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Visual Studio 2010

Introducing Windows Workflow Services in .NET 4 and Windows Server AppFabric

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http://blogs.msdn.com/swiss_dpe_team/Default.aspx

Workflow Service = WCF + WF

- Think "WCF on the outside, WF on the inside"
 - WCF exposes external interface
 - WF describes internal flow & state transitions

- There is great potential in WF + WCF
 - .NET 3.0 didn't provide any integration
 - .NET 3.5 added initial WCF support
 - .NET 4.0 invested heavily in this area

→ **Workflow Services !!!**

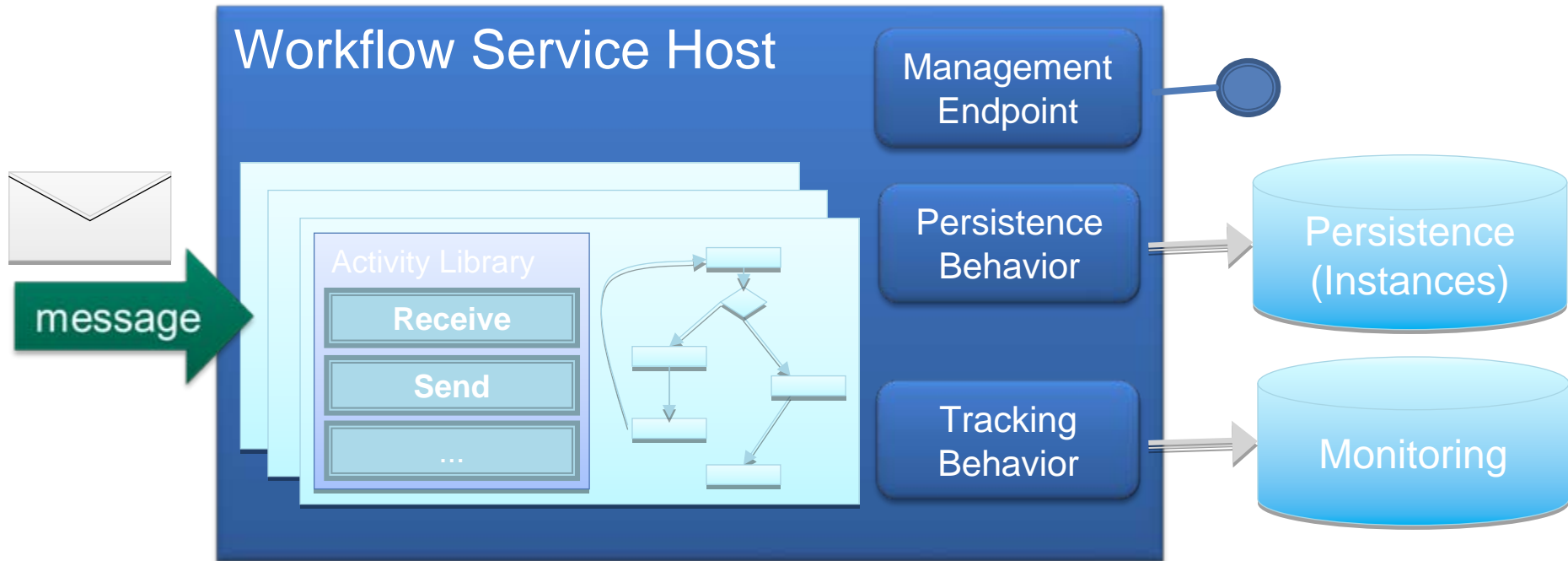
WF 4.0 Basic

- WF 4.0 is a complete rewrite
 - Significant improvements in performance and scalability
- XAML-only workflows are the new default
 - Unified model between WF, WCF, and WPF
- WF 4.0 simplifies data flow by adding:
 - *Arguments (In, Out, InOut), variables, and expressions*
- New FlowChart Workflow
- No State Machine Workflow... and now?
 - WF 4 Migration Guidance!!!
 - WF State Machine Activity Pack CTP 1
- Improved WF 4.0 designer (WPF based) / Designer Rehosting

Workflow Services

demo

WCF and WF in .NET 4

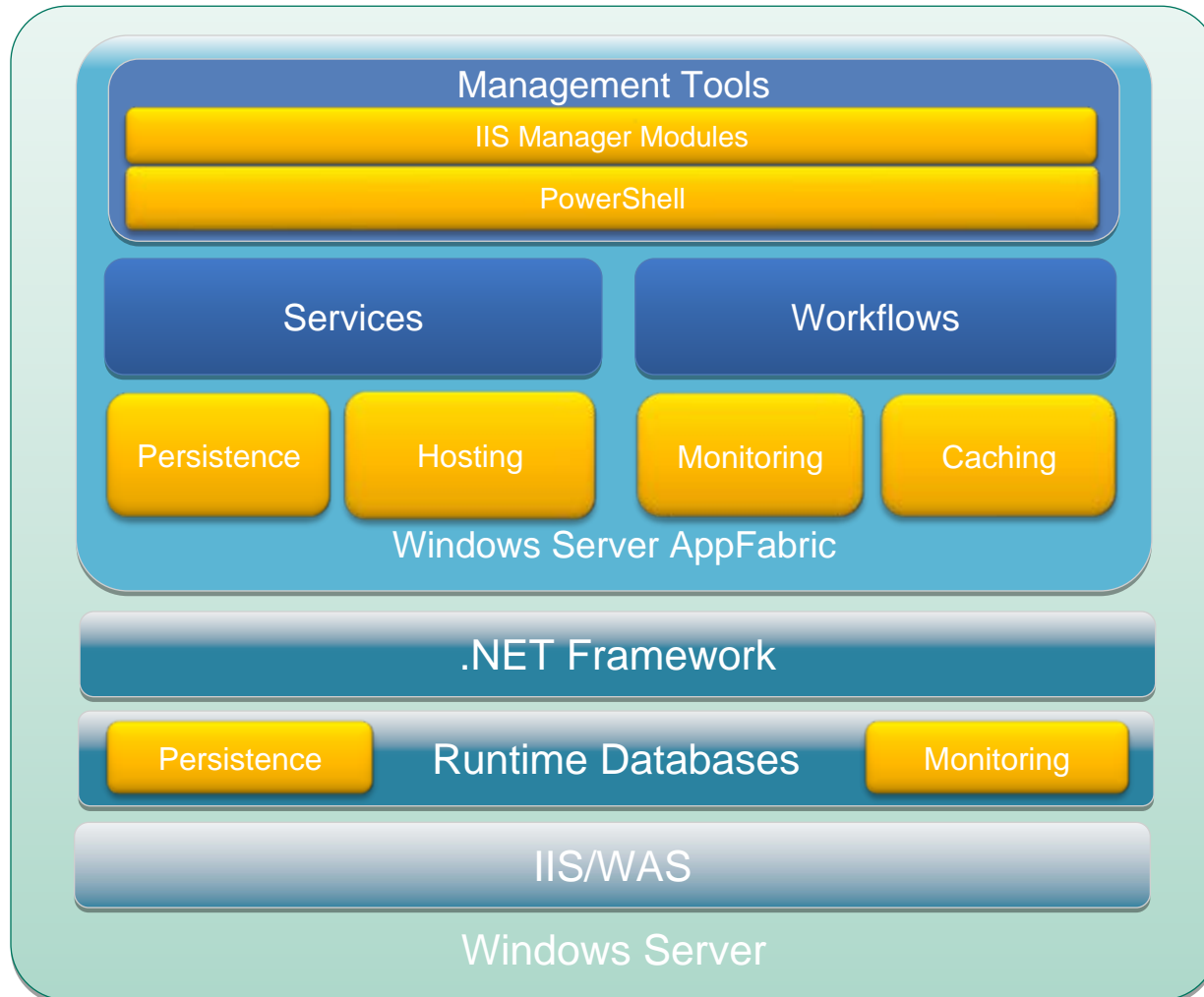


Windows Server AppFabric

Composed by

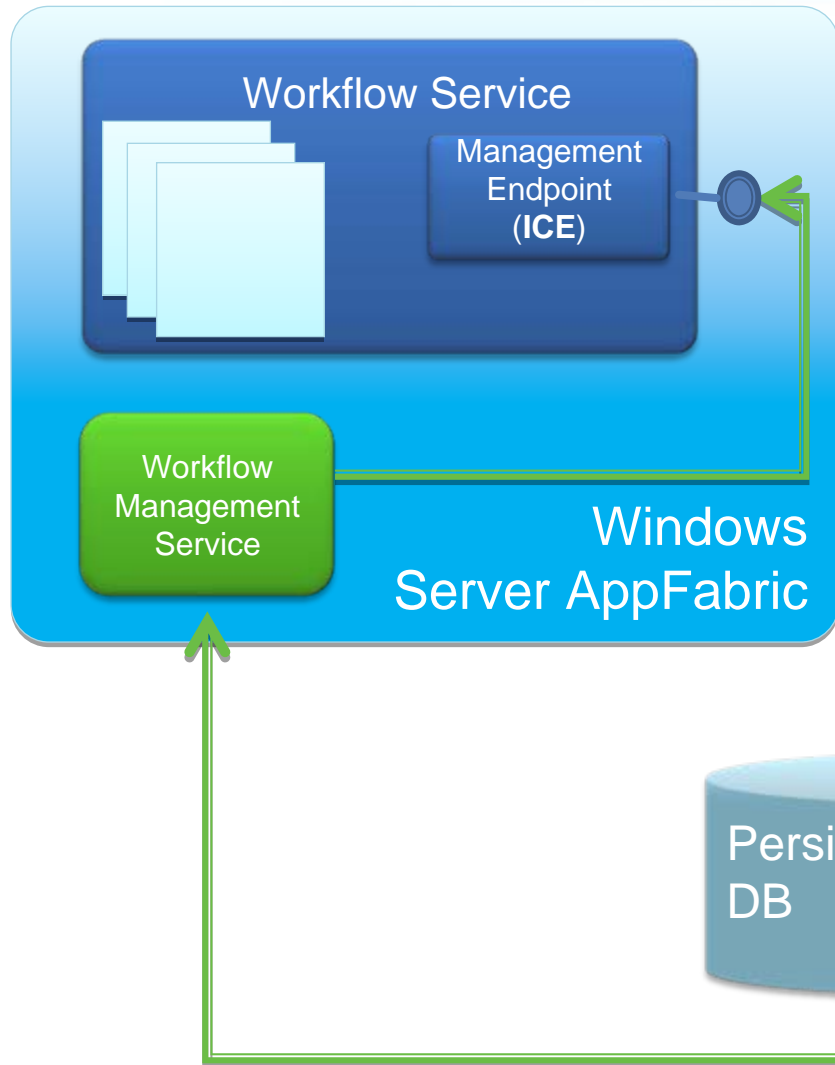
- Caching (formerly codename “Velocity”)
- **Service and Workflow Management (formerly codename “Dublin”)**

Windows Server AppFabric



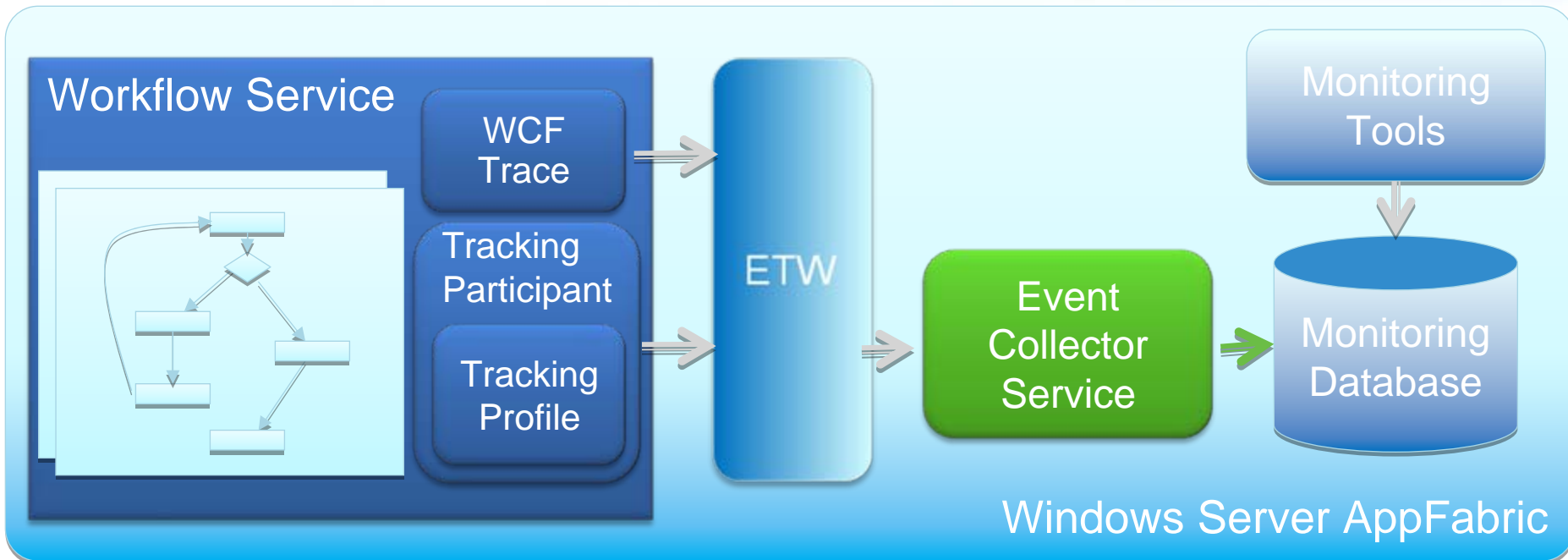
Evolution of WAS/IIS and Windows Application Server role to run and manage WCF and WF services

Persistence



- **Workflow Management Service for IIS/WAS**
 - A Windows Service installed with the Windows Server AppFabric that monitors the Persistence DB
 - Instance restart including graceful shutdown
 - Activates durable timers
 - Executes instance control commands

Monitoring



Event Collector Service

- A Windows Service installed with the Windows Server AppFabric
- Collects WCF and WF instrumentation events into the Monitoring DB

Windows Server AppFabric Installation Requirements

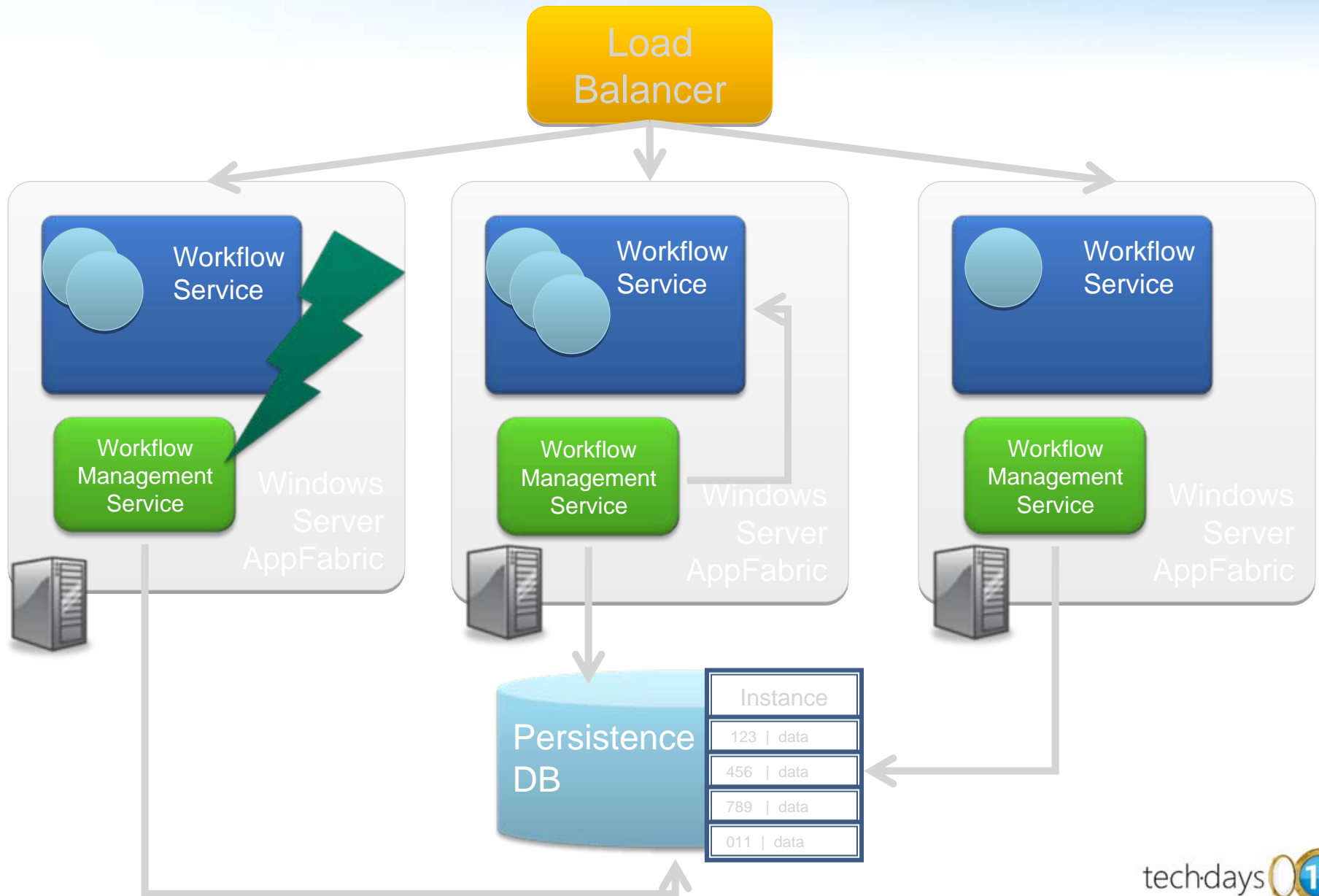
- Windows 7 or
- Windows Server 2008 or Server 2008 R2 or
- Windows Vista
- .NET 4
- SQL Server 2008
- Windows PowerShell V2

Note: AutoStart feature requires Windows 7 or Windows Server 2008 R2

Windows Server AppFabric

demo

Instance Availability in a Farm



Windows Server AppFabric Availability

- Today in RTM

→ <http://msdn.microsoft.com/appfabric>

Q&A

Break 😊

Starting again at 10:30

Summary

Workflow is ideally suited for business services

Workflow services handle complex coordination

- Composition of services
- Message correlation to instances

The Windows Server AppFabric supports WCF and Workflow services by

- Providing runtime databases
- Capabilities for monitoring, persistence, hosting and caching
- Tooling and scripting to manage and monitor WCF and WF services



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