

Migrating to Microsoft Edge IE mode

Microsoft Edge IE mode was introduced in the Chromium version of Edge 77 and provides a method to run sites (usually legacy web applications) that are only compatible with Internet Explorer to run in Edge. It runs all modern sites using the chromium-based browser and the Trident MSHTML engine from Internet Explorer 11 for legacy sites. It is used primarily so that you do not have to continually switch web browsers if you want to use a site that only runs in Internet Explorer, allowing you to run everything within Edge.

Migration Approach High-level overview

This guide outlines the Blue Prism recommended approach for migration from Internet Explorer to Microsoft Edge IE Mode:

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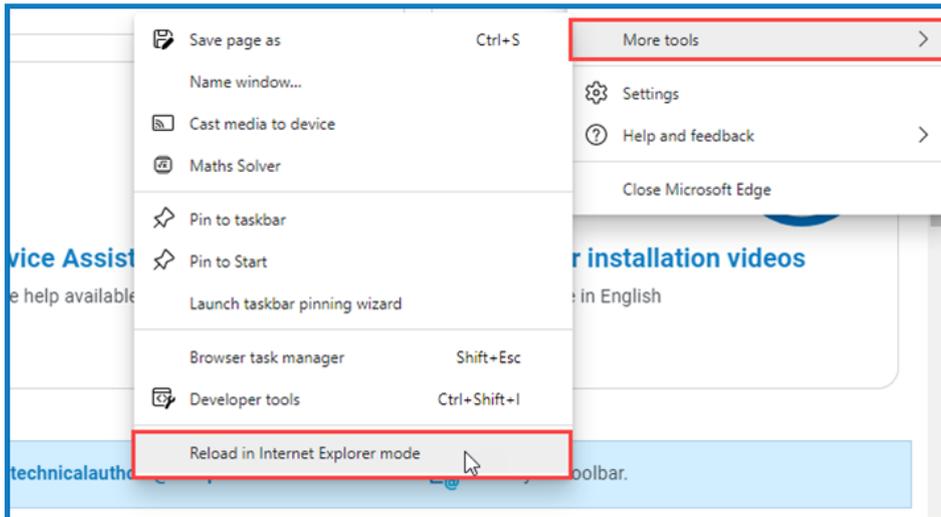
 Information about configuring Blue Prism for IE Mode can be found in [Microsoft Edge IE mode](#).

Confirm that target web applications support IE Mode

Before starting the conversion process, you must assess the target web application(s) for compatibility with Microsoft Edge Internet Explorer Mode (IE Mode). This is irrelevant to the use of Blue Prism, since the target web application must support IE Mode first.

It is also important to note, your IT department may not support your target application(s) for use in IE Mode even if it is fully functional, due to support constraints. Therefore, it is important you confirm the support availability of your target web application.

To view a site or application in IE Mode, open the required application in Microsoft Edge, click the ellipsis, and select More tools > Reload in Internet Explorer mode.



 Steps on how to enable IE Mode at scale via a Group Policy can be found in [Enable IE mode with group policy](#).

If the target application does not function sufficiently in IE mode, additional integration options for that target system will need to be investigated. An alternative modern browser may be required, or there may be other options such as Web APIs available.

Identify objects that require conversion/migration to IE Mode

Before performing the migrations, it is important to plan what needs migrating and what does not. Not only will this eliminate wasted effort, but it will also be an opportunity to perform some housekeeping, which may improve performance of the environment.

Automated approaches

Automated approaches to facilitate this effort may include:

- Use the Not Run Since script, available from Blue Prism. This will indicate the last run of all objects/processes in the environment which may help indicate whether an object should be migrated or not.
- Use a script to query the relevant Blue Prism Scheduler database tables to determine which processes dependant objects are scheduled to run in the Production environment. This will facilitate efforts to determine what needs migrating.
- Use the dependencies scripts to determine required dependent objects. This can be used in conjunction with one or both of the scripts above.

As when using any other database scripts, the usual advice around this technique should be followed.

Manual approaches

Manual approaches to facilitate this effort may include:

- Consulting with your development team to create a report containing objects that do/do not need migrating. The development team will have knowledge regarding which objects are for testing/sandbox purposes and which have production value.
- Use any ODI, Object Library, Process/Object Matrix, or any other design documentation that would support this effort.

Blue Prism Professional Services are available to support and discuss the above points and other considerations and advice around migrating to Edge IE Mode.

Estimate the required effort

For large numbers of objects, a sensible approach would be to perform analysis on the objects that need converting to create an effort estimating tool:

For example, the Blue Prism Object XML could be parsed programmatically to create a report listing all in-scope objects and actions.

You can then assign each action/object a complexity rating with an associated effort estimate to test & remediate for IE Mode. This complexity rating may be made up of (but not limited to):

- Number actions per object
- Number of stages per action
- Number of application model elements in use. Do not count unused elements
- Spy mode used per element

Only consider actions that interact with the application (reads, writes, waits, navigates), ignore decisions, calculations, etc.

Take a proof-of-concept approach by performing the migration, testing and remediating of a selection of objects to refine the effort estimating tool.

Convert processes and objects with the IE Mode Conversion Assistant

It may be possible to use the IE Mode Conversion Assistant, a utility specifically created in migrating into IE Mode, to perform some automatic conversions of processes and objects. For example, we know Internet Explorer objects will need to be reconfigured to launch or attach to Edge rather than Internet Explorer. It should be possible to achieve this via an automated approach using the utility or by creating a bespoke solution.

It is recommended that a small batch of processes and objects are converted first, and the approach described in this document is trialled and refined using those processes and objects, as opposed to a bulk conversion of all processes and objects. Ideally these process and objects will form single business process.

The utility also has ability to generate reports, designed to surface known areas where further manual investigations and remediations may be needed. It is recommended that those reports are generated either before or after the auto conversion to help develop an understanding of potential areas and associated efforts needed to address them.

 The IE Mode Conversion Assistant can be downloaded on the [Blue Prism Digital Exchange](#) with an accompanying user guide that contains detailed information on the usage of those reports and the specific issues each is designed to address.

Perform regression testing on each converted object

Once automatic conversion of the first batch of objects has been achieved, testing will need to be performed by developers. The IE Mode Conversion Assistant utility does not guarantee automatic conversion of all interactions and elements – its use should always be accompanied by testing in the Blue Prism client.

A risk-based testing approach may be more appropriate if a large number of objects need migrating. This would involve identifying consistencies in order to build or reduce confidence in the likelihood of certain objects/actions working or needing adjustment. Such an approach would need to be agreed with the customer, so further discussion with Blue Prism Professional Services may be required.

Edge IE Mode needs to be enabled for the target system. This can be done via Group Policy or in Edge itself. It is also possible to configure a list of websites to run in IE Mode by default. For more information, see the [online help](#).

Resolve any issues following conversion

Once the objects have been configured to launch or attach to Edge, a developer can step through the objects in the Blue Prism Object Studio to confirm they are working as intended. Any issues should be resolved through a fix-on-fail approach in the Development environment.

 Test data may be required to navigate to certain screens within the application to test interactions.

It is important to document what needed fixing and how it was fixed so learnings can be applied to the rest of the conversions/migrations while also refining the effort estimating tool if one is used.

Once all objects have been confirmed to be working as expected, the business process can be considered functionally migrated. Since the business rules and logic of the process have not been modified, Blue Prism does not anticipate customers needing to perform the full testing methodology usually associated with the delivery of a new Blue Prism solution.

Test all applicable objects for each business process

Complete testing on all applicable objects for each business process:

1. [Perform regression testing on each converted object above](#)
2. [Resolve any issues following conversion above](#)

Once successfully tested, processes can be considered successfully migrated.

Refine the conversion rules

Following the previous steps, optionally, refine the customizable Element Attribute Conversion Rules available from IE Mode Conversion Assistant to increase the success levels of automatic element conversion.

Migrate all applicable processes

As per the project and resource plan, described in [Estimate the required effort on page 4](#), repeat the following steps until all required processes have been successfully migrated to use Edge IE Mode:

1. Convert processes and objects with the IE Mode Conversion Assistant on [page 4](#)
2. Perform regression testing on each converted object on the previous page
3. Resolve any issues following conversion on the previous page
4. Test all applicable objects for each business process on the previous page
5. Refine the conversion rules on the previous page

Frequently asked questions

Can you spy a site in IE Mode with the Edge Browser Extension?

No. IE Mode in Edge is not dependent on the Blue Prism browser extension to work. The browser is not running as a Chromium-based browser and the plugin depends on this. Attempting to spy with the latest plugin on a website where IE Mode is enabled does not work – the URL resolves when using ephemeral ports, but you are unable to spy. Microsoft explicitly state this limitation in their [documentation](#):

IE mode supports the following Internet Explorer functionality

- All document modes and enterprise modes
- ActiveX controls (such as Java or Silverlight)
- Browser Helper Objects
- Internet Explorer settings and Group Policies that affect the security zone settings and Protected Mode
- The F12 developer tools for IE, when launch with IEChooser
- Microsoft Edge extensions (Extensions that interact with the IE page content directly are not supported.)

Can you spy a site in IE Mode with IE Spying modes?

Yes. If you set up the application modeler to launch Edge instead of Internet Explorer, as long as the website is enabled in IE mode, you can spy the web page. In order for this to work though, when setting up the application modeler, despite the website running in Edge, when selecting what type of application they are using, they must select “Browser based application (Internet explorer)”. If you navigate to a domain that doesn’t have IE mode enabled, you will no longer be able to spy.

You can also attach to a running instance of Edge with a web page loaded in IE mode – you don’t need to launch Edge with Blue Prism.