Microsoft Products Layered Architecture Blueprint (All-Up View)

Microsoft

Tools: MSDN, Patterns & Practices, TechNet & Microsoft IT Showcase; Robotics Developer Studio; IIS Express; LightSwitch; SketchFlow; Visual Studio 2010; Expression Studio; Report Manager; Report Builder; BI Visual Development Studio; InfoPath Designer 2010; SharePoint Designer 2010; SharePoint Workspace 2010

Build Process | Development Process | Team Foundation Server 2010 | Project Management | Team Development

Presentation Layer

Desktops / Laptop / Netbook / Slate
- Smart Client Applications: Duet Enterprise Clients; Office 2010; Microsoft Security Essentials; .NET 4.0 & SQL Server 2008 R2
- Web Applications/Portals: IE9 & XPS; Office 365 Client; Bing & Windows Live; XHTML, HTML5, Silverlight 4.0
- Windows 7

Mobile
- Native Mobile App: Office Mobile 2010; Silverlight 4.0; .NET Compact Framework 4.0; SQL Server 3.5 Compact
- Web App/Portals: Office 365 Client; CHTML, XHTML,HTML3.2, WAP/WML; ASP.NET, Ajax, jQuery, JS, HTML5
- Windows Phone 7.x/Windows Mobile 6.x

Embedded devices
- Native Apps: Silverlight; .NET compact Framework 4.0; SQL Server 3.5 Compact
- Web Applications/Portals: Office 365 Client; HTML5, CHTML, XHTML,HTML3.2, WAP/WML; ASP.NET, Ajax, jQuery
- Windows Embedded (Auto PC, Blue&Me, etc)

Surface
- Native Applications; Surface Controls; Surface Toolkit; .NET Framework 4.0; Surface SDK
- Microsoft Surface 2.0

Microsoft Robotics
- Robotics Apps: Visual Programming Language (VPL), Visual Simulation Environment (VSE), Concurrency and Coordination Runtime (CCR)
- Windows 7

Microsoft Hardware
- Microsoft Signature; Windows Phone7; xBox 360 & Kinect; Keyboard & Mice; Webcams; Headsets

MSN & Windows Live
- Windows Live Hotmail, Mesh, Messenger, Movie Maker, Photo Gallery, SkyDrive, Games
- Bing Search, Maps, Translator, Shopping, Travel, Images (PhotoSynth)
- Microsoft AdCenter; Worldwide Telescope; Xbox Live; Microsoft My Phone; Microsoft Tag

Line of Business Services

Ax Dynamics 2009 (ERP)
- Finance Management; Sales & Marketing; Service Management
- Production Management; Supply Chain Management; BI & Reporting
- HR Management; Project Management & Accounting

Ax Dynamics for Retail
- Store Systems; Logistics; Marketing
- Merchandising; POS Client Framework

Dynamics CRM 2011
- Customer Service; Marketing; Customer Care Accelerator (CCA)
- Sales Force Automation; CRM Connector for AX
- xRM Framework

Amalga
- Quality Measures Manager, Research, Imaging
- Identity Mgmt; SSO
- Proximity cards
- Clinical Workstation

Dynamics CRM Online: Marketing & Customer Service; Sales Force Automation

HealthVault Community Connect: Family Health Mgmt & Devices

Bing Maps for Enterprise: Geocoding, Web Services, Pushpin, etc.

Windows Azure Marketplace: ISV Apps; Data Market

Application Services

Project Server 2010: Project Management; Portfolio Management; Reporting & Analytics

Commerce Server 2009 R2: Catalog Management; Multi-channel Commerce; Order Management; Profile Management; Payment Gateway Integration; Campaign Management

SharePoint Server 2010
- Duet Enterprise Clients; Document Management; Collaboration; Single Sign On; Web 2.0
- Business Intelligence: Scorecards, BI Dashboards, Reports; Excel Services; Visio Services; Access Services; PowerPivot for SharePoint 2010; Reporting Services for SharePoint 2010; Performance Point Services
- Web Parts; Web UI Framework; Workflow Services
- Web Content Management; Office Web Applications; Enterprise Search; Composite Applications; InfoPath Forms Services

FAST for SharePoint 2010: Enterprise Search

FAST for Internet Search: Internet Search

Office 365
- Exchange Online: Outlook, Mobile email, Archiving & Compliance
- Office Web Applications: Office Professional Plus/Web Apps/Mobile, & Co-Authoring
- SharePoint Online: My Sites, Doc collaboration, Team & Project Sites
- Lync Online: IM, Presence, video & audio calls & Online meetings

Integration Services

BizTalk Server 2010
- Business Process Management; Messaging, Transformation; EDI; AppFabric Connect Integration
- Workflow, Rules Engine; Single Sign On; RFID; ESB Tool kit 2.0
- LOB Adaptors (SAP, Oracle, PeopleSoft, etc); Business Activity Monitoring; Accelerators (HL7, SWIFT, etc)
- Azure AppFabric Connect Integration; Host Integration Server

LOB Integration: Business Data Connectivity Services

Communication & Workflow Foundation 4.0: Web Services & SOA Framework; Workflow Engine; Messaging Queues (MSMG 5.0); Rule Engine

Web Apps (ASP.NET 4.0): Silverlight 4.0; Web Forms; jQuery; MVC 3.0; AJAX

Native Apps: WinForms; WPF; Silverlight

Data Apps: Entity Fx; ADO.NET; LINQ

Windows Server AppFabric: Hosting Services; Caching Services

Core: CLR; IO; Parallel Computing; Socket; Cryptography; Threading; Security, ...

Platform Services (.NET Framework 4.0)

Native Apps: DirectX SDK; COM/DCOM; Visual C++ API's; Windows SDK; Win32/64 API

Win32/Win64

Windows Azure
- AppFabric: Service Bus; Messaging; Caching; Integration; Composite App (Workflow, Web Services); AppFabric Management
- AppFabric Container: Multi-tenancy; Composition Runtime; State Management; Scale-out & High Availability

Data Services

Parallel Data Warehouse: *Parallel Processing*

Fast Track Data Warehouse 3.0 Appliance; *HP Business Decision Appliance*

Data Mining: Predictive Analysis; Segmentation Analysis; Statistical Analysis

Reporting Services; Cubes, Analytics (Analysis Services)

Data Warehouse

ETL (Integration Services)

SQL Server 2008 R2

Database Engine
- Real-time Event Processing; Application Deployment (DAC); Multi-Server Mgmt; Master Data Mgmt
- Spatial Data; XML; FileStream; High Availability; Encryption; Compression; Core DB Engine

SQL Azure
- Reporting; Data Sync; Import and Export
- Spatial Data; Multi-Tenant
- WCF Data Services/Entity Framework/ADO.NET/ODBC
- Cloud RDBMS (with Database Manager)

Common Services

Unified Communication

Exchange Server 2010: Email; Voice Mail; Achieving; Journaling; Compliance

Lync Server 2010: Instant Messaging; Presence; Enterprise Voice; Mobility; Audio/Video Web Conferencing; Group Chat

System Center Suite
- Data Protection Manager: Back up & Receovery
- Virtual Machine Manager: Multi-vendor Virtualization, Physical-to-Virtual-Machine, etc
- Configuration Manager: Configure, Deploy, Upgrade Infrastructure; Mobile Device Manager
- Operations Manager: Monitoring infrastructure
- Service Manager: Case Registration & Resolution; IT Service Management
- .NET App Monitoring (AVICode)
- Orchestration & Workflow Management (Opalis)

Windows Intune: Manage Updates; Malware Protection; Security Policies; PC Monitoring; Remote Assistance; Hardware & Software Inventory

System Center Advisor: Notifications; Alerts; Monitoring; Configuration

Security Services

Windows Server 2008 R2
- Windows Identity Foundation
- Windows Authentication; Authorization Manager
- Federation Services V2; Domain Services
- Rights Management (ADRMS & DLP); Group Policy
- Lightweight Directory Services
- Active Directory Services

Forefront 2010 Suite
- UAG Server; TMG Server
- Proxy/Reverse Proxy/Any Where Access (SSLVPN/Direct Access)
- Forefront protection for Exchange Server; Forefront Security for SharePoint Server
- Forefront Security for OCS R2; Forefront Endpoint Protection (Client)
- Server Management Console 2010; Server Script Kit
- Identity Manager
- Smart Card/Certificate Management
- User Provisioning; Identity Synchronization
- Policy Management; Credential Management
- User Management; Group Management

Exchange Hosted Services: e-mail Filtering, Encryption & Archiving

Federation Gateway: Cloud based Identity Service

Windows Azure: Azure App Fabric; Access Control Service; Azure Virtual Network

Core Infrastructure

Windows Azure Appliance
- SQL Azure: Reporting; Data Sync; Spatial Data; Cloud DB
- HPC: VM Role; Compute; REST & Managed API; Azure Storage; BLOB, Tables, Queues & Drive

Dynamic Datacenter Private Cloud Self Service Portal 2.0

Windows Server 2008 R2
- Hyper-V, Virtual Desktop Infrastructure (VDI), Application Virtualization (App-V), Terminal Services, Remote Desktop Services
- Failover Clustering, Application Server, Network Access Protection, Network Access Protection, File Classification Infrastructure, Certificate Server
- Network Load Balancing, Windows Server Backup, DirectAccess, Streaming Media Services, BranchCache
- Security (U-Prove, AppLocker, BitLocker, Kerberos, Trusted Platform Module, Encrypting File System)

System Center Suite: Virtual Machine Self Service Portal 2.0; Datacenter Management; Provisioning Engine

Windows MultiPoint Server 2011

Windows Home Server

Windows HPC Server 2008 R2: MPI; SOA; High Performance Computing

Private Cloud

Hyper-V Cloud Fast Track (HP, Dell, Fujitsu, Hitachi, IBM, NEC)

Dynamic Data Center Alliance (Public Hosting)

Windows Azure
- HPC/Map Reduce; APP-V; CDN
- VM Role; Compute
- Windows Azure SDK; REST & Managed API
- Azure Storage: BLOB; Tables; Queues; Drive

Public Cloud

Public Cloud Offerings