Evergreen Citrix Builds

virtualengine

The End User Computing and Cloud Solution Specialists

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  - PScribo
  - Lability

Agenda

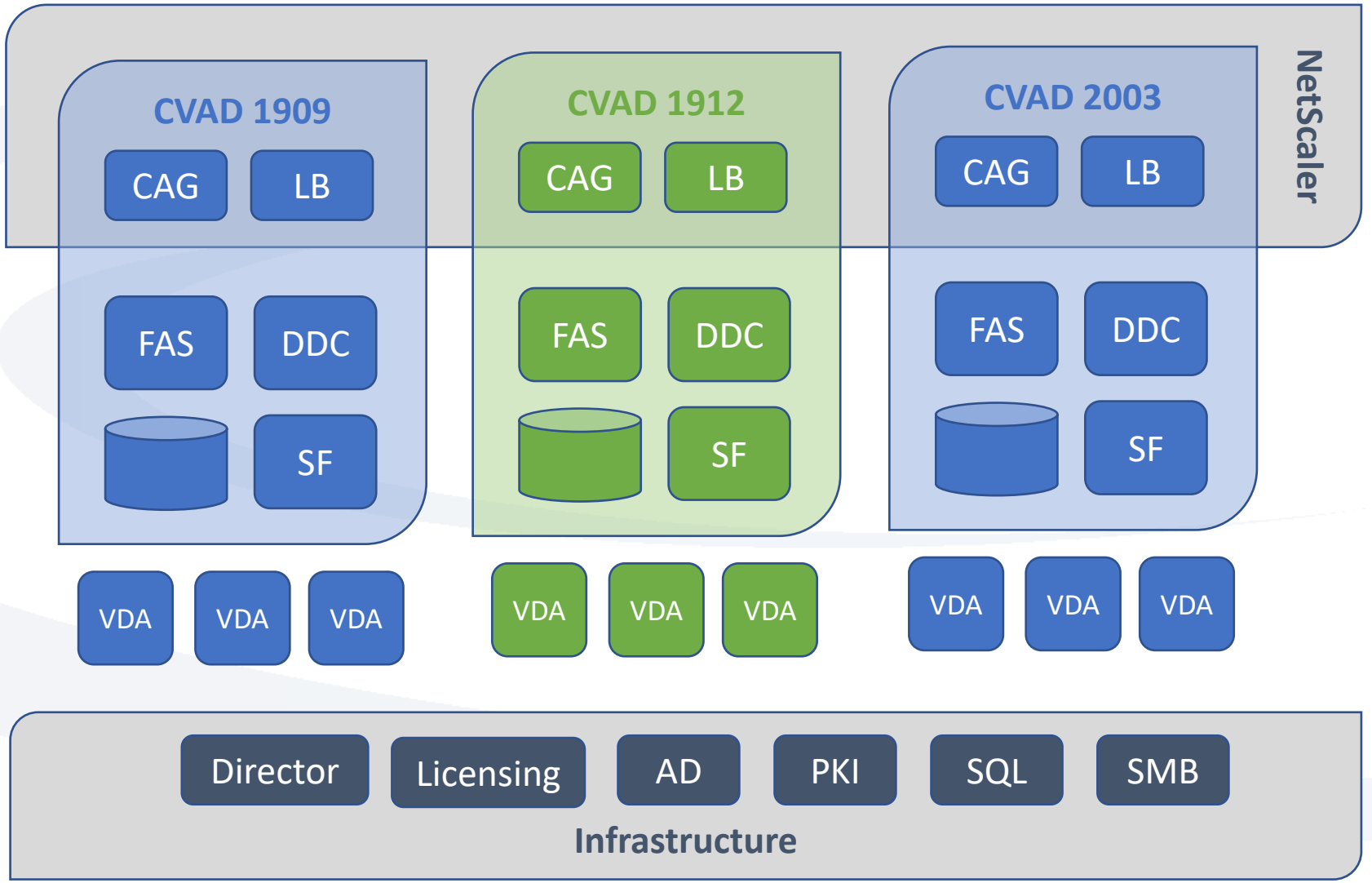
- What, why and why not of Evergreen
- Configuration-as-code
- PowerShell DSC 101
- Demo
- Wrap up

LTSR and/or CR

- Bug fixes = LTSR and CR
- New features and enhancements = CR only
- LTSR customers may need to install latest CU to receive a fix
- CR customers may need to upgrade to next CR to receive a fix
- Cloud deployments not supported by CR

What do we mean by “Evergreen”?

- Always deploying “new”
- Never upgrading
- Continual deployments
  - Build
  - Test
  - Migrate
  - Tear down


NetScaler
CVAD 1909
CAG
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CVAD 1912
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VDA
VDA
CVAD 2003
CAG
LB
FAS
DDC
SF
VDA
VDA
VDA
Director
Licensing
AD
PKI
SQL
SMB
Infrastructure

Why go to all this trouble?

- Known, repeatable deployment processes
  - Deploy to any infrastructure (migration and/or DR)
- Reduce upgrade risks
- Minimise configuration drift
- Change tracking
- Documentation

So why wouldn't you?

- Management paradigm shift
- Requires upfront and continual investment
- Additional infrastructure components requirements
- Data islands (lost visibility)
- Requires good automation skills
- Not everything is a good "fit"

How do we do it?

- Configuration-as-Code
  - Separation of **what** from **how**
- Windows PowerShell DSC 2.0
  - Improvements introduced in WMF v5
  - Cross-node dependencies
  - PSDSCRunAsCredential (no CredSSP)
- Can use any configuration management tooling
  - Chef, Puppet and Ansible all natively support DSC resources

Windows PowerShell DSC 101

- Local Configuration Manager (LCM)
  - Push/Pull
  - Configuration Mode
- Managed Object Format (MOF) files
  - CIM standard
  - Enacted by the LCM
- Resources
  - Open source resources (inc. XenDesktop7)
  - Internal/custom resources
- Configurations
  - Configuration Data

PowerShell Authoring

```
#requires -version 4

configuration DemoConfiguration {
    param (
        [System.String[]] $ComputerName
    )

    node $ComputerName {
        File Reports {
            DestinationPath = 'C:\Reports';
            Ensure = 'Present';
            Type = 'Directory';
        }
        Service WindowsUpdate {
            Name = 'wuauserv';
            StartupType = 'Automatic';
            State = 'Running';
        }
        WindowsFeature RemoteDesktopServices {
            Name = 'RDS-RD-Server';
            Ensure = 'Present';
            DependsOn = '[Service]WindowsUpdate';
        }
    } #end node

} #end configuration
```

```
...

instance of MSFT_ServiceResource as $MSFT_ServiceResource1ref
{
ResourceID = "[Service]WindowsUpdate";
 State = "Running";
 SourceInfo = “C:\\TestLab\\Resources\\DSCConfigurations\\..
 Name = "wuauserv";
 StartupType = "Automatic";
 ModuleName = "PSDesiredStateConfiguration";
 ModuleVersion = "1.0";
};

instance of MSFT_RoleResource as $MSFT_RoleResource1ref
{
ResourceID = "[WindowsFeature]RemoteDesktopServices";
 Ensure = "Present";
 SourceInfo = "C:\\TestLab\\Resources\\DSCConfigurations\\..
 Name = "RDS-RD-Server";
 ModuleName = "PSDesiredStateConfiguration";
 ModuleVersion = "1.0";
DependsOn = {
    "[Service]WindowsUpdate"};
};

...
```

Demo

Where next?

- Infrastructure-as-code
  - ARM/CloudFormation templates or Terraform
- Build and release pipelines
- Infrastructure test automation

Resources

- Advanced PowerShell DSC and Custom Resources
  - Channel9 Series (Jeffrey Snover and Jason Helmick)
- XenDesktop7 DSC Resources
  - 44 resources
- PowerShell DSC Community Resources
  - Experimental and high-quality resources
- Lability
  - Locally deploy/test DSC configurations on Hyper-V

Questions?

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