

Adobe® Certified Expert Program

Product Proficiency Exam Bulletin

Flex 4.5 ACE Exam

Exam # 9A0-182

ACE Certification Checklist

The checklist below will help guide you through the process of obtaining ACE certification.

- Review this bulletin to become familiar with the topic areas and objectives of the exam.
- Identify the topic areas and objectives you need to study.
- Determine which study materials you need to improve your skills.
- For a list of recommended study materials, visit:
<http://www.adobe.com/misc/training.html>
- Study for the exam.
- Contact Pearson VUE to register for an exam:
Pearson VUE: *<http://www.pearsonvue.com/adobe>*
- When registering for the exam, refer to the exam number located at the top of this bulletin.
- Take the exam.

Your score is electronically reported to Adobe.

Exam Structure

The following lists the topic areas and percentage of questions delivered in each topic area:

Topic Area	% of Exam	# of Questions
Creating a User Interface (UI)	34	20
Flex system architecture and design	17	10
Programming Flex applications with ActionScript	20	12
Interacting with data sources and servers	14	8
Using Flex in the Adobe Integrated Runtime (AIR)	15	9

Number of Questions and Passing Score

- 59 questions
- 67% minimum required to pass

Test Content: Topic Areas and Objectives

Following is a detailed outline of the information covered on the exam.

1. Creating a User Interface (UI)

- Identify and describe the basic UI controls used in a Flex application. (UI controls include: NumericStepper, TextInput, CheckBox, RadioButton).
- Identify the purpose of UI containers and when to use them. (UI containers include: Group, SkinnableContainer, Application)
- Change the look and feel of a design by using API styles, style sheets, Spark skins, filters and blends, and visual customizations by using Halo.
- Dynamically change the look of an application by using Spark view states, transitions and effects.
- Position UI elements by using constraint-based layout.
- Implement application navigation by using navigator containers.
- Customize list-based controls. (Customizing includes: using editors, renderers, label functions)
- Given a layout type, explain the differences and when to use that layout type. (Layout types include: percentage based, constraints based, and custom)
- Create a custom layout. (Including understanding the differences between container and layout)

2. Flex system architecture and design

- Create and use custom components by using MXML and ActionScript.
- Transfer data within an MXML component by using data bindings. (Including two way binding)

- Create, handle, and dispatch events, including developer created event classes that extend the Event class.
- Identify and describe the implementation and purpose of common software design patterns that are used in Flex. (Design patterns include: Observer, Command, and Data transfer)
- Understand the skinning architecture and the role of the SkinnableContainer class.
- Given a method in the component lifecycle explain the purpose of and when to use that method. (Methods include: CreateChildren, UpdateDisplayList)
- Explain how modules are used in the development of a Flex application.
- Explain the use case and development workflow for building a custom preloader.

3. Programming Flex applications with ActionScript

- Define and extend an ActionScript class.
- Implement an ActionScript interface.
- Use access modifiers with classes and class members.
- Implement data transfer objects.
- Implement accessor methods in ActionScript. (Methods include: explicit and implicit getter and setter)
- Use an ArrayCollection to sort, filter, and provide data.
- Implement data validation.
- Manipulate XML data by using E4X.
- Implement events that function properly in the Flex event framework. (Including: extends the Event class, call super(), override clone())

4. Interacting with data sources and servers

- Implement real-time messaging by using producers and consumers.
- Explain the importance of and implement data paging on data sets.
- Understand synchronization and online/offline use cases using data management.
- Interact with remote data and services by using Remote Procedure Call (RPC) services. (Services include: HTTPService, WebService, RemoteObject, URLRequest)
- Read, write, and upload local files from the local file system by using Flash Player 10 API. (Including: the use of file filters)

5. Using Flex in the Adobe Integrated Runtime (AIR)

- Given a scenario, compile and export a release build of an AIR application. (Scenarios include: Using Flex Builder, from the command line)
- Create, populate, and delete files and directories on a local file system.
- Create and customize native windows and menus.
- Adding drag-and-drop functionality to and from the desktop.
- Install, uninstall, and update an AIR application.
- List and describe the AIR security contexts.

- Create, connect to, and define a local database.
- Add, update, and remove records from local database.

Practice Exam

Try out these practice questions to get a feel for the types of questions on the ACE exam. Please note that your performance here does not indicate how you will do on the actual exam. To fully prepare for the exam, closely review the topic areas and objectives in the Exam Bulletin.

1.3 Change the look and feel of a design by using API styles, style sheets, filters, and blends.

You want to apply the Overlay blend to an image in your Flex application.

Which is the correct syntax?

- A. `<mx:Image overlay="true" />`
- B. `<mx:Image blend="overlay" />`
- C. `<mx:Image blendMode="overlay" />`
- D. `<mx:Image filters="{overlay}" />`

Correct answer: C

2.2 Transfer data between components by using data bindings.

Which line of code correctly binds the text property of a Label to the selectedValue of a RadioButtonGroup with an id of cardType?

- A. `<mx:Label text=cardType.selectedValue`
- B. `<mx:Label text="cardType.selectedValue" />`
- C. `<mx:Label text="{cardType.selectedValue}" />`
- D. `<mx:Label text="[cardType.selectedValue]" />`

Correct answer: C

2.3 Create, handle, and dispatch custom events.

Which two properties are declared in the flash.events.Event class and are declared in all event objects? (Choose two.)

- A. id

- B. type
- C. target
- D. value
- E. relatedObject

Correct answer: B, C

3.1 Define and extend an ActionScript class.

You have a custom component named PopUpWindow that inherits from TitleWindow.

Which syntax is used to create a class that extends from TitleWindow?

- A. public class PopUpWindow extends TitleWindow
- B. public class PopUpWindow becomes TitleWindow
- C. public class PopUpWindow inherits TitleWindow
- D. public class PopUpWindow implements TitleWindow

Correct answer: A

3.8 Manipulate XML data by using E4X.

You have declared the following XML instance:

```
var myBooks:XML =  
<books>  
  <book name="Flex 3 with AIR" />  
</books>
```

How do you access the name attribute of the myBooks instance by using E4X?

- A. myBooks.book.@name;
- B. myBooks.books.book.@name;
- C. myBooks.book.attributes.name;
- D. myBooks.books.book.attributes.name;

Correct answer: A

4.4 Interact with remote data and services by using Remote Procedure Call (RPC) services.

Which HTTPService method call will invoke a service request?

- A. load()
- B. send()
- C. initialized()
- D. addEventListener()

Correct answer: B

5.4 Adding drag-and-drop functionality to and from the desktop.

Which method of the NativeDragManager class will approve the current drag event?

- A. doDrag()
- B. dragDrop()
- C. doDragDrop()
- D. acceptDragDrop()

Correct answer: D

5.5 Install, uninstall, and update an AIR application.

Which statement is true about installing AIR applications?

- A. They can only be installed from the desktop.
- B. They can only be installed from a web browser.
- C. They must be installed using an SWF (Flash) file.
- D. They can be installed from a web browser or the desktop.

Correct answer: D