

Citrix App Layering Installation - Deployment Guide

Overview

This deployment guide covers the simplified Citrix App Layering platform installation process with hardcoded paths. No command-line parameters are required - simply configure the paths within the scripts and run.

Prerequisites

System Requirements

- Windows Server 2016/2019/2022 or Windows 10/11
- Virtual Machine (VMware vSphere recommended for App Layering)
- Minimum 8GB RAM, 16GB+ recommended
- Administrator privileges
- PowerShell 5.1 or higher

Required Files

1. CitrixInstall-Stage1.ps1 - Main installation script
2. citrix_functions_library.psm1 - Functions module
3. Citrix installers in your designated folder

Installation Structure

C:\Install\	(or your chosen path)
├─ VDAServerSetup.exe	(Required - Citrix VDA)
├─ PVS_Device.exe	(Optional - PVS Target Device)
├─ WEMAgent.msi	(Optional - WEM Agent)
├─ uberAgent.msi	(Optional - UberAgent)
├─ UberAgent\	(Optional - UberAgent files)
│ └─ Templates\	
│ └─ uberagent.conf	
│ └─ uberagent.license	
└─ Scripts\	(Your script location)
└─ CitrixInstall-Stage1.ps1	
└─ citrix_functions_library.psm1	

Step-by-Step Deployment

Step 1: Prepare Installation Files

1. Create installation directory:

```
powershell
```

```
New-Item -ItemType Directory -Path "C:\Install" -Force
```

```
New-Item -ItemType Directory -Path "C:\Scripts" -Force
```

2. Download and place Citrix installers:

- VDA installer (required): `C:\Install\VDAServerSetup.exe`
- PVS Target Device (optional): `C:\Install\PVS_Device.exe`
- WEM Agent (optional): `C:\Install\WEMAgent.msi`
- UberAgent (optional): `C:\Install\uberAgent.msi`

3. Place scripts:

- `CitrixInstall-Stage1.ps1` → `C:\Scripts\`
- `citrix_functions_library.psm1` → `C:\Scripts\`

Step 2: Configure Installation Paths

Edit `CitrixInstall-Stage1.ps1` and modify the Configuration Section:

```
powershell
```

```
#region Configuration Section - Modify paths as needed
```

```
# Required Citrix VDA installer path
```

```
$VDAPath = "C:\Install\VDAServerSetup.exe"
```

```
# Optional component installer paths (set to empty string to skip)
```

```
$PVSPath = "C:\Install\PVS_Device.exe"           # Set to "" to skip
```

```
$WEMPath = "C:\Install\WEMAgent.msi"             # Set to "" to skip
```

```
# UberAgent paths (set to empty string to skip UberAgent installation)
```

```
$UberAgentPath = "C:\Install\uberAgent.msi"      # Set to "" to skip
```

```
$UberAgentTemplatesPath = "C:\Install\UberAgent\Templates" # Set to "" to skip
```

```
$UberAgentConfigPath = "C:\Install\UberAgent\uberagent.conf" # Set to "" to skip
```

```
$UberAgentLicensePath = "C:\Install\UberAgent\uberagent.license" # Set to "" to skip
```

```
# IBM TADDM paths (set to empty string to skip TADDM configuration)
```

```
$TADDMPath = "C:\Program Files\IBM\TADDM"        # Set to "" to skip
```

```
$TADDMInstallBatPath = ""                        # Set to "" to skip
```

```
# Functions module (should be in same folder as script)
```

```
$FunctionsPath = "$PSScriptRoot\citrix_functions_library.psm1"
```

```
#endregion
```

Step 3: Configuration Examples

Minimal VDA-Only Installation

powershell

```
$VDAPath = "C:\Install\VDAServerSetup.exe"
$PVSPath = ""           # Skip PVS
$WEMPath = ""           # Skip WEM
$UberAgentPath = ""     # Skip UberAgent
$TADDMPath = ""         # Skip TADDM
```

Full Installation with All Components

powershell

```
$VDAPath = "C:\Install\VDAServerSetup.exe"
$PVSPath = "C:\Install\PVS_Device.exe"
$WEMPath = "C:\Install\WEMAgent.msi"
$UberAgentPath = "C:\Install\uberAgent.msi"
$UberAgentTemplatesPath = "C:\Install\UberAgent\Templates"
$UberAgentConfigPath = "C:\Install\UberAgent\uberagent.conf"
$UberAgentLicensePath = "C:\Install\UberAgent\uberagent.license"
$TADDMPath = "C:\Program Files\IBM\TADDM"
```

VDA + WEM Only

powershell

```
$VDAPath = "C:\Install\VDAServerSetup.exe"
$PVSPath = ""           # Skip PVS
$WEMPath = "C:\Install\WEMAgent.msi"
$UberAgentPath = ""     # Skip UberAgent
$TADDMPath = ""         # Skip TADDM
```

Step 4: Execute Installation

1. **Open PowerShell as Administrator**
2. **Navigate to script directory:**

powershell

```
cd C:\Scripts
```

3. **Set execution policy (if needed):**

```
powershell
```

```
Set-ExecutionPolicy -ExecutionPolicy Bypass -Scope Process
```

4. Run Stage 1:

```
powershell
```

```
.\CitrixInstall-Stage1.ps1
```

5. Follow the prompts:

- Script validates all paths
- Displays configuration summary
- Waits for confirmation before starting
- Installs components and optimizes system
- Automatically reboots if required

6. Stage 2 runs automatically after reboot:

- Verifies installations
- Performs App Layering finalization
- Creates packaging report
- Cleans up temporary files

What the Scripts Do

Stage 1 (Pre-Reboot)

- **Drive Configuration:** Sets up D: drive for cache, moves pagefile, event logs, user profiles
- **Component Installation:** Installs VDA, PVS, WEM, UberAgent, configures TADDM
- **System Optimization:** Registry tweaks, service optimization, power management
- **VMware Optimization:** Disables memory ballooning for consistent VDI performance
- **App Layering Prep:** Applies optimizations specifically for App Layering templatesM
- **System Optimization:** Registry tweaks, service optimization, power management
- **App Layering Prep:** Applies optimizations specifically for App Layering templates

Stage 2 (Post-Reboot)

- **Verification:** Checks service installation and system state
- **WEM RSA Key Cleanup:** Critical for App Layering finalization
- **Template Finalization:** Clears temp files, event logs, runs NGEN
- **Privacy Configuration:** Disables telemetry and call-home features

- **Reporting:** Creates comprehensive HTML report

App Layering Integration

After successful completion:

1. In App Layering Management Console:

- Navigate to Layers → Platform Layers
- Click "Create Platform Layer"
- Select the prepared VM as packaging machine
- Follow the platform layer creation wizard

2. Template is optimized for:

- WEM RSA keys removed (prevents finalization issues)
- Drive layout optimized (D: for cache, Y: for CD/DVD)
- Services installed but not running (proper for templates)
- Registry optimized for VDI workloads
- VMware memory ballooning disabled for consistent performance
- Clean state ready for layer finalization

Troubleshooting

Common Issues

1. Path Not Found Errors:

- Verify all installer paths in the Configuration Section
- Check file names match exactly (case sensitive)

2. Functions Module Not Found:

- Ensure `citrix_functions_library.psm1` is in same folder as Stage 1 script
- Or update `$FunctionsPath` variable

3. Drive Configuration Issues:

- Script handles physical D: drive requirements automatically
- Prompts to attach physical disk if needed in virtualized environment

4. Service Installation Issues:

- Check VDA prerequisites (Print Spooler, .NET Framework)
- Review installation logs in `C:\Logs\`

Log Locations

- Main log: `C:\Logs\CitrixInstall.log`

- VDA logs: `%ProgramData%\Citrix\VirtualDesktopAgent\Logs\`
- HTML report: `C:\Logs\CitrixPackagingReport.html`

Best Practices

1. Virtual Machine Setup:

- Use VMware vSphere for best App Layering compatibility
- Attach separate disk for D: drive (20GB+ recommended)
- Ensure VM has adequate RAM (8GB minimum, 16GB+ preferred)
- Memory ballooning will be automatically disabled for VDI optimization

2. App Layering Workflow:

- Run scripts on clean OS installation
- Don't join to domain during packaging (workgroup mode)
- Let scripts handle all optimizations automatically
- Use resulting template for platform layer creation

3. Component Selection:

- Only install components you actually need
- VDA is always required
- PVS only needed if using Provisioning Services
- WEM only needed if using Workspace Environment Management
- UberAgent only if using monitoring/analytics

4. VMware Considerations:

- Memory ballooning is automatically disabled for consistent performance
- VMware Tools should remain installed for guest OS functionality
- VDI mode is enabled in VMware Tools configuration
- Memory trimming features are disabled to prevent conflicts

Support

For issues with the scripts:

1. Check the main log file: `C:\Logs\CitrixInstall.log`
2. Review the HTML packaging report for detailed status
3. Verify all prerequisite files are present and paths are correct
4. Ensure running as Administrator in virtualized environment