Developer's Guide - v1

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Note to readers: this is the help file for Thinfinity VirtualUI v1.

Please visit
www.cybelesoft.com/support/documentation.aspx
for documentation on the latest version of this product.

1 Introduction

Thinfinity® VirtualUI is a software solution that enables developers to add user interface web remoting to their Windows applications. Typically, by adding one line of code to the application's project, you can transform your Windows Application into a cross-platform one, enabling it to run as usual on Windows or as a Web application when installed under a Thinfinity® VirtualUI Server environment.

Why Thinfinity® VirtualUI?

1. It enables you to effortlessly create dual-platform Windows/HTML5 Apps.
2. It expands applications availability by delivering them instantly to users anywhere on any device.
3. It dramatically reduces the Total Cost of Ownership (TCO), by slashing IT costs and simplifying administration avoiding costly virtualization/remoting solutions such as Citrix XenApp® or Microsoft® RemoteApp.

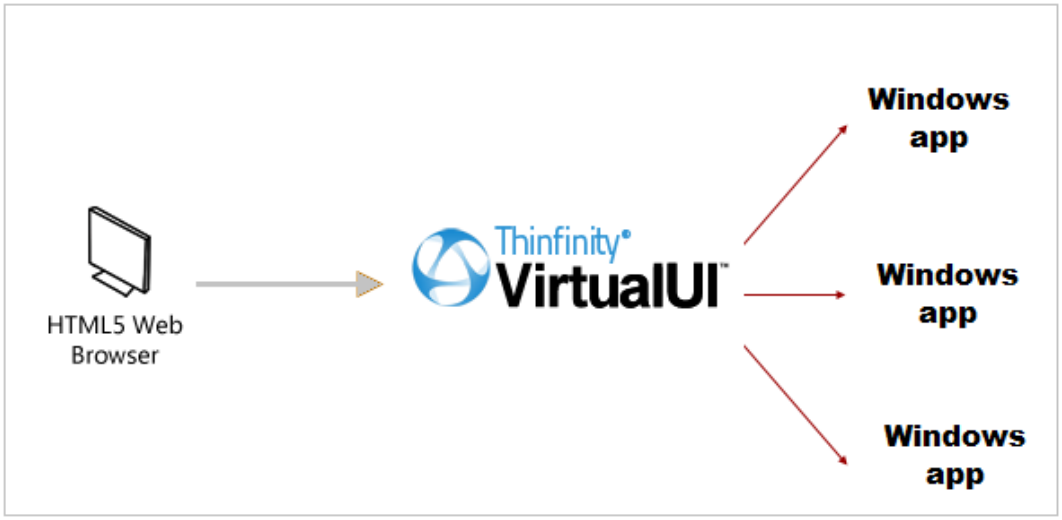
See more:

Architecture
Getting Started
Installing Thinfinity® VirtualUI
Compiling the application
Registering the application
Accessing the app from the Web
Thinfinity® VirtualUI Server Manager
Managing the SSL

2 Architecture

Thinfinity® VirtualUI™ is composed of:

- Thinfinity VirtualUI Javascript Client, running on an HTML5-capable web browser
- Thinfinity VirtualUI Server, running as a Windows Service
- Thinfinity VirtualUI SDK dlls and/or source code files libraries referenced and/or included in your Windows application
- Thinfinity VirtualUI Gateway, optional scaling and load balancing components.



Requirements:

Development machine

- Operating Systems:
  - Microsoft Windows 7 32bit / 64bit
  - Microsoft Windows 8 32bit / 64bit
  - Microsoft Windows Server 2012
- A development environment:
  - Microsoft Visual Studio
  - Delphi 5 to XE7
  - C++ Builder
  - Microsoft Visual Basic
  - PowerBuilder
  - other
- The application can use .NET WPF, GDI, GDI+ and limited DirectX calls.

Server and Gateway machine

- Windows 8 32-bit / 64-bit
- Windows Server 2012

End-user machine

- Any operating system and/or device with an HTML5-compliant web browser.
- Any modern web browser (HTML5-compliant) such as IE10/11, Chrome, Safari, Firefox, Opera, etc.

3 Getting Started

This section covers the basics of Thinfinity VirtualUI as follows:

1. Installing Thinfinity VirtualUI
2. Compiling and testing your WinForms, Delphi or C++ application
3. Registering the application in Thinfinity VirtualUI Server
4. Accessing the application from the Web

Find a more comprehensive reference here:

Development Server Manager

Advanced Programming with jsRO

Server Manager

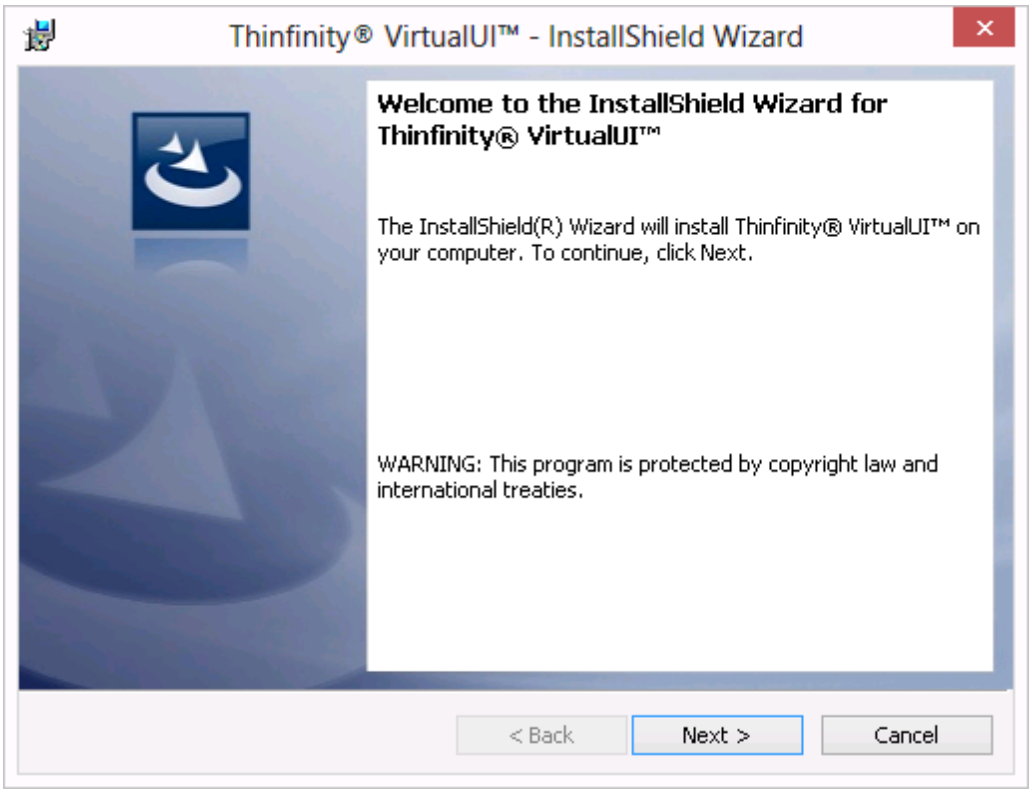
Symbol Reference

3.1 Installing Thinfinity VirtualUI

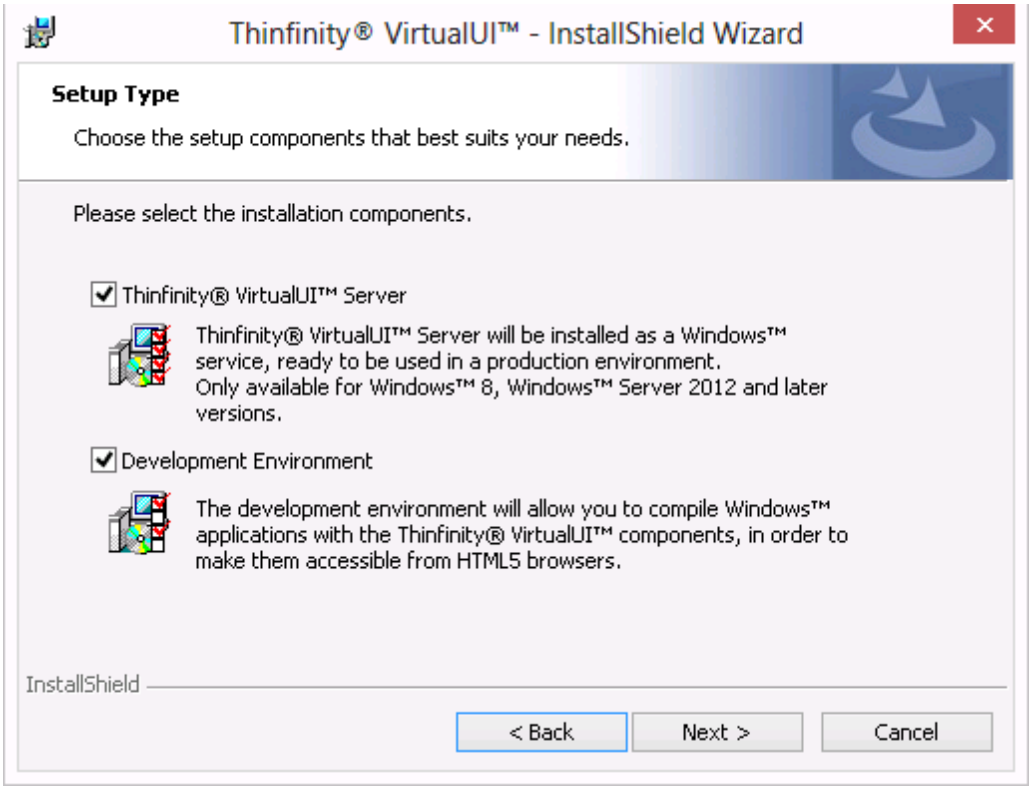
1. Download the installer from the download page in the Cybele Software site:

   http://www.cybelesoft.com/downloads/

2. Execute the installer on the target machine.



3. Select the environments to be installed:



Thinfinity® VirtualUI™ Server

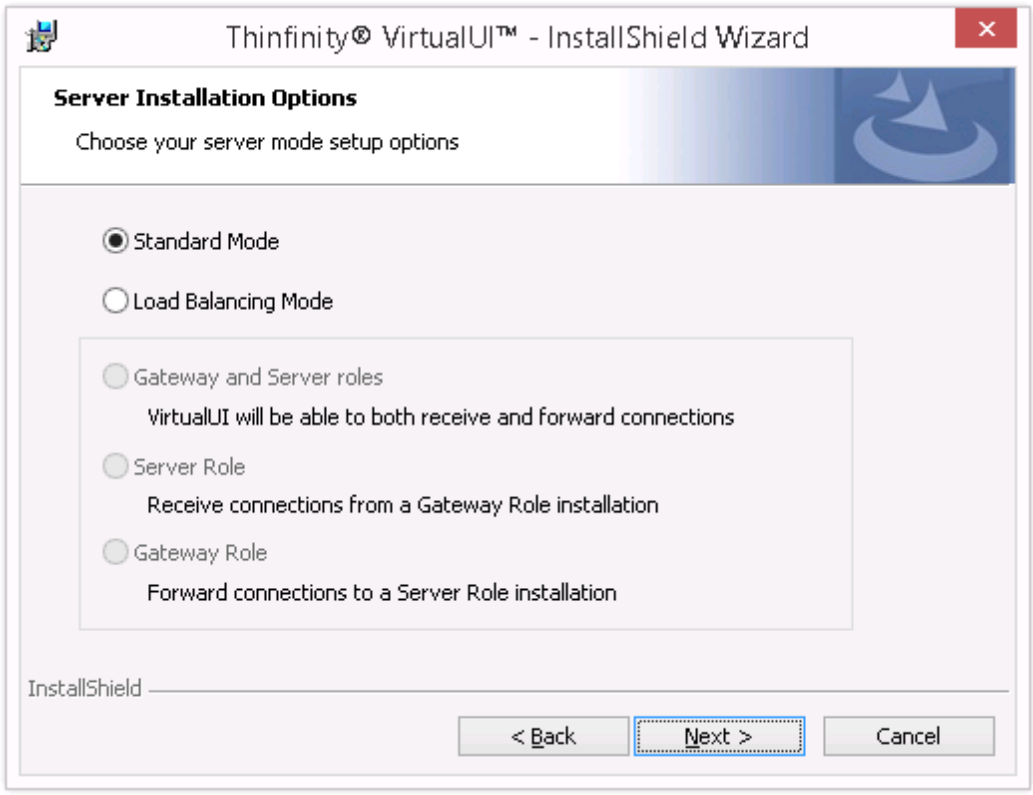
Thinfinity® VirtualUI™ Server is an HTTPS/WebSocket Server that maintains the communication between your app and the web browser. Installing this environment will enable you to configure and run your adapted Windows apps. This is not needed for development purposes but its installation is recommended for testing purposes.

On this installation mode, the Thinfinity® VirtualUI™ Server will be installed as a Windows Service.

Development Environment

This environment is meant to be installed on the developer machine. This mode installs the Thinfinity® VirtualUI™ SDK files that you will need to include or reference in your application's project. It includes also one Thinfinity® VirtualUI™ Server that will execute in 'development' mode, to quickly test your application from a web browser.

4. If you are installing the Server Environment, you will be presented with the following options:



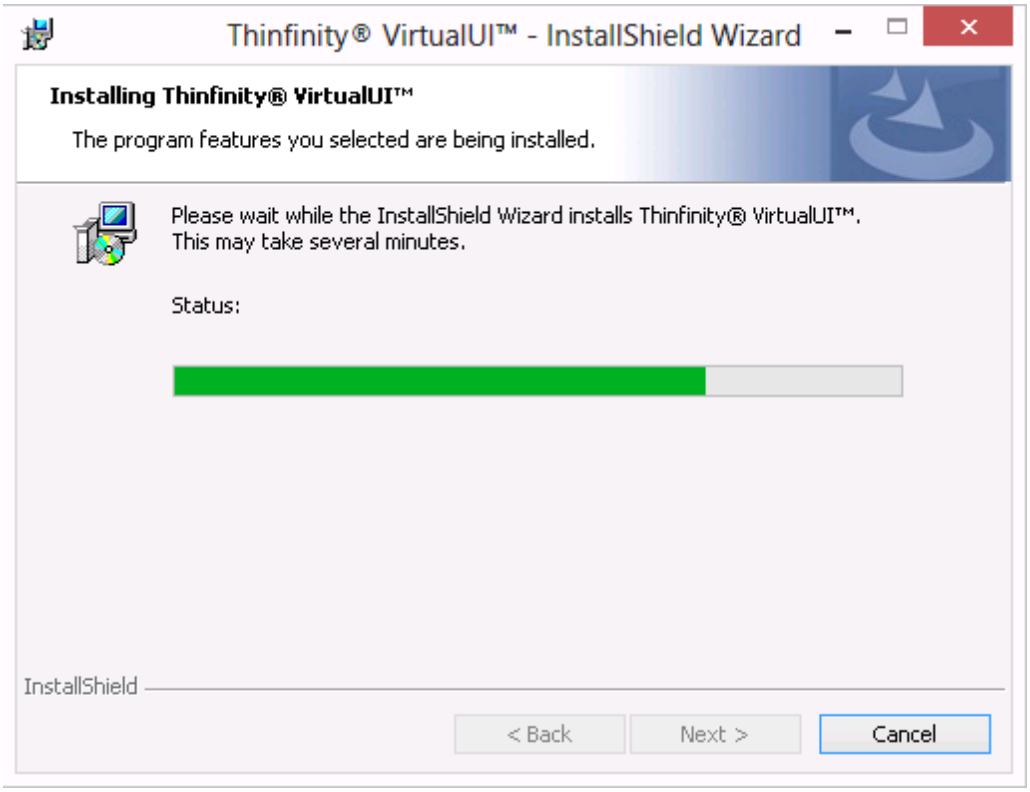
Standard Mode

This is the default option. Choose this for a stand-alone installation, Thinfinity VirtualUI Server will centralize all the connections.

Load Balancing Mode

Choose this option to distribute the connection's load between several installations. Read more about Scaling and Load Balancing.

5. Press Next and wait for the installation process to finish. When it is done, press the 'Finish' button.



Read More:

- Simple UI Remoting

3.2 Simple UI Remoting

UI Remoting is made simple with Thinfinity VirtualUI. All it takes is adding one or two lines of code in your applications, compiling and then configuring VirtualUI Server to show it.

Read more:

- Compiling and testing a WinForms application
- Compiling and testing a Delphi application
- Compiling and Testing a C++ Application
- Registering the application in Thinfinity VirtualUI Server
- Accessing the app from the Web

- Application Execution behavior

3.2.1 Compiling and Testing a WinForms Application

Follow these steps to integrate a .NET WinForms application with Thinfinity VirtualUI:

1. Open Microsoft Visual Studio.

2. Open the application's project you want to integrate with.

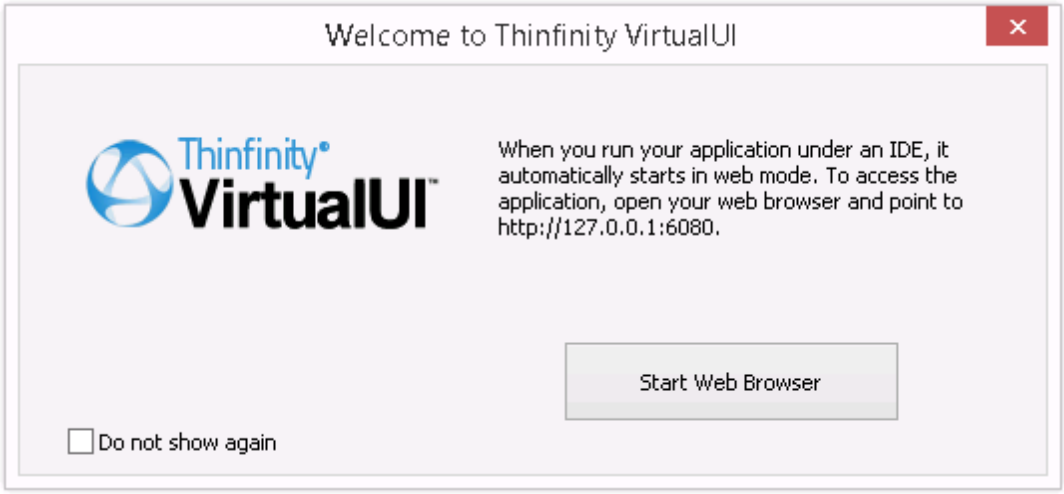
3. Right-click on the project name in the 'Solution Explorer' panel and then select 'Add' - 'Existing Item'. Look for the *Thinfinity.VirtualUI.cs* file, which is typically located in *c:\Program Files\Thinfinity\VirtualUI\Dev\dotNet*.

4. In the program.cs file add a line as follows:

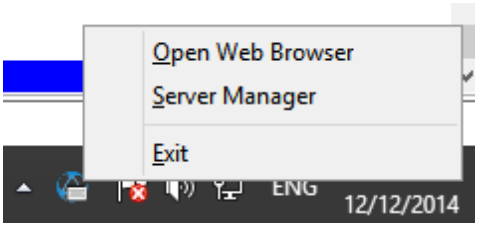
```
using System;
using System.Windows.Forms;

namespace MyApp
{
    static class Program
    {
        /// <summary>
        /// The main entry point for the application.
        /// </summary>
        [STAThread]
        static void Main()
        {
            new Cybele.Thinfinity.VirtualUI().Start();
            Application.EnableVisualStyles();
            Application.SetCompatibleTextRenderingDefault(false);
            Application.Run(new Form1());
        }
    }
}
```

5. Compile your program and run it.

You will see this message. If you press the 'Start Web Browser' button, a web browser will open pointing to the application.



6. Alternatively, choose to not show the message and observe on the Windows Tray Bar that the Thinfinity VirtualUI Development Server icon will appear.



You can right-click on the icon, and after that click on the 'Open Web Browser' menu.

A Web browser window will open and your application will be running inside.

> When you run your application under an IDE, it automatically starts in web mode. To access the application, open your web browser and point to http://127.0.0.1:6080

8. You can also click on the 'Server Manager' menu of the Tray Bar icon to access the Development Server Manager.

Read more:

- Compiling and testing a Delphi application
- Compiling and Testing a C++ Application
- Registering the application in Thinfinity VirtualUI Server
- Accessing the app from the Web
- Application Execution behavior

3.2.2 Compiling and Testing a Delphi Application

Follow these steps to integrate a Delphi VCL application with Thinfinity VirtualUI:

1. Open Delphi.

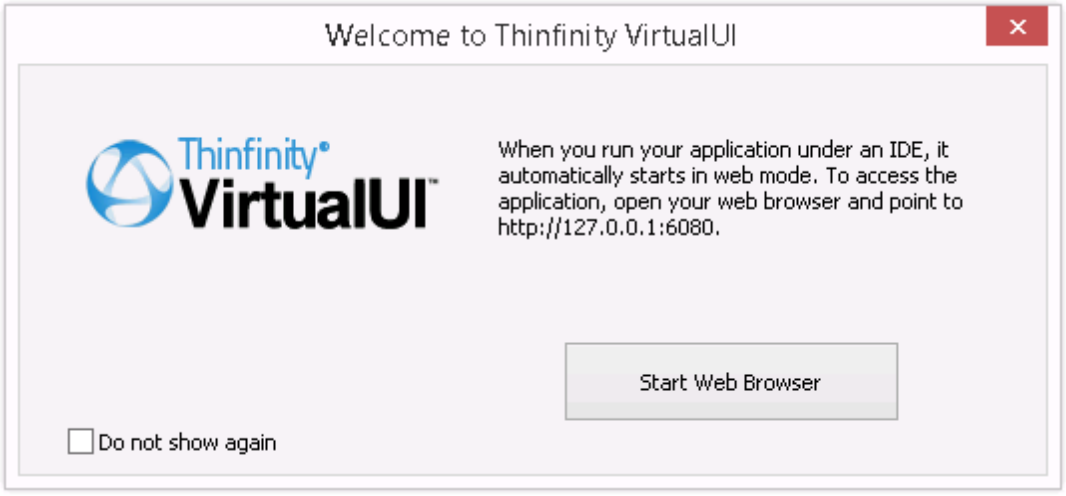
2. Open the application's project.

3. Add the *VirtualUI_AutoRun* unit to the 'Uses' clause of the project source file. This unit will typically be located in the *C:\Program Files (x86)\Thinfinity\VirtualUI\dev\Delphi* folder.

```
program MyApp;

uses
  Windows,
  Forms,
  VirtualUI_AutoRun,
  MyApp.Main in MyApp.Main.pas' {Form1};

{$R *.res}

begin
  Application.Initialize;
  Application.CreateForm(TForm1, Form1);
  Application.Run;
end.
```

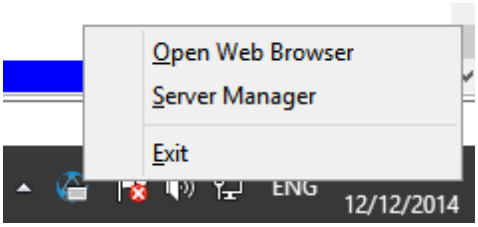
4. Compile the program and run it.

You will see this message. If you press the 'Start Web Browser' button, a web browser will open pointing to the application.



5. Alternatively, choose to not show the message and observe on the Windows

Tray Bar that the Thinfinity VirtualUI Development Server icon will appear.



6. Right-click on the icon, and after that click on the 'Open Web Browser' menu.

A Web browser window will open and your application will be running inside.

When you run your application under an IDE, it automatically starts in web mode. To access the application, open your web browser and point to http://127.0.0.1:6080

7. Click on the 'Server Manager' menu to access the Development Server Manager.

Read more:

- Compiling and testing a WinForms application
- Compiling and Testing a C++ Application
- Registering the application in Thinfinity VirtualUI Server
- Accessing the app from the Web
- Application Execution behavior

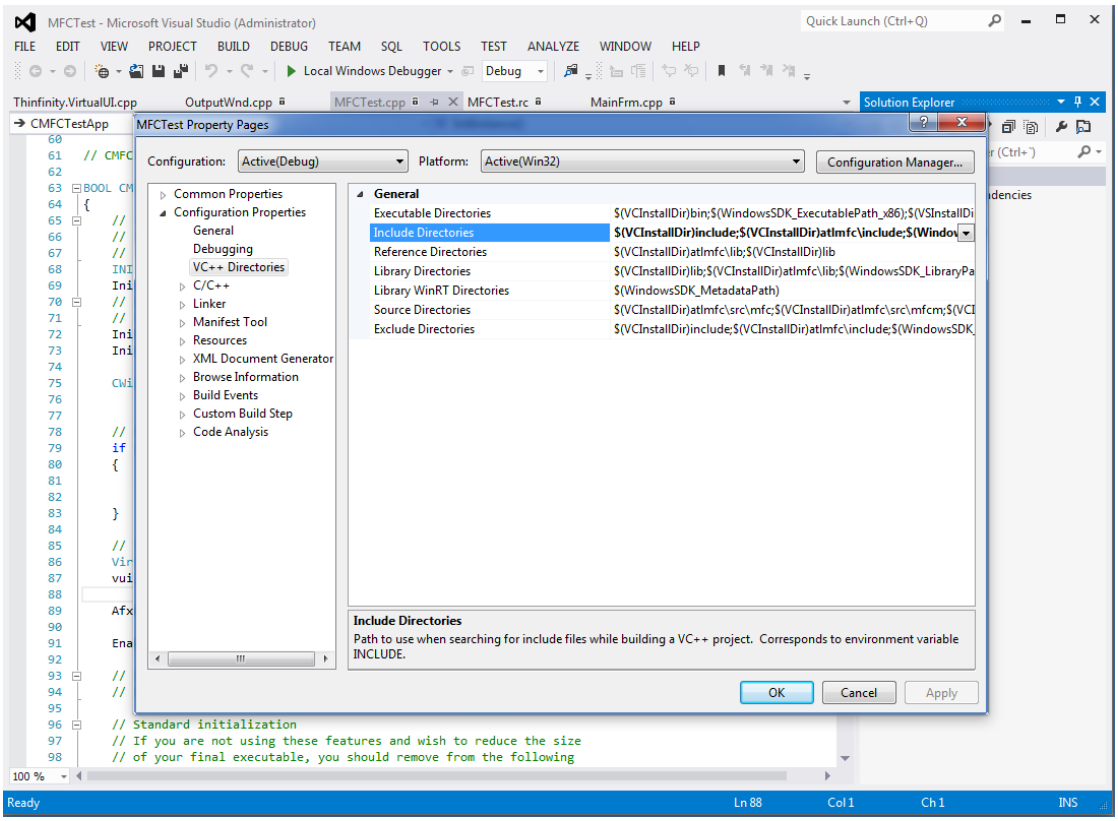
3.2.3 Compiling and Testing a C++ Application

Follow these steps to integrate a C++ application with Thinfinity VirtualUI:

1. Open Visual Studio.

2. Open the application's project.

3. Add the path to the VirtualUI library in the 'Include Directories' field, which can be found in the main menu under Project - Properties - Configuration Properties - VC++ Directories).



4. Add Thinfinity.VirtualUI.cpp to the Source Files.

5. Add Thinfinity.VirtualUI.h to the Header Files.

6. Include Thinfinity.VirtualUI.h in the application`s cpp:

#include "Thinfinity.VirtualUI.h"

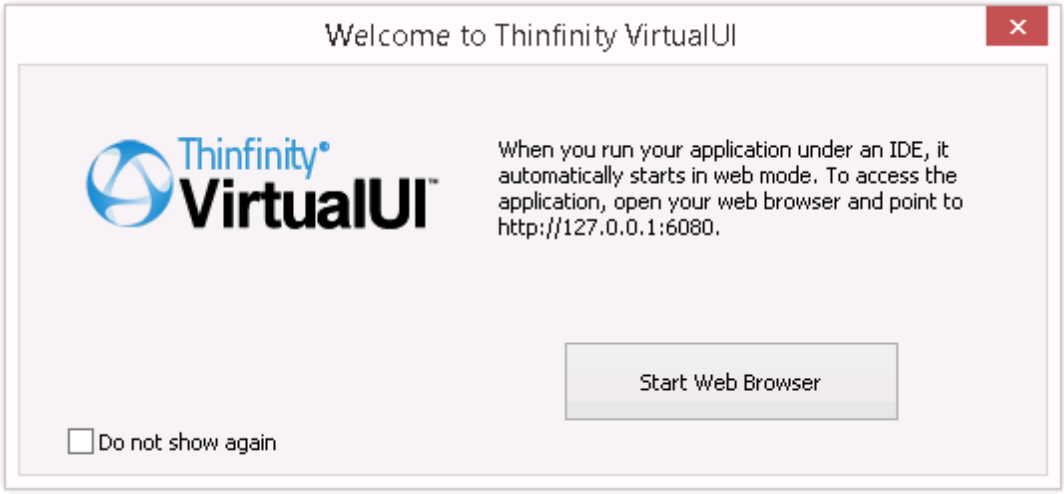
7. Create a VirtualUI instance of the program and start it.

```
BOOL CMFCTestApp::InitInstance()
{
    INITCOMMONCONTROLSEX InitCtrls;
    InitCtrls.dwSize = sizeof(InitCtrls);
    InitCtrls.dwICC = ICC_WIN95_CLASSES;
    InitCommonControlsEx(&InitCtrls);
    CWinAppEx::InitInstance();
    if (!AfxOleInit())
    {
            AfxMessageBox(IDP_OLE_INIT_FAILED);
            return FALSE;
    }

    // Initialize VirtualUI
    VirtualUI vui;
    vui.Start();
```

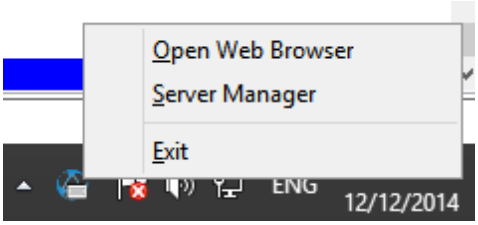
```
        ...
        ...
    }
```

8. Compile the program and run it.

You will see this message. If you press the 'Start Web Browser' button, a web browser will open pointing to the application.



9. Alternatively, choose to not show the message and observe on the Windows Tray Bar that the Thinfinity VirtualUI Development Server icon will appear.



10. Right-click on the icon, and after that click on the 'Open Web Browser' menu.

A Web browser window will open and your application will be running inside.

When you run your application under an IDE, it automatically starts in web mode. To

access the application, open your web browser and point to http://127.0.0.1:6080

11. Click on the 'Server Manager' menu to access the Development Server Manager.

Read more:

- Compiling and testing a WinForms application
- Compiling and testing a Delphi application
- Registering the application in Thinfinity VirtualUI Server
- Accessing the app from the Web
- Application Execution behavior

3.2.4 Registering the Application in Thinfinity VirtualUI Server

Now the application needs to be registered on Thinfinity VirtualUI Server. By doing this, the application will get published on the web server and will be available to be run from the web.

We assume you have already Compiled and tested your application with the Thinfinity® VirtualUI™ runtime units.

To create an application profile, follow these steps:

1. Open the Thinfinity VirtualUI Server Manager, available in the Start Menu.

2. Go to the 'Applications' tab.

3. Click on the 'Add' button.

4. Name the application and inform the application path and file name.

5. You can check the 'Default Application' option to bypass the Thinfinity VirtualUI landing page and go directly to the selected profile. You can access the rest of the profiles through their virtual path urls.

6. Press 'OK' and 'Apply' on the Server Manager screen.

Now the application is ready to be reached on the Web.

Read More:

- Accessing the App from the Web
- Application Execution Behavior
- The 'Applications' tab

3.2.5 Accessing the App from the Web

Follow the next steps to access registered applications using the web browser:

1. Open your preferred web browser.

2. Type in the application URL. This URL is composed of the server URL plus the Virtual Path configured for the application, ie http://your-machine:6580/MyApp/

Alternatively, leave the Virtual Path as the root path using just http://your-machine:6580/. In this case a page with the list of applications will show up, unless you have set a profile to be the Default Application, in which case you will be connected to the Default Application.

a. Check the 'Open in a new browser window' option if you want the application to be opened in another tab.

b. Click on the corresponding icon of the application you want to access.

Read More:
- Application Execution Behavior

3.2.6 Application Execution behavior

The application execution behavior will depend on how the application is run.

- Windows Shell
  When the application is executed from the Windows Shell, it will behave as a standard Windows application.

- Development Environment
  When the application is executed under a Development Environment (such as Microsoft Visual Studio or Embarcadero Delphi), an instance of VirtualUI Server running in development mode will be started, and the application will be seen both as an standard Windows application and as a Web application.

- VirtualUI Sever's web page:
  If the application is launched from a VirtualUI Server's page, it will run as a web application.

3.3 Adapting the Application

Thinfinity VirtualUI not only exposes the original application on the web browser, it also allows you to integrate, extend it and customize its look using web resources.

Read more:

- Customizing the web page
- Programming VirtualUI

3.3.1 Customizing the Web Page

By default, the applications are loaded in the app.html page, located in the VirtualUI web directory. However, if you need to change the look and feel, add a new functionality, etc., you can achieve this by loading the application in a different web page with the use of a virtual path.

Read more:

- Preparing the web page
- Create a virtual path for the application

3.3.1.1 Preparing the Web Page

Create a new directory and the web page where the application will run. You can use app.html as a template. In order for the application to work in the browser, the page must have, at least:

1. A reference to the thinfinity.virtualui.css stylesheet.
2. A reference to the virtualui.sdk.min.js javascript library.
3. A div named 'virtualui' that will work as 'desktop' for the application.
4. The necessary code to create an instance of the Thinfinity.VirtualUI class, with a call to the connect() method.

For example:

```
<!DOCTYPE html>
<html>
<head>
    <meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge,chrome=1"/>

    <meta name="apple-mobile-web-app-capable" content="yes" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0,
maximum-scale=1.0, minimum-scale=1.0, user-scalable=no, target-
densityDpi=device-dpi"/>

    <title>Thinfinity VirtualUI - Basic Page</title>

    <link rel="stylesheet" type="text/css" href="css/
thinfinity.virtualui.css" />

    <script src="virtualui.sdk.min.js" type="text/javascript"></script>
</head>

<body>
    <script type="text/javascript">

           $(document).ready(function () {

               var virtualUI = new Thinfinity.VirtualUI();
               virtualUI.connect();

           });

    </script>
    <div id="virtualui" style="position:absolute;display:none;"></div>

</body>
</html>
```

Starting from this basic page, you can change the windows' style, add new html content and interact programmatically with the executed application.

Thinfinity VirtualUI Server page load scheme

In the previous example page you can see references to Thinfinity VirtualUI files (a stylesheet and a Javascript file). It's not necessary for those common files to be replicated in each virtual path folder.
The server will handle each http request from a virtual path in the following order:

1) Search for the page locally, in the folder assigned to the application's virtual path.
2) Search for the page starting in the Thinfinity VirtualUI root directory.

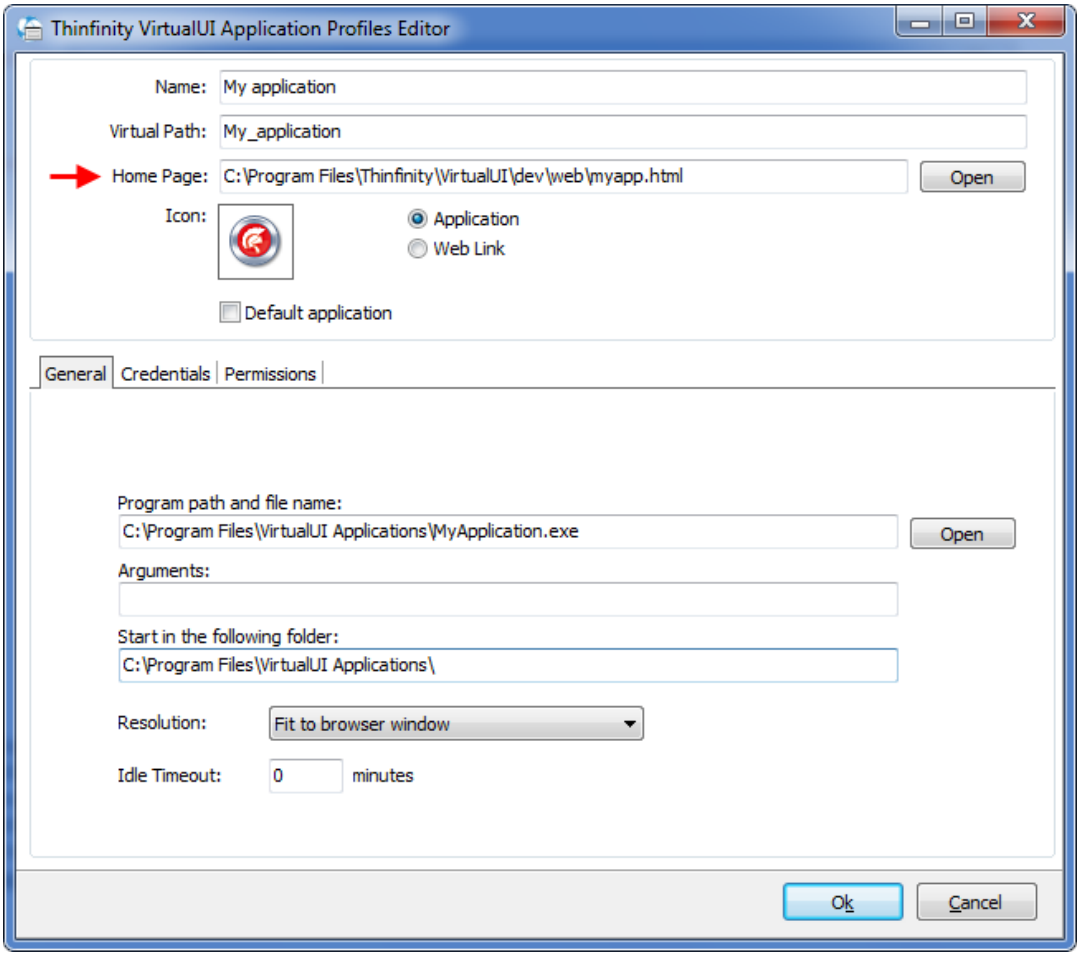
Read more:
- Customizing Settings

3.3.1.2 Customizing Settings

After creating the directory and the web page, inform Thinfinity VirtualUI of their location by defining a *virtual path* for the application and indicating which page will be loaded by default.

In order to set a virtual path for the application:

1. Open the Thinfinity VirtualUI Server Manager.
2. Go to the 'Applications' tab.
3. Add the new application or select it from the list.
4. Click on the 'Edit' button.
5. Set the Home Page. Press the 'Open' button and search for the location of your customized home page.



6. You can modify the virtual path name.
7. Press 'OK' and 'Apply'.

When the application is loaded —through the icon in the index page or typing the url to the full virtual path—, Thinfinity VirtualUI will open the page that was

specified in the 'Home Page' field of the application profile, and it will show the application.

Read More:

- Programming VirtualUI

3.3.2 Programming VirtualUI

The virtualui.sdk.min.js javascript library has everything that you need to connect to your application and interact from it from the web page, extending and integrating with your execution environment as much as you wish.

The library has these classes:

Thinfinity.VirtualUI class
Thinfinity.JsRO class

Thinfinity.VirtualUI class

This class is necessary and mandatory, because it's the one handling the communication between the browser and Thinfinity VirtualUI Server.

Properties

devMode

Methods

connect

Events

onClose
onError
onLoading
onShow

Read More:
- Handling VirtualUI Events

3.3.2.1 Handling VirtualUI Events

The following example shows how to assign *handlers* to events available in the VirtualUI object (they can be seen in the javascript console or shown as alerts in the case of errors or disconnections)

```
<!DOCTYPE html>
<html>
<head>
    <title>Thinfinity VirtualUI - Basic Page</title>
    <link rel="stylesheet" type="text/css" href="css/
thinfinity.virtualui.css" />
    <script src="virtualui.sdk.min.js" type="text/javascript"></script>
</head>

<body>
    <script type="text/javascript">

            $(document).ready(function () {

                var virtualUI = new Thinfinity.VirtualUI();

                virtualUI.onError = function (errorMsg) {
                   if (errorMsg == null) { errorMsg = ""; }
                   alert("Application load failed: " + errorMsg);
                };

                virtualUI.onLoading = function () {
                   console.log("Loading...");
                };
                virtualUI.onShow = function () {
                   console.log("Application loaded.");
                };
                virtualUI.onClose = function () {
                   alert("Application closed.");
                   window.close();
                };

                virtualUI.connect();

            });

    </script>
    <div id="virtualui" style="position:absolute;display:none;"></div>

</body>
</html>
```

Thinfinity.jsRO class

The Thinfinity.jsRO class helps create interaction between the application and the

web that's much more fluid than any other methodology or standard technology available.

This class interacts with the executable file and accesses the data models that are exposed from the application and the properties, methods and events that have been written for each of these models.

In the next chapter we will see how to work with jsRO (Javascript Remote Objects).

Read More:

- Advanced Programming with jsRO

4 Advanced Programming with jsRO

jsRO (JavaScript Remote Objects) allows you to increase your application's power, extending it to the web environment. This is made possible by the publishing of data models defined programmatically from the application that expose properties, methods and events, easing the dialog between the web and the original application.

To make the development of applications with jsRO easy, Thinfinity VirtualUI provides a web environment that allows you to interact with the application during the development and test its functionality: the Development Lab.

Read More:

- The Development Lab
- Life Cycle of jsRO Objects
- Creating jsRO Objects
- Updating Properties
- OnPropertyChange(), OnSet() y OnGet() events
- jsRO Remote Calls

4.1 The Development Lab

Thinfinity VirtualUI includes an html test environment called Development Lab. You can test your customized application and access the available programming resources through the objects.
The Development Lab will load when you execute an application in Dev mode from your development environment by calling the URL where Thinfinity VirtualUI is running (i.e. http://127.0.0.1:6080/).

The environment consists of five panels:

- The Address bar.
  Load here the web page address that you want to open. If you call the root address ("/"), app.html will load; if you enter an application's *virtual path*, it will load the address that was specified as *Home Page* for this application in the Thinfinity VirtualUI Server Manager, and if the Home Page wasn't defined it will load app.html.

- The Model Inspector.
  The Model Inspector's function is to show the available properties, methods and events for each data model. In its upper part there's a combobox that shows the published models; by selecting an item you will see its attributes. From this panel you can change the properties value, provided that they are not read-only.

- The Log pane.
  The log pane shows a log of the interaction between the jsRO object and the application. The newer entrances will show on top.

- The Console pane.
  In the console pane you can assign a new value to a property or call a method.

- The Browser pane.
  This is the most important panel. The selected application will load there and it will show just like it would in the browser independently.

Read More:
- Life Cycle of jsRO Objects
- Creating jsRO Objects
- Updating Properties
- OnPropertyChange(), OnSet() y OnGet() events
- jsRO Remote Calls

4.2 Life cycle of the jsRO Objects

jsRO objects are always defined inside the application and propagated to the browser. New properties, methods or events can't be added From Javascript, but events that are produced can be handled, the property values can be retrieved and modified, and the object's methods can be invoked.

There are four pre-defined Javascript events that are related to the life cycle of a jsRO object, associated to its creation, updating and destruction,

Starting from the first ApplyModel produced in the application, jsRO will create the object, propagate it to the browser and trigger there the event related to this creation:

```
on("model:object", "created")
```

also, for the properties that are created with an assigned value, jsRO will replicate their initial values in the browser and fire the corresponding events:

```
on("model:object.property", "changed")
```

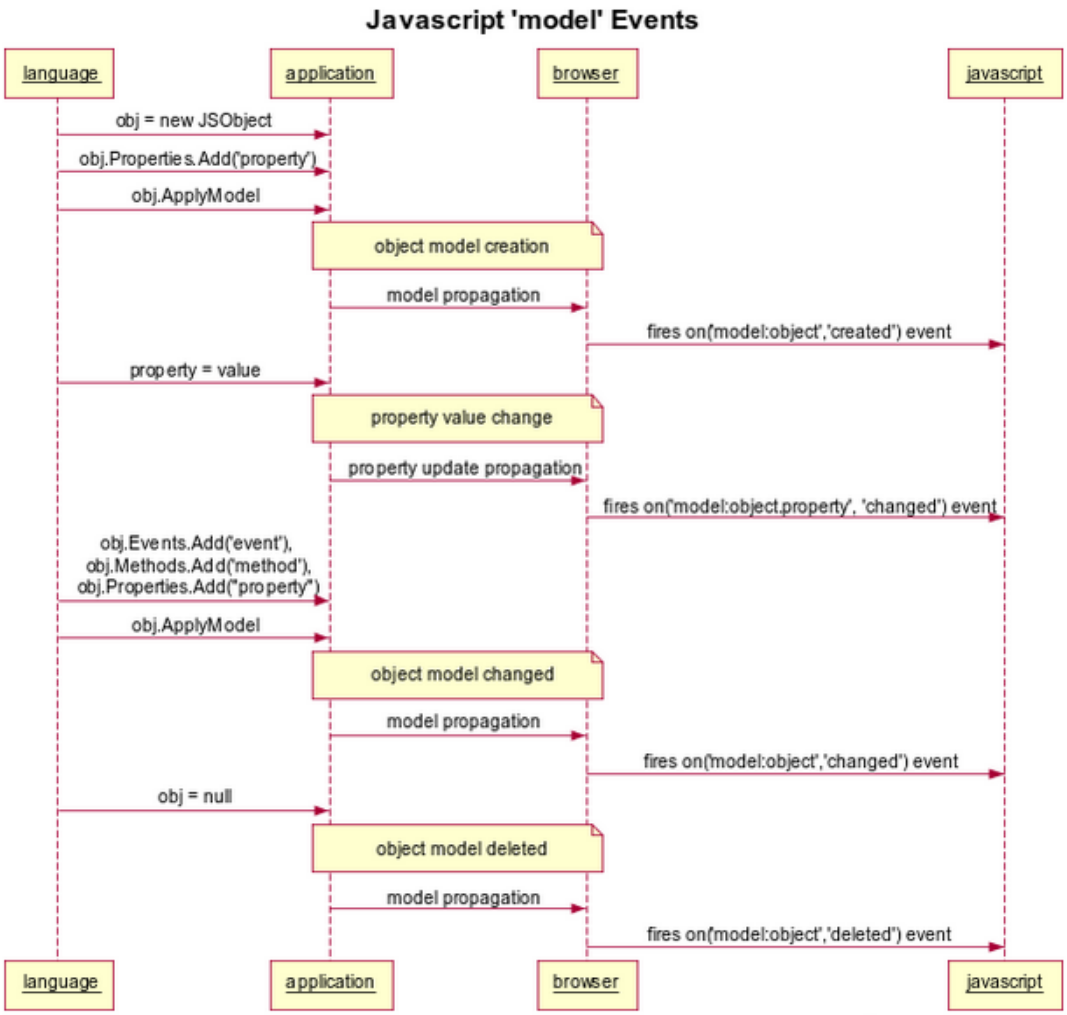
and from that moment on, it will keep the state of the properties synchronized in the application and the browser.
If the model needs to be updated by the addition of new attributes (properties, events or method) a new ApplyModel must be made, which will, in turn, with the model already created, fire a changed event on the model:

```
on("model:object", "changed")
```

Finally, if the object is destroyed in the application, the deleted event will be triggered and the object will be destroyed in Javascript too.

```
on("model:object", "deleted")
```

This last event will also be triggered when closing the application.



Read More:

- Creating jsRO Objects
- Updating Properties
- OnPropertyChange(), OnSet() y OnGet() events
- jsRO Remote Calls

4.3 Creating jsRO objects

As stated previously, the sjRO models are created in the application and then propagated to the browser, where they can be consumed from Javascript through a Thinfinity.sjRO class instance.

Let's see a complete example of this sequence:

Both examples create a 'ro' object, which has a 'text' property with the value: 'Hello!'.

Using Delphi, in the Create method of the form:

```
// Creates the remote object and its property
  ro := TJSObject.Create('ro');
  ro.Properties.Add('text');
  ro.ApplyModel;
```

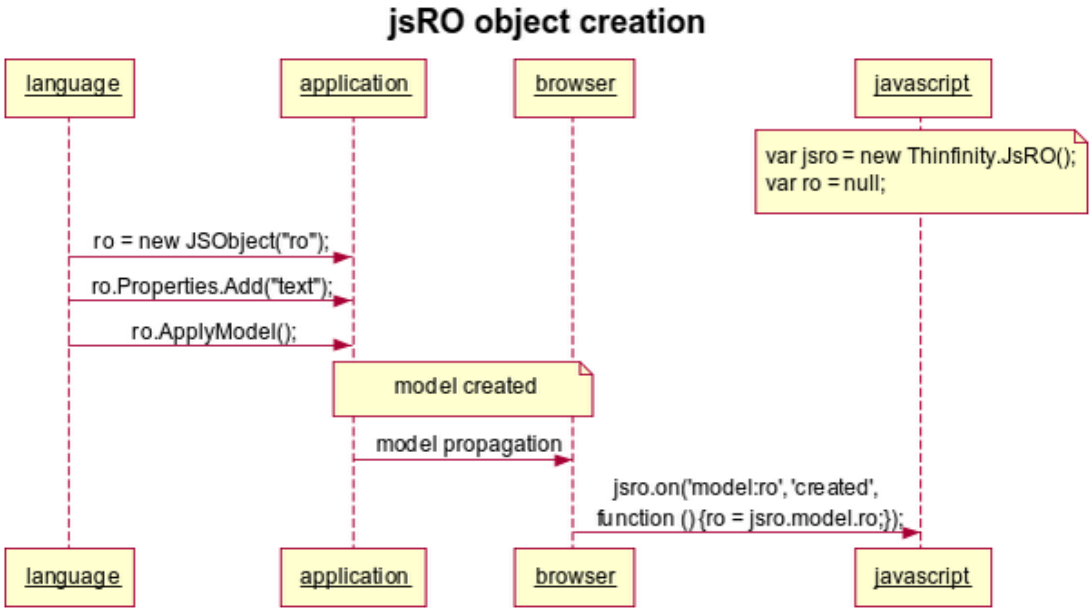
Using C# (.Net Winform application)

```
// Creates the remote object and its property
  ro = new JSObject("ro");
  ro.Properties.Add("text");
  ro.ApplyModel();
```

Let's see how to work with this object from Javascript:

```
        $(document).ready(function () {

            ...
            ...
            var jsro = new Thinfinity.JsRO();
            var ro = null;
            ...
            ...
            jsro.on('model:ro', 'created', function () {
                ro = jsro.model.ro;
            });
        });
```

Sequence diagram for the creation of an object:



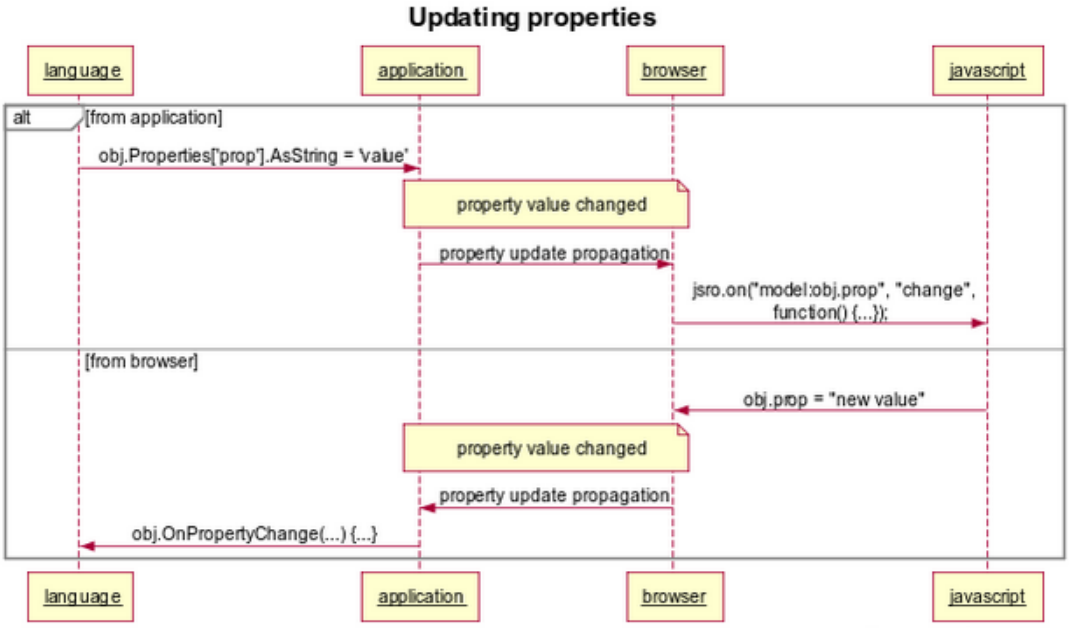
Read More:

- Updating Properties
- OnPropertyChange(), OnSet() y OnGet() events
- jsRO Remote Calls

4.4 Updating Properties

jsRO will keep each property synchronized in the browser and in the application. Each time a property is updated in the server side, this change triggers an event to the browser, where it can be handled by the corresponding on("model:object.property", "change", ...) event, if this event was declared. Similarly, when a property is updated in the browser, this change travels to the application and triggers the *object.OnPropertyChange* and *property.OnSet* events.

Sequence diagram for the assignation of a property value from the application and from the browser:



Read More:

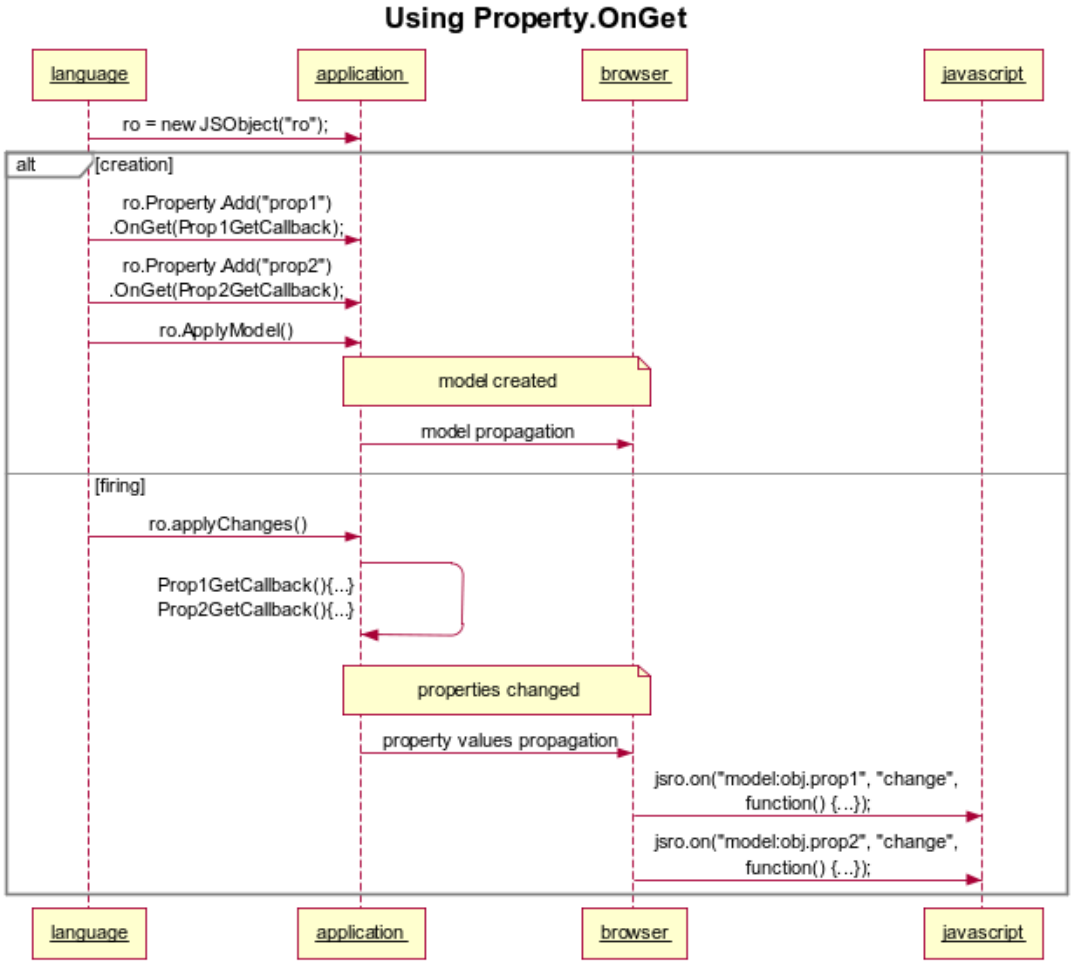
- OnPropertyChange(), OnSet() y OnGet() events
- jsRO Remote Calls

4.5 OnPropertyChange(), OnSet() y OnGet() events

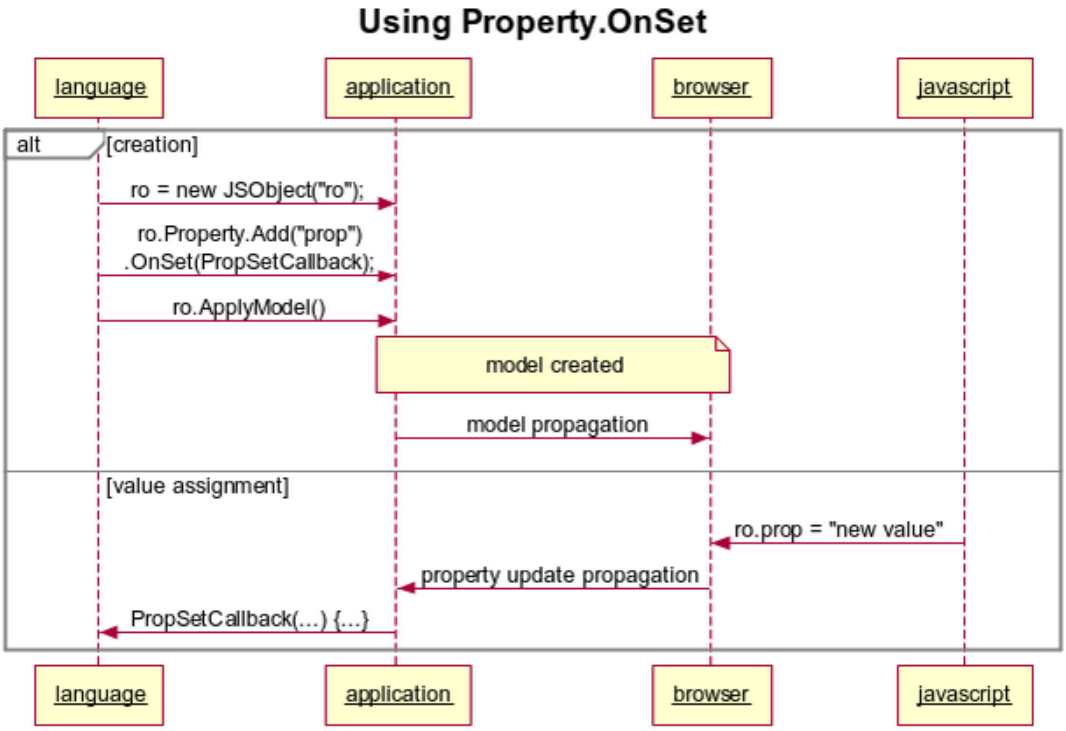
When publishing a model, jsRO will keep the state of the created object synchronized in the application side and in the browser. Each time a property is updated in the server side, this change is propagated to the browser, where besides updating the value it can be handled by the corresponding .on("model:object.property", "change", ...) event, if this event was declared. When a property is updated on the browser side, this change is sent in the opposite direction (from the web to the application) and triggers an OnPropertyChange event in the instantiated JSObject object. This is a good place to do things like propagating the change of a property value to some other element of the application, update a group of values in a database, etc.

jsRO can also handle changes in the properties of its object through the declaration of the OnSet and OnGet property events.

By invoking the ApplyChanges method on a JSObject object, the collection of the properties added to the object is traversed and if any of these properties has an OnGet event declared, it's triggered.



The OnSet event, however, is executed when it receives a change from a particular property from the browser.



The way to add the OnSet and OnGet event handlers to a property is based on their definition, you can do so when of adding the property or afterwards, always remember to fire an ApplyModel so that the model is propagated to the browser. The next example shows how the browser can retrieve the application form background color in a #RRGGBB format, and also how to change the background color using a value sent from the browser. Since the desktop application doesn't interpret colors like the web does, we need a conversion that works both ways:

Delphi Definition:

```
// Creates the remote object
FRo := TJSObject.Create('ro');
// Property definition
FRo.Properties.Add('backgroundColor')
  .OnGet(TJSBinding.Create(
    procedure(const Parent: IJSObject; const Prop: IJSproperty)
    begin
      Prop.AsString := '#'
        + IntToHex(GetRValue(ColorToRGB(Form1.Color)), 2)
        + IntToHex(GetGValue(ColorToRGB(Form1.Color)), 2)
        + IntToHex(GetBValue(ColorToRGB(Form1.Color)), 2);
    end))
  .OnSet(TJSBinding.Create(
    procedure(const Parent: IJSObject; const Prop: IJSproperty)
```

```
        var
          value: string;
        begin
          value := LowerCase(Prop.AsString);
          if ((Length(value) = 7) and (copy(value, 1, 1) = '#')) then
          begin
            try
              Form1.Color := RGB(
                         StrToInt('$' + Copy(value, 2, 2)),
                         StrToInt('$' + Copy(value, 4, 2)),
                         StrToInt('$' + Copy(value, 6, 2))
                       );
            except
            end;
          end;
        end));
```

.Net definition:

```
    // Creates the remote object
    ro = new JSObject("ro");
    // Property definition
    ro.Properties.Add("backgroundColor")
      .OnGet(new JSBinding(
          // This anonymous procedure do the actual get
          delegate(IJSObject Parent, IJSProperty Prop)
          {
              Prop.AsString = "#"
                  + this.BackColor.R.ToString("X2")
                  + this.BackColor.G.ToString("X2")
                  + this.BackColor.B.ToString("X2");
          }))
      .OnSet(new JSBinding(
          // This anonymous procedure do the actual set
          delegate(IJSObject Parent, IJSProperty Prop)
          {
              string value = Prop.AsString.ToLower();
              Regex reColor = new Regex(@"^#([0-9,a-f]{6})$");
              Match match = reColor.Match(value);
              if (match.Success)
              {
                  string color = match.Groups[1].Value;
                  this.BackColor = Color.FromArgb(
                      int.Parse(color.Substring(0, 2),
  NumberStyles.AllowHexSpecifier),
                      int.Parse(color.Substring(2, 2),
  NumberStyles.AllowHexSpecifier),
                      int.Parse(color.Substring(4, 2),
  NumberStyles.AllowHexSpecifier)
                  );
              }
          }));
```

```
```

Assigning the property value in Javascript:

```
ro.backgroundColor = “#FF0000”;
```

4.6 jsRO Remote Calls

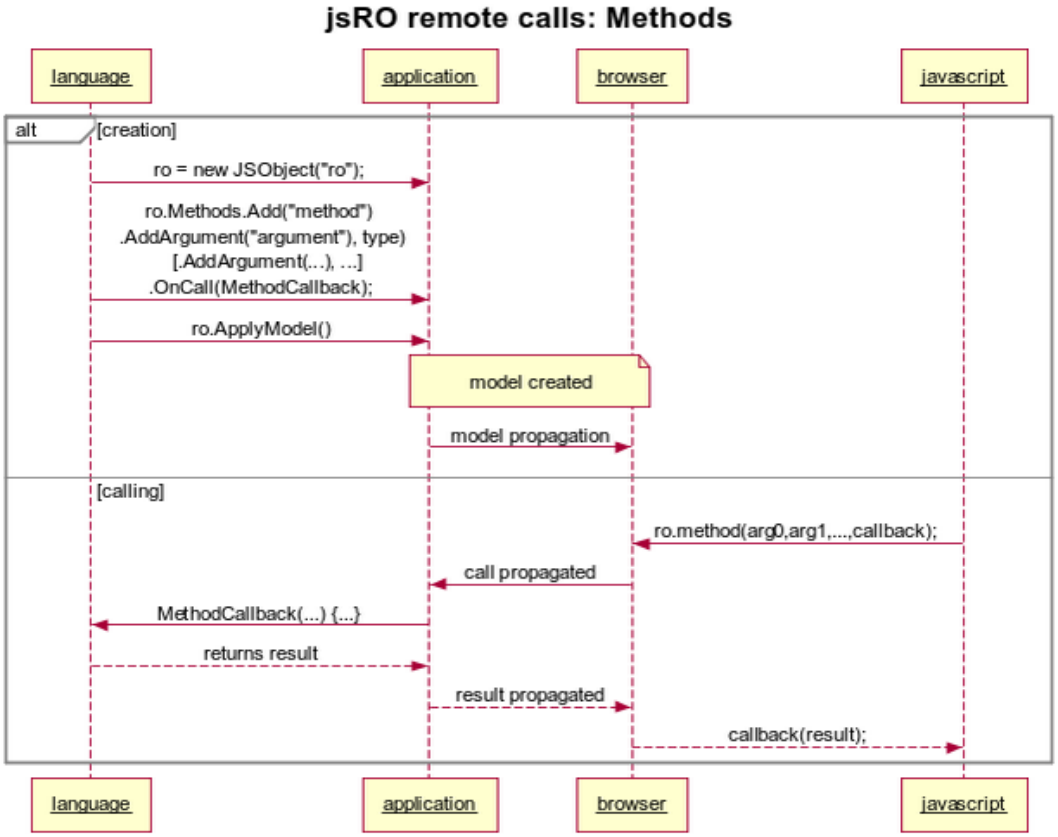
In order to achieve more interaction between the remote application and the browser, the object model provided by jsRO allows the creation of remote methods and events defined in the application by the developer. Both the methods and the events are created and added to a model. While the methods can be invoked from the browser to remotely execute the application's own actions, the events are fired from the application to the browser, where they can be handled by the corresponding callback.

Read More:

- Remote Methods
- Custom Events

4.6.1 Remote Methods

The remote jsRO methods allow you to make the application's own actions available to be invoked from Javascript.
When the invokation of a method arrives to the application from the browser, two events are fired: the first is OnMethodExecuted, at the level of the JSObject object, which receives all the methods calls from the browser; the second is OnCall, and it happens at the level of the remote method.
If the invoked method is a function (if it returns a value), the value will be returned and propagated to the browser, where it will be handled asynchronously by a callback defined as the last argument in the call to the method.



The following examples show how to add a method to an object and how it can be called from Javascript. In this case, we create a method called multiply, which will receive two integer type arguments as parameters and will return the result of the product between them. This result will be shown in the callback to the method call.

Method definition in Delphi:

```
// Creates the remote object
 FRo := TJSObject.Create('ro');
 // Adds the method
 FRo.Methods.Add('multiply')              // Returns a IJSMethod
   .AddArgument('a', JSDT_FLOAT)          // First value to multiply
   .AddArgument('b', JSDT_FLOAT)          // Second value to multiply
     .OnCall(TJSCallback.Create(          // Adds the callback
       procedure(const Parent: IJSObject; const Method: IJSMethod)
       var
         a, b: int;
       begin
         a := Method.Arguments['a'].AsFloat;
         b := Method.Arguments['b'].AsFloat;
         Method.ReturnValue.AsFloat := a * b;
       end))
     .ReturnValue.DataType := JSDT_FLOAT;  // Sets the return type
 FRo.ApplyModel;
```

Method definition in .Net:

```
// Creates the remote object
  ro = new JSObject("ro");
  // Adds the method
  ro.Methods.Add("multiply")                        // Returns a JSMethod
     .AddArgument("a", IJSDataType.JSDT_FLOAT)     // First number to
multiply
     .AddArgument("b", IJSDataType.JSDT_FLOAT)     // Second number to
multiply
        .OnCall(new JSCallback(                    // Adds the callback
            delegate(IJSObject parent, IJSMethod Method)
            {
                float a, b;
                a = Method.Arguments["a"].AsFloat;
                b = Method.Arguments["b"].AsFloat;

                Method.ReturnValue.AsFloat = a * b;
            })).ReturnValue.DataType = IJSDataType.JSDT_FLOAT;
  ro.ApplyModel();
```

Invoke the method in order to run it from Javascript. Use a callback in case the result needs to be retrieved (like in this case):

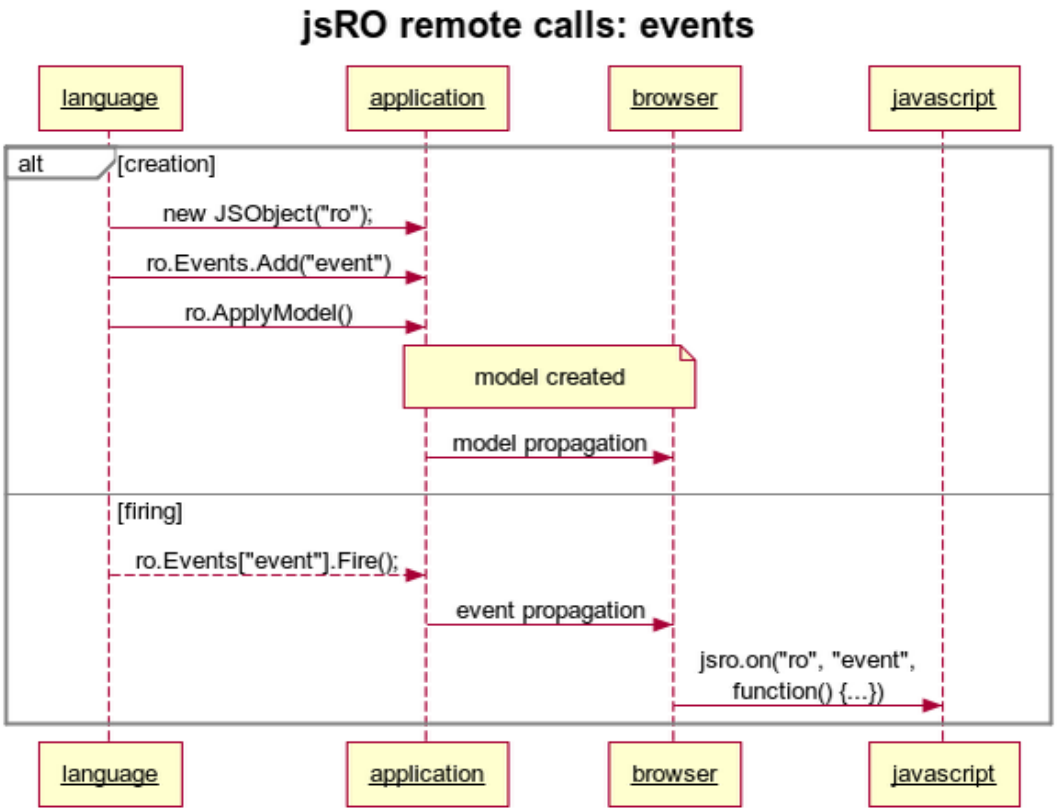
```
ro.multiply(3, 4, function (result) {
     alert("Result is " + result);
});
```

Read More:

- Custom Events

4.6.2 Custom Events

On top of the events detailed in Life Cycle of jsRO Objects, events can be created in the application that are defined by the programmer and when fired will be propagated from the application to the browser.



The following example shows how to add a personalized event to an object and how this can be handled from Javascript. In this case we'll expose, as a JSON, the mouse coordinates.

Definition and use of an event in Delphi:

```
  // Creates the remote object
  FRo := TJSObject.Create('ro');
  // Adds the event
  FRo.Events.Add('mousePositionChanged')
    .AddArgument('coords', JSDT_JSON);     // Adds the mouse position as
JSON
  FRo.ApplyModel;

  procedure TForm1.FormMouseMove(Sender: TObject; Shift: TShiftState;
                                 X, Y: Integer);
  begin
```

```
      FRo.Events['mousePositionChanged']
        .ArgumentAsJSON('coords', '{"x": ' + X + ', "y": ' + Y + '}')
        .Fire;
    end;
```

Definition and use of an event in .Net:

```
    // Creates the remote object
    ro = new JSObject("ro");
    // Adds the event
    ro.Events.Add("mousePositionChanged")
       .AddArgument("coords", IJSDataType.JSDT_JSON) // Adds the mouse
position as JSON
    ro.ApplyModel();
    ...
    ...

    private void Form1_MouseMove(object sender, MouseEventArgs e)
    {
       ro.Events["mousePositionChanged"]
          .ArgumentAsJSON("coords",
               "{ \"x\": " + MousePosition.X + ", \"y\": " +
MousePosition.Y + "}")
          .Fire();
    }
```

To handle the event in Javascript, please note that the Javascript syntax for the personalized events differs slightly from the syntax for the model events, since it's declared directly associated to the name of the jsRO (without the "model"):

```
 jsro.on('ro', 'mousePositionChanged', function (coords) {
       console.log('mouse moved to [' + coords.x + ', ' + coords.y +
']');
  });
```

5 Scaling and Load Balancing

Scaling and load balancing come into play when one machine is not capable of managing all the required resources. Too many concurrent connections or virtualized application that handle a lot of graphics, sound or other elements that require a great availability of resources may cause an overload.

Thinfinity VirtualUI provides components that allow you to distribute the workload across multiple Windows sessions, as well as multiple servers. You can scale the application availability in terms of applications instances —and user accesses— and failover scenarios in order to achieve optimal resource utilization and avoid overload.

Some of the benefits of load balancing:

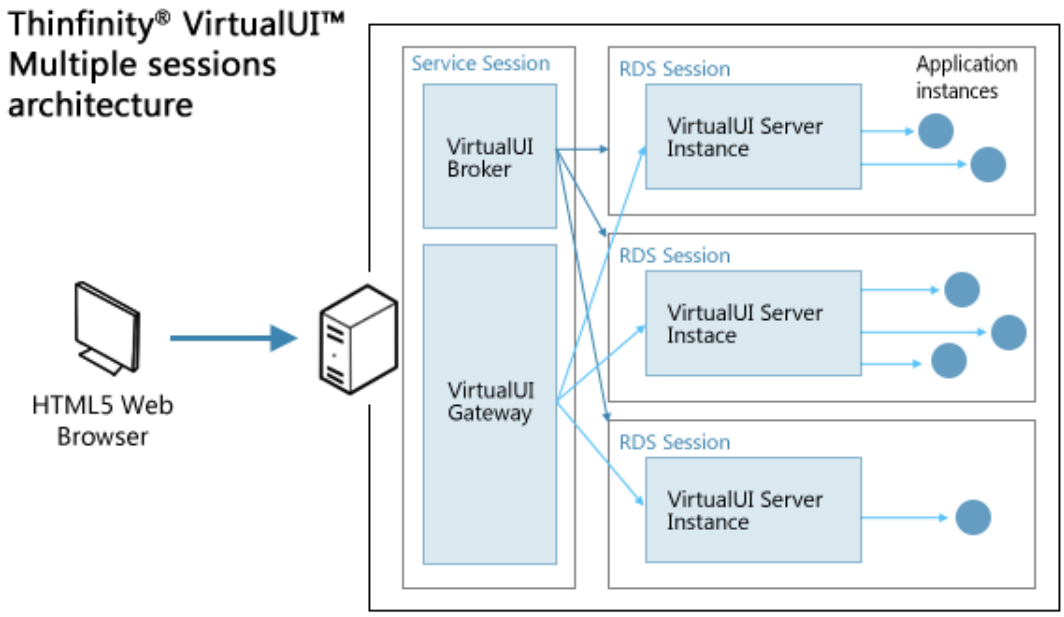
- Avoids the overload by distributing the connections among different servers
- Minimizes response time
- More reliability (redundancy)
- Failover control

Read More:
- Scaling and Load Balancing Configurations
- Installing components
- Enabling Multiple RDS Accounts
- Configuring Load Balancing

5.1 Scaling and Load Balancing Configurations

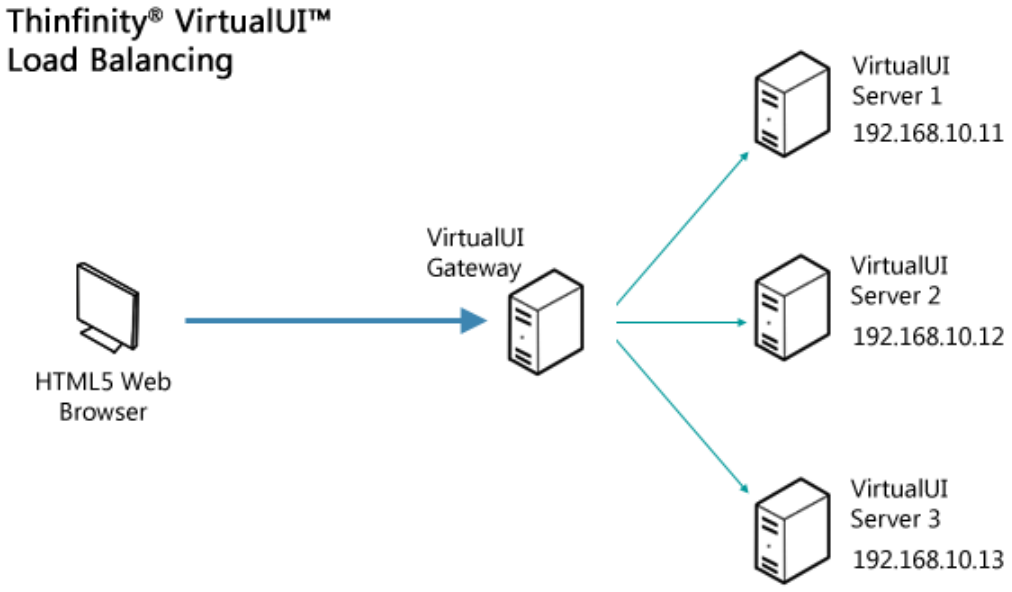
If you arrive to the conclusion that your Thinfinity® VirtualUI environment would benefit from using Load Balancing, you can choose between different scenarios. This decision is an essential step in planning the hardware scheme and configuring the system to work in a distributed way.

Scenario 1: Multiple RDS accounts



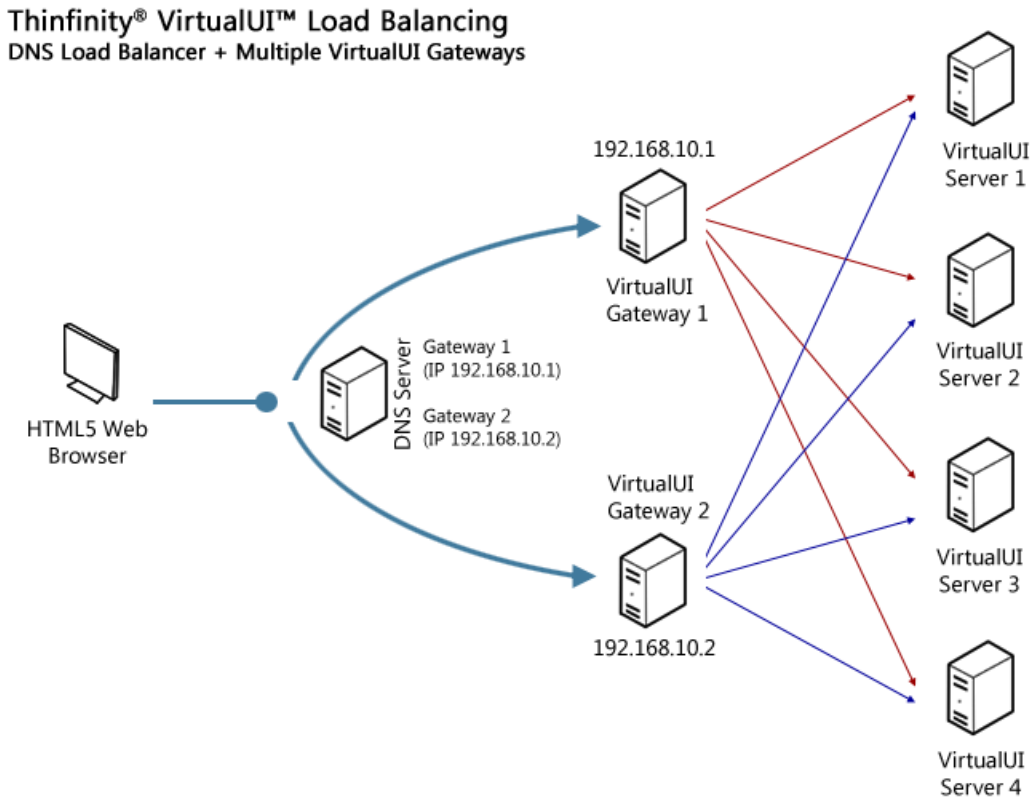
This architecture involves only one computer. Each RDS session creates a Server instance which can, in turn, handle application instances separately. The VirtualUI Broker administrates the server instances: checks up on them to see if they are functional, and works together with the Gateway to distribute the connections.

Scenario 2: Multiple Servers with Load Balancing



In this simple scenario, a single Gateway distributes the connection load between a number of Servers.

Scenario 3: Multiple Gateways and Servers with Load Balancing



This example combines a external load balancing DNS Server with multiple Gateways. The scheme is composed by multiple Servers, multiple Gateways and the DNS Server, its domain name associated to all the available Gateways' IPs.

Scenario 4: Multiple RDS accounts and multiple Servers with Load Balancing

Combine load balancing with multiple RDS sessions to get the most out of your architecture.

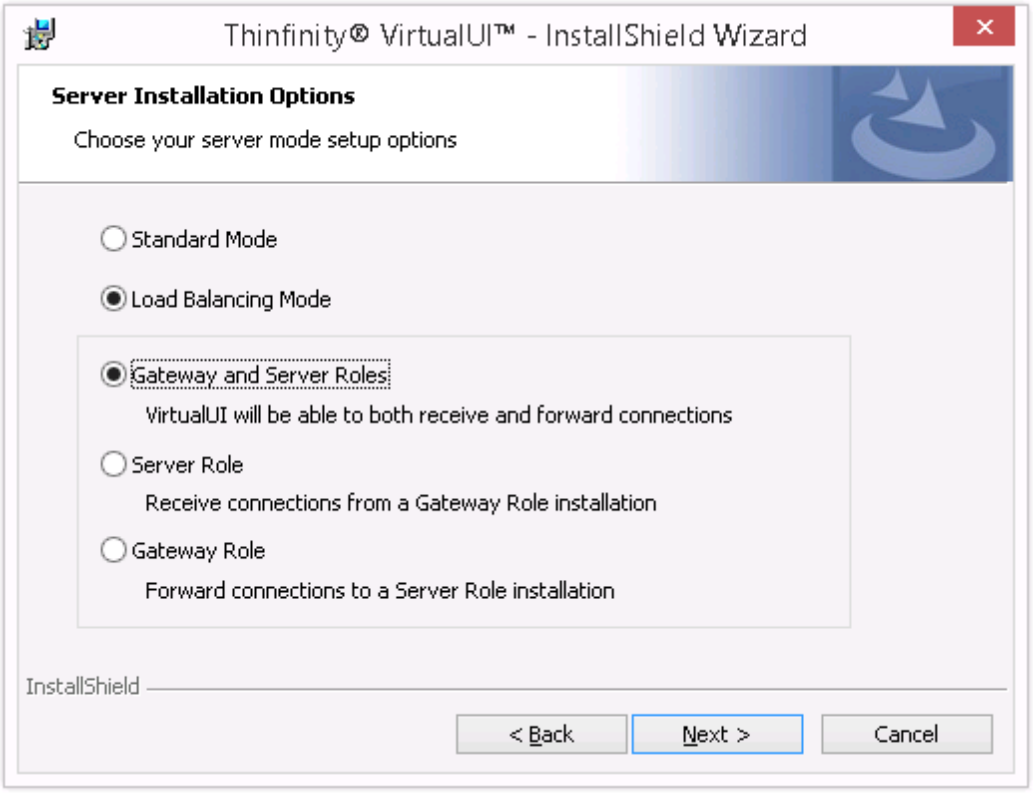
Read More:

- Installing components
- Enabling Multiple RDS Accounts
- Configuring Load Balancing

5.2 Installing components

In this section you will learn how to set up Thinfinity VirtualUI's components in a load-balancing network configuration.

Choose the Load Balancing mode in the Server Installation Options screen:



Two or more servers will participate in the load balancing/fault-tolerance scenario. These are the two possible roles for an installation:

Gateway Role: Under this role, VirtualUI responds to all web-page requests and, when a connection is solicited, it selects the appropriate Server to forward that request to.
In case any established connection fails, or a Server falls down, the Gateway will be able to reconnect to the Server that has the highest availability at the moment.
All the system settings and profiles are centralized and shared between the Servers.

Server Role: Under this role, VirtualUI only processes forwarded connections. The Server is responsible for establishing and processing the connections assigned by the Gateway. A Server Role installation also includes the option to enable multiple RDS accounts.

Before configuring a distributed environment, you should go over some steps:

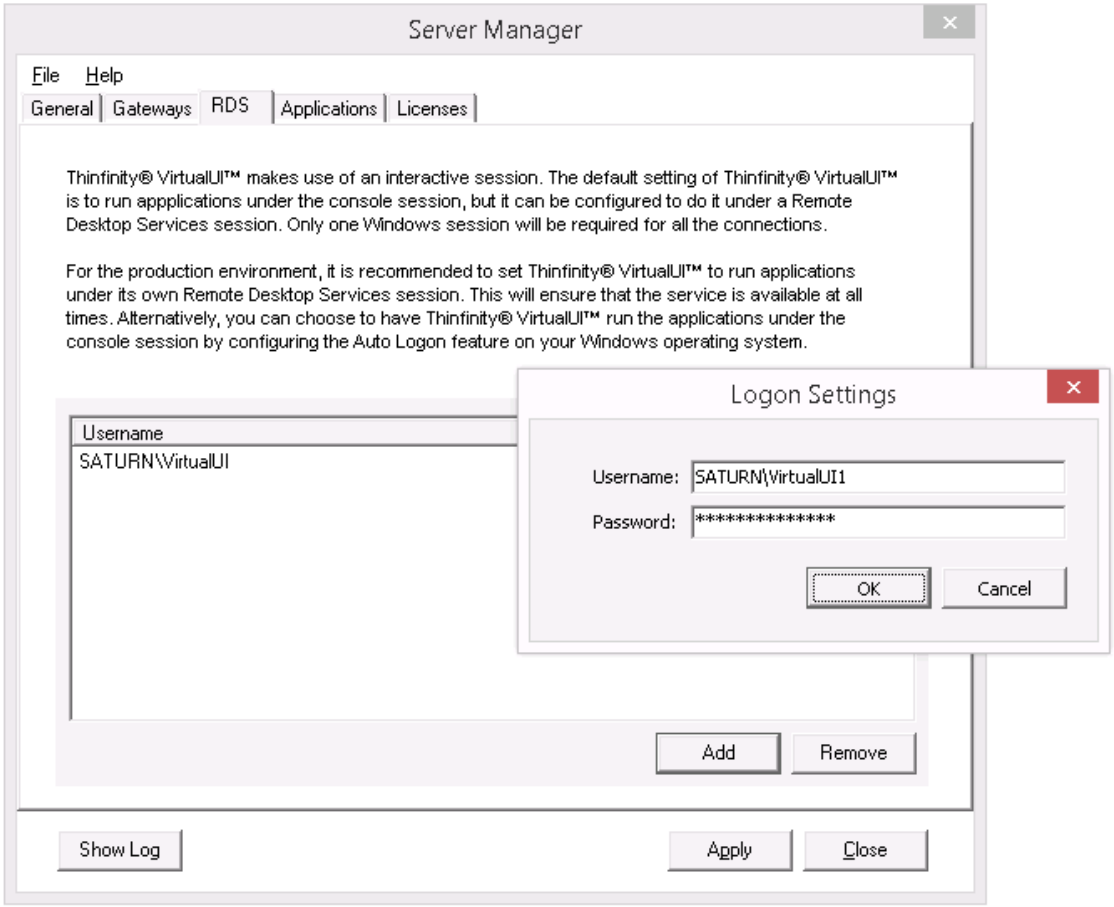
1. Choose out of the possible Scaling and Load Balancing Configurations the one that best fits your needs.
2. Plan which machines will work under the Server Role, and which under the Gateway Role and DNS Servers.
3. Make sure all the Gateway Roles IP addresses are public to the web browsers that will access Thinfinity® VirtualUI.

Read More:

- Enabling Multiple RDS Accounts
- Configuring Load Balancing

5.3 Enabling Multiple RDS Accounts

In order to enable multiple RDS accounts, go to the 'RDS' tab and press the 'Add' button:



You can use already existing accounts or new VirtualUI accounts which will be created automatically.
The accounts must have administrator permissions.
Each RDS session will handle independent application instances, allowing a single computer to handle more connections.

Note: In order to use this feature, Thinfinity VirtualUI must be installed in a Windows Server where the Remote Desktop Session Host (RD Session Host) role service is installed.

Read More:

- Scaling and Load Balancing

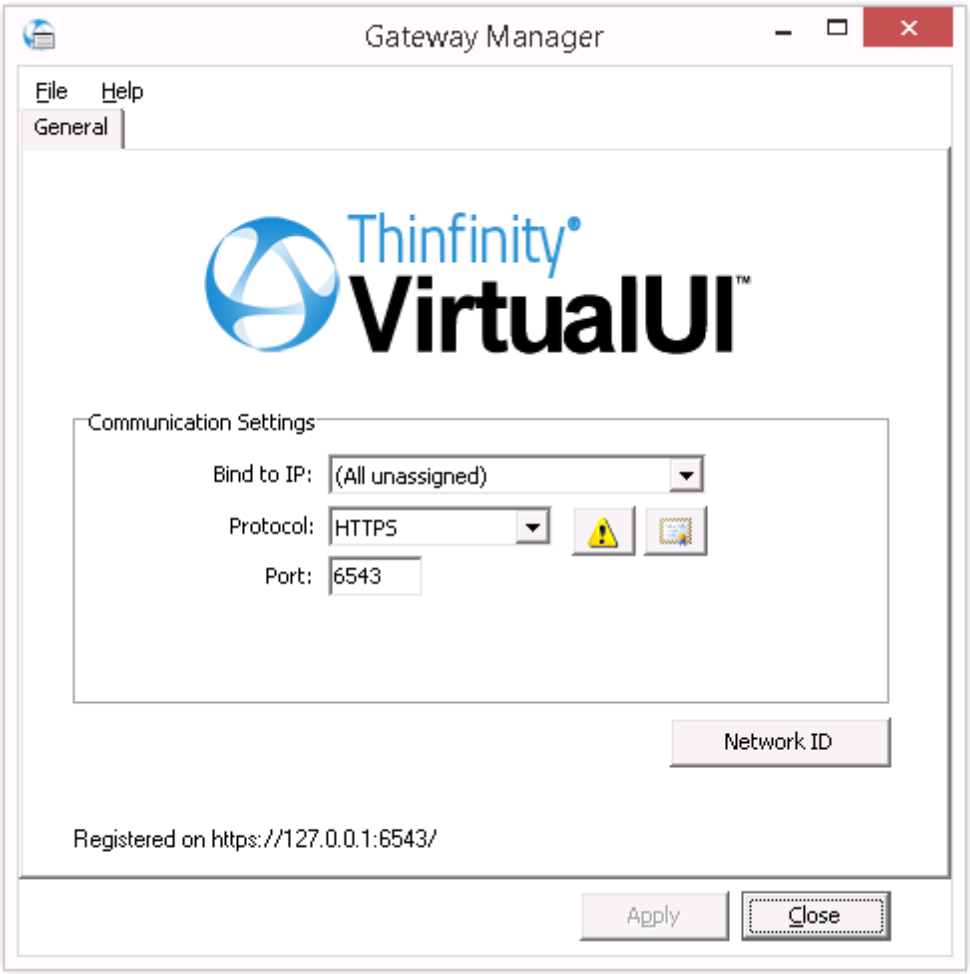
5.4 Configuring Load Balancing

In order to configure a load balancing scenario, you need at least one Gateway installation and two Server installations.

Configuring the Gateway Roles

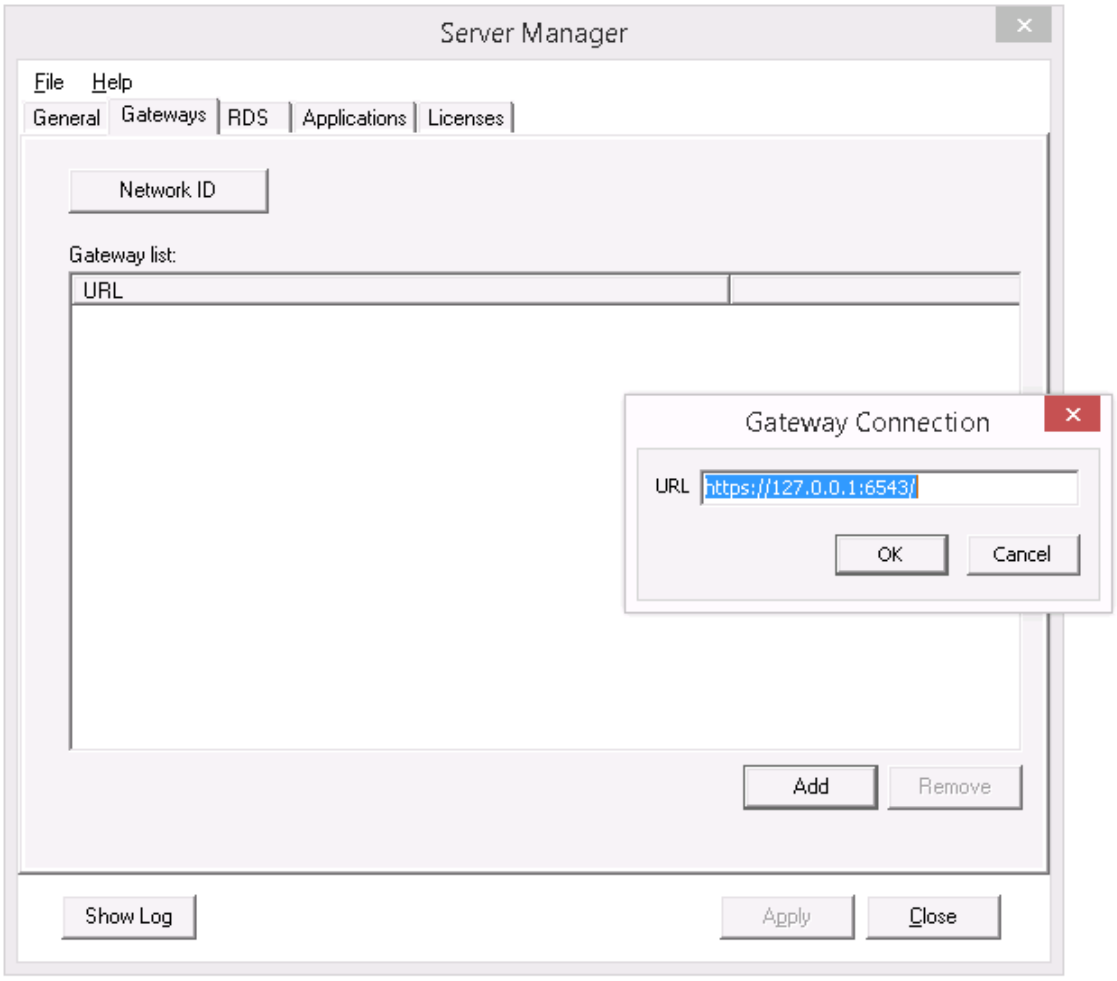
Under this role, VirtualUI responds to all web-page requests and, when a connection is solicited, it selects the appropriate Server to forward that request to.

To configure the Gateway, open the Gateway Manager. Set the IP and port where the Gateway will run. If you only have one gateway, this is where the users will connect to. If you use more than one Gateway in your architecture, you will use this IP in the DNS server you set up to distribute the connection between the Gateways.
Also, set the Network ID. All the Gateway and Server installations involved in a Load Balancing architecture share the same network ID.



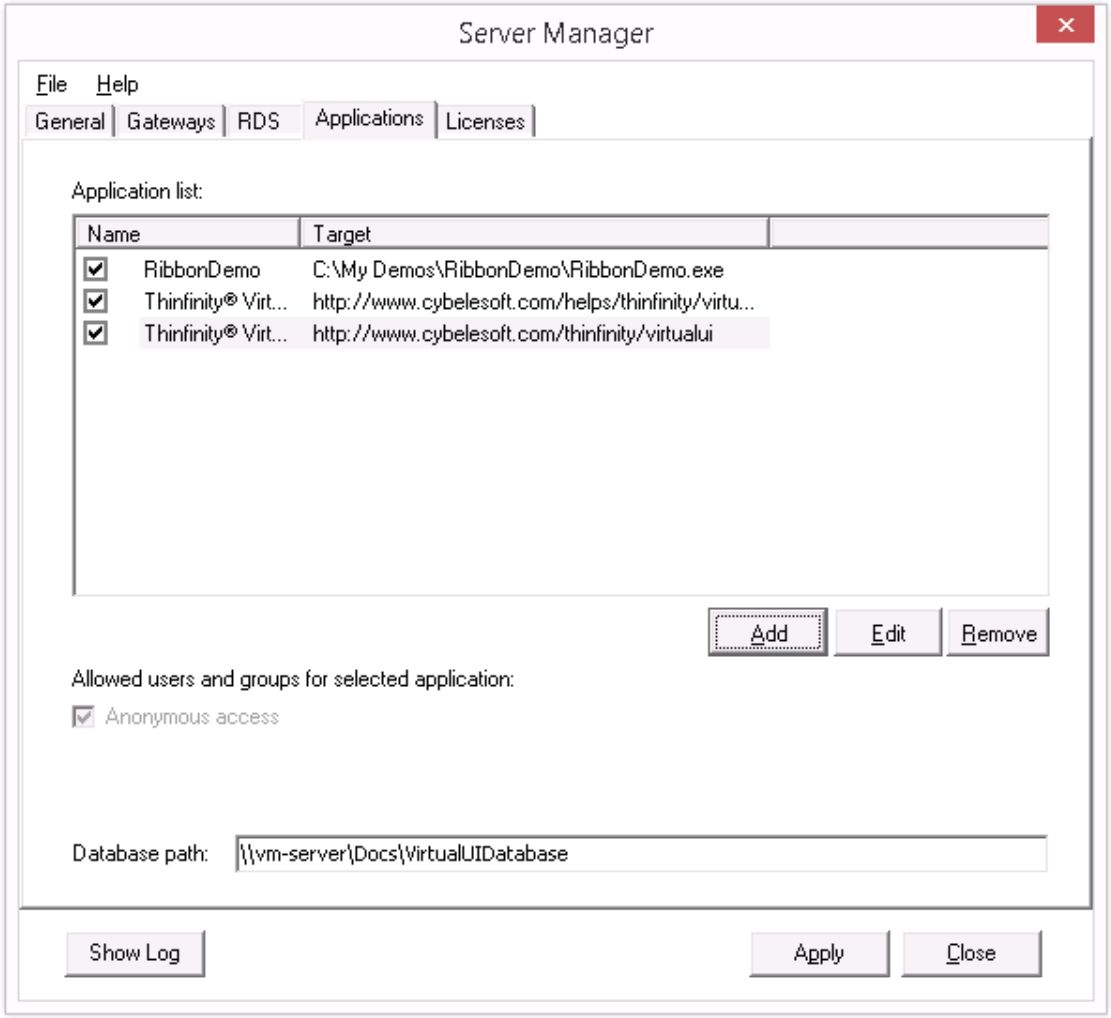
Configuring the Server Roles

Under this role, VirtualUI only processes forwarded connections. The Server is responsible for establishing and processing the connections assigned by the Gateway.
To configure the Server, open the Server Manager and go the 'Gateways' tab. Press the 'Add' button to add a gateway to the Gateway List.



This means that now this server's resources can be accessed through the listed gateways.
Make sure that the Network ID is the same for all the gateways and servers involved in this load balancing architecture.

Then, go to the 'Applications' tab:



Set the 'Database Path' field in a network location that you can access from the other Server role installations.
Once you share the database path, all the information in the 'Applications' tab will be shared with other VirtualUI installations. Make sure you modify the Applications information from one installation at a time, as all changes will be reflected in the other installations.

Also, make sure all the Gateways' IPs are public to the locations that will access Thinfinity® VirtualUI through a web browser.

Read More:

- The Gateway Manager
- Scaling and Load Balancing Configurations
- Configuring the General tab
- Configuring the RDS tab
- Configuring the Applications tab
- Configuring the Licenses tab

6 Enhanced Browser and DPI Support

Among the wide range of valid resolutions that Thinfinity VirtualUI offers, the most commonly used —for its flexibility and simplicity— is “Fit to Browser”. This configuration allows you to adjust the remote application to fit the available browser size. However, when it comes to accessing a desktop from different devices, the sometimes huge differences between screen sizes and pixel resolutions (i.e. iPhone 4 vs a 27 inch iMac Retina Display) make it impossible to have a simple rule to determine the best remote desktop size. Even when the application is adjusting properly to the available size, the screen rendered might still look tiny or disproportionate, making the user experience not as satisfactory as expected.

Tailoring "Fit to browser"
Now, using a new configurable browser detection ruleset, we can tailor the way we want to see of the remote desktop/application on every device. This ruleset allows you to specify rules that will detect the web browser, device and display characteristics, and set parameters that adjust the remote desktop/application resolution according to your own taste.

The main characteristics that need to be taken into account are:

- The browser User Agent, that tells about the web browser and device
- The device pixel ratio, that tells about the real display resolution
- The device display size
- The display orientation (landscape or portrait)

The browser detection ruleset is stored in a file with entries that contain specifications (rules) that match general or specific devices. Each entry (model) can inherit matching parameters (properties) from a more general model. For example, you can define an iOS model and an iPhone4 can inherit the iOS model properties.

A default ruleset file named BrowserRules.ini is installed in the Thinfinity VirtualUI program folder. Then, if it doesn’t exist there yet, it is copied to "\programData\Cybele Software\Thinfinity\VirtualUI\" and renamed as Thinfinity.VirtualUI.BrowserRules.ini. You can safely customize this file as it won’t be overridden with a program update.

The structure of this file is as follow:

```
[default]
min-width = 640
min-height = 480
max-width = 2560
max-height = 1600
max-device-pixel-ratio = 1

[mobile]
parent-model = default
match-mobile = true
max-device-pixel-ratio = 2
```

Note: for these setting to apply, the connection’s ‘Resolution’ property must be set to ‘Fit to browser’.
Configure this setting in for your application in the 'General' tab of the Application Profile, or the

'General' tab of the Application Profile in the development server.

Read More:
- Model Inheritance
- Property Reference
- The Calculation Process
- Examples

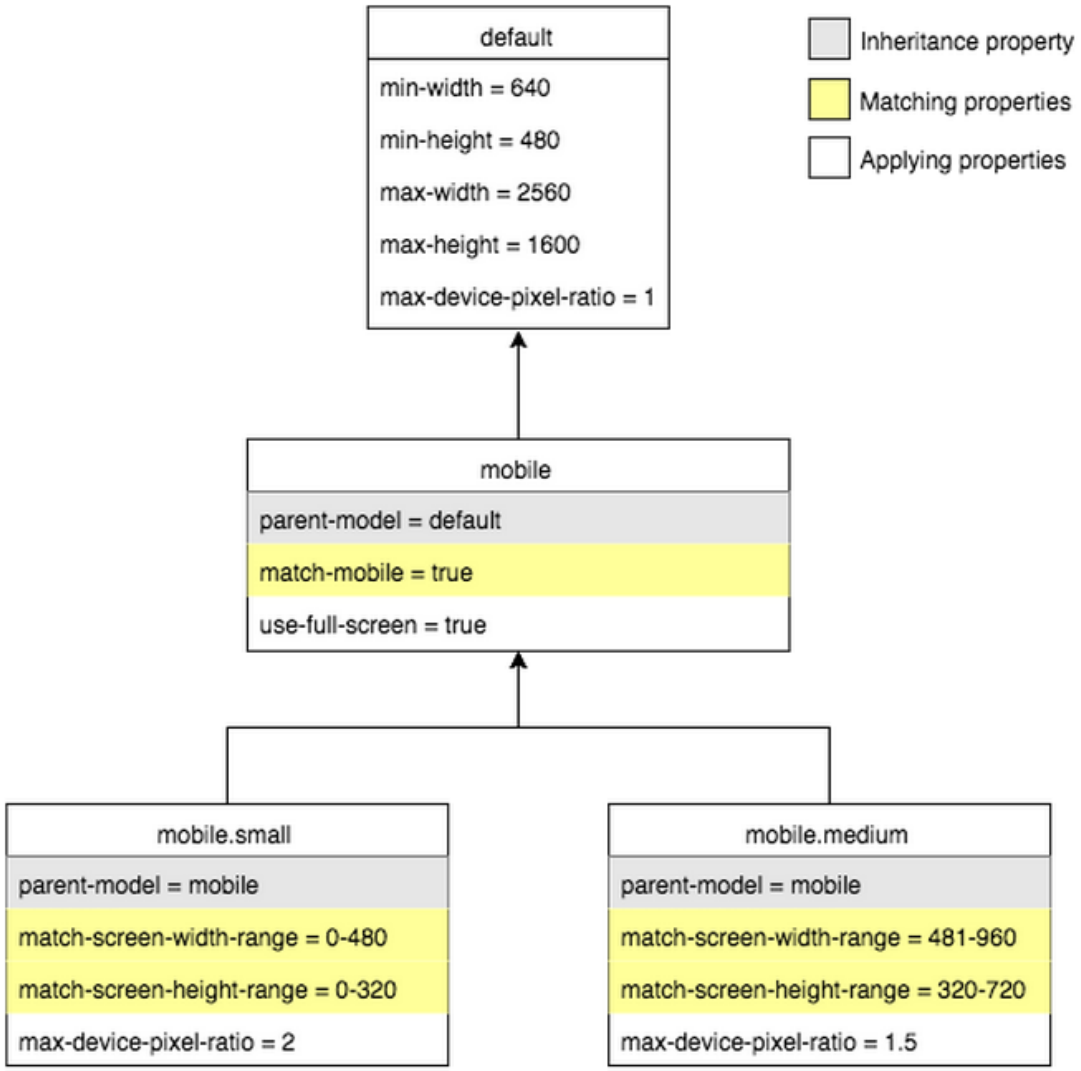
6.1 Model Inheritance

A section defines a ***model***, and each model contains a set of properties divided in two groups: *matching properties* and *applying properties*.

Models are organized in an inheritance tree. The relationship between models is defined by a special property rule called *parent-model*, present in all models except in the ***[default]*** model, which is the tree's root node and includes some basic properties.
Every other model must directly or indirectly inherit from the ***[default]*** model. Also, each model contains its own rules that match general or specific devices, and inherits all specifications (including matching parameters) from its ancestors.

When more than one criteria is met for a device, a scoring system is used to resolve this conflict.

This is the in-the-box models tree:



Read More:

- Property Reference
- The Calculation Process
- Examples

6.2 Property Reference

Properties can be divided in two groups: *matching properties* and *applying properties*.

Matching properties are those used to test the browser and device properties (such as the browser user agent, the device pixel ratio, the display orientation width and height, etc.) in order to choose the best model for each case.

match-device-pixel-ratio	Matches any device with a specific pixel ratio.
match-mobile	Matches any mobile device.
match-orientation	Matches any device with the specified orientation: landscape or portrait.
match-screen-height-range	Matches any device with a screen height in the specified range. This range is expressed as From-To (for example, 900-1200).
match-screen-width-range	Matches any device with a screen width in the specified range. This range is expressed as From-To (for example, 400-600).
match-screen-height	Matches any device with a specified screen height.
match-screen-width	Matches any device with a specified screen width.
match-user-agent	Matches devices by comparing the device browser user agent to the string value supplied. This string is a regular expression.

Applying properties are those used to determine the final size and resolution.

Use the parent-model property to set the parent model:

parent-model	Establish the parent model for this model.

The following properties deal with the display resolution:

device-pixel-ratio	Overrides the original device pixel ratio, scaling the content accordingly.
max-device-	This property determines the maximum device pixel ratio

pixel-ratio	accepted. The lesser of the device's device pixel ratio and this value is applied to scale the display.

The following properties deal with the screen size of the remote desktop, in pixels. You can determine it by setting the actual height and width, or by establishing maximum and minimum values for these properties.

height	Remote desktop height.
width	Remote desktop width.
max-height	Remote desktop maximum height.
max-width	Remote desktop maximum width.
min-height	Remote desktop minimum height.
min-width	Remote desktop minimum width.

The following properties allow you to specify device screen areas that will never be used for displaying the remote connection, such as when a browser or device bar cannot be hidden and uses up screen space. These margins will be excluded for screen size calculations.

margin-left	Width of an area at the left of the device screen that will not be used for displaying the remote desktop.
margin-bottom	Width of an area at the bottom of the device screen that will not be used for displaying the connection.
margin-right	Width of an area at the right of the device screen that will not be used for displaying the connection.
margin-top	Width of an area at the top of the device screen that will not be used for displaying the connection.

Miscellaneous properties:

use-full-screen	For mobile only. If the device's browser supports the full-screen mode, this property indicates the remote desktop size should be calculated to occupy the whole screen. When not in full screen, the content will be scaled.

Read More:
- The Calculation Process
- Examples

6.3 The Calculation Process

In order to choose a model from the ruleset, Thinfinity uses the client device type, dimensions, resolution, orientation and browser:

1. If match-mobile exists, it tests if device is a mobile.
2. If match-user-agent exists, it tests the browser's User Agent.
3. If match-device-pixel-ratio exists, it tests the device's pixel ratio.
4. If match-orientation exists, it tests the device's orientation.
5. If match-screen-width-range or match-screen-height-range exist, it tests to see if the screen size is in range.
6. If match-screen-width or match-screen-height exist, it tests the exact screen size.

Once the model is selected, the parameters are applied in this way:

1. If the width and height properties exist, then it applies them.
2. If the browser width is less than the min-width, it applies min-width.
3. If the browser height is less than the min-height, it applies min-height.
4. If the browser width is greater than the max-width, it applies max-width.
5. If the browser height is greater than the max-height, it applies max-height.
6. If a specific device-pixel-ratio was specified, it applies it.
7. If a max-device-ratio was specified, it takes the minimum of the real device pixel ratio and max-device-ratio property and applies it.

Read More:
- Examples

6.4 Examples

This example shows a possible ruleset and how it will affect different devices:

```
[default]
min-width = 640
min-height = 480
max-width = 2560
max-height = 1600
max-device-pixel-ratio = 1
```

```
[mobile]
parent-model = default
match-mobile = true
max-device-pixel-ratio = 2

[ipad]
parent-model = mobile
match-user-agent = ipad

[iphone4]
parent-model = mobile
match-user-agent = iphone
match-screen-width = 480
match-screen-height = 320
device-pixel-ratio = 1.5
```

In this case, when connecting with an ipad, the following models will be matched:
[default]: This model applies to all devices.
[mobile]: The ipad will match the match-mobile property.
[ipad]: The ipad will match the user agent keyword ‘ipad’ specified in the match-user-agent property.

The resulting properties for this device will be:

```
min-width = 640
min-height = 480
max-width = 2560
max-height = 1600
max-device-pixel-ratio = 2
```

Using the same ruleset, when connecting with an iphone4, the following models will be matched:
[default]: This model applies to all devices.
[mobile]: The iphone will match the match-mobile property.
[iphone4]: The ipad will match the user agent keyword ‘iphone’ specified in the match-user-agent property, together with the match-screen-width and match-screen-height properties. An iphone6, with a screen width of 667px, and a screen height of 375px, would match the ‘iphone’ user agent keyword, but not the size.

The resulting properties for this device will be:

```
min-width = 640
min-height = 480
max-width = 2560
max-height = 1600
max-device-pixel-ratio = 2
device-pixel-ratio = 1.5
```

7 One-Time URL

Thinfinity VirtualUI offers a special access method called “One-Time URL”. This mechanism was designed to create a temporary, unique url to provide one-time access to a specific application. This temporary url is disposed as soon as it is used or after a specified period of time has elapsed.

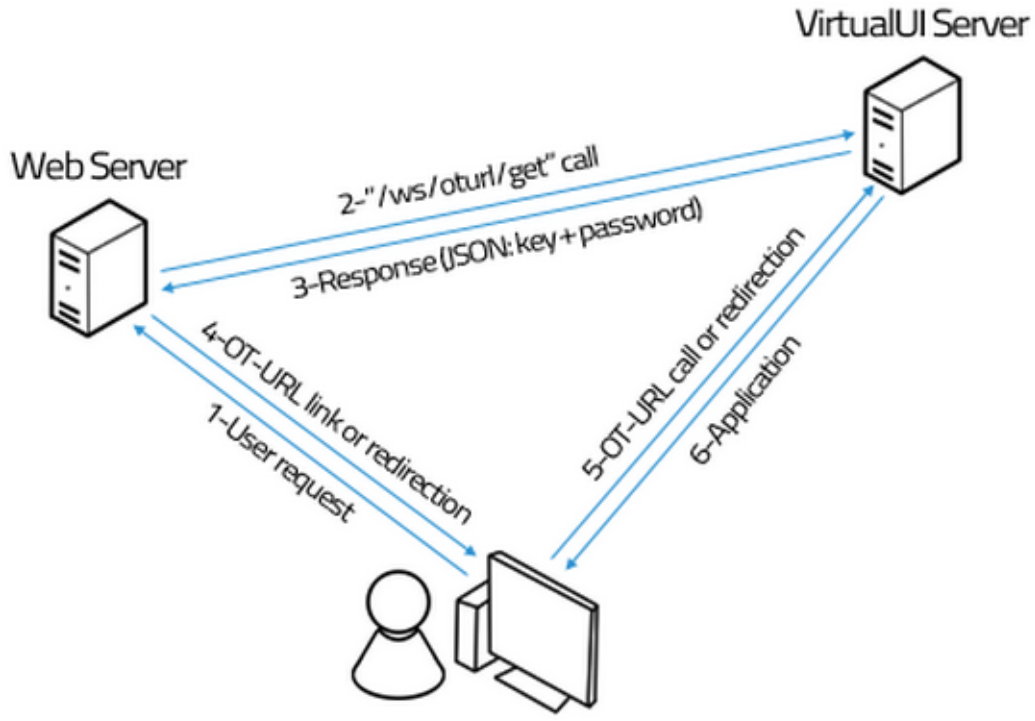
These are the main scenarios where the One-Time URL access method is most useful:

- Single Sign-on scenarios.
- External authentication methods.
- One-time invitations to run a program (i.e. application demos/presentations).

Read more:
- How it Works
- Creating a One-Time URL
- Single Sign-On Sequence Example

7.1 How it Works

The One-Time URL is an unique, disposable URL leading to a specific VirtualUI application. What makes it useful is that it allows for passing credentials and/or custom data to the application through an independent secure channel, hidden to the end user.



A usual scenario involves a backend service (ie. a web server), where the user's credentials are validated. This backend service communicates with a VirtualUI

Server to request the creation of a One-Time URL, passing information about the application to run, credentials and custom data. This information is stored temporarily and indexed by a unique access key. Also a random passcode is created and used to encrypt the stored information. This access key and passcode are returned to the backend service to build the final One-Time URL.

Once the user is directed to the provided URL (automatically or by clicking on a link), VirtualUI validates the access key and passcode and starts the application passing the associated data. Finally, this key and associated data are removed from memory and therefore the URL becomes invalid. The same happens if the URL was not used for the amount of time specified in the creation request.

Read more:
- Creating a One-Time URL
- Single Sign-On Sequence Example

7.2 Creating a One-Time URL

The VirtualUI Server processes a One-Time URL creation request in the form of an http(s) request, as follows:

```
serverurl + "/ws/oturl/get?apikey=" + apikey + "&accesskey=" + accesskey +
                          "&userid=" + userid + "&password=" + password +
                          "&customdata=" + customData +
                           "&plen=" + passlen + "&expires=" + expires,
```

where:

serverurl	optional	VirtualUI Server address (protocol, domain and port)
apikey	required	VirtualUI installation [API] key. Find this information in Thinfinity.VirtualUI.Server.ini at C:\ProgramData\Cybele Software\Thinfinity \VirtualUI
accesskey	required	Identifies the application that will be run. Complete this parameter with the 'access key' parameter found in the application's profile in the VirtualUI Server Manager.
userid	optional	A valid user that meets the criteria set in the application profile's 'Permission' tab.
password	optional	The password of the user specified in the 'userid' parameter.

customdata	optional	Use this field to send any information you may need to make available to the application. This is the right place to pass sign-on credentials. This information will be accessible in the application through the *BrowserInfo.CustomData* property.
plen	optional	Length of the passcode to be returned.
expires	optional	Ticket expiration time, in minutes.

Note: The user indicated in the 'userid' parameter is a user validated within VirtualUI to access the application. This is an Active Directory user that was either added individually, or as part of a group of users in the 'Permissions' tab of the profile that will be accessed. In a regular non-one-time-URL implementation, the end user would authenticate by providing these credentials. However, when using one-time-URL, this information is used internally by the application and the user can be authenticated somehow else.

If the request is unsuccessful, the following HTTP codes can be received:

400: Invalid parameters
401: Userid/password invalid

If the request is successful, the HTTP call returns a 200 HTTP status code, and a JSON consisting of two fields:

```
{
   "key": "LnJwsxGHp5d@6MHeiEswRdfxFCiIcLAUttRS$9FSUs-Utz3o",
   "pass":"1U4KRLN0"
}
```

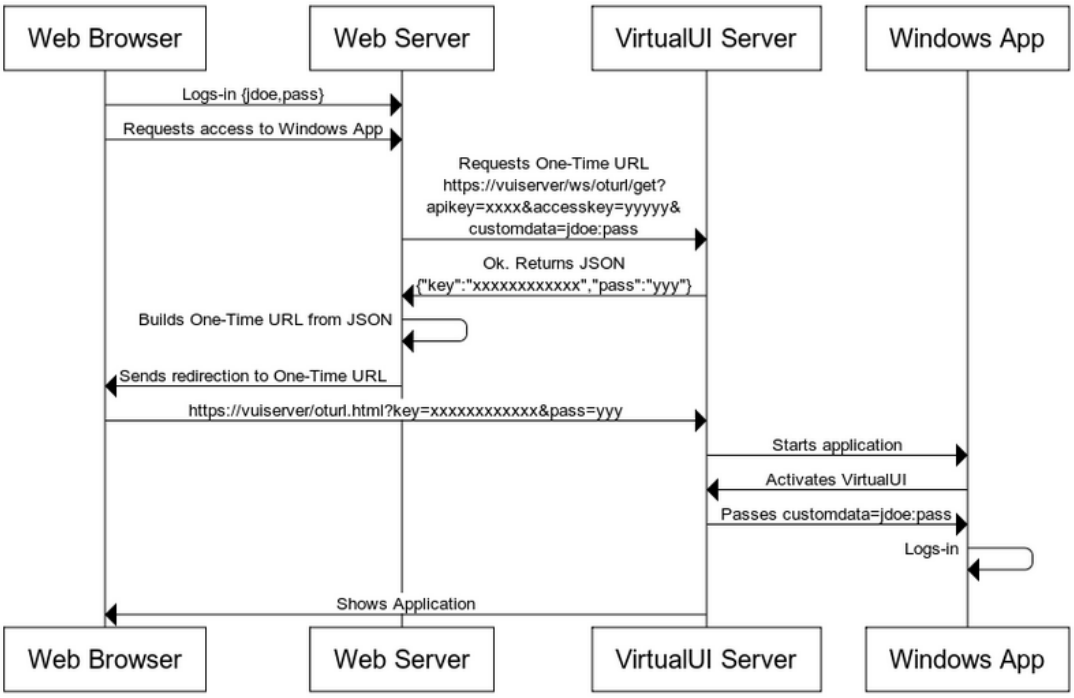
With this information, the backend can build the final URL, following this format:
http(s)://server-url/oturl.html?key=[accesskey]&pass=[passcode]

Here's an example that uses the JSON shown above:
http(s)://server-url/oturl.html?
key=LnJwsxGHp5d@6MHeiEswRdfxFCiIcLAUttRS$9FSUs-Utz3o&pass=1U4KRLN0

Read more:
- Single Sign-On Sequence Example

7.3 Single Sign-On Sequence Example

The sequence diagram below shows a complete one-time-URL example using single sign-on. In this example, the same credentials —the 'jdoe' username and 'pass' password— are first used for the single sign-on, and then sent to the application in the customdata parameter.



In conclusion, the One-Time URL offers a useful way to extend web-enhanced applications to new scenarios. We are fully convinced that you will greatly benefit from this new Thinfinity VirtualUI feature.

8 Configuration Reference

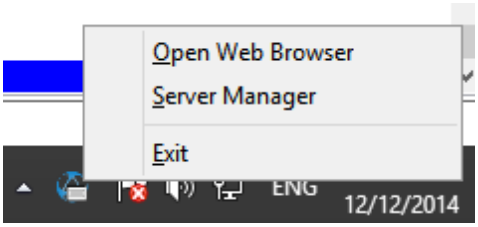
This section is a reference for the different managing tools included in Thinfinity VirtualUI

Read More:
- The Development Server
- The Production Server
- The Gateway Manager

8.1 Development Server

Thinfinity® VirtualUI™ Developer Manager is a tool to manage your applications in development mode. Access the virtual path for each application to test your web developments.
When in production mode, you will use a very similar tool called Thinfinity VirtualUI Server Manager.

To access Thinfinity® VirtualUI™ Development Server Manager compile your application and run it. The Thinfinity VirtualUI Development Server icon will appear in the Windows Tray Bar .

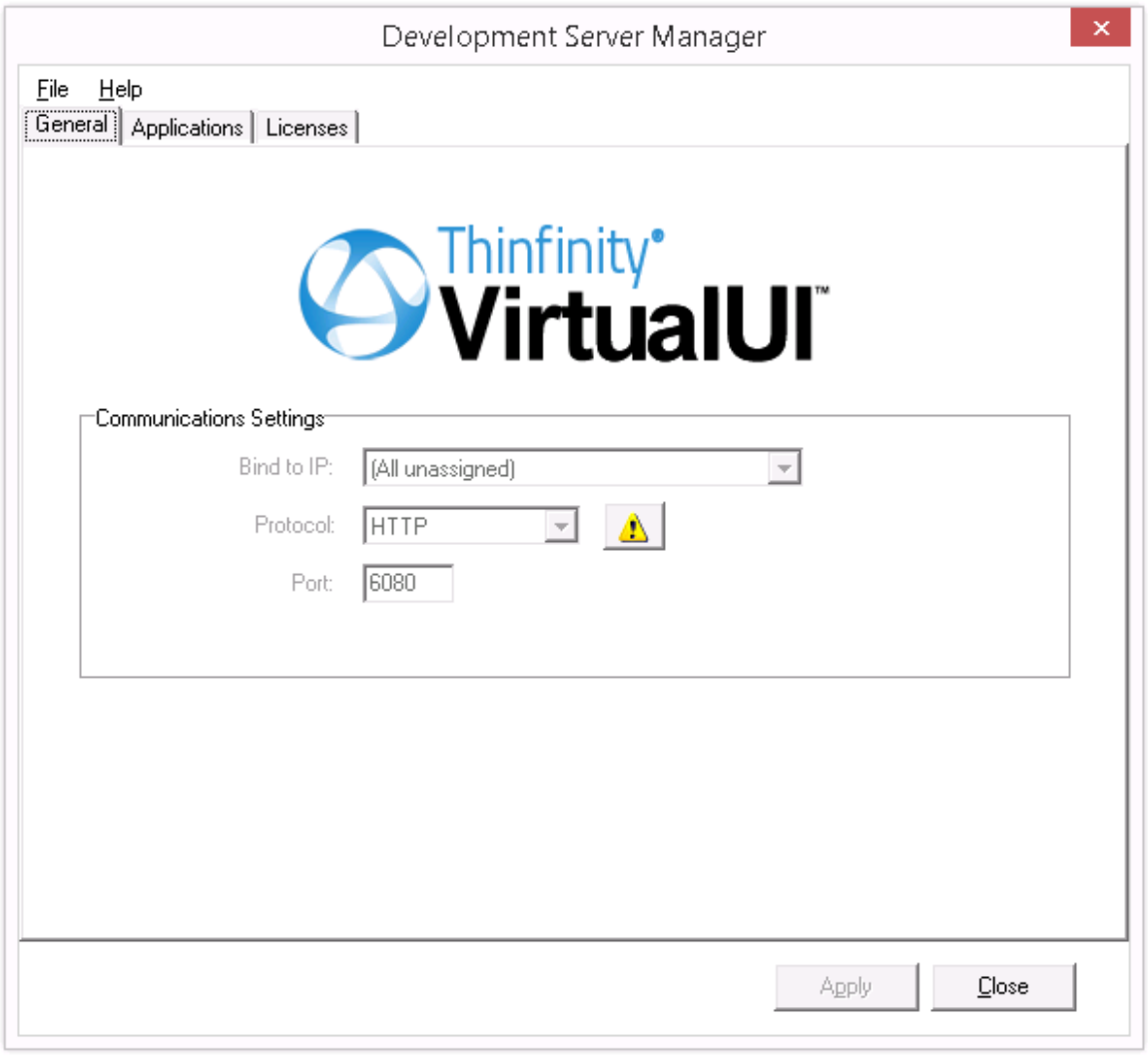


Right-click on the icon, and after that click on the 'Open Web Browser' menu.

Read More:

- The 'General' Tab
- The 'Applications' Tab
- The 'Licenses' Tab

8.1.1 General



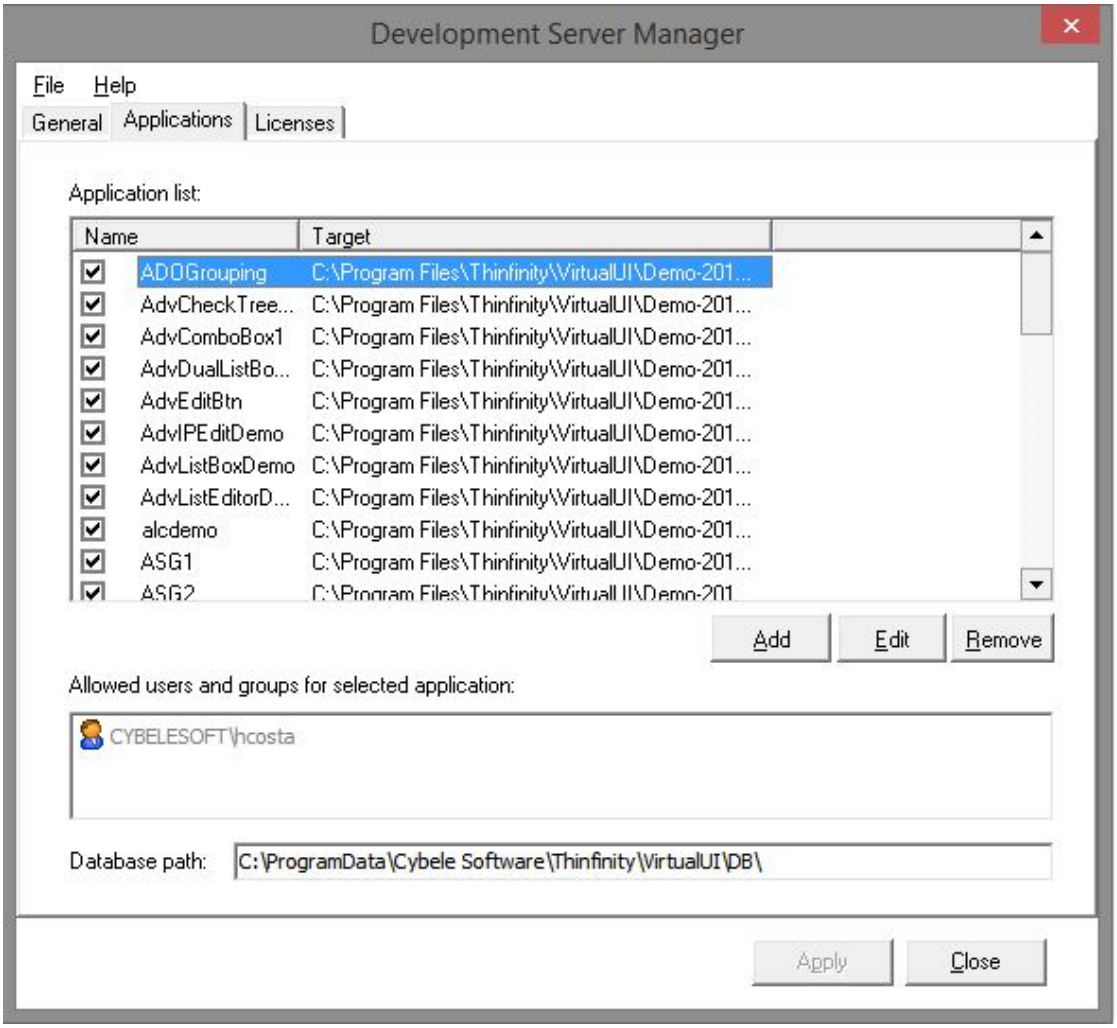
In the Thinfinity® VirtualUI™ Development Sercer Manager 'General' tab you will find the following options:

Bind to IP	Use this option to restrict access to the service to one specific IP address. The 'All unassigned' option allows access through all the available IP addresses.
Protocol	Choose between the http and https protocol.
Port	Choose which port will Thinfinity® VirtualUI™ Server be listening on. If the port is not available, you will see an error message on the status bar.

	Press this button to configure HTTP error responses.

Read More:
- The 'Applications' Tab
- The 'Licenses' Tab

8.1.2 Applications



In the Thinfinity® VirtualUI™ Development Server Manager Applications tab you will find the following options:

Application List	This list shows the available applications. You can enable or disable them by checking the box to the left of the name.

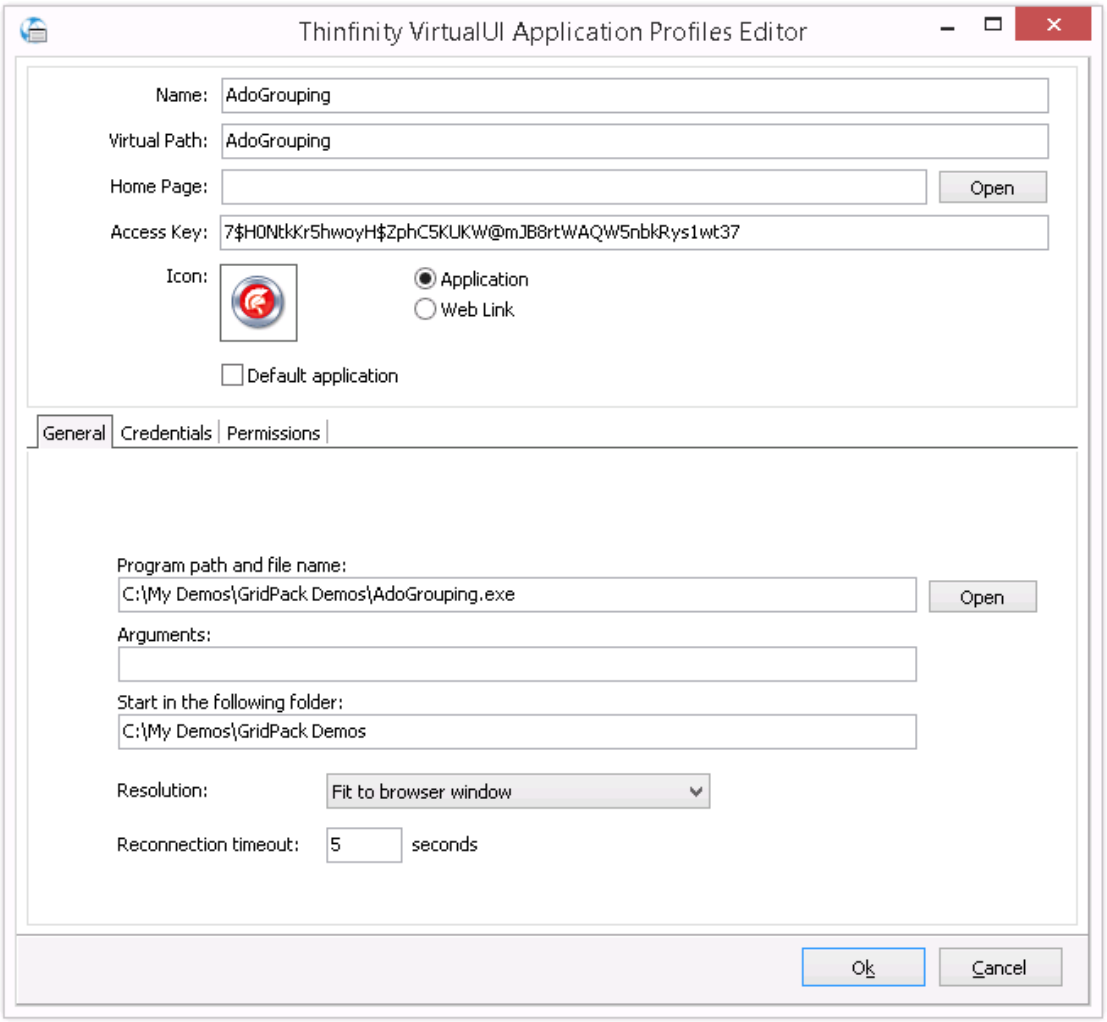
	<table><tr><td>Name</td><td>Shows the name of the application.</td></tr><tr><td>Target</td><td>Shows the application path or the web address for Web Link profiles.</td></tr></table>
Add	Press this button to add a new application.
Edit	Select an application and press this button to edit it.
Remove	Select an application and press this button to remove it.
Allowed users and groups for selected profile	See here the allowed users or group(s) of users for the selected application. If you want to change the permissions, edit the application.
Database path	Path to the profile database.

Read More:

- The Application Profile
- The Weblink Profile
- The 'Licenses' Tab

8.1.2.1 Application Profile

When you edit or add an application profile you will be presented with this screen below.
The radio button 'Application' must be checked.



These are the profile properties you can edit:

Name	Use this field to change the application name.
Virtual Path	The Virtual Path will create a unique URL address for this connection. The complete path will consist of: http(s)://ip:port/VirtualPath/. Use this path and the home page field to test the look of the application.
Home Page	Choose the landing HTML page for the application and use it with the virtual path field to test its look.
Open	Press this button to look for the Home Page.
Access Key	This is a unique key for this application profile. The value is used to identify the application when implementing access through the One-Time-URL

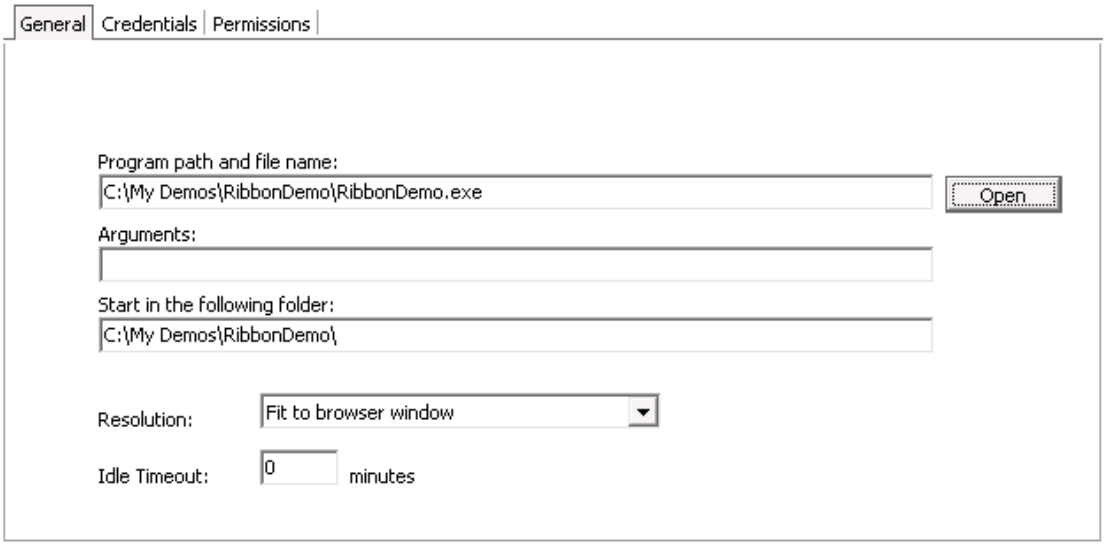
	method.
Icon	Click on the Icon gray box to load an image to be associated with the profile. The image will be presented along with the profile name on the web interface profiles selection.
Application/Web link	Select the Application option to have a regular profile that gives access to an application. If you select the Web link radio button, this profile will behave like a Web Hyperlink.
Default Application	Check this option to make this profile the default application: the authenticated user will connect to this profile directly instead of choosing between the available profiles. The rest of the profiles can be accessed by their Virtual Path.

The properties located inside the tabs will be described throughout the next subtopics.

Read More:
- The 'General' Tab
- The 'Credentials' Tab
- The 'Permissions' Tab
- The Weblink Profile

8.1.2.1.1 General

In the Application Profile Editor 'General' tab you will find the following options:



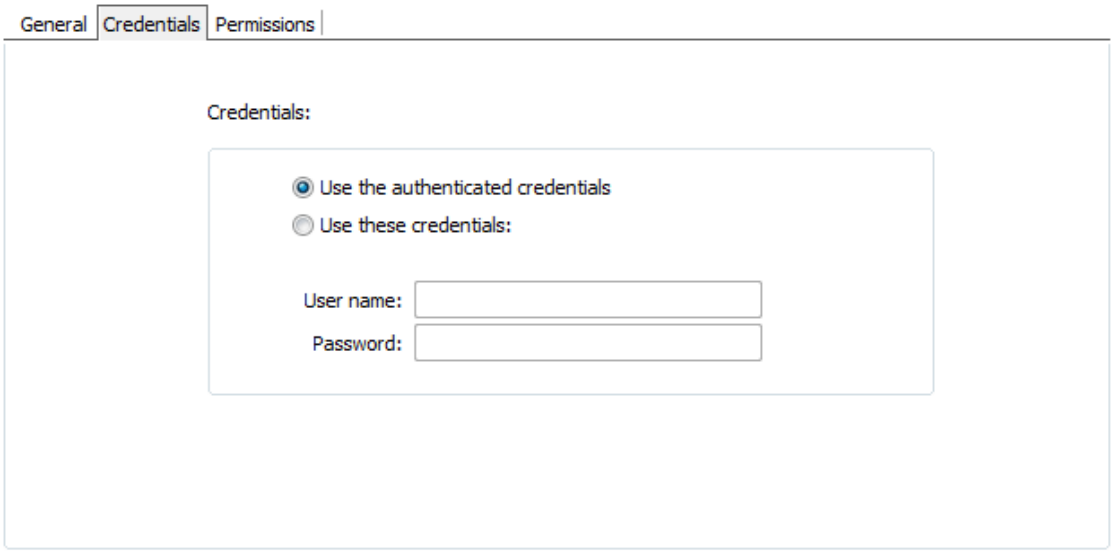
Program path and file name	Specify the complete path that gives access to the application executable file.
Arguments	Application arguments.
Start in the following folder	Inform a context directory for the application set on the 'Program path and file name' field.
Resolution	Choose from the available list of resolutions including 'Fit to browser window' and 'Fit to screen', ideal for hiding the browser and working on a full screen mode.
Idle Timeout	Set a timeout in minutes if you want Thinfinity® VirtualUI™ Server to wait this period before killing the application once the browser has been closed. Timeout 0 will kill the application immediately after the browser has been closed.

Read More:

- The 'Credentials' Tab
- The 'Permissions' Tab

8.1.2.1.2 Credentials

In the Thinfinity® VirtualUI™ Application Editor 'Credentials' tab, you should inform the mode for logging into the specified application:

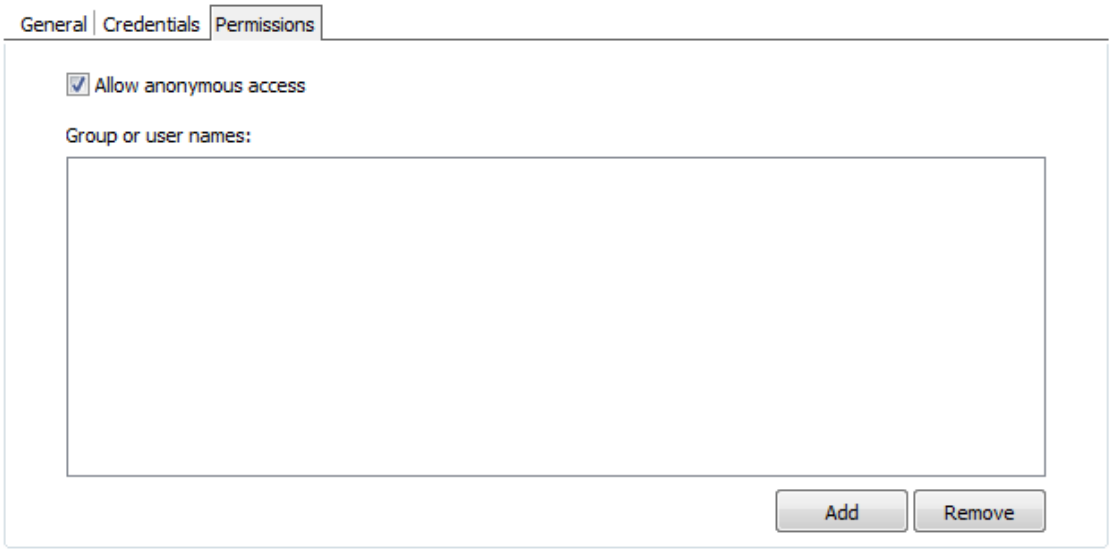


Use the authenticated credentials	Use the same credentials entered in the browser for Thinfinity® VirtualUI™ (specified in the 'Permissions' tab). Note: If the credentials are correct, this option will connect the user automatically when selecting the application, or after authenticating for Thinfinity® VirtualUI™ if this is the only profile for their credentials.
Use these credentials	Complete the credentials used to access the computer. Note: If the credentials are correct, this option will connect the user automatically when selecting the application, or after authenticating for Thinfinity® VirtualUI™ if this is the only profile for their credentials.

Read More:
- The 'Permissions' Tab

8.1.2.1.3 Permissions

Select the users that will access this application. If you don't select any user, this application will not be accessed.
These are the options you will find on the Application Profile Editor 'Permissions' tab:



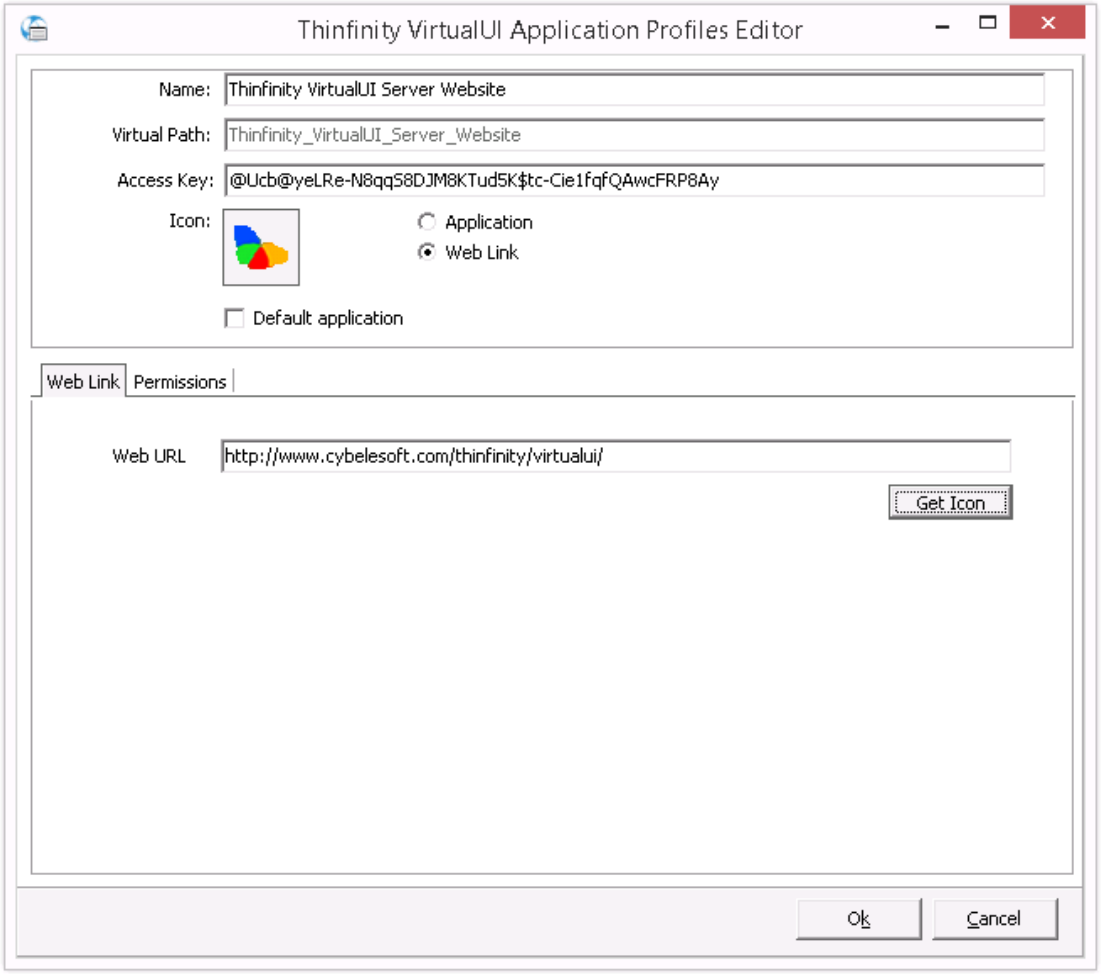
Allow anonymous access	Check this option to make this application available without any authentication. Use this option if you want this profile to be available for everyone. This means that everybody accessing Thinfinity® VirtualUI™ will have access to this application. Checking this option will disable the Add and Remove buttons.
Add	Press 'Add' to access the windows dialog for selecting Active Directory users.
Remove	Press 'Remove' to remove a user for this profile.

If you want a user or a user group to access more than one application, you need to create more application profiles and then add this user to each profile.
The authenticated user will be able to choose from the available application profiles on the Web interface.

Read More:
- The Weblink Profile

8.1.2.2 Weblink Profile

When you edit or add a Web Link profile you will be presented with this screen below. The radio button 'Web Link' must be checked.



These are the profile properties you can edit:

Name	Use this field to change the profile name.
Virtual Path	The Virtual Path will create a unique URL address for this connection. The complete path will consist of: http(s)://ThinfinityVirtualUIDomain:port/VirtualPath/. The users can then create a web shortcut to this connection in particular and bypass the Thinfinity® VirtualUI web interface.
Access Key	This is a unique key for this application profile. The value is used to identify the application when implementing access through the One-Time-URL method.

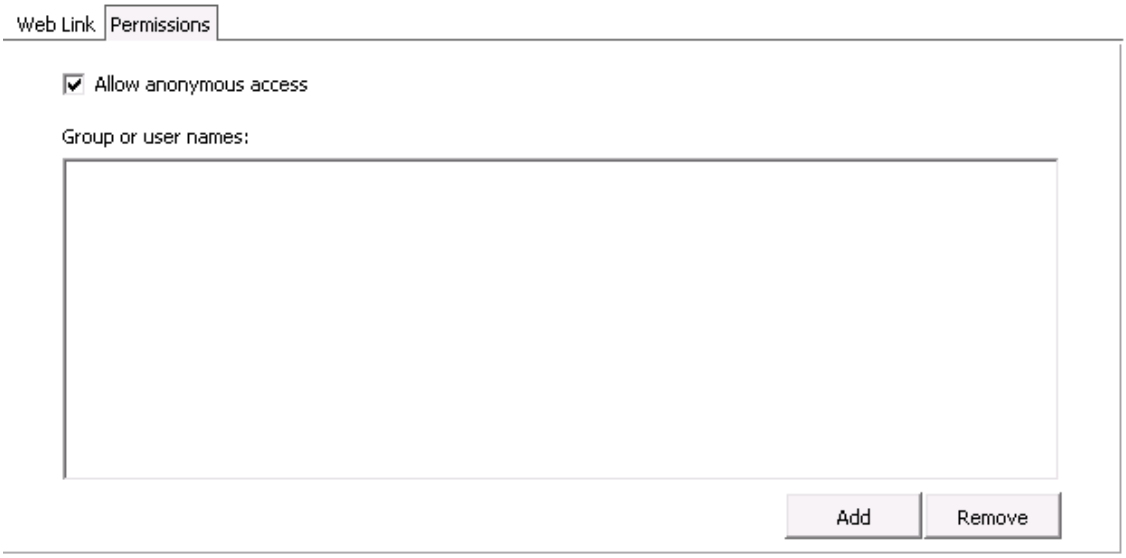
Icon	Click on the Icon gray box to load an image to be associated with the application. The image will be presented along with the application name on the web interface.
Application / Web Link	Select the Weblink option to have a profile that connects to a Web link. These links will be shown along with all the other applications on the Thinfinity® VirtualUI™ start page.
Default Application	Check this option to make this profile the default application: the authenticated user will connect to this profile directly instead of choosing between the available profiles. The rest of the profiles can be accessed by their Virtual Path.
Web URL	Inform in this field the URL that you want this application profile to connect to.

The properties located inside the other tabs will be described throughout the next subtopics.

Read More:
- The 'Permissions' Tab

8.1.2.2.1 Permissions

Select the users that will access this application profile. If you don't select any users, this profile will not be available from the Web interface.
These are the options you will find under the 'Permissions' tab:



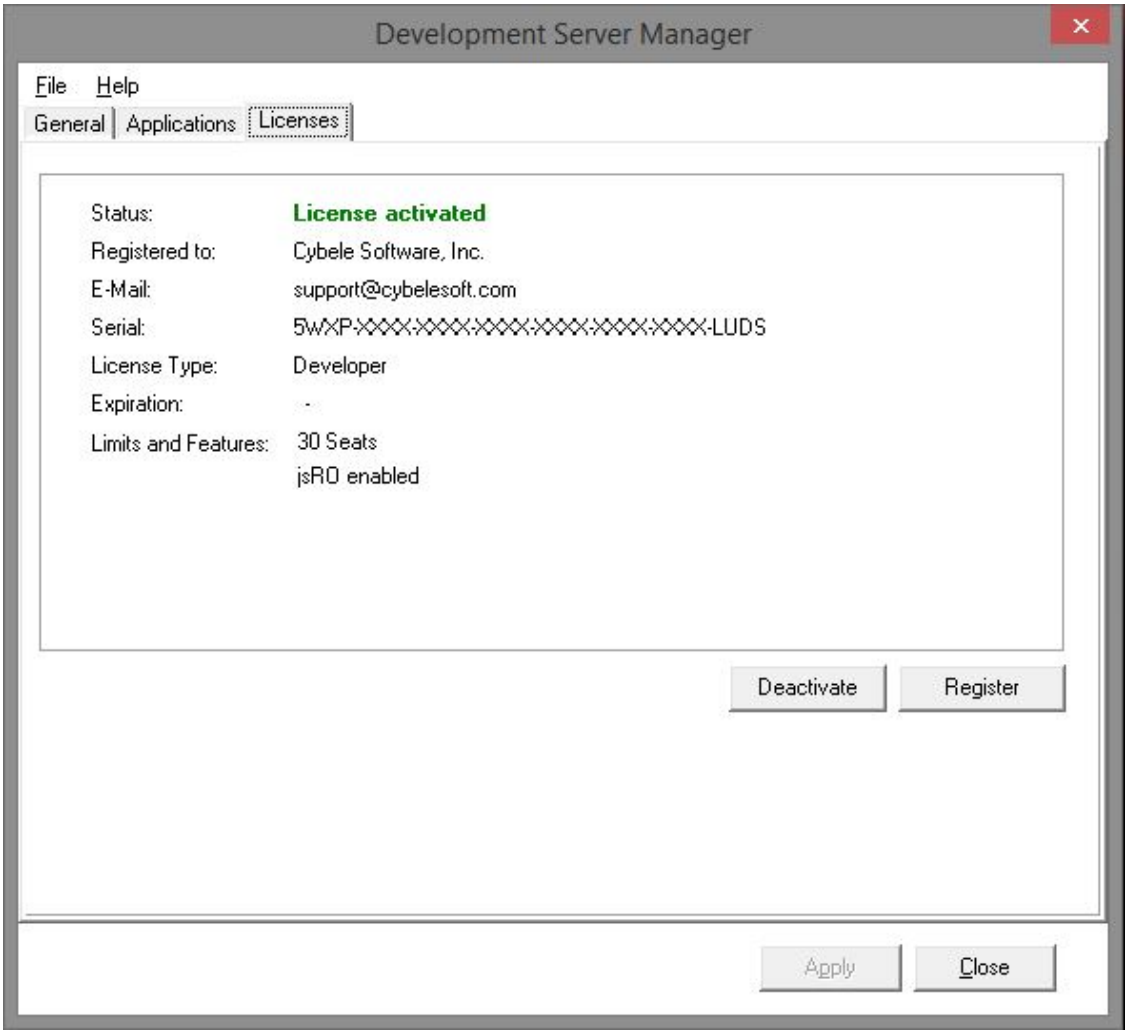
Allow anonymous access	Check this option to make this application available without any authentication. Use this option, if you want this profile to be available for everyone. This means that everybody accessing Thinfinity® VirtualUI™ home page will see this profile. Checking this option will disable the Add and Remove buttons.
Add	Press 'Add' to access the windows dialog for selecting Active Directory users.
Remove	Press 'Remove' to remove a user for this application profile.

If you want a user or a user group to access more than one application, you need to create more profiles and then add this user to each profile.
The authenticated user will be able to choose from the Web interface which application s/he will connect to.

Read More:
- The 'Licenses' tab

8.1.3 Licenses

In the Thinfinity® VirtualUI™ Manager 'Licenses' tab you will find the following options:



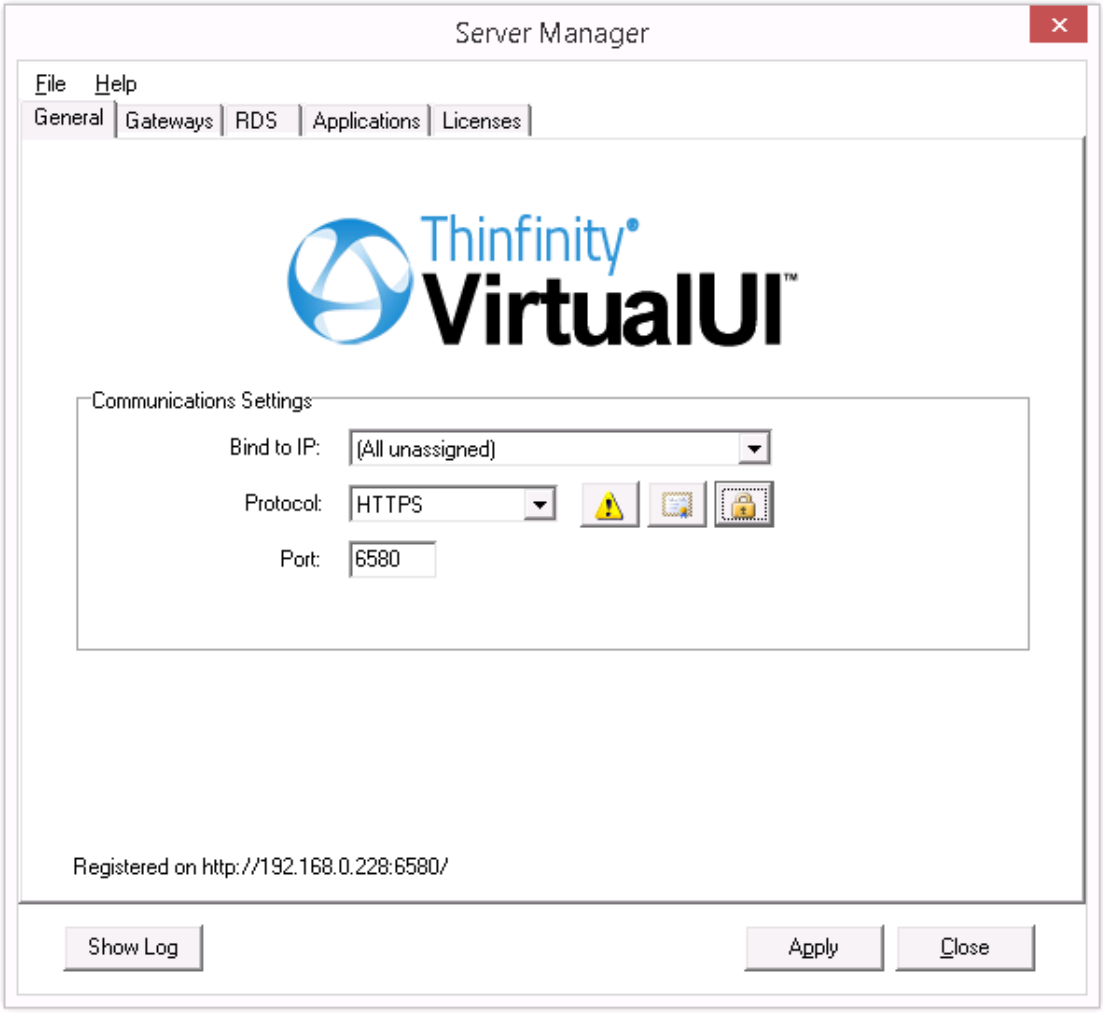
This tab shows the licenses you have currently installed. If you don't have a license yet, you will see a message letting you know how many evaluation days you have left until the trial finishes.
Contact us regarding pricing and/or licensing questions.

Read More:
- The Production Server

8.2 Production Server

Thinfinity® VirtualUI™ Server Manager is a tool to administrate the Thinfinity® VirtualUI™ Server. From its interface you can manage applications profiles, permissions and other settings related to Thinfinity® VirtualUI™ Server.
When in development mode, a very similar tool called Development Server Manager is used.

To access Thinfinity® VirtualUI™ Server Manager go to the Start Menu and look for the 'Thinfinity VirtualUI™ Server Manager' shortcut.



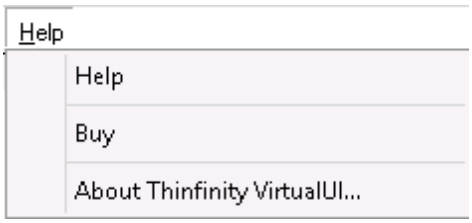
Its main menu has two sub-menus:

File Menu:

The File Menu is composed of the following options:

Save	Click to save any change done on the system Settings.
Exit	Click on this option to exit Thinfinity® VirtualUI™ Server Manager.

Help Menu:



The Help Menu is composed of the following options:

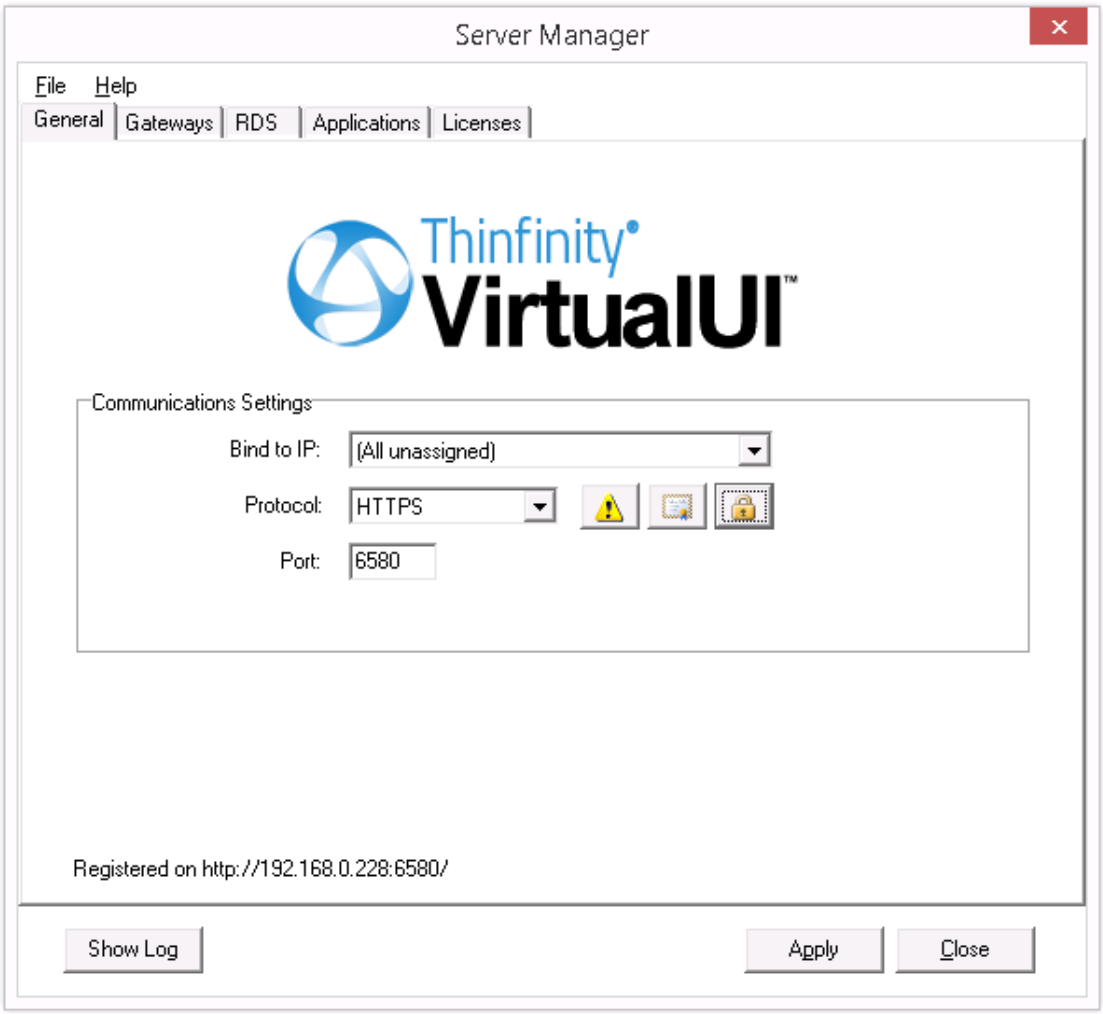
Help	Takes you to the application online guide.
Buy	Takes you to the Cybele Software Buy page.
About Thinfinity VirtualUI	Click on the About to see the application version and build number.

Read More:

- The 'General' Tab
- The 'Gateways' tab
- The 'RDS' tab
- The 'Applications' tab
- The 'Licences' tab

8.2.1 General

This is how the Thinfinity VirtualUI Server Manager looks in a Standard Mode installation. You will find the following options:



Bind to IP	Use this option to restrict access to the service to one specific IP address. The 'All unassigned' option allows access through all the available IP addresses.
Protocol	Choose between the HTTP and HTTPS protocol.
	Press this button to configure HTTP error responses.
	This button is only visibile when the protocol is set to HTTPS. Press this button to access the options for replacing the default Thinfinity VirtualUI installed

	certificate with your own. Read more about managing the SSL certificates.
	This button is only visibile when the protocol is set to HTTPS. Press this button to access the HTTPS Security Settings.
Port	Choose which port will Thinfinity® VirtualUI™ Server be listening on. If the port is not available, you will see an error message on the status bar.
Show Log	Press to open the file with the Thinfinity VirtualUI log.

Always remember to press 'Apply' in order to save the changes.

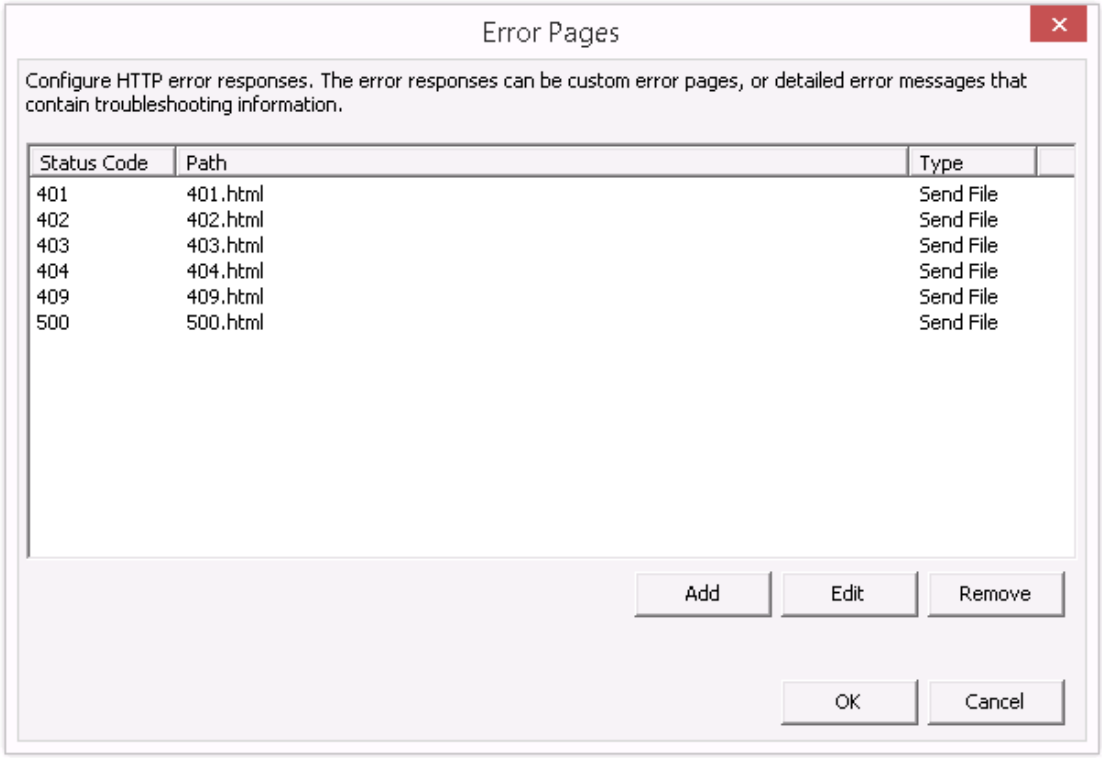
Read more:
- Configure HTTP Error Responses
- Managing the SSL Certificate
- HTTPS Security Settings
- The 'Gateways' tab

8.2.1.1 Configure HTTP Error Responses

You can access configuration for the HTTP Error response pages by pressing this button:

which you will find in the Server Manager General tab, when the protocol is set to HTTPS.

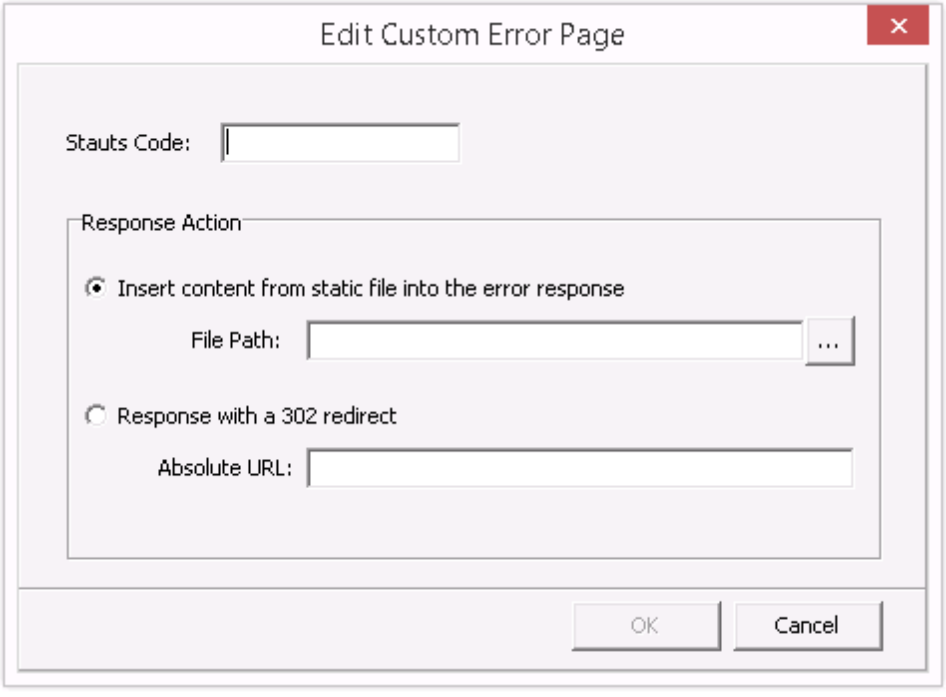
You will be presented with the following dialog:



Status Code	This numeric code indicates the status of the response when a browser tries to access content in Thinfinity VirtualUI. The error responses may be displayed in the client browser. The HTTP status code may indicate whether a request is successful or unsuccessful, and may also reveal the exact reason that a request is unsuccessful.
Path	Shows the path to the error file that will show in

	case of a particular status code. The default path is the 'web' directory in the Thinfinity Virtual installation directory.
Type	Shows the Thinfinity VirtualUI action in the event of an error status code: - Send file: Thinfinity VirtualUI will show an error page located physically in the server's computer. - Redirect: Thinfinity VirtualUI will redirect the page to any web page indicated in the configuration.
Add	Press this button to add a new Custom Error page. Read more about this below.
Edit	Press this button to edit an existing Custom Error Page. Read more about this below.
Remove	Press this button to remove a selected Custom Error Page.

If you choose to add or edit a Custom Error Page, you will be presented with the following dialog:



Status Code	Enter the Status Code number that you want to configure.

Response Action	Choose whether Thinfinity VirtualUI will show a page that is stored locally or will redirect the user to another web page.
Insert Content from file into the error response	Choose this option if you want Thinfinity VirtualUI to show a static page locally stored in your Thinfinity VirtualUI server. Complete the file path by selecting the file you want to show with the button.
Response with a 302 redirect	Choose this option if you want Thinfinity VirtualUI to redirect users to a web page. Type the Absolute URL to this web page in the field below

Press OK to save the changes.

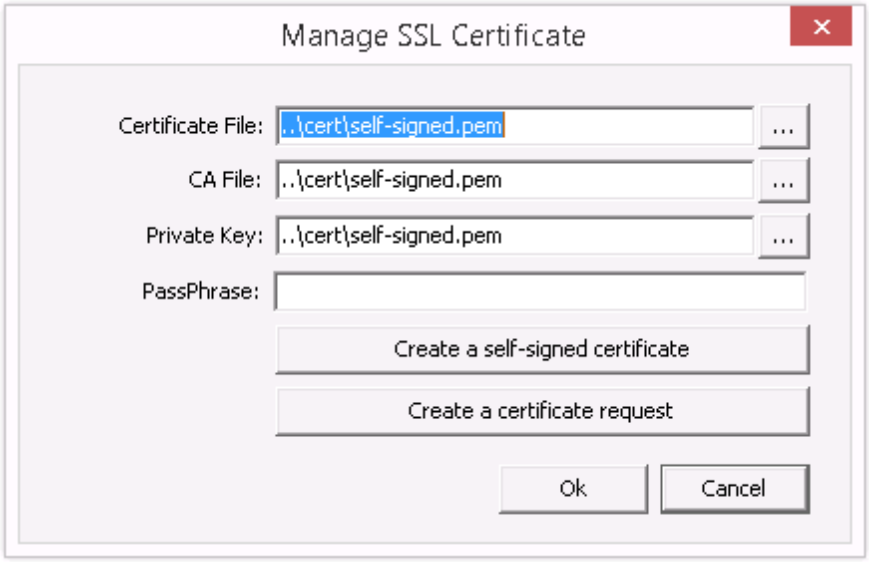
Read more:
- Managing the SSL Certificate
- HTTPS Security Settings
- The Gateways tab

8.2.1.2 Managing the SSL Certificate

You can access configuration for managing the SSL certificates by pressing this button:

which you will find in the Server Manager General tab, when the protocol is set to HTTPS.

You will be presented with the following dialog:



An SSL certificate is an effective way to secure a website against unauthorized interception of data. At its simplest, an SSL Certificate is used to identify the website and encrypt all data flowing to and from the Certificate holder's web site. This makes all exchanges between the site and its visitors 100 percent private.
A valid SSL certificate is included with the Thinfinity® VirtualUI™ Server installation and all communications are already encrypted with the product's default certificate. You may want to create your own certificate to identify your company better.

Managing the SSL Certificate

1. There are two ways of creating your own SSL certificate:

a. Create A self-signed certificate
b. Use A CA Certificate

2. Once you already have your certificate files, go to the Thinfinity® VirtualUI™ Server Settings 'General' tab.

3. Click on the 'Manage Certificate' option.

4. On this screen you should inform the location of the certificate files, as follows:

Certificate File
Inform the path to the certificate file.

CA File
If the certificate is issued by a unknown CA, you should fill in the pathname to the CA certificate.

Private Key
You should inform the pathname to the certificate private key file.

Pass Phrase
Inform the password that was used, if any, when the private key was generated.

Note: The path names can be absolute (C:\MyCertPath\UserThisCert.pem) or relative to

the path where Thinfinity® VirtualUI™ Server is installed (\cert\UserThisCert.perm).

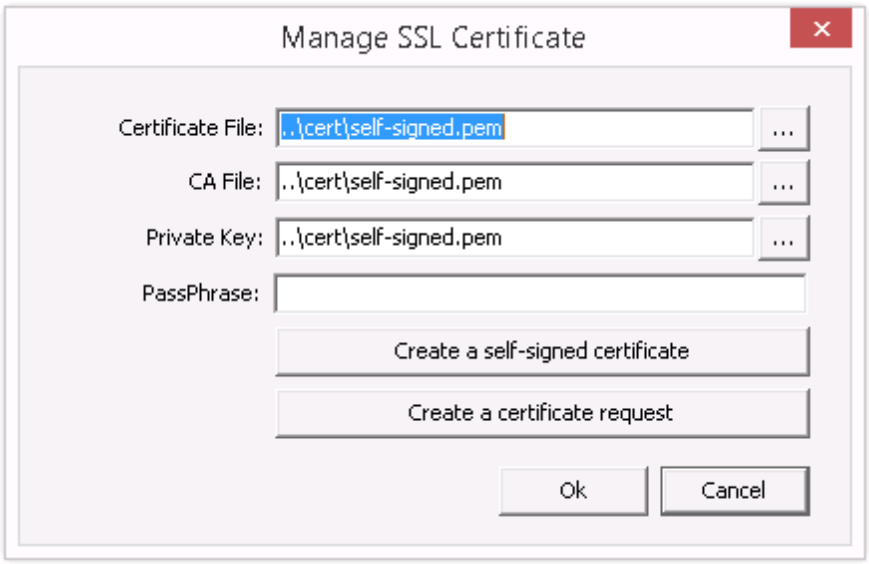
Read more:

- The Default Embedded Certificate
- A Self-signed Certificate
- A CA Certificate
- HTTPS Security Settings
- The Gateways tab

8.2.1.2.1 The Default Embedded Certificate

A certificate called "self-signed.pem" is included with the Thinfinity® VirtualUI™ Server installation. You will find it inside the \cert directory, located inside the Thinfinity® VirtualUI™ Server application path.

If you want to use this default certificate you should have the files set as the image below:



You'll find these settings inside the Thinfinity® VirtualUI™ Server Settings 'General' tab, by clicking on the 'Manage certificate' button.

Because this certificate is not issued by a known Certificate Authority (CA), the web browsers will warn you they can not verify its authority.

Read more:

- A Self-signed Certificate
- A CA Certificate
- HTTPS Security Settings
- The Gateways tab

8.2.1.2.2 A Self-signed Certificate

This option is used to create your own self-sign certificate.

1. Go to the Thinfinity® VirtualUI™ Server Settings 'Security' tab.
2. Press the 'Manage certificate' button.
3. Press the 'Create a self-signed certificate' button.
4. Fill in the form below with your organization data:

Country Code	The two letter country code of the International Organization for Standardization (ISO 3166)
State	Full unabbreviated name of the state or province your organization is located.
Locality	Full unabbreviated name of the city where your organization is located.
Organization	The name your company is legally registered under.

Organizational Unit	Use this field to differentiate between divisions within an organization.
Common Name	The domain name or URL you plan to use this certificate with.
E-Mail Address	Company e-mail address.
Bits	We recommend using a 2048 length key.

5. The 'Common Name' field should be filled with the server+domain that will be used to access Thinfinity® VirtualUI™ Server (ThinfinityVirtualUI.mycompany.com).

6. Press 'Create'.

7. Select the location where you want the certificate to be stored.

8. The application will start using this self-signed certificate created by you.

Because this certificate is not issued by a known Certificate Authority (CA), the web browsers will warn you they can not verify its authority.

Read more:
- A CA Certificate
- HTTPS Security Settings
- The Gateways tab

8.2.1.2.3 A CA Certificate

In order to use this option you will have to get a certificate from a known Certificate Authority (CA). Some CA examples are GoDaddy, VeriSign, Thawte, GeoTrust and Network Solutions.

The CA will ask you for a "certificate request". Create one following the next steps:

1. Go to the Thinfinity® VirtualUI™ Server Settings 'Security' tab.

2. Press the 'Manage certificate' button.

3. Click on the 'Create a certificate request' button.

4. Fill in the form below with your organization data:

Country Code	The two letter country code of the International Organization for Standardization (ISO 3166)
State	Full unabbreviated name of the state or province your organization is located.

Locality	Full unabbreviated name of the city where your organization is located.
Organization	The name your company is legally registered under.
Organizational Unit	Use this field to differentiate between divisions within an organization.
Common Name	The domain name or URL you plan to use this certificate with.
E-Mail Address	Company e-mail address.
Bits	We recommend using a 2048 length key.

5. The 'Common Name' field should be filled with the server+domain that will be used to access Thinfinity® VirtualUI™ server (ThinfinityVirtualUI.mycompany.com)

6. Press 'Create' and the application will generate two files.

7. The first window will ask you for a location to keep the private key file: "Where do you want the private key file to be stored".

a. Inform a name for your private key.
b. Select a place to keep it safe.
c. Press the 'Save' button.

8. The second window will ask you for a location to keep the request file: "Where do you want the request file to be stored.".

a. Inform a name for the request file.
b. Select a directory where you can find the file later on to send to the CA.
c. Press the 'Save' button.

9. The first file is the certificate private key. It should always be kept safe with you.

10. Send only the request file to the CA.

After the CA validation process, place the certificate they sent to you in the Thinfinity® VirtualUI™ Server cert directory and inform the path to the files on Thinfinity® VirtualUI™ Server Manager, Manage Certificate option (Certificate file, CA file and Private Key).

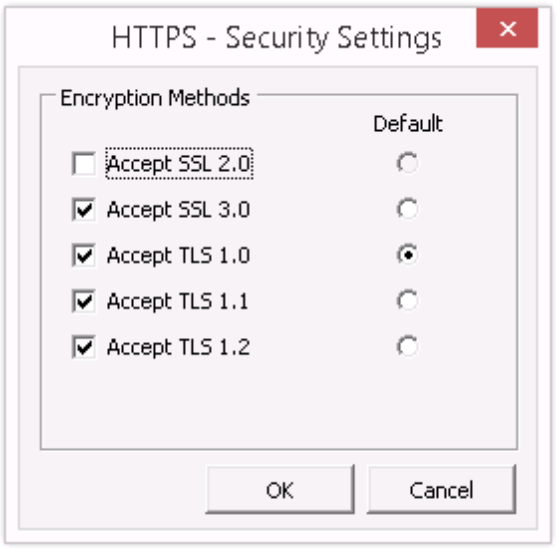
Read more:
- HTTPS Security Settings
- The Gateways tab

8.2.1.3 HTTPS Security Settings

You can access the HTTPS Security Settings by pressing this button:

which you will find in the Server Manager General tab, when the protocol is set to HTTPS.

You will be presented with the following dialog:

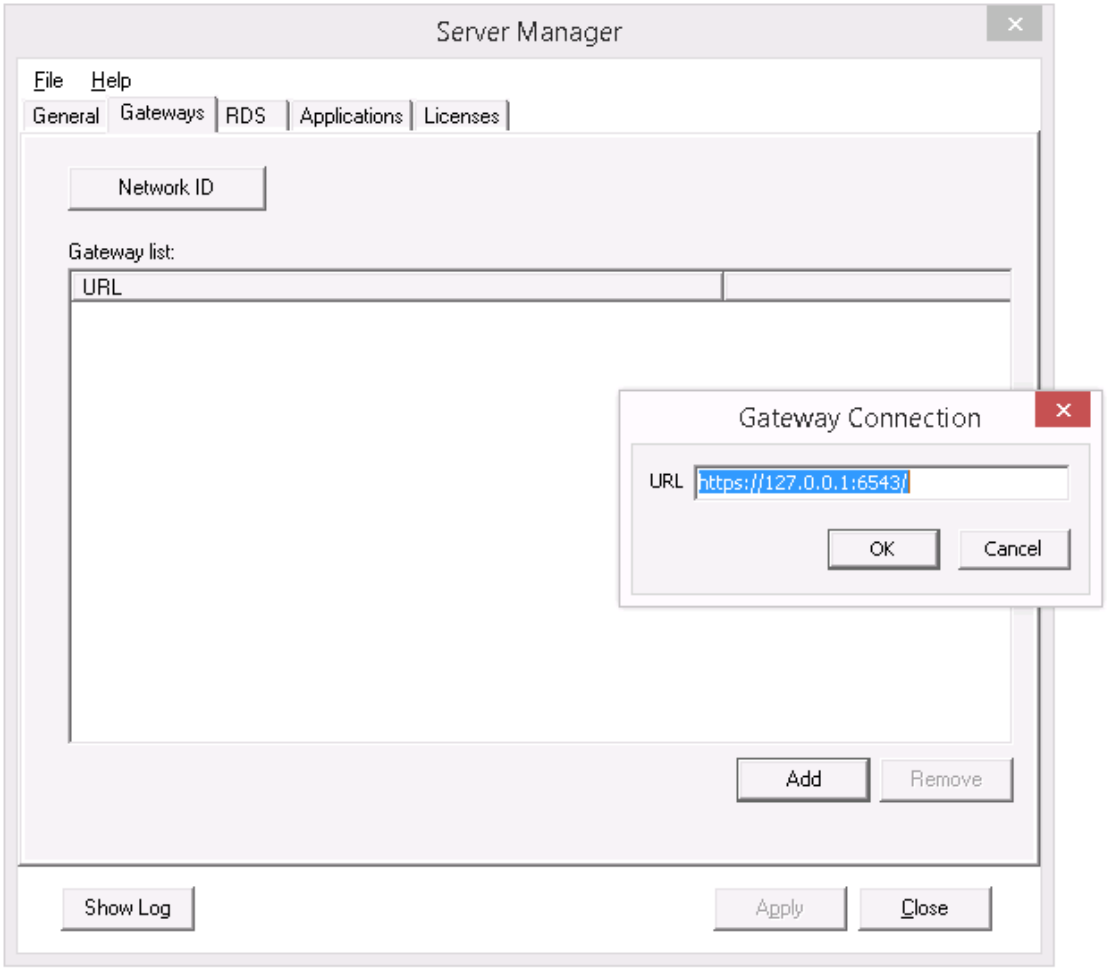


Encryption Methods	Select the HTTPS encryptions methods you want Thinfinity VirtualUI to support.
Default	Select which of the supported HTTPS encryption method is the default. When a connection is made with a browser that doesn't support the default encryption method, Thinfinity VirtualUI will negotiate the security with other supported encryption methods on this list.

Read more:
- The Gateways tab

8.2.2 Gateways

In the Thinfinity® VirtualUI™ Manager 'Gateways' tab you will find the following options:



Network ID	The network ID identifies this installation. Thinfinity VirtualUI Servers that want to share their resources through one or more Gateways must match their Network ID. Press this button to see and/or change the Network ID. The default value is a random string but you can change it to something more descriptive.
Gateway List	A list of the gateways that a user can connect to in order to access this server's resources. For a typical installation, with no load balancing architecture, leave it blank.
Add	Add a new gateway to the Gateway List. Only if you will use Scaling and Load Balancing.
Remove	Remove a selected gateway from the Gateway

	List.

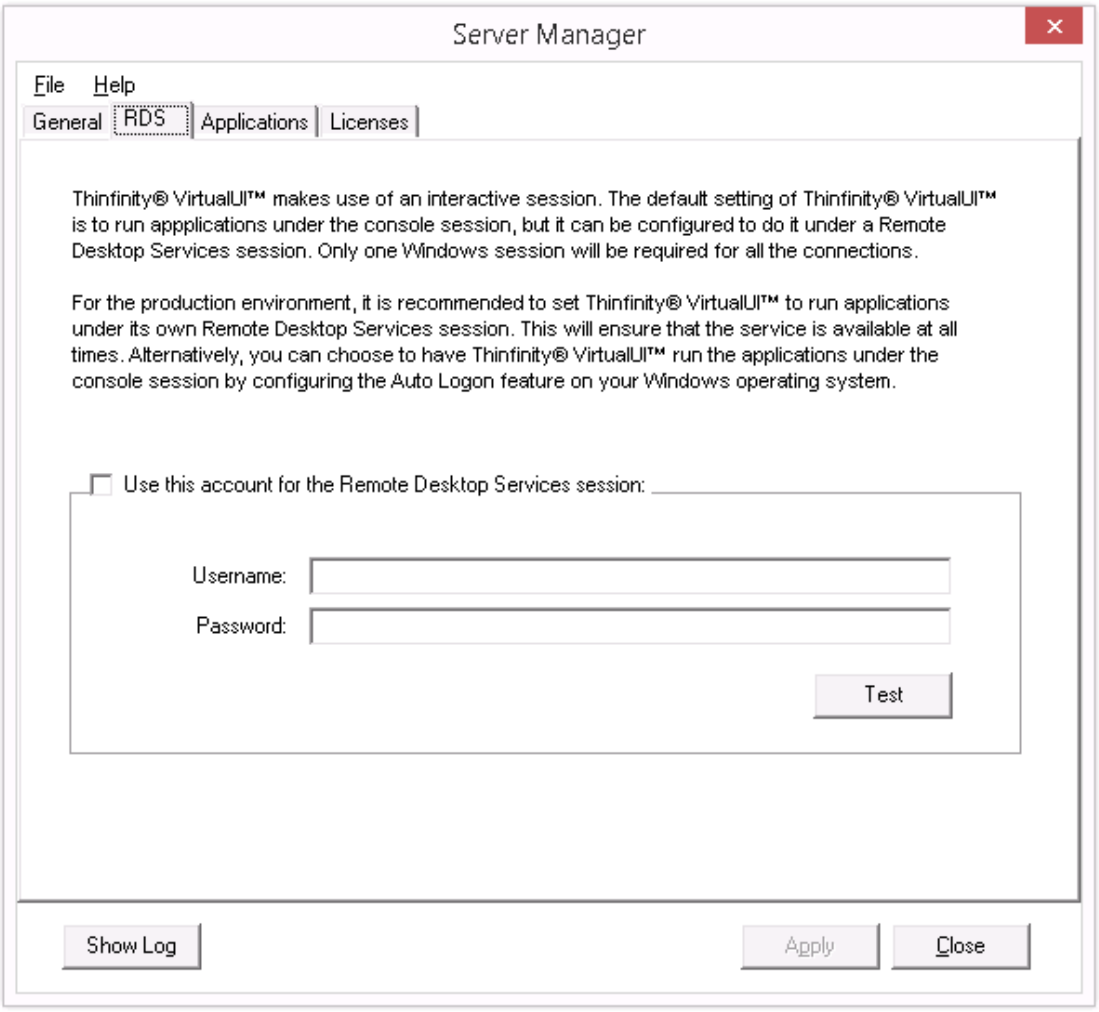
Check out the Scaling and Load Balancing section to learn about more options.

Read more:
- The 'RDS' tab
- The 'Applications' tab
- The 'Licenses' tab
- Scaling and Load Balancing

8.2.3 RDS

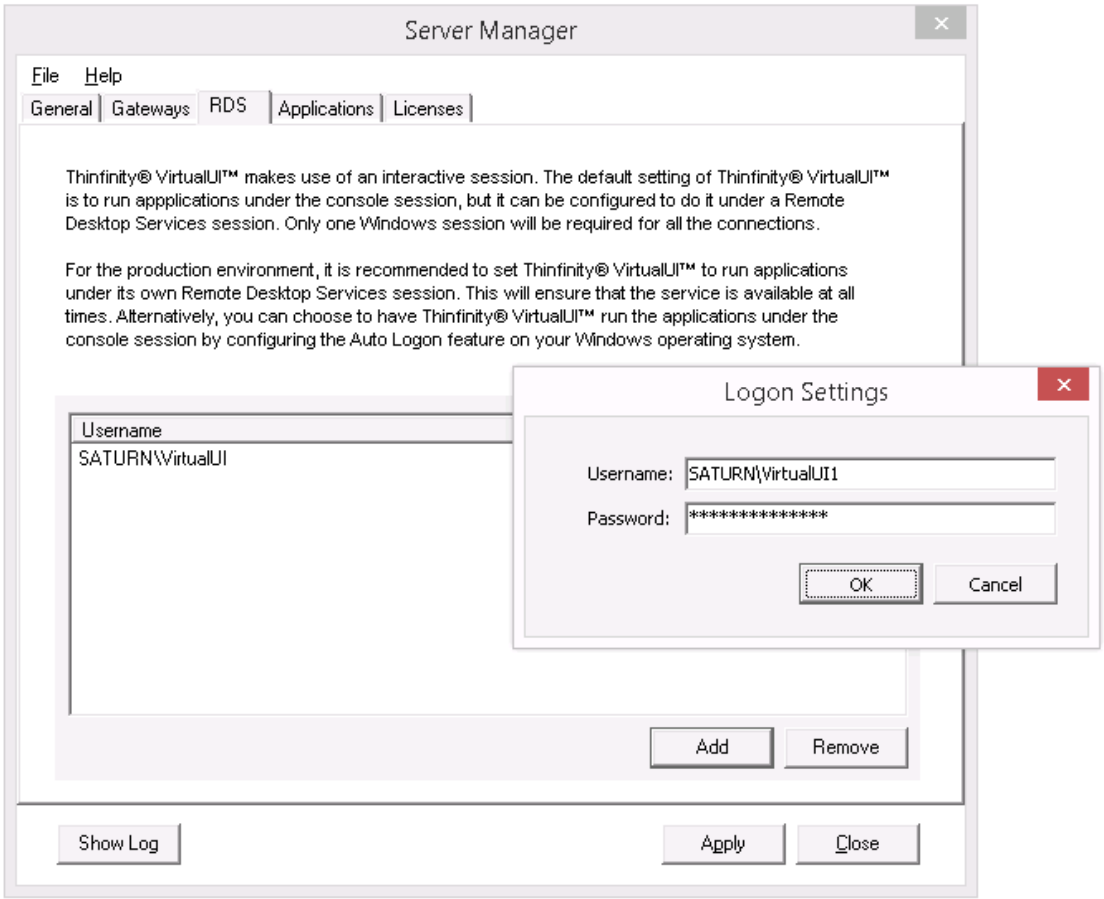
In the Thinfinity® VirtualUI™ manager 'RDS' tab you will find the following options:

Standard Mode installation:



Use this account for the Remote Desktop Services session:	Check this option to enable Thinfinity VirtualUI to run applications under a separate Remote Desktop Services session.
User name	Enter the username for the Remote Desktop Services session you want Thinfinity VirtualUI to run applications under.
Password	Enter the password for the Remote Desktop Services session you want Thinfinity VirtualUI to run applications under.
Test	Test the credentials entered to verify that the username and password are correct and can access RDS.

Load Balancing Mode installation:



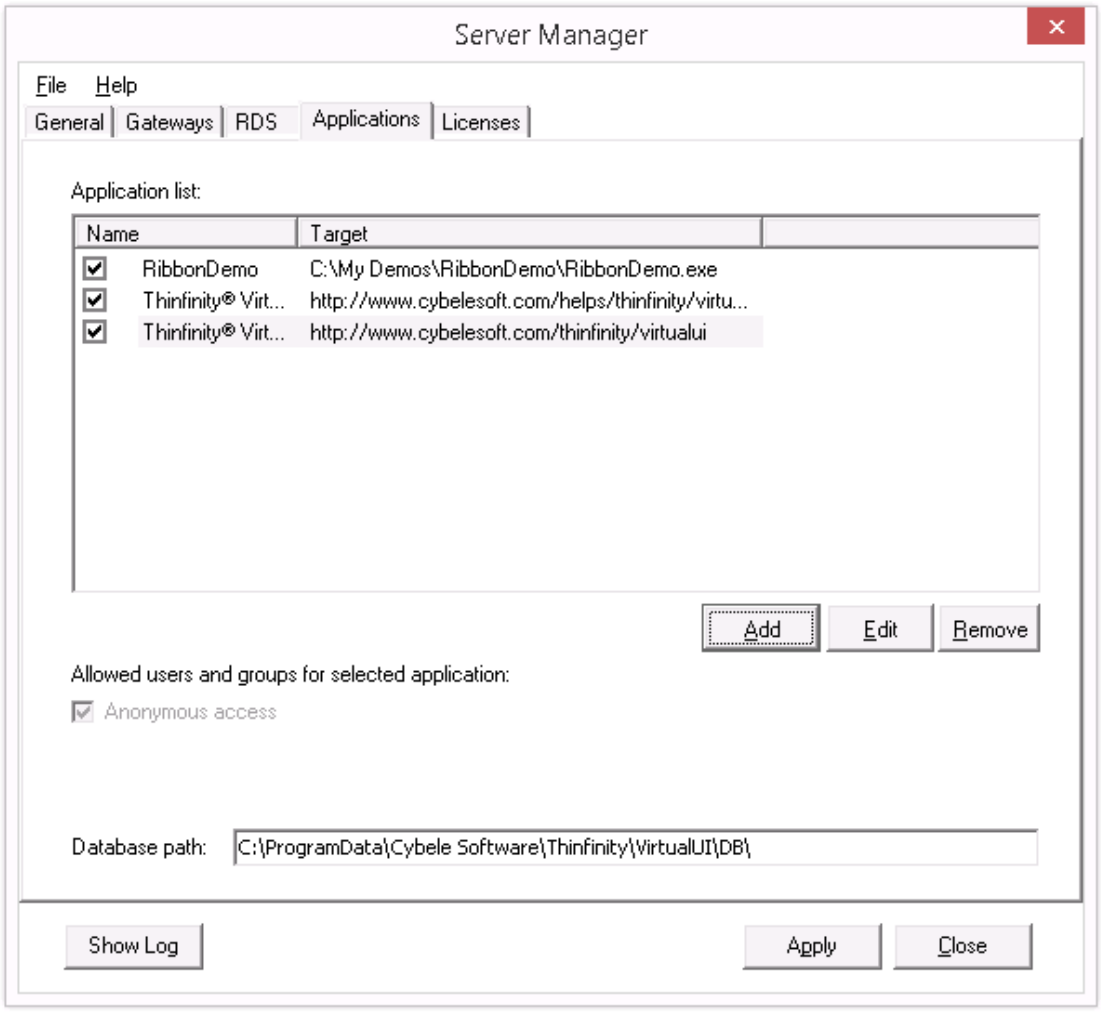
User name	This table shows the RDS sessions that will handle Thinfinity VirtualUI connections. You can use more than one session when you have a lot of connections, so that it is distributed between different sessions in the same computer. You can combine this with a Scaling and Load Balancing.
Add	Press this button to add another RDS account.
Remove	Press this button to remove a selected RDS account.

Always remember to press 'Apply' in order to save the changes.

Read More:
- The 'Applications' tab
- The 'Licenses' tab
- Scaling and Load Balancing

8.2.4 Applications

The 'Applications' tab will allow you to configure the applications' locations and settings as well as the user permissions to access them.



Application List	This list shows the available applications. You can enable or disable them by checking the box to the left of the name.
Name	Shows the name of the application.
Target	Shows the application path or the web address for Web Link profiles.

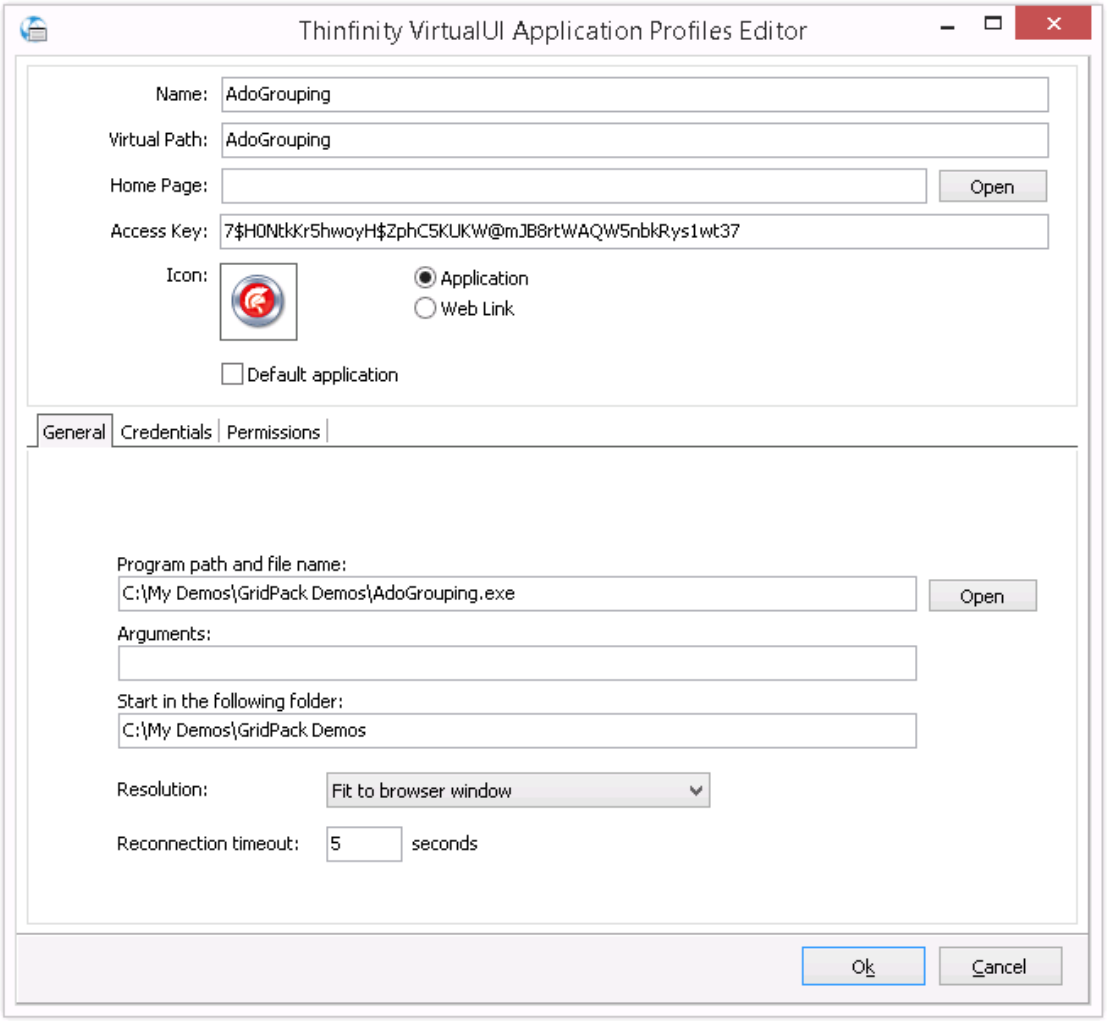
Add	Press this button to add a new application.
Edit	Select an application and press this button to edit it.
Remove	Select an application and press this button to remove it.
Allowed users and groups for selected profile	See here the allowed users or group(s) of users for the selected application. If you want to change the permissions, edit the application.
Database path	Path to the profile database.

Always remember to press 'Apply' in order to save the changes.

Read More:
- Application Profile
- Weblink Profile
- The 'Licenses' Tab
- Scaling and Load Balancing

8.2.4.1 Application Profile

When you edit or add an application profile you will be presented with this screen below.
The radio button 'Application' must be checked.



These are the profile properties you can edit:

Name	Use this field to change the application name.
Virtual Path	The Virtual Path will create a unique URL address for this connection. The complete path will consist of: http(s):// ip:port/VirtualPath/. The users can then create a web shortcut to this connection in particular and bypass the Thinfinity VirtualUI web interface.
Home Page	Choose the landing HTML page for the application.

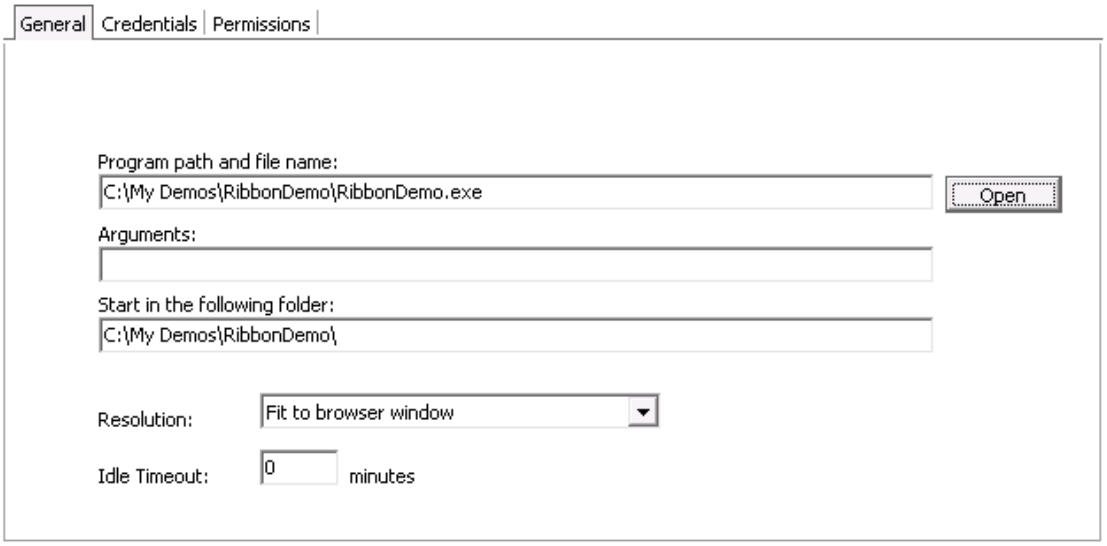
Open	Press this button to look for the Home Page.
Access Key	This is a unique key for this application profile. The value is used to identify the application when implementing access through the One-Time-URL method.
Icon	Click on the Icon gray box to load an image to be associated with the profile. The image will be presented along with the profile name on the web interface profiles selection.
Application/Web link	Select the Application option to have a regular profile that gives access to an application. If you select the Web link radio button, this profile will behave like a Web Hyperlink.
Default Application	Check this option to make this profile the default application: the authenticated user will connect to this profile directly instead of choosing between the available profiles. The rest of the profiles can be accessed by their Virtual Path.

The properties located inside the tabs will be described throughout the next subtopics.

Read More:
- The 'General' Tab
- The 'Credentials' Tab
- The 'Permissions' Tab
- Weblink Profile

8.2.4.1.1 General

In the Application Profile Editor 'General' tab you will find the following options:

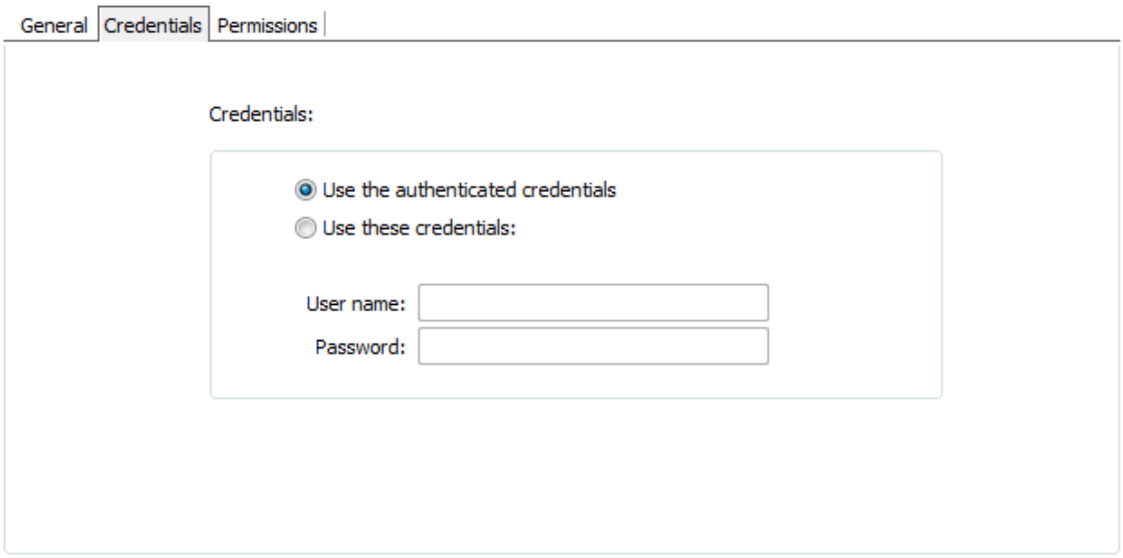


Program path and file name	Specify the complete path that gives access to the application executable file.
Arguments	Application arguments.
Start in the following folder	Inform a context directory for the application set on the 'Program path and file name' field.
Resolution	Choose from the available list of resolutions including 'Fit to browser window' and 'Fit to screen', ideal for hiding the browser and working on a full screen mode.
Idle Timeout	Set a timeout in minutes if you want Thinfinity® VirtualUI™ Server to wait this period before killing the application once the browser has been closed. Timeout 0 will kill the application immediately after the browser has been closed.

Read More:
- The 'Credentials' Tab
- The 'Permissions' Tab

8.2.4.1.2 Credentials

In the Thinfinity® VirtualUI™ Application Editor 'Credentials' tab, you should inform the mode for logging into the specified application:



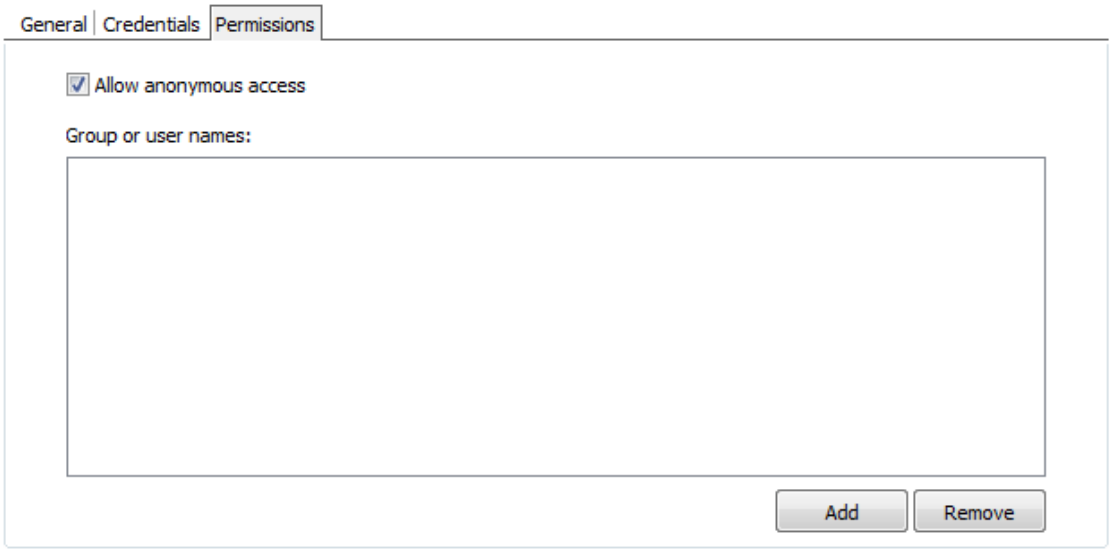
Use the authenticated credentials	Use the same credentials entered in the browser for Thinfinity VirtualUI (specified in the 'Permissions' tab). Note: If the credentials are correct, this option will connect the user automatically when selecting the application, or after authenticating for Thinfinity VirtualUI if this is the only profile for their credentials.
Use these credentials	Complete the credentials used to access the computer. Note: If the credentials are correct, this option will connect the user automatically when selecting the application, or after authenticating for Thinfinity VirtualUI if this is the only profile for their credentials.

Read More:

- The 'Permissions' Tab

8.2.4.1.3 Permissions

Select the users that will access this application. If you don't select any user, this application will not be accessed.
These are the options you will find on the Application Profile Editor 'Permissions' tab:



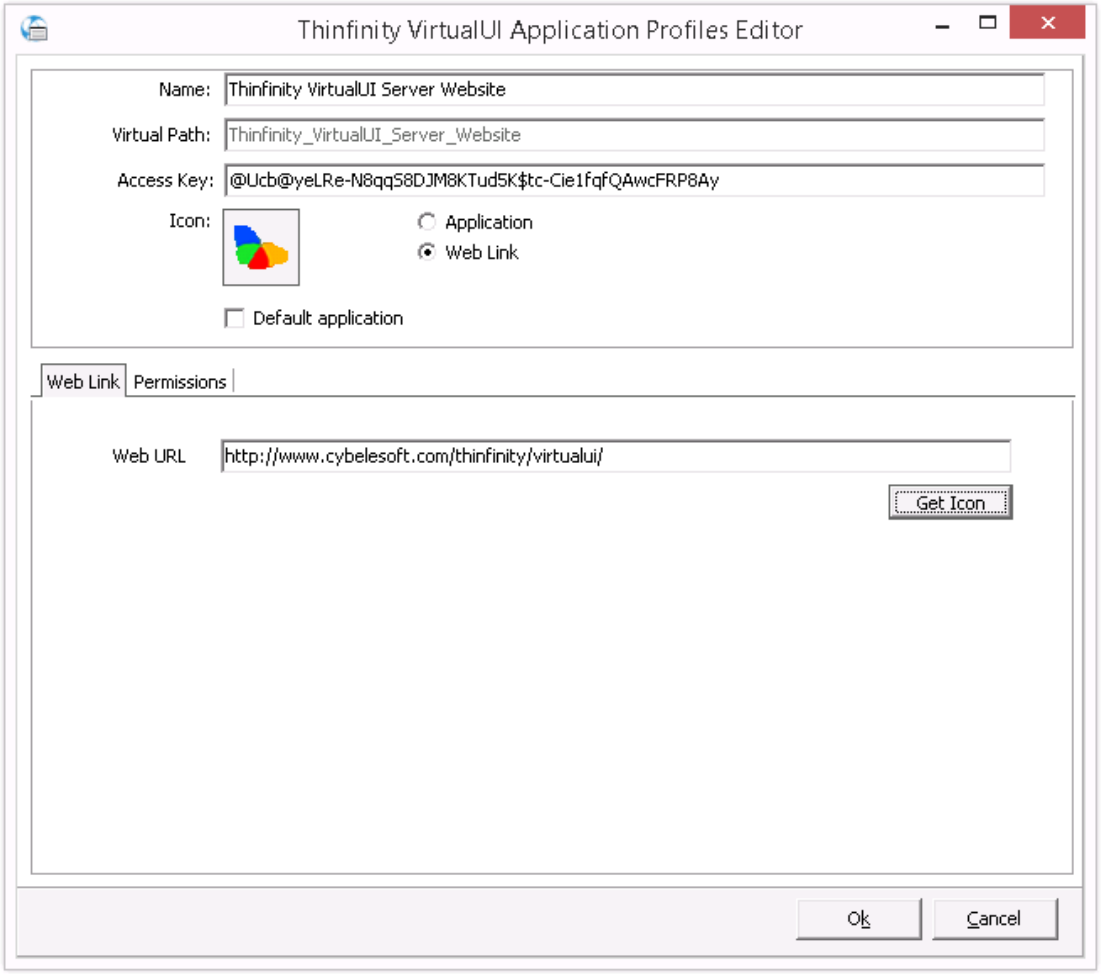
Allow anonymous access	Check this option to make this application available without any authentication. Use this option if you want this profile to be available for everyone. This means that everybody accessing Thinfinity VirtualUI will have access to this application. Checking this option will disable the Add and Remove buttons.
Add	Press 'Add' to access the windows dialog for selecting Active Directory users.
Remove	Press 'Remove' to remove a user for this profile.

If you want a user or a user group to access more than one application, you need to create more application profiles and then add this user to each profile.
The authenticated user will be able to choose from the available application profiles on the Web interface.

Read More:
- Weblink Profile

8.2.4.2 Weblink Profile

When you edit or add a Web Link profile you will be presented with the screen below. The 'Web Link' radio button must be marked.



These are the profile properties you can edit:

Name	Use this field to change the profile name.
Virtual Path	The Virtual Path will create a unique URL address for this connection. The complete path will consist of: http(s):// ThinfinityVirtualUIDomain:port/VirtualPath/. The users can then create a web shortcut to this connection in particular and bypass the Thinfinity VirtualUI web interface.
Access Key	This is a unique key for this application profile. The value is used to identify the application when implementing access through the One-Time-URL method.

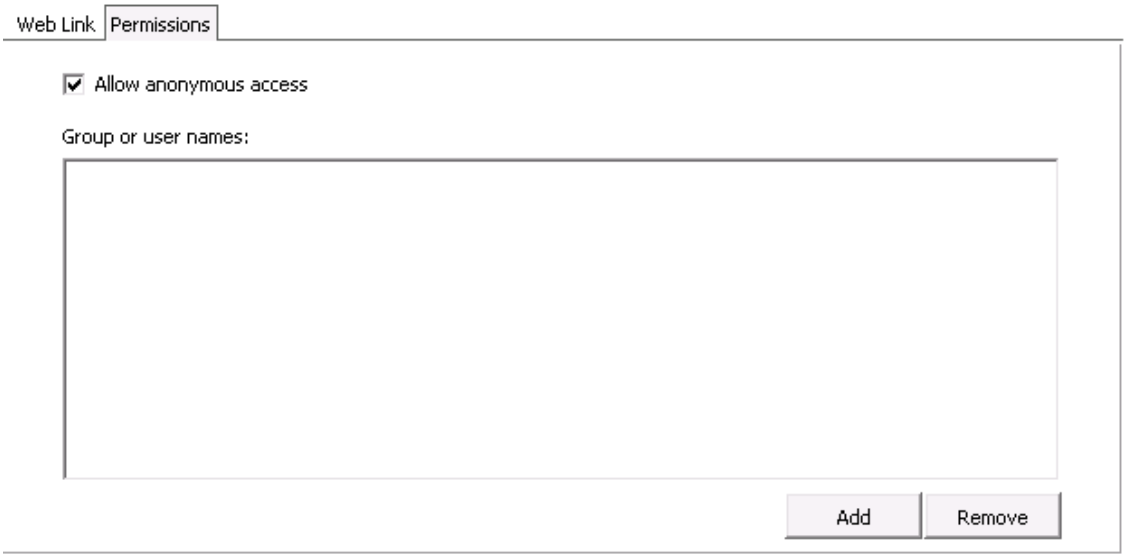
Icon	Click on the Icon gray box to load an image to be associated with the application. The image will be presented along with the application name on the web interface.
Web link / Application profile	Select the Weblink option to have a profile that connects to a Web link. These links will be shown along with all the other applications on the Thinfinity VirtualUI start page.
Default Application	Check this option to make this profile the default application: the authenticated user will connect to this profile directly instead of choosing between the available profiles. The rest of the profiles can be accessed by their Virtual Path.
Web URL	Inform in this field the URL that you want this application profile to connect to.
Get Icon	Retrieve an icon from the specified Web URL to be used in the web link profile

The properties located inside the other tabs will be described throughout the next subtopics.

Read more:
- The 'Permissions' tab

8.2.4.2.1 Permissions

Select the users that will access this application profile. If you don't select any users, this profile will not be available from the Web interface.
These are the options you will find under the 'Permissions' tab:



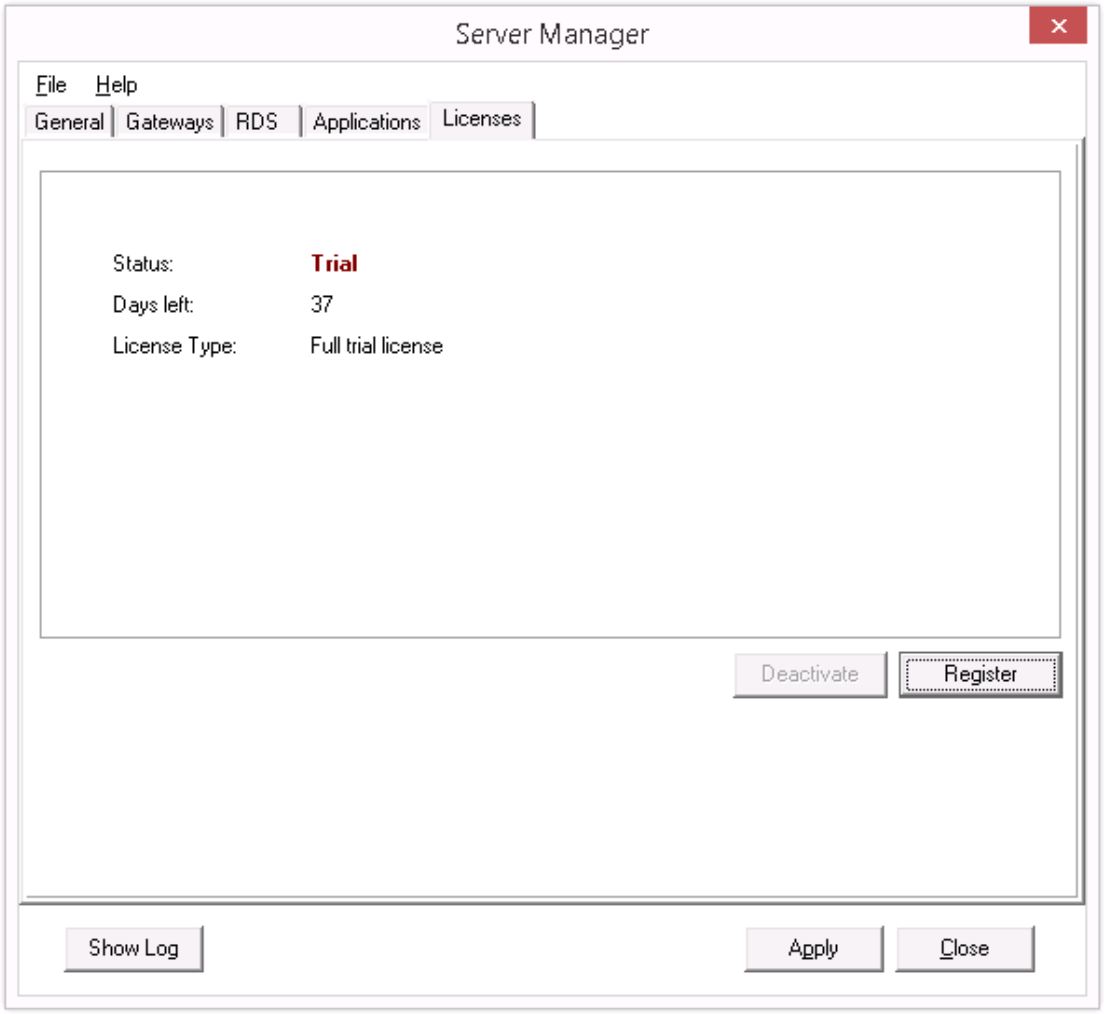
Allow anonymous access	Check this option to make this application available without any authentication. Use this option, if you want this profile to be available for everyone. This means that everybody accessing Thinfinity® VirtualUI™ home page will see this profile. Checking this option will disable the Add and Remove buttons.
Add	Press 'Add' to access the windows dialog for selecting Active Directory users.
Remove	Press 'Remove' to remove a user for this application profile.

If you want a user or a user group to access more than one application, you need to create more profiles and then add this user to each profile.
The authenticated user will be able to choose from the Web interface which application s/he will connect to.

Read More:
- The 'Licenses' tab

8.2.5 Licenses

In the Thinfinity® VirtualUI™ Manager 'Licenses' tab you will find the following options:



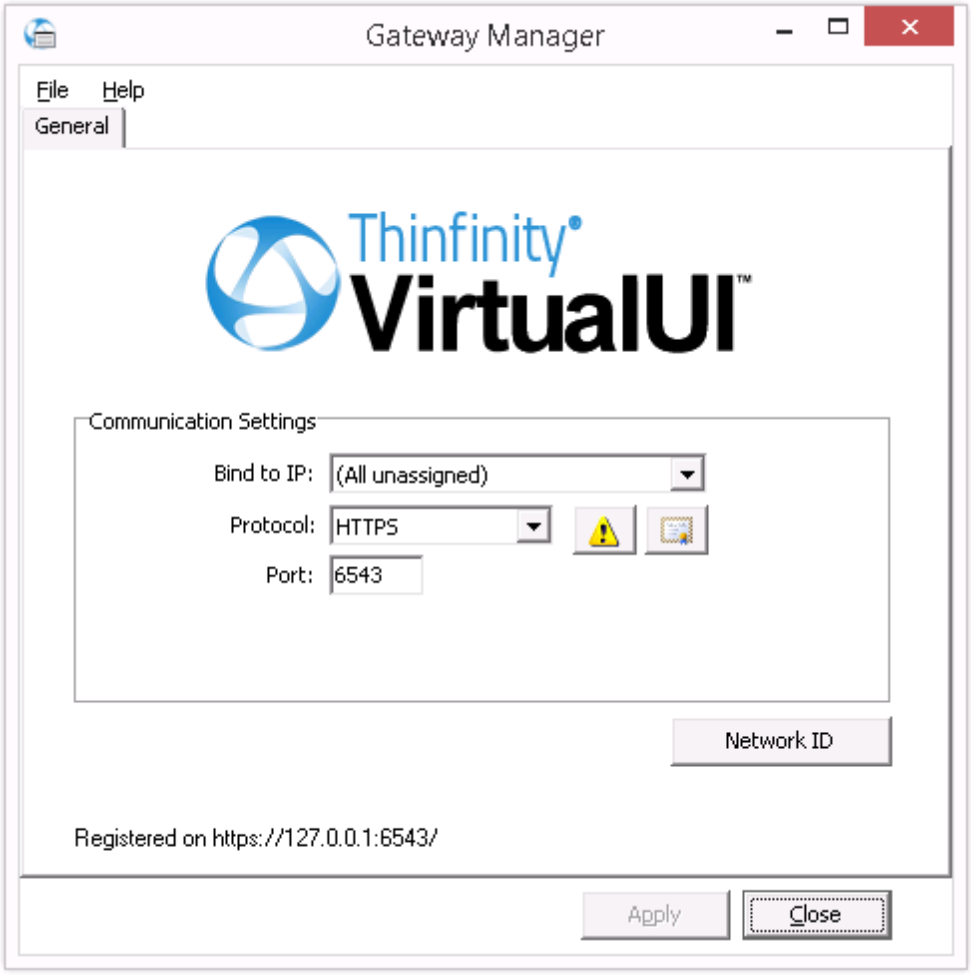
This tab shows the licenses you have currently installed. If you don't have a license yet, you will see a message letting you know how many evaluation days you have left until the trial finishes.
Press 'Register' to add your license information.

Contact us regarding pricing and/or licensing questions.

8.3 Gateway

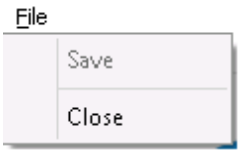
The Gateway Manager is a tool to configure gateway options in a Load Balancing scenario.

Install Thinfinity VirtualUI as a Gateway Role and look for the 'Thinfinity VirtualUI Gateway' shortcut in the Start Menu.



Its main menu has two sub-menus:

File Menu:



The File Menu is composed of the following options:

Save	Click to save any change done on the system Settings.
Close	Click on this option to exit Thinfinity VirtualUI Gateway Manager.

Help Menu:

The Help Menu is composed of the following options:

About Thinfinity VirtualUI	Click on the About to see the application version and build number.

The General tab presents the following options:

Bind to IP	Use this option to restrict access to the service to one specific IP address. The 'All unassigned' option allows access through all the available IP addresses.
Protocol	Choose between the http and https protocol.
	Press this button to configure HTTP error responses.
	This button is only visibile when the protocol is set to HTTPS. Press this button to access the options for replacing the default Thinfinity VirtualUI installed certificate with your own. Read more about managing the SSL certificates.
Port	Choose which port will Thinfinity® VirtualUI™ Gateway be listening on. If the port is not available, you will see an error message on the status bar.
Network ID	The network ID identifies this gateway services installation. Thinfinity VirtualUI Servers that want to share their resources through this this gateway must match this Network ID. Press this button to see and/or change the Network ID. The default value is a random string

	but you can change it to something more descriptive.
Show Log	Press to open the file with the Thinfinity VirtualUI log.

9 Symbol Reference

ActiveX Interfaces

.NET Classes

Delphi Classes

C++ Classes

VirtualUI.sdk.min.js

9.1 ActiveX Interfaces

Libraries

Name	Description
VirtualUI	Main class. Has methods, properties and events to allow the activation and control the behavior of VirtualUI.
VirtualUIS	

9.1.1 VirtualUI Runtime Library

Main class. Has methods, properties and events to allow the activation and control the behavior of VirtualUI.

Description

Enumerations

	Name	Description
	IJSDataType	This is record VirtualUI::IJSDataType.
	Orientation	This is record VirtualUI::Orientation.
	MouseMoveGestureStyle	This is record VirtualUI::MouseMoveGestureStyle.
	MouseMoveGestureAction	This is record VirtualUI::MouseMoveGestureAction.

Group

ActiveX Interfaces

Interfaces

	Name	Description
	IVirtualUI	Main interface. Has methods, properties and events to allow the activation and control the behavior of VirtualUI.
	IBrowserInfo	Contains information regarding the end-user's screen, web browser, the window containing VirtualUI Viewer and VirtualUI Viewer itself. The VirtualUI Viewer tuns inside an HTML DIV element contained in a frame o browser window on the end-user's application page.
	IDevServer	Contains properties to manage the VirtualUI Development Server as well as the access from the developer's web browser.
	IClientSettings	Contains settings that are synchronized with the VirtualUI Viewer.
	IJSValue	Base interface for IJSNamedValue, IJSProperty and IJSArgument.
	IJSNamedValue	Base interface for IJSProperty and IJSArgument.
	IJSObject	Represents a custom remotable object.
	IJSObjects	Collection of IJSObjects
	IJSProperty	Represents a property in a custom remotable object.
	IJSProperties	Collection of properties.
	IJSArgument	Represents a parameter in events and methods.
	IJSArguments	Collection of IJSArgument.
	IJSMethod	This interface represents an method called on the client side and executed on the server side.
	IJSMethods	Collection of methods.
	IJSEvent	This interface represents an event fired on the server side and raised on the client side.
	IJSEvents	Collection of events.
	IJSBinding	Used as a callback interface for binding external data source with the IJSProperty data.
	IJSCallback	Used as a callback interface for executing the remote calling to IJSMethod.
	IEvents	General VirtualUI events.
	IJSObjectEvents	This is class VirtualUI::IJSObjectEvents.

9.1.1.1 VirtualUI::IJSDataType Enumeration

```
IDL
[ uuid(B81C7C6D-CDD4-4268-A769-C46EC04FD58B) ]
enum IJSDataType {
  JSDT_NULL = 0,
  JSDT_STRING = 1,
  JSDT_INT = 2,
  JSDT_BOOL = 3,
  JSDT_FLOAT = 4,
  JSDT_JSON = 5
};
```

File

VirtualUIX.ridl

Description

This is record VirtualUI::IJSDataType.

Library

VirtualUI Runtime Library

9.1.1.2 VirtualUI::Orientation Enumeration

```
IDL
[ uuid(0715C547-D231-4F69-9D25-44164C90DA88) ]
enum Orientation {
  PORTRAIT = 0,
  LANDSCAPE = 1
};
```

File

VirtualUIX.ridl

Description

This is record VirtualUI::Orientation.

Library

VirtualUI Runtime Library

9.1.1.3 VirtualUI::MouseMoveGestureStyle Enumeration

```
IDL
[ uuid(B1A699F2-F16C-49AA-93DD-1A056936AA87) ]
enum MouseMoveGestureStyle {
```

```
  MM_STYLE_RELATIVE = 0,
  MM_STYLE_ABSOLUTE = 1
};
```

File

VirtualUIX.ridl

Description

This is record VirtualUI::MouseMoveGestureStyle.

Library

VirtualUI Runtime Library

9.1.1.4 VirtualUI::MouseMoveGestureAction Enumeration

IDL

```
[ uuid(EEC4FF42-7574-4250-8433-E14593AB7E7B) ]
enum MouseMoveGestureAction {
  MM_ACTION_MOVE = 0,
  MM_ACTION_WHEEL = 1
};
```

File

VirtualUIX.ridl

Description

This is record VirtualUI::MouseMoveGestureAction.

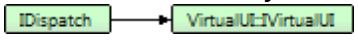
Library

VirtualUI Runtime Library

9.1.1.5 IVirtualUI Interface

Main interface. Has methods, properties and events to allow the activation and control the behavior of VirtualUI.

Class Hierarchy



IDL

```
[ uuid(4B85F81B-72A2-4FCD-9A6B-9CAC24B7A511), helpstring("Interface for VirtualUI Object"), dual, oleautomation ]
interface IVirtualUI : IDispatch;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.5.1 IVirtualUI Methods

The methods of the IVirtualUI class are listed here.

Interface

IVirtualUI Interface

Public Methods

	Name	Description
	DevMode	Gets/sets the development mode.
	Enabled	Enables/disables VirtualUI for the container application.
	StdDialogs	Enables/disables the use of standard dialogs.
	Start	Starts the VirtualUI's activation process. Returns true if VirtualUI was fully activated or false if the passed timeout expired.
	Stop	Deactivates VirtualUI, closing the connection with the end-user's web browser
	Active	Returns the VirtualUI's state.
	BrowserInfo	Contains information regarding the end-user's environment.
	DevServer	Allows for managing the Development Server.
	ClientSettings	Controls some working parameters on the client side.
	DownloadFile	Sends the specified file to the end-user's web browser for saving it in the remote machine.
	PrintPdf	Sends the specified PDF file to be shown on the end-user's web browser.
	OpenLinkDlg	This is OpenLinkDlg, a member of class IVirtualUI.
	SendMessage	Sends a data string to the web browser.
	AllowExecute	Allows the execution of the passed application.
	SetImageQualityByWnd	This is SetImageQualityByWnd, a member of class IVirtualUI.
	UploadFile	This is UploadFile, a member of class IVirtualUI.
	TakeScreenshot	This is TakeScreenshot, a member of class IVirtualUI.

	ShowVirtualKeyboard	This is ShowVirtualKeyboard, a member of class IVirtualUI.

9.1.1.5.1.1 DevMode Method

Gets/sets the development mode.

Remarks

When in development mode, applications executed under the IDE, connect to the Development Server, allowing the access to the application from the browser while in debugging.

Overload List

	Name	Description
	IVirtualUI::DevMode ([in] VARIANT_BOOL)	This is DevMode, a member of class IVirtualUI.
	IVirtualUI::DevMode ([out, retval] VARIANT_BOOL*)	This is DevMode, a member of class IVirtualUI.

Group

IVirtualUI Methods

IDL

```
[propget, id(0x00000069)]
HRESULT _stdcall DevMode([out, retval] VARIANT_BOOL* Value);
```

Description

This is DevMode, a member of class IVirtualUI.

Group

DevMode Method

IDL

```
[propput, id(0x00000069)]
HRESULT _stdcall DevMode([in] VARIANT_BOOL Value);
```

Description

This is DevMode, a member of class IVirtualUI.

Group

DevMode Method

9.1.1.5.1.2 Enabled Method

Enables/disables VirtualUI for the container application.

Overload List

	Name	Description
	IVirtualUI::Enabled ([in] VARIANT_BOOL)	This is Enabled, a member of class IVirtualUI.
	IVirtualUI::Enabled ([out, retval] VARIANT_BOOL*)	This is Enabled, a member of class IVirtualUI.

Group

IVirtualUI Methods

IDL

```
[propget, id(0x0000006A)]
HRESULT _stdcall Enabled([out, retval] VARIANT_BOOL* Value);
```

Description

This is Enabled, a member of class IVirtualUI.

Group

Enabled Method

IDL

```
[propput, id(0x0000006A)]
HRESULT _stdcall Enabled([in] VARIANT_BOOL Value);
```

Description

This is Enabled, a member of class IVirtualUI.

Group

Enabled Method

9.1.1.5.1.3 StdDialogs Method

Enables/disables the use of standard dialogs.

Remarks

When set to false, the standard save, open and print dialogs are replaced by native browser ones, enabling you to extend the operations to the remote computer.

Overload List

	Name	Description
	IVirtualUI::StdDialogs ([in] VARIANT_BOOL)	This is StdDialogs, a member of class IVirtualUI.
	IVirtualUI::StdDialogs ([out, retval] VARIANT_BOOL*)	This is StdDialogs, a member of class IVirtualUI.

Group

IVirtualUI Methods

IDL

```
[propget, id(0x0000006B)]
HRESULT _stdcall StdDialogs([out, retval] VARIANT_BOOL* Value);
```

Description

This is StdDialogs, a member of class IVirtualUI.

Group

StdDialogs Method

IDL

```
[propput, id(0x0000006B)]
HRESULT _stdcall StdDialogs([in] VARIANT_BOOL Value);
```

Description

This is StdDialogs, a member of class IVirtualUI.

Group

StdDialogs Method

9.1.1.5.1.4 IVirtualUI::Start Method

Starts the VirtualUI's activation process. Returns true if VirtualUI was fully activated or false if the passed timeout expired.

IDL

```
[id(0x00000066)]
HRESULT _stdcall Start([in] long Timeout, [out, retval] VARIANT_BOOL* OutRetVal);
```

Parameters

Parameters	Description
[in] long Timeout	Maximum time, in seconds, until the activation process is canceled. Defaults to 60 seconds.

Remarks

To fully activate VirtualUI, the connection with the end-user's web browser must established within the time specified by Timeout parameter.

Group

IVirtualUI Methods

9.1.1.5.1.5 IVirtualUI::Stop Method

Deactivates VirtualUI, closing the connection with the end-user's web browser

IDL

```
[id(0x00000067)]
HRESULT _stdcall Stop();
```

Group

IVirtualUI Methods

9.1.1.5.1.6 IVirtualUI::Active Method

Returns the VirtualUI's state.

IDL

```
[propget, id(0x00000068)]
HRESULT _stdcall Active([out, retval] VARIANT_BOOL* Value);
```

Group

IVirtualUI Methods

9.1.1.5.1.7 IVirtualUI::BrowserInfo Method

Contains information regarding the end-user's environment.

IDL

```
[propget, id(0x00000065)]
HRESULT _stdcall BrowserInfo([out, retval] IBrowserInfo** Value);
```

Group

IVirtualUI Methods

9.1.1.5.1.8 IVirtualUI::DevServer Method

Allows for managing the Development Server.

IDL

```
[propget, id(0x0000006E)]
HRESULT _stdcall DevServer([out, retval] IDevServer** Value);
```

Group

IVirtualUI Methods

9.1.1.5.1.9 IVirtualUI::ClientSettings Method

Controls some working parameters on the client side.

IDL

```
[propget, id(0x0000006F)]
HRESULT _stdcall ClientSettings([out, retval] IClientSettings** Value);
```

Group

IVirtualUI Methods

9.1.1.5.1.10 IVirtualUI::DownloadFile Method

Sends the specified file to the end-user's web browser for saving it in the remote machine.

IDL

```
[id(0x00000070)]
HRESULT _stdcall DownloadFile([in] BSTR LocalFilename, [in] BSTR RemoteFilename, [in] BSTR MimeTyp
```

Parameters

Parameters	Description
[in] BSTR LocalFilename	Name of the local file to be sent.
[in] BSTR RemoteFilename	Name of the file in the remote machine.
[in] BSTR MimeType	content-type of the file. If specified, the content will be handled by browser. Leave blank to force download.

Group

IVirtualUI Methods

9.1.1.5.1.11 IVirtualUI::PrintPdf Method

Sends the specified PDF file to be shown on the end-user's web browser.

IDL

```
[id(0x00000071)]
HRESULT _stdcall PrintPdf([in] BSTR AFileName);
```

Parameters

Parameters	Description

FileName	Name of the PDF file.

Remarks

PrintPDF is similar to DownloadFile, except that it downloads the file with a content-type: application/pdf.

Group

IVirtualUI Methods

9.1.1.5.1.12 IVirtualUI::OpenLinkDlg Method

IDL

```
[id(0x00000072)]
HRESULT _stdcall OpenLinkDlg([in] BSTR url, [in] BSTR caption);
```

Description

This is OpenLinkDlg, a member of class IVirtualUI.

Group

IVirtualUI Methods

9.1.1.5.1.13 IVirtualUI::SendMessage Method

Sends a data string to the web browser.

IDL

```
[id(0x00000073)]
HRESULT _stdcall SendMessage([in] BSTR Data);
```

Remarks

This method is used to send custom data to the browser for custom purposes.

Group

IVirtualUI Methods

9.1.1.5.1.14 IVirtualUI::AllowExecute Method

Allows the execution of the passed application.

IDL

```
[id(0x00000074)]
HRESULT _stdcall AllowExecute([in] BSTR Filename);
```

Parameters

Parameters	Description
[in] BSTR Filename	regular expression specifying the filename(s) of the applications allowed to run.

Remarks

Under VirtualUI environment, only applications precompiled with VirtualUI SDK should be allowed to run. Applications not under VirtualUI control, cannot be controlled.

Group

IVirtualUI Methods

9.1.1.5.1.15 IVirtualUI::SetImageQualityByWnd Method

IDL

```
[id(0x00000075)]
HRESULT _stdcall SetImageQualityByWnd([in] long Wnd, [in] BSTR Class, [in] long Quality);
```

Description

This is SetImageQualityByWnd, a member of class IVirtualUI.

Group

IVirtualUI Methods

9.1.1.5.1.16 IVirtualUI::UploadFile Method

IDL

```
[id(0x00000076)]
HRESULT _stdcall UploadFile([in] BSTR ServerDirectory);
```

Description

This is UploadFile, a member of class IVirtualUI.

Group

IVirtualUI Methods

9.1.1.5.1.17 IVirtualUI::TakeScreenshot Method

IDL

```
[id(0x00000077)]
HRESULT _stdcall TakeScreenshot([in] long Wnd, [in] BSTR FileName, [out, retval] VARIANT_BOOL* Out
```

Description

This is TakeScreenshot, a member of class IVirtualUI.

Group

IVirtualUI Methods

9.1.1.5.1.18 IVirtualUI::ShowVirtualKeyboard Method

```
IDL
[id(0x00000078)]
HRESULT _stdcall ShowVirtualKeyboard();
```

Description

This is ShowVirtualKeyboard, a member of class IVirtualUI.

Group

IVirtualUI Methods

9.1.1.6 IBrowserInfo Interface

Contains information regarding the end-user's screen, web browser, the window containing VirtualUI Viewer and VirtualUI Viewer itself. The VirtualUI Viewer tuns inside an HTML DIV element contained in a frame o browser window on the end-user's application page.

Class Hierarchy


```
IDL
[ uuid(4D9F5347-460B-4275-BDF2-F2738E7F6757), dual, oleautomation ]
interface IBrowserInfo : IDispatch;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.6.1 IBrowserInfo Methods

The methods of the IBrowserInfo class are listed here.

Interface

IBrowserInfo Interface

Public Methods

	Name	Description

	ViewHeight	Returns the height of the VirtualUI Viewer.
	ViewWidth	Returns the width of the VirtualUI Viewer.
	BrowserWidth	Returns the width of the window containing the VirtualUI Viewer.
	BrowserHeight	Returns the height of the window containing the VirtualUI Viewer.
	ScreenWidth	Returns the width of the end-user's monitor screen.
	ScreenHeight	Returns the height of the end-user's monitor screen.
	Username	Returns the logged-on Username.
	IPAddress	Returns the client's IP address.
	UserAgent	Returns the browser's User Agent string
	ScreenResolution	Returns the application screen resolution defined in the application profile.
	Orientation	Returns the browser's orientation.
	UniqueBrowserId	This is UniqueBrowserId, a member of class IBrowserInfo.
	GetCookie	This is GetCookie, a member of class IBrowserInfo.
	SetCookie	This is SetCookie, a member of class IBrowserInfo.
	Location	This is Location, a member of class IBrowserInfo.

9.1.1.6.1.1 ViewHeight Method

Returns the height of the VirtualUI Viewer.

Overload List

	Name	Description
	IBrowserInfo::ViewHeight ([in] long)	This is ViewHeight, a member of class IBrowserInfo.
	IBrowserInfo::ViewHeight ([out, retval] long*)	This is ViewHeight, a member of class IBrowserInfo.

Group

IBrowserInfo Methods

IDL

```
[propget, id(0x00000066)]
HRESULT _stdcall ViewHeight([out, retval] long* Value);
```

Description

This is ViewHeight, a member of class IBrowserInfo.

Group

ViewHeight Method

IDL

```
[propput, id(0x00000066)]
HRESULT _stdcall ViewHeight([in] long Value);
```

Description

This is ViewHeight, a member of class IBrowserInfo.

Group

ViewHeight Method

9.1.1.6.1.2 ViewWidth Method

Returns the width of the VirtualUI Viewer.

Overload List

	Name	Description
	IBrowserInfo::ViewWidth ([in] long)	This is ViewWidth, a member of class IBrowserInfo.
	IBrowserInfo::ViewWidth ([out, retval] long*)	This is ViewWidth, a member of class IBrowserInfo.

Group

IBrowserInfo Methods

IDL

```
[propget, id(0x00000065)]
HRESULT _stdcall ViewWidth([out, retval] long* Value);
```

Description

This is ViewWidth, a member of class IBrowserInfo.

Group

ViewWidth Method

IDL

```
[propput, id(0x00000065)]
HRESULT _stdcall ViewWidth([in] long Value);
```

Description

This is ViewWidth, a member of class IBrowserInfo.

Group

ViewWidth Method

9.1.1.6.1.3 IBrowserInfo::BrowserWidth Method

Returns the width of the window containing the VirtualUI Viewer.

IDL

```
[propget, id(0x00000067)]
HRESULT _stdcall BrowserWidth([out, retval] long* Value);
```

Group

IBrowserInfo Methods

9.1.1.6.1.4 IBrowserInfo::BrowserHeight Method

Returns the height of the window containing the VirtualUI Viewer.

IDL

```
[propget, id(0x00000068)]
HRESULT _stdcall BrowserHeight([out, retval] long* Value);
```

Group

IBrowserInfo Methods

9.1.1.6.1.5 IBrowserInfo::ScreenWidth Method

Returns the width of the end-user's monitor screen.

IDL

```
[propget, id(0x00000069)]
HRESULT _stdcall ScreenWidth([out, retval] long* Value);
```

Group

IBrowserInfo Methods

9.1.1.6.1.6 IBrowserInfo::ScreenHeight Method

Returns the height of the end-user's monitor screen.

IDL

```
[propget, id(0x0000006A)]
```

```
HRESULT _stdcall ScreenHeight([out, retval] long* Value);
```

Group

IBrowserInfo Methods

9.1.1.6.1.7 IBrowserInfo::Username Method

Returns the logged-on Username.

IDL

```
[propget, id(0x0000006B)]
HRESULT _stdcall Username([out, retval] BSTR* Value);
```

Group

IBrowserInfo Methods

9.1.1.6.1.8 IBrowserInfo::IPAddress Method

Returns the client's IP address.

IDL

```
[propget, id(0x0000006D)]
HRESULT _stdcall IPAddress([out, retval] BSTR* Value);
```

Group

IBrowserInfo Methods

9.1.1.6.1.9 IBrowserInfo::UserAgent Method

Returns the browser's User Agent string

IDL

```
[propget, id(0x0000006E)]
HRESULT _stdcall UserAgent([out, retval] BSTR* Value);
```

Group

IBrowserInfo Methods

9.1.1.6.1.10 IBrowserInfo::ScreenResolution Method

Returns the application screen resolution defined in the application profile.

IDL

```
[propget, id(0x0000006F)]
HRESULT _stdcall ScreenResolution([out, retval] long* Value);
```

Group

IBrowserInfo Methods

9.1.1.6.1.11 IBrowserInfo::Orientation Method

Returns the browser's orientation.

IDL

```
[propget, id(0x000000C9)]
HRESULT _stdcall Orientation([out, retval] enum Orientation* Value);
```

Group

IBrowserInfo Methods

9.1.1.6.1.12 IBrowserInfo::UniqueBrowserId Method

IDL

```
[propget, id(0x000000CA)]
HRESULT _stdcall UniqueBrowserId([out, retval] BSTR* Value);
```

Description

This is UniqueBrowserId, a member of class IBrowserInfo.

Group

IBrowserInfo Methods

9.1.1.6.1.13 IBrowserInfo::GetCookie Method

IDL

```
[id(0x000000CB)]
HRESULT _stdcall GetCookie([in] BSTR Name, [out, retval] BSTR* Value);
```

Description

This is GetCookie, a member of class IBrowserInfo.

Group

IBrowserInfo Methods

9.1.1.6.1.14 IBrowserInfo::SetCookie Method

IDL

```
[id(0x000000CC)]
HRESULT _stdcall SetCookie([in] BSTR Name, [in] BSTR Value, [in] BSTR Expires);
```

Description

This is SetCookie, a member of class IBrowserInfo.

Group

IBrowserInfo Methods

9.1.1.6.1.15 IBrowserInfo::Location Method

IDL

```
[propget, id(0x000000CD)]
HRESULT _stdcall Location([out, retval] BSTR* Value);
```

Description

This is Location, a member of class IBrowserInfo.

Group

IBrowserInfo Methods

9.1.1.7 IDevServer Interface

Contains properties to manage the VirtualUI Development Server as well as the access from the developer's web browser.

Class Hierarchy

IDL
[uuid(B3EAC0CA-D7AB-4AB1-9E24-84A63C8C3F80), dual, oleautomation]
interface IDevServer : IDispatch;

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.7.1 IDevServer Methods

The methods of the IDevServer class are listed here.

Interface

IDevServer Interface

Public Methods

	Name	Description
	Enabled	Enables/disables the Development Server.
	Port	Gets/sets the Development Server's TCP/IP listening port.
	StartBrowser	Instructs VirtualUI whether start or not the local web browser upon VirtualUI activation.

9.1.1.7.1.1 Enabled Method

Enables/disables the Development Server.

Overload List

	Name	Description
	IDevServer::Enabled ([in] VARIANT_BOOL)	This is Enabled, a member of class IDevServer.
	IDevServer::Enabled ([out, retval] VARIANT_BOOL*)	This is Enabled, a member of class IDevServer.

Group

IDevServer Methods

IDL

```
[propget, id(0x000000C9)]
HRESULT _stdcall Enabled([out, retval] VARIANT_BOOL* Value);
```

Description

This is Enabled, a member of class IDevServer.

Group

Enabled Method

IDL

```
[propput, id(0x000000C9)]
HRESULT _stdcall Enabled([in] VARIANT_BOOL Value);
```

Description

This is Enabled, a member of class IDevServer.

Group

Enabled Method

9.1.1.7.1.2 Port Method

Gets/sets the Development Server's TCP/IP listening port.

Overload List

	Name	Description
	IDevServer::Port ([in] long)	This is Port, a member of class IDevServer.
	IDevServer::Port ([out, retval] long*)	This is Port, a member of class IDevServer.

Group

IDevServer Methods

IDL

```
[propget, id(0x000000CA)]
HRESULT _stdcall Port([out, retval] long* Value);
```

Description

This is Port, a member of class IDevServer.

Group

Port Method

IDL

```
[propput, id(0x000000CA)]
HRESULT _stdcall Port([in] long Value);
```

Description

This is Port, a member of class IDevServer.

Group

Port Method

9.1.1.7.1.3 StartBrowser Method

Instructs VirtualUI whether start or not the local web browser upon VirtualUI activation.

Overload List

	Name	Description
	IDevServer::StartBrowser ([in] VARIANT_BOOL)	This is StartBrowser, a member of class IDevServer.
	IDevServer::StartBrowser ([out, retval]	This is StartBrowser, a member of class IDevServer.

	VARIANT_BOOL*)	

Group

IDevServer Methods

IDL
```
[propget, id(0x000000CB)]
HRESULT _stdcall StartBrowser([out, retval] VARIANT_BOOL* Value);
```

Description

This is StartBrowser, a member of class IDevServer.

Group

StartBrowser Method

IDL
```
[propput, id(0x000000CB)]
HRESULT _stdcall StartBrowser([in] VARIANT_BOOL Value);
```

Description

This is StartBrowser, a member of class IDevServer.

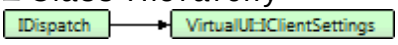
Group

StartBrowser Method

9.1.1.8 IClientSettings Interface

Contains settings that are synchronized with the VirtualUI Viewer.

Class Hierarchy



IDL
```
[ uuid(439624CA-ED33-47BE-9211-91290F29584A), dual, oleautomation ]
interface IClientSettings : IDispatch;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.8.1 IClientSettings Methods

The methods of the IClientSettings class are listed here.

Interface

IClientSettings Interface

Public Methods

	Name	Description
	CursorVisible	Hides/shows the mouse pointer.
	MouseMoveGestureAction	Specifies whether the "mouse move" simulation on a touch device is interpreted as a mouse move or as a mouse wheel.
	MouseMoveGestureStyle	Valid for touch devices. Specifies whether the mouse pointer is shown and acts on the exact spot of the finger touch (absolute) or its position is managed relatively to the movement of the finger touch (relative).

9.1.1.8.1.1 CursorVisible Method

Hides/shows the mouse pointer.

Overload List

	Name	Description
	IClientSettings::CursorVisible ([in] VARIANT_BOOL)	This is CursorVisible, a member of class IClientSettings.
	IClientSettings::CursorVisible ([out, retval] VARIANT_BOOL*)	This is CursorVisible, a member of class IClientSettings.

Group

IClientSettings Methods

IDL

```
[propget, id(0x000000CB)]
HRESULT _stdcall CursorVisible([out, retval] VARIANT_BOOL* Value);
```

Description

This is CursorVisible, a member of class IClientSettings.

Group

CursorVisible Method

IDL

```
[propput, id(0x000000CB)]
HRESULT _stdcall CursorVisible([in] VARIANT_BOOL Value);
```

Description

This is CursorVisible, a member of class IClientSettings.

Group

CursorVisible Method

9.1.1.8.1.2 MouseMoveGestureAction Method

Specifies whether the "mouse move" simulation on a touch device is interpreted as a mouse move or as a mouse wheel.

Overload List

	Name	Description
	IClientSettings::MouseMoveGestureAction ([in] enum MouseMoveGestureAction)	This is MouseMoveGestureAction, a member of class IClientSettings.
	IClientSettings::MouseMoveGestureAction ([out, retval] enum MouseMoveGestureAction*)	This is MouseMoveGestureAction, a member of class IClientSettings.

Group

IClientSettings Methods

IDL

```
[propget, id(0x000000CA)]
HRESULT _stdcall MouseMoveGestureAction([out, retval] enum MouseMoveGestureAction* Value);
```

Description

This is MouseMoveGestureAction, a member of class IClientSettings.

Group

MouseMoveGestureAction Method

IDL

```
[propput, id(0x000000CA)]
HRESULT _stdcall MouseMoveGestureAction([in] enum MouseMoveGestureAction Value);
```

Description

This is MouseMoveGestureAction, a member of class IClientSettings.

Group

MouseMoveGestureAction Method

9.1.1.8.1.3 MouseMoveGestureStyle Method

Valid for touch devices. Specifies whether the mouse pointer is shown and acts on the exact spot of the finger touch (absolute) or its position is managed relatively to the movement of the finger touch (relative).

Overload List

	Name	Description
	IClientSettings::MouseMoveGestureStyle ([in] enum MouseMoveGestureStyle)	This is MouseMoveGestureStyle, a member of class IClientSettings.
	IClientSettings::MouseMoveGestureStyle ([out, retval] enum MouseMoveGestureStyle*)	This is MouseMoveGestureStyle, a member of class IClientSettings.

Group

IClientSettings Methods

IDL

```
[propget, id(0x000000C9)]
HRESULT _stdcall MouseMoveGestureStyle([out, retval] enum MouseMoveGestureStyle* Value);
```

Description

This is MouseMoveGestureStyle, a member of class IClientSettings.

Group

MouseMoveGestureStyle Method

IDL

```
[propput, id(0x000000C9)]
HRESULT _stdcall MouseMoveGestureStyle([in] enum MouseMoveGestureStyle Value);
```

Description

This is MouseMoveGestureStyle, a member of class IClientSettings.

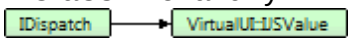
Group

MouseMoveGestureStyle Method

9.1.1.9 IJSValue Interface

Base interface for IJSNamedValue, IJSProperty and IJSArgument.

Class Hierarchy



IDL
```
[ uuid(6DE2E6A0-3C3A-47DC-9A93-928135EDAC90), dual, oleautomation ]
interface IJSValue : IDispatch;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.9.1 IJSValue Methods

The methods of the IJSValue class are listed here.

Interface

IJSValue Interface

Public Methods

	Name	Description
	AsBool	Sets/gets a boolean value.
	AsFloat	Sets/gets a float value.
	AsInt	Sets/gets an integer value.
	AsJSON	Sets/gets a JSON-formatted string value.
	AsString	Sets/gets a string value.
	DataType	Sets/gets a data type.
	RawValue	This is the overview for the RawValue method overload.

9.1.1.9.1.1 AsBool Method

Sets/gets a boolean value.

Overload List

	Name	Description

	IJSValue::AsBool ([in] VARIANT_BOOL)	This is AsBool, a member of class IJSValue.
	IJSValue::AsBool ([out, retval] VARIANT_BOOL*)	This is AsBool, a member of class IJSValue.

Group

IJSValue Methods

IDL

```
[propget, id(0x000000CD)]
HRESULT _stdcall AsBool([out, retval] VARIANT_BOOL* Value);
```

Description

This is AsBool, a member of class IJSValue.

Group

AsBool Method

IDL

```
[propput, id(0x000000CD)]
HRESULT _stdcall AsBool([in] VARIANT_BOOL Value);
```

Description

This is AsBool, a member of class IJSValue.

Group

AsBool Method

9.1.1.9.1.2 AsFloat Method

Sets/gets a float value.

Overload List

	Name	Description
	IJSValue::AsFloat ([in] float)	This is AsFloat, a member of class IJSValue.
	IJSValue::AsFloat ([out, retval] float*)	This is AsFloat, a member of class IJSValue.

Group

IJSValue Methods

IDL

```
[propget, id(0x000000CE)]
HRESULT _stdcall AsFloat([out, retval] float* Value);
```

Description

This is AsFloat, a member of class IJSValue.

Group

AsFloat Method

IDL

```
[propput, id(0x000000CE)]
HRESULT _stdcall AsFloat([in] float Value);
```

Description

This is AsFloat, a member of class IJSValue.

Group

AsFloat Method

9.1.1.9.1.3 AsInt Method

Sets/gets an integer value.

Overload List

	Name	Description
	IJSValue::AsInt ([in] long)	This is AsInt, a member of class IJSValue.
	IJSValue::AsInt ([out, retval] long*)	This is AsInt, a member of class IJSValue.

Group

IJSValue Methods

IDL

```
[propget, id(0x000000CC)]
HRESULT _stdcall AsInt([out, retval] long* Value);
```

Description

This is AsInt, a member of class IJSValue.

Group

AsInt Method

IDL

```
[propput, id(0x000000CC)]
HRESULT _stdcall AsInt([in] long Value);
```

Description

This is AsInt, a member of class IJSValue.

Group

AsInt Method

9.1.1.9.1.4 AsJSON Method

Sets/gets a JSON-formatted string value.

Overload List

	Name	Description
	IJSValue::AsJSON ([in] BSTR)	This is AsJSON, a member of class IJSValue.
	IJSValue::AsJSON ([out, retval] BSTR*)	This is AsJSON, a member of class IJSValue.

Group

IJSValue Methods

IDL

```
[propget, id(0x000000CF)]
HRESULT _stdcall AsJSON([out, retval] BSTR* Value);
```

Description

This is AsJSON, a member of class IJSValue.

Group

AsJSON Method

IDL

```
[propput, id(0x000000CF)]
HRESULT _stdcall AsJSON([in] BSTR Value);
```

Description

This is AsJSON, a member of class IJSValue.

Group

AsJSON Method

9.1.1.9.1.5 AsString Method

Sets/gets a string value.

Overload List

	Name	Description
	IJSValue::AsString ([in] BSTR)	This is AsString, a member of class IJSValue.
	IJSValue::AsString ([out, retval] BSTR*)	This is AsString, a member of class IJSValue.

Group

IJSValue Methods

IDL

```
[propget, id(0x000000CB)]
HRESULT _stdcall AsString([out, retval] BSTR* Value);
```

Description

This is AsString, a member of class IJSValue.

Group

AsString Method

IDL

```
[propput, id(0x000000CB)]
HRESULT _stdcall AsString([in] BSTR Value);
```

Description

This is AsString, a member of class IJSValue.

Group

AsString Method

9.1.1.9.1.6 DataType Method

Sets/gets a data type.

Overload List

	Name	Description
	IJSValue::DataType ([in] enum IJSDataType)	This is DataType, a member of class IJSValue.
	IJSValue::DataType ([out, retval] enum IJSDataType*)	This is DataType, a member of class IJSValue.

Group

IJSValue Methods

IDL

```
[propget, id(0x000000C9)]
HRESULT _stdcall DataType([out, retval] enum IJSDataType* Value);
```

Description

This is DataType, a member of class IJSValue.

Group

DataType Method

IDL

```
[propput, id(0x000000C9)]
HRESULT _stdcall DataType([in] enum IJSDataType Value);
```

Description

This is DataType, a member of class IJSValue.

Group

DataType Method

9.1.1.9.1.7 RawValue Method

This is the overview for the RawValue method overload.

Description

Sets/gets the rawvalue.

Overload List

	Name	Description
	IJSValue::RawValue ([in] VARIANT)	This is RawValue, a member of class IJSValue.

	IJSValue::RawValue ([out, retval] VARIANT*)	This is RawValue, a member of class IJSValue.

Group

IJSValue Methods

IDL

```
[propget, id(0x000000CA)]
HRESULT _stdcall RawValue([out, retval] VARIANT* Value);
```

Description

This is RawValue, a member of class IJSValue.

Group

RawValue Method

IDL

```
[propput, id(0x000000CA)]
HRESULT _stdcall RawValue([in] VARIANT Value);
```

Description

This is RawValue, a member of class IJSValue.

Group

RawValue Method

9.1.1.10 IJSNamedValue Interface

Base interface for IJSProperty and IJSArgument.

Class Hierarchy

IDL

```
[ uuid(E492419B-00AC-4A91-9AE9-9A82B07E89AE), dual, oleautomation ]
interface IJSNamedValue : IJSValue;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.10.1 IJSNamedValue Methods

The methods of the IJSNamedValue class are listed here.

Interface

IJSNamedValue Interface

Public Methods

	Name	Description
	Name	Sets/gets the name.

9.1.1.10.1.1 Name Method

Sets/gets the name.

Overload List

	Name	Description
	IJSNamedValue::Name ([in] BSTR)	This is Name, a member of class IJSNamedValue.
	IJSNamedValue::Name ([out, retval] BSTR*)	This is Name, a member of class IJSNamedValue.

Group

IJSNamedValue Methods

IDL

```
[propget, id(0x0000012D)]
HRESULT _stdcall Name([out, retval] BSTR* Value);
```

Description

This is Name, a member of class IJSNamedValue.

Group

Name Method

IDL

```
[propput, id(0x0000012D)]
HRESULT _stdcall Name([in] BSTR Value);
```

Description

This is Name, a member of class IJSNamedValue.

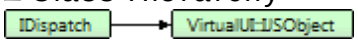
Group

Name Method

9.1.1.11 IJSObject Interface

Represents a custom remotable object.

Class Hierarchy



IDL
[uuid(59342310-79A7-4B14-8B63-6DF05609AE30), dual, oleautomation]
interface IJSObject : IDispatch;

File

VirtualUIX.ridl

Remarks

IJSObject allows you to define an object model that is mirrored on the client side, and allows for a easy, powerful and straight-forward way to connect the web browser client application and the remoted Windows application.

IJSObject can contain properties (IJSProperties), methods (IJSMethods), events (IJSEvents) and children objects. Changes to properties values are propagated in from server to client and viceversa, keeping the data synchronized.

IJSObject is defined as a model seen from the client perspective. A method (IJSMethod) is called on the client side and executed on the server side. An event (IJSEvent) is called on the server side and raised on the client side.

Library

VirtualUI Runtime Library

9.1.1.11.1 IJSObject Methods

The methods of the IJSObject class are listed here.

Interface

IJSObject Interface

Public Methods

	Name	Description
	Id	This is the overview for the Id method overload.
	Properties	This is Properties, a member of class IJSObject.

	Methods	This is Methods, a member of class IJSObject.
	Events	This is Events, a member of class IJSObject.
	Objects	This is Objects, a member of class IJSObject.
	FireEvent	This is FireEvent, a member of class IJSObject.
	ApplyChanges	This is ApplyChanges, a member of class IJSObject.
	ApplyModel	This is ApplyModel, a member of class IJSObject.

9.1.1.11.1.1 Id Method

This is the overview for the Id method overload.

Overload List

	Name	Description
	IJSObject::Id ([in] BSTR)	This is Id, a member of class IJSObject.
	IJSObject::Id ([out, retval] BSTR*)	This is Id, a member of class IJSObject.

Group

IJSObject Methods

IDL

```
[propget, id(0x000000C9)]
HRESULT _stdcall Id([out, retval] BSTR* Value);
```

Description

This is Id, a member of class IJSObject.

Group

Id Method

IDL

```
[propput, id(0x000000C9)]
HRESULT _stdcall Id([in] BSTR Value);
```

Description

This is Id, a member of class IJSObject.

Group

Id Method

9.1.1.11.1.2 IJSObject::Properties Method

IDL

```
[propget, id(0x000000CA)]
HRESULT _stdcall Properties([out, retval] IJSProperties** Value);
```

Description

This is Properties, a member of class IJSObject.

Group

IJSObject Methods

9.1.1.11.1.3 IJSObject::Methods Method

IDL

```
[propget, id(0x000000CB)]
HRESULT _stdcall Methods([out, retval] IJSMethods** Value);
```

Description

This is Methods, a member of class IJSObject.

Group

IJSObject Methods

9.1.1.11.1.4 IJSObject::Events Method

IDL

```
[propget, id(0x000000CC)]
HRESULT _stdcall Events([out, retval] IJSEvents** Value);
```

Description

This is Events, a member of class IJSObject.

Group

IJSObject Methods

9.1.1.11.1.5 IJSObject::Objects Method

IDL

```
[propget, id(0x000000CD)]
HRESULT _stdcall Objects([out, retval] IJSObjects** Value);
```

Description

This is Objects, a member of class IJSObject.

Group

IJSObject Methods

9.1.1.11.1.6 IJSObject::FireEvent Method

IDL

```
[id(0x000000CE)]
HRESULT _stdcall FireEvent([in] BSTR Name, [in] IJSArguments* Arguments);
```

Description

This is FireEvent, a member of class IJSObject.

Group

IJSObject Methods

9.1.1.11.1.7 IJSObject::ApplyChanges Method

IDL

```
[id(0x000000CF)]
HRESULT _stdcall ApplyChanges();
```

Description

This is ApplyChanges, a member of class IJSObject.

Group

IJSObject Methods

9.1.1.11.1.8 IJSObject::ApplyModel Method

IDL

```
[id(0x000000D0)]
HRESULT _stdcall ApplyModel();
```

Description

This is ApplyModel, a member of class IJSObject.

Group

IJSObject Methods

9.1.1.12 IJSObjects Interface

Collection of IJSObjects

Class Hierarchy

IDL
```
[ uuid(C2406011-568E-4EAC-B95C-EF29E4806B86), dual, oleautomation ]
interface IJSObjects : IDispatch;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.12.1 IJSObjects Methods

The methods of the IJSObjects class are listed here.

Interface

IJSObjects Interface

Public Methods

	Name	Description
	Count	Returns the number of items in the collection.
	Item	Returns an item.
	Clear	Clears the collection.
	Add	Adds a new object to the collection.
	Remove	Removes an item from the collection.

9.1.1.12.1.1 IJSObjects::Count Method

Returns the number of items in the collection.

IDL
```
[propget, id(0x000000C9)]
HRESULT _stdcall Count([out, retval] long* Value);
```

Group

IJSObjects Methods

9.1.1.12.1.2 IJSObjects::Item Method

Returns an item.

IDL

```
[propget, id(0x00000000), defaultcollelem]
HRESULT _stdcall Item([in] VARIANT Index, [out, retval] IJSObject** Value);
```

Parameters

Parameters	Description
[in] VARIANT Index	OleVariant. Number indicating the index of the item in the collection or string indicating the name of the item.
OutRetVal	Returns the selected item.

Group

IJSObjects Methods

9.1.1.12.1.3 IJSObjects::Clear Method

Clears the collection.

IDL

```
[id(0x000000CC)]
HRESULT _stdcall Clear();
```

Group

IJSObjects Methods

9.1.1.12.1.4 IJSObjects::Add Method

Adds a new object to the collection.

IDL

```
[id(0x000000CD)]
HRESULT _stdcall Add([in] BSTR Id, [out, retval] IJSObject** Value);
```

Parameters

Parameters	Description
Name	Object name.
OutRetVal	Returns the newly created object.

Group

IJSObjects Methods

9.1.1.12.1.5 IJSObjects::Remove Method

Removes an item from the collection.

IDL

```
[id(0x000000CE)]
HRESULT _stdcall Remove([in] IJSObject* Item);
```

Parameters

Parameters	Description
[in] IJSObject* Item	Item to remove

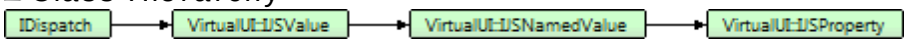
Group

IJSObjects Methods

9.1.1.13 IJSProperty Interface

Represents a property in a custom remotable object.

Class Hierarchy



IDL

```
[ uuid(1F95C0E9-E7BF-48C9-AA35-88AD0149109B), dual, oleautomation ]
interface IJSProperty : IJSNamedValue;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.13.1 IJSProperty Methods

The methods of the IJSProperty class are listed here.

Interface

IJSProperty Interface

Public Methods

	Name	Description

	ReadOnly	Sets/gets the readonly attribute. If Readonly is true, the property value cannot be altered on the client side.
	OnGet	Allows you to pass an interface that will receive control at property initialization and when you make a call to IJSObject.ApplyChanges.
	OnSet	Allows you to pass an interface that will receive control when a property changes on the client side.

9.1.1.13.1.1 ReadOnly Method

Sets/gets the readonly attribute. If Readonly is true, the property value cannot be altered on the client side.

Overload List

	Name	Description
	IJSProperty::ReadOnly ([in] VARIANT_BOOL)	This is ReadOnly, a member of class IJSProperty.
	IJSProperty::ReadOnly ([out, retval] VARIANT_BOOL*)	This is ReadOnly, a member of class IJSProperty.

Group

IJSProperty Methods

IDL

```
[propget, id(0x00000191)]
HRESULT _stdcall ReadOnly([out, retval] VARIANT_BOOL* Value);
```

Description

This is ReadOnly, a member of class IJSProperty.

Group

ReadOnly Method

IDL

```
[propput, id(0x00000191)]
HRESULT _stdcall ReadOnly([in] VARIANT_BOOL Value);
```

Description

This is ReadOnly, a member of class IJSProperty.

Group

ReadOnly Method

9.1.1.13.1.2 IJSProperty::OnGet Method

Allows you to pass an interface that will receive control at property initialization and when you make a call to IJSObject.ApplyChanges.

IDL

```
[id(0x00000192)]
HRESULT _stdcall OnGet([in] IJSBinding* Binding, [out, retval] IJSProperty** OutRetVal);
```

Parameters

Parameters	Description
[in] IJSBinding* Binding	IJSBinding interface
[out, retval] IJSProperty** OutRetVal	Returns the parent property

Group

IJSProperty Methods

9.1.1.13.1.3 IJSProperty::OnSet Method

Allows you to pass an interface that will receive control when a property changes on the client side.

IDL

```
[id(0x00000193)]
HRESULT _stdcall OnSet([in] IJSBinding* Binding, [out, retval] IJSProperty** OutRetVal);
```

Parameters

Parameters	Description
[in] IJSBinding* Binding	IJSBinding interface
[out, retval] IJSProperty** OutRetVal	Returns the parent property

Group

IJSProperty Methods

9.1.1.14 IJSProperties Interface

Collection of properties.

Class Hierarchy

IDL

```
[ uuid(FCBB688F-8FB2-42C1-86FC-0AAF3B2A500C), dual, oleautomation ]
interface IJSProperties : IDispatch;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.14.1 IJSProperties Methods

The methods of the IJSProperties class are listed here.

Interface

IJSProperties Interface

Public Methods

	Name	Description
	Count	Returns the number of items in the collection.
	Item	Returns an item.
	Clear	Clears the collection.
	Add	Adds a new property to the collection.
	Remove	Removes an item from the collection.

9.1.1.14.1.1 IJSProperties::Count Method

Returns the number of items in the collection.

IDL

```
[propget, id(0x000000C9)]
HRESULT _stdcall Count([out, retval] long* Value);
```

Group

IJSProperties Methods

9.1.1.14.1.2 IJSProperties::Item Method

Returns an item.

IDL

```
[propget, id(0x00000000), defaultcollelem]
HRESULT _stdcall Item([in] VARIANT Index, [out, retval] IJSProperty** Value);
```

Parameters

Parameters	Description

[in] VARIANT Index	OleVariant. Number indicating the index of the item in the collection or string indicating the name of the item.
OutRetVal	Returns the selected item.

Group

IJSProperties Methods

9.1.1.14.1.3 IJSProperties::Clear Method

Clears the collection.

IDL

```
[id(0x000000CC)]
HRESULT _stdcall Clear();
```

Group

IJSProperties Methods

9.1.1.14.1.4 IJSProperties::Add Method

Adds a new property to the collection.

IDL

```
[id(0x000000CD)]
HRESULT _stdcall Add([in] BSTR Name, [out, retval] IJSProperty** OutRetVal);
```

Parameters

Parameters	Description
[in] BSTR Name	Property name.
[out, retval] IJSProperty** OutRetVal	Returns the newly created property.

Group

IJSProperties Methods

9.1.1.14.1.5 IJSProperties::Remove Method

Removes an item from the collection.

IDL

```
[id(0x000000CE)]
HRESULT _stdcall Remove([in] IJSProperty* Item);
```

Parameters

Parameters	Description

[in] IJSProperty* Item	Item to remove

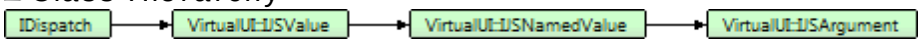
Group

IJSProperties Methods

9.1.1.15 IJSArgument Interface

Represents a parameter in events and methods.

Class Hierarchy



IDL
```
[ uuid(8F8C4462-D7B5-4696-BAD5-16DFAA6E2601), dual, oleautomation ]
interface IJSArgument : IJSNamedValue;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.16 IJSArguments Interface

Collection of IJSArgument.

Class Hierarchy

IDL
```
[ uuid(FC097EF5-6D8A-4C80-A2AD-382FDC75E901), dual, oleautomation ]
interface IJSArguments : IDispatch;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.16.1 IJSArguments Methods

The methods of the IJSArguments class are listed here.

Interface

IJSArguments Interface

Public Methods

	Name	Description
	Count	Returns the number of items in the collection.
	Item	Returns an item of the collection.
	Clear	Clears the collection.
	Add	Adds an argument to the collecton.
	Remove	Removes an item from the collection.

9.1.1.16.1.1 IJSArguments::Count Method

Returns the number of items in the collection.

IDL

```
[propget, id(0x000000C9)]
HRESULT _stdcall Count([out, retval] long* Value);
```

Group

IJSArguments Methods

9.1.1.16.1.2 IJSArguments::Item Method

Returns an item of the collection.

IDL

```
[propget, id(0x00000000), defaultcollelem]
HRESULT _stdcall Item([in] VARIANT Index, [out, retval] IJSArgument** Value);
```

Parameters

Parameters	Description
[in] VARIANT Index	OleVariant. Number indicating the index in the collection or string indicating the name of the method.
OutRetVal	Returns the selected IJSMethod

Group

IJSArguments Methods

9.1.1.16.1.3 IJSArguments::Clear Method

Clears the collection.

IDL

```
[id(0x000000CC)]
HRESULT _stdcall Clear();
```

Group

IJSArguments Methods

9.1.1.16.1.4 IJSArguments::Add Method

Adds an argument to the collecton.

IDL

```
[id(0x000000CD)]
HRESULT _stdcall Add([in] BSTR Name, [out, retval] IJSArgument** OutRetVal);
```

Parameters

Parameters	Description
[in] BSTR Name	Argument name
[out, retval] IJSArgument** OutRetVal	Returns a newly created IJSArgument

Group

IJSArguments Methods

9.1.1.16.1.5 IJSArguments::Remove Method

Removes an item from the collection.

IDL

```
[id(0x000000CE)]
HRESULT _stdcall Remove([in] IJSArgument* Item);
```

Parameters

Parameters	Description
[in] IJSArgument* Item	IJSMethod to remove

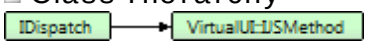
Group

IJSArguments Methods

9.1.1.17 IJSMethod Interface

This interface represents an method called on the client side and executed on the server side.

Class Hierarchy



IDL
[uuid(C45D6A8F-AD4A-47BB-AC3A-C125D6D5D27E), dual, oleautomation]
interface IJSMethod : IDispatch;

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.17.1 IJSMethod Methods

The methods of the IJSMethod class are listed here.

Interface

IJSMethod Interface

Public Methods

	Name	Description
	Name	This is the overview for the Name method overload.
	Arguments	Collection of arguments
	ReturnValue	Data to return to the remote caller.
	AddArgument	Adds an argument to the parameters list
	OnCall	Allows you to pass a IJSCallback interface that will receive a the remote call.

9.1.1.17.1.1 Name Method

This is the overview for the Name method overload.

Overload List

	Name	Description
	IJSMethod::Name ([in] BSTR)	This is Name, a member of class IJSMethod.
	IJSMethod::Name ([out, retval] BSTR*)	This is Name, a member of class IJSMethod.

Group

IJSMethod Methods

IDL
```
[propget, id(0x000000C9)]
```

```
HRESULT _stdcall Name([out, retval] BSTR* Value);
```

Description

This is Name, a member of class IJSMethod.

Group

Name Method

IDL

```
[propput, id(0x000000C9)]
HRESULT _stdcall Name([in] BSTR Value);
```

Description

This is Name, a member of class IJSMethod.

Group

Name Method

9.1.1.17.1.2 IJSMethod::Arguments Method

Collection of arguments

IDL

```
[propget, id(0x000000CA)]
HRESULT _stdcall Arguments([out, retval] IJSArguments** Value);
```

Group

IJSMethod Methods

9.1.1.17.1.3 IJSMethod::ReturnValue Method

Data to return to the remote caller.

IDL

```
[propget, id(0x000000CB)]
HRESULT _stdcall ReturnValue([out, retval] IJSValue** Value);
```

Group

IJSMethod Methods

9.1.1.17.1.4 IJSMethod::AddArgument Method

Adds an argument to the parameters list

IDL

```
[id(0x000000CC)]
HRESULT _stdcall AddArgument([in] BSTR Name, [in] enum IJSDataType DataType, [out, retval] IJSMeth
```

Parameters

Parameters	Description
[in] BSTR Name	Argument name
[in] enum IJSDataType DataType	Data type.
[out, retval] IJSMethod** OutRetVal	Returns the newly created argument.

Group

IJSMethod Methods

9.1.1.17.1.5 IJSMethod::OnCall Method

Allows you to pass a IJSCallback interface that will receive a the remote call.

IDL

```
[id(0x000000CD)]
HRESULT _stdcall OnCall([in] IJSCallback* Callback, [out, retval] IJSMethod** OutRetVal);
```

Parameters

Parameters	Description
[in] IJSCallback* Callback	Callback interface.
[out, retval] IJSMethod** OutRetVal	Returns the parent IJSMethod.

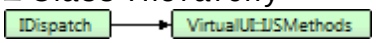
Group

IJSMethod Methods

9.1.1.18 IJSMethods Interface

Collection of methods.

Class Hierarchy



IDL

```
[ uuid(E4CB461F-586E-4121-ABD7-345B87BC423A), dual, oleautomation ]
interface IJSMethods : IDispatch;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.18.1 IJSMethods Methods

The methods of the IJSMethods class are listed here.

Interface

IJSMethods Interface

Public Methods

	Name	Description
	Count	Returns the number of items in the collection.
	Item	Returns an item.
	Clear	Clears the collection.
	Add	Adds a new method to the collection.
	Remove	Removes an item from the collection.

9.1.1.18.1.1 IJSMethods::Count Method

Returns the number of items in the collection.

IDL

```
[propget, id(0x000000C9)]
HRESULT _stdcall Count([out, retval] long* Value);
```

Group

IJSMethods Methods

9.1.1.18.1.2 IJSMethods::Item Method

Returns an item.

IDL

```
[propget, id(0x00000000), defaultcollelem]
HRESULT _stdcall Item([in] VARIANT Index, [out, retval] IJSMethod** Value);
```

Parameters

Parameters	Description
[in] VARIANT Index	OleVariant. Number indicating the index of the item in the collection or string indicating the name of the item.
OutRetVal	Returns the selected item.

Group

IJSMethods Methods

9.1.1.18.1.3 IJSMethods::Clear Method

Clears the collection.

IDL

```
[id(0x000000CC)]
HRESULT _stdcall Clear();
```

Group

IJSMethods Methods

9.1.1.18.1.4 IJSMethods::Add Method

Adds a new method to the collection.

IDL

```
[id(0x000000CD)]
HRESULT _stdcall Add([in] BSTR Name, [out, retval] IJSMethod** OutRetVal);
```

Parameters

Parameters	Description
[in] BSTR Name	Method name.
[out, retval] IJSMethod** OutRetVal	Returns the newly created method.

Group

IJSMethods Methods

9.1.1.18.1.5 IJSMethods::Remove Method

Removes an item from the collection.

IDL

```
[id(0x000000CE)]
HRESULT _stdcall Remove([in] IJSMethod* Item);
```

Parameters

Parameters	Description
[in] IJSMethod* Item	Item to remove

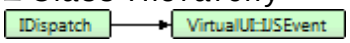
Group

IJSMethods Methods

9.1.1.19 IJSEvent Interface

This interface represents an event fired on the server side and raised on the client side.

Class Hierarchy



IDL
```
[ uuid(8B66EACD-9619-43CF-9196-DCDA17F5500E), dual, oleautomation ]
interface IJSEvent : IDispatch;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.19.1 IJSEvent Methods

The methods of the IJSEvent class are listed here.

Interface

IJSEvent Interface

Public Methods

	Name	Description
	Name	This is the overview for the Name method overload.
	Arguments	Collection of arguments.
	AddArgument	Adds an argument to the Arguments collection.
	ArgumentAsNull	Sets the value of an argument to null.
	ArgumentAsString	Sets the value of an argument with a string data type.
	ArgumentAsInt	Sets the value of an argument with a integer data type.
	ArgumentAsBool	Sets the value of an argument with a boolean data type.
	ArgumentAsFloat	Sets the value of an argument with a float data type.
	ArgumentAsJSON	Sets the value of an argument with a JSON formatted string.
	Fire	Fires the event.

9.1.1.19.1.1 Name Method

This is the overview for the Name method overload.

Description

Sets/gets the event name.

Overload List

	Name	Description
	IJSEvent::Name ([in] BSTR)	This is Name, a member of class IJSEvent.
	IJSEvent::Name ([out, retval] BSTR*)	This is Name, a member of class IJSEvent.

Group

IJSEvent Methods

IDL

```
[propget, id(0x000000C9)]
HRESULT _stdcall Name([out, retval] BSTR* Value);
```

Description

This is Name, a member of class IJSEvent.

Group

Name Method

IDL

```
[propput, id(0x000000C9)]
HRESULT _stdcall Name([in] BSTR Value);
```

Description

This is Name, a member of class IJSEvent.

Group

Name Method

9.1.1.19.1.2 IJSEvent::Arguments Method

Collection of arguments.

IDL

```
[propget, id(0x000000CA)]
```

```
HRESULT _stdcall Arguments([out, retval] IJSArguments** Value);
```

Group

IJSEvent Methods

9.1.1.19.1.3 IJSEvent::AddArgument Method

Adds an argument to the Arguments collection.

IDL

```
[id(0x000000CB)]
HRESULT _stdcall AddArgument([in] BSTR Name, [in] enum IJSDataType DataType, [out, retval] IJSEver
```

Parameters

Parameters	Description
[in] BSTR Name	Name of argument.
[in] enum IJSDataType DataType	Data type of the argument.
[out, retval] IJSEvent** OutRetVal	Returns the parent IJSEvent.

Group

IJSEvent Methods

9.1.1.19.1.4 IJSEvent::ArgumentAsNull Method

Sets the value of an argument to null.

IDL

```
[id(0x000000CC)]
HRESULT _stdcall ArgumentAsNull([in] VARIANT Index, [out, retval] IJSEvent** OutRetVal);
```

Parameters

Parameters	Description
[in] VARIANT Index	OleVariant. Number or string value identifying the argument by index or name.
[out, retval] IJSEvent** OutRetVal	Returns the parent IJSEvent.

Group

IJSEvent Methods

9.1.1.19.1.5 IJSEvent::ArgumentAsString Method

Sets the value of an argument with a string data type.

IDL

```
[id(0x000000CD)]
```

```
HRESULT _stdcall ArgumentAsString([in] VARIANT Index, [in] BSTR Value, [out, retval] IJSEvent** Ou
```

Parameters

Parameters	Description
[in] VARIANT Index	OleVariant. Number or string value identifying the argument by index or name.
[in] BSTR Value	String value.
[out, retval] IJSEvent** OutRetVal	Returns the parent IJSEvent.

Group

IJSEvent Methods

9.1.1.19.1.6 IJSEvent::ArgumentAsInt Method

Sets the value of an argument with a integer data type.

IDL

```
[id(0x000000CE)]
HRESULT _stdcall ArgumentAsInt([in] VARIANT Index, [in] long Value, [out, retval] IJSEvent** OutRe
```

Parameters

Parameters	Description
[in] VARIANT Index	OleVariant. Number or string value identifying the argument by index or name.
[in] long Value	Integer value.
[out, retval] IJSEvent** OutRetVal	Returns the parent IJSEvent.

Group

IJSEvent Methods

9.1.1.19.1.7 IJSEvent::ArgumentAsBool Method

Sets the value of an argument with a boolean data type.

IDL

```
[id(0x000000CF)]
HRESULT _stdcall ArgumentAsBool([in] VARIANT Index, [in] VARIANT_BOOL Value, [out, retval] IJSEver
```

Parameters

Parameters	Description
[in] VARIANT Index	OleVariant. Number or string value identifying the argument by index or name.
[in] VARIANT_BOOL Value	Boolean value.
[out, retval] IJSEvent** OutRetVal	Returns the parent IJSEvent.

Group

IJSEvent Methods

9.1.1.19.1.8 IJSEvent::ArgumentAsFloat Method

Sets the value of an argument with a float data type.

IDL

```
[id(0x000000D0)]
HRESULT _stdcall ArgumentAsFloat([in] VARIANT Index, [in] float Value, [out, retval] IJSEvent** Ou
```

Parameters

Parameters	Description
[in] VARIANT Index	OleVariant. Number or string value identifying the argument by index or name.
[in] float Value	Float value.
[out, retval] IJSEvent** OutRetVal	Returns the parent IJSEvent.

Group

IJSEvent Methods

9.1.1.19.1.9 IJSEvent::ArgumentAsJSON Method

Sets the value of an argument with a JSON formatted string.

IDL

```
[id(0x000000D1)]
HRESULT _stdcall ArgumentAsJSON([in] VARIANT Index, [in] BSTR Value, [out, retval] IJSEvent** OutR
```

Parameters

Parameters	Description
[in] VARIANT Index	OleVariant. Number or string value identifying the argument by index or name.
[in] BSTR Value	String value with a valid JSON format.
[out, retval] IJSEvent** OutRetVal	Returns the parent IJSEvent.

Group

IJSEvent Methods

9.1.1.19.1.10 IJSEvent::Fire Method

Fires the event.

IDL
```
[id(0x000000D2)]
HRESULT _stdcall Fire();
```

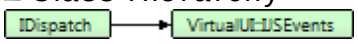
Group

IJSEvent Methods

9.1.1.20 IJSEvents Interface

Collection of events.

Class Hierarchy



IDL
```
[ uuid(6AE952B3-B6DA-4C81-80FF-D0A162E11D02), dual, oleautomation ]
interface IJSEvents : IDispatch;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.20.1 IJSEvents Methods

The methods of the IJSEvents class are listed here.

Interface

IJSEvents Interface

Public Methods

	Name	Description
	Count	Returns the number of items in the collection.
	Item	Returns an item.
	Clear	Clears the collection.
	Add	Adds an IJSEvent to the collection.
	Remove	Removes an item from the collection.

9.1.1.20.1.1 IJSEvents::Count Method

Returns the number of items in the collection.

IDL

```
[propget, id(0x000000C9)]
HRESULT _stdcall Count([out, retval] long* Value);
```

Group

IJSEvents Methods

9.1.1.20.1.2 IJSEvents::Item Method

Returns an item.

IDL

```
[propget, id(0x00000000), defaultcollelem]
HRESULT _stdcall Item([in] VARIANT Index, [out, retval] IJSEvent** Value);
```

Parameters

Parameters	Description
[in] VARIANT Index	OleVariant. Number indicating the index of the item in the collection or string indicating the name of the item.
OutRetVal	Returns the selected item.

Group

IJSEvents Methods

9.1.1.20.1.3 IJSEvents::Clear Method

Clears the collection.

IDL

```
[id(0x000000CC)]
HRESULT _stdcall Clear();
```

Group

IJSEvents Methods

9.1.1.20.1.4 IJSEvents::Add Method

Adds an IJSEvent to the collection.

IDL

```
[id(0x000000CD)]
HRESULT _stdcall Add([in] BSTR Name, [out, retval] IJSEvent** OutRetVal);
```

Parameters

Parameters	Description
[in] BSTR Name	Event name
[out, retval] IJSEvent** OutRetVal	Returns the newly created IJSEvent

Group

IJSEvents Methods

9.1.1.20.1.5 IJSEvents::Remove Method

Removes an item from the collection.

IDL

```
[id(0x000000CE)]
HRESULT _stdcall Remove([in] IJSEvent* Item);
```

Parameters

Parameters	Description
[in] IJSEvent* Item	Item to remove

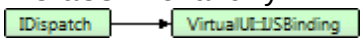
Group

IJSEvents Methods

9.1.1.21 IJSBinding Interface

Used as a callback interface for binding external data source with the IJSProperty data.

Class Hierarchy



IDL

```
[ uuid(ACFC2953-37F1-479E-B405-D0BB75E156E6), dual, oleautomation ]
interface IJSBinding : IDispatch;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.21.1 IJSBinding Methods

The methods of the IJSBinding class are listed here.

Interface

IJSBinding Interface

Public Methods

	Name	Description
	Set	Callback method.

9.1.1.21.1.1 IJSBinding::Set Method

Callback method.

IDL

```
[id(0x000000C9)]
HRESULT _stdcall Set([in] IJSObject* Parent, [in] IJSProperty* Prop);
```

Parameters

Parameters	Description
[in] IJSObject* Parent	Parent IJSObject
[in] IJSProperty* Prop	Calling IJSProperty

Group

IJSBinding Methods

9.1.1.22 IJSCallback Interface

Used as a callback interface for executing the remote calling to IJSMethod.

Class Hierarchy

IDL
[uuid(ADD570A0-491A-4E40-8120-57B4D1245FD3), dual, oleautomation]
interface IJSCallback : IDispatch;

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.22.1 IJSCallback Methods

The methods of the IJSCallback class are listed here.

Interface

IJSCallback Interface

Public Methods

	Name	Description
	Callback	Callback method.

9.1.1.22.1.1 IJSCallback::Callback Method

Callback method.

IDL

```
[id(0x000000C9)]
HRESULT _stdcall Callback([in] IJSObject* Parent, [in] IJSMethod* Method);
```

Parameters

Parameters	Description
[in] IJSObject* Parent	Parent IJSObject
Name	Calling method name
Arguments	IJSArguments
ReturnValue	Returned value to the client call.

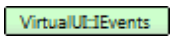
Group

IJSCallback Methods

9.1.1.23 IEvents Interface

General VirtualUI events.

Class Hierarchy



IDL

```
[ uuid(1C5700BC-2317-4062-B614-0A4E286CFE68) ]
dispinterface IEvents;
```

File

VirtualUIX.ridl

Library

VirtualUI Runtime Library

9.1.1.23.1 IEvents Methods

The methods of the IEvents class are listed here.

Interface

IEvents Interface

Public Methods

	Name	Description
	OnGetUploadDir	Fires during an upload request, allowing you to change the save folder.
	OnBrowserResize	Fires when the VirtualUI Viewer's container window resizes. Normally, when the browser resizes.
	OnClose	Fires when the browser window is about to close.
	OnReceiveMessage	Fires when a custom data string is sent from the web browser page.
	OnDownloadEnd	Fires when the file has been sent.

9.1.1.23.1.1 IEvents::OnGetUploadDir Method

Fires during an upload request, allowing you to change the save folder.

IDL

```
[id(0x00000065)]
void OnGetUploadDir([in, out] BSTR* Directory, [in, out] VARIANT_BOOL* Handled);
```

Parameters

Parameters	Description
[in, out] BSTR* Directory	[in,out] Upload directory
[in, out] VARIANT_BOOL* Handled	[in,out] Indicates that the Directory was changed.

Group

IEvents Methods

9.1.1.23.1.2 IEvents::OnBrowserResize Method

Fires when the VirtualUI Viewer's container window resizes. Normally, when the browser resizes.

IDL

```
[id(0x00000066)]
void OnBrowserResize([in, out] long* Width, [in, out] long* Height, [in, out] VARIANT_BOOL* Resize
```

Parameters

Parameters	Description
[in, out] long* Width	Browser window width.
[in, out] long* Height	Browser window height.
Handled	[out] Returns whether the to prevent the default processing.

Remarks

Allows you to take action when the VirtualUI Viewer's container window resizes. Set Handled to true to disable the default processing, which resizing all maximized windows.

Group

IEvents Methods

9.1.1.23.1.3 IEvents::OnClose Method

Fires when the browser window is about to close.

IDL

```
[id(0x00000067)]
void OnClose();
```

Group

IEvents Methods

9.1.1.23.1.4 IEvents::OnReceiveMessage Method

Fires when a custom data string is sent from the web browser page.

IDL

```
[id(0x00000068)]
void OnReceiveMessage([in] BSTR Data);
```

Parameters

Parameters	Description
[in] BSTR Data	Data string

Group

IEvents Methods

9.1.1.23.1.5 IEvents::OnDownloadEnd Method

Fires when the file has been sent.

IDL

```
[id(0x00000069)]
void OnDownloadEnd([in] BSTR Filename);
```

Parameters

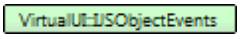
Parameters	Description
[in] BSTR Filename	File name.

Group

IEvents Methods

9.1.1.24 IJSObjectEvents Interface

Class Hierarchy



IDL

```
[ uuid(A3D640E8-CD18-4196-A1A2-C87C82B0F88B) ]
dispinterface IJSObjectEvents;
```

File

VirtualUIX.ridl

Description

This is class VirtualUI::IJSObjectEvents.

Library

VirtualUI Runtime Library

9.1.1.24.1 IJSObjectEvents Methods

The methods of the IJSObjectEvents class are listed here.

Interface

IJSObjectEvents Interface

Public Methods

	Name	Description

	OnExecuteMethod	Fires when a method is called in the client side.
	OnPropertyChange	Fires when a property has changed on the client side.

9.1.1.24.1.1 IJSObjectEvents::OnExecuteMethod Method

Fires when a method is called in the client side.

IDL

```
[id(0x00000065)]
void OnExecuteMethod([in] IJSObject* Caller, [in] IJSMethod* Method);
```

Parameters

Parameters	Description
[in] IJSObject* Caller	Object caller
Name	Method name
Arguments	Arguments
ReturnValue	Data to return to the client

Group

IJSObjectEvents Methods

9.1.1.24.1.2 IJSObjectEvents::OnPropertyChange Method

Fires when a property has changed on the client side.

IDL

```
[id(0x00000066)]
void OnPropertyChange([in] IJSObject* Caller, [in] IJSProperty* Prop);
```

Parameters

Parameters	Description
[in] IJSObject* Caller	Object caller
Name	Property name
Value	Property value

Group

IJSObjectEvents Methods

9.1.2 Server Configuration Library

CoClasses

Name	Description
Server	This is class VirtualUIS::Server.

Enumerations

	Name	Description
	Protocol	This is record VirtualUIS::Protocol.
	ProfileKind	This is record VirtualUIS::ProfileKind.
	ScreenResolution	This is record VirtualUIS::ScreenResolution.
	ServerSection	This is record VirtualUIS::ServerSection.

Group

ActiveX Interfaces

Interfaces

	Name	Description
	IServer	Gives you access to server's settings
	ILicense	Contains methods and properties to control VirtualUI Server's licence activation.
	IProfile	A profile contains information about an application or web link configured to be opened in VirtualUI's home page (or directly through its URL).
	IProfiles	Contains the list of profiles registered in VirtualUI Server.
	IBinding	Interface for the server's binding parameters.
	ICertificate	Manages the certificate's configuration for HTTPS Binding.
	IRDS	Manages the configuration of a Remote Desktop Services account.
	IRDSAccounts	Contains a list of Remote Desktop Services accounts.

Types

Name	Description
PWideString1	This is type VirtualUIS::PWideString1.

9.1.2.1 VirtualUIS::Protocol Enumeration

IDL

```
[ uuid(D8C7713F-D823-4FC8-B361-B67667CBB9A9) ]
enum Protocol {
  PROTO_HTTP = 0,
```

```
  PROTO_HTTPS = 1
};
```

File

VirtualUIS.ridl

Description

This is record VirtualUIS::Protocol.

Library

Server Configuration Library

9.1.2.2 VirtualUIS::ProfileKind Enumeration

```
IDL
[ uuid(5B7C0230-6A31-468B-874A-65777244F4AF) ]
enum ProfileKind {
  PROFILE_APP = 0,
  PROFILE_WEBLINK = 1
};
```

File

VirtualUIS.ridl

Description

This is record VirtualUIS::ProfileKind.

Library

Server Configuration Library

9.1.2.3 VirtualUIS::ScreenResolution Enumeration

```
IDL
[ uuid(F4DF441B-0C9A-40A3-A6F7-1B251E5765B3) ]
enum ScreenResolution {
  SCREENRES_Custom = 0,
  SCREENRES_FitToBrowser = 1,
  SCREENRES_FitToScreen = 2,
  SCREENRES_640x480 = 3,
  SCREENRES_800x600 = 4,
  SCREENRES_1024x768 = 5,
  SCREENRES_1280x720 = 6,
  SCREENRES_1280x768 = 7,
  SCREENRES_1280x1024 = 8,
  SCREENRES_1440x900 = 9,
```

```
  SCREENRES_1440x1050 = 10,
  SCREENRES_1600x1200 = 11,
  SCREENRES_1680x1050 = 12,
  SCREENRES_1920x1080 = 13,
  SCREENRES_1920x1200 = 14
};
```

File

VirtualUIS.ridl

Description

This is record VirtualUIS::ScreenResolution.

Library

Server Configuration Library

9.1.2.4 VirtualUIS::ServerSection Enumeration

```
IDL
[ uuid(D1266C04-7CA5-4705-9486-363BC24CFABC) ]
enum ServerSection {
  SRVSEC_GENERAL = 0,
  SRVSEC_RDS = 1,
  SRVSEC_APPLICATIONS = 2,
  SRVSEC_LICENSES = 3
};
```

File

VirtualUIS.ridl

Description

This is record VirtualUIS::ServerSection.

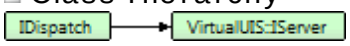
Library

Server Configuration Library

9.1.2.5 IServer Interface

Gives you access to server's settings

Class Hierarchy



IDL

```
[ uuid(845B4EE8-0F67-4D84-A4CE-642BBD520A47), helpstring("Interface for VirtualUIConfig Object"), dual, oleautoma
interface IServer : IDispatch;
```

File

VirtualUIS.ridl

Library

Server Configuration Library

9.1.2.5.1 IServer Methods

The methods of the IServer class are listed here.

Interface

IServer Interface

Public Methods

	Name	Description
	Binding	Returns the TCP/IP binding parameters
	Certificate	Returns the SSL certificate parameters
	RDSAccounts	Contains Remote Desktop Services accounts. VirtualUI makes use of an interactive session. The default setting is to run applications under the console session, but it can be configured to do it under Remote Desktop Services sessions. For the production environment, it is recommended to set VirtualUI to run applications under its own Remote Desktop Services session. This will ensure that the service is available at all times. Alternatively, you can choose to have VirtualUI run the applications under the console session by configuring the Auto Logon feature on your Windows operating system.
	Profiles	Returns the profiles list.
	Load	Loads all the configuration entries and profiles from file. It is automatically called by constructor.
	Save	Saves the entire configuration parameters and profiles.
	HideSection	Hides a configuration section in the VirtualUI Server Manager.
	ShowSection	Makes visible a configuration section in the VirtualUI Server Manager.
	License	Returns the current VirtualUI Server's licence.

9.1.2.5.1.1 IServer::Binding Method

Returns the TCP/IP binding parameters

IDL

```
[propget, id(0x000000C9)]
HRESULT _stdcall Binding([out, retval] IBinding** Value);
```

See Also

IBinding interface

Group

IServer Methods

9.1.2.5.1.2 IServer::Certificate Method

Returns the SSL certificate parameters

IDL

```
[propget, id(0x000000CA)]
HRESULT _stdcall Certificate([out, retval] ICertificate** Value);
```

See Also

ICertificate interface

Group

IServer Methods

9.1.2.5.1.3 IServer::RDSAccounts Method

Contains Remote Desktop Services accounts. VirtualUI makes use of an interactive session. The default setting is to run applications under the console session, but it can be configured to do it under Remote Desktop Services sessions. For the production environment, it is recommended to set VirtualUI to run applications under its own Remote Desktop Services session. This will ensure that the service is available at all times. Alternatively, you can choose to have VirtualUI run the applications under the console session by configuring the Auto Logon feature on your Windows operating system.

IDL

```
[propget, id(0x000000CB)]
HRESULT _stdcall RDSAccounts([out, retval] IRDSAccounts** Value);
```

See Also

IRDSAccounts interface

Group

IServer Methods

9.1.2.5.1.4 IServer::Profiles Method

Returns the profiles list.

IDL

```
[propget, id(0x000000CC)]
HRESULT _stdcall Profiles([out, retval] IProfiles** Value);
```

See Also

IProfiles interface

Group

IServer Methods

9.1.2.5.1.5 IServer::Load Method

Loads all the configuration entries and profiles from file. It is automatically called by constructor.

IDL

```
[id(0x000000CD)]
HRESULT _stdcall Load();
```

Group

IServer Methods

9.1.2.5.1.6 IServer::Save Method

Saves the entire configuration parameters and profiles.

IDL

```
[id(0x000000CE)]
HRESULT _stdcall Save();
```

Group

IServer Methods

9.1.2.5.1.7 IServer::HideSection Method

Hides a configuration section in the VirtualUI Server Manager.

IDL

```
[id(0x000000CF)]
HRESULT _stdcall HideSection([in] enum ServerSection section);
```

Parameters

Parameters	Description

[in] enum ServerSection section	The Server configuration section to hide to user. Use one of the following constants: • SRVSEC_GENERAL: Hides the General tab, that contains the Binding configuration. • SRVSEC_RDS: Hides the tab with the Remote Desktop Services account configuration. • SRVSEC_APPLICATIONS: Hides the list of applications. • SRVSEC_LICENSES: Hides the tab with License information.

Group

IServer Methods

9.1.2.5.1.8 IServer::ShowSection Method

Makes visible a configuration section in the VirtualUI Server Manager.

IDL

```
[id(0x000000D0)]
HRESULT _stdcall ShowSection([in] enum ServerSection section);
```

Parameters

Parameters	Description
[in] enum ServerSection section	The Server configuration section to hide to user. Use one of the following constants: • SRVSEC_GENERAL: Hides the General tab, that contains the Binding configuration. • SRVSEC_RDS: Hides the tab with the Remote Desktop Services account configuration. • SRVSEC_APPLICATIONS: Hides the list of applications. • SRVSEC_LICENSES: Hides the tab with License information.

Group

IServer Methods

9.1.2.5.1.9 IServer::License Method

Returns the current VirtualUI Server's licence.

IDL

```
[propget, id(0x000000D1)]
HRESULT _stdcall License([out, retval] ILicense** Value);
```

See Also

ILicense interface

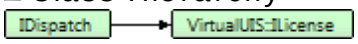
Group

IServer Methods

9.1.2.6 ILicense Interface

Contains methods and properties to control VirtualUI Server's licence activation.

Class Hierarchy



IDL
```
[ uuid(A1DF5DC4-7157-4643-B28F-3B3D20A0E5C8), dual, oleautomation ]
interface ILicense : IDispatch;
```

File

VirtualUIS.ridl

Library

Server Configuration Library

9.1.2.6.1 ILicense Methods

The methods of the ILicense class are listed here.

Interface

ILicense Interface

Public Methods

	Name	Description
	Activate	Activates the Server's machine license.
	Deactivate	Deactivates a previously activated license.

9.1.2.6.1.1 ILicense::Activate Method

Activates the Server's machine license.

IDL
```
[id(0x000000CE)]
HRESULT _stdcall Activate([in] BSTR customerId, [in] BSTR serial, [out] long* resultCode, [out] BS
```

Parameters

Parameters	Description

[in] BSTR customerId	Customer identification
[in] BSTR serial	Serial number
[out] long* resultCode	Result code
resultText	Error message

Returns

True if the license was successfully activated. False otherwise (in which case check resultCode and resultText).

Group

ILicense Methods

9.1.2.6.1.2 ILicense::Deactivate Method

Deactivates a previously activated license.

```
IDL
[id(0x000000CF)]
HRESULT _stdcall Deactivate();
```

Group

ILicense Methods

9.1.2.6.2 Properties

9.1.2.6.2.1 CustomerID

Customer identification.

Interface

ILicense Interface

9.1.2.6.2.2 Limits

Returns the License limits, if any (ie, trial days, max servers, max users per installation, etc).

Interface

ILicense Interface

9.1.2.6.2.3 Features

Returns custom features enabled on the License, if any.

Interface

ILicense Interface

9.1.2.6.2.4 IsTrial

Returns true if the current License is in trial mode.

Interface

ILicense Interface

9.1.2.6.2.5 SerialStr

Serial number of the current License.

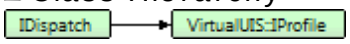
Interface

ILicense Interface

9.1.2.7 IProfile Interface

A profile contains information about an application or web link configured to be opened in VirtualUI's home page (or directly through its URL).

Class Hierarchy



IDL
```
[ uuid(D478CC7A-8071-47BD-BA2D-845131B51B42), dual, oleautomation ]
interface IProfile : IDispatch;
```

File

VirtualUIS.ridl

Library

Server Configuration Library

9.1.2.7.1 Properties

Interface

IProfile Interface

Topics

Name	Description
ID	Internal profile ID. This value is auto generated by the library when the profile is created.
Name	Profile name. It's the caption shown under the application's icon in VirtualUI index page.
VirtualPath	The Virtual Path unique to this profile.
IsDefault	This option is used to make this profile the default application.
Enabled	Enables or disables the profile. Disabled profiles are not accessible by users.
ProfileKind	Gets or sets the profile type: Application or Web Link. Uses the PROFILE_APP and PROFILE_WEBLINK constants.
FileName	Complete path of the application executable file. Only used when the ProfileKind is Application.
Arguments	Parameters to be passed to application.
StartDir	Application startup directory. In most cases, the same directory of the application executable file.
UserName	A valid Windows User account to run the application.
Password	Password of the Windows User account.
ScreenResolution	Screen resolution in the browser. Uses the constants SCREENRES_...
WebLink	Complete Web Link URL (used only when ProfileKind is Web Link).
HomePage	Use it to set a customized home page for the application.
IdleTimeout	Set a timeout in minutes if you want VirtualUI Server to wait before terminating the application once the browser has been closed. Timeout 0 will terminate the application immediately after the browser has been closed.
IconData	Contains the icon of the profile, consisting in a PNG image in base64 format.

9.1.2.7.1.1 ID

Internal profile ID. This value is auto generated by the library when the profile is created.

Group

Properties

9.1.2.7.1.2 Name

Profile name. It's the caption shown under the application's icon in VirtualUI index page.

Group

Properties

9.1.2.7.1.3 VirtualPath

The Virtual Path unique to this profile.

Group

Properties

9.1.2.7.1.4 IsDefault

This option is used to make this profile the default application.

Group

Properties

9.1.2.7.1.5 Enabled

Enables or disables the profile. Disabled profiles are not accessible by users.

Group

Properties

9.1.2.7.1.6 ProfileKind

Gets or sets the profile type: Application or Web Link. Uses the PROFILE_APP and PROFILE_WEBLINK constants.

Group

Properties

9.1.2.7.1.7 FileName

Complete path of the application executable file. Only used when the ProfileKind is Application.

Group

Properties

9.1.2.7.1.8 Arguments

Parameters to be passed to application.

Group

Properties

9.1.2.7.1.9 StartDir

Application startup directory. In most cases, the same directory of the application executable file.

Group

Properties

9.1.2.7.1.10 UserName

A valid Windows User account to run the application.

Group

Properties

9.1.2.7.1.11 Password

Password of the Windows User account.

Group

Properties

9.1.2.7.1.12 ScreenResolution

Screen resolution in the browser. Uses the constants SCREENRES_...

Group

Properties

9.1.2.7.1.13 WebLink

Complete Web Link URL (used only when ProfileKind is Web Link).

Group

Properties

9.1.2.7.1.14 HomePage

Use it to set a customized home page for the application.

Group

Properties

9.1.2.7.1.15 IdleTimeout

Set a timeout in minutes if you want VirtualUI Server to wait before terminating the application once the browser has been closed. Timeout 0 will terminate the application immediately after the browser has been closed.

Group

Properties

9.1.2.7.1.16 IconData

Contains the icon of the profile, consisting in a PNG image in base64 format.

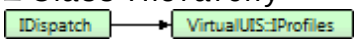
Group

Properties

9.1.2.8 IProfiles Interface

Contains the list of profiles registered in VirtualUI Server.

Class Hierarchy



IDL
```
[ uuid(C271394D-82FA-4DF9-A603-9927AA76A4F9), dual, oleautomation ]
interface IProfiles : IDispatch;
```

File

VirtualUIS.ridl

Library

Server Configuration Library

9.1.2.8.1 IProfiles Methods

The methods of the IProfiles class are listed here.

Interface

IProfiles Interface

Public Methods

	Name	Description
	Add	Creates a new profile and adds it to the list.
	Delete	Deletes a profile from the list.

9.1.2.8.1.1 IProfiles::Add Method

Creates a new profile and adds it to the list.

IDL

```
[id(0x000000CD)]
HRESULT _stdcall Add([out, retval] IProfile** Value);
```

Returns

The newly created profile.

See Also

IProfile interface

Group

IProfiles Methods

9.1.2.8.1.2 IProfiles::Delete Method

Deletes a profile from the list.

IDL

```
[id(0x000000CE)]
HRESULT _stdcall Delete([in] IProfile* profile);
```

Parameters

Parameters	Description
[in] IProfile* profile	The profile to be deleted.

Group

IProfiles Methods

9.1.2.8.2 Properties

9.1.2.8.2.1 Count

Returns the profile count.

Interface

IProfiles Interface

9.1.2.8.2.2 Item

Returns a profile from the list by its index.

Description

Profile interface.

See Also

IProfile

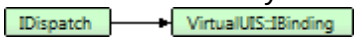
Interface

IProfiles Interface

9.1.2.9 IBinding Interface

Interface for the server's binding parameters.

Class Hierarchy



IDL
```
[ uuid(52C63E8D-2FA4-4179-AFDB-2D33853F3356), dual, oleautomation ]
interface IBinding : IDispatch;
```

File

VirtualUIS.ridl

Library

Server Configuration Library

9.1.2.9.1 Properties

9.1.2.9.1.1 Protocol

Gets o sets the network protocol: HTTP or HTTPS. Uses the PROTO_HTTP and PROTO_HTTPS constants.

Interface

IBinding Interface

9.1.2.9.1.2 IPAddress

Gets o sets the local IP Address. Leave empty to use all addresses.

Interface

IBinding Interface

9.1.2.9.1.3 Port

Gets o sets the listening port.

Interface

IBinding Interface

9.1.2.10 ICertificate Interface

Manages the certificate's configuration for HTTPS Binding.

Class Hierarchy

IDL
[uuid(8B534446-EDC5-4EE7-91B0-13B5DACC5B51), dual, oleautomation]
interface ICertificate : IDispatch;

File

VirtualUIS.ridl

Library

Server Configuration Library

9.1.2.10.1 Properties

9.1.2.10.1.1 CertFile

Gets o sets the Certificate file path.

Interface

ICertificate Interface

9.1.2.10.1.2 CAFile

Gets o sets the Certificate Authority file path.

Interface

ICertificate Interface

9.1.2.10.1.3 PKFile

Gets o sets the path of Private Key file.

Interface

ICertificate Interface

9.1.2.10.1.4 PassPhrase

Gets o sets the certificate password.

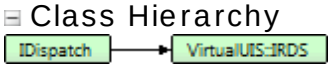
Interface

ICertificate Interface

9.1.2.11 IRDS Interface

Manages the configuration of a Remote Desktop Services account.

Class Hierarchy



IDL
```
[ uuid(103B86C8-E012-4AC7-A366-D3845BBB8D5E), dual, oleautomation ]
interface IRDS : IDispatch;
```

File

VirtualUIS.ridl

Library

Server Configuration Library

9.1.2.11.1 Properties

9.1.2.11.1.1 Enabled

Enable or disable the use of this RDS account.

Interface

IRDS Interface

9.1.2.11.1.2 UserName

Summary

Gets o sets the RDS Username.

Interface

IRDS Interface

9.1.2.11.1.3 Password

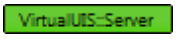
Gets o sets the RDS Password.

Interface

IRDS Interface

9.1.2.12 Server CoClass

Class Hierarchy



IDL
```
[ uuid(67F012A8-5C8D-4E30-B697-104AF434CF57) ]
coclass Server;
```

File

VirtualUIS.ridl

Description

This is class VirtualUIS::Server.

Library

Server Configuration Library

9.1.2.13 VirtualUIS::PWideString1 Type

IDL

```
[ custom(8B342977-45CB-4A01-A8F2-E47B61F3539E, 0) ]
typedef BSTR* PWideString1;
```

File

VirtualUIS.ridl

Description

This is type VirtualUIS::PWideString1.

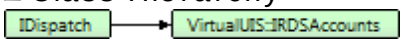
Library

Server Configuration Library

9.1.2.14 IRDSAccounts Interface

Contains a list of Remote Desktop Services accounts.

Class Hierarchy



IDL

```
[ uuid(60666BC2-7E17-4842-9716-CFA3DCFD5583), dual, oleautomation ]
interface IRDSAccounts : IDispatch;
```

File

VirtualUIS.ridl

Library

Server Configuration Library

9.1.2.14.1 IRDSAccounts Methods

The methods of the IRDSAccounts class are listed here.

Interface

IRDSAccounts Interface

Public Methods

	Name	Description
	Count	This is Count, a member of class IRDSAccounts.
	Item	This is Item, a member of class IRDSAccounts.
	Add	This is Add, a member of class IRDSAccounts.
	Delete	This is Delete, a member of class IRDSAccounts.

9.1.2.14.1.1 IRDSAccounts::Count Method

IDL

```
[propget, id(0x000000C9)]
HRESULT _stdcall Count([out, retval] long* Value);
```

Description

This is Count, a member of class IRDSAccounts.

Group

IRDSAccounts Methods

9.1.2.14.1.2 IRDSAccounts::Item Method

IDL

```
[propget, id(0x000000CA), defaultcollelem]
HRESULT _stdcall Item([in] long index, [out, retval] IRDS** Value);
```

Description

This is Item, a member of class IRDSAccounts.

Group

IRDSAccounts Methods

9.1.2.14.1.3 IRDSAccounts::Add Method

IDL

```
[id(0x000000CB)]
HRESULT _stdcall Add([in] BSTR UserName, [in] BSTR Password, [in, defaultvalue(False)] VARIANT_BOO
```

Description

This is Add, a member of class IRDSAccounts.

Group

IRDSAccounts Methods

9.1.2.14.1.4 IRDSAccounts::Delete Method

IDL

```
[id(0x000000CC)]
HRESULT _stdcall Delete([in] BSTR UserName, [in] VARIANT_BOOL DeleteAccount, [out, retval] VARIANT
```

Description

This is Delete, a member of class IRDSAccounts.

Group

IRDSAccounts Methods

9.2 .NET Classes

Namespaces

Name	Description
Cybele.Thinfinity	This is namespace Cybele.Thinfinity.
Cybele.Thinfinity.Settings.VirtualUI	This is namespace Cybele.Thinfinity.Settings.VirtualUI.

9.2.1 Cybele.Thinfinity Namespace

This is namespace Cybele.Thinfinity.

Classes

	Name	Description
	ClientSettings	Allows to set some client settings.
	BrowserInfo	Contains information regarding the end-user's screen, web browser, the window containing VirtualUI Viewer and VirtualUI Viewer itself. The VirtualUI Viewer tuns inside an HTML DIV element contained in a frame o browser window on the end-user's application page.
	DevServer	Contains properties to manage the VirtualUI Development Server as well as the access from the developer's web browser.
	BrowserResizeEventArgs	This is class Cybele.Thinfinity.BrowserResizeEventArgs.
	GetUploadDirEventArgs	This is class Cybele.Thinfinity.GetUploadDirEventArgs.
	DownloadEndArgs	This is class Cybele.Thinfinity.DownloadEndArgs.
	CloseArgs	This is class Cybele.Thinfinity.CloseArgs.
	ReceiveMessageArgs	This is class Cybele.Thinfinity.ReceiveMessageArgs.

	VirtualUI	Main class. Has methods, properties and events to allow the activation and control the behavior of VirtualUI.
	JSExecuteMethodEventArgs	This is class Cybele.Thinfinity.JSExecuteMethodEventArgs.
	JSPropertyChangeEventArgs	This is class Cybele.Thinfinity.JSPropertyChangeEventArgs.
	JSObject	Represents a custom remotable object.
	JSBinding	This is class Cybele.Thinfinity.JSBinding.
	JSCallback	This is class Cybele.Thinfinity.JSCallback.

Enumerations

	Name	Description
	BrowserOrientation	This is record Cybele.Thinfinity.BrowserOrientation.
	MouseMoveGestureStyle	This is record Cybele.Thinfinity.MouseMoveGestureStyle.
	MouseMoveGestureAction	This is record Cybele.Thinfinity.MouseMoveGestureAction.

Group

.NET Classes

Types

Name	Description
JSPropertySet	This is type Cybele.Thinfinity.JSPropertySet.
JSMethodCallback	This is type Cybele.Thinfinity.JSMethodCallback.

9.2.1.1 Cybele.Thinfinity.BrowserOrientation Enumeration

C#

```
public enum BrowserOrientation {
  PORTRAIT = 0,
  LANDSCAPE = 1
}
```

File

Thinfinity.VirtualUI.cs

Description

This is record Cybele.Thinfinity.BrowserOrientation.

Namespace

Cybele.Thinfinity Namespace

9.2.1.2 Cybele.Thinfinity.MouseMoveGestureStyle Enumeration

```
C#
public enum MouseMoveGestureStyle {
  MM_STYLE_RELATIVE = 0,
  MM_STYLE_ABSOLUTE = 1
}
```

File

Thinfinity.VirtualUI.cs

Description

This is record Cybele.Thinfinity.MouseMoveGestureStyle.

Namespace

Cybele.Thinfinity Namespace

9.2.1.3 Cybele.Thinfinity.MouseMoveGestureAction Enumeration

```
C#
public enum MouseMoveGestureAction {
  MM_ACTION_MOVE = 0,
  MM_ACTION_WHEEL = 1
}
```

File

Thinfinity.VirtualUI.cs

Description

This is record Cybele.Thinfinity.MouseMoveGestureAction.

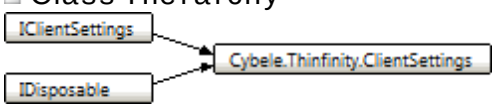
Namespace

Cybele.Thinfinity Namespace

9.2.1.4 ClientSettings Class

Allows to set some client settings.

Class Hierarchy



C#

```
public class ClientSettings : IClientSettings, IDisposable;
```

File

Thinfinity.VirtualUI.cs

Namespace

Cybele.Thinfinity Namespace

9.2.1.4.1 ClientSettings.ClientSettings Constructor

```
C#
public ClientSettings(IVirtualUI virtualUI);
```

Description

This is ClientSettings, a member of class ClientSettings.

Class

ClientSettings Class

9.2.1.4.2 ClientSettings Methods

The methods of the ClientSettings class are listed here.

Class

ClientSettings Class

Public Methods

	Name	Description
	Dispose	This is Dispose, a member of class ClientSettings.

9.2.1.4.2.1 ClientSettings.Dispose Method

```
C#
public void Dispose();
```

Description

This is Dispose, a member of class ClientSettings.

Group

ClientSettings Methods

9.2.1.4.3 ClientSettings Properties

The properties of the ClientSettings class are listed here.

Class

ClientSettings Class

Public Properties

	Name	Description
	MouseMoveGestureStyle	Valid for touch devices. Specifies whether the mouse pointer is shown and acts on the exact spot of the finger touch (absolute) or its position is managed relatively to the movement of the finger touch (relative).
	MouseMoveGestureAction	Specifies whether the "mouse move" simulation on a touch device is interpreted as a mouse move or as a mouse wheel.
	CursorVisible	Hides/shows the mouse pointer.

9.2.1.4.3.1 ClientSettings.MouseMoveGestureStyle Property

Valid for touch devices. Specifies whether the mouse pointer is shown and acts on the exact spot of the finger touch (absolute) or its position is managed relatively to the movement of the finger touch (relative).

C#

```
public MouseMoveGestureStyle MouseMoveGestureStyle;
```

Group

ClientSettings Properties

9.2.1.4.3.2 ClientSettings.MouseMoveGestureAction Property

Specifies whether the "mouse move" simulation on a touch device is interpreted as a mouse move or as a mouse wheel.

C#

```
public MouseMoveGestureAction MouseMoveGestureAction;
```

Group

ClientSettings Properties

9.2.1.4.3.3 ClientSettings.CursorVisible Property

Hides/shows the mouse pointer.

C#

```
public bool CursorVisible;
```

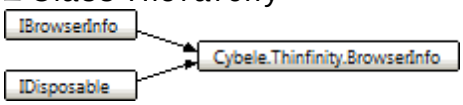
Group

ClientSettings Properties

9.2.1.5 BrowserInfo Class

Contains information regarding the end-user's screen, web browser, the window containing VirtualUI Viewer and VirtualUI Viewer itself. The VirtualUI Viewer tuns inside an HTML DIV element contained in a frame o browser window on the end-user's application page.

Class Hierarchy



C#
```
public class BrowserInfo : IBrowserInfo, IDisposable;
```

File

Thinfinity.VirtualUI.cs

Namespace

Cybele.Thinfinity Namespace

9.2.1.5.1 BrowserInfo.BrowserInfo Constructor

C#
```
public BrowserInfo(IVirtualUI virtualUI);
```

Description

This is BrowserInfo, a member of class BrowserInfo.

Class

BrowserInfo Class

9.2.1.5.2 BrowserInfo Methods

The methods of the BrowserInfo class are listed here.

Class

BrowserInfo Class

Public Methods

	Name	Description
	Dispose	This is Dispose, a member of class BrowserInfo.
	GetCookie	Returns a browser's cookie value.
	SetCookie	Sets a cookie in the browser.

9.2.1.5.2.1 BrowserInfo.Dispose Method

C#

```
public void Dispose();
```

Description

This is Dispose, a member of class BrowserInfo.

Group

BrowserInfo Methods

9.2.1.5.2.2 BrowserInfo.GetCookie Method

Returns a browser's cookie value.

C#

```
public string GetCookie(string Name);
```

Group

BrowserInfo Methods

9.2.1.5.2.3 BrowserInfo.SetCookie Method

Sets a cookie in the browser.

C#

```
public void SetCookie(string Name, string Value, string Expires);
```

Group

BrowserInfo Methods

9.2.1.5.3 BrowserInfo Properties

The properties of the BrowserInfo class are listed here.

Class

BrowserInfo Class

Public Properties

	Name	Description
	ViewWidth	Returns the width of the VirtualUI Viewer.
	ViewHeight	Returns the height of the VirtualUI Viewer.
R	BrowserWidth	Returns the width of the HTML element containing the VirtualUI Viewer.
R	BrowserHeight	Returns the height of the HTML element containing the VirtualUI Viewer.
R	ScreenWidth	Returns the width of the end-user's monitor screen.
R	ScreenHeight	Returns the height of the end-user's monitor screen.
R	Username	Returns the logged-on Username.
R	IPAddress	Returns the client's IP address.
R	UserAgent	Returns the browser's User Agent string.
R	UniqueBrowserId	UniqueBrowserId identifies an instance of a Web Browser. Each time an end-user opens the application from a different browser window, this ID will have a different value.
R	Location	Returns the URL of the current application.
R	ScreenResolution	Returns the application screen resolution defined in the application profile.
R	Orientation	Returns the browser's orientation.

9.2.1.5.3.1 BrowserInfo.ViewWidth Property

Returns the width of the VirtualUI Viewer.

C#

```
public int ViewWidth;
```

Group

BrowserInfo Properties

9.2.1.5.3.2 BrowserInfo.ViewHeight Property

Returns the height of the VirtualUI Viewer.

C#

```
public int ViewHeight;
```

Group

BrowserInfo Properties

9.2.1.5.3.3 BrowserInfo.BrowserWidth Property

```
C#
public int BrowserWidth;
```

Description

Returns the width of the HTML element containing the VirtualUI Viewer.

Group

BrowserInfo Properties

9.2.1.5.3.4 BrowserInfo.BrowserHeight Property

Returns the height of the HTML element containing the VirtualUI Viewer.

```
C#
public int BrowserHeight;
```

Group

BrowserInfo Properties

9.2.1.5.3.5 BrowserInfo.ScreenWidth Property

Returns the width of the end-user's monitor screen.

```
C#
public int ScreenWidth;
```

Group

BrowserInfo Properties

9.2.1.5.3.6 BrowserInfo.ScreenHeight Property

Returns the height of the end-user's monitor screen.

```
C#
public int ScreenHeight;
```

Group

BrowserInfo Properties

9.2.1.5.3.7 BrowserInfo.Username Property

Returns the logged-on Username.

C#
```
public string Username;
```

Group

BrowserInfo Properties

9.2.1.5.3.8 BrowserInfo.IPAddress Property

Returns the client's IP address.

C#
```
public string IPAddress;
```

Group

BrowserInfo Properties

9.2.1.5.3.9 BrowserInfo.UserAgent Property

Returns the browser's User Agent string.

C#
```
public string UserAgent;
```

Group

BrowserInfo Properties

9.2.1.5.3.10 BrowserInfo.UniqueBrowserId Property

UniqueBrowserId identifies an instance of a Web Browser. Each time an end-user opens the application from a different browser window, this ID will have a different value.

C#
```
public string UniqueBrowserId;
```

Group

BrowserInfo Properties

9.2.1.5.3.11 BrowserInfo.Location Property

Returns the URL of the current application.

C#
```
public string Location;
```

Group

BrowserInfo Properties

9.2.1.5.3.12 BrowserInfo.ScreenResolution Property

Returns the application screen resolution defined in the application profile.

```
C#
public int ScreenResolution;
```

Group

BrowserInfo Properties

9.2.1.5.3.13 BrowserInfo.Orientation Property

Returns the browser's orientation.

```
C#
public BrowserOrientation Orientation;
```

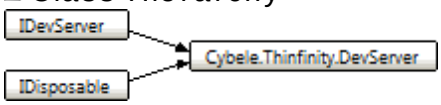
Group

BrowserInfo Properties

9.2.1.6 DevServer Class

Contains properties to manage the VirtualUI Development Server as well as the access from the developer's web browser.

Class Hierarchy




```
C#
public class DevServer : IDevServer, IDisposable;
```

File

Thinfinity.VirtualUI.cs

Namespace

Cybele.Thinfinity Namespace

9.2.1.6.1 DevServer.DevServer Constructor

C#

```
public DevServer(IVirtualUI virtualUI);
```

Description

This is DevServer, a member of class DevServer.

Class

DevServer Class

9.2.1.6.2 DevServer Methods

The methods of the DevServer class are listed here.

Class

DevServer Class

Public Methods

	Name	Description
	Dispose	This is Dispose, a member of class DevServer.

9.2.1.6.2.1 DevServer.Dispose Method

C#

```
public void Dispose();
```

Description

This is Dispose, a member of class DevServer.

Group

DevServer Methods

9.2.1.6.3 DevServer Properties

The properties of the DevServer class are listed here.

Class

DevServer Class

Public Properties

	Name	Description
	Enabled	Enables/disables the Development Server.
	Port	Gets/sets the Development Server's TCP/IP listening port.
	StartBrowser	Instructs VirtualUI whether start or not the local web browser upon VirtualUI activation.

9.2.1.6.3.1 DevServer.Enabled Property

Enables/disables the Development Server.

C#
```
public bool Enabled;
```

Group

DevServer Properties

9.2.1.6.3.2 DevServer.Port Property

Gets/sets the Development Server's TCP/IP listening port.

C#
```
public int Port;
```

Group

DevServer Properties

9.2.1.6.3.3 DevServer.StartBrowser Property

Instructs VirtualUI whether start or not the local web browser upon VirtualUI activation.

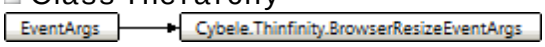
C#
```
public bool StartBrowser;
```

Group

DevServer Properties

9.2.1.7 BrowserResizeEventArgs Class

Class Hierarchy



C#
```
public class BrowserResizeEventArgs : EventArgs;
```

File

Thinfinity.VirtualUI.cs

Description

This is class Cybele.Thinfinity.BrowserResizeEventArgs.

Namespace

Cybele.Thinfinity Namespace

9.2.1.7.1 BrowserResizeEventArgs Properties

The properties of the BrowserResizeEventArgs class are listed here.

Class

BrowserResizeEventArgs Class

Public Properties

	Name	Description
	Width	This is Width, a member of class BrowserResizeEventArgs.
	Height	This is Height, a member of class BrowserResizeEventArgs.
	ResizeMaximized	This is ResizeMaximized, a member of class BrowserResizeEventArgs.

9.2.1.7.1.1 BrowserResizeEventArgs.Width Property

C#

```
public int Width;
```

Description

This is Width, a member of class BrowserResizeEventArgs.

Group

BrowserResizeEventArgs Properties

9.2.1.7.1.2 BrowserResizeEventArgs.Height Property

C#

```
public int Height;
```

Description

This is Height, a member of class BrowserResizeEventArgs.

Group

BrowserResizeEventArgs Properties

9.2.1.7.1.3 BrowserResizeEventArgs.ResizeMaximized Property

```
C#
public bool ResizeMaximized;
```

Description

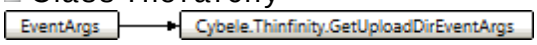
This is ResizeMaximized, a member of class BrowserResizeEventArgs.

Group

BrowserResizeEventArgs Properties

9.2.1.8 GetUploadDirEventArgs Class

Class Hierarchy




```
C#
public class GetUploadDirEventArgs : EventArgs;
```

File

Thinfinity.VirtualUI.cs

Description

This is class Cybele.Thinfinity.GetUploadDirEventArgs.

Namespace

Cybele.Thinfinity Namespace

9.2.1.8.1 GetUploadDirEventArgs Properties

The properties of the GetUploadDirEventArgs class are listed here.

Class

GetUploadDirEventArgs Class

Public Properties

	Name	Description

	Directory	This is Directory, a member of class GetUploadDirEventArgs.
	Handled	This is Handled, a member of class GetUploadDirEventArgs.

9.2.1.8.1.1 GetUploadDirEventArgs.Directory Property

C#
```
public string Directory;
```

Description

This is Directory, a member of class GetUploadDirEventArgs.

Group

GetUploadDirEventArgs Properties

9.2.1.8.1.2 GetUploadDirEventArgs.Handled Property

C#
```
public bool Handled;
```

Description

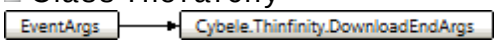
This is Handled, a member of class GetUploadDirEventArgs.

Group

GetUploadDirEventArgs Properties

9.2.1.9 DownloadEndArgs Class

Class Hierarchy



C#
```
public class DownloadEndArgs : EventArgs;
```

File

Thinfinity.VirtualUI.cs

Description

This is class Cybele.Thinfinity.DownloadEndArgs.

Namespace

Cybele.Thinfinity Namespace

9.2.1.9.1 DownloadEndArgs Properties

The properties of the DownloadEndArgs class are listed here.

Class

DownloadEndArgs Class

Public Properties

	Name	Description
	Filename	This is Filename, a member of class DownloadEndArgs.

9.2.1.9.1.1 DownloadEndArgs.Filename Property

C#

```
public string Filename;
```

Description

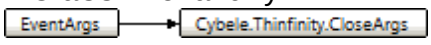
This is Filename, a member of class DownloadEndArgs.

Group

DownloadEndArgs Properties

9.2.1.10 CloseArgs Class

Class Hierarchy



C#

```
public class CloseArgs : EventArgs;
```

File

Thinfinity.VirtualUI.cs

Description

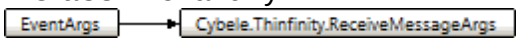
This is class Cybele.Thinfinity.CloseArgs.

Namespace

Cybele.Thinfinity Namespace

9.2.1.11 ReceiveMessageArgs Class

Class Hierarchy



C#
```
public class ReceiveMessageArgs : EventArgs;
```

File

Thinfinity.VirtualUI.cs

Description

This is class Cybele.Thinfinity.ReceiveMessageArgs.

Namespace

Cybele.Thinfinity Namespace

9.2.1.11.1 ReceiveMessageArgs Properties

The properties of the ReceiveMessageArgs class are listed here.

Class

ReceiveMessageArgs Class

Public Properties

	Name	Description
	Data	This is Data, a member of class ReceiveMessageArgs.

9.2.1.11.1.1 ReceiveMessageArgs.Data Property

C#
```
public string Data;
```

Description

This is Data, a member of class ReceiveMessageArgs.

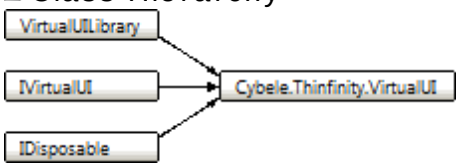
Group

ReceiveMessageArgs Properties

9.2.1.12 VirtualUI Class

Main class. Has methods, properties and events to allow the activation and control the behavior of VirtualUI.

Class Hierarchy



C#
```
public class VirtualUI : VirtualUILibrary, IVirtualUI, IDisposable;
```

File

Thinfinity.VirtualUI.cs

Namespace

Cybele.Thinfinity Namespace

9.2.1.12.1 VirtualUI.VirtualUI Constructor

C#
```
public VirtualUI();
```

Description

This is VirtualUI, a member of class VirtualUI.

Class

VirtualUI Class

9.2.1.12.2 VirtualUI Methods

The methods of the VirtualUI class are listed here.

Class

VirtualUI Class

Public Methods

	Name	Description
	DownloadFile	This is the overview for the DownloadFile method overload.
	Start	This is the overview for the Start method overload.

	UploadFile	This is the overview for the UploadFile method overload.
	Dispose	This is Dispose, a member of class VirtualUI.
	Stop	Deactivates VirtualUI, closing the connection with the end-user's web browser.
	PrintPdf	Sends the specified PDF file to be shown on the end-user's web browser.
	OpenLinkDlg	Displays a popup with a button to open a web link.
	SendMessage	Sends a data string to the web browser.
	AllowExecute	Allows the execution of the passed application.
	SetImageQualityByWnd	Allows to the the image quality for the specified window.
	TakeScreenshot	Takes a screenshot of a Window.

9.2.1.12.2.1 DownloadFile Method

This is the overview for the DownloadFile method overload.

Overload List

	Name	Description
	VirtualUI.DownloadFile (string)	Sends the specified file to the end-user's web browser for saving it in the remote machine.
	VirtualUI.DownloadFile (string, string)	Sends the specified file to the end-user's web browser for saving it in the remote machine.
	VirtualUI.DownloadFile (string, string, string)	Sends the specified file to the end-user's web browser for saving it in the remote machine.

Group

VirtualUI Methods

Sends the specified file to the end-user's web browser for saving it in the remote machine.

C#

```
public void DownloadFile(string LocalFilename);
```

Parameters

Parameters	Description
string LocalFilename	Name of both the local and remote file .

Group

DownloadFile Method

Sends the specified file to the end-user's web browser for saving it in the remote machine.

C#
```
public void DownloadFile(string LocalFilename, string RemoteFilename);
```

Parameters

Parameters	Description
string LocalFilename	Name of the local file to be sent.
string RemoteFilename	Name of the file in the remote machine.

Group

DownloadFile Method

Sends the specified file to the end-user's web browser for saving it in the remote machine.

C#
```
public void DownloadFile(string LocalFilename, string RemoteFilename, string MimeType);
```

Parameters

Parameters	Description
string LocalFilename	Name of the local file to be sent.
string RemoteFilename	Name of the file in the remote machine.
string MimeType	content-type of the file. If specified, the content will be handled by browser. Leave blank to force download.

Group

DownloadFile Method

9.2.1.12.2.2 Start Method

This is the overview for the Start method overload.

Overload List

	Name	Description
	VirtualUI.Start ()	Starts the VirtualUI's activation process. Returns true if VirtualUI was fully activated or false if the timeout expired. The timeout is 60 seconds.
	VirtualUI.Start (int)	Starts the VirtualUI's activation process. Returns true if VirtualUI was fully activated or false if the passed timeout expired.

Group

VirtualUI Methods

Starts the VirtualUI's activation process. Returns true if VirtualUI was fully activated or false if the timeout expired. The timeout is 60 seconds.

C#
```
public bool Start();
```

Group

Start Method

Starts the VirtualUI's activation process. Returns true if VirtualUI was fully activated or false if the passed timeout expired.

C#
```
public bool Start(int timeout);
```

Parameters

Parameters	Description
Timeout	Maximum time, in seconds, until the activation process is canceled. Defaults to 60 seconds.

Remarks

To fully activate VirtualUI, the connection with the end-user's web browser must established within the time specified by Timeout parameter.

Group

Start Method

9.2.1.12.2.3 UploadFile Method

This is the overview for the UploadFile method overload.

Overload List

	Name	Description
	VirtualUI.UploadFile ()	Selects a file from client machine, and it's uploaded to VirtualUI public path.
	VirtualUI.UploadFile (string)	Selects a file from client machine, and it's uploaded to ServerDirectory

Group

VirtualUI Methods

Selects a file from client machine, and it's uploaded to ServerDirectory

C#
```
public void UploadFile(string ServerDirectory);
```

Parameters

Parameters	Description
string ServerDirectory	Destination directory in Server.

Group

UploadFile Method

Selects a file from client machine, and it's uploaded to VirtualUI public path.

C#
```
public void UploadFile();
```

Group

UploadFile Method

9.2.1.12.2.4 VirtualUI.Dispose Method

C#
```
public void Dispose();
```

Description

This is Dispose, a member of class VirtualUI.

Group

VirtualUI Methods

9.2.1.12.2.5 VirtualUI.Stop Method

Deactivates VirtualUI, closing the connection with the end-user's web browser.

C#
```
public void Stop();
```

Group

VirtualUI Methods

9.2.1.12.2.6 VirtualUI.PrintPdf Method

Sends the specified PDF file to be shown on the end-user's web browser.

C#
```
public void PrintPdf(string FileName);
```

Parameters

Parameters	Description
AFileName	Name of the PDF file.

Remarks

PrintPDF is similar to DownloadFile, except that it downloads the file with a content-type: application/pdf.

Group

VirtualUI Methods

9.2.1.12.2.7 VirtualUI.OpenLinkDlg Method

Displays a popup with a button to open a web link.

C#
```
public void OpenLinkDlg(string Url, string Caption);
```

Parameters

Parameters	Description
url	Link to open.
caption	Text to display in popup.

Group

VirtualUI Methods

9.2.1.12.2.8 VirtualUI.SendMessage Method

Sends a data string to the web browser.

C#
```
public void SendMessage(string Data);
```

Remarks

This method is used to send custom data to the browser for custom purposes.

Group

VirtualUI Methods

9.2.1.12.2.9 VirtualUI.AllowExecute Method

Allows the execution of the passed application.

C#
```
public void AllowExecute(string Filename);
```

Parameters

Parameters	Description
string Filename	regular expression specifying the filename(s) of the applications allowed to run.

Remarks

Under VirtualUI environment, only applications precompiled with VirtualUI SDK should be allowed to run. Applications not under VirtualUI control, cannot be controlled.

Group

VirtualUI Methods

9.2.1.12.2.10 VirtualUI.SetImageQualityByWnd Method

Allows to the the image quality for the specified window.

C#
```
public void SetImageQualityByWnd(long Wnd, string Classname, int Quality);
```

Parameters

Parameters	Description
long Wnd	Window handle.
int Quality	Quality from 0 to 100.
Class	Window classname.

Group

VirtualUI Methods

9.2.1.12.2.11 VirtualUI.TakeScreenshot Method

Takes a screenshot of a Window.

C#
```
public bool TakeScreenshot(long Wnd, string FileName);
```

Parameters

Parameters	Description
long Wnd	The Window to capture.
string FileName	Full path of file to save screenshot. Extensions allowed: jpg, bmp, png.

Group

VirtualUI Methods

9.2.1.12.3 VirtualUI Properties

The properties of the VirtualUI class are listed here.

Class

VirtualUI Class

Public Properties

	Name	Description
	Active	Returns the VirtualUI's state.
	Enabled	Enables/disables VirtualUI for the container application.
	DevMode	Gets/sets the development mode.
	StdDialogs	Enables/disables the use of standard dialogs.
	BrowserInfo	Contains information regarding the end-user's environment.
	DevServer	Allows for managing the Development Server.
	ClientSettings	Controls some working parameters on the client side.

9.2.1.12.3.1 VirtualUI.Active Property

Returns the VirtualUI's state.

C#

```
public bool Active;
```

Group

VirtualUI Properties

9.2.1.12.3.2 VirtualUI.Enabled Property

Enables/disables VirtualUI for the container application.

C#
```
public bool Enabled;
```

Group

VirtualUI Properties

9.2.1.12.3.3 VirtualUI.DevMode Property

Gets/sets the development mode.

C#
```
public bool DevMode;
```

Remarks

When in development mode, applications executed under the IDE, connect to the Development Server, allowing the access to the application from the browser while in debugging.

Group

VirtualUI Properties

9.2.1.12.3.4 VirtualUI.StdDialogs Property

Enables/disables the use of standard dialogs.

C#
```
public bool StdDialogs;
```

Remarks

When set to false, the standard save, open and print dialogs are replaced by native browser ones, enabling you to extend the operations to the remote computer.

Group

VirtualUI Properties

9.2.1.12.3.5 VirtualUI.BrowserInfo Property

Contains information regarding the end-user's environment.

C#
```
public IBrowserInfo BrowserInfo;
```

Group

VirtualUI Properties

9.2.1.12.3.6 VirtualUI.DevServer Property

Allows for managing the Development Server.

```
C#
public IDevServer DevServer;
```

Group

VirtualUI Properties

9.2.1.12.3.7 VirtualUI.ClientSettings Property

Controls some working parameters on the client side.

```
C#
public IClientSettings ClientSettings;
```

Group

VirtualUI Properties

9.2.1.12.4 VirtualUI Events

The events of the VirtualUI class are listed here.

Class

VirtualUI Class

Public Events

	Name	Description
	OnBrowserResize	This is OnBrowserResize, a member of class VirtualUI.
	OnGetUploadDir	This is OnGetUploadDir, a member of class VirtualUI.
	OnClose	This is OnClose, a member of class VirtualUI.
	OnReceiveMessage	This is OnReceiveMessage, a member of class VirtualUI.
	OnDownloadEnd	This is OnDownloadEnd, a member of class VirtualUI.

9.2.1.12.4.1 VirtualUI.OnBrowserResize Event

```
C#
public event EventHandler<BrowserResizeEventArgs> OnBrowserResize;
```

Description

This is OnBrowserResize, a member of class VirtualUI.

Group

VirtualUI Events

9.2.1.12.4.2 VirtualUI.OnGetUploadDir Event

```
C#
public event EventHandler<GetUploadDirEventArgs> OnGetUploadDir;
```

Description

This is OnGetUploadDir, a member of class VirtualUI.

Group

VirtualUI Events

9.2.1.12.4.3 VirtualUI.OnClose Event

```
C#
public event EventHandler<CloseArgs> OnClose;
```

Description

This is OnClose, a member of class VirtualUI.

Group

VirtualUI Events

9.2.1.12.4.4 VirtualUI.OnReceiveMessage Event

```
C#
public event EventHandler<ReceiveMessageArgs> OnReceiveMessage;
```

Description

This is OnReceiveMessage, a member of class VirtualUI.

Group

VirtualUI Events

9.2.1.12.4.5 VirtualUI.OnDownloadEnd Event

C#
```
public event EventHandler<DownloadEndArgs> OnDownloadEnd;
```

Description

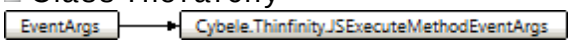
This is OnDownloadEnd, a member of class VirtualUI.

Group

VirtualUI Events

9.2.1.13 JSExecuteMethodEventArgs Class

Class Hierarchy



C#
```
public class JSExecuteMethodEventArgs : EventArgs;
```

File

Thinfinity.VirtualUI.cs

Description

This is class Cybele.Thinfinity.JSExecuteMethodEventArgs.

Namespace

Cybele.Thinfinity Namespace

9.2.1.13.1 JSExecuteMethodEventArgs Properties

The properties of the JSExecuteMethodEventArgs class are listed here.

Class

JSExecuteMethodEventArgs Class

Public Properties

	Name	Description
	Sender	This is Sender, a member of class JSExecuteMethodEventArgs.

	Method	This is Method, a member of class JSExecuteMethodEventArgs.

9.2.1.13.1.1 JSExecuteMethodEventArgs.Sender Property

C#
```
public IJSObject Sender;
```

Description

This is Sender, a member of class JSExecuteMethodEventArgs.

Group

JSExecuteMethodEventArgs Properties

9.2.1.13.1.2 JSExecuteMethodEventArgs.Method Property

C#
```
public IJSMethod Method;
```

Description

This is Method, a member of class JSExecuteMethodEventArgs.

Group

JSExecuteMethodEventArgs Properties

9.2.1.14 JSPropertyChangeEventArgs Class

Class Hierarchy

C#
```
public class JSPropertyChangeEventArgs : EventArgs;
```

File

Thinfinity.VirtualUI.cs

Description

This is class Cybele.Thinfinity.JSPropertyChangeEventArgs.

Namespace

Cybele.Thinfinity Namespace

9.2.1.14.1 JSPropertyChangeEventArgs Properties

The properties of the JSPropertyChangeEventArgs class are listed here.

Class

JSPropertyChangeEventArgs Class

Public Properties

	Name	Description
	Sender	This is Sender, a member of class JSPropertyChangeEventArgs.
	Prop	This is Prop, a member of class JSPropertyChangeEventArgs.

9.2.1.14.1.1 JSPropertyChangeEventArgs.Sender Property

C#

```
public IJSObject Sender;
```

Description

This is Sender, a member of class JSPropertyChangeEventArgs.

Group

JSPropertyChangeEventArgs Properties

9.2.1.14.1.2 JSPropertyChangeEventArgs.Prop Property

C#

```
public IJSProperty Prop;
```

Description

This is Prop, a member of class JSPropertyChangeEventArgs.

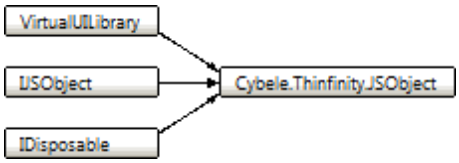
Group

JSPropertyChangeEventArgs Properties

9.2.1.15 JSObject Class

Represents a custom remotable object.

Class Hierarchy



C#
```
public class JSObject : VirtualUILibrary, IJSObject, IDisposable;
```

File

Thinfinity.VirtualUI.cs

Remarks

JSObject allows you to define an object model that is mirrored on the client side, and allows for an easy, powerful and straight-forward way to connect the web browser client application and the remoted Windows application.

JSObject can contain properties (IJSProperties), methods (IJSMethods), events (IJSEvents) and children objects. Changes to properties values are propagated in from server to client and viceversa, keeping the data synchronized.

JSObject is defined as a model seen from the client perspective. A method (IJSMethod) is called on the client side and executed on the server side. An event (IJSEvent) is called on the server side and raised on the client side.

Namespace

Cybele.Thinfinity Namespace

9.2.1.15.1 JSObject.JSObject Constructor

C#
```
public JSObject(string Id);
```

Description

This is JSObject, a member of class JSObject.

Class

JSObject Class

9.2.1.15.2 JSObject Methods

The methods of the JSObject class are listed here.

Class

JSObject Class

Public Methods

	Name	Description
	Dispose	This is Dispose, a member of class JSObject.
	FireEvent	This is FireEvent, a member of class JSObject.
	ApplyChanges	When this method called, all properties getters are internally called looking for changes. Any change to the property value is sent to the client.
	ApplyModel	Propagates the whole JSObject definition to the javascript client.

9.2.1.15.2.1 JSObject.Dispose Method

C#

```
public void Dispose();
```

Description

This is Dispose, a member of class JSObject.

Group

JSObject Methods

9.2.1.15.2.2 JSObject.FireEvent Method

C#

```
public void FireEvent(string Name, IJSArguments Arguments);
```

Description

This is FireEvent, a member of class JSObject.

Group

JSObject Methods

9.2.1.15.2.3 JSObject.ApplyChanges Method

When this method called, all properties getters are internally called looking for changes. Any change to the property value is sent to the client.

C#

```
public void ApplyChanges();
```

Group

JSObject Methods

9.2.1.15.2.4 JSObject.ApplyModel Method

Propagates the whole JSObject definition to the javascript client.

C#
```
public void ApplyModel();
```

Group

JSObject Methods

9.2.1.15.3 JSObject Properties

The properties of the JSObject class are listed here.

Class

JSObject Class

Public Properties

	Name	Description
	Id	Identifier of the object. It must be unique among siblings objects.
R	Properties	List containing all properties of this object.
R	Methods	List containing all methods of this object.
R	Events	List containing all events of this object.
R	Objects	List containing all events of this object.

9.2.1.15.3.1 JSObject.Id Property

Identifier of the object. It must be unique among siblings objects.

C#
```
public string Id;
```

Group

JSObject Properties

9.2.1.15.3.2 JSObject.Properties Property

List containing all properties of this object.

C#
```
public IJSProperties Properties;
```

Group

JSObject Properties

9.2.1.15.3.3 JSObject.Methods Property

List containing all methods of this object.

```
C#
public IJSMethods Methods;
```

Group

JSObject Properties

9.2.1.15.3.4 JSObject.Events Property

List containing all events of this object.

```
C#
public IJSEvents Events;
```

Group

JSObject Properties

9.2.1.15.3.5 JSObject.Objects Property

List containing all events of this object.

```
C#
public IJSObjects Objects;
```

Group

JSObject Properties

9.2.1.15.4 JSObject Events

The events of the JSObject class are listed here.

Class

JSObject Class

Public Events

	Name	Description
	OnExecuteMethod	Fired when a method is executed on the remote object.

	OnPropertyChange	Fired when a property value has been changed on the remote object.

9.2.1.15.4.1 JSObject.OnExecuteMethod Event

Fired when a method is executed on the remote object.

C#
```
public event EventHandler<JSExecuteMethodEventArgs> OnExecuteMethod;
```

Group

JSObject Events

9.2.1.15.4.2 JSObject.OnPropertyChange Event

Fired when a property value has been changed on the remote object.

C#
```
public event EventHandler<JSPropertyChangeEventArgs> OnPropertyChange;
```

Group

JSObject Events

9.2.1.16 Cybele.Thinfinity.JSPropertySet Type

C#
```
public delegate void JSPropertySet(IJSObject Parent, IJSProperty Prop);
```

File

Thinfinity.VirtualUI.cs

Description

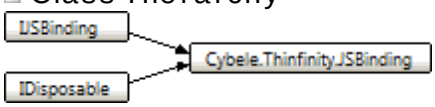
This is type Cybele.Thinfinity.JSPropertySet.

Namespace

Cybele.Thinfinity Namespace

9.2.1.17 JSBinding Class

Class Hierarchy



C#

```
[ComVisible(true), ClassInterface(ClassInterfaceType.AutoDual), ComDefaultInterface(typeof(IJSBinding))]
public class JSBinding : IJSBinding, IDisposable;
```

File

Thinfinity.VirtualUI.cs

Description

This is class Cybele.Thinfinity.JSBinding.

Namespace

Cybele.Thinfinity Namespace

9.2.1.17.1 JSBinding.JSBinding Constructor

C#

```
public JSBinding(JSPropertySet Proc);
```

Description

This is JSBinding, a member of class JSBinding.

Class

JSBinding Class

9.2.1.17.2 JSBinding Methods

The methods of the JSBinding class are listed here.

Class

JSBinding Class

Public Methods

	Name	Description
	Dispose	This is Dispose, a member of class JSBinding.
	Set	This is Set, a member of class JSBinding.

9.2.1.17.2.1 JSBinding.Dispose Method

C#

```
public void Dispose();
```

Description

This is Dispose, a member of class JSBinding.

Group

JSBinding Methods

9.2.1.17.2.2 JSBinding.Set Method

C#
```
public void Set(IJSObject Parent, IJSProperty Prop);
```

Description

This is Set, a member of class JSBinding.

Group

JSBinding Methods

9.2.1.18 Cybele.Thinfinity.JSMethodCallback Type

C#
```
public delegate void JSMethodCallback(IJSObject Parent, IJSMethod Method);
```

File

Thinfinity.VirtualUI.cs

Description

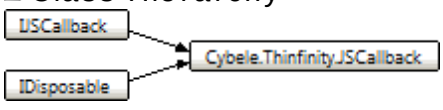
This is type Cybele.Thinfinity.JSMethodCallback.

Namespace

Cybele.Thinfinity Namespace

9.2.1.19 JSCallback Class

Class Hierarchy



C#
```
[ComVisible(true), ClassInterface(ClassInterfaceType.AutoDual), ComDefaultInterface(typeof(IJSCallback))]
public class JSCallback : IJSCallback, IDisposable;
```

File

Thinfinity.VirtualUI.cs

Description

This is class Cybele.Thinfinity.JSCallback.

Namespace

Cybele.Thinfinity Namespace

9.2.1.19.1 JSCallback.JSCallback Constructor

C#

```
public JSCallback(JSMethodCallback Proc);
```

Description

This is JSCallback, a member of class JSCallback.

Class

JSCallback Class

9.2.1.19.2 JSCallback Methods

The methods of the JSCallback class are listed here.

Class

JSCallback Class

Public Methods

	Name	Description
	Dispose	This is Dispose, a member of class JSCallback.
	Callback	This is Callback, a member of class JSCallback.

9.2.1.19.2.1 JSCallback.Dispose Method

C#

```
public void Dispose();
```

Description

This is Dispose, a member of class JSCallback.

Group

JSCallback Methods

9.2.1.19.2.2 JSCallback.Callback Method

```
C#
public void Callback(IJSObject Parent, IJSMethod Method);
```

Description

This is Callback, a member of class JSCallback.

Group

JSCallback Methods

9.2.2 Cybele.Thinfinity.Settings.VirtualUI Namespace

This is namespace Cybele.Thinfinity.Settings.VirtualUI.

Classes

	Name	Description
	Server	Main class. Contains methods and properties to manage all Server configuration.
	ServerUtils	Helper functions.

Enumerations

	Name	Description
	Protocol	This is record Cybele.Thinfinity.Settings.VirtualUI.Protocol.
	ProfileKind	This is record Cybele.Thinfinity.Settings.VirtualUI.ProfileKind.
	ScreenResolution	This is record Cybele.Thinfinity.Settings.VirtualUI.ScreenResolution.
	ServerSection	This is record Cybele.Thinfinity.Settings.VirtualUI.ServerSection.

Group

.NET Classes

Interfaces

	Name	Description
	IRDSAccounts	Manages the configuration of alternative Remote Desktop Services accounts. VirtualUI makes use of an interactive session. The default setting is to run applications under the console session, but it can be configured to do it under Remote Desktop Services sessions. For the production

		environment, it is recommended to set VirtualUI to run applications under its own Remote Desktop Services session. This will ensure that the service is available at all times. Alternatively, you can choose to have VirtualUI run the applications under the console session by configuring the Auto Logon feature on your Windows operating system.

9.2.2.1 Cybele.Thinfinity.Settings.VirtualUI.Protocol Enumeration

C#

```
public enum Protocol {
  PROTO_HTTP = 0,
  PROTO_HTTPS = 1
}
```

File

Thinfinity.VirtualUI.Settings.cs

Description

This is record Cybele.Thinfinity.Settings.VirtualUI.Protocol.

Namespace

Cybele.Thinfinity.Settings.VirtualUI Namespace

9.2.2.2 Cybele.Thinfinity.Settings.VirtualUI.ProfileKind Enumeration

C#

```
public enum ProfileKind {
  PROFILE_APP = 0,
  PROFILE_WEBLINK = 1
}
```

File

Thinfinity.VirtualUI.Settings.cs

Description

This is record Cybele.Thinfinity.Settings.VirtualUI.ProfileKind.

Namespace

Cybele.Thinfinity.Settings.VirtualUI Namespace

9.2.2.3 Cybele.Thinfinity.Settings.VirtualUI.ScreenResolution Enumeration

C#

```
public enum ScreenResolution {
```

```
  SCREENRES_Custom = 0,
  SCREENRES_FitToBrowser = 1,
  SCREENRES_FitToScreen = 2,
  SCREENRES_640x480 = 3,
  SCREENRES_800x600 = 4,
  SCREENRES_1024x768 = 5,
  SCREENRES_1280x720 = 6,
  SCREENRES_1280x768 = 7,
  SCREENRES_1280x1024 = 8,
  SCREENRES_1440x900 = 9,
  SCREENRES_1440x1050 = 10,
  SCREENRES_1600x1200 = 11,
  SCREENRES_1680x1050 = 12,
  SCREENRES_1920x1080 = 13,
  SCREENRES_1920x1200 = 14
}
```

File

Thinfinity.VirtualUI.Settings.cs

Description

This is record Cybele.Thinfinity.Settings.VirtualUI.ScreenResolution.

Namespace

Cybele.Thinfinity.Settings.VirtualUI Namespace

9.2.2.4 Cybele.Thinfinity.Settings.VirtualUI.ServerSection Enumeration

```
C#
public enum ServerSection {
  SRVSEC_GENERAL = 0,
  SRVSEC_RDS = 1,
  SRVSEC_APPLICATIONS = 2,
  SRVSEC_LICENSES = 3
}
```

File

Thinfinity.VirtualUI.Settings.cs

Description

This is record Cybele.Thinfinity.Settings.VirtualUI.ServerSection.

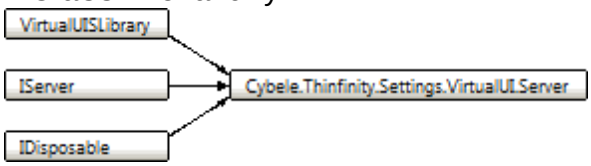
Namespace

Cybele.Thinfinity.Settings.VirtualUI Namespace

9.2.2.5 Server Class

Main class. Contains methods and properties to manage all Server configuration.

Class Hierarchy



C#
```
public class Server : VirtualUISLibrary, IServer, IDisposable;
```

File

Thinfinity.VirtualUI.Settings.cs

Namespace

Cybele.Thinfinity.Settings.VirtualUI Namespace

9.2.2.5.1 Server.Server Constructor

C#
```
public Server();
```

Description

This is Server, a member of class Server.

Class

Server Class

9.2.2.5.2 Server Methods

The methods of the Server class are listed here.

Class

Server Class

Public Methods

	Name	Description
	Dispose	This is Dispose, a member of class Server.
	Load	Loads all the configuration entries and profiles from file. It's automatically called by constructor.

	Save	Saves the entire configuration parameters and profiles.
	HideSection	Hides a configuration section in the VirtualUI Server Manager GUI.
	ShowSection	Makes visible a configuration section in the VirtualUI Server Manager GUI.

9.2.2.5.2.1 Server.Dispose Method

C#
```
public void Dispose();
```

Description

This is Dispose, a member of class Server.

Group

Server Methods

9.2.2.5.2.2 Server.Load Method

Loads all the configuration entries and profiles from file. It's automatically called by constructor.

C#
```
public void Load();
```

Group

Server Methods

9.2.2.5.2.3 Server.Save Method

Saves the entire configuration parameters and profiles.

C#
```
public void Save();
```

Group

Server Methods

9.2.2.5.2.4 Server.HideSection Method

Hides a configuration section in the VirtualUI Server Manager GUI.

C#
```
public void HideSection(ServerSection section);
```

Parameters

Parameters	Description
ServerSection section	The Server configuration section to hide to user. Use one of the following constants: • SRVSEC_GENERAL: Hides the General tab, that contains the Binding configuration. • SRVSEC_RDS: Hides the tab with the Remote Desktop Services account configuration. • SRVSEC_APPLICATIONS: Hides the list of applications. • SRVSEC_LICENSES: Hides the tab with License information.

Group

Server Methods

9.2.2.5.2.5 Server.ShowSection Method

Makes visible a configuration section in the VirtualUI Server Manager GUI.

C#

```
public void ShowSection(ServerSection section);
```

Parameters

Parameters	Description
ServerSection section	The Server configuration section to show to user. Use one of the following constants: • SRVSEC_GENERAL: Shows the General tab, that contains the Binding configuration. • SRVSEC_RDS: Shows the tab with the Remote Desktop Services account configuration. • SRVSEC_APPLICATIONS: Shows the list of applications. • SRVSEC_LICENSES: Shows the tab with License information.

Group

Server Methods

9.2.2.5.3 Server Properties

The properties of the Server class are listed here.

Class

Server Class

Public Properties

	Name	Description

	Binding	Returns the Server's Binding configuration.
	Certificate	Returns the Server's certificate configuration for SSL protocol.
	RDSAccounts	Returns the list of Remote Desktop Services accounts.
	Profiles	Returns the profiles list.
	License	Returns the current Server's licence.

9.2.2.5.3.1 Server.Binding Property

Returns the Server's Binding configuration.

C#
```
public IBinding Binding;
```

See Also

IBinding interface

Group

Server Properties

9.2.2.5.3.2 Server.Certificate Property

Returns the Server's certificate configuration for SSL protocol.

C#
```
public ICertificate Certificate;
```

See Also

ICertificate interface

Group

Server Properties

9.2.2.5.3.3 Server.RDSAccounts Property

Returns the list of Remote Desktop Services accounts.

C#
```
public IRDSAccounts RDSAccounts;
```

See Also

IRDSAccounts interface

Group

Server Properties

9.2.2.5.3.4 Server.Profiles Property

Returns the profiles list.

```
C#
public IProfiles Profiles;
```

See Also

IProfiles interface

Group

Server Properties

9.2.2.5.3.5 Server.License Property

Returns the current Server's licence.

```
C#
public ILicense License;
```

See Also

ILicense interface

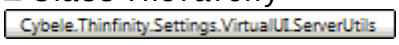
Group

Server Properties

9.2.2.6 ServerUtils Class

Helper functions.

Class Hierarchy




```
C#
public class ServerUtils;
```

File

Thinfinity.VirtualUI.Settings.cs

Namespace

Cybele.Thinfinity.Settings.VirtualUI Namespace

9.2.2.6.1 ServerUtils Methods

The methods of the ServerUtils class are listed here.

Class

ServerUtils Class

Public Methods

	Name	Description
	RunAsAdmin	Runs an application in elevated mode. This mode is required to save the Server's configuration in protected files.
	Base64ToIcon	Converts the IProfile.IconData (base64 string) to a PNG image.
	IconToBase64	Converts a PNG image to be stored in IProfile.IconData (as base64 string).

9.2.2.6.1.1 ServerUtils.RunAsAdmin Method

Runs an application in elevated mode. This mode is required to save the Server's configuration in protected files.

C#

```
public static void RunAsAdmin(string fileName, string parameters);
```

Parameters

Parameters	Description
filename	Full path of application to execute.
Parameters	Arguments.

Example

In the main program of the application using this classes, you can include: if (args.Length == 0) ServerUtils.RunAsAdmin(Application.ExecutablePath, "/edit"); else { [...] }

Group

ServerUtils Methods

9.2.2.6.1.2 ServerUtils.Base64ToIcon Method

Converts the IProfile.IconData (base64 string) to a PNG image.

C#

```
public static Image Base64ToIcon(string data);
```

Parameters

Parameters	Description
string data	The image encoded in base64.

Group

ServerUtils Methods

9.2.2.6.1.3 ServerUtils.IconToBase64 Method

Converts a PNG image to be stored in IProfile.IconData (as base64 string).

C#

```
public static string IconToBase64(Image png);
```

Description

param name="png"> The image to be encoded in base64.

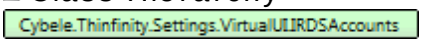
Group

ServerUtils Methods

9.2.2.7 IRDSAccounts Interface

Manages the configuration of alternative Remote Desktop Services accounts. VirtualUI makes use of an interactive session. The default setting is to run applications under the console session, but it can be configured to do it under Remote Desktop Services sessions. For the production environment, it is recommended to set VirtualUI to run applications under its own Remote Desktop Services session. This will ensure that the service is available at all times. Alternatively, you can choose to have VirtualUI run the applications under the console session by configuring the Auto Logon feature on your Windows operating system.

Class Hierarchy



C#

```
[Guid("60666BC2-7E17-4842-9716-CFA3DCFD5583"), InterfaceType(ComInterfaceType.InterfaceIsIDispatch)]
public interface IRDSAccounts;
```

File

Thinfinity.VirtualUI.Settings.cs

Namespace

Cybele.Thinfinity.Settings.VirtualUI Namespace

9.2.2.7.1 IRDSAccounts Methods

The methods of the IRDSAccounts class are listed here.

Interface

IRDSAccounts Interface

Public Methods

	Name	Description
	Add	Creates a new RDS account and adds it to the list. If CreateAccount is true, the account will be created in your system.
	Delete	Deletes an RDS account from the list. If DeleteAccount is true, the account will be delete in your system.

9.2.2.7.1.1 IRDSAccounts.Add Method

Creates a new RDS account and adds it to the list. If CreateAccount is true, the account will be created in your system.

C#

```
IRDS Add(string UserName, string Password, bool CreateAccount);
```

Returns

The newly created RDS account.

See Also

IRDS interface

Group

IRDSAccounts Methods

9.2.2.7.1.2 IRDSAccounts.Delete Method

Deletes an RDS account from the list. If DeleteAccount is true, the account will be delete in your system.

C#

```
bool Delete(string UserName, bool DeleteAccount);
```

Parameters

Parameters	Description
rds	The account to be deleted.

Group

IRDSAccounts Methods

9.2.2.7.2 IRDSAccounts Indexers

The indexers of the IRDSAccounts class are listed here.

Interface

IRDSAccounts Interface

Public Methods

	Name	Description
	this	Returns an RDS account from the list by it's index.

9.2.2.7.2.1 IRDSAccounts.this Indexer

Returns an RDS account from the list by it's index.

C#

```
IRDS this[int index];
```

See Also

IRDS interface

Group

IRDSAccounts Indexers

9.2.2.7.3 IRDSAccounts Properties

The properties of the IRDSAccounts class are listed here.

Interface

IRDSAccounts Interface

Public Properties

	Name	Description
	Count	Returns the accounts count.

9.2.2.7.3.1 IRDSAccounts.Count Property

Returns the accounts count.

C#

```
int Count;
```

Group

IRDSAccounts Properties

9.3 Delphi Classes

Namespaces

Name	Description
VirtualUI_SDK	This is namespace VirtualUI_SDK.
VirtualUI_Settings	

9.3.1 VirtualUI_SDK Namespace

This is namespace VirtualUI_SDK.

Classes

	Name	Description
	TBrowserInfo	Contains information regarding the end-user's screen, web browser, the window containing VirtualUI Viewer and VirtualUI Viewer itself. The VirtualUI Viewer tuns inside an HTML DIV element contained in a frame o browser window on the end-user's application page.
	TClientSettings	Allows to set some client settings.
	TDevServer	Contains properties to manage the VirtualUI Development Server as well as the access from the developer's web browser.
	TEventSink	This is class VirtualUI_SDK.TEventSink.
	TJSBinding	This is class VirtualUI_SDK.TJSBinding.
	TJSCallback	This is class VirtualUI_SDK.TJSCallback.
	TJSObject	Represents a custom remotable object.
	TJSObjectEventSink	This is class VirtualUI_SDK.TJSObjectEventSink.
	TVirtualUI	Main class. Has methods, properties and events to allow the activation and control the behavior of VirtualUI.

Functions

	Name	Description
	GetDllDir	Returns the path where Thinfinity.VirtualUI.dll is located.
	VirtualUI	Returns a global VirtualUI object.

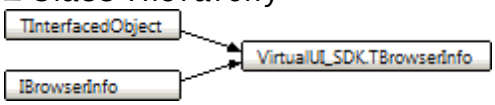
Group

Delphi Classes

9.3.1.1 TBrowserInfo Class

Contains information regarding the end-user's screen, web browser, the window containing VirtualUI Viewer and VirtualUI Viewer itself. The VirtualUI Viewer tuns inside an HTML DIV element contained in a frame o browser window on the end-user's application page.

Class Hierarchy



Pascal
```
TBrowserInfo = class(TInterfacedObject, IBrowserInfo);
```

File

VirtualUI_SDK

Namespace

VirtualUI_SDK Namespace

9.3.1.1.1 TBrowserInfo.Create Constructor

Pascal
```
constructor Create(AVirtualUI: IVirtualUI);
```

Description

This is Create, a member of class TBrowserInfo.

Class

TBrowserInfo Class

9.3.1.1.2 TBrowserInfo.Destroy Destructor

Pascal
```
destructor Destroy; override;
```

Description

This is Destroy, a member of class TBrowserInfo.

Class

TBrowserInfo Class

9.3.1.1.3 TBrowserInfo Properties

The properties of the TBrowserInfo class are listed here.

Class

TBrowserInfo Class

Public Properties

	Name	Description
	ViewWidth	Returns the width of the VirtualUI Viewer.
	ViewHeight	Returns the height of the VirtualUI Viewer.
	BrowserWidth	Returns the width of the HTML element containing the VirtualUI Viewer.
	BrowserHeight	Returns the height of the HTML element containing the VirtualUI Viewer.
	ScreenWidth	Returns the width of the end-user's monitor screen.
	ScreenHeight	Returns the height of the end-user's monitor screen.
	Username	Returns the logged-on Username.
	IPAddress	Returns the client's IP address.
	UserAgent	Returns the browser's User Agent string.
	ScreenResolution	Returns the application screen resolution defined in the application profile.
	Orientation	Returns the browser's orientation.
	UniqueBrowserId	UniqueBrowserId identifies an instance of a Web Browser. Each time an end-user opens the application from a different browser window, this ID will have a different value.
	Location	Returns the URL of the current application.

9.3.1.1.3.1 TBrowserInfo.ViewWidth Property

Returns the width of the VirtualUI Viewer.

```
Pascal
property ViewWidth: Integer;
```

Group

TBrowserInfo Properties

9.3.1.1.3.2 TBrowserInfo.ViewHeight Property

Returns the height of the VirtualUI Viewer.

```
Pascal
property ViewHeight: Integer;
```

Group

TBrowserInfo Properties

9.3.1.1.3.3 TBrowserInfo.BrowserWidth Property

Returns the width of the HTML element containing the VirtualUI Viewer.

```
Pascal
property BrowserWidth: Integer;
```

Group

TBrowserInfo Properties

9.3.1.1.3.4 TBrowserInfo.BrowserHeight Property

Returns the height of the HTML element containing the VirtualUI Viewer.

```
Pascal
property BrowserHeight: Integer;
```

Group

TBrowserInfo Properties

9.3.1.1.3.5 TBrowserInfo.ScreenWidth Property

Returns the width of the end-user's monitor screen.

```
Pascal
property ScreenWidth: Integer;
```

Group

TBrowserInfo Properties

9.3.1.1.3.6 TBrowserInfo.ScreenHeight Property

Returns the height of the end-user's monitor screen.

```
Pascal
property ScreenHeight: Integer;
```

Group

TBrowserInfo Properties

9.3.1.1.3.7 TBrowserInfo.Username Property

Returns the logged-on Username.

```
Pascal
property Username: WideString;
```

Group

TBrowserInfo Properties

9.3.1.1.3.8 TBrowserInfo.IPAddress Property

Returns the client's IP address.

```
Pascal
property IPAddress: WideString;
```

Group

TBrowserInfo Properties

9.3.1.1.3.9 TBrowserInfo.UserAgent Property

Returns the browser's User Agent string.

```
Pascal
property UserAgent: WideString;
```

Group

TBrowserInfo Properties

9.3.1.1.3.10 TBrowserInfo.ScreenResolution Property

Returns the application screen resolution defined in the application profile.

```
Pascal
property ScreenResolution: Integer;
```

Group

TBrowserInfo Properties

9.3.1.1.3.11 TBrowserInfo.Orientation Property

Returns the browser's orientation.

```
Pascal
property Orientation: Orientation;
```

Group

TBrowserInfo Properties

9.3.1.1.3.12 TBrowserInfo.UniqueBrowserId Property

UniqueBrowserId identifies an instance of a Web Browser. Each time an end-user opens the application from a different browser window, this ID will have a different value.

```
Pascal
property UniqueBrowserId: WideString;
```

Group

TBrowserInfo Properties

9.3.1.1.3.13 TBrowserInfo.Location Property

Returns the URL of the current application.

```
Pascal
property Location: WideString;
```

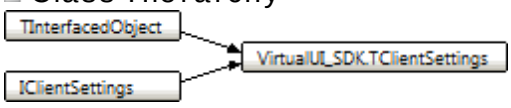
Group

TBrowserInfo Properties

9.3.1.2 TClientSettings Class

Allows to set some client settings.

Class Hierarchy




```
Pascal
TClientSettings = class(TInterfacedObject, IClientSettings);
```

File

VirtualUI_SDK

Namespace

VirtualUI_SDK Namespace

9.3.1.2.1 TClientSettings.Create Constructor

```
Pascal
constructor Create(AVirtualUI: IVirtualUI);
```

Description

This is Create, a member of class TClientSettings.

Class

TClientSettings Class

9.3.1.2.2 TClientSettings.Destroy Destructor

```
Pascal
destructor Destroy; override;
```

Description

This is Destroy, a member of class TClientSettings.

Class

TClientSettings Class

9.3.1.2.3 TClientSettings Properties

The properties of the TClientSettings class are listed here.

Class

TClientSettings Class

Public Properties

	Name	Description
	MouseMoveGestureStyle	Valid for touch devices. Specifies whether the mouse pointer is shown and acts on the exact spot of the finger touch (absolute) or its position is managed relatively to the movement of the finger touch (relative).
	MouseMoveGestureAction	Specifies whether the "mouse move" simulation on a touch device is interpreted as a mouse move or as a mouse wheel.
	CursorVisible	Hides/shows the mouse pointer.

9.3.1.2.3.1 TClientSettings.MouseMoveGestureStyle Property

Valid for touch devices. Specifies whether the mouse pointer is shown and acts on the exact spot of the finger touch (absolute) or its position is managed relatively to the movement of the finger touch (relative).

```
Pascal
property MouseMoveGestureStyle: MouseMoveGestureStyle;
```

Group

TClientSettings Properties

9.3.1.2.3.2 TClientSettings.MouseMoveGestureAction Property

Specifies whether the "mouse move" simulation on a touch device is interpreted as a mouse move or as a mouse wheel.

```
Pascal
property MouseMoveGestureAction: MouseMoveGestureAction;
```

Group

TClientSettings Properties

9.3.1.2.3.3 TClientSettings.CursorVisible Property

Hides/shows the mouse pointer.

```
Pascal
property CursorVisible: WordBool;
```

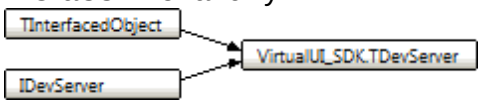
Group

TClientSettings Properties

9.3.1.3 TDevServer Class

Contains properties to manage the VirtualUI Development Server as well as the access from the developer's web browser.

Class Hierarchy




```
Pascal
TDevServer = class(TInterfacedObject, IDevServer);
```

File

VirtualUI_SDK

Namespace

VirtualUI_SDK Namespace

9.3.1.3.1 TDevServer.Create Constructor

```
Pascal
constructor Create(AVirtualUI: IVirtualUI);
```

Description

This is Create, a member of class TDevServer.

Class

TDevServer Class

9.3.1.3.2 TDevServer.Destroy Destructor

```
Pascal
destructor Destroy; override;
```

Description

This is Destroy, a member of class TDevServer.

Class

TDevServer Class

9.3.1.3.3 TDevServer Properties

The properties of the TDevServer class are listed here.

Class

TDevServer Class

Public Properties

	Name	Description
	Enabled	Enables/disables the Development Server.
	Port	Gets/sets the Development Server's TCP/IP listening port.
	StartBrowser	Instructs VirtualUI whether start or not the local web browser upon VirtualUI activation.

9.3.1.3.3.1 TDevServer.Enabled Property

Enables/disables the Development Server.

```
Pascal
property Enabled: WordBool;
```

Group

TDevServer Properties

9.3.1.3.3.2 TDevServer.Port Property

Gets/sets the Development Server's TCP/IP listening port.

```
Pascal
property Port: Integer;
```

Group

TDevServer Properties

9.3.1.3.3.3 TDevServer.StartBrowser Property

Instructs VirtualUI whether start or not the local web browser upon VirtualUI activation.

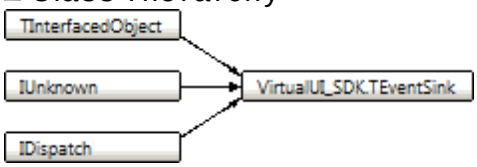
```
Pascal
property StartBrowser: WordBool;
```

Group

TDevServer Properties

9.3.1.4 TEventSink Class

Class Hierarchy




```
Pascal
TEventSink = class(TInterfacedObject, IUnknown, IDispatch);
```

File

VirtualUI_SDK

Description

This is class VirtualUI_SDK.TEventSink.

Namespace

VirtualUI_SDK Namespace

9.3.1.4.1 TEventSink.Create Constructor

```
Pascal
constructor Create(Controller: TObject);
```

Description

This is Create, a member of class TEventSink.

Class

TEventSink Class

9.3.1.4.2 TEventSink.Destroy Destructor

```
Pascal
destructor Destroy; override;
```

Description

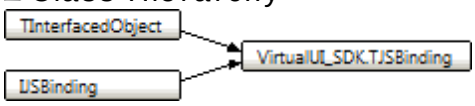
This is Destroy, a member of class TEventSink.

Class

TEventSink Class

9.3.1.5 TJSBinding Class

Class Hierarchy



Pascal
TJSBinding = class(TInterfacedObject, IJSBinding);

File

VirtualUI_SDK

Description

This is class VirtualUI_SDK.TJSBinding.

Namespace

VirtualUI_SDK Namespace

9.3.1.5.1 Create Constructor

This is the overview for the Create constructor overload.

Overload List

	Name	Description
	TJSBinding.Create (TJSPropertyNNProc)	Creates an IJSBinding wrapper passing an anonymous procedure as a callback.
	TJSBinding.Create (TJSPropertyProc)	Creates an IJSBinding wrapper passing an object procedure as a callback.

Class

TJSBinding Class

9.3.1.5.1.1 TJSBinding.Create Constructor (TJSPropertyNNProc)

Creates an IJSBinding wrapper passing an anonymous procedure as a callback.

```
Pascal
constructor Create(ANNProc: TJSPropertyNNProc); overload;
```

Group

Create Constructor

9.3.1.5.1.2 TJSBinding.Create Constructor (TJSPropertyProc)

Creates an IJSBinding wrapper passing an object procedure as a callback.

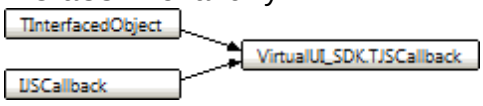
```
Pascal
constructor Create(AProc: TJSPropertyProc); overload;
```

Group

Create Constructor

9.3.1.6 TJSCallback Class

Class Hierarchy



Pascal

```
TJSCallback = class(TInterfacedObject, IJSCallback);
```

File

VirtualUI_SDK

Description

This is class VirtualUI_SDK.TJSCallback.

Namespace

VirtualUI_SDK Namespace

9.3.1.6.1 Create Constructor

This is the overview for the Create constructor overload.

Overload List

	Name	Description
	TJSCallback.Create (TJSMethodNNProc)	Creates an IJSCallback wrapper passing an anonymous procedure as a callback.
	TJSCallback.Create (TJSMethodProc)	Creates an IJSCallback wrapper passing an object procedure as a callback.

Class

TJSCallback Class

9.3.1.6.1.1 TJSCallback.Create Constructor (TJSMethodNNProc)

Creates an IJSCallback wrapper passing an anonymous procedure as a callback.

```
Pascal
constructor Create(ANNProc: TJSMethodNNProc); overload;
```

Group

Create Constructor

9.3.1.6.1.2 TJSCallback.Create Constructor (TJSMethodProc)

Creates an IJSCallback wrapper passing an object procedure as a callback.

```
Pascal
constructor Create(AProc: TJSMethodProc); overload;
```

Group

Create Constructor

9.3.1.7 TJSObject Class

Represents a custom remotable object.

Class Hierarchy

Pascal
```
TJSObject = class(TInterfacedObject, IJSObject);
```

File

VirtualUI_SDK

Remarks

TJSObject allows you to define an object model that is mirrored on the client side, and allows for an easy, powerful and straight-forward way to connect the web browser client application and the remoted Windows application.

TJSObject can contain properties (IJSProperties), methods (IJSMethods), events (IJSEvents) and children objects. Changes to properties values are propagated in from server to client and viceversa, keeping the data synchronized.

TJSObject is defined as a model seen from the client perspective. A method (IJSMethod) is called on the client side and executed on the server side. An event (IJSEvent) is called on the server side and raised on the client side.

Namespace

VirtualUI_SDK Namespace

9.3.1.7.1 TJSObject.Create Constructor

Pascal
```
constructor Create(const Id: WideString);
```

Parameters

Parameters	Description
const Id: WideString	_nt_

Description

Class

TJSObject Class

9.3.1.7.2 TJSObject.Destroy Destructor

```
Pascal
destructor Destroy; override;
```

Description

This is Destroy, a member of class TJSObject.

Class

TJSObject Class

9.3.1.7.3 TJSObject Methods

The methods of the TJSObject class are listed here.

Class

TJSObject Class

Public Methods

	Name	Description
	FireEvent	Fires the event specified in Name on the client-size javascript API.
	ApplyChanges	When this method called, all properties getters are internally called looking for changes. Any change to the property value is sent to the client.
	ApplyModel	Propagates the whole JSObject definition to the javascript client.

9.3.1.7.3.1 TJSObject.FireEvent Method

Fires the event specified in Name on the client-size javascript API.

```
Pascal
procedure FireEvent(const Name: WideString; const Arguments: IJSArguments); safecall;
```

Parameters

Parameters	Description
const Name: WideString	Event name
const Arguments: IJSArguments	List of arguments

Group

TJSObject Methods

9.3.1.7.3.2 TJSObject.ApplyChanges Method

When this method called, all properties getters are internally called looking for changes. Any change to the property value is sent to the client.

```
Pascal
procedure ApplyChanges; safecall;
```

Group

TJSObject Methods

9.3.1.7.3.3 TJSObject.ApplyModel Method

Propagates the whole JSObject definition to the javascript client.

```
Pascal
procedure ApplyModel; safecall;
```

Group

TJSObject Methods

9.3.1.7.4 TJSObject Properties

The properties of the TJSObject class are listed here.

Class

TJSObject Class

Public Properties

	Name	Description
	Id	Identifier of the object. It must be unique among siblings objects.
R	Properties	List containing all properties of this object.
R	Methods	List containing all methods of this object.
R	Events	List containing all events of this object.
R	Objects	List containing all events of this object.

9.3.1.7.4.1 TJSObject.Id Property

Identifier of the object. It must be unique among siblings objects.

```
Pascal
property Id: WideString;
```

Group

TJSObject Properties

9.3.1.7.4.2 TJSObject.Properties Property

List containing all properties of this object.

```
Pascal
property Properties: IJSProperties;
```

Group

TJSObject Properties

9.3.1.7.4.3 TJSObject.Methods Property

List containing all methods of this object.

```
Pascal
property Methods: IJSMethods;
```

Group

TJSObject Properties

9.3.1.7.4.4 TJSObject.Events Property

List containing all events of this object.

```
Pascal
property Events: IJSEvents;
```

Group

TJSObject Properties

9.3.1.7.4.5 TJSObject.Objects Property

List containing all events of this object.

```
Pascal
property Objects: IJSObjects;
```

Group

TJSObject Properties

9.3.1.7.5 TJSObject Events

The events of the TJSObject class are listed here.

Class

TJSObject Class

Public Events

	Name	Description
	OnExecuteMethod	Fired when a method is executed on the remote object.
	OnPropertyChange	Fired when a property value has been changed on the remote object.

9.3.1.7.5.1 TJSObject.OnExecuteMethod Event

Fired when a method is executed on the remote object.

```
Pascal
property OnExecuteMethod: TExecuteMethodEvent;
```

Group

TJSObject Events

9.3.1.7.5.2 TJSObject.OnPropertyChange Event

Fired when a property value has been changed on the remote object.

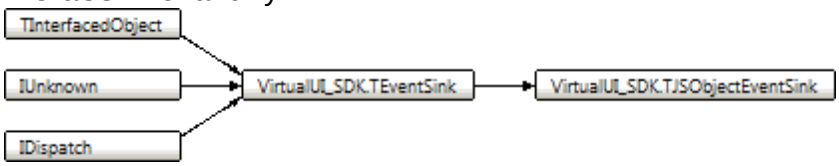
```
Pascal
property OnPropertyChange: TPropertyChangeEvent;
```

Group

TJSObject Events

9.3.1.8 TJSObjectEventSink Class

Class Hierarchy



Pascal
TJSObjectEventSink = class(TEventSink);

File

VirtualUI_SDK

Description

This is class VirtualUI_SDK.TJSObjectEventSink.

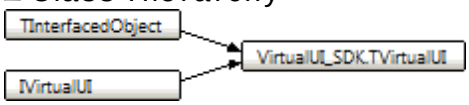
Namespace

VirtualUI_SDK Namespace

9.3.1.9 TVirtualUI Class

Main class. Has methods, properties and events to allow the activation and control the behavior of VirtualUI.

Class Hierarchy



Pascal
```
TVirtualUI = class(TInterfacedObject, IVirtualUI);
```

File

VirtualUI_SDK

Namespace

VirtualUI_SDK Namespace

9.3.1.9.1 TVirtualUI.Create Constructor

```
Pascal
constructor Create;
```

Description

This is Create, a member of class TVirtualUI.

Class

TVirtualUI Class

9.3.1.9.2 TVirtualUI.Destroy Destructor

```
Pascal
destructor Destroy; override;
```

Description

This is Destroy, a member of class TVirtualUI.

Class

TVirtualUI Class

9.3.1.9.3 TVirtualUI Methods

The methods of the TVirtualUI class are listed here.

Class

TVirtualUI Class

Public Methods

	Name	Description
	DownloadFile	This is the overview for the DownloadFile method overload.
	Start	This is the overview for the Start method overload.
	UploadFile	This is the overview for the UploadFile method overload.
	Stop	Deactivates VirtualUI, closing the connection with the end-user's web browser.
	PrintPdf	Sends the specified PDF file to be shown on the end-user's web browser.
	TakeScreenshot	Takes a screenshot of a Window.
	OpenLinkDlg	Displays a popup with a button to open a web link.
	SendMessage	Sends a data string to the web browser.
	AllowExecute	Allows the execution of the passed application.
	SetImageQualityByWnd	Allows to the the image quality for the specified window.
	ShowVirtualKeyboard	In mobile, shows the keyboard.

9.3.1.9.3.1 DownloadFile Method

This is the overview for the DownloadFile method overload.

Overload List

	Name	Description
	TVirtualUI.DownloadFile (WideString)	Sends the specified file to the end-user's web browser for saving it in the remote machine.
	TVirtualUI.DownloadFile (WideString, WideString)	Sends the specified file to the end-user's web browser for saving it in the remote machine.
	TVirtualUI.DownloadFile (WideString, WideString, WideString)	Sends the specified file to the end-user's web browser for saving it in the remote machine.

Group

TVirtualUI Methods

Sends the specified file to the end-user's web browser for saving it in the remote machine.

```
Pascal
procedure DownloadFile(const LocalFilename: WideString; const RemoteFilename: WideString; const Mi
```

Parameters

Parameters	Description
const LocalFilename: WideString	Name of the local file to be sent.
const RemoteFilename: WideString	Name of the file in the remote machine.
const MimeType: WideString	content-type of the file. If specified, the content will be handled by browser. Leave blank to force download.

Group

DownloadFile Method

Sends the specified file to the end-user's web browser for saving it in the remote machine.

```
Pascal
procedure DownloadFile(const LocalFilename: WideString; const RemoteFilename: WideString); safecal
```

Parameters

Parameters	Description
const LocalFilename: WideString	Name of the local file to be sent.
const RemoteFilename: WideString	Name of the file in the remote machine.

Group

DownloadFile Method

Sends the specified file to the end-user's web browser for saving it in the remote machine.

```
Pascal
procedure DownloadFile(const LocalFilename: WideString); overload;
```

Parameters

Parameters	Description
const LocalFilename: WideString	Name of both the local and remote file .

Group

DownloadFile Method

9.3.1.9.3.2 Start Method

This is the overview for the Start method overload.

Overload List

	Name	Description
	TVirtualUI.Start ()	Starts the VirtualUI's activation process. Returns true if VirtualUI was fully activated or false if the timeout expired. The timeout is 60 seconds.
	TVirtualUI.Start (Integer)	Starts the VirtualUI's activation process. Returns true if VirtualUI was fully activated or false if the passed timeout expired.

Group

TVirtualUI Methods

Starts the VirtualUI's activation process. Returns true if VirtualUI was fully activated or false if the passed timeout expired.

```
Pascal
function Start(Timeout: Integer): WordBool; safecall; overload;
```

Parameters

Parameters	Description
Timeout: Integer	Maximum time, in seconds, until the activation process is canceled. Defaults to 60 seconds.

Remarks

To fully activate VirtualUI, the connection with the end-user's web browser must established within the time specified by Timeout parameter.

Group

Start Method

Starts the VirtualUI's activation process. Returns true if VirtualUI was fully activated or false if the timeout expired. The timeout is 60 seconds.

```
Pascal
function Start: WordBool; overload;
```

Group

Start Method

9.3.1.9.3.3 UploadFile Method

This is the overview for the UploadFile method overload.

Overload List

	Name	Description
	TVirtualUI.UploadFile ()	Selects a file from client machine, and it's uploaded to VirtualUI public path.
	TVirtualUI.UploadFile (WideString)	Selects a file from client machine, and it's uploaded to ServerDirectory

Group

TVirtualUI Methods

Selects a file from client machine, and it's uploaded to ServerDirectory

```
Pascal
procedure UploadFile(const ServerDirectory: WideString); safecall; overload;
```

Parameters

Parameters	Description
const ServerDirectory: WideString	Destination directory in Server.

Group

UploadFile Method

Selects a file from client machine, and it's uploaded to VirtualUI public path.

```
Pascal
procedure UploadFile; overload;
```

Group

UploadFile Method

9.3.1.9.3.4 TVirtualUI.Stop Method

Deactivates VirtualUI, closing the connection with the end-user's web browser.

```
Pascal
procedure Stop; safecall;
```

Group

TVirtualUI Methods

9.3.1.9.3.5 TVirtualUI.PrintPdf Method

Sends the specified PDF file to be shown on the end-user's web browser.

```
Pascal
procedure PrintPdf(const AFileName: WideString); safecall;
```

Parameters

Parameters	Description
const AFileName: WideString	Name of the PDF file.

Remarks

PrintPDF is similar to DownloadFile, except that it downloads the file with a content-type: application/pdf.

Group

TVirtualUI Methods

9.3.1.9.3.6 TVirtualUI.TakeScreenshot Method

Takes a screenshot of a Window.

```
Pascal
function TakeScreenshot(Wnd: Integer; const FileName: WideString): WordBool; safecall;
```

Parameters

Parameters	Description
Wnd: Integer	The Window to capture.
const FileName: WideString	Full path of file to save screenshot. Extensions allowed: jpg, bmp, png.

Group

TVirtualUI Methods

9.3.1.9.3.7 TVirtualUI.OpenLinkDlg Method

Displays a popup with a button to open a web link.

```
Pascal
procedure OpenLinkDlg(const url: WideString; const caption: WideString); safecall;
```

Parameters

Parameters	Description
const url: WideString	Link to open.
const caption: WideString	Text to display in popup.

Group

TVirtualUI Methods

9.3.1.9.3.8 TVirtualUI.SendMessage Method

Sends a data string to the web browser.

```
Pascal
procedure SendMessage(const Data: WideString); safecall;
```

Remarks

This method is used to send custom data to the browser for custom purposes.

Group

TVirtualUI Methods

9.3.1.9.3.9 TVirtualUI.AllowExecute Method

Allows the execution of the passed application.

```
Pascal
procedure AllowExecute(const Filename: WideString); safecall;
```

Parameters

Parameters	Description
const Filename: WideString	regular expression specifying the filename(s) of the applications allowed to run.

Remarks

Under VirtualUI environment, only applications precompiled with VirtualUI SDK should be allowed to run. Applications not under VirtualUI control, cannot be controlled.

Group

TVirtualUI Methods

9.3.1.9.3.10 TVirtualUI.SetImageQualityByWnd Method

Allows to the the image quality for the specified window.

```
Pascal
procedure SetImageQualityByWnd(Wnd: Integer; const Class_: WideString; Quality: Integer); safecall
```

Parameters

Parameters	Description
Wnd: Integer	Window handle.
Quality: Integer	Quality from 0 to 100.
Class	Window classname.

Group

TVirtualUI Methods

9.3.1.9.3.11 TVirtualUI.ShowVirtualKeyboard Method

In mobile, shows the keyboard.

```
Pascal
procedure ShowVirtualKeyboard; safecall;
```

Group

TVirtualUI Methods

9.3.1.9.4 TVirtualUI Properties

The properties of the TVirtualUI class are listed here.

Class

TVirtualUI Class

Public Properties

	Name	Description
	Active	Returns the VirtualUI's state.

	Enabled	Enables/disables VirtualUI for the container application.
	DevMode	Gets/sets the development mode.
	StdDialogs	Enables/disables the use of standard dialogs.
R	BrowserInfo	Contains information regarding the end-user's environment.
R	DevServer	Allows for managing the Development Server.
R	ClientSettings	Controls some working parameters on the client side.

9.3.1.9.4.1 TVirtualUI.Active Property

Returns the VirtualUI's state.

```
Pascal
property Active: WordBool;
```

Group

TVirtualUI Properties

9.3.1.9.4.2 TVirtualUI.Enabled Property

Enables/disables VirtualUI for the container application.

```
Pascal
property Enabled: WordBool;
```

Group

TVirtualUI Properties

9.3.1.9.4.3 TVirtualUI.DevMode Property

Gets/sets the development mode.

```
Pascal
property DevMode: WordBool;
```

Remarks

When in development mode, applications executed under the IDE, connect to the Development Server, allowing the access to the application from the browser while in debugging.

Group

TVirtualUI Properties

9.3.1.9.4.4 TVirtualUI.StdDialogs Property

Enables/disables the use of standard dialogs.

```
Pascal
property StdDialogs: WordBool;
```

Remarks

When set to false, the standard save, open and print dialogs are replaced by native browser ones, enabling you to extend the operations to the remote computer.

Group

TVirtualUI Properties

9.3.1.9.4.5 TVirtualUI.BrowserInfo Property

Contains information regarding the end-user's environment.

```
Pascal
property BrowserInfo: IBrowserInfo;
```

Group

TVirtualUI Properties

9.3.1.9.4.6 TVirtualUI.DevServer Property

Allows for managing the Development Server.

```
Pascal
property DevServer: IDevServer;
```

Group

TVirtualUI Properties

9.3.1.9.4.7 TVirtualUI.ClientSettings Property

Controls some working parameters on the client side.

```
Pascal
property ClientSettings: IClientSettings;
```

Group

TVirtualUI Properties

9.3.1.9.5 TVirtualUI Events

The events of the TVirtualUI class are listed here.

Class

TVirtualUI Class

Public Events

	Name	Description
	OnGetUploadDir	Fires during an upload request, allowing you to change the save folder.
	OnBrowserResize	Fires when the VirtualUI Viewer's container window resizes. Normally, when the browser resizes.
	OnReceiveMessage	Fires when a custom data string is sent from the web browser page.
	OnClose	Fires when the browser window is about to close.
	OnDownloadEnd	Fires when the file has been sent.

9.3.1.9.5.1 TVirtualUI.OnGetUploadDir Event

Fires during an upload request, allowing you to change the save folder.

```
Pascal
property OnGetUploadDir: TGetUploadDirEvent;
```

Group

TVirtualUI Events

9.3.1.9.5.2 TVirtualUI.OnBrowserResize Event

Fires when the VirtualUI Viewer's container window resizes. Normally, when the browser resizes.

```
Pascal
property OnBrowserResize: TBrowserResizeEvent;
```

Remarks

Allows you to take action when the VirtualUI Viewer's container window resizes. Set Handled to true to disable the default processing, which resizing all maximized windows.

Group

TVirtualUI Events

9.3.1.9.5.3 TVirtualUI.OnReceiveMessage Event

Fires when a custom data string is sent from the web browser page.

```
Pascal
property OnReceiveMessage: TReceiveMessageEvent;
```

Group

TVirtualUI Events

9.3.1.9.5.4 TVirtualUI.OnClose Event

Fires when the browser window is about to close.

```
Pascal
property OnClose: TCloseEvent;
```

Group

TVirtualUI Events

9.3.1.9.5.5 TVirtualUI.OnDownloadEnd Event

Fires when the file has been sent.

```
Pascal
property OnDownloadEnd: TDownloadEndEvent;
```

Group

TVirtualUI Events

9.3.1.10 VirtualUI_SDK.GetDllDir Function

Returns the path where Thinfinity.VirtualUI.dll is located.

```
Pascal
function GetDllDir: string;
```

File

VirtualUI_SDK

Namespace

VirtualUI_SDK Namespace

9.3.1.11 VirtualUI_SDK.VirtualUI Function

Returns a global VirtualUI object.

```
Pascal
function VirtualUI: TVirtualUI;
```

File

VirtualUI_SDK

Namespace

VirtualUI_SDK Namespace

9.3.2 VirtualUI_Settings Unit

Classes

	Name	Description
	TServer	Main class. Contains methods and properties to manage all Server configuration.

Functions

	Name	Description
	Base64ToIcon	Converts the IProfile.IconData (base64 string) to a PNG image.
	IconToBase64	Converts a PNG image to be stored in IProfile.IconData (as base64 string).

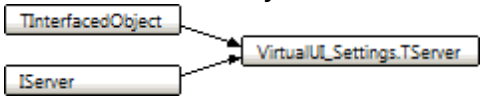
Group

Delphi Classes

9.3.2.1 TServer Class

Main class. Contains methods and properties to manage all Server configuration.

Class Hierarchy




```
Pascal
TServer = class(TInterfacedObject, IServer);
```

File

VirtualUI_Settings

Namespace

VirtualUI_Settings Unit

9.3.2.1.1 TServer.Create Constructor

```
Pascal
constructor Create;
```

Description

This is Create, a member of class TServer.

Class

TServer Class

9.3.2.1.2 TServer.Destroy Destructor

```
Pascal
destructor Destroy; override;
```

Description

This is Destroy, a member of class TServer.

Class

TServer Class

9.3.2.1.3 TServer Methods

The methods of the TServer class are listed here.

Class

TServer Class

Public Methods

	Name	Description
	Load	Loads all the configuration entries and profiles from file. It is automatically called by constructor.
	Save	Saves the entire configuration parameters and profiles.
	HideSection	Hides a configuration section in the VirtualUI Server Manager GUI.

	ShowSection	Makes visible a configuration section in the VirtualUI Server Manager GUI.

9.3.2.1.3.1 TServer.Load Method

Loads all the configuration entries and profiles from file. It is automatically called by constructor.

```
Pascal
procedure Load; safecall;
```

Group

TServer Methods

9.3.2.1.3.2 TServer.Save Method

Saves the entire configuration parameters and profiles.

```
Pascal
procedure Save; safecall;
```

Group

TServer Methods

9.3.2.1.3.3 TServer.HideSection Method

Hides a configuration section in the VirtualUI Server Manager GUI.

```
Pascal
procedure HideSection(section: ServerSection); safecall;
```

Parameters

Parameters	Description
section: ServerSection	The Server configuration section to hide to user. Use one of the following constants: • SRVSEC_GENERAL: Hides the General tab, that contains the Binding configuration. • SRVSEC_RDS: Hides the tab with the Remote Desktop Services account configuration. • SRVSEC_APPLICATIONS: Hides the list of applications. • SRVSEC_LICENSES: Hides the tab with License information.

Description

Group

TServer Methods

9.3.2.1.3.4 TServer.ShowSection Method

Makes visible a configuration section in the VirtualUI Server Manager GUI.

```
Pascal
procedure ShowSection(section: ServerSection); safecall;
```

Parameters

Parameters	Description
section: ServerSection	The Server configuration section to show to user. Use one of the following constants: • SRVSEC_GENERAL: Shows the General tab, that contains the Binding configuration. • SRVSEC_RDS: Shows the tab with the Remote Desktop Services account configuration. • SRVSEC_APPLICATIONS: Shows the list of applications. • SRVSEC_LICENSES: Shows the tab with License information.

Description

Group

TServer Methods

9.3.2.1.4 TServer Properties

The properties of the TServer class are listed here.

Class

TServer Class

Public Properties

	Name	Description
	Binding	Returns the Server's Binding configuration.
	Certificate	Returns the Server's certificate configuration for SSL protocol.
	RDSAccounts	Returns the list of Remote Desktop Services accounts.
	Profiles	Returns the profiles list.
	License	Returns the current Server's licence.

9.3.2.1.4.1 TServer.Binding Property

Returns the Server's Binding configuration.

```
Pascal
property Binding: IBinding;
```

See Also

IBinding interface

Group

TServer Properties

9.3.2.1.4.2 TServer.Certificate Property

Returns the Server's certificate configuration for SSL protocol.

```
Pascal
property Certificate: ICertificate;
```

See Also

ICertificate interface

Group

TServer Properties

9.3.2.1.4.3 TServer.RDSAccounts Property

Returns the list of Remote Desktop Services accounts.

```
Pascal
property RDSAccounts: IRDSAccounts;
```

See Also

IRDSAccounts interface

Group

TServer Properties

9.3.2.1.4.4 TServer.Profiles Property

Returns the profiles list.

```
Pascal
property Profiles: IProfiles;
```

See Also

IProfiles interface

Group

TServer Properties

9.3.2.1.4.5 TServer.License Property

Returns the current Server's licence.

```
Pascal
property License: ILicense;
```

See Also

ILicense interface

Group

TServer Properties

9.3.2.2 VirtualUI_Settings.Base64ToIcon Function

Converts the IProfile.IconData (base64 string) to a PNG image.

```
Pascal
function Base64ToIcon(AData: String): TPngImage;
```

File

VirtualUI_Settings

Parameters

Parameters	Description
data	The image encoded in base64.

Namespace

VirtualUI_Settings Unit

9.3.2.3 VirtualUI_Settings.IconToBase64 Function

Converts a PNG image to be stored in IProfile.IconData (as base64 string).

```
Pascal
function IconToBase64(png: TPngImage): string;
```

File

VirtualUI_Settings

Parameters

Parameters	Description
png: TPngImage	The image to be encoded in base64.

Namespace

VirtualUI_Settings Unit

9.4 C++ Classes

The following table lists classes in this documentation.

Description

Classes

	Name	Description
	CClientSettings	Allows to set some client settings.
	CBrowserInfo	Contains information regarding the end-user's screen, web browser, the window containing VirtualUI Viewer and VirtualUI Viewer itself. The VirtualUI Viewer tuns inside an HTML DIV element contained in a frame o browser window on the end-user's application page.
	CDevServer	Contains properties to manage the VirtualUI Development Server as well as the access from the developer's web browser.
	JSObject	Represents a custom remotable object.
	JSCallback	This is class JSCallback.
	JSBinding	This is class JSBinding.

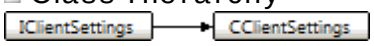
Topics

Name	Description
VirtualUI	

9.4.1 CClientSettings Class

Allows to set some client settings.

Class Hierarchy



C++

```
class CClientSettings : public IClientSettings;
```

File

Thinfinity.VirtualUI.h

Group

C++ Classes

9.4.1.1 CClientSettings::CClientSettings Constructor

```
C++
CClientSettings(IVirtualUI * virtualUI);
```

Description

This is CClientSettings, a member of class CClientSettings.

Class

CClientSettings Class

9.4.1.2 CClientSettings::~CClientSettings Destructor

```
C++
~CClientSettings();
```

Description

This is ~CClientSettings, a member of class CClientSettings.

Class

CClientSettings Class

9.4.1.3 CClientSettings Methods

The methods of the CClientSettings class are listed here.

Class

CClientSettings Class

Public Methods

	Name	Description
	CursorVisible	This is the overview for the CursorVisible method overload.
	MouseMoveGestAction	This is the overview for the MouseMoveGestAction method

		overload.
	MouseMoveGestStyle	This is the overview for the MouseMoveGestStyle method overload.
	get_MouseMoveGestureStyle	This is get_MouseMoveGestureStyle, a member of class CClientSettings.
	put_MouseMoveGestureStyle	This is put_MouseMoveGestureStyle, a member of class CClientSettings.
	get_MouseMoveGestureAction	This is get_MouseMoveGestureAction, a member of class CClientSettings.
	put_MouseMoveGestureAction	This is put_MouseMoveGestureAction, a member of class CClientSettings.
	get_CursorVisible	This is get_CursorVisible, a member of class CClientSettings.
	put_CursorVisible	This is put_CursorVisible, a member of class CClientSettings.

9.4.1.3.1 CursorVisible Method

This is the overview for the CursorVisible method overload.

Overload List

	Name	Description
	CClientSettings::CursorVisible ()	Gets the the mouse pointer state.
	CClientSettings::CursorVisible (bool)	Hides/shows the mouse pointer.

Group

CClientSettings Methods

9.4.1.3.1.1 CClientSettings::CursorVisible Method ()

Gets the the mouse pointer state.

C++

```
bool CursorVisible();
```

Group

CursorVisible Method

9.4.1.3.1.2 CClientSettings::CursorVisible Method (bool)

Hides/shows the mouse pointer.

C++

```
void CursorVisible(bool value);
```

Group

CursorVisible Method

9.4.1.3.2 MouseMoveGestAction Method

This is the overview for the MouseMoveGestAction method overload.

Overload List

	Name	Description
	CClientSettings::MouseMoveGestAction ()	Gets the MouseMoveGestureAction value
	CClientSettings::MouseMoveGestAction (MouseMoveGestureAction)	Specifies whether the "mouse move" simulation on a touch device is interpreted as a mouse move or as a mouse wheel.

Group

CClientSettings Methods

9.4.1.3.2.1 CClientSettings::MouseMoveGestAction Method ()

Gets the MouseMoveGestureAction value

C++

```
MouseMoveGestureAction MouseMoveGestAction();
```

Group

MouseMoveGestAction Method

9.4.1.3.2.2 CClientSettings::MouseMoveGestAction Method (MouseMoveGestureAction)

Specifies whether the "mouse move" simulation on a touch device is interpreted as a mouse move or as a mouse wheel.

C++

```
void MouseMoveGestAction(MouseMoveGestureAction value);
```

Group

MouseMoveGestAction Method

9.4.1.3.3 MouseMoveGestStyle Method

This is the overview for the MouseMoveGestStyle method overload.

Overload List

	Name	Description
	CClientSettings::MouseMoveGestStyle ()	Gets the MouseMoveGestureStyle value
	CClientSettings::MouseMoveGestStyle (MouseMoveGestureStyle)	Valid for touch devices. Specifies whether the mouse pointer is shown and acts on the exact spot of the finger touch (absolute) or its position is managed relatively to the movement of the finger touch (relative).

Group

CClientSettings Methods

9.4.1.3.3.1 CClientSettings::MouseMoveGestStyle Method ()

Gets the MouseMoveGestureStyle value

C++

```
MouseMoveGestureStyle MouseMoveGestStyle();
```

Group

MouseMoveGestStyle Method

9.4.1.3.3.2 CClientSettings::MouseMoveGestStyle Method (MouseMoveGestureStyle)

Valid for touch devices. Specifies whether the mouse pointer is shown and acts on the exact spot of the finger touch (absolute) or its position is managed relatively to the movement of the finger touch (relative).

C++

```
void MouseMoveGestStyle(MouseMoveGestureStyle value);
```

Group

MouseMoveGestStyle Method

9.4.1.3.4 CClientSettings::get_MouseMoveGestureStyle Method

C++

```
__stdcall HRESULT get_MouseMoveGestureStyle(enum MouseMoveGestureStyle * Value);
```

Description

This is get_MouseMoveGestureStyle, a member of class CClientSettings.

Group

CClientSettings Methods

9.4.1.3.5 CClientSettings::put_MouseMoveGestureStyle Method

```
C++
__stdcall HRESULT put_MouseMoveGestureStyle(enum MouseMoveGestureStyle Value);
```

Description

This is put_MouseMoveGestureStyle, a member of class CClientSettings.

Group

CClientSettings Methods

9.4.1.3.6 CClientSettings::get_MouseMoveGestureAction Method

```
C++
__stdcall HRESULT get_MouseMoveGestureAction(enum MouseMoveGestureAction * Value);
```

Description

This is get_MouseMoveGestureAction, a member of class CClientSettings.

Group

CClientSettings Methods

9.4.1.3.7 CClientSettings::put_MouseMoveGestureAction Method

```
C++
__stdcall HRESULT put_MouseMoveGestureAction(enum MouseMoveGestureAction Value);
```

Description

This is put_MouseMoveGestureAction, a member of class CClientSettings.

Group

CClientSettings Methods

9.4.1.3.8 CClientSettings::get_CursorVisible Method

```
C++
__stdcall HRESULT get_CursorVisible(VARIANT_BOOL * Value);
```

Description

This is get_CursorVisible, a member of class CClientSettings.

Group

CClientSettings Methods

9.4.1.3.9 CClientSettings::put_CursorVisible Method

```
C++
__stdcall HRESULT put_CursorVisible(VARIANT_BOOL Value);
```

Description

This is put_CursorVisible, a member of class CClientSettings.

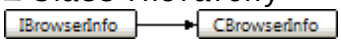
Group

CClientSettings Methods

9.4.2 CBrowserInfo Class

Contains information regarding the end-user's screen, web browser, the window containing VirtualUI Viewer and VirtualUI Viewer itself. The VirtualUI Viewer tuns inside an HTML DIV element contained in a frame o browser window on the end-user's application page.

Class Hierarchy




```
C++
class CBrowserInfo : public IBrowserInfo;
```

File

Thinfinity.VirtualUI.h

Group

C++ Classes

9.4.2.1 CBrowserInfo::CBrowserInfo Constructor

```
C++
CBrowserInfo(IVirtualUI * virtualUI);
```

Description

This is CBrowserInfo, a member of class CBrowserInfo.

Class

CBrowserInfo Class

9.4.2.2 CBrowserInfo::~CBrowserInfo Destructor

```
C++
~CBrowserInfo();
```

Description

This is ~CBrowserInfo, a member of class CBrowserInfo.

Class

CBrowserInfo Class

9.4.2.3 CBrowserInfo Methods

The methods of the CBrowserInfo class are listed here.

Class

CBrowserInfo Class

Public Methods

	Name	Description
	ViewHeight	This is the overview for the ViewHeight method overload.
	ViewWidth	This is the overview for the ViewWidth method overload.
	get_ViewWidth	This is get_ViewWidth, a member of class CBrowserInfo.
	put_ViewWidth	This is put_ViewWidth, a member of class CBrowserInfo.
	get_ViewHeight	This is get_ViewHeight, a member of class CBrowserInfo.
	put_ViewHeight	This is put_ViewHeight, a member of class CBrowserInfo.
	get_BrowserWidth	This is get_BrowserWidth, a member of class CBrowserInfo.
	get_BrowserHeight	This is get_BrowserHeight, a member of class CBrowserInfo.
	get_ScreenWidth	This is get_ScreenWidth, a member of class CBrowserInfo.
	get_ScreenHeight	This is get_ScreenHeight, a member of class CBrowserInfo.
	get_Username	This is get_Username, a member of class CBrowserInfo.
	get_IPAddress	This is get_IPAddress, a member of class CBrowserInfo.
	get_UserAgent	This is get_UserAgent, a member of class CBrowserInfo.
	get_ScreenResolution	This is get_ScreenResolution, a member of class CBrowserInfo.
	get_Orientation	This is get_Orientation, a member of class CBrowserInfo.

	get_UniqueBrowserId	This is get_UniqueBrowserId, a member of class CBrowserInfo.
	GetCookie	This is GetCookie, a member of class CBrowserInfo.
	SetCookie	This is SetCookie, a member of class CBrowserInfo.
	get_Location	This is get_Location, a member of class CBrowserInfo.
	BrowserWidth	Returns the width of the HTML element containing the VirtualUI Viewer.
	BrowserHeight	Returns the height of the HTML element containing the VirtualUI Viewer.
	ScreenWidth	Returns the width of the end-user's monitor screen.
	ScreenHeight	Returns the height of the end-user's monitor screen.
	Username	Returns the logged-on Username.
	IPAddress	Returns the client's IP address.
	UserAgent	Returns the browser's User Agent string.
	UniqueBrowserId	UniqueBrowserId identifies an instance of a Web Browser. Each time an end-user opens the application from a different browser window, this ID will have a different value.
	Location	Returns the URL of the current application.
	ScreenResolution	Returns the application screen resolution defined in the application profile.
	Orientation	Returns the browser's orientation.

9.4.2.3.1 ViewHeight Method

This is the overview for the ViewHeight method overload.

Overload List

	Name	Description
	CBrowserInfo::ViewHeight ()	Returns the height of the VirtualUI Viewer.
	CBrowserInfo::ViewHeight (int)	Sets the height of the VirtualUI Viewer.

Group

CBrowserInfo Methods

9.4.2.3.1.1 CBrowserInfo::ViewHeight Method ()

Returns the height of the VirtualUI Viewer.

```
C++
```

```
int ViewHeight();
```

Group

ViewHeight Method

9.4.2.3.1.2 CBrowserInfo::ViewHeight Method (int)

Sets the height of the VirtualUI Viewer.

C++

```
void ViewHeight(int value);
```

Group

ViewHeight Method

9.4.2.3.2 ViewWidth Method

This is the overview for the ViewWidth method overload.

Overload List

	Name	Description
	CBrowserInfo::ViewWidth ()	Returns the width of the VirtualUI Viewer.
	CBrowserInfo::ViewWidth (int)	Sets the width of the VirtualUI Viewer.

Group

CBrowserInfo Methods

9.4.2.3.2.1 CBrowserInfo::ViewWidth Method ()

Returns the width of the VirtualUI Viewer.

C++

```
int ViewWidth();
```

Group

ViewWidth Method

9.4.2.3.2.2 CBrowserInfo::ViewWidth Method (int)

Sets the width of the VirtualUI Viewer.

C++

```
void ViewWidth(int value);
```

Group

ViewWidth Method

9.4.2.3.3 CBrowserInfo::get_ViewWidth Method

```
C++
__stdcall HRESULT get_ViewWidth(long * Value);
```

Description

This is get_ViewWidth, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.4 CBrowserInfo::put_ViewWidth Method

```
C++
__stdcall HRESULT put_ViewWidth(long Value);
```

Description

This is put_ViewWidth, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.5 CBrowserInfo::get_ViewHeight Method

```
C++
__stdcall HRESULT get_ViewHeight(long * Value);
```

Description

This is get_ViewHeight, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.6 CBrowserInfo::put_ViewHeight Method

```
C++
__stdcall HRESULT put_ViewHeight(long Value);
```

Description

This is put_ViewHeight, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.7 CBrowserInfo::get_BrowserWidth Method

```
C++
__stdcall HRESULT get_BrowserWidth(long * Value);
```

Description

This is get_BrowserWidth, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.8 CBrowserInfo::get_BrowserHeight Method

```
C++
__stdcall HRESULT get_BrowserHeight(long * Value);
```

Description

This is get_BrowserHeight, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.9 CBrowserInfo::get_ScreenWidth Method

```
C++
__stdcall HRESULT get_ScreenWidth(long * Value);
```

Description

This is get_ScreenWidth, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.10 CBrowserInfo::get_ScreenHeight Method

```
C++
__stdcall HRESULT get_ScreenHeight(long * Value);
```

Description

This is get_ScreenHeight, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.11 CBrowserInfo::get_Username Method

```
C++
__stdcall HRESULT get_Username(BSTR * Value);
```

Description

This is get_Username, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.12 CBrowserInfo::get_IPAddress Method

```
C++
__stdcall HRESULT get_IPAddress(BSTR * Value);
```

Description

This is get_IPAddress, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.13 CBrowserInfo::get_UserAgent Method

```
C++
__stdcall HRESULT get_UserAgent(BSTR * Value);
```

Description

This is get_UserAgent, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.14 CBrowserInfo::get_ScreenResolution Method

```
C++
__stdcall HRESULT get_ScreenResolution(long * Value);
```

Description

This is get_ScreenResolution, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.15 CBrowserInfo::get_Orientation Method

```
C++
__stdcall HRESULT get_Orientation(enum Orientation * Value);
```

Description

This is get_Orientation, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.16 CBrowserInfo::get_UniqueBrowserId Method

```
C++
__stdcall HRESULT get_UniqueBrowserId(BSTR * Value);
```

Description

This is get_UniqueBrowserId, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.17 CBrowserInfo::GetCookie Method

```
C++
__stdcall HRESULT GetCookie(BSTR Name, BSTR * Value);
```

Description

This is GetCookie, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.18 CBrowserInfo::SetCookie Method

```
C++
__stdcall HRESULT SetCookie(BSTR Name, BSTR Value, BSTR Expires);
```

Description

This is SetCookie, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.19 CBrowserInfo::get_Location Method

```
C++
__stdcall HRESULT get_Location(BSTR * Value);
```

Description

This is get_Location, a member of class CBrowserInfo.

Group

CBrowserInfo Methods

9.4.2.3.20 CBrowserInfo::BrowserWidth Method

```
C++
int BrowserWidth();
```

Description

Returns the width of the HTML element containing the VirtualUI Viewer.

Group

CBrowserInfo Methods

9.4.2.3.21 CBrowserInfo::BrowserHeight Method

Returns the height of the HTML element containing the VirtualUI Viewer.

```
C++
int BrowserHeight();
```

Group

CBrowserInfo Methods

9.4.2.3.22 CBrowserInfo::ScreenWidth Method

Returns the width of the end-user's monitor screen.

```
C++
int ScreenWidth();
```

Group

CBrowserInfo Methods

9.4.2.3.23 CBrowserInfo::ScreenHeight Method

Returns the height of the end-user's monitor screen.

```
C++
int ScreenHeight();
```

Group

CBrowserInfo Methods

9.4.2.3.24 CBrowserInfo::Username Method

Returns the logged-on Username.

```
C++
std::wstring Username();
```

Group

CBrowserInfo Methods

9.4.2.3.25 CBrowserInfo::IPAddress Method

Returns the client's IP address.

```
C++
std::wstring IPAddress();
```

Group

CBrowserInfo Methods

9.4.2.3.26 CBrowserInfo::UserAgent Method

Returns the browser's User Agent string.

C++

```
std::wstring UserAgent();
```

Group

CBrowserInfo Methods

9.4.2.3.27 CBrowserInfo::UniqueBrowserId Method

UniqueBrowserId identifies an instance of a Web Browser. Each time an end-user opens the application from a different browser window, this ID will have a different value.

C++

```
std::wstring UniqueBrowserId();
```

Group

CBrowserInfo Methods

9.4.2.3.28 CBrowserInfo::Location Method

Returns the URL of the current application.

C++

```
std::wstring Location();
```

Group

CBrowserInfo Methods

9.4.2.3.29 CBrowserInfo::ScreenResolution Method

Returns the application screen resolution defined in the application profile.

C++

```
int ScreenResolution();
```

Group

CBrowserInfo Methods

9.4.2.3.30 CBrowserInfo::Orientation Method

Returns the browser's orientation.

C++

```
Orientation Orientation();
```

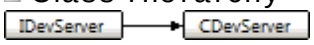
Group

CBrowserInfo Methods

9.4.3 CDevServer Class

Contains properties to manage the VirtualUI Development Server as well as the access from the developer's web browser.

Class Hierarchy




```
C++
class CDevServer : public IDevServer;
```

File

Thinfinity.VirtualUI.h

Group

C++ Classes

9.4.3.1 CDevServer::CDevServer Constructor

```
C++
CDevServer(IVirtualUI * virtualUI);
```

Description

This is CDevServer, a member of class CDevServer.

Class

CDevServer Class

9.4.3.2 CDevServer::~CDevServer Destructor

```
C++
~CDevServer();
```

Description

This is ~CDevServer, a member of class CDevServer.

Class

CDevServer Class

9.4.3.3 CDevServer Methods

The methods of the CDevServer class are listed here.

Class

CDevServer Class

Public Methods

	Name	Description
	Enabled	This is the overview for the Enabled method overload.
	Port	This is the overview for the Port method overload.
	get_Enabled	This is get_Enabled, a member of class CDevServer.
	put_Enabled	This is put_Enabled, a member of class CDevServer.
	get_Port	This is get_Port, a member of class CDevServer.
	put_Port	This is put_Port, a member of class CDevServer.
	get_StartBrowser	This is get_StartBrowser, a member of class CDevServer.
	put_StartBrowser	This is put_StartBrowser, a member of class CDevServer.
	StartBrowser	Instructs VirtualUI whether start or not the local web browser upon VirtualUI activation.

9.4.3.3.1 Enabled Method

This is the overview for the Enabled method overload.

Overload List

	Name	Description
	CDevServer::Enabled ()	Gets the Development Server state.
	CDevServer::Enabled (bool)	Enables/disables the Development Server.

Group

CDevServer Methods

9.4.3.3.1.1 CDevServer::Enabled Method ()

Gets the Development Server state.

C++

```
bool Enabled();
```

Group

Enabled Method

9.4.3.3.1.2 CDevServer::Enabled Method (bool)

Enables/disables the Development Server.

```
C++
void Enabled(bool value);
```

Group

Enabled Method

9.4.3.3.2 Port Method

This is the overview for the Port method overload.

Overload List

	Name	Description
	CDevServer::Port ()	Gets the Development Server's TCP/IP listening port.
	CDevServer::Port (int)	Sets the Development Server's TCP/IP listening port.

Group

CDevServer Methods

9.4.3.3.2.1 CDevServer::Port Method ()

Gets the Development Server's TCP/IP listening port.

```
C++
int Port();
```

Group

Port Method

9.4.3.3.2.2 CDevServer::Port Method (int)

Sets the Development Server's TCP/IP listening port.

```
C++
void Port(int value);
```

Group

Port Method

9.4.3.3.3 CDevServer::get_Enabled Method

```
C++
__stdcall HRESULT get_Enabled(VARIANT_BOOL * Value);
```

Description

This is get_Enabled, a member of class CDevServer.

Group

CDevServer Methods

9.4.3.3.4 CDevServer::put_Enabled Method

```
C++
__stdcall HRESULT put_Enabled(VARIANT_BOOL Value);
```

Description

This is put_Enabled, a member of class CDevServer.

Group

CDevServer Methods

9.4.3.3.5 CDevServer::get_Port Method

```
C++
__stdcall HRESULT get_Port(long * Value);
```

Description

This is get_Port, a member of class CDevServer.

Group

CDevServer Methods

9.4.3.3.6 CDevServer::put_Port Method

```
C++
__stdcall HRESULT put_Port(long Value);
```

Description

This is put_Port, a member of class CDevServer.

Group

CDevServer Methods

9.4.3.3.7 CDevServer::get_StartBrowser Method

```
C++
__stdcall HRESULT get_StartBrowser(VARIANT_BOOL * Value);
```

Description

This is get_StartBrowser, a member of class CDevServer.

Group

CDevServer Methods

9.4.3.3.8 CDevServer::put_StartBrowser Method

```
C++
__stdcall HRESULT put_StartBrowser(VARIANT_BOOL Value);
```

Description

This is put_StartBrowser, a member of class CDevServer.

Group

CDevServer Methods

9.4.3.3.9 CDevServer::StartBrowser Method

Instructs VirtualUI whether start or not the local web browser upon VirtualUI activation.

```
C++
void StartBrowser(bool value);
```

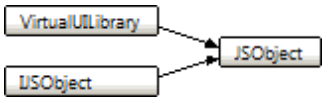
Group

CDevServer Methods

9.4.4 JSObject Class

Represents a custom remotable object.

Class Hierarchy



C++
```
class JSObject : public VirtualUILibrary, private IJSObject;
```

File

Thinfinity.VirtualUI.h

Remarks

JSObject allows you to define an object model that is mirrored on the client side, and allows for an easy, powerful and straight-forward way to connect the web browser client application and the remoted Windows application.

JSObject can contain properties (IJSProperties), methods (IJSMethods), events (IJSEvents) and children objects. Changes to properties values are propagated in from server to client and viceversa, keeping the data synchronized.

JSObject is defined as a model seen from the client perspective. A method (IJSMethod) is called on the client side and executed on the server side. An event (IJSEvent) is called on the server side and raised on the client side.

Group

C++ Classes

9.4.4.1 JSObject::JSObject Constructor

C++
```
JSObject(std::wstring id);
```

Description

This is JSObject, a member of class JSObject.

Class

JSObject Class

9.4.4.2 JSObject::~JSObject Destructor

C++
```
~JSObject();
```

Description

This is ~JSObject, a member of class JSObject.

Class

JSObject Class

9.4.4.3 JSObject Methods

The methods of the JSObject class are listed here.

Class

JSObject Class

Public Methods

	Name	Description
	FireEvent	This is the overview for the FireEvent method overload.
	Id	This is the overview for the Id method overload.
	QueryInterface	This is QueryInterface, a member of class JSObject.
	get_Id	This is get_Id, a member of class JSObject.
	put_Id	This is put_Id, a member of class JSObject.
	get_Properties	This is get_Properties, a member of class JSObject.
	get_Methods	This is get_Methods, a member of class JSObject.
	get_Events	This is get_Events, a member of class JSObject.
	get_Objects	This is get_Objects, a member of class JSObject.
	ApplyChanges	When this method called, all properties getters are internally called looking for changes. Any change to the property value is sent to the client.
	ApplyModel	Propagates the whole JSObject definition to the javascript client.
	Properties	List containing all properties of this object.
	Methods	List containing all methods of this object.
	Events	List containing all events of this object.
	Objects	List containing all events of this object.

9.4.4.3.1 FireEvent Method

This is the overview for the FireEvent method overload.

Overload List

	Name	Description

	JSObject::FireEvent (BSTR, IJSArguments *)	This is FireEvent, a member of class JSObject.
	JSObject::FireEvent (std::wstring, IJSArguments*)	This is FireEvent, a member of class JSObject.

Group

JSObject Methods

9.4.4.3.1.1 JSObject::FireEvent Method (BSTR, IJSArguments *)

```
C++
__stdcall HRESULT FireEvent(BSTR Name, IJSArguments * Arguments);
```

Description

This is FireEvent, a member of class JSObject.

Group

FireEvent Method

9.4.4.3.1.2 JSObject::FireEvent Method (std::wstring, IJSArguments*)

```
C++
void FireEvent(std::wstring Name, IJSArguments* Arguments);
```

Description

This is FireEvent, a member of class JSObject.

Group

FireEvent Method

9.4.4.3.2 Id Method

This is the overview for the Id method overload.

Overload List

	Name	Description
	JSObject::Id ()	Identifier of the object. It must be unique among siblings objects.
	JSObject::Id (std::wstring)	Identifier of the object. It must be unique among siblings objects.

Group

JSObject Methods

9.4.4.3.2.1 JSObject::Id Method ()

Identifier of the object. It must be unique among siblings objects.

```
C++
std::wstring Id();
void Id(std::wstring value);
```

Group

Id Method

9.4.4.3.3 JSObject::QueryInterface Method

```
C++
__stdcall HRESULT QueryInterface(REFIID riid, void ** ppvObject);
```

Description

This is QueryInterface, a member of class JSObject.

Group

JSObject Methods

9.4.4.3.4 JSObject::get_Id Method

```
C++
__stdcall HRESULT get_Id(BSTR * Value);
```

Description

This is get_Id, a member of class JSObject.

Group

JSObject Methods

9.4.4.3.5 JSObject::put_Id Method

```
C++
__stdcall HRESULT put_Id(BSTR Value);
```

Description

This is put_Id, a member of class JSObject.

Group

JSObject Methods

9.4.4.3.6 JSObject::get_Properties Method

```
C++
__stdcall HRESULT get_Properties(IJSProperties ** Value);
```

Description

This is get_Properties, a member of class JSObject.

Group

JSObject Methods

9.4.4.3.7 JSObject::get_Methods Method

```
C++
__stdcall HRESULT get_Methods(IJSMethods ** Value);
```

Description

This is get_Methods, a member of class JSObject.

Group

JSObject Methods

9.4.4.3.8 JSObject::get_Events Method

```
C++
__stdcall HRESULT get_Events(IJSEvents ** Value);
```

Description

This is get_Events, a member of class JSObject.

Group

JSObject Methods

9.4.4.3.9 JSObject::get_Objects Method

```
C++
__stdcall HRESULT get_Objects(IJSObjects ** Value);
```

Description

This is get_Objects, a member of class JSObject.

Group

JSObject Methods

9.4.4.3.10 JSObject::ApplyChanges Method

When this method called, all properties getters are internally called looking for changes. Any change to the property value is sent to the client.

```
C++
__stdcall HRESULT ApplyChanges();
```

Group

JSObject Methods

9.4.4.3.11 JSObject::ApplyModel Method

Propagates the whole JSObject definition to the javascript client.

```
C++
__stdcall HRESULT ApplyModel();
```

Group

JSObject Methods

9.4.4.3.12 JSObject::Properties Method

List containing all properties of this object.

```
C++
CJSProperties* Properties();
```

Group

JSObject Methods

9.4.4.3.13 JSObject::Methods Method

List containing all methods of this object.

```
C++
CJSMethods* Methods();
```

Group

JSObject Methods

9.4.4.3.14 JSObject::Events Method

List containing all events of this object.

C++
```
CJSEvents* Events();
```

Group

JSObject Methods

9.4.4.3.15 JSObject::Objects Method

List containing all events of this object.

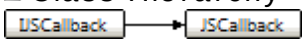
C++
```
CJSObjects* Objects();
```

Group

JSObject Methods

9.4.5 JSCallback Class

Class Hierarchy



C++
```
class JSCallback : private IJSCallback;
```

File

Thinfinity.VirtualUI.h

Description

This is class JSCallback.

Group

C++ Classes

9.4.5.1 JSCallback::JSCallback Constructor

C++
```
JSCallback(JSMethodCallback Proc);
```

Description

This is JSCallback, a member of class JSCallback.

Class

JSCallback Class

9.4.5.2 JSCallback Methods

The methods of the JSCallback class are listed here.

Class

JSCallback Class

Public Methods

	Name	Description
	Callback	This is Callback, a member of class JSCallback.

9.4.5.2.1 JSCallback::Callback Method

```
C++
__stdcall HRESULT Callback(IJSObject* Parent, IJSMethod* Method);
```

Description

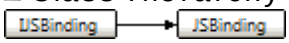
This is Callback, a member of class JSCallback.

Group

JSCallback Methods

9.4.6 JSBinding Class

Class Hierarchy




```
C++
class JSBinding : private IJSBinding;
```

File

Thinfinity.VirtualUI.h

Description

This is class JSBinding.

Group

C++ Classes

9.4.6.1 JSBinding::JSBinding Constructor

```
C++
JSBinding(JSPropertySet Proc);
```

Description

This is JSBinding, a member of class JSBinding.

Class

JSBinding Class

9.4.6.2 JSBinding Methods

The methods of the JSBinding class are listed here.

Class

JSBinding Class

Public Methods

	Name	Description
	Set	This is Set, a member of class JSBinding.

9.4.6.2.1 JSBinding::Set Method

```
C++
__stdcall HRESULT Set(IJSObject* Parent, IJSProperty* Prop);
```

Description

This is Set, a member of class JSBinding.

Group

JSBinding Methods

9.4.7 VirtualUI

Group

C++ Classes

9.5 VirtualUI.sdk.min.js

Files

Name	Description
thinfinity.virtualui	Thinfinity.VirtualUI is a Javascript pseudo-class that offers a single-line-of-code user interface remoting solution for self-developed applications, making it possible to deliver them as dual-platform Windows/HTML5 apps. Regarding its full web integration capabilities, Thinfinity VirtualUI takes advantage of the newly developed Javascript Remote Objects (jsRO) framework to facilitate two-way data integration between the application and the browser. It empowers developers who are confronted with a need for deep modernization of existing Windows-based apps with a dual-approach tool: instant GUI remoting and full web integration.
thinfinity.jsro	Thinfinity.JsRO is a Javascript pseudo-class for GUI remoting and full web integration. It allows you to create remotable objects, and their properties, methods and events are mirrored to the web as native javascript objects. There must be a unique HOST to communicate with, and there can be more than one REMOTE for the same HOST. The HOST will keep all REMOTES synchronized, even when a REMOTE changes a value locally the other REMOTES will receive a notification.

9.5.1 Thinfinity.VirtualUI

Thinfinity.VirtualUI is a Javascript pseudo-class that offers a single-line-of-code user interface remoting solution for self-developed applications, making it possible to deliver them as dual-platform Windows/HTML5 apps.

Regarding its full web integration capabilities, Thinfinity VirtualUI takes advantage of the newly developed Javascript Remote Objects (jsRO) framework to facilitate two-way data integration between the application and the browser.

It empowers developers who are confronted with a need for deep modernization of existing Windows-based apps with a dual-approach tool: instant GUI remoting and full web integration.

JavaScript

```
var virtualUI = new Thinfinity.VirtualUI(); // has no arguments
```

Returns

Thinfinity.VirtualUI Object.

Version

20141216.1

Events

Name	Description
onLoading	Occurs when 'loading' is triggered. The event will be fired once the client and the server are connected to each other.

onShow	Occurs when 'show' is triggered. The event will be fired once the web-app is ready to be shown.
onClose	Occurs when 'close' is triggered. The event will be fired once the app is closed.
onError	Occurs when 'error' is triggered.

Group

VirtualUI.sdk.min.js

Properties

Name	Description
devMode	Retrieves information about the current mode. In the developer environment only one application can run at the same time. By default the assigned port is 6080, if it's available.

9.5.1.1 Events

9.5.1.1.1 onLoading

```JavaScript
virtualUI.onLoading = function(){;
 //...TODO
};
```

Parameters

Parameters	Description
handler	callback as function.

Description

Occurs when 'loading' is triggered. The event will be fired once the client and the server are connected to each other.

File

Thinfinity.VirtualUI

9.5.1.1.2 onShow

```JavaScript
virtualUI.onShow = function(){;
 //...TODO
};
```

Parameters

Parameters	Description
handler	callback as function.

Description

Occurs when 'show' is triggered. The event will be fired once the web-app is ready to be shown.

File

Thinfinity.VirtualUI

9.5.1.1.3 onClose

```JavaScript
virtualUI.onClose = function(){;
 //...TODO
};
```

Description

Occurs when 'close' is triggered. The event will be fired once the app is closed.

File

Thinfinity.VirtualUI

9.5.1.1.4 onError

```JavaScript
virtualUI.onError = function(message){;
 //...TODO
};
```

Parameters

Parameters	Description
handler	callback as function. The event will be fired once the app generates an error at run-time.

Returns

message as string

Description

Occurs when 'error' is triggered.

File

Thinfinity.VirtualUI

9.5.1.2 Properties

9.5.1.2.1 devMode

```JavaScript
virtualUI.devMode;
if (virtualUI.devMode === true){
 //...TODO
}
```

Returns

Returns Boolean, depending on the mode value.

Description

Retrieves information about the current mode. In the developer environment only one application can run at the same time. By default the assigned port is 6080, if it's available.

File

Thinfinity.VirtualUI

9.5.2 Thinfinity.JsRO

Thinfinity.JsRO is a Javascript pseudo-class for GUI remoting and full web integration. It allows you to create remotable objects, and their properties, methods and events are mirrored to the web as native javascript objects. There must be a unique HOST to communicate with, and there can be more than one REMOTE for the same HOST. The HOST will keep all REMOTES synchronized, even when a REMOTE changes a value locally the other REMOTES will receive a notification.

```JavaScript
var JsRO = new Thinfinity.JsRO({
 //'autoStart':false [optional]
});
```

Parameters

Parameters	Description
autoStart	(optional) allows you to set off automatically the linkage, by default is TRUE.

Returns

Thinfinity.JsRO Object.

Notes

To use this pseudo-class you must have got an existing HOST created.

Version

20141216.1

Group

VirtualUI.sdk.min.js

Methods

Name	Description
start	Allows you to start linkage protocol manually with the HOST. It will be available when 'autoStart' is set to false.
on	Allows you to add an event to a specific node.
off	Allows you to remove an event from a specific node.

Properties

Name	Description
model	Model is just an entry point of the data object tree. All remote objects will be displayed as object-structure and can be accessed through their names.

9.5.2.1 Methods

9.5.2.1.1 start

```JavaScript
JsRO.start();
```

Description

Allows you to start linkage protocol manually with the HOST. It will be available when 'autoStart' is set to false.

File

Thinfinity.JsRO

9.5.2.1.2 on

```JavaScript
//The events can be:
//local (client side)
JsRO.on('model:Form1.checkBox1','changed',function(elem){
  //yourCode
});
//remote (events declared on the server side)
JsRO.on('Form1.checkBox1','click', function(elem){
  //yourCode
});
```

Parameters

Parameters	Description
object	path of the node as string.
event	name of the event as string.
handler	callback as function.

Returns

Returns boolean. TRUE if the event was added and FALSE when it was not.

Description

Allows you to add an event to a specific node.

File

Thinfinity.JsRO

9.5.2.1.3 off

```
JavaScript
//The events can be:
//local (client side)
JsRO.off('model:Form1.checkBox1','changed',handler);
//remote (events declared on the server side)
JsRO.off('Form1.checkBox1','click', handler);
```

Parameters

Parameters	Description
object	node path as string.
event	event name as string.
handler	reference to the handler function previously set in the *on* method.

Returns

Returns boolean. TRUE if the event was removed and FALSE when it was not.

Description

Allows you to remove an event from a specific node.

File

Thinfinity.JsRO

9.5.2.2 Properties

9.5.2.2.1 model

```
JavaScript
JsRO.model.yourObjectName.[n]
```

Description

Model is just an entry point of the data object tree. All remote objects will be displayed as object-structure and can be accessed through their names.

File

Thinfinity.JsRO