

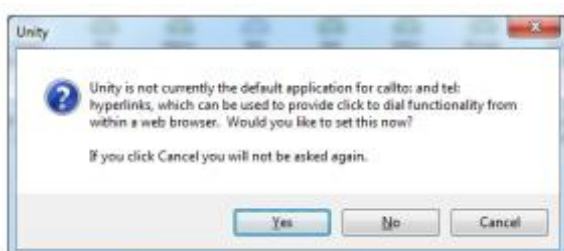
Unity: Browser Click to Dial

This document outlines the steps required to configure click to dial functionality between a web browser and Unity. This feature was introduced with Unity release 6.3.3.0 and later. Any users running previous versions of Unity will automatically update to this version. It allows a user to click on any `callto:` or `tel:` hyperlink from within a browser to dial that number through Unity. If Unity is not currently running it will be started. Please note that at present Unity doesn't create these hyperlinks automatically for all numbers; this is typically the job of a browser add-in. However many web portals wrap numbers in either a `callto:` or `tel:` hyperlink, as they are generally recognised as the default URI for click to dial, much like `mailto:` is generally recognised as the default URI for sending email.

HOW IT WORKS

When Unity is started, it downloads a small utility application called `ClickToDial.exe`, this is the link between the browser and Unity. When the user clicks on a `callto:` or `tel:` hyperlink, the operating system will run the `ClickToDial` application, passing the number that was wrapped in the hyperlink. This application will then start Unity if it is not currently running, and instruct it to call that number.

This utility is also responsible for configuring the operating system to run the `ClickToDial` application when a user clicks on an applicable hyperlink. Unity will prompt the user to make Unity the default application for `callto:` and `tel:` links when it starts, assuming the user has not been prompted before and that the brand stipulates to prompt the user [explained below]. An example of this prompt is shown below.



CONFIGURATION

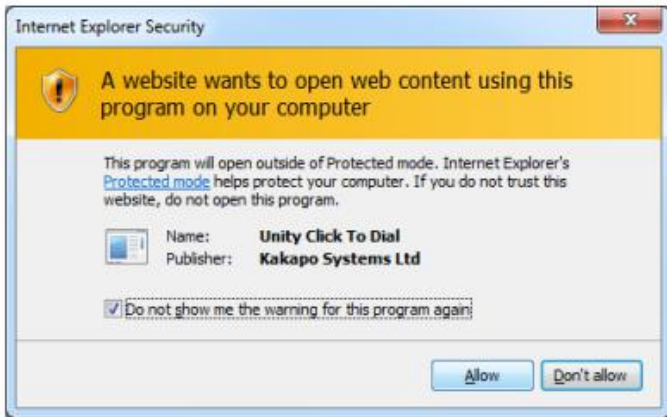
If the user clicks `Yes` then the `ClickToDial` application will be instructed to configure the operating system to make Unity the default application for `callto:` and `tel:` hyperlinks. There is no other configuration required by the user, and no restarts are required.

The operating system is configured per user, not once for all users. This means that once the user has selected to use Unity as the default application for click to dial, this will be the case on all computers that they log into when using roaming Windows profiles.

When you first click on a `callto:` or `tel:` hyperlink from within a browser, you may be prompted to confirm your action, as below.

- Microsoft Internet Explorer

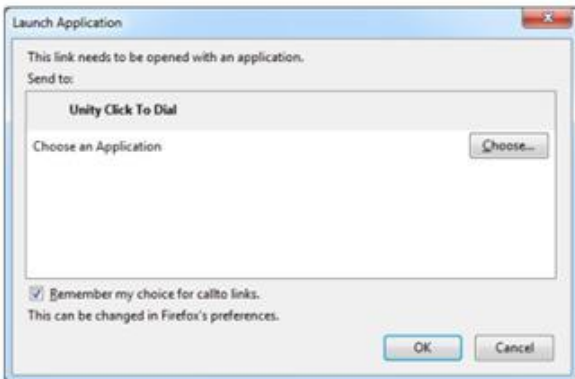
The below prompt will be displayed when you first click on a callto: or tel: hyperlink.



Please check the 'Do not show me the warning for this program again' box and click allow.

- Mozilla Firefox

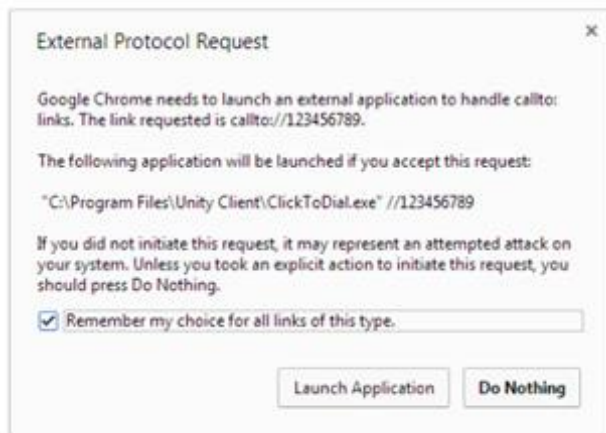
The below prompt will be displayed when you first click on a callto: or tel: hyperlink.



Please check the 'remember my choice for callto/tel links' and click ok.

- Google Chrome

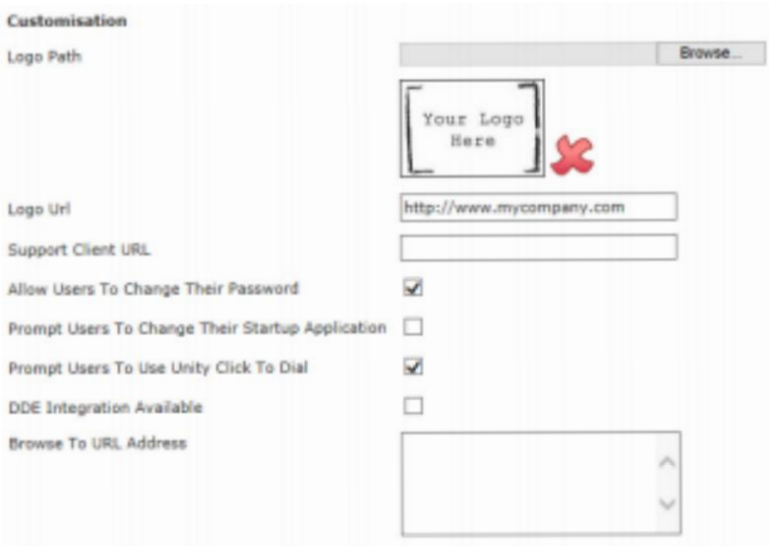
The below prompt will be displayed when you first click on a callto: or tel: hyperlink



Please check the 'Remember my choice for all links of this type' and click the launch application button

PORTAL CONFIGURATION

As mentioned above, the click to dial feature is automatically available to all users once their Unity client is updated. Therefore in order to avoid confusion, the user is not prompted to make Unity the default application for click to dial [as shown in the screenshot above] by default. This can be managed through the partner portal, as outlined below.



The "Prompt User To Use Unity Click To Dial" setting is available through the Branding tab at the system provider, reseller/enterprise and group levels. As with all brand settings, it cascades down the hierarchy when saved. For example if this setting is activated at the reseller level, it will apply to all groups [and users of those groups] within that reseller. Once this setting is changed it will be applied when Unity is next restarted. It is recommended that the customer is educated about Unity click to dial in order to ensure they click Yes when prompted.

TESTING AND TROUBLESHOOTING

• Troubleshooting Configuration Issues

Unity will attempt to download the ClickToDial.exe application from the Crystal Clear telecom update server, if it doesn't already exist in the installation folder. However Unity may not have appropriate permissions to save the file, or the file may not be downloaded because of firewall or proxy restrictions. Unity will not prompt the user to configure click to dial if this file doesn't exist locally.

When the ClickToDial utility configures the operating system for callto: and tel: links, a log file is created called ClickToDialSetupLog.txt. Below is a sample log file for a successful configuration.

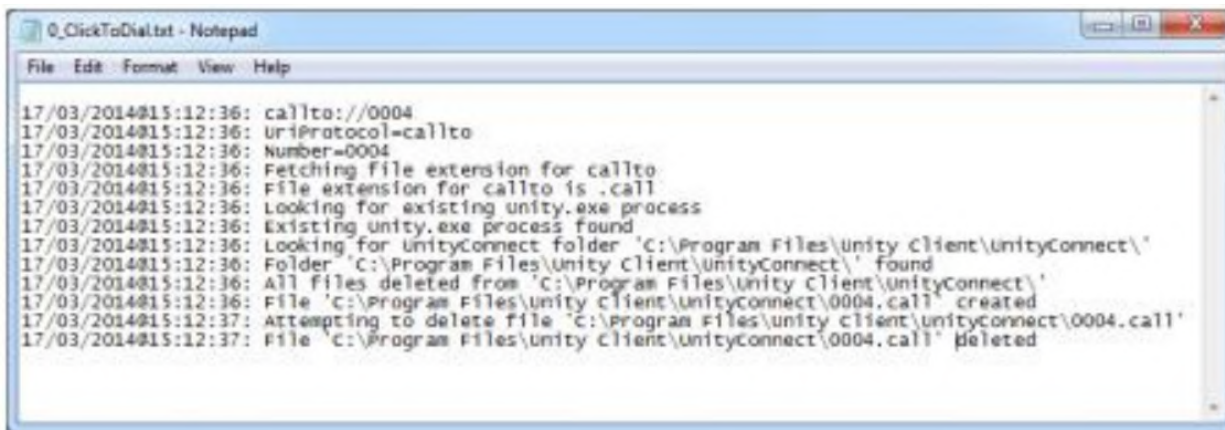
```
File Edit Format View Help
03/04/2014015:47:51: Attempting to remove existing callto uri protocol handler
03/04/2014015:47:51: Successfully removed existing callto uri protocol handler
03/04/2014015:47:51: Attempting to create uri protocol handler with the following details
03/04/2014015:47:51: uriProtocol = callto
03/04/2014015:47:51: fileExtension = .call
03/04/2014015:47:51: isNumeric = True
03/04/2014015:47:51: applicationPath = C:\Program Files\Unity Client\ClickToDial.exe
03/04/2014015:47:51: New uri protocol handler created successfully
03/04/2014015:47:51: Attempting to remove existing tel uri protocol handler
03/04/2014015:47:51: Successfully removed existing tel uri protocol handler
03/04/2014015:47:51: Attempting to create uri protocol handler with the following details
03/04/2014015:47:51: uriProtocol = tel
03/04/2014015:47:51: fileExtension = .call
03/04/2014015:47:51: isNumeric = True
03/04/2014015:47:51: applicationPath = C:\Program Files\Unity Client\ClickToDial.exe
03/04/2014015:47:51: New uri protocol handler created successfully
```

If there are any errors when configuring the operating system for click to dial, the log file will contain any error messages. This file should be attached to a ticket through the Uboss partner portal when reporting an error.

• Troubleshooting Execution Issues

When clicking on a hyperlink from within the browser, the operating system will try to execute the ClickToDial application, passing the number wrapped in the hyperlink. For example when clicking on a callto://123456789 link, the OS will send 123456789 as an argument when starting the ClickToDial executable. The ClickToDial application then instructs Unity to place the call to that number.

This process is logged in the Log folder, located within the installation folder. The log file will have a sequence number followed by "ClickToDial.txt"; the sequence number will change each time Unity is restarted. Below is a sample log file created when the user clicked on a callto://0004 hyperlink

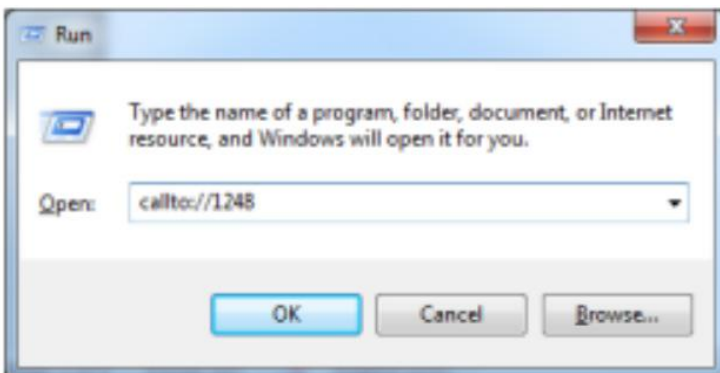


```
0_ClickToDial.txt - Notepad
File Edit Format View Help
17/03/2014@15:12:36: callto://0004
17/03/2014@15:12:36: UriProtocol=callto
17/03/2014@15:12:36: Number=0004
17/03/2014@15:12:36: Fetching file extension for callto
17/03/2014@15:12:36: File extension for callto is .call
17/03/2014@15:12:36: Looking for existing unity.exe process
17/03/2014@15:12:36: Existing unity.exe process found
17/03/2014@15:12:36: Looking for unityConnect folder 'C:\Program Files\unity client\unityConnect\'
17/03/2014@15:12:36: Folder 'C:\Program Files\unity client\unityConnect\' found
17/03/2014@15:12:36: All files deleted from 'C:\Program Files\unity client\unityConnect\'
17/03/2014@15:12:36: File 'c:\program files\unity client\unityconnect\0004.call' created
17/03/2014@15:12:37: Attempting to delete file 'c:\program files\unity client\unityconnect\0004.call'
17/03/2014@15:12:37: File 'c:\program files\unity client\unityconnect\0004.call' deleted
```

This file should be attached to a ticket through the Uboss partner portal when reporting an error.

• Testing

This feature can be tested by clicking to Start > Run and typing a callto: or tel: URL, as shown below.



When OK is clicked above Unity will be instructed to dial 1248. The log file can then be checked to confirm if the operating system

Click To Dial

The operating system can be configured to use Unity as the default application for callto: and tel: links, which provides click to dial functionality from within the browser. Simply enter a number to call and press the Create Link button below to test this functionality on your local browser.



You can enter any number into the text box and press the Create Link button to see the corresponding callto: or tel: hyperlink shown in three ways:

- The URL and text of the hyperlink are the same
- The URL and text of the hyperlink are different
- The URL wraps around an image, giving the impression of a "Dial" button

Clicking any of these three hyperlinks should result in Unity calling the number entered. This has been tested in Internet Explorer, Firefox and Chrome browsers.

INCORPORATING CLICK TO DIAL INTO A CUSTOM APPLICATION

Because the operating system can detect when the callto: or tel: hyperlink is processed, any third party application can run a process that calls the hyperlink, which will then be processed by the operating system in exactly the same way as it would be by running it through Start > Run or through the test web page. This is an easy way to provide click to dial from any internally developed thirdparty application.