**Basic Topics**

1. **What are SharePoint objects**
2. **What is hierarchy of SharePoint Objects?**
3. **Which version of .Net SharePoint built on?**

SharePoint 2010 uses .net 3.5 version and SharePoint 2013 uses 4.0

**Generic Topics**

1. **CSOM vs JSOM**

Here's the difference between CSOM/ JSOM/ SSOM/ REST. Model Types. CSOM: CSOM core assembly is Microsoft.SharePoint.Client.Runtime.dll and Microsoft.SharePoint.Client.dll, which stands for Client-Side Object Model. It is a web service based API of SharePoint

1. **What is JSOM**

SharePoint 2013 Client Object Model is a set of libraries and classes with which you can consume SharePoint data through a specific object model that is a subset of the SharePoint Server Object Model. ... JSOM or JavaScript Object Model is a set of .js files built for ECMAScript-enabled platforms.

1. **What is CSOM**

The client-side object model (CSOM) provides client-side applications with access to a subset of the SharePoint Foundation server object model, including core objects such as site collections, sites, lists, and list items.

1. **What is SharePoint REST API**

This means that developers can perform Create, Read, Update, and Delete (CRUD) operations from their SharePoint Add-ins, solutions, and client applications, using REST web technologies and standard Open Data Protocol (OData) syntax

1. **Difference b/w SharePoint 2010 and 2013**

**2013:**

**🡪** Apps model is introduced this is alternate solution for sandbox solutions

* Sandbox solutions are deprecated.
* Look and feel is improved (Visual upgrade and Design manger added)
* Cloud computing introduced “SAAS (software as a service) Online” version is available from 2013.
* New OOB Workflows added, few more option introduced in Designer List workflows.

1. What is JSON (Java Script Object Notation)

JSON has eclipsed XML as the preferred data interchange format for web applications and web services.

JavaScript Object Notation is a schema-less, text-based representation of structured data that is based on key-value pairs and ordered lists. Although JSON is derived from JavaScript, it is supported either natively or through libraries in most major programming languages. JSON is commonly, but not exclusively, used to exchange information between web clients and web servers

**JSON is built in 2 structures**

A collection of name/value pairs or (key/value pairs) an ordered list of values. JSON take these forms: objects, array, value, string, number

**Example:**

{  
  “firstName”: “**Jonathan**”,  
  “lastName”: “**Freeman**”,  
  “loginCount”: 4,  
  “isWriter”: **true**,  
  “worksWith”: [“**Spantree** **Technology** **Group**”, “**InfoWorld**”],  
  “pets”: [  
    {  
      “name”: “**Lilly**”,  
      “type”: “**Raccoon**”  
    }  
  ]  
}

1. The assemblies required for CSOM

Microsoft.SharePoint.Client.dll

Microsoft.SharePoint.Client.Runtime.dll

1. What are libraries required for JSOM

SP.js, SP.Core.js, SP.Runtime.js

1. What are steps to be taken for avoiding “Threshold issue”?

Creation of indexes for all unique columns.

Adding more number of filters while retrieving data with “from date” and “to date” limit.

Keeping unique value fields as first filter in CAML query <AND> conditions.

1. **Impact of Threshold issue to the application**

It does not impact storing items into list, it will impact the displaying items.

Lookup columns did not enable at SharePoint admin side and it will be highlighted with “5000 limit exceeded, threshold issue warning message”.

Views will be highlighted with “threshold issue warning message”.

CAMP queries did not work if the query returning more than 5K items, it also impact the custom pages where are using it.

1. **Why such 5000 magic number**

To minimize database contention SQL Server, the back-end database for SharePoint, often uses row-level locking as a strategy to ensure accurate updates without adversely impacting other users who are accessing other rows. However, if a read or write database operation, such as a query, causes more than 5,000 rows to be locked at once, then it's more efficient for SQL Server to temporarily lock the entire table until the database operation is completed.

Note: The actual number is not always 5,000, and can vary depending on your site, the amount of activity in the database, and your site's configuration.

When the whole table is locked, it prevents other users from accessing the table. If this happens too often, then users will experience a degradation of system performance. Therefore, thresholds and limits are essential to help minimize the impact of resource-intensive database operations and balance the needs of all users.

1. Uses of Client side object model CSOM
2. Sample Code using CSOM for basic operations
3. Uses of JavaScript Object model (JSOM)
4. Sample Code using JSOM for basic operations
5. How do you use SharePoint REST API in the code?
6. What is Client Context?

ALL about Workflows:

1. What is the use of Workflow manager
2. What are the new options added in SPD 2013 workflows.
3. SP 2013 designer list workflow conditions?

Common Conditions

* 1. If any value equals value
  2. If current item field equals value

Other Conditions

* 1. Created by specific person
  2. Created in a specific date span
  3. Modified by a specific person
  4. Modified in a specific date span
  5. Person is a valid SharePoint user
  6. Title field contains keywords

1. SP 2013 designer list workflow actions?

**Core Actions**

* 1. Add a Comment
  2. Add Time to Date
  3. Do Calculation
  4. Log to History List
  5. Pause for Duration
  6. Pause until Date
  7. Send an Email
  8. Set Time Portion of Date/Time Field
  9. Set Workflow Status
  10. Set Workflow Variable
  11. Stop Workflow

**Document Set Actions (not available in SharePoint Foundation)**

* 1. Capture a version of the Document Set
  2. Send Document Set to Repository
  3. Set Content Approval Status for the Document Set
  4. Start Document Set Approval Process

**List Actions**

* 1. Check In Item
  2. Check Out Item
  3. Copy List Item
  4. Create List Item
  5. Declare Record
  6. Delete Item
  7. Discard Check Out Item
  8. Set Content Approval Status
  9. Set Field in Current Item
  10. Undeclared Record (not available in SharePoint Foundation)
  11. Update List Item
  12. Wait for Field Change in Current Item

**Relational Actions (not available in SharePoint Foundation)**

* 1. Lookup Manager for a User

**Task Actions**

* 1. Assign a Form to a Group
  2. Assign a To-do Item
  3. Collect Data from a User
  4. Start Approval Process (not available in SharePoint Foundation)
  5. Start Feedback Process (not available in SharePoint Foundation)

**Utility Actions**

* 1. Extract Substring from End of String
  2. Extract Substring from Index of String
  3. Extract Substring from Start of String
  4. Extract Substring of String from Index with Length
  5. Find Interval Between Dates

1. What is reusable workflow?

Reusable workflows are built on content types. And we can attach it to list where this content type is associated.

1. How do you deploy SPD workflow into SharePoint
2. Difference between event receivers and workflows
3. Type of workflow available in SharePoint
4. Difference between sequential workflow and parallel workflow.
5. What are the things required to improve the performance of the list workflow.

All about Nintex forms and Nintex workflows.

All about SharePoint migration

SharePoint 2016 and Apps model

**III**

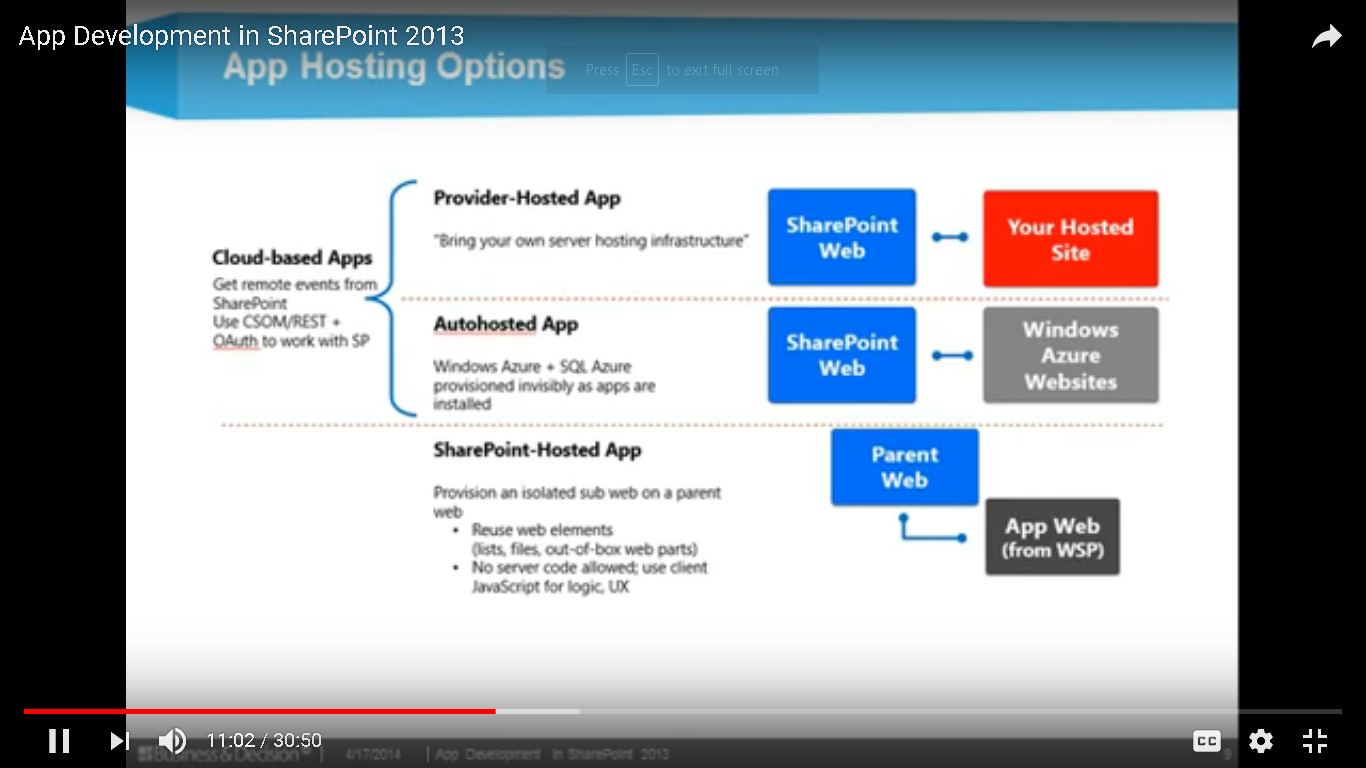
1. **Apps model**

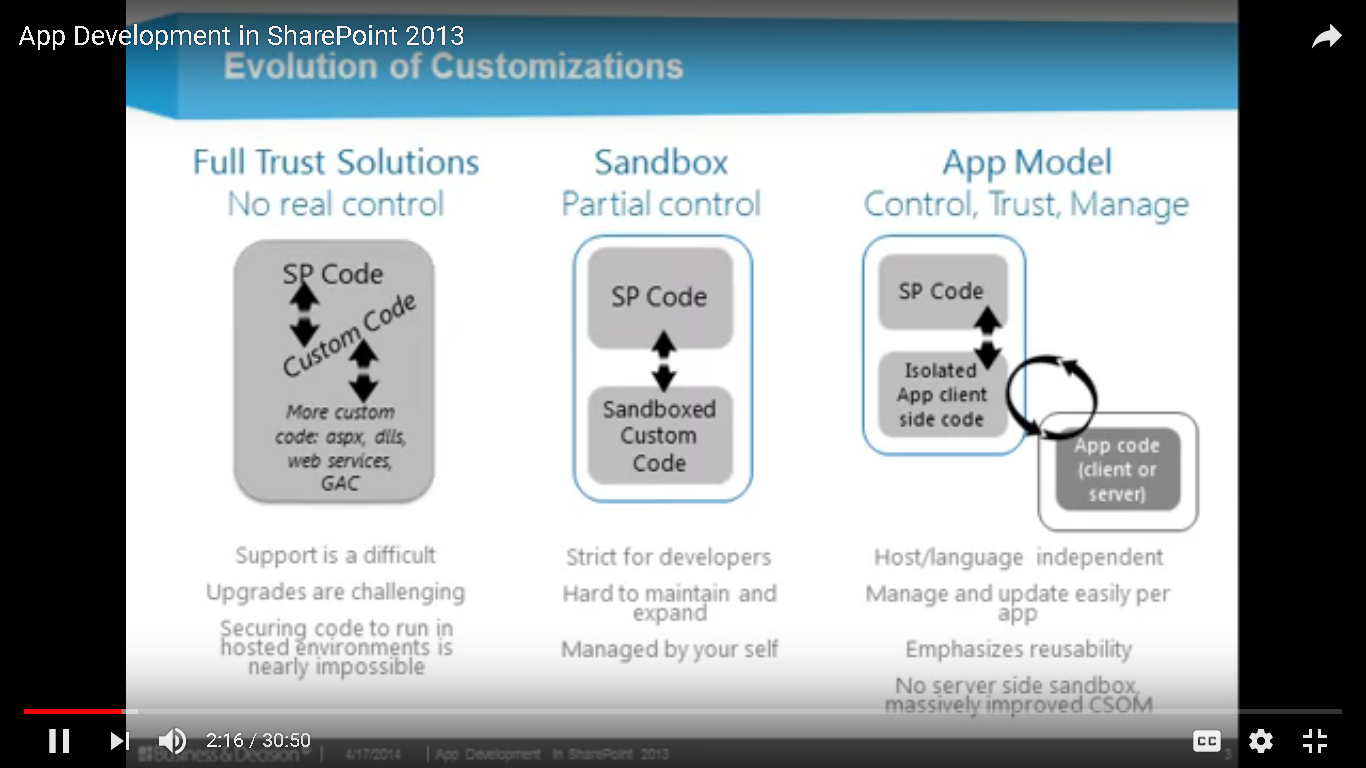
Total 2 types of apps available, SharePoint hosted apps and cloud hosted apps.

* **SharePoint-Hosted:**These types of apps are manifested within SharePoint generally without external dependencies. Any custom business logic implemented with custom code must run within the context of the browser client. Some examples of these types of Apps could be an expense calculator or holiday request. Each of these Apps may implement its own business logic using JavaScript, but they can also access and leverage SharePoint lists and libraries.

**Cloud hosted apps again two types.**

* **Provider-Hosted:**These types of apps may have a SharePoint component but the bulk of the business logic is manifested in some other infrastructure, such as an external Web server or in the cloud. These types of apps are a good option when integrating an existing event registration or help desk ticketing solutions within a SharePoint site.
* **Auto-Hosted:**These types of apps are similar to the Provider-Hosted Apps in that they have the bulk of their business logic and/or data storage manifested externally. What’s different with an Azure Auto-Hosted app is that the app package contains the website & database in the package. When the app is installed in a site, SharePoint handles the automatic provisioning of the database (as a SQL Azure database) and website (as an Azure hosted website) using an account that has been setup by the SharePoint farm/tenant administrator.





1. **Disadvantages of SharePoint app model**

The Apps infrastructure is very clunky and in some cases unrealistic to implement

A corporate catalog is paid or needs to be purchased

Apps will need to rely heavily on JavaScript and asynchronous REST API calls/client OM calls to interact with the associated SharePoint context

The new App model brings many more cross-server communications with it. This may impact performance.

1. **Which will executes first rules of the Nintex form or javascript code.**

Need to do test for this, adding alert kind of messages

1. **adding custom client-side rendering**

We can add custom client rendering to webpart for JSLink property, for list views, using list view webpart properties.

var customRenderingOverride = {};

customRenderingOverride.Templates = {};

customRenderingOverride.Templates.Fields = {

}

1. **Configuration of Search in SharePoint.**
2. **What is modern site/pages in SharePoint 2016**

In 2016, the "modern" page experience was released by the SharePoint team. Modern team site pages are fast, easy to author, and support rich multimedia content. Additionally, pages look great on any device, in a browser, or from within the SharePoint mobile app. +

SharePoint pages are built with web parts, which you can customize according to your needs. You can add documents, videos, images, site activities, Yammer feeds, and more. Just select the + sign and pick a web part from the toolbox to add content to your page. The new “highlighted content” web part lets you set criteria so that specific content automatically and dynamically populates in that area of the page. By using the SharePoint Framework, developers can build custom web parts that show up right in the toolbox.

**Supported customizations for "modern" pages**

The number of customizations available for "modern" pages keeps on growing, and in this article, we'll provide details and examples of the supported options. The SharePoint team is working to support more options in the future.

**The following list gives a quick overview of the supported capabilities for "modern" pages:**

Custom branding

Adding "modern" pages programmatically

Adding, deleting, and updating client-side web parts on "modern" pages

Alternative layouts (see note on SharePoint Virtual Summit)

**These customizations are currently not supported for "modern" pages:**

Adding "classic" web parts on "modern" pages

Custom CSS via AlternateCSSUrl web property

Custom JavaScript embedded via user custom actions (see note on SharePoint Framework Extensions)

Custom master pages (more extensive branding will be supported later using alternative options)

Minimal Download Strategy (MDS)

1. **What is Microsoft Flow**

Microsoft Flow is a cloud-based service that makes it practical and simple for line-of-business users to build workflows that automate time-consuming business tasks and processes across applications and services.

**How do Microsoft Flow and Logic Apps relate to each other?**

Microsoft Flow provides features that help line-of-business users create automated workflows. Logic Apps is an Azure service that provides the same great features of Microsoft Flow, plus features such as integration with Azure Resource Manager and the Azure Portal, PowerShell and xPlat CLI, Visual Studio, and additional connectors. Learn more about Logic Apps.

**How does Microsoft Flow fit in Microsoft’s overall business application platform strategy?**

Microsoft Flow is part of a powerful and adaptable business application platform that includes PowerApps, the Common Data Service, Dynamics 365, and Office 365. This platform allows our customers, our partners, and our ISV partners to create purpose-built solutions for their own companies, their industry, for functional roles or even for specific geographies. Line-of-business users, who understand their business needs best, can now easily analyze, compose, and streamline data and processes. Professional developers can easily extend the automation, analytics and apps line-of-business to leverage Azure services like Functions, App Service, and Logic Apps. API connectors, gateways and the Microsoft Common Data Service make it possible to get more value out of services or data already in use, either in the cloud or on-premises.

Debiyar Middle East:

1. What is feature stapling?

**Scenario:** I want a custom list to be created by default whenever a site is created using the Team Site template. The best way to do this is to create a Feature Stapling.   
  
**Feature Stapling:** Feature Stapling can be created for the site definition that is already in use. Feature Stapling has two features.

1. Stapler feature: staples another feature to the site definition
2. Staplee feature: that which will be stapled

**Steps involved**  
The following is the procedure steps to implement Feature Stapling in SharePoint:

1. Create Empty SharePoint Project
2. Create a feature
3. Create the feature stapler
4. Create FeatureAssociation.xml
5. Deploy the solution
6. Check whether the feature stapler is activated in a web application
7. Testing
8. What is feature SPSiteDataQuery?



Following are the core aspects involved:

SPSiteDataQuery: Server Object Model type to represent a CAML query. This class can be used to get data from selected lists or from all lists in the current site collection.

GetSiteData() is the method to be invoked passing the above object

1. Joins using CAML Query?

We can do only inner join with list using lists.

https://msdn.microsoft.com/en-us/library/ee539975(office.14).aspx

**CTS 04/07/2018:**

1. Is azure is Paas or Iaas ?

We can use it as a Paas and Iaas

1. What is the purpose of SharePoint Services?

SharePoint Server includes a set of service applications that you can use to share services across web applications. In some cases, you can also share service applications across farms. You can manage service applications by using the SharePoint Central Administration website or by using Windows PowerShell

<https://docs.microsoft.com/en-us/sharepoint/administration/service-application-management>

1. Difference between arrays and list in C#?

The following table lists the difference between Array and ArrayList in C#. Array is strongly typed. This means that an array can store only specific type of items\elements. ... Array stores fixed number of elements.

List is flexible.

| **Array** | **ArrayList** |
| --- | --- |
| Array is strongly typed. This means that an array can store only specific type of items\elements. | ArrayList can store any type of items\elements. |
| Array stores fixed number of elements. Size of an Array must be specified at the time of initialization. | ArrayList grows automatically and you don't need to specify size. |
| No need to cast elements of an array while retriving because it is strongly type and stores specific type of items only. | Items of ArrayList need to be cast to appropriate data type while retriving. |
| Use static helper class Array to perform different tasks on the array. | ArrayList itself includes various utility methods for various tasks. |

1. Best thing to use for customization JSOM or REST?

REST having end point to interact SharePoint objects and CRUD operations with them.

JSOM have its own SharePoint defined object for interacting with SharePoint server.

<http://www.andrewconnell.com/blog/sharepoint-2013-csom-vs.-rest-...-my-preference-and-why>

<https://www.c-sharpcorner.com/blogs/sharepoint-2013-net-server-csom-jsom-and-rest-api-index>

1. What is content type hub?

Content Type Hub is a centralized location where we manage and publish content types to other web applications.

* + 1. Content Type Hub is actually a Site Collection.
    2. Content Type is published and subscribed using the Managed Metadata Service application.

Content Type Hub – A wonderful concept which Microsoft introduced on the era of SharePoint 2010 itself. Let us see what it is, why we require that, and how to use that on this article.

What it is?

A Centralized site collection on which we will create all our site columns and Content Types and through the Managed Metadata Service Application, these Content Types can be used across our SPFarm. i.e., other site collections can use these content types.

Why we require this?

When we are dealing with more than one Site Collections, i.e., Preview, staging and actual site collections, we may require to create same content type on all of the a above mentioned site collections. To avoid that, we can create the content type on the Content Type Hub Site collection and we can use those content types across our required site collections.

The following is a summary of activities:

* + 1. Create Content Type Hub: Web Application and Site Collection
    2. Create Content Type under Site Collection
    3. Manage Metadata Service Application
    4. Manage Metadata Service Application Connection
    5. Publish Content Type
    6. Run Timer Jobs
    7. Refresh Subscribing Site Collection
    8. Ensure Content Type is visible

<http://www.sharepointpals.com/post/How-to-Use-Content-Type-Hub-in-SharePoint-2013>

1. What is the purpose of JSlink for JQuery SharePoint?
2. How do you increase the performance of the SharePoint site page?

Optimize page performance in SharePoint

* + 1. Minimal Download Strategy (MDS)
    2. Optimize page downloads
* Optimize HTML markup.
* Use consolidated images and files; for example, combine multiple CSS files into one. Combine images into an image strip or cluster.
* Verify that you are referencing the production version of common JavaScript libraries, such as jQuery, instead of the debug versions.
* Consider using a well-known content delivery network (CDN) such as the [Microsoft Ajax Content Delivery Network](http://www.asp.net/ajaxlibrary/cdn.ashx). The files required in your pages may already be cached by the client browser.
  + 1. Number and size of images
    2. List view pages
       - * Show only the strictly required columns.
         * If possible, exclude columns that include presence information.
* Use a link instead of an edit menu to view the item details.

1. What is sprint images concept in SharePoint
2. What are the component available for SharePoint Search and how do you configure search. What is search architecture?

<https://docs.microsoft.com/en-us/sharepoint/search/search-architecture-overview>

1. What is the architecture of SharePoint 2010 and 2013 and 2016?
2. How do you configure workflow manager for On premise SharePoint 2013

Install Workflow Manager 1.0 Using Web Platform Installer 4.6

All your workflows that were built by using SharePoint Server 2010 will continue to work in SharePoint Server 2013.

The SharePoint 2013 Workflow platform uses the new Workflow Manager Service. Workflow Manager is built on top of Windows Workflow Foundation. Windows Workflow Foundation is part of the .NET Framework 4.5.

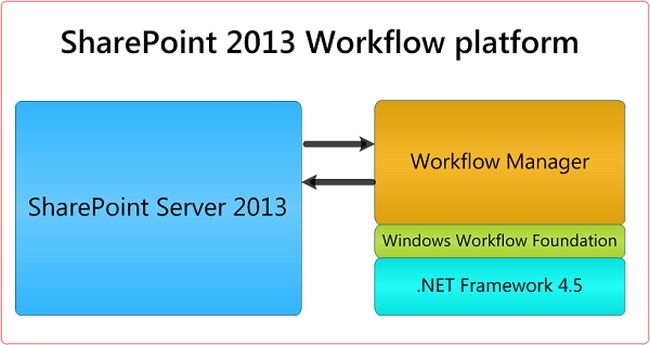
Note  
  
you can install Workflow Manager on the SharePoint Server itself or you can have separate environment for Workflow Manager and attach your SharePoint 2013 farm to the Workflow Manager farm

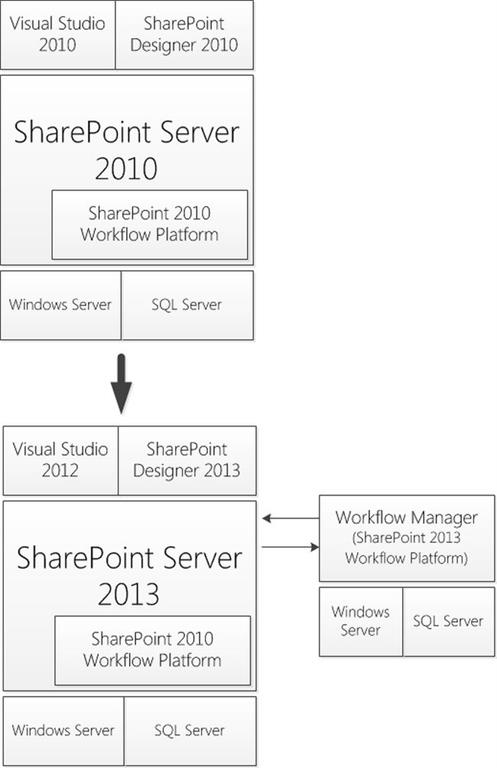
Prerequisites for Workflow Manager

If you want to install Workflow Manager 1.0, here are the pre-requisites:

* .NET Framework 4 Platform Update 3 or .NET Framework 4.5
* Service Bus 1.0
* Workflow Client 1.0
* PowerShell 3.0

Architectural changes in Workflow.





1. What are the differences between BCS and BDC?

BDC (Business Data Connectivity) is introduced in SP 2007, with this we can only read data from external data sources.

BCS (Business Connectivity Services) is introduced in SP 2010, using this read/write operations can be done on external data sources.

1. What is an external content type?

The external content type is a core concept of Business Connectivity Services (BCS). Used throughout the functionality and services offered by BCS, external content types are reusable metadata descriptions of connectivity information and data definitions plus the behaviors you want to apply to a certain category of external data.

Prerequisites for working with BCS external content types

To get started creating external content types, you will need the following:

SharePoint

Visual Studio 2012

Office Developer Tools for Visual Studio 2012 or

SharePoint Designer 2013

What can you do with external content types?

External lists

External Data Columns

Custom pages and applications

1. How to configure BCS for online SharePoint?

Using azure host connector.

Limitations of BCS for online SharePoint?

* There are no profile pages for external content types
* There is no offline availability or rich client integration
* There is no search integration.

1. How do you deploy wsp with one power shell command?

SP-Update solution.

C:\PS>Update-SPSolution -Identity contoso\_solution.wsp -LiteralPath c:\contoso\_solution\_v2.wsp -GACDeployment

1. What is Power BI and uses of it.

These are advance for InfoPath forms.

1. What are advantages of Nintex workflows on SharePoint designer workflows?
2. What is SharePoint Framework? How to use it.