

Basics

Composite Resources

1 Configuration script

```
Written in PowerShell
Example:
Configuration AlterPermissions
{
    Import-DscResource -ModuleName
        VSAR_cFileShare

    node [target server name]
    {
        VSAR_cSetSharePermissions SetPermissions
        {
            ShareName      = '[Share name]'
            Ensure          = 'Absent'
            FullAccessUsers = @('[user 1]')
            ChangeAccessUsers = @('[user 2]')
        }
    }
}
AlterPermissions
```

2 Run script

- Creates **one** MOF file per node
- Potential for long and complex configurations
- → consider **composite** resources.

3 MOF sent to node

- One** MOF file per node
- → consider **composite** resources.
- Two distribution channels:
 - Pull mode ... interval based check.
 - Push mode ... manual file copy via WinRM.

4 Node configures

- Node checks for push config every 15min
- Node checks for pull config every 30min
- Use `get-dscstatus` to check config state

1 Create Composite Module

- Create common composite module:

```
CompositeShareConfigModule
CompositeShareConfigModule.psd1
DSCResources
CompositeShareConfig
```

folder
manifest file
folder
resource folder

```
CompositeShareConfig.schema.psm1  
CompositeShareConfig.psm1
```

- Similar structure to a standard resource module

2 Create Node-Less configuration

- Create composite `CompositeShareConfig.schema.psm1` file

```
CompositeShareConfigModule
- CompositeShareConfigModule.psd1
- DSCResources
  - CompositeShareConfig
  - CompositeShareConfig.schema.psm1
```

- The **extension** is the magic glue!

- Example:

```
Configuration DemoMachines
{
    Import-DscResource -ModuleName cFileShare
    param
    (
        [parameter(Mandatory = $true)]
        [System.String] $ShareName,
    )
    Import-DscResource -ModuleName
        VSAR_cFileShare

    cSetSharePermissions SetPermissions
    {
        ShareName      = $ShareName
        Ensure          = "Ensure"
        FullAccessUsers = "demo\demoAdmin"
        ChangeAccessUsers = "demo\demoUser"
        ReadAccessUsers = "demo\demoReader"
    }
}
```

common configuration

applied to all nodes

4 Use the configuration

- Example usage:

```
Configuration DemoMachines
{
    Import-DscResource -ModuleName
        CompositeShareConfigModule

    Node DemoMC1
    {
        CommonShareConfig Common
        {
            ShareName = "DemoMC1 Share"
        }
    }

    Node DemoMC2
    {
        CommonShareConfig Common
        {
            ShareName = "DemoMC2 Share"
        }
    }
}
```

3 Create manifest file

- `New-ModuleManifest -Path "...CompsiteShareConfigModile\DSCResources\CompositeShareConfig\CompositeShareConfig.psd1"`
`-RootModule CompositeShareConfig.schema.psm1`

Config re-use
Simpler config files