Configure Application Domain Monitoring

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You can configure the .NET Agent to monitor ASP.NET applications with multiple Application Domains (AppDomains). This topic assumes you have a working knowledge of AppDomains and that you are familiar with the AppDomain implementation in your application.

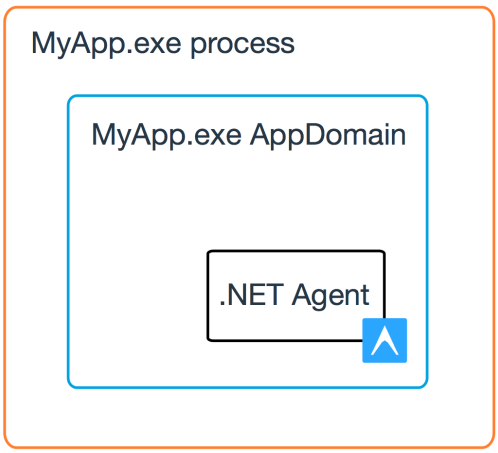
This topic does not cover the System Domain, Shared Domain, or DefaultDomain AppDomains the CLR instantiates before it executes the managed code. If your standalone application runs in the DefaultDomain, see Instrument the DefaultDomain for Standalone Applications.

Overview of AppDomains in .NET

Windows uses processes to manage security and performance isolation between running applications. Process isolation ensures one application's running code doesn't interfere with another application. However, for applications that share data, making calls between Windows processes can introduce complications and performance issues. AppDomains enable developers to create several applications that run inside a single process but maintain application isolation.

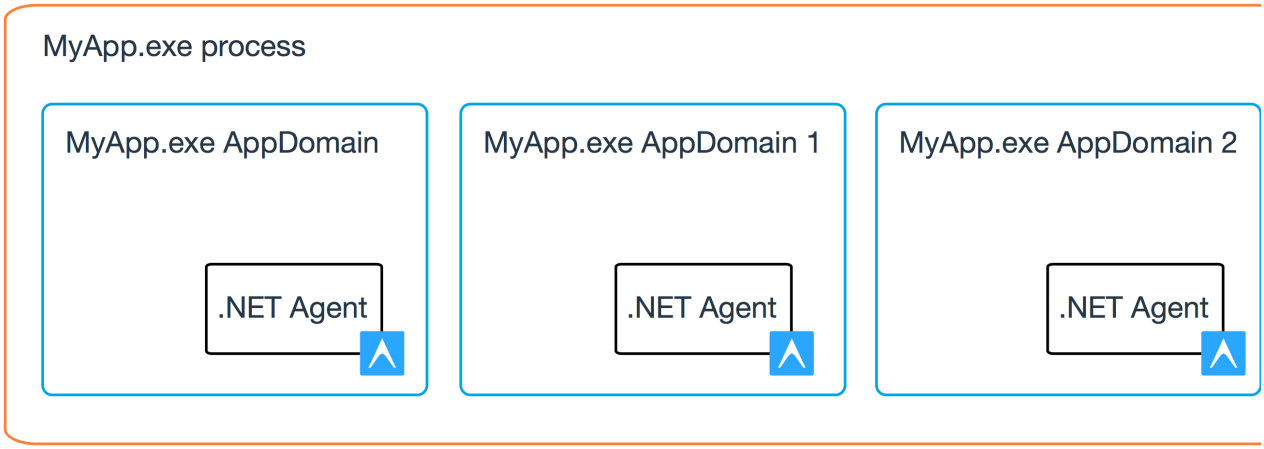
Single Application Domain

In the case of a single application running inside its own process, the runtime host typically manages the AppDomain. The application executable and the AppDomain have the same name. The .NET Agent (agent) installs itself inside the single AppDomain and creates a node for the application.



Multiple Application Domains

When developers include multiple AppDomains in an application, all the AppDomains run inside a single process. The application executable may have the same name as one AppDomain, but there are other, uniquely named AppDomains. By default, the agent installs itself inside all the AppDomains and creates nodes for them.



Configure Monitoring for Multiple Application Domains

If the application you monitor contains multiple AppDomains, the App Agent for .NET automatically instruments each AppDomain and creates a node. You can configure the .NET Agent to instrument only the AppDomains you specify. This is useful to exclude AppDomains you don't want to monitor and to limit the number of nodes in a tier.

You can configure application domain monitoring for:

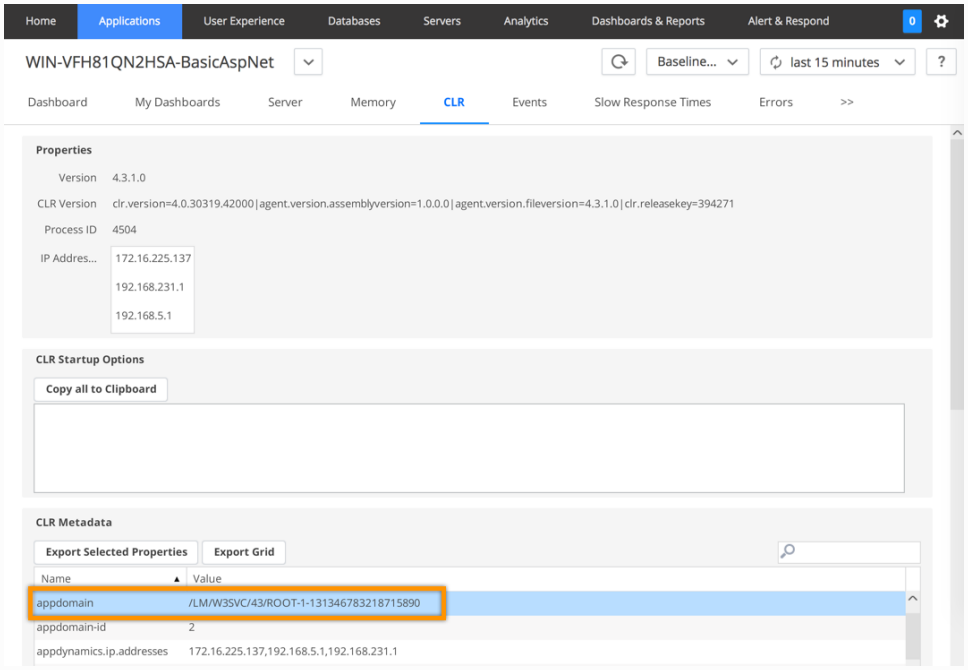
- Windows Services
- Standalone Applications

Configure all instrumentation settings for the .NET Agent in the config.xml file. See "Where to Configure Agent Properties" on Administer the .NET Agent.

1. Identify the name of the AppDomains you want to instrument.

If you have already instrumented your application, you can see the AppDomain names in the Node Dashboard.

Click the node in the left navigation pane, then click **CLR**.



2. Launch a text editor as administrator.
3. Edit the config.xml file as an administrator. See Administer the .NET Agent.
4. Find the element that corresponds to your application with multiple AppDomains:
   Standalone Application element: `<standalone-application executable="MyWindowsApplication.exe">`
5. Add the **app-domain-name** attribute to the element.

   For example, to instrument the MyApp.exe AppDomain for the MyApp.exe standalone application:

```
<standalone-application executable="MyApp.exe" app-domain-name="MyApp.exe">
    <tier name="StandaloneApplication Tier"/>
</standalone-application>
```

As soon as you instrument one AppDomain in the config.xml, the agent instruments only the AppDomains you specify. Other AppDomains are not instrumented.

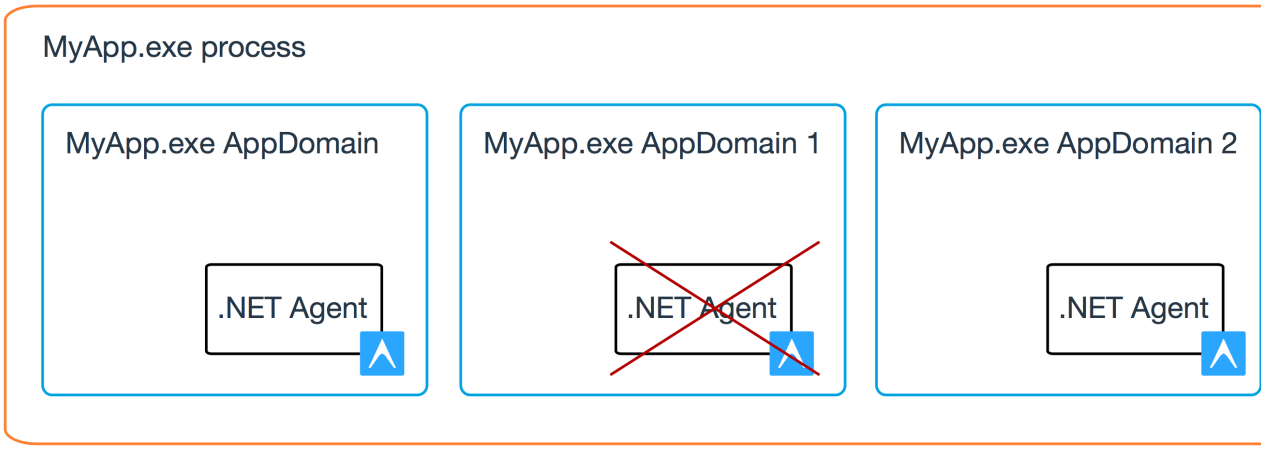
6. To instrument additional AppDomains, add an element for each AppDomain as if they were separate applications.
   For example, to instrument MyAppDomain1 in MyApp.exe:

```
<standalone-application executable="MyApp.exe" app-domain-name="MyAppDomain1">
  <tier name="StandaloneApplication Tier"/>
</standalone-application>
```

7. Save the config.xml file.
8. Restart the AppDynamics.Agent.Coordinator service.
9. Restart instrumented applications: Windows services or standalone applications.

Sample Standalone Application configuration with multiple AppDomains

This sample config.xml shows the configuration for the application MyApp.exe. Instrumentation only applies to the AppDomains specified in the config.xml: MyApp.exe and MyAppDomain2.



```
<?xml version="1.0" encoding="utf-8"?>
<appdynamics-agent xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.
org/2001/XMLSchema">
  <controller host="mycontroller.mycompany.com" port="8090" ssl=false">
        <account name="customer1" password="changeme" />
    <application name="MyDotNetApplication" />
  </controller>
  <machine-agent />
  <app-agents>
    <standalone-applications>
      <standalone-application executable="MyApp.exe" app-domain-name=""MyApp.exe">
        <tier name="StandaloneApplication Tier"/>
      </standalone-application>
      <standalone-application executable="MyApp.exe" app-domain-name=""MyAppDomain2">
        <tier name="StandaloneApplication Tier"/>
      </standalone-application>
    </standalone-applications>
  </app-agents>
</appdynamics-agent>
```