Windows Azure Cloud Computing platform

Technology Partner Selection Guide

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Overview

There has always been a constant need for organizations to improve operational efficiency to keep pace with the market dynamics. To maintain their lead over the competition, organizations have been looking out for advanced technological options that will help them in focusing on the core business rather than IT.

Cloud computing technology is one of the technologies gaining momentum and industry attention, influencing business decisions and acting as a game changer. Microsoft has come up with "Windows Azure" a cloud computing platform which is acting as a principle element in achieving non-linear growth for most of the organisations that are facing challenges like scalability, elasticity, high availability and other technology needs.

In the world of ever-evolving technologies organizations take help from technology partners to rapidly adopt and implement new technology.

The technology partner provides services to analyze the current state of the technology, infrastructure, and applications versus the need for a more futuristic perspective for the organization. Also, they help in resolving technology related issues which are directly or indirectly impacting business objectives. Hence, it becomes important to select the right service partner who is qualified and able to deliver the benefits of technology.

This white paper provides detailed guidance to decision makers (company CIOs, CTOs, IT Directors, middle management, technical architects etc.) in the areas of selecting a technology partner for Microsoft Windows Azure – Cloud computing platform. The white paper also talks about some key points that need to be taken into consideration before deciding upon a technology partner.

This paper is divided into several sections that can help the reader during the selection process of a qualified technology partner. Some of the information may not be applicable in certain cases; however, the aim is to equip decision makers with all possible scenarios. The section ahead starts with the service offerings by partner and related considerations.

Your cloud technology partner should have the following minimal service offerings –

Assessment Services

Many organizations are keen to leverage cloud computing by looking at the green side of it, but before they jump onto the bandwagon, they need a thorough assessment on -

○ Which applications are better suited for the platform?
○ What kinds of changes are required to make the applications compatible on this platform?
○ How is development effort required to retrofit?
○ What will be the cost of hosting?
○ How much will be the Return-on-Investment (ROI)?
○ How will new projects benefit from using the cloud platform?
○ What cloud architecture to adopt to make future projects cost effective?
○ What are the risk factors involved for new or migrated applications to be on cloud?
○ What are the additional security policies to be considered?
○ How to ensure data availability?
○ How to plan for disaster recovery?
○ How is communication with on-premise applications established?
○ How will the failover handling be implemented?
○ How will the integration with other systems (such as ERP) be done?

This assessment will help organisations to get an idea of (the time and efforts) involved in getting their existing or upcoming applications on to this platform.

In order to come up with real assessment the cloud partner should also have the ability to perform necessary Proof-Of-Concepts (POC) which will demonstrate the real time feasibility. A full-fledged lab setup with Windows Azure Tools will help to perform quick tests and experiments to validate the assumptions and to come to conclusions.

- Cost effective and futuristic Architecture
- Total Cost of Ownership (TCO)
- Return on Investment, Break even
- Risk Factors
- Technical Considerations
- Security Considerations
- Near accurate Effort estimations

Migration Services

Migration to the cloud platform needs special knowledge as compared to new development using latest frameworks. To perform migration you need expertise in mapping legacy technologies / frameworks used in existing application can be mapped to the cloud based architecture. Migration involves following major phases which can be carried out in parallel or sequentially depending upon the nature of applications –

1. Application Technology Migration –

This caters to all code/architectural changes in the application. Special attention should be given to areas like State Management, Security, Authentication, Session management, use of local file systems storage, application monitoring, components which need to be installed using installers, ActiveX controls needing registration, event logging, database access methodology, mission critical data, ingress/outgoing data transfer, transaction processing, on-premise data/ application access, OLAP/OLTP, and Reporting applications.

Prior hands on experience in migrating ASP to ASP.NET, VB to VB.NET would be an added advantage for technology partners to move unmanaged applications to a managed environment.

2. Database Objects and Data Migration -

To enjoy the true benefits of cloud computing your data needs to be deployed in the cloud. This includes understanding existing database, schema, RDBMS features used in developing business logic/reporting purposes. All this may or may not be fully compliant in cloud based databases like SQL Azure. Partner should be able to handle such schema conversions, carry out database feature comparisons and finally perform data migration. There are several tools readily available which will help expedite data transfer from an on-premises database to a cloud database.

2.1. Data Synchronization -

2.1. Data Synchronization - Migration/development may need data to be synchronized between different data sources.Data sources may be on cloud or on-premises. Better understanding of synchronization techniques are required so that proper database schema changes can be done or tools/ frameworks can be selected. 'SQL Azure Data Sync' enables creating and scheduling regular synchronizations between SQL Azure and either SQL Server or other SQL Azure databases. Having an understanding of 'Microsoft Sync framework' will be a value addition.

SQL Azure Data Sync Scenarios:
- Cloud to cloud synchronization
- Enterprise (on-premises) to cloud
- Cloud to on-premises
- Bi-directional or sync-to-hub or sync - from-hub synchronization

2.2. Data Reporting -

Data has no meaning unless it is utilized. Reporting is an integral part of any application irrespective of where it is deployed (on cloud or on-premises). SQL Azure Reporting is a flexible and cost effective cloud based reporting capability that allows organisations to develop and rapidly deploy reports that deliver insights to business users. A partner with relevant experience in other reporting engines like Crystal repor SQL Server Reporting Services will help expedite learning Azure based reporting techniques.

> "Combined with the SQL Azure Data Sync, SQL Azure Reporting enables new hybrid IT scenarios - for example, customers can schedule automatic synchronization of on-premises databases with SQL Azure, and then deploy cloud-based BI reports based on the synchronized cloud-based data sources."

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2.3. Content / Data Delivery Network(CDN) –

To reap the real benefits like performance, user experience and reliability in accessing data, your data should be closer to the end users. Windows Azure CDN allows you to place data closer to the user (multiple locations across the globe) resulting in better user experience, reduced internet trips, and enables handling of high load conditions. Applications needing smooth audio/video streaming can be implemented using CDN. The partner should have some experience in this area too.

> **"Located in the United States, Europe, Asia, Australia and South America, the Windows Azure CDN offers users a global solution for delivering high-bandwidth content."**

3. Integration with On-Premises systems

Applications rarely accomplish functionality without interfacing with other enterprise applications. Thus it is imperative to have a robust integration solution that makes deployment to the cloud a seamless activity.

Development

Fresh development and legacy application modernization is a golden opportunity for all the stakeholders, including the organization and technology partner, wherein, the best and the latest tools & languages can be adopted to satisfy business needs.

The following considerations can help you identify the best solution with longer endorsement.

- Follow best practices of Windows Azure development
- Be aware of the latest tools and utilities available in market to leverage out of the box functionalities
- Have multiple approaches to implement the business requirements so that a Cost vs. Performance vs. Security comparison can be done
- Explore the best data storage options and retrieval patterns available to meet business requirements
- Keep an eye on Community Technology Preview (CTP)/RTM (Release to Manufacturing) by Microsoft to be a forerunner in using new Azure features

Support and Maintenance

The key to having a successful Azure partner is their support and maintenance services strengths, which includes -

- Monitoring applications and services deployed in the cloud
- Monitoring and analyzing log files, event logs, performance counters, email alerts
- Having tools for online monitoring of CPU, Memory, and Storage resources on Azure roles usage at run-time
- A mechanism in place to dynamically increase or decrease the number of application instances basis overall application load
- Deployment to staging and production environments in case of defect fixes or enhancements
- A good issue/ defect tracking system along with automated testing tools to speed up issue resolutions
- Toolsets for troubleshooting purposes

Technology Coverage

Technology plays a crucial role in cloud computing. Typical scenarios like a cloud deployed application communicating with few on-premise services, building high performance applications for variable load, UI rich applications, content driven websites etc. will need better understanding of available options to apply appropriate techniques.

When choosing a partner sufficient care must be taken to look at their technical expertise. A cloud computing platform like Windows Azure has wide choices in terms of different development languages such as –

- Microsoft .Net (C#, VB.NET, WF, WPF, WCF, LightSwitch)
- Web technologies (ASP.NET, MVC, Silverlight, AJAX, JavaScript etc.)
- Windows Azure Platform SDK, Azure AppFabric SDK, SQL Azure, SQL Azure Reporting Services, SQL Azure Data Sync, Sync Framework etc.
- Java

- PHP
- BizTalk Server with integration adapters
- SharePoint and Azure Experience
- Experience in developing applications of Mobile and devices
- Design experience on Service oriented applications
- Ruby and Rails, Python

Windows Azure has been commercially available for more than a year now. Many open source frameworks and applications are available for use on this platform. Partner should have in-depth knowledge about such frameworks and tools so that it will result in expediting design, and development processes by leveraging open source code.

Microsoft .Net framework Experience

Microsoft .Net programming experience is essential to reap the benefits of the Azure platform. Various Microsoft languages(C#,VB.NET), frameworks, distributed programming experience(WCF), interoperability, client side programming, rich internet applications, RIA services, RESTful services, third party user controls etc. are inevitable for development/migration activities.

SharePoint 2010

When you build applications using Office or SharePoint you'll be prepared to deploy your line-of-business applications on-premises, in partner-hosted facilities or in Microsoft's own data centres. Moreover SharePoint have the potential to leverage Windows Azure services to help reduce IT-related cost, freeing up time and capital expenditure.

In a nutshell, the partner should have skills in leveraging Windows Azure features with SharePoint applications. Below are some of the major integration areas which need to be evaluated in terms of experience and/or knowledge.

"One can think of SharePoint and Azure combination to achieve Reach, Resource and Reusability"

Points of Integration	How?
SP COM	Interact with Azure data in a list
BCS	Model data from Azure or build external list in SQL Azure
Silverlight	Create UI against Azure services or data
Sandboxed Solutions/SP Online	Silverlight application leveraging Azure deployed to site collection
Office Custom Client	Consume data directly from Azure or BCS list exposing Azure data
Standard/VisualWeb Parts	Leverage services and data from Azure
Open XML	Manage Azure data into a document
REST	Use REST to interact with Azure data to integrate with SP artifacts
Office Server Services	Combine with OO to auto-gen docs (e.g. PDFs) on server
Workflow/Event Receivers	State or events that tie into Azure services or data
LINQ	Use for querying Azure data objects
Search	Federate search to include Azure data
WCF	Calling WCF deployed in Azure from SharePoint (on-premise

Middleware services

Windows Azure AppFabric provides pre-built, middleware services that raise the level of abstraction and reduce the complexity of cloud deployment. These services are open and interoperable across languages (.NET, Java, PHP) and give developers a powerful pre-built 'class-library' for development. Experience in using Service Bus, Access Control and caching services is desirable.

Integration

A partner should be well-versed with products like BizTalk Server for integration implementation. Microsoft is yet to release 'Integration component' as part of AppFabric Middleware services. BizTalk Server running on-premises can solve the purpose. If a partner has any other integration offering or product, that is a bonus.

If a partner has any solution offering with the capability to integrate with legacy systems or ERPs/products like JD Edwards, SAP, Oracle E-biz, APRISO, APRIMO should be given more preference as that will reduce the risk and cost of integration.

Java , PHP

If the applications are developed in Java and PHP programming languages, then these applications can be deployed on Windows Azure. Microsoft provides tools to write, debug, configure and deploy Java and PHP applications on Windows Azure.

Windows Phone 7

Toolkits are available for Windows 7 Phone mobile applications that leverage cloud services running in Windows Azure. The partner is expected to have experience in leveraging it.

iOS

Windows Azure Toolkit for iOS provides an easy and convenient way of accessing Windows Azure storage from iOS based applications.

Database

An in-depth understanding of SQL Azure database and feature comparison with SQL Server is required.

SQL Azure Migration Assistant

Toolkit to handle the complex manual process of migrating databases.

SQL Server Integration Services

Experience in database sharding, synchronization, reporting and SQL Azure Federation would add value in the partners services.

Virtual Network

Organisations seldom need virtual network setup between Azure virtual machines with local network; this is needed for monitoring application instances, downloading log or data.

Business Intelligence

Partner having BI practice should be given preference. This will add value in terms of tools experience, reporting, different data structure understanding like WORD, EXCEL, PDF, and ATOM feeds etc. The partner should also be well versed with Azure based reporting services

Other Products

Experience on other Products like Umbraco, DotNetNuke and NopCommerce can help partners to deploy these on Windows Azure as Microsoft has released accelerators for such products.

VM Role

For applications with special needs that cannot be run on standard Web role or Worker Role, will need VM Role expertise to deploy application on Azure.

Online Services experience

A partner involved in the development of Microsoft online services like SharePoint Online, Exchange Online, and Office Online should be preferred

Private Cloud Capabilities (IaaS)

In cases where public hosting of data/services is not feasible because of data sensitivity in sectors like finance, banking, and military etc. private hosting becomes a more viable option. To provide private cloud services the technology partner needs capabilities on the tools mentioned below:

- **Virtualization experience using:**

  - Microsoft Windows Server Hyper V to virtualize and System Centre Virtual Machine Manager - to manage the complete
  - life cycle for your virtual instances
  - Microsoft Assessment and Planning (MAP) Toolkit – to gain full details on your existing databases
  - Microsoft Consolidation Planning Tool for SQL Server – to help database architects plan their consolidation efforts
  - SQL Server Migration Assistant Tool – to help automate the migration process from non-SQL to SQL Server
  - Windows Server Hyper-V and Live Migration – to upgrade host with minimum downtime
  - System Center Virtual Machine Manager and System Center Operations Manager - Management Packs to manage your
  - Private Cloud end to end
  - Microsoft System Center Virtual Machine Manager Self-Service Portal
  - Microsoft System Center Operations Manager 2007 R2
  - Microsoft System Center Configuration Manager 2007 R3
  - Microsoft System Center Data Protection Manager 2010

- **Knowledge in optimizing SQL Server database for private cloud (see Microsoft Private Cloud Help for more info),Microsoft has released guidance on optimizing SQL Server instances to gain the full benefits of Private Cloud.**

- **Microsoft and HP announced the new reference architecture that allows customers to gain the full benefits of a Private Cloud.**

Since this whitepaper is specific to Microsoft cloud computing partner selection, we will not discuss the tools and techniques to build private cloud using Linux based systems here, however, any experience in that area will be an added advantage.

Domain Expertise

For any IT project to be successful and profitable for the organization, it is very important for all stake holders to be in-sync. They should be well versed with business or domain knowledge. Technology partner should have prior experience in related domains so that the business transition can happen smoothly. Experienced technology partner can participate and add value to every project activity.

Below are some of the domain areas:

- Insurance
- Education
- Point of Sale, Retail
- Banking and Finance

- Automobiles
- Insurance
- HealthCare
- Supply chain

- Manufacturing
- Retail and distribution
- Distribution and transport management
- Print, Web-to-Print

- Oil and Gas
- Ecommerce
- Energy utilities

It is mostly observed that companies who are in the ERP sectors possess a good amount of knowledge and experience in such top domain areas.

People

People are the core asset of any IT development. Having the right people on the project at the right phase/time will ensure quality outcomes. Every team member involved will have some contribution in making cloud computing projects successful.

So it is necessary to check if -

- The involved professionals are experienced in cloud computing platform
- The task force has Technology Certified Professionals for e.g. Windows Azure certified professional will have better a understanding of the platform
- The Partner organization is involved in community contribution. This can be verified through the company's website/s, their white papers, or case studies, etc.

Windows Azure is a new platform, partners might not have real project experience but they should at least have completed internal projects, product development, trial projects or proof-of-concepts.

Alignment with Principal

Microsoft Technical support

The only risk that organizations may face in opting for Windows Azure platform is the technology challenges. Since Windows Azure is an evolving platform there might be cases where you will need to take help of Microsoft for specific advanced technical implementations. In such cases, turnaround time for such requests should be quick, and this can be achieved by using the services below that are available as part of Microsoft Partner program.

This risk can be mitigated by availing below options

- Microsoft Technical Support Services
- Microsoft Advisory Services, consulting services
- Training by Microsoft

Microsoft Partner Competencies

Another way of checking partner alignment with Microsoft is their certifications (Gold/Silver) in regards to different Microsoft Partner Network competencies. 'Software Development', 'Web Development', 'Application integration' competencies are more relevant to Azure development work and should be considered with more weight.

Microsoft Cloud Partner Program

Microsoft has launched Cloud Partner Program which contains two level classifications of cloud competencies as 'Cloud Essentials' and 'Cloud Accelerate' programs. A Partner company should have enrolled for at least the 'Cloud Essentials' Pack.

Customer Reference

If a partner has a customer reference, then qualification will become easy. This will give you a better idea of the type of work done earlier and the work methodology they follow. It helps in knowing about partner's strengths and weaknesses.

Some partner companies might have developed small products for selling them through Microsoft Windows Azure Marketplace (Application Market or Data Market). (The Windows Azure Marketplace is a global online market for customers and partners to share, buy, and sell finished SaaS applications and premium datasets.) Such a partner should be given preference as they have with them the experience in developing finished products.

"One satisfied customer is worth thousand advertisements"

Organizations involved in software product development, experience in SaaS architecture should be considered as an additional advantage, since products being developed on cloud would follow the SaaS model.

Processes and Maturity

One should check if the partner has -

○ Industry accepted standards adoption compliance certifications like CMMi Level3 or above, ISO 9001.

○ Experience in development methodologies - Waterfall, iterative waterfall, Scrum.

○ Accelerators for Technology migration, data migration, application monitoring, Azure hosting cost calculator etc.

○ Best practices/ Guidelines -

  - Security(OWASP)

  - Performance

  - Code review

  - Architecture review

   - Azure Capacity planning

  - Azure cost effective coding

  - Migration

  - Support

○ Tools knowledge - Windows Azure related

Tools	Details
Windows Azure Monitoring Management Pack	Enables you to monitor the availability and performance of applications that are running on Windows Azure.
CloudXplorer from clumfsyleaf	CloudXplorer is a rich UI client for browsing Windows Azure blob storage.
Windows Azure Storage Explorer	Useful GUI tool for inspecting and altering the data in your Windows Azure Storage projects including the logs.
Windows Traffic manager	Provides several methods of distributing internet traffic among two or more hosted services.
Sqlcmd utility	Connect to Microsoft SQL Azure Database with the sqlcmd command prompt utility, lets you enter Transact-SQL statements, system procedures, and script files at the command prompt.

The bcp utility	The bcp utility bulk copies data between an instance of Microsoft SQL Server and a data file in a user-specified format.
SQL Azure Reporting	The Customer Technology Preview of SQL Azure Reporting is also available. Microsoft SQL Azure Reporting is a cloud-based reporting service built on top of SQL Azure Database.
Data –tier applications	Data-tier applications (DACs) are introduced to help developers and database administrators to package schemas and objects into a single entity called DAC package.
Cerebrata Cloud Studio	Windows (WPF) based client for managing Windows Azure Storage.
Windows (WPF) based client for managing Windows Azure Storage.	The utility will perform a series of data-upload and download tests using sample data and collect measurements of throughput, which are displayed at the end of the test, along with other statistics.
SpaceBlock File transfer utility	SpaceBook is a simple Windows front-end for managing Amazon S3, Nirvanix, Azure Blob Storage, and now Sun Cloud Object Storage online service accounts.
AzureWatch utility	AzureWatch aggregates and analyzes performance counters, queue lengths, and other metrics and matches that data against user-defined rules.
FTP to Azure Blob Storage Bridge	Azure Blob Storage Bridge creates an FTP server that can accept connections from all popular FTP clients (for example FileZilla) for command and control of your blob storage account.

Please visit Windows Azure Tools site for more details

○ Microsoft Centre of Excellence (COE) group
   - A team dedicated to Center of Excellence activities is necessary to track developments in technology, research problems in advance and develop solutions. A partner with such practices should be given more preferences as they will have the technical maturity and ability to mitigate technology related risks.

Work Model

A Partner should have -

Onsite offshore work model

○ Onsite - Offshore work model is the most flexible and cost effective development model

○ It provides lot of options in terms of flexibility in resourcing, achieving elasticity by allocating resources on demand and meeting business objectives

Support model (24x7)

○ Application support and maintenance is an ongoing activity

○ Having 24x7 support for critical application is desirable; alternatively 24x5 or 16x5 are sufficient

○ Ability to scale up L1, L2, and L3 support levels

○ Formally signed SLAs in advance

Table below shows the basic structure needed for support activities

Support Assurance	→	24x7 Support Assurance
Support Model	→	Onshore - Offshore Support Model
Microsoft Relationship	→	Microsoft Technical Support Services
Tools	→	Advanced Troubleshooting Tools
Tracking System	→	Online Issue Tracking System
Change Control	→	Change Management System
Release Management	→	Release Management System
SLA Model	→	Flexible SLA Model

Engagement Framework: Bigger projects need better co-ordination, collaboration, and governance model. A partnershould have mature engagement model to sustain the competition, critical business demands and achieve elasticity and flexibility.

Last but not the least; to sum up the white paper here is the Selection Matrix which will help in rating the technology partners as per their competencies.

Selection Matrix

Overall, organizations must take measured steps as they plan to realize the benefits of this paradigm shift. A qualification matrix has been created below to help in recording findings during the selection process. A comparative report thus will enable an organization to clearly identify the suitable partner for implementing the cloud strategy in the long haul.

Service Offerings

	Available? (Y/N)	Rating (1-5)	Partner Notes	Help
Assessment Services				
Migration Services				
Development Services				
Support, Maintenance				
Azure Test Lab to validate assumptions				
Other Microsoft Technology Migration Experience				VB toVB.NET, ASP to ASP.NET
Application Technology Migration				
Data Migration				SQL and non SQL data sources
Data Synchronisation				
Data Reporting				Crystal Report, SSRS
Other				

Technology Coverage

	Available? (Y/N)	Rating (1-5)	Partner Notes	Help
Microsoft .Net Framework Experience				
Azure development SDK and Middleware Services				
SharePoint 2010				
Integration experience with ERP(JDE, SAP, Oracle EBiz)				BizTalk Server, custom tool etc.
Integration with Legacy Systems				Using product or custom code
Database				SQL , non SQL
Java				
PHP				
Windows Phone 7				
iOS				
VM Role				
Virtual Network				Azure Connect
Business Intelligence				
Microsoft Online Services Experience				
Other Products				
SAS architecting Experience				
In-house integration Product				
Other				

People

	Available? (Y/N)	Rating (1-5)	Partner Notes	Help
Azure Experienced Professionals				
Azure Certified Professionals				
Community Contribution				
POC's experience				
Other				

Work Model

	Available? (Y/N)	Rating (1-5)	Partner Notes	Help
Onsite-Offshore model				
Well Defined Support Model				
24x7 Support				
L1,L2,L3 support base				
SLA agreements				
Engagement Framework				
Other				

Private cloud Capabilities

	Available? (Y/N)	Rating (1-5)	Partner Notes	Help
Virtualisation Experience				In house/ for customer
Microsoft System Centre Tools Knowledge				
SQL Server optimization for Private Cloud				
Microsoft HP reference Architecture knowledge				
Linux based Private cloud Experience				In house/ for customer
Other				

Domain Expertise

	Available? (Y/N)	Rating (1-5)	Partner Notes	Help
Oil and Gas				
Manufacturing				
Retail and Distribution				
Print, Web-to-Print				
Energy Utilities				
Ecommerce				
Supply Chain				
Distribution and Management				
Point of Sale, Retail				
Insurance				
Automobiles				
Banking and Finance				
HealthCare				
Education				
Other				

Alignment with Principal

	Available? (Y/N)	Rating (1-5)	Partner Notes	Help
Microsoft Partner Network Competencies(Gold/Silver)				
Microsoft Cloud Partner Program				
Microsoft Technical Support				
Other				

Processes and Maturity

	Available? (Y/N)	Rating (1-5)	Partner Notes	Help
Process Maturity (CMM/ISO/others)				
Whole Project Life cycle experience				
In-house Accelerators				
Best Practices and Guidelines Windows Azure Tools Knowledge				
Microsoft Center of Excellence Team				
Other				

Customer Reference

	Available? (Y/N)	Rating (1-5)	Partner Notes	Help
Reference- able Customers				
Windows Azure Marketplace Presence				
Other				

About KPIT

KPIT is an industry-focused partner to global manufacturing, distribution, automotive, and oil-and-gas companies. KPIT provides world-class Oracle JD Edwards and Microsoft technology solutions having extensive and diverse expertise on various tools, technologies and framework offerings. KPIT maintains a successful track record of delivering Development Projects, Engagements, and Product Development, Application Support. KPIT started its foray in Windows Azure cloud computing in 2009 helping customers develop applications on this platform. KPIT has strong capabilities on Windows Azure platform having conducted several Proof-of Concept exercises, Assessments and Projects. KPIT is Microsoft Gold certified partner with Cloud essential partner status.

Glossary

ROI - Return on Investment

POC - Proof of concept

TCO - Total cost of ownership

ActiveX - ActiveX is a framework for defining reusable software components in a programming language-independent way

OLAP - Online Analytical Processing

OLTP - Online Transaction Processing

ASP - Active Server Pages

VB - Visual Basic

SSRS - SQL Server Reporting Services

Crystal Report - A Reporting product

CDN - Content Delivery Networon

CTP - Community Technology Preview

RTM - Release to Manufacturing

CMM - Capability Maturity Model

WF - Windows Workflow foundation

WPF - Windows Presentation Foundation

WCF - Windows Communication Foundation

RIA - Rich Internet Applications

BCS - Business connectivity Services

SP - SharePoint

BI - Business Intelligence

OWASP-Open web application security Project

REST - Representational State Transfer

LINQ - Language integrated Query

Sharding - A database shard is a horizontal partition in a database

ATOM - Atom syndication Format

ERP-Enterprise Resource planning

SaaS - Software as a Service

IaaS - Infrastructure as a Service

COE - Centre of Excellence

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Cloud Partner Program -

http://www.microsoftcloudpartner.com/

Windows Azure MarketPlace -

https://marketplace.windowsazure.com/

Windows Azure Tools -

http://laxmikantpatil.com/2011/10/14/windowsazure-utilities-tools/

Microsoft HP Consolidation Appliance white paper Aug 2011 -

http://www.microsoft.com/sqlserver/en/us/solutions-technologies/cloud-computing/private-cloud.aspx

Microsoft Office 365 Launch kit -

https://partner.microsoft.com/uk/40163302

SharePoint - Azure Training Kit -

http://www.microsoft.com/download/en/details.aspx?id=24398)

Microsoft Private Cloud -

http://www.microsoft.com/en-us/server-cloud/private-cloud/default.aspx