

The Future of Infrastructure Management from Microsoft – Project Honolulu



PolicyPak



control UP

liquidware

xenapp
blog.

virtual expo

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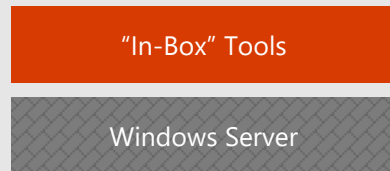


Server Management

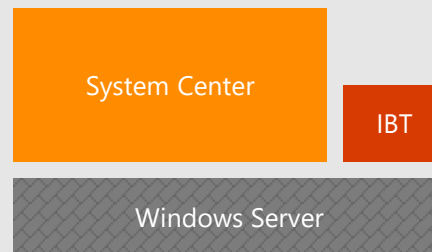
Core graphical management experiences for Windows Server



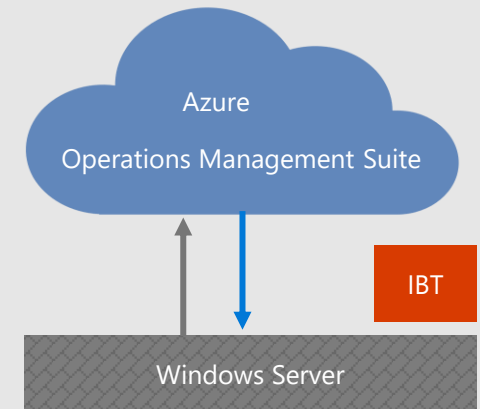
Smaller deployments for small-to-medium business, remote/branch office.



Larger deployments for enterprises, hosters, and service providers.



Cloud for hybrid IT management as a service.



Server management experiences: evolution of "in-box" tools, what's new and what's next. Complementary to System Center and OMS; not replacements, and not competitors.

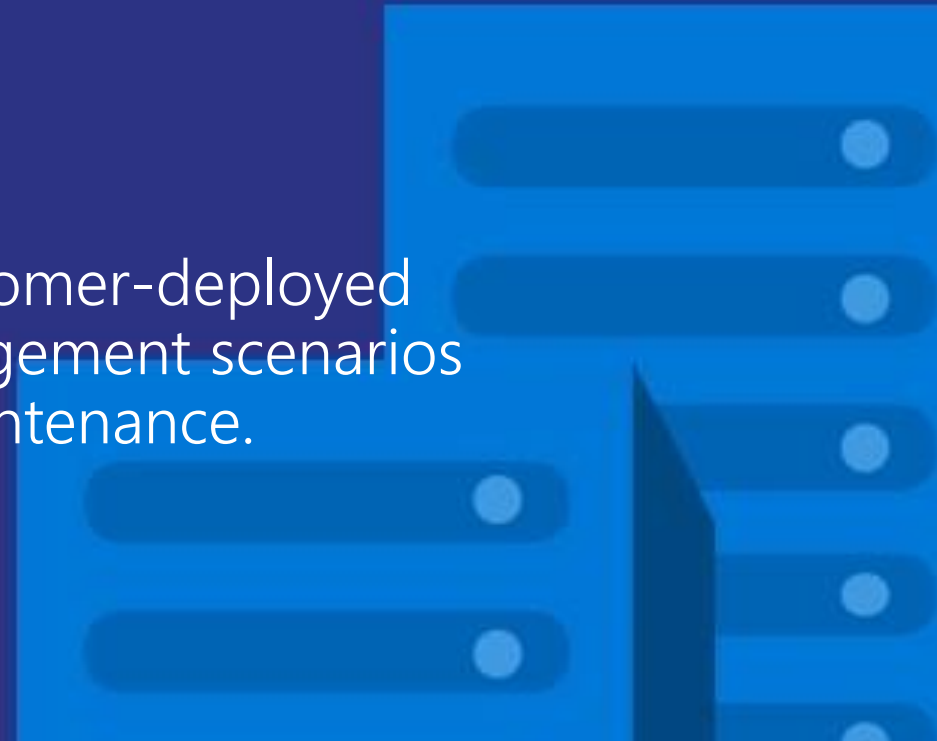
Project Honolulu

Public Preview

Released 9/14/2017

Project “Honolulu” is a browser-based customer-deployed solution for remote Windows Server management scenarios for troubleshooting, configuration and maintenance.

Build 1803 – April 2018





- Windows Firewall with Advanced Security
- Inbound Rules
- Outbound Rules
- Connection Security Rules
- Monitoring

| Name | Group |
|-------------------------|----------------|
| DFS Management (WMI-In) | DFS Management |
| ... | ... |

Computer\HKEY_CURRENT_USER\Software

- Adv...
- Xa...
- AppC...
- Autop...
- Banne...
- BitBud...
- Cabin...
- CIDOp...
- CIDSa...



| Volume | Layout |
|----------------------|--------|
| (C:) | Simple |
| (Disk 0 partition 1) | Simple |
| (Disk 0 partition 2) | Simple |
| (Disk 0 partition 5) | Simple |
| Data (D:) | Simple |
| Tmp (E:) | Simple |

Disk 0
Basic
233.56 GB
Online
450 MB
Healthy (R)

Disk 1
Basic
238.47 GB
Online
Data (D:)
238.47 GB
Healthy (Primary Partition)

■ Unallocated ■ Primary partition

Update status

Server Manager Dashboard

- Dashboard
- All Servers
- File and Storage S...
- Hyper-V

Add Roles and Features Wizard

Select features

- Before You Begin
- Installation Type
- Server Selection
- Server Roles
- Features**
- Confirmation
- Results

Select one or more features to install on the selected server.

Features

- ☒ Remote Server Administration Tools (2 of 42 installed)
 - ☐ Feature Administration Tools
 - ☐ SMTP Server Tools
 - ☐ BitLocker Drive Encryption Administration Tools
 - ☐ BitLocker Drive Encryption Tools
 - ☐ BitLocker Recovery Password Viewer
 - ☐ BITS Server Extensions Tools
 - ☐ DataCenterBridging LLDP Tools
 - ☐ Failover Clustering Tools
 - ☐ Failover Cluster Management Tools
 - ☐ Failover Cluster Module for Windows PowerShell
 - ☐ Failover Cluster Automation Server
 - ☐ Failover Cluster Command Interface
 - ☐ IP Address Management (IPAM) Client
 - ☐ Network Load Balancing Tools
 - ☐ Shielded VM Tools
 - ☐ SNMP Tools
 - ☐ Storage Replica Module for Windows PowerShell
 - ☐ WINS Server Tools

Description

Remote Server Administration Tools includes snap-ins and command-line tools for remotely managing roles and features.

DESTINATION SERVER
smehost.redmond.corp.microsoft.com

Hide

< Previous Next > Install Cancel

BPA results

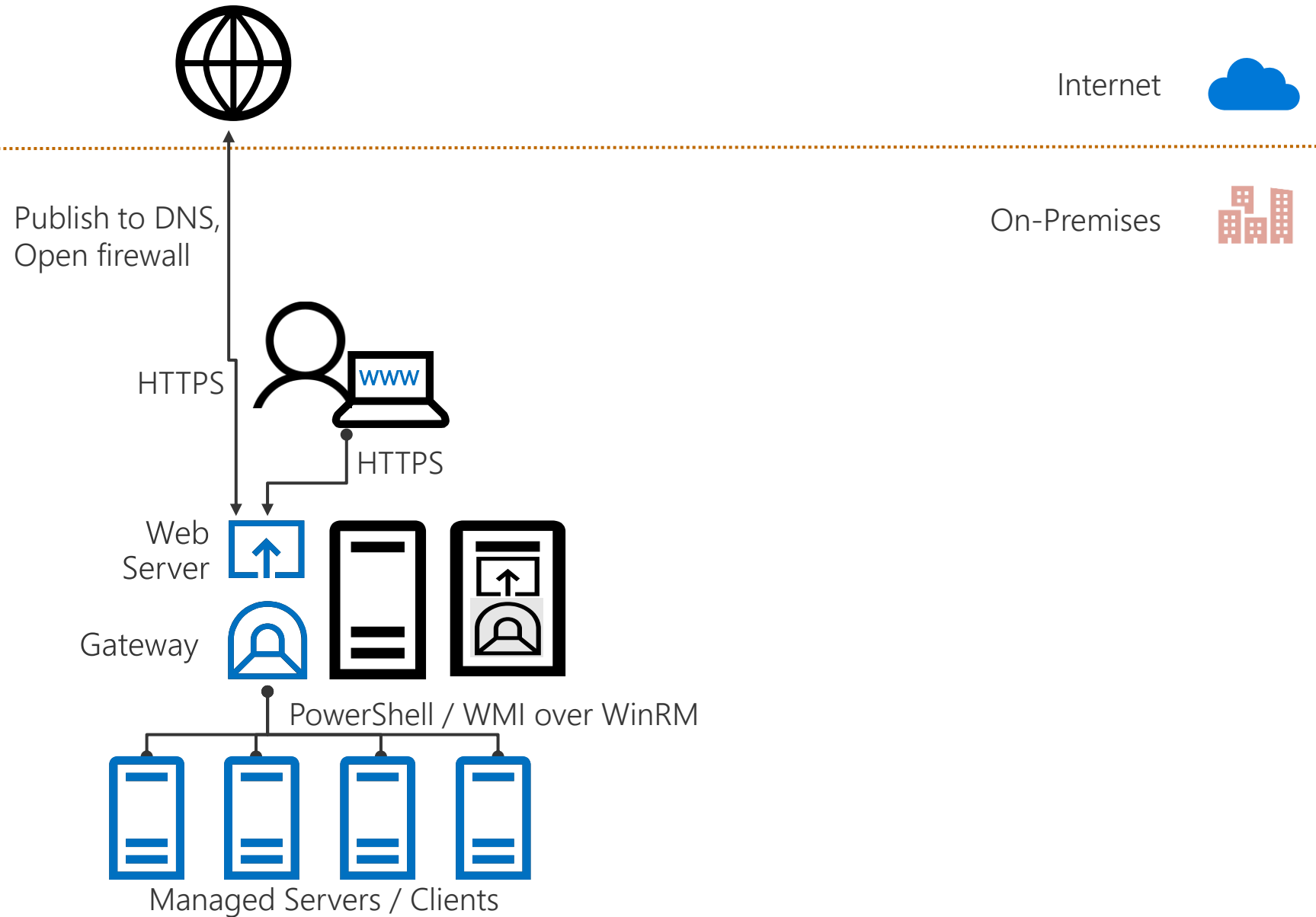
BPA results

BPA results

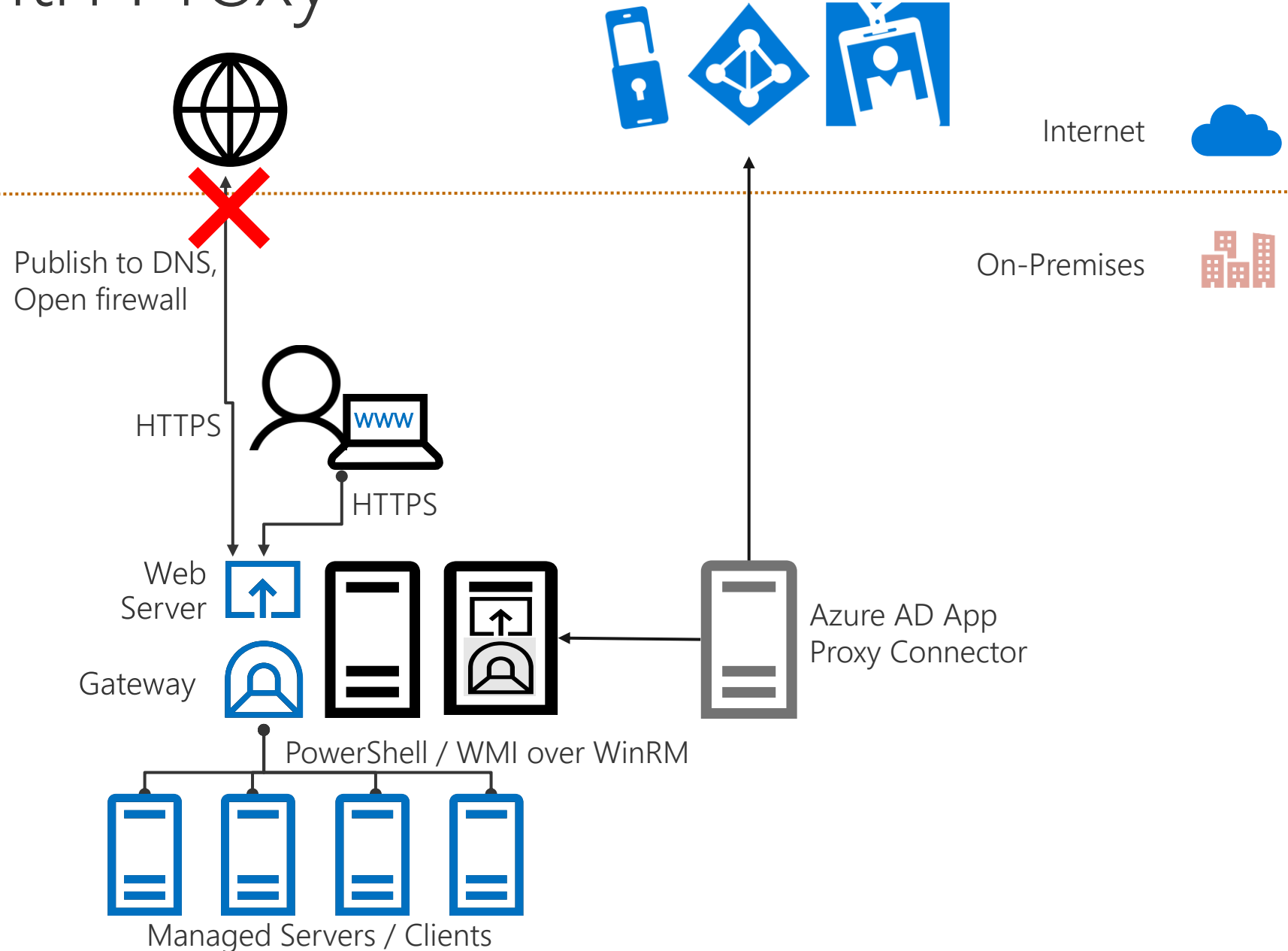
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tered connections (where charges may

Architecture

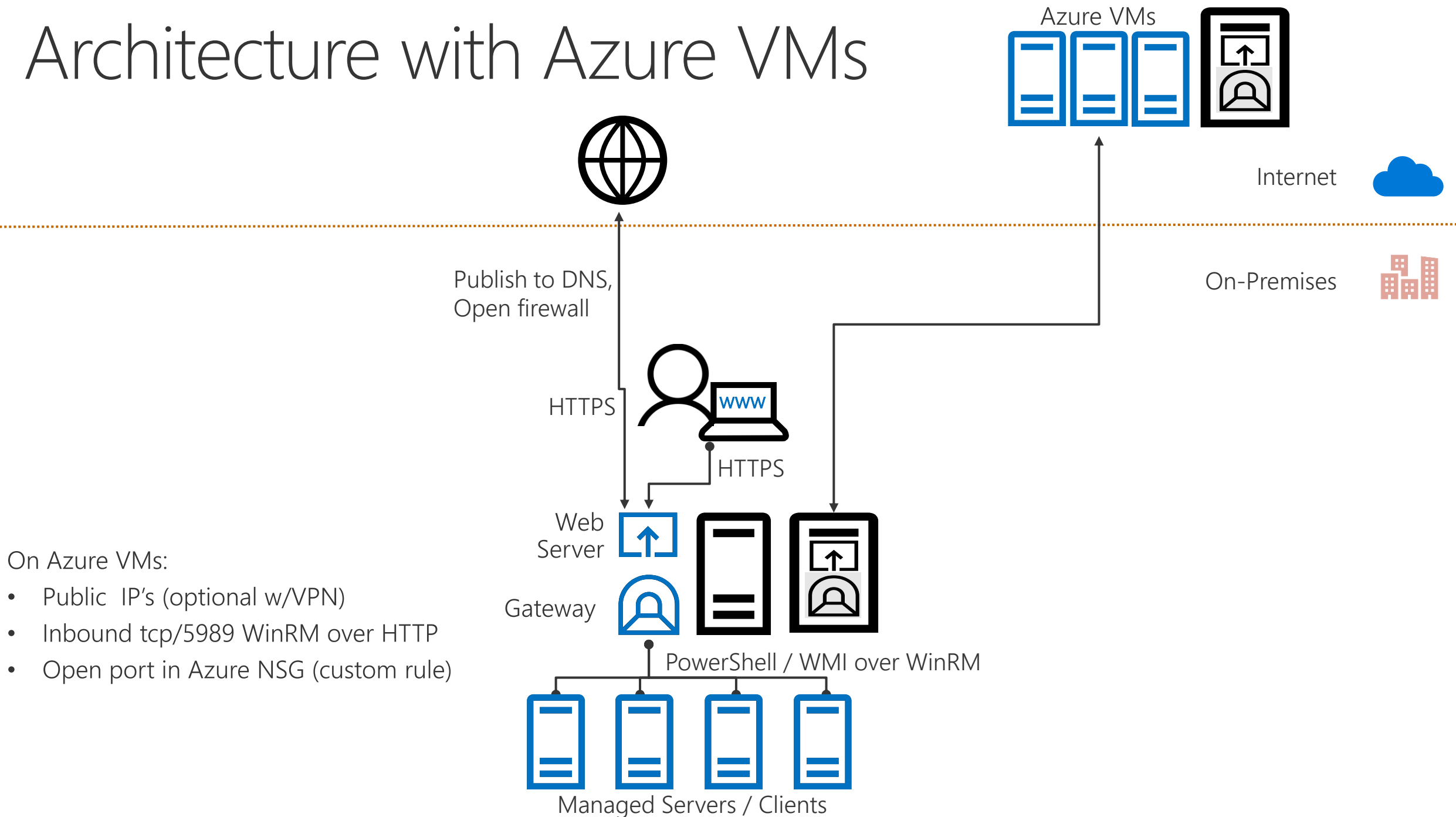


Architecture with Proxy

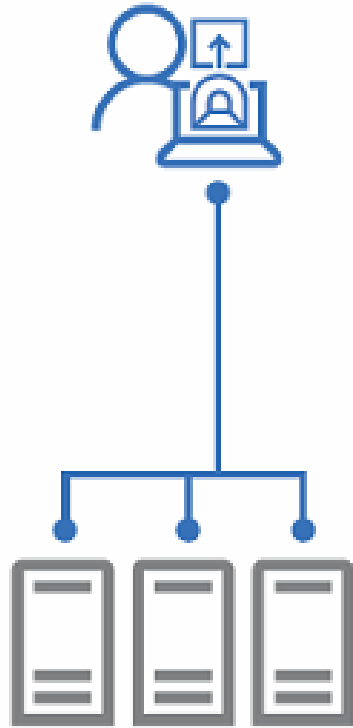


<https://gotoguy.blog>

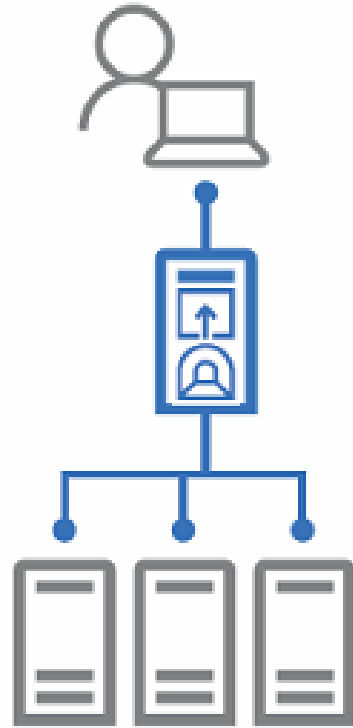
Architecture with Azure VMs



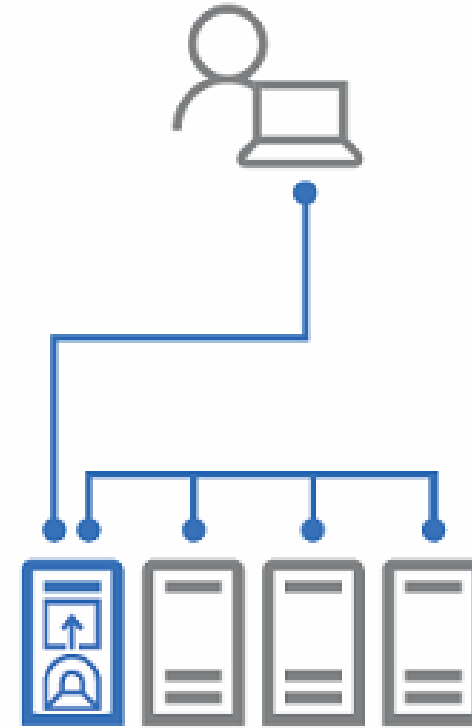
Deployment Models



Install on a local Windows 10 client that has connectivity to the managed servers. Great for quick start, testing, ad-hoc or small scale scenarios.

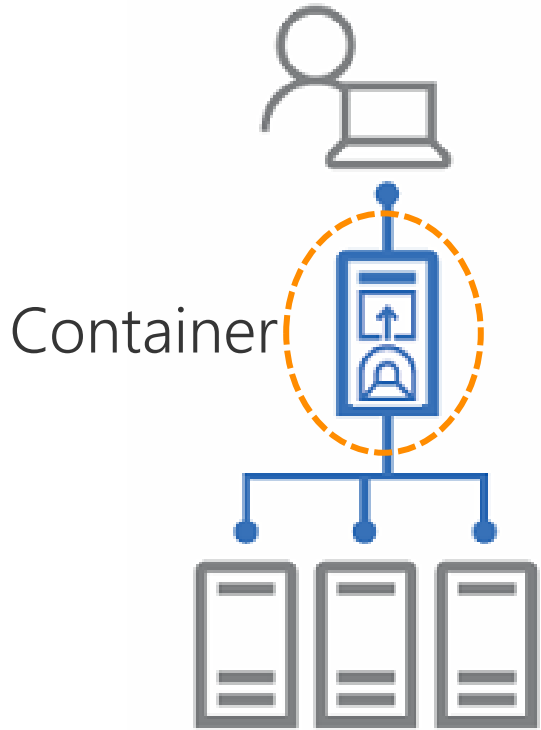


Install on a designated gateway server and access from any client browser with connectivity to the gateway server.



Install directly on a managed server for the purpose of managing itself or a cluster in which it's a member node.

Deployment Models

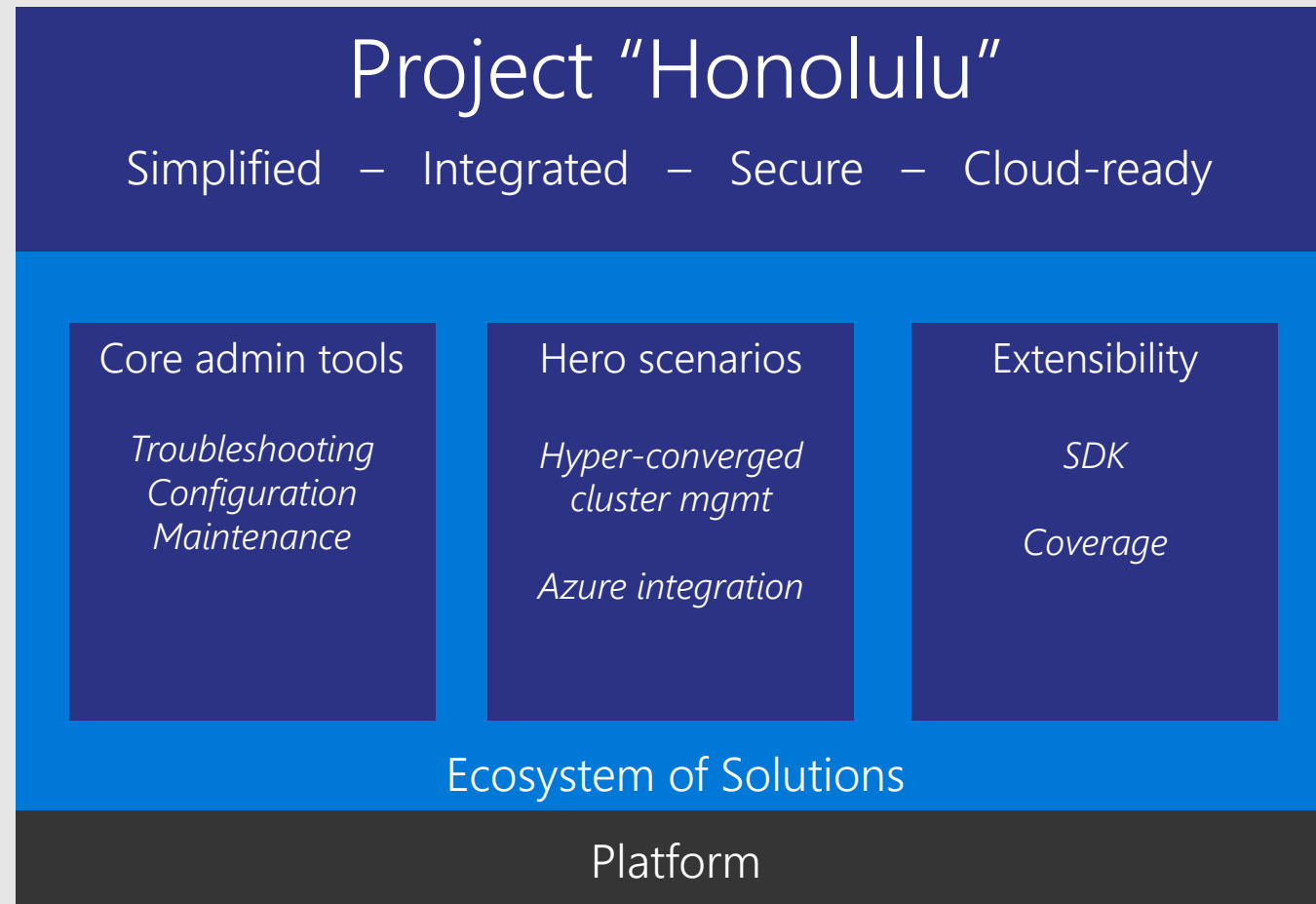


Run as Windows Container –On-Premises or in Azure
Self-contained, portable, flexible, scalable

**Not officially supported... yet.*

<https://github.com/aavdberg>

Modernizing the graphical management experience for Windows Server



Honolulu Design Choices



Visual Design

Aligning with Microsoft common design language and patterns



Leveraging open source technologies

Angular, TypeScript, jQuery, SignalR, Chart.js, PrimeNG, RxJS, etc.



Building extensibility into the architecture

All core tools are built as separate modules

Deep linking and contextual reusability

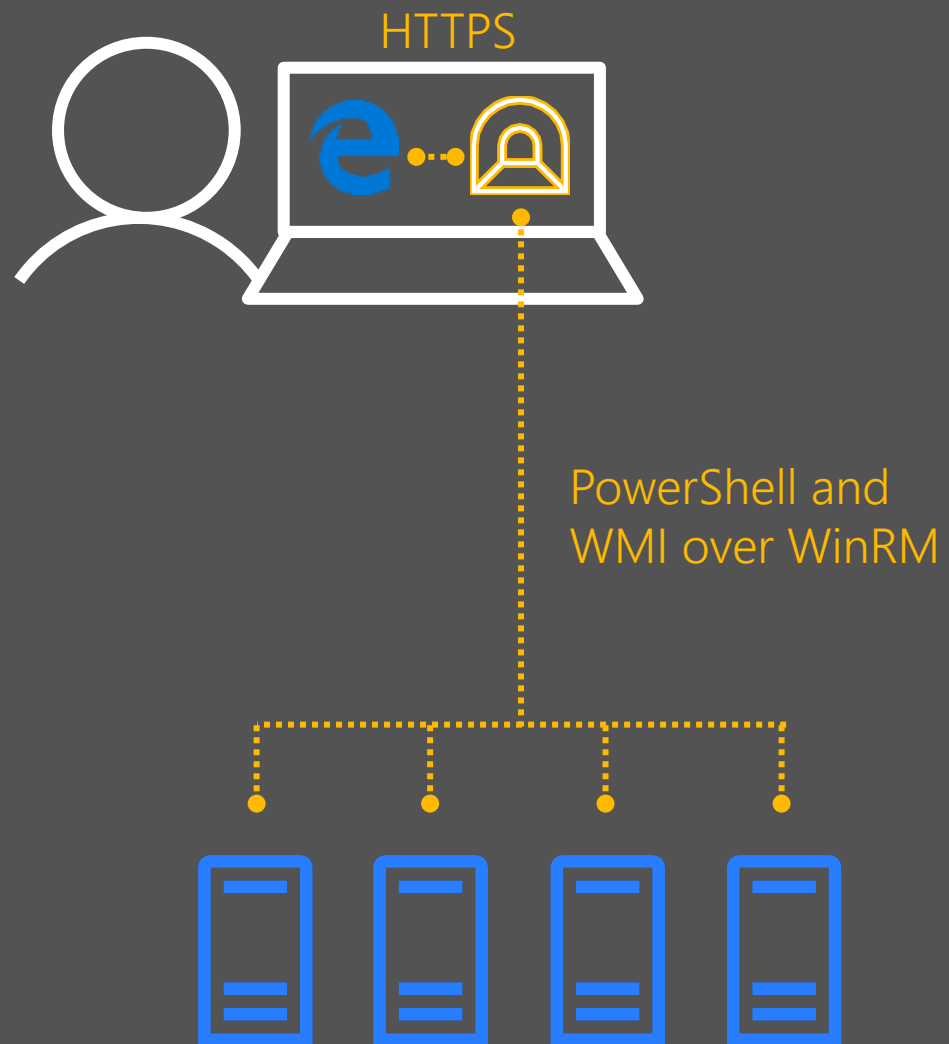


Designing for integration opportunities

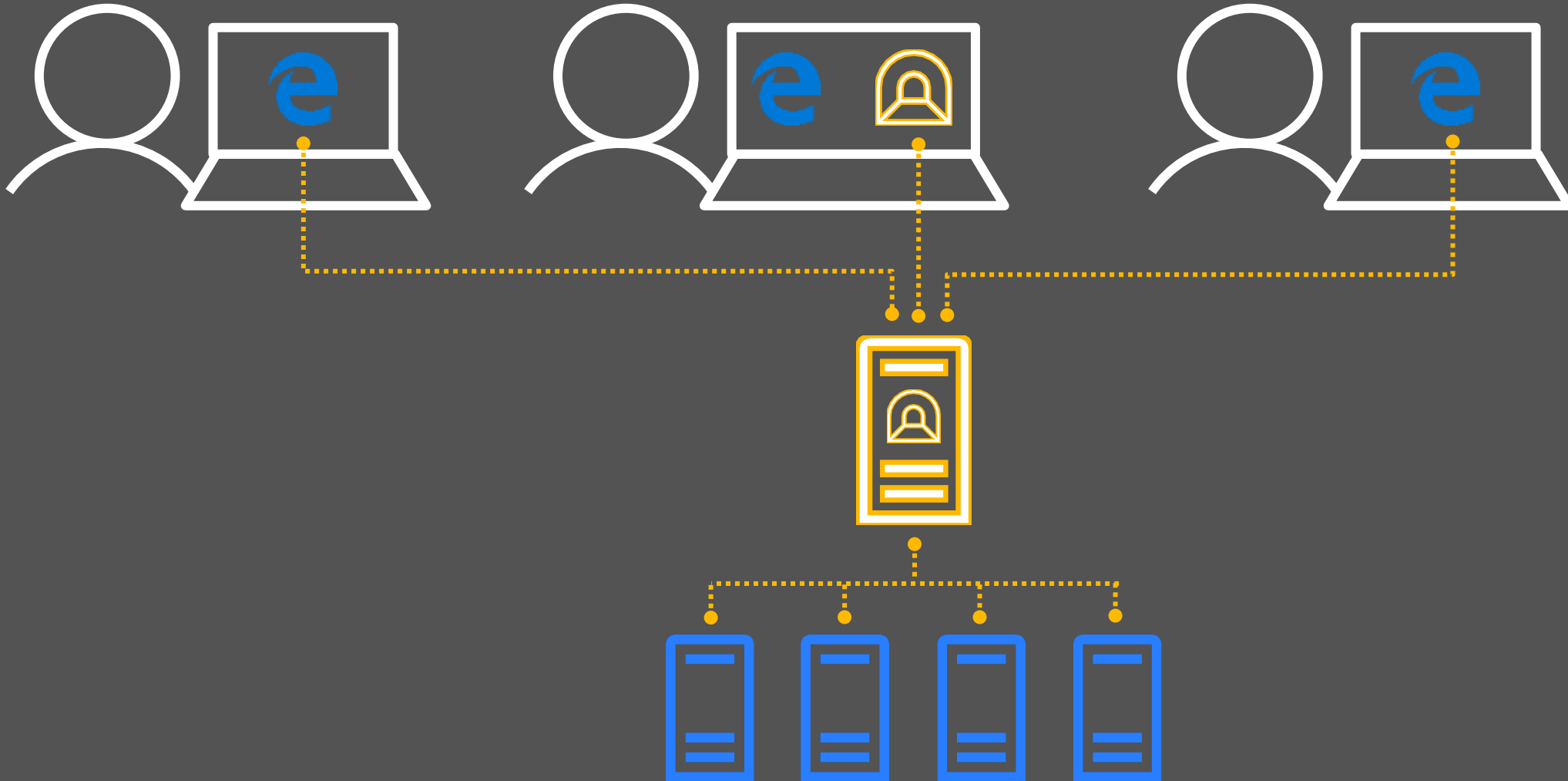
iFrame separation allows for implementation variety and portability of extension modules

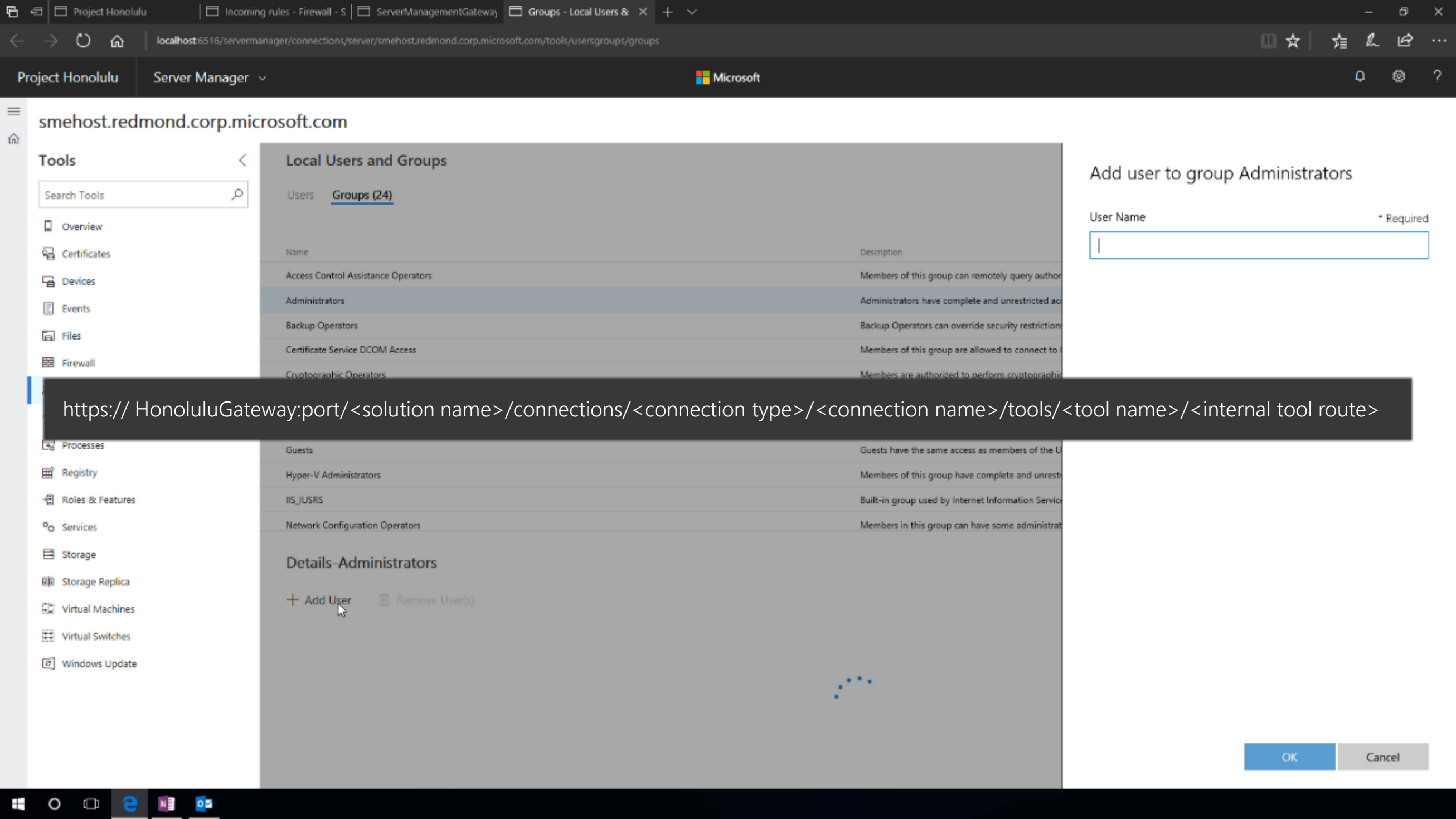
Content can be rendered for integration back into Azure or other cloud scenarios

How does Honolulu work?



How does Honolulu work?





https:// HonoluluGateway:port/<solution name>/connections/<connection type>/<connection name>/tools/<tool name>/<internal tool route>

Requirements

OS Support for Install

- Windows 10 (Desktop Mode), Server 2016 Full or Core (Gateway Mode), Windows Server Build 1709 Core (Gateway Mode), Server 2016 or Hyper-V Server Core container (not yet officially supported)
- Server Gateway requires Kerberos delegation enabled in domain.

OS Support for Clients

- Windows 10, Server 2016, Server Build 1709
- 2012 & 2012R2 require WMF 5 install (\$PSVersionTable)

Certificate

- *Self-Signed or Legit (60 days expiration on generated certificate)

WinRM, WMI, PowerShell Remoting

- Admin rights, local or domain → Local Administrator Password Solution (LAPS)
- Framework 5 → Server 2012 / 2012R2 (again \$PSVersionTable)
- WinRM over HTTP inbound → Existing rule needs to be enabled by network location
- Trusted Hosts → Done by installer now

WinRM and WMI

- “winrm quickconfig”
- WinRM enabled on Public network by default limits access to local subnet
- Firewall Rules
 - WinRM over HTTP tcp/5698
 - “Set-NetFirewallRule -Name WINRM-HTTP-In-TCP-PUBLIC -RemoteAddress Any”
- Trusted Hosts
 - Have installer do it for you
 - Troubleshooting → check this



Tips

- Troubleshooting –WinRM over HTTP (not HTTPS), Credentials (cached per session)
- Local Admin authentication may require Registry edit on target
 - `REG ADD HKLM\SOFTWARE\Microsoft\Windows\CurrentVersion\Policies\System /v LocalAccountTokenFilterPolicy /t REG_DWORD /d 1`
- PowerShell modules
 - **Remoting** - \Program Files\Project 'Honolulu' (Technical Preview)\PowerShell\Modules\ManagementTools
 - **Core** - \ProgramData\Server Management Experience\Ux\powershell-module\Microsoft.SME.Shell

Tips

- Use tags until description field is available
- UI can be customized, but messy (manifest.json & strings.json)
- Connection entries kept in ESENT DB
 - Gateway - %windir%\ServiceProfiles\NetworkService\AppData\Roaming\Microsoft\ServerManagementExperience
 - Desktop - %AppData%\Microsoft\ServerManagementExperience

Honolulu FAQ

| Cost | Browse using | Installs on | Manages | Connectivity |
|-----------------------------|--|--|--|--|
| Free! |  Edge  Chrome | Windows Server, version 1709 Windows Server 2016 Windows 10 | Windows Server, version 1709 Windows Server 2016 Windows Server 2012 R2 Windows Server 2012 Microsoft Hyper-V Server | Azure not required Internet not required AD not required |
| Security | Configuration | Positioning | Feedback | Extensions |
| HTTPS LAPS Delegation | IIS not required Agents not required SQL not required WMF 5.1 required on WS 2012 and 2012 R2 | Evolution of “in-box” tools Complementary to RSAT, SC and OMS | Upvotes via UserVoice | Early alpha SDK in private preview |

What's Missing Yet

Quite a bit actually,
but it is growing rapidly

What's Coming

3rd Party
Extensions

AD Import &
Search

UI Changes –
Groups,
customization, etc.

Export

More Extension
Features

RBAC

Azure Backup /
ASR

RDS Management

Linux?

Demos