

Any App. Any Server. Any Time.

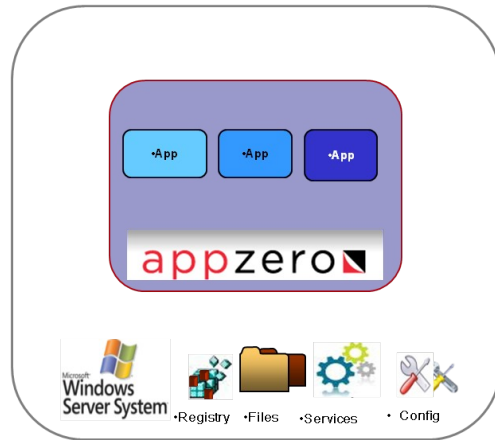
OS-free server application delivery for
instant provisioning

appzero 

ISV Technical Drill Down - Introductions

- AppZero – application virtualization software vendor
 - Server applications (Solaris, Linux, Windows) and Windows desktop
 - Patented and field-proven software
 - Greg O'Connor – CEO
 - Bill Cullen – CTO
- ISV technical drill down – 60 minutes total
 - What is AppZero?
 - How AppZero Works
 - Tools and Runtime
 - Application Stacks
 - AppZero ISV Accelerator Program
 - Q&A and FAQs

What is AppZero?



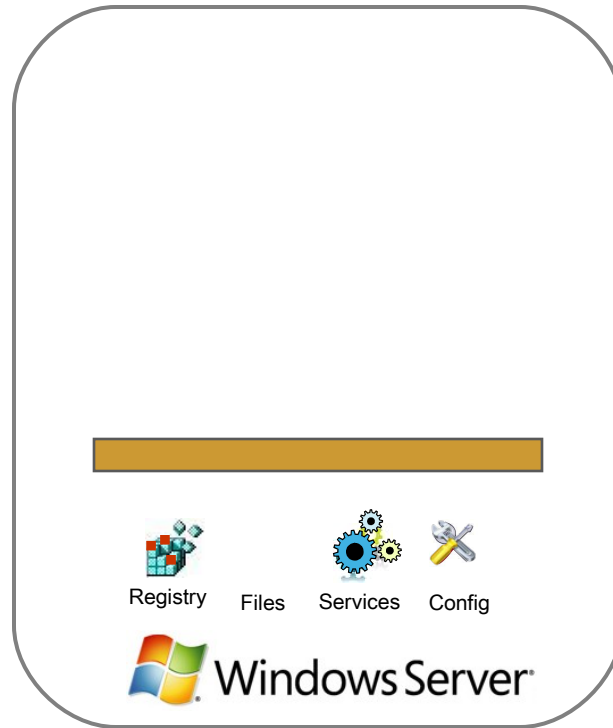
- Zero Install
- Zero Conflicts
- Zero Lock-In

- ❑ AppZero encapsulates enterprise-class applications into a package called a Virtual Application Appliance (VAA) that can be copied and run instantly without installation.
- ❑ AppZero isolates applications from one another and the underlying OS instance.
- ❑ Applications may be moved among machines easily, including those in a cloud, providing OS-free instant provisioning.

Why Application Virtualization?

- Extreme simplicity – copy and run
- Portability
 - Cloud: Move apps from D2C2C2D
 - Platform: Move app silos to PaaS
- VM doesn't solve the app/OS problem
 - VM images tie OS and Apps together forever and must be managed as a whole
- Continued consolidation, less OS management
- Separating app from OS results in far fewer permutations
- App & OS patches done once – gold “images”

Installing an application

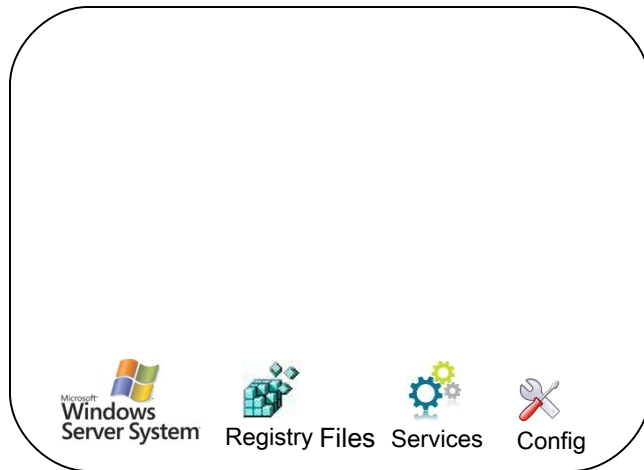


Virtualizing an application



Virtualizing an application





SQLServer.vaa



A **VAA** is a file that contains pre-installed, pre configured application(s) with all of its dependencies

but

Zero OS

VAA – Deployment



Salesperson, SE

SQLServer.vaa



**Customer
Datacenter**



**Cloud
Provider**

A **VAA** is a file that contains pre-installed, pre configured application(s) with all of its dependencies

but

Zero OS

AppZero VAAs are unaffected by **virtual machine** concerns:

- Hypervisor changes
- Processor architecture
- CPU core count
- Storage configuration or technology
- OS configuration and file versions
- Cloud technology

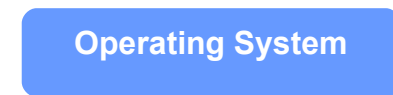
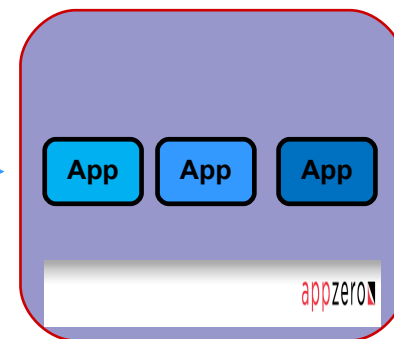
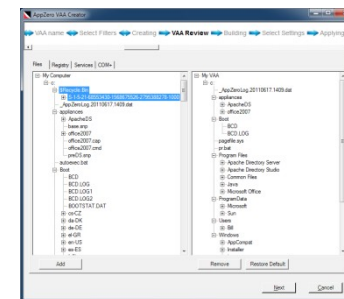
How AppZero works

Package: Create virtual application appliance (VAA) with the AppZero Creator

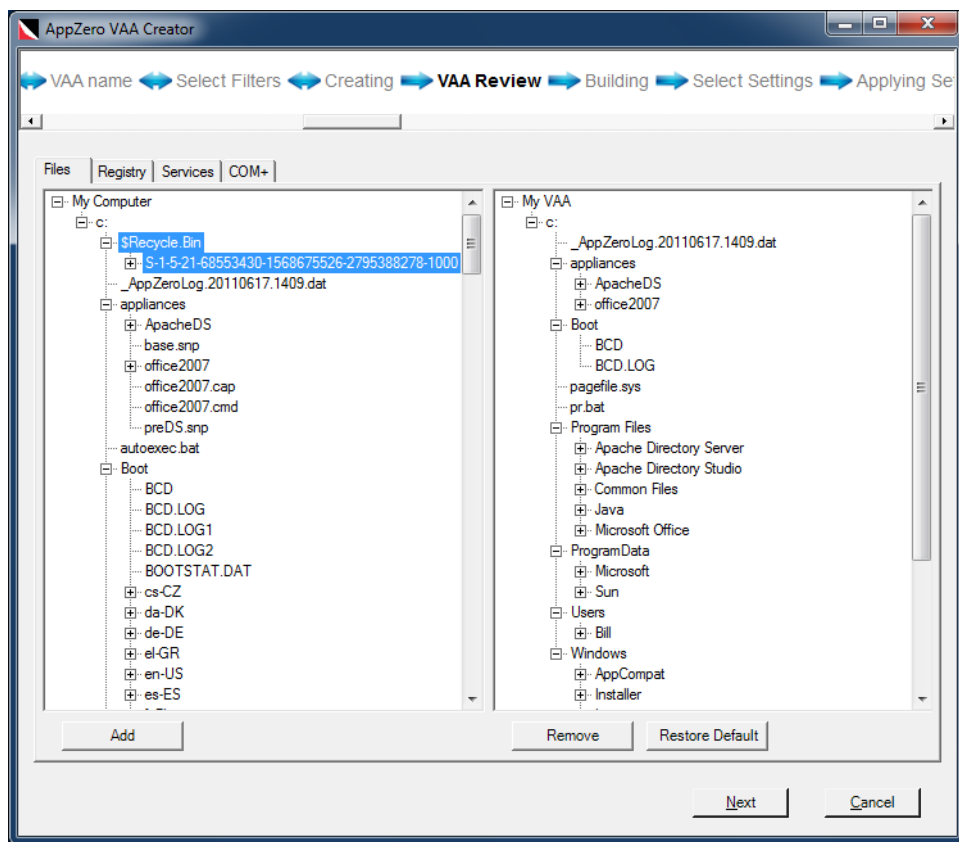
Deploy: VAAs are copied to physical or virtual machines -- applications run without installation. Zero-install. A VAA is compressed for minimal transfer time.

Run: AppZero Director creates small runtime environment to isolate VAA from operating system. The application writes changes to the VAA. Underlying OS is unchanged.

Administer: AppZero Admin manages VAAs



AppZero Creator



- Configurable tool for VAA creation
- Creates a snapshot before and after app installation
- Uses predefined filters to skip unwanted items
- Does not require the application to be stopped
- Displays files, registry entries, Windows services and COM components
- Supports templates

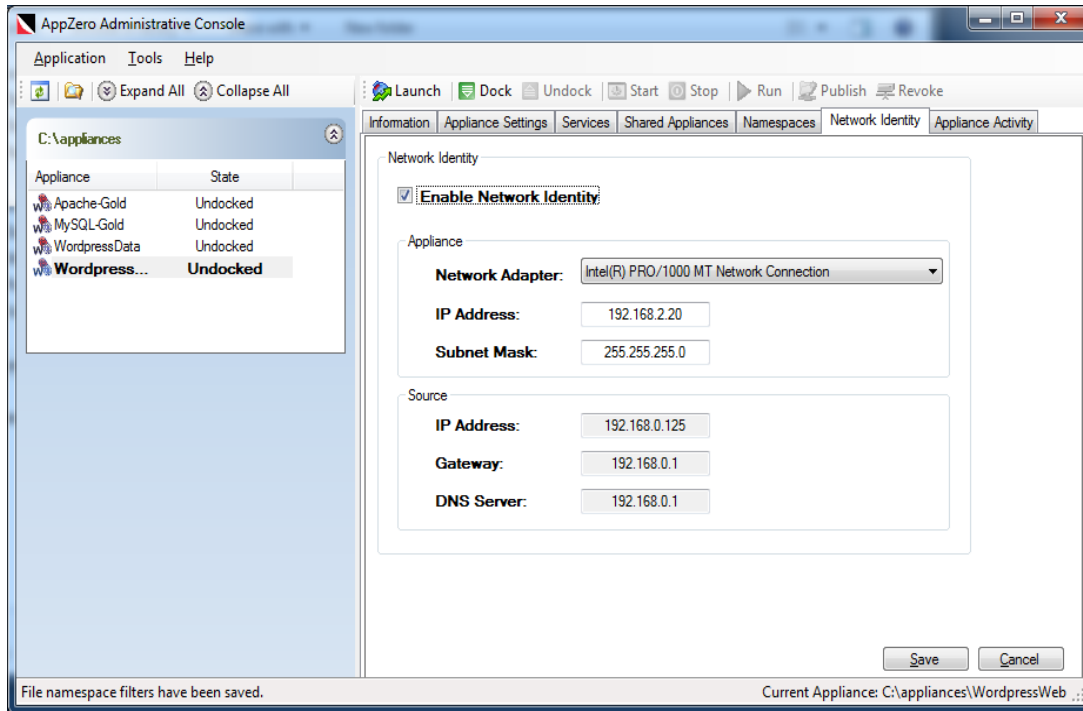
VAA Templates

```
<?xml version="1.0" encoding="UTF-8" ?>
- <AppZero version="7">
- <APPLIANCE>
- <PROPERTIES>
<DESCRIPTION>ApacheDS</DESCRIPTION>
<BOOT_AUTODOCK>N</BOOT_AUTODOCK>
<BOOT_STARTMENU>Y</BOOT_STARTMENU>
<DOCK_AUTOSTARTUP>N</DOCK_AUTOSTARTUP>
<DOCK_AUTOPUBLISH>N</DOCK_AUTOPUBLISH>
<UNDOCK_AUTOUPDATE>N</UNDOCK_AUTOUPDATE>
<DEFAULT_APP />
<SHOW_SCRIPTS>N</SHOW_SCRIPTS>
<HW_SERIAL_NUMBER>7826DB5A</HW_SERIAL_NUMBER>
- <!--
```

```
<NETWORK_ID><DESTINATION>NATIVE</DESTINATION><IP_ADDRESS
>192.168.0.126</IP_ADDRESS><GATEWAY>192.168.0.1</GATEWAY><DN
S_SERVER>192.168.0.1</DNS_SERVER><SUBNET_MASK>0.0.0.0</
```

- A template defines the content and configuration of a VAA
- Produced as part of VAA creation or from an existing VAA
- Can be reused to capture a new application instance and its unique configuration

Administrative Console



- Full control and monitoring of all VAA operations
- Displays VAA configuration and allows for changes at time of deployment
- Supports convenient features such as setting an IP address dedicated to the VAA

Command Line Interface

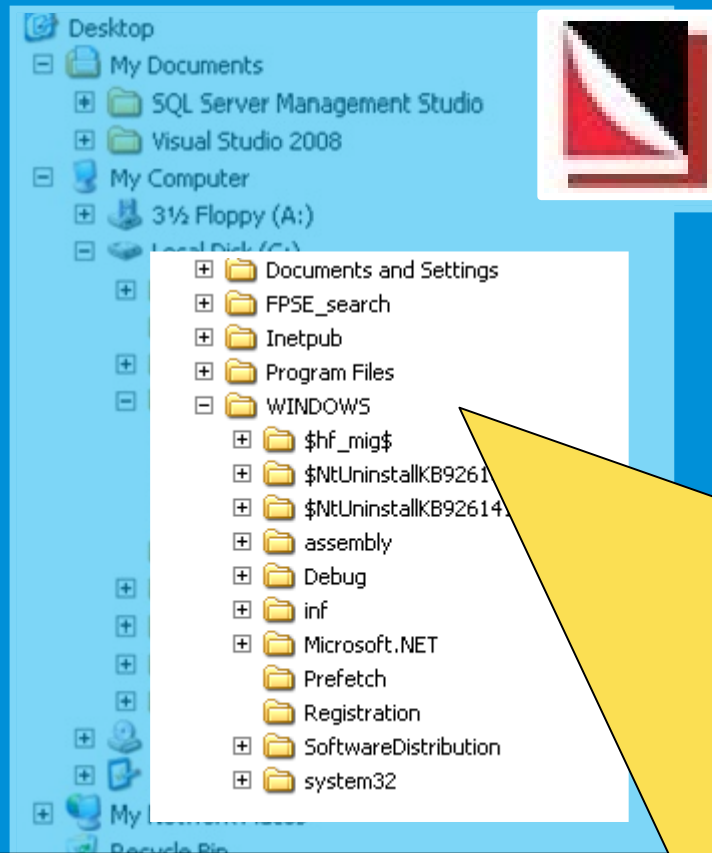
All creation and admin functions are fully scriptable

```
c:\Program Files\AppZero>appzstart.exe c:\appliances\Apache
APPZERO (R) VAA Services Startup Utility
(x64) Version 4.7 x64
Copyright (C) AppZero Software Corp. All rights reserved.
Starting services for appliance c:\appliances\Apache
Starting Service: Apache2.2

Start services for appliance c:\appliances\Apache:
Started appliance c:\appliances\Apache: success

c:\Program Files\AppZero>appzrun.exe c:\appliances\Apache "C:\Program Files
(x86)\Internet Explorer\iexplore.exe" http://localhost/

c:\Program Files\AppZero>appzstop.exe c:\appliances\Apache
APPZERO (R) VAA Services Stop Utility
(x64) Version 4.7 x64
```

cept Layer

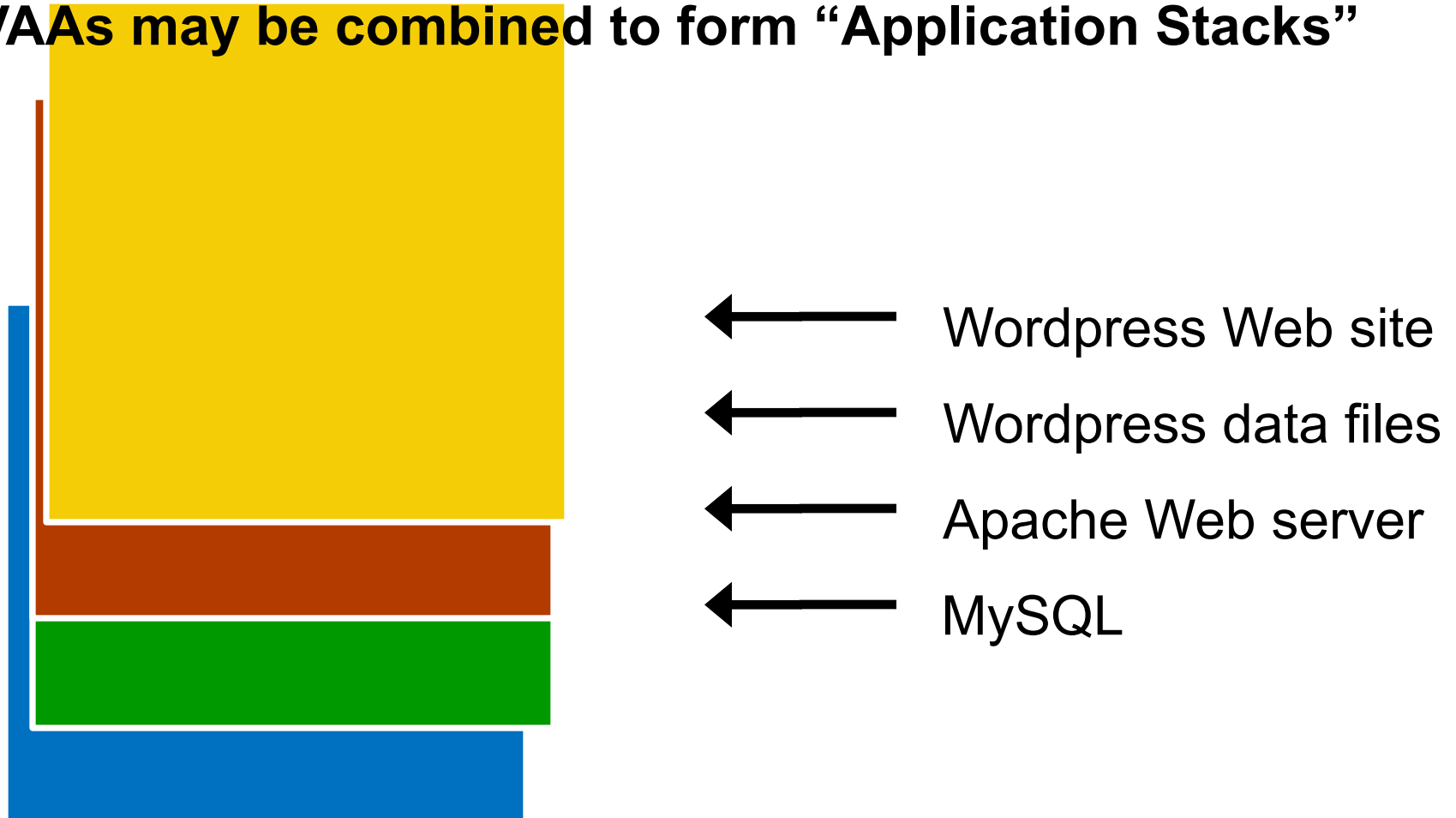
The application view is “in the context” of the VAA and merged with underlying OS

- Virtualized
 - File system (includes deletion)
 - Registry
 - Background services
 - COM components (dll, *new* exe)
 - New processes
- Integrated
 - IIS (app pools, hostheaders, etc.)
 - WMI management
 - RPC

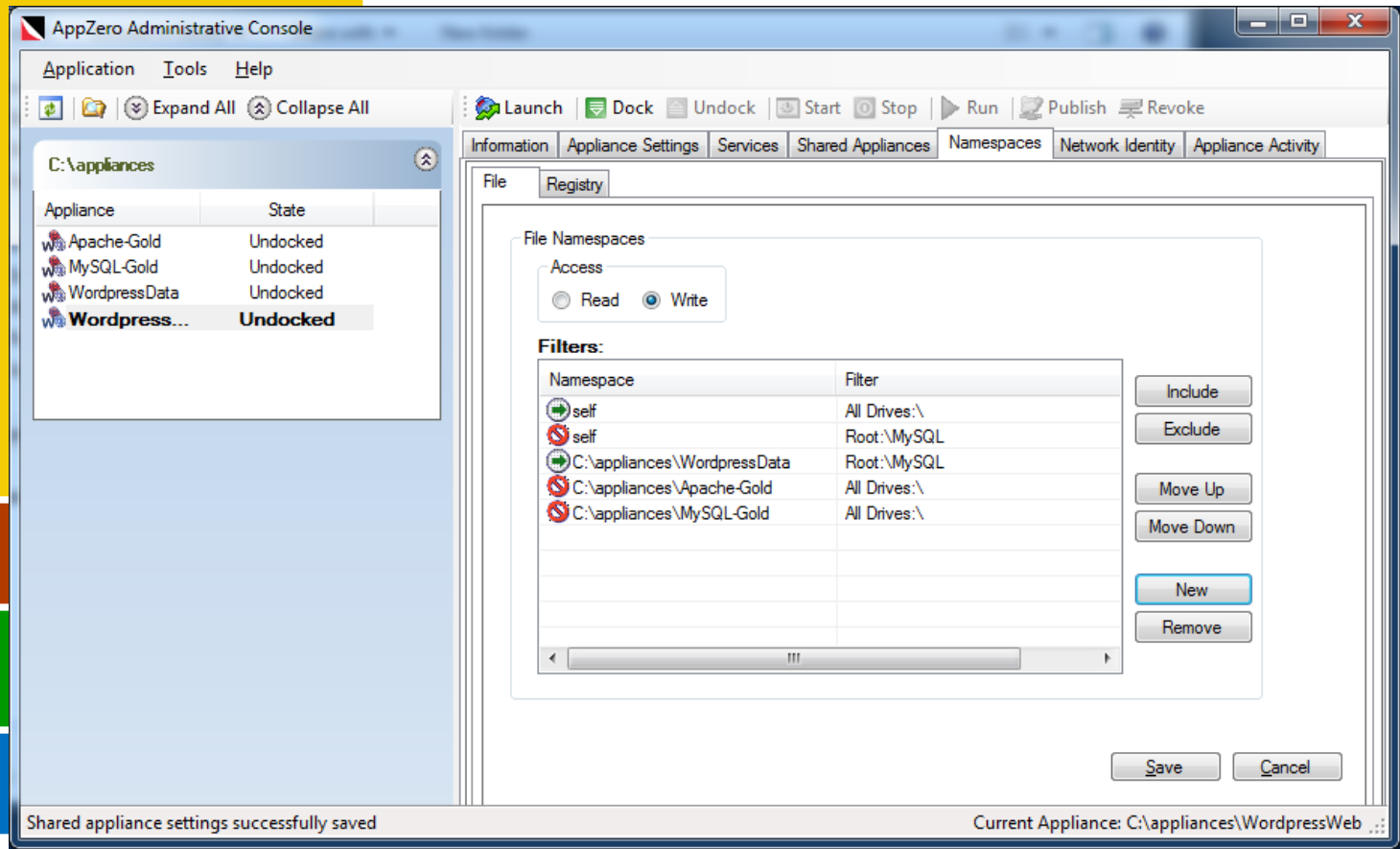
Dock and run operation

- “Docking” establishes the VAA context prior to starting any applications
 - Dock is useful to run application configuration tools, upgrade applications, and run other products in the app context, including the command prompt
- Dock/undock fully scriptable to gain control when a VAA is moved
- “Run” starts the VAA’s primary application

VAAAs may be combined to form “Application Stacks”



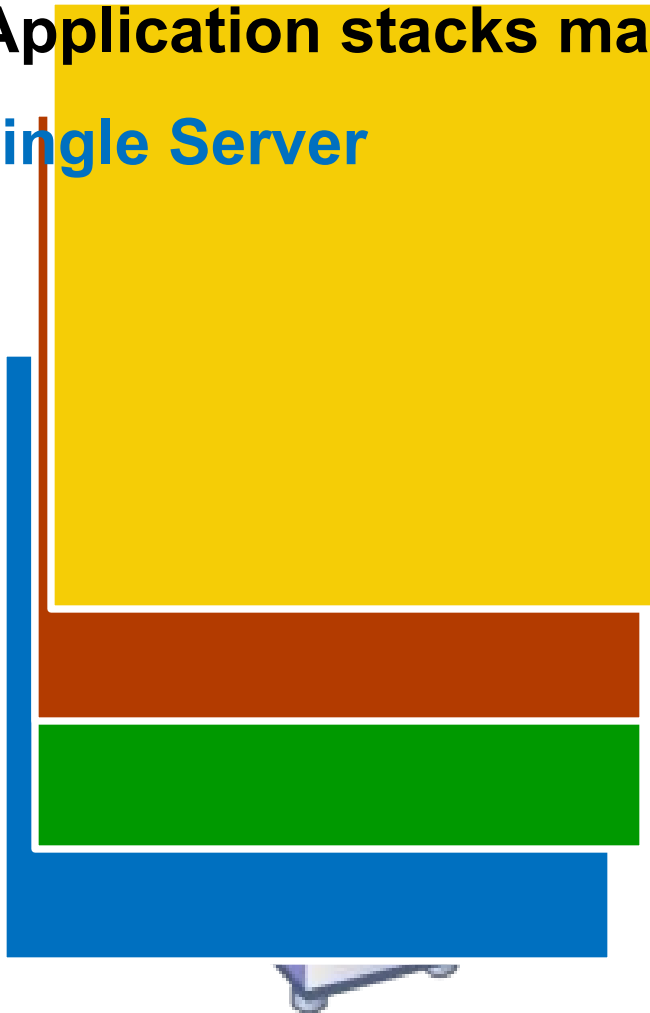
Namespaces – VAA read and write locations



Flexible topology

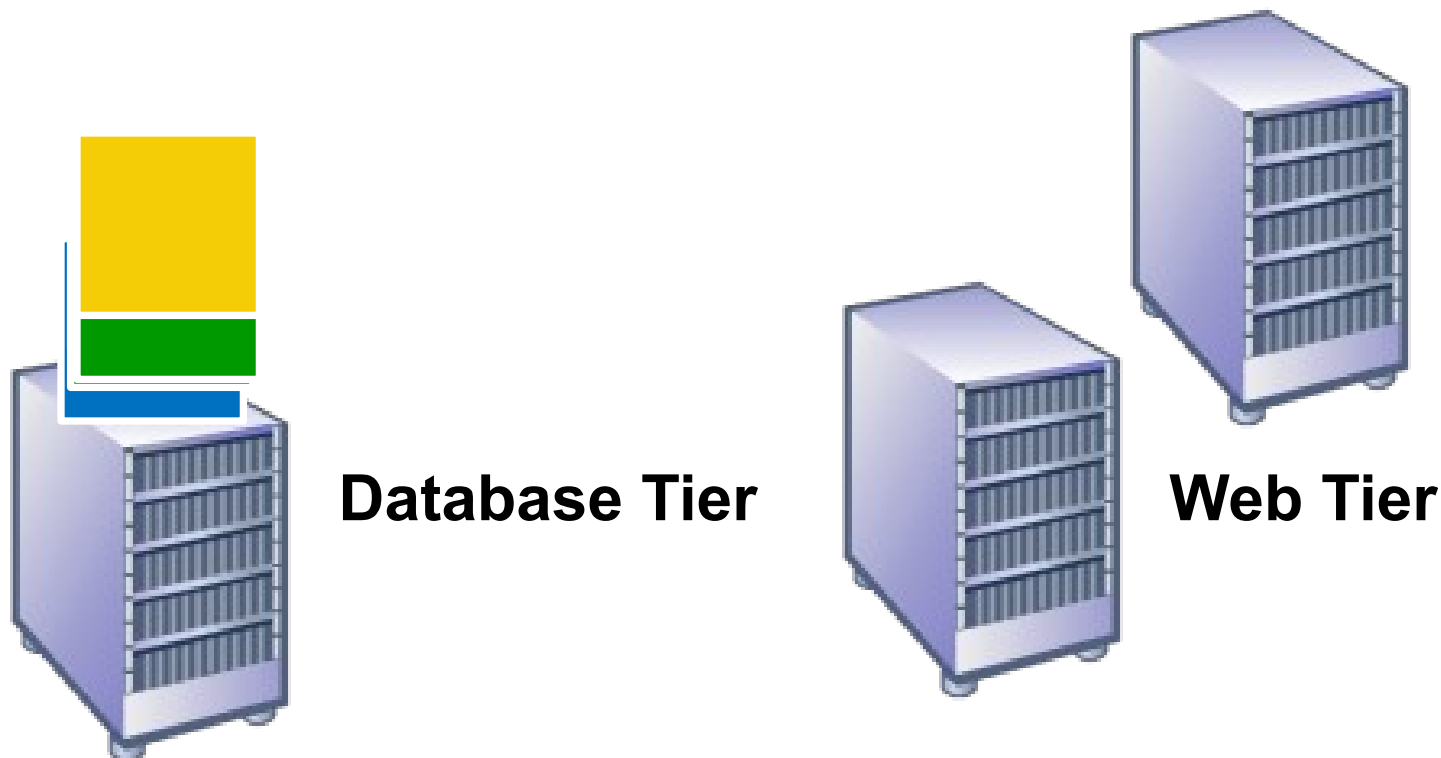
Application stacks may be scaled as required

Single Server



Application stacks may be scaled as required

Multiple Servers



Technical benefits

- Compared to a VM – VAA is a far smaller package
 - A VAA can be 10 to 100 times smaller than a typical 50GB VM
 - Upload to a cloud in an hour or less, not a day or two
 - Multiple applications easily fit on a typical portable computer
- Flexibility
 - No lock in - move applications among different clouds
 - Move from physical servers to virtual environments
 - No OS reconfiguration required
 - Independent of surrounding infrastructure
- Simplicity
 - ZeroInstall - copy and run
 - No error-prone manual steps
 - No uninstall required
 - Update applications by replacing the VAA

Similar letters (VAA and VM) – big differences

Virtual App Appliance

- + Windows today
- + Physical and Virtual
- + IT owns OS lifecycle
 - + Managed by IT
- + Small in size
- + Cloud ready

Virtual Appliance

App

OS

Virtual Machine

Fast provisioning
Simplified test and development
Reduced life cycle cost

- Not for Windows
- Virtual only
- ISV owns OS lifecycle
 - Managed by ISV
- Large in size
- Limited clouds



All work is harvested

AppZero transitions ISV application
from demo through production



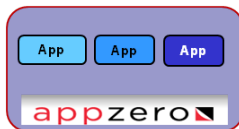
Trial goes live in a department

POC basis for Trial roll out

**POC harvested for other field
engagements**

Demo basis for POC

**App purposed for Demo
and customer
requirements**



AppZero POC impact

Example Software Vendor

Top Down

FY2010 Revenue detail

·Maintenance	·50%	·\$250,000,000
·Consulting Service	·10%	·\$50,000,000
·Grow from existing customers	·20%	·\$100,000,000
·New business/new department	·20%	·\$100,000,000
·Total Revenue	·100%	·\$500,000,000
·New Business by POC	·50%	·\$50,000,000

Bottom up

·Time to install app in hours	·7:00	
·Number of SE	·150	
·Number of POC per year	·600	
·Average deal size	·\$150,000	
·POC win rate	·60%	
·	·	·360
·	·	·\$54,000,000
·Cost per SE	·\$100,000	

AppZero Impact

·Time to Run VAA-app in minutes	·0:20	
·Change from install to RUN in minutes		·6:40
·% time savings		·95%
·Win rate improvement	·10%	
·New POC win rate		·66%
·POC saving per year		·\$192,308
·Number of addition POC wins		·36
·Revenue increases		·\$5,400,000
·Top line YOY increase		·1%

Business benefits

- Increased revenue
 - Win more PoCs
 - Accelerate sales cycle/time to revenue
- Decreased costs
 - Lower cost of sales
 - Decrease cost of acquiring customer
- Maximize resource and process effectiveness
 - Support your application, not the underlying OS
 - Reduce the number of application/ technical environment combinations you have to test and maintain
 - Run your app in any provider's cloud – no change or lock-in
- Non-intrusive
 - No change to technology of choice
 - No disruption to established business processes

AppZero ISV Accelerator Program

- ISVs get
 - ▣ Software and professional services to build a VAA that will allow the instant provisioning of PoCs and demos
 - ▣ License to use your VAA anywhere/anytime
 - ▣ No time limit
- AppZero gets
 - ▣ A PoC of our software
 - ▣ Real world data points
- Process
 - ▣ Visit www.appzero.com ISV Accelerator program
 - ▣ Together, we'll build a project plan