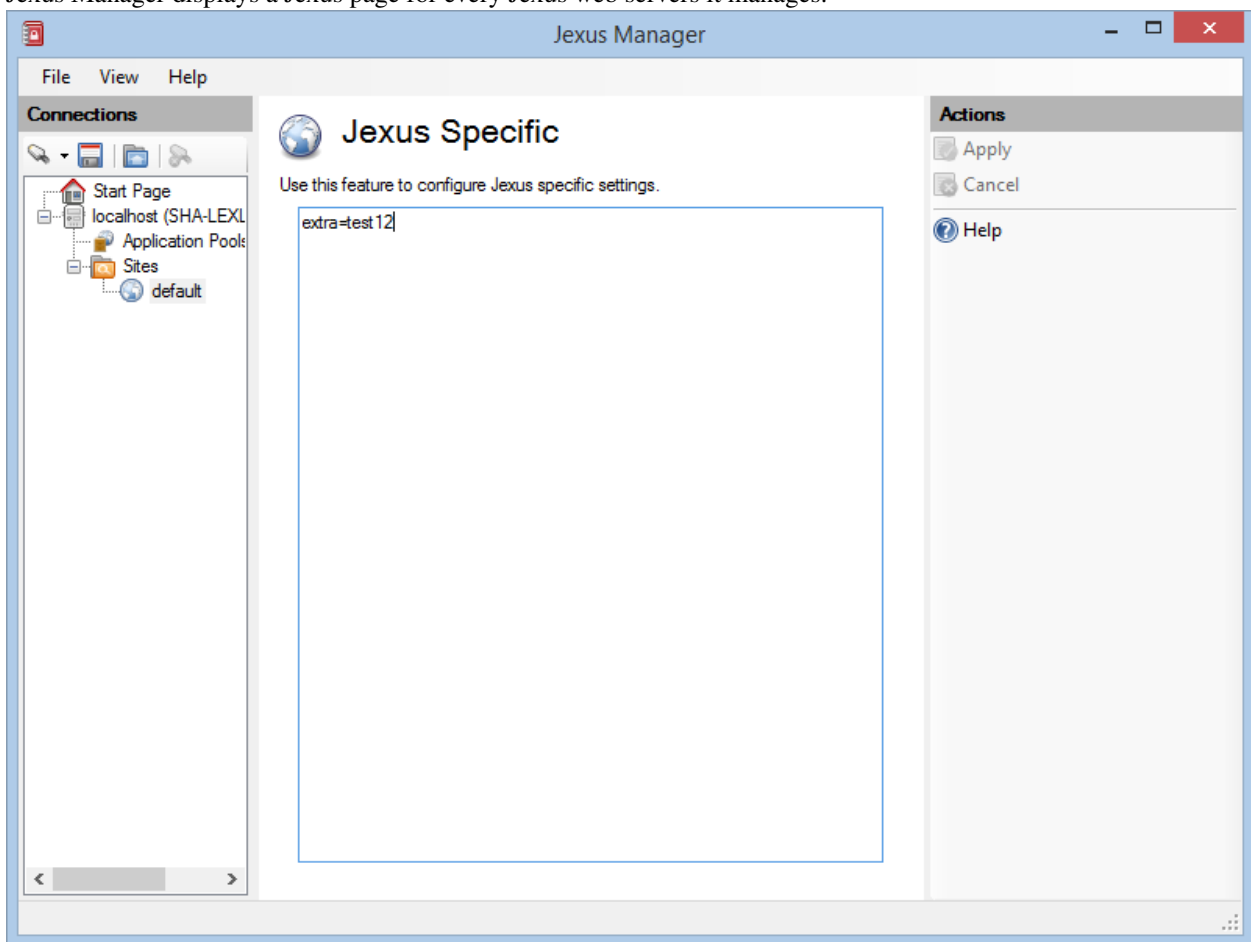
- *Background*
- *Jexus Page*
- *Related Resources*

**Background**

Jexus web server does have some special settings that are not yet mapped to IIS configuration system.

**Jexus Page**

Jexus Manager displays a Jexus page for every Jexus web servers it manages.



Since Jexus settings are stored as key-value pair, this simple editor allows you to modify the pairs freely and apply the changes at will when everything looks good to you.

**Note:** If you are not sure of any setting, you can click the Help link and navigate to our documentation site.

### Related Resources

- [Install on Windows](#)
- [Managing Servers](#)

## Find Jexus Manager Update

By [Lex Li](#)

This page shows you how to find Jexus Manager update.

#### In this article:

- [Background](#)
- [Steps to Find Update](#)
- [Related Resources](#)

### Background

Jexus Manager has been updated frequently to address crashes and other critical issues that affect user experience. Thus, it is very important to run its latest release.

### Steps to Find Update

Jexus Manager offers a update wizard,

1. Click Help | Check Update menu item.

This wizard checks the current release in use and then compare its version number against the latest release at GitHub so as to tell if an update is needed.

If an update is found, this wizard can help you navigate to the download page.

### Related Resources

- [Install on Windows](#)
- [Managing Servers](#)

## Support Information

### Icons Used in Jexus Manager

By [Lex Li](#)

This page shows you where the icons used in Jexus Manager come from.

The beautiful icons used in Jexus Manager come from the Tango Icon Library. More information can be found at, <http://tango.freedesktop.org/>

Some of the icons are modified or combined to suit the needs of Jexus Manager.



Some unofficial icons are also used.

Tango Icon Library is released to the Public Domain.

## Supported Platforms

By [Lex Li](#)

This page shows you what are the supported platforms to run Jexus Manager.

### In this article:

- [Background](#)
- [Requirements](#)
- [Related Resources](#)

## Background

Jexus Manager is currently in beta, so it only supports a limited set of platforms.

## Requirements

- Windows Vista or above is required.
- .NET Framework 4.5 or above must be installed.
- Local IIS installation is only required if you want to manage local IIS instance.
- Jexus web server is only required if you want to manage Jexus.
- IIS 10 Express (or IIS 8 Express, or IIS 7 Express) is required if you want to manage IIS Express.

## Related Resources

- [Install on Windows](#)
- [Known Issues](#)
- [Troubleshooting](#)

## Known Issues

By [Lex Li](#)

This page shows you what are the known issues.

### In this article:

- [IIS Express](#)
- [Local IIS](#)
- [Jexus](#)
- [New Issues](#)
- [Related Resources](#)

### IIS Express

#### Supported Features

1. Read-write access to IIS Express configuration.
2. Basic support for server/site/app/virtual directory/physical directory settings.
3. Basic support for adding/editing/deleting pool/site/app/virtual directory.
4. Sites can be started and browsed.
5. Many more settings are now supported and editable, such as Default Document, URL Rewrite, Authentication and so on.
6. Server Certificate feature is completed. Elevation will be automatically requested.
7. ASP.NET Impersonation support is added.
8. Self signed certificate generation supports more parameters (such as CN, bit length, hashing method)
9. IIS 7/8/10 Express seamless support by automatically adapting to their unique schema files.
10. Add a server level HTTP API page to view IP and SNI based certificate bindings.
11. Detailed error message is displayed when a site fails to start.
12. Globale config file is loaded by default, while custom config files can be added via “File | Connect to a Server...” menu item. Simply choose “IIS Express Configuration File” and follow the wizard.
13. Include SSL Diagnostics.

#### Known issues

- Many editing menu items/buttons currently raise exceptions or do nothing. (Will fix in Beta 4)
- Sites in folders with read-only access can be modified but changes cannot be saved (and might lead to various issues). (Will fix in Beta 4)
- More ASP.NET related settings. (Coming in Beta 4)
- IIS 7 Express always uses 32 bit processes. (original limitation from Microsoft)
- ProcessorAction enum is reset to default value if set to a value IIS 7 Express does not support. (original limitation from Microsoft)
- Visual Studio integration is under investigation. Changing a site’s settings (such as bindings) might lead to problems when opening its project file in VS.
- Start/stop a site can take a few seconds, due to the current design to health check on IIS Express process.

#### Local IIS

Only local IIS installation is displayed and displayed in read-only mode. Any changes made will trigger exceptions (can be ignored safely).

Read/write support is coming in a later build (very likely 3.0).

Note that this mode is provided for IIS troubleshooting and compatibility testing.

## Jexus

Both local/remote Jexus web servers are supported. Currently this functionality is being ported from 1.1 to 2.0 new design, so still experimental.

About how to connect to Jexus web server, please refer to previous documentation on [release:121174].

Since Jexus only has a few options (compared to IIS/IIS Express), only certain changes in Jexus Manager affects the configuration files on Jexus side. More info can be found in [url:this article|http://jexuswebserver.readthedocs.io/en/latest/tutorials/configuration.html]. The “Jexus Specific” page at each level provides access to those settings that have no IIS equivalent.

## New Issues

Issues can be reported at [GitHub](#) .

## Related Resources

- [Install on Windows](#)
- [Managing Servers](#)
- [Troubleshooting](#)

## Troubleshooting

By [Lex Li](#)

This page shows you how to troubleshoot common issues.

### In this article:

- *[How to troubleshoot client/server connectivity?](#)*
- *[What if client side reports connection failure and the error message is not clear enough?](#)*
- *[What is the cause of “System.Reflection.TargetInvocationException” when starting/stopping Jexus Manager Remote Services?](#)*
- *[Related Resources](#)*

## How to troubleshoot client/server connectivity?

Answer: First please follow server component installation steps to review if you have executed every steps.

Second, check the issues step by step,

## Certificate

Assume that we register the certificate to port 8088. Run the following command,

```
sudo httpcfg -list
```

You must see the port and certificate thumbprint listed which is similar to below,

```
Port: 8088 Thumbprint: 38A913B07B138730DC9B7B13DC4F51310ADC6C93
```

Otherwise, the certificate was not properly registered.

### Service Address

Assume that we are using a machine whose IP address is 192.168.18.129. Run the following command,

```
ifconfig
```

You can see the “inet address” for each network adapter, and learn which are the valid IP addresses you can use in service address.

The port number used in service address must have a server certificate registered. Otherwise, the client cannot make an HTTPS connection to the server side.

### Firewall

Linux distributions normally come with built-in firewall products. So exceptions for the port chosen for Jexus Manager server component must be made. You have to refer to the corresponding distro or firewall manuals to learn how to create such firewall exceptions. If you choose port 8088, then TCP access to that port must be registered as an exception.

If the client/server connection goes through the Internet, you should be even more cautious that sometimes the connection can be blocked unexpectedly. Try to use another port number (such as 12345) and try again.

### REST Test

The service address (such as <https://192.168.18.129:8088>) and user credentials (jexusllexstudio.com) can be used to test out the server component availability via curl or WFetch.

- URL: <https://192.168.18.129:8088/api/server>
- Verb: GET
- Header: “X-HTTP-Authorization: jexusllexstudio.com”

The server should reply with 200 if configuration is correct.

### What if client side reports connection failure and the error message is not clear enough?

Answer: JexusManager.exe writes the exception details to a file named “debug”. Open it and you will see the information.

For Jexus Manager 2.0 and above, this debug log file is located at “My DocumentsJexus Managertempdebug”.

### What is the cause of “System.Reflection.TargetInvocationException” when starting/stopping Jexus Manager Remote Services?

Answer: If the exception details match below, then please make sure you pass a valid service address to RemoteServicesHost.exe.

Unhandled Exception:

```
System.Reflection.TargetInvocationException: Exception has been thrown by the target of an invocation
  at System.Net.Sockets.Socket.Bind (System.Net.EndPoint local_end) [0x00000] in <filename unknown>:
  at System.Net.EndPointListener..ctor (System.Net.IPAddress addr, Int32 port, Boolean secure) [0x00
  at System.Net.EndPointManager.GetEPLListener (System.String host, Int32 port, System.Net.HttpListene
  at System.Net.EndPointManager.AddPrefixInternal (System.String p, System.Net.HttpListener listener)
  at System.Net.EndPointManager.AddListener (System.Net.HttpListener listener) [0x00000] in <filename
```

## Related Resources

- [Install on Windows](#)
- [Known Issues](#)

## Licensing Terms

By [Lex Li](#)

This page shows you how the licensing works for Jexus Manager.

### In this article:

- [Background](#)
- [End User License Agreement](#)
- [Related Resources](#)

## Background

Jexus Manager is free to download and use.

Jexus Manager is not an open-source product (yet) and the source code is protected by copyright laws.

The author provides no warranties, and accepts no liability for direct or consequential damages.

## End User License Agreement

Lex Li (the “licensor”) grants you (the “licensee”) a nonexclusive license to use Jexus Manager, for personal and commercial use. The licensor retains all intellectual ownership of Jexus Manager.

## Usage

You may redistribute an unmodified version of the Jexus Manager executable with a commercial or non-commercial application or library for the sole purpose of allowing end-users to run Jexus Manager. Redistribution for other purposes requires written permission from the licensor.

You may not make or distribute modifications to Jexus Manager, nor sub-license Jexus Manager, nor circumvent any paid edition usage restrictions described on the product pages at <https://www.jexusmanager.com>.

### Collection of Information

Jexus Manager might automatically contact a web server: - to check for and retrieve updates; - to post feedback and error reports (if the licensee chooses); Jexus Manager sends only a minimal set of data required to reasonably perform the task.

### Disclaimer

Jexus Manager is provided “as is” without any warranty of any kind, either expressed or implied. The licensor shall in no event be liable for any damages including, but not limited to, direct, indirect, special, incidental or consequential damages or other losses arising out of the use of or inability to use the product.

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### Related Resources

- [Managing Servers](#)
- [Install on Windows](#)
- [Known Issues](#)
- [Troubleshooting](#)

## Support Services

By Lex Li

This page shows you what are the support services provided by LeXtudio.

#### In this article:

- [\*Professional Support Services\*](#)
- [\*Advisory Services\*](#)
- [\*Related Resources\*](#)

### Professional Support Services

Professional Support helps you address problems encountered with the development, deployment and management of LeXtudio products (Jexus Manager) in business environments.

Professional Support is available as a single “pay-per-incident” (PPI) or an annual contract with five incidents. Professional Support incidents focus on troubleshooting a specific problem, error message, or functionality that is not working as intended for LeXtudio products. An incident is defined as a single support issue and the reasonable effort to resolve it. Incidents may be submitted online. Response time will be between 2 and 8 hours, depending on severity of incident.

Contract Types	Price	To Purchase	Business hours	To submit incident
Professional Support Single Incident	\$259 USD for one incident	<a href="#">Buy Single</a>	7:00 PM – 10:00 PM China Standard Time, Monday through Friday, excluding public holidays	<a href="#">Get Started</a>
Professional Support 5-Pack Annual Support Contract	\$1289 USD for five incidents	<a href="#">Buy Multiple</a>	7:00 PM – 10:00 PM China Standard Time, Monday through Friday, excluding public holidays	<a href="#">Get Started</a>

Business-critical after-hours support is available for \$515 USD per incident and provides support only for business-critical issues. Service is available after business hours, on weekends, and during public holidays. To purchase after-hours support, please contact [the support team](#) .

### Advisory Services

Professional Advisory services are designed for developers, IT professionals and small and medium business customers to provide advice and information to enable customers to deliver their own solution, e.g. providing recommendations and best practices for design, development and deployment, leveraging LeXtudio products and technologies. This offering does not include hands on configuration, writing custom code, onsite consulting, root cause analysis or account management.

Professional Advisory services are provided for the same price as a Professional Support incident, and the delivery time is expected to be similar to a support incident, typically 2 to 3 hours. Requests may be rescoped to fit the limited delivery time or the service may be declined. Professional Advisory services are available during normal business hours: 7:00 PM – 10:00 PM China Standard Time Monday to Friday, excluding public holidays. Response time will be 8 hours. Simply contact [the support team](#) , stating that you want Professional Advisory Services.

### Related Resources

- [Install on Windows](#)
- [Known Issues](#)
- [Troubleshooting](#)