

Installing Certificates on Windows

Using PowerShell to install into the Local Computer store

This can only be done with elevated privileges.

```
Import-Certificate -CertStoreLocation Cert:\LocalMachine\Root -FilePath cert.crt
```

Viewing certificate store contents

```
Get-ChildItem Cert:\LocalMachine\My | Sort-Object -Property Subject  
Get-ChildItem Cert:\LocalMachine\Root | Sort-Object -Property Subject  
Get-ChildItem Cert:\LocalMachine\TrustedPublisher | Sort-Object -Property Subject
```

```
Get-ChildItem Cert:\CurrentUser\My | Sort-Object -Property Subject  
Get-ChildItem Cert:\CurrentUser\Root | Sort-Object -Property Subject  
Get-ChildItem Cert:\CurrentUser\TrustedPublisher | Sort-Object -Property Subject
```

Viewing cert information from extensions

```
# Show all relevant local computer certificate information
```

```
Get-ChildItem Cert:\LocalMachine\My |
```

```

ForEach-Object {
    $sanExtension = $_.Extensions |
        Where-Object { $_.Oid.Value -eq '2.5.29.17' }

    if ($sanExtension) {
        [PSCustomObject]@{
            Subject          = $_.Subject
            IssuingCA        = $_.Issuer
            Thumbprint       = $_.Thumbprint
            NotBefore        = $_.NotBefore
            NotAfter         = $_.NotAfter
            DnsNames         = ($_.DnsNameList -join ', ')
        }
    }
}

```

Viewing certs and validate trust chain

```

Get-ChildItem Cert:\LocalMachine\My |
ForEach-Object {

    $chain = New-Object System.Security.Cryptography.X509Certificates.X509Chain
    $chain.ChainPolicy.RevocationMode = 'Online'
    $chain.ChainPolicy.RevocationFlag = 'EntireChain'
    $chain.ChainPolicy.VerificationFlags = 'NoFlag'
    $chain.ChainPolicy.VerificationTime = Get-Date

    $isTrusted = $chain.Build($_)

    # Extract SAN (DNS names)
    $san = $_.DnsNameList -join ', '

    [PSCustomObject]@{
        Subject          = $_.Subject
        IssuingCA        = $_.Issuer
        Thumbprint       = $_.Thumbprint
        NotAfter         = $_.NotAfter
    }
}

```

```
DnsNames      = $san
Trusted       = $isTrusted
ChainStatus   = if ($isTrusted) {
                'Success'
            } else {
                ($chain.ChainStatus | Select-Object -ExpandProperty Status) -join
            }, '
            }
ChainElements = ($chain.ChainElements |
                ForEach-Object { $_.Certificate.Subject }) -join ' -> '
    }
}
```

end

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