Browsium Ion Demo Script

IE8 to IE11 Migration

This document provides a detailed demo script to enable you to effectively demonstrate Browsium Ion and highlight many of the key features. The demo includes showing an example (fictional) corporate line-of-business application working on a legacy Windows 7 / IE8 PC, failing on a modern Windows 7 / IE11 PC, being partially fixed with Enterprise Mode for Internet Explorer (EMIE), and then being completely fixed on the modern PC via Browsium Ion. The script includes comprehensive preparation instructions and steps to ensure the demo can be delivered in a consistent manner.

System Preparation

In order to effectively demonstrate Browsium Ion, the following system configurations are required:

1) A PC or virtual machine running Windows 7, IE8 and Java 1.4.2u19.
2) A PC or virtual machine running Windows 7, IE11, Java 1.4.2u19, Java SE Development Kit 8u45 (or other recent version of the JDK), Ion Client and Ion Configuration Manager 3.5.
3) Ensure that the Group Policy for Enterprise Mode is enabled on the IE11 Machine (or turn on via the Registry).
4) On the system with IE11 and Java 8u45, open the Java control panel and add http://www.javatester.org to the exceptions list so that Javatester can load Java 8 with its unsigned Java applet. Alternatively, substitute http://java.com/en/download/installed8.jsp for Javatester in the demo as it uses a signed Java applet.

All systems should run the latest Windows Service Packs and be completely patched via Windows Update. However, it's critical to hide the IE9, IE10 and IE11 update in Windows Update on the PC running Windows 7 with IE8, so that it remains running IE8. Without this step, Windows Update will automatically upgrade Internet Explorer and the demo will not function properly. The demo configuration runs on a single PC with the two virtual machines.

Java installations can be found on the Oracle website. For Java 1.4, the latest (and last) revision is Java 1.4 update 19. For Java 8, you should use the Java SE Development Kit 8u45 or later (as new JDK releases come out every few months). Note that the JDK is only needed for the Java Version Manager within Ion Configuration Manager. Client PCs only need the lightweight JREs for enterprise deployment.

Demo Goals

At a high level, the goals of this script are to:

- Familiarize potential customers with the product & technology
- Compare EMIE to Browsium Ion
- Demonstrate a variety of common scenarios that Ion can address (custom IE rendering modes and custom Java versions using the Java Version Manager)
- Address the most common technical questions received from customers

Additional Information

Additional resources are available to help you understand the flow of this demo. See this demo in action by watching the demo videos on our website at www.browsium.com/ion/demo-videos/.

Demo Script

Demo Steps	Context and Talking Points
Section 1: The site working in Windows 7 with IE8	
Step 1.1: Open IE8 on Windows 7 to the Microsoft Bing page.	Demonstrate that you're running IE8. Point out that the Bing page looks fine in IE8, open 'help about' from the Menu to show the IE8 version box.
Step 1.2: Navigate to www.yourang.us.	Next show how a site that was designed during the IE8 era works very well in IE8 today. Navigate to www.yourang.us. This is a Browsium demo site, used to show how various browsers handle the typical web pages used for enterprise line-of-business applications. YouRang is a fictional company whose operators use the yourang.us portal to assist customers with purchasing a cell phone and access corporate line-of-business applications. Point out that the demo will highlight functionality that works in the legacy environment (Windows 7, IE8, Java 1.4) but will not work in the modern environment (Windows 7, IE11, Java 8). The issues will include page layout problems, and Java compatibility problems.
Step 1.3: Purchase Phone >> Search from the 'Order Phone' menu and complete the selection and purchase process.	Steps to complete for this section include: a) Select 'Order Phone' and then use the dropdown menu to select a phone. You may choose any phone from the list. It's helpful to use the same phone throughout the demo. b) Point out that the features of the phone are displayed as well as a picture of the phone. c) Once the customer decides they like the phone's specs, click the Purchase This Phone button to begin the purchase process. d) Look up a customer by entering the Last Name or Customer ID and click on the Submit link to display the customer information. Any name or number will work, but remember the name or number and use it consistently throughout the demo. (The preferred way to do this part of the demo is with the Last Name, and then choose a name from the search results.) e) Continue through to complete the purchase.
Step 1.4: Navigate back to the yourang.us homepage.	Operators have been trained to use the 'Timecard application to submit their hours worked each week. This is available from the Timecard menu.
Step 1.5: Select 'Timecard' to navigate to the timecard application.	The page will load the 'Timecard' application as a Java applet; demonstrate that you can enter hours in a cell for a given day (the cell will change color depending on the # of hours entered). Clicking the 'submit' button will do nothing; it's just a sample applet, but right now you're just showing how it looks in IE8 with Java 1.4.
Step 1.6: Navigate to www.javatester.org.	Javatester is a website that detects the default version of Java. We'll use it to confirm the version of Java being used on our system. Click the 'Test the version of Java...' link at the top of the page to show that Java 1.4 is being loaded in IE8 as it's the only version of Java installed on this PC. Point out that the 'Timecard's application was written when Java 1.4 was the current version (about 10 years ago) and works well in that version. We'll see soon that it doesn't work in the current Java 8 releases.
Step 1.7: Navigate to www.ideakites.com to show how IE8 handles a site that requires HTML5	The IdeaKites website is an award winning site built in HTML5. Point out that the website does not work at all in IE8. IE8 is already obsolete. The current version of Internet Explorer on Windows 7 is IE11. Many modern SaaS applications, including Office365, Google Apps, Salesforce.com and Workday, are all dropping support for IE8 – so it's time to upgrade!
Step 1.8: Conclusion of part one	Re-cap what the customer experience has been and the current configuration of Windows 7 with IE8 using Java 1.4 and that the legacy application works as expected but the modern HTML5 application failed completely.

Section 2: The site broken on Windows 7 with IE11	
Step 2.1: Switch to Windows 7 with IE11.	Demonstrate that you're in IE11; show the 'help about' box to prove which version of IE you're running. Remember to mention whether or not you're running the 64-bit version of Windows 7; Ion supports both 32-bit and 64-bit Windows 7. Remark that you have upgraded to Java 8u45 on this PC. Mention that the Ion client has already been installed on this PC but no rules or profiles have been configured and Enterprise Mode is not enabled. As such Ion, will sit harmlessly in the background, and all sites will be handled with IE's default setting (currently IE11). Open the 'Manage add-ons' tool in IE11 and show the Ion client add-on in the list.
Step 2.2: Visit www.ideakites.com and show the functionality.	The Idea Kites website looks great in IE11 because IE11 has excellent support for HTML5. Recall that this looked completely broken in IE8.
Step 2.3 Visit www.yourang.us and demonstrate that the site is broken in IE11 by running through the 'Order Phone' scenario that worked in IE8.	Next we'll see how our YouRang application works in IE11. Elements to highlight include: a) Select 'Order Phone' and then use the dropdown to select a phone. Select the same phone as you did in part one. b) Point out that the features of the phone are displayed poorly and that some of the text is outside of the border. c) Attempt to use the link to purchase the phone and explain that the link is no longer functioning. d) Point out that the operator is not able to complete the sale.
Step 2 4: Go to the tools menu for IE and enable 'Enterprise Mode'. Use Alt to access the tools menu in IE11. The Icon above should appear on the navigation bar of IE.	Before tackling this site with Ion, let's first use the built-in tools Microsoft provides for fixing layout issues. So we'll turn on Enterprise Mode in IE11, which swaps in the IE8 Emulation for Enterprise Mode, and see if this fixes our application. Some parts of the application are now fixed, but other parts still fail. Elements to highlight include: a) Use the 'Order Phone' to select a phone. Select the same phone as you did in part one. b) Point out that the features of the phone are displayed properly now. c) Attempt to use the link to purchase the phone and it will take you to the window to enter the customer ID or Last Name. This function has been fixed by Enterprise Mode, (If the logo does not appear in the new window, hit the alt key and enable Enterprise Mode again). d) Attempt to look up a customer by entering an ID and clicking on the Submit link to display the customer information. When you click on the Submit link it does not work. EMIE did not fix this function. EMIE fixed some things but not everything; EMIE alone isn't enough to fix this site, so we'll use Ion to get it working. (Note that we'll need to go back after the demo and turn off EMIE so it's ready for the next demo session.)

Section 3: Get the site working with Ion	
Step 3.1: Turn of EMIE in all IE Windows and then close them. Open the Ion Configuration Manager.	It's time to build an Ion configuration to get this site running properly using an older, but more compatible, IE engine and settings that are much closer to the settings used by IE8. It's important to note that the Ion Configuration Manager will only be used by the IT administrators within the organization. End users in an enterprise will never see/use this tool and will not need to be trained in it. Ion Configuration Manager is fully documented in the Administration Guide.
Step 3.2: Create a new Project for the demo's rules and profiles.	Launch the Ion Configuration Manager from the Start menu and it will open to a 'New Project'. Give the project a meaningful name (such as "Fix yourang in IE11"). Note that as you adjust the name in the central Content pane of the Configuration Manager, you can also add a Description. The File Path field will be populated automatically when your Project is saved. Once you've named your Project, it's time to add a Profile.

Step 3.3: Create a Profile for YouRang.	Steps to complete for this section include:
	
	    a) Click on 'Profiles' in the Objects pane, then Click on 'Add Profile'.
	    b) Choose the 'IE8 Standards Mode' rendering mode.
	
	Each of these available Profiles is a different IE rendering mode and browser settings that we can assign to an app or a site. Old IE8-dependent apps will typically run best under 'IE8 Standards Mode', which runs the web page as if it were displayed in standards mode by IE8.
	
	    c) Select 'OK' to create the profile and note that the name of the profile is 'IE8 Standards Mode'.
	    d) Open the profile in the 'Objects' window and comment on the Document mode field which shows that we will be rendering in IE8.
	    e) Open the 'User Agent String' and point out that it will be set to MSIE 8.0 which will in turn tell the server it is in IE8 rendering mode.
	    f) Point out that this is similar functionality to EMIE but has many more options for remediation beyond what EMIE can do.
	
	Now the profile is ready to be used. There are many advanced options visible here that we can use to change the behavior of the IE engine selected, but for now we'll just try our site with the defaults to see how well it runs.

Step 3.4: Create a Rule to invoke the Profile.	Steps to complete for this section include:
	
	    a) With your new profile selected, choose 'Add Rule using this Profile' from the actions pane on the right.
	    b) Name the rule 'Yourang'.
	    c) Type the app's domain (yourang.us) into the 'value' field.
	    d) Click 'OK' to save that rule. The Rules Manager is now shown in the Configuration Manager.
	Now you can see that we have one rule in our list: when the URL includes yourang.us, we'll load the site using IE 8 Standards Mode instead of the IE11 defaults.

Step 3.5: Open the File Menu to discuss deployment options.	The file menu gives you a variety of options for opening and saving project files. Ion configurations are saved to project files which are then deployed to end user systems or to central servers. A pointer to the project file is configured in the registry of end user systems, either via a registry editor (or script) or via Group Policy. While demoing and during project development, working with 'Test Configurations' is the simplest way to see immediate results to changes to an Ion configuration. 'Start Test Configuration' saves the current project, writes a pointer to the project file in the registry, and starts the Ion Controller to read the configuration. This operation can be repeated as the configuration changes. Choose 'Start Test Configuration' now. Be sure to give the PC a few seconds to fully restart the Ion processes! Watch for the green Ion splash screen to appear before visiting the Yourang.us site again.
Step 3.6: Restart IE11.	The page will open to Bing as it did before. Show that the page renders and functions just as it did before and Ion is not interfering with it. Open a new tab and enter the yourang.us in the navigation bar. Note that Ion opens a new instance of Internet Explorer and isolates the yourang application there. Right click to view the source code and point out where the tag 'BEGIN BROWSIUM ION GENERATED CODE'. This indicates that Ion is in control of this browser instance. Mention that it doesn't matter how the end user navigates to a web site: It could be a link on the desktop or in email, or they could type it in the address bar or in the start menu – it doesn't matter, Ion will capture the navigation and instruct IE to open the website with the correct rendering mode and settings regardless of how the user got there. In this way, the user just uses IE11 as they normally do, they don't have to do anything differently (or be trained in any way) and the right thing 'just happens'.
Step 3.7: Select Product >> Navigate to yourang.us, Search from the 'Order Phone' menu and complete the selection and purchase process.	Elements to highlight include: a) Use the 'Order Phone' link and select a phone. b) Point out that the features of the phone are displayed as well as a picture of the phone – and everything looks clean as it did in IE8. c) Look up the customer by selecting the Purchase This Phone button and then entering an ID or Last Name and clicking on the Submit link to display the customer information. a) Point out that the Operator is still not able to complete the sale and that this part of the application works as it did in IE8. Point out that this is the same symptoms we experienced with EMIE enabled.
Step 3.8: View the source code for the application by right-clicking on the page and choosing View Source from the menu. The scroll down the page to find the first instance of the variable "formAction".	Point out that this site was built for IE8 and some of the JavaScript used in the site is not compatible with the JavaScript engine in IE11. In this case, the developer named a variable "formAction", which worked fine in IE8 and IE9, but in IE11 (actually as of IE10), Microsoft changed the JavaScript engine and "formaction" became an official attribute of button objects. This change breaks our YouRang customer lookup, as the submit button no longer works.

	The fix is to change the variable name to something (anything) that is not reserved by Internet Explorer. Explain that you will use the String Replacement Manager in Ion to accomplish this.
Step 3.9: Create a new String Replacement and copy/paste the relevant URI data from the Purchase Phone window for the Target URI field in the Ion Configuration Manager to target our string replacement to just the page with the error.	Steps to complete for this section include: a) Go to the 'String Replacement Manager' in the Configuration Manager. b) Choose 'Add' in the String Replacement Manager Actions Pane on the right. c) Name the string replacement "Fix formAction" d) Paste the Target URI data in the String Replacement Manager, using the string http://yourang.us/purchase_phone.php. (Be sure to only paste up through ".php", otherwise your string replacement will include phone-specific information and will not work if you choose a different phone.)
Step 3.10: Complete the string replacement for "formAction" by replacing it with "buttonAction".	Steps to complete for this section include: a) Leave both Match Method and Find/Replace Method at their default values of "Simple". b) Enter the value "formAction" (without quotes) in the 'String to Find' field in the String Replacement Manager. c) Enter the value "buttonAction" (without quotes) in the 'Replace with' field. This will change all instances of formAction with buttonAction. d) Click 'OK' to save the string replacement.
Step 3.11: Show the impact of the string replacements – navigate to yourang.us.	Close all of the Internet Explorer windows – by right-clicking on the IE task icon and choosing 'Close All Windows'. Then choose 'Start Test Configuration' from the File menu in the Configuration Manager and then Navigate to yourang.us.
Step 3.12: Select Product >> Search from the menu and complete the selection and purchase process.	Steps to complete for this section include: a) Select 'Order Phone' and then use the dropdown menu to select a phone. You may choose any phone from the list. It's helpful to use the same phone that you used earlier. b) Point out that the features of the phone are displayed as well as a picture of the phone. c) Once the customer decides they like the phone's specs, click the Purchase This Phone' button to begin the purchase process. d) Look up a customer by entering the 'Last Name' or 'Customer ID' and click on the 'Submit' link to display the customer information. Any name or number will work, but remember to use the name or number you used before. (The preferred way to do this part of the demo is with the Last Name). e) Select the customer name. f) Select 'Place Order'. g) Select 'Close This Window'. Point out that the Operator is now able to complete the sale.

Section 4: Java Replacement	
Step 4.1: Navigate to www.javatester.com.	Click the 'Test the version of Java…' link at the top of the page to show that Java 7 is being loaded in IE11 by default. Point out that the 'Timecard application was written when Java 1.4 was the current version (about 10 years ago) and works well in that version.
Step 4.2: Navigate back to the yourang home page.	Remind the audience that Operators have been trained to use the Timecard application to submit their timecards.
Step 4.3: Demonstrate the 'Timecard's application fail with Java 8.	Attempt to use the 'Timecard application. This will result in the system attempting to launch the application with the default version of Java which in this case is version 8 update 45. It will result in a large submit button and will fail to load properly.
Step 4.4: Do custom file re-direction invoke Java 1.4.2_19.	Steps to complete for this section include: a) Use the 'Java Version Manager' from the Profile Properties page to redirect the default Java version to Java 1.4.2_19 that our 'Timecard application uses. b) Rename the profile to reflect the changes for Java to 'IE8 Standards Mode + Java 1.4'. c) Choose 'Start Test Configuration' from the file menu and wait for the Ion Controller restart.
Step 4.5: Show the impact of the Java Replacement.	Navigate to the 'yourang' homepage and select the 'Timecard' option on the main menu. Demonstrate that the application loads properly with Java 1.4
Step 4.6: Show Java 7 and Java 1.4 running side by side.	Steps to complete for this section include: a) Go to the first instance of IE where Bing is the default page. b) On the next tab Visit javatester.org and click on the 'Test the version of Java used in this browser' Link. c) Verify that this instance of IE is using the default version Java 8u45 and the other instance of IE with yourang has 1.4.2_19 running side by side to facilitate the Timecard application.
Step 4.7: Summarize what we have just seen.	This wraps up the demo of the core features of Ion. So we have seen a remediation with Browsium Ion of an application that was designed to run on Windows 7 with IE8 and Java 1.4.2_19 on a machine with Windows 7 and IE11 and a modern version of Java. We also touched on what EMIE can do and where Ion adds features and functions beyond it can do.
Section 5: Post-demo cleanup	
Step 5.1: Clear Test Configuration in Ion Configuration Manager and reset EMIE to disabled on the Windows 7 PC with IE11. Delete the project file. No cleanup needed for Windows 7 with IE8.	This clears out your Rules & Profiles from memory so that next time you run the demo, the critical elements of the page are appropriately broken again. 1) Close all IE windows and select 'Clear Test Configuration' from the File Menu of the Ion Configuration Manager on the Windows 7 system with IE11. 2) Delete the project file. 3) Launch IE again and navigate to www.yourang.us. Disable EMIE from the tools menu. Confirm that the yourang page layout is broken as it appeared in step 2.2.