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BUILD AND DEPLOYMENT AUTOMATIONS ACROSS AZURE ENVIRONMENTS WITH VISUAL STUDIO ONLINE

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Managed Gold Partner – System Integrator

Introduction

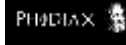


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- Mary Ann Yeager
 - ▣ Sr. Software Configuration Manager
 - MaryAnnYeager@Phidix.com
 - ▣ Professional Passions:
 - Source Code Management (branching/merging)
 - Environment Configuration
 - Change Control
 - Release Management
 - Continuous Integration
 - Deployment Engineering

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DevOps Benefits



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Strong IT Performance
is
a competitive
advantage

Firms with high-performing
IT organizations were 2x as likely
to exceed their profitability, market
share, and productivity goals

DevOps Practices
improve IT
performance



Deploy code
30x faster

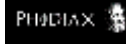
and with 200x
shorter lead time as compared to their
lower-performing peers

Have 60x
fewer failures

and recover from failure
168x faster as compared to their
lower-performing peers

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Automating the Deployments



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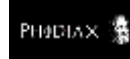
Deploys the same way to all environments



When environments are deployed consistently, the cost of trouble-shooting issues goes down.

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Without Release Management



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- Manual tracking
- Lack of traceability
- Approvals over e-mails
- Lack of automation through workflows
- Limited reporting capabilities
- Scattered release information

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With Release Management

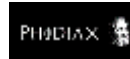


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- Releases visible in TFS Web access
- Release can be tracked across environments
- Approvals kept in TFS
- Deployment and notification automated in TFS
- Advanced reporting tools
- Centralized information store

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DEMO



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- ❑ Build Definition setup and configuration
- ❑ Release Definition setup and configuration
- ❑ Deploying to Azure VMs in multiple environments
- ❑ Deploying to Azure WebApps in multiple environments
- ❑ Task customizations per environment
- ❑ Tracking it all in one place



Prerequisites for VMs

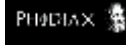


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- ❑ TFS WinRM extension (in Team Service or on premise install)
 - ❑ <https://marketplace.visualstudio.com/items?itemName=ms-vscs-rm.iiswebapp>
- ❑ Powershell v4.0 or above
- ❑ .NET Framework 4.5 or higher
- ❑ File and Print sharing enabled
 - ❑ netsh advfirewall firewall set rule group="File and Printer Sharing" new enable=yes
- ❑ WinRM installed on VM
 - ❑ <https://github.com/Microsoft/vsts-tasks/blob/master/Tasks/PowerShellOnTargetMachines/ConfigureWinRM.ps1>
- ❑ WebDeploy installed on VM
 - ❑ <https://www.iis.net/downloads/microsoft/web-deploy>
 - ❑ Installs to port 80 by default, to install to alternate port (shown as 90):
 - `msiexec /i C:\temp\WebDeploy_amd64_en-US.msi /I C:\temp\WebDeploy.log /passive ADDLOCAL=ALL LISTENURL=http://+:90/MsDeployAgentService2/`

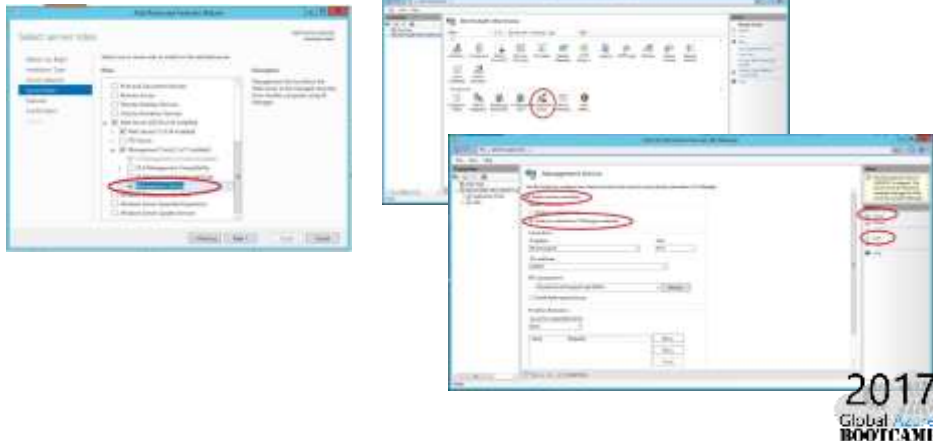


Prerequisites for VMs (con't)

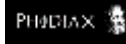


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- Web Management Service Installed/Enabled/Users Permitted in IIS


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Prerequisites for VMs (con't)



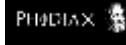
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- Ports open on VM firewall
 - 5985 & 5986 (WinRM), 8172 (WmSvc), 90 (WebDeploy), 80, 443, 8080, etc (IIS)

Windows Firewall with Advanced Security										
Inbound Rules										
Name	Group	Profile	Enabled	Action	Direction	Program	Local Address	Remote Address	Protocol	Port
Windows Remote Management (HTTP-In)	Windows Remote Manage...	System...	Yes	Allow	In	System	Any	Any	TCP	5985
Windows Remote Management (HTTPS-In)	Windows Remote Manage...	All	Yes	Allow	In	Any	Any	Any	TCP	5986
Core Networking - Dynamic Host Configuration Protocol (DHCP-In)	Core Networking	All	Yes	Allow	In	System...	Any	Any	UDP	67
BranchCache Content Retrieval (HTTP-In)	BranchCache - Content Ret...	All	No	Allow	In	System	Any	Any	TCP	80
Windows Remote Management - Compatibility Mode (HTTP-In)	Windows Remote Manage...	All	No	Allow	In	System	Any	Any	TCP	80
World Wide Web Services (HTTP Traffic-In)	World Wide Web Services...	All	Yes	Allow	In	System	Any	Any	TCP	80
BranchCache Hosted Cache Service (HTTP-In)	BranchCache - Hosted Ca...	All	No	Allow	In	System	Any	Any	TCP	8080
WWW Services Custom Ports (HTTP Traffic-In)	WWW Services Custom Ports	All	Yes	Allow	In	Any	Any	Any	TCP	8080-8089
Web Management Service (HTTP Traffic-In)	Web Management Service...	All	Yes	Allow	In	System	Any	Any	TCP	8172
Web Deploy		All	Yes	Allow	In	Any	Any	Any	TCP	8172

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Prerequisites for VMs (con't)



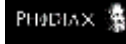
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- Ports open on Azure Network Security Group
 - 5985 & 5986 (WinRM), 8172 (WmSvc), 90 (WebDeploy), 80, 443, 8080, etc (IIS)

PRIORITY	NAME	SOURCE	DESTINATION	SERVICE	ACTION
1000	default-allow-rdp	Any	Any	RDP (TCP/3389)	Allow
1010	WinRM	Any	Any	WinRM (TCP/5986)	Allow
1020	WinRM_http	Any	Any	Custom (TCP/5985)	Allow
1030	WmSvc	Any	Any	Custom (TCP/8172)	Allow
1040	WebDeploy	Any	Any	Custom (TCP/90)	Allow
1050	IIS_default	Any	Any	HTTP (TCP/80)	Allow
1070	IIS_SSL_Default	Any	Any	HTTPS (TCP/443)	Allow
1080	IIS_additional	Any	Any	Custom (TCP/8080)	Allow

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Questions?



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