

WINDOWS SERVER 2022

添加语言包、功能包后、累积更新及其它完成后，组件会有新的变化，例如过时的、待删除等状态。向不同的版本添加语言包、功能包后，每一个语言包、功能包有对应的。在 Windows 11、Windows 10 里并无多少变化，但是在 Windows Server 2022 Datacenter 和 Windows Server 2022 Datacenter (Desktop Experience) 版对比就有很大的变化，详见组件分析报告。

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一、 部署映像

A. 先决条件

II ISO 工具

使用一款可编辑 ISO 文件的软件，例如：PowerISO、DAEMON Tools、ISO Workshop；

III 获取相关包

学习“[附件 1：获取 Windows 安装包](#)”，查看“[Windows Server 2022](#)”项，

1. 系统安装包

- 1.1. 准备：[en-us_windows_server_2022_x64_dvd_620d7eac.iso](#)
- 1.2. 解压到：[D:\en-us_windows_server_2022_x64_dvd_620d7eac](#)
- 1.3. 解压完成后，将目录 [en-us_windows_11_business_editions_version_22h2_x64_dvd_17a08c](#) 更改为 [D:\OS2022](#)
- 1.4. 所有脚本、所有路径，已默认设置为 [D:\OS2022](#) 为映像来源。

2. 语言包：

下载：[20348.1.210507-1500.fe_release_amd64fre_SERVER_LOF_PACKAGES_OEM.iso](#)

II 运行 PS 命令行时：

1. 可选 “Terminal” 或 “PowerShell ISE”，未安装 “Terminal”，请前往 <https://github.com/microsoft/terminal/releases> 后下载；
2. 以管理员身份打开 “Terminal” 或 “PowerShell ISE”，建议设置 PowerShell 执行策略：绕过，PS 命令行：

`Set-ExecutionPolicy -ExecutionPolicy Bypass -Force`
3. 在本文中，PS 命令行，绿色部分，请复制后，粘贴到 “Terminal” 对话框，按回车键（Enter）后开始运行；
4. 有 .ps1 时，点击文件右键，选择以 PowerShell 运行，或复制路径，粘贴到 Terminal 里运行。

B. 语言包：提取

II 准备语言包

挂载 [20348.1.210507-1500.fe_release_amd64fre_SERVER_LOF_PACKAGES_OEM.iso](#) 或解压到任意位置；

III 执行提取命令

- 提取语言：[简体中文 - 中国](#)
- 语言标记：[zh-CN](#)
- 提取语言包适用于范围：[Install.wim](#)，[Boot.wim](#)，[WinRE.wim](#)
- [Auto](#) = 自动搜索本地所有磁盘，默认；
- 自定义路径，例如指定为 E 盘：[\\$ISO = "E:\\"](#)

复制代码或查看源文件：[Extract.ps1](#) ([本地](#), [Github](#))

```
$ISO = "Auto"
```

```
Function Extract_Language
```

```
{  
    param  
    (  
        $Package,  
        $SaveTo,  
        $NewPath  
    )
```

```
New-Item -Path $SaveTo -ItemType Directory -ErrorAction SilentlyContinue | Out-Null
```

```
if ($NewPath -eq "Auto") {
    Get-PSDrive -PSProvider FileSystem -ErrorAction SilentlyContinue | ForEach-Object {
        ForEach ($item in $Language) {
            $TempFilePath = Join-Path -Path $_.Root -ChildPath $item -ErrorAction SilentlyContinue

            if (Test-Path $TempFilePath -PathType Leaf) {
                Write-host "`n Find: " -NoNewLine; Write-host $TempFilePath -ForegroundColor Green
                Write-host " Copy to: " -NoNewLine; Write-host $SaveTo
                Copy-Item -Path $TempFilePath -Destination $SaveTo -Force
            }
        }
    }
} else {
    ForEach ($item in $Language) {
        $TempFilePath = Join-Path -Path $NewPath -ChildPath $item -ErrorAction SilentlyContinue

        Write-host "`n Find: " -NoNewline; Write-host $TempFilePath -ForegroundColor Green
        if (Test-Path $TempFilePath -PathType Leaf) {
            Write-host " Copy to: " -NoNewLine; Write-host $SaveTo
            Copy-Item -Path $TempFilePath -Destination $SaveTo -Force
        } else {
            Write-host " Not found"
        }
    }
}

Write-host "`n Verify the language pack file"
ForEach ($item in $Package) {
    $Path = "$($SaveTo)\${[IO.Path]::GetFileName($item)}"

    if (Test-Path $Path -PathType Leaf) {
        Write-host " Discover: " -NoNewLine
        Write-host $Path -ForegroundColor Green
    } else {
        Write-host " Not found: " -NoNewLine
        Write-host $Path -ForegroundColor Red
    }
}

$Language = @(
    "LanguagesAndOptionalFeatures\Microsoft-Windows-LanguageFeatures-Fonts-Hans-Package~31bf3856ad364e35~amd64~~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-Server-Language-Pack_x64_zh-CN.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-LanguageFeatures-Basic-zh-CN-Package~31bf3856ad364e35~amd64~~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-LanguageFeatures-Handwriting-zh-CN-Package~31bf3856ad364e35~amd64~~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-LanguageFeatures-OCR-zh-CN-Package~31bf3856ad364e35~amd64~~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-LanguageFeatures-Speech-zh-CN-Package~31bf3856ad364e35~amd64~~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-LanguageFeatures-TextToSpeech-zh-CN-Package~31bf3856ad364e35~amd64~~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~amd64~zh-CN~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~wow64~zh-CN~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~amd64~zh-CN~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~wow64~zh-CN~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~amd64~zh-CN~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~wow64~zh-CN~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-StepsRecorder-Package~31bf3856ad364e35~amd64~zh-CN~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-StepsRecorder-Package~31bf3856ad364e35~wow64~zh-CN~.cab"
    "LanguagesAndOptionalFeatures\Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~amd64~zh-CN~.cab"
```

```
"LanguagesAndOptionalFeatures\Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~wow64~zh-CN~.cab"
)

Extract_Language -Package $Language -SaveTo "D:\OS2022_Custom\Install\Install\Language\zh-CN" -NewPath $ISO

$Language = @(
    "Windows Preinstallation Environment\x64\WinPE_OC\WinPE-FontSupport-zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\lp.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-securestartup_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-atbroker_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-audiocore_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-audiodrivers_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-enhancedstorage_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-narrator_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-scripting_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-speech-tts_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-srh_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-srt_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-wds-tools_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-wmi_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-appxpackaging_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-storagewmi_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-wifi_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-rejuv_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-opcservices_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-hta_zh-CN.cab"
)

Extract_Language -Package $Language -SaveTo "D:\OS2022_Custom\Install\WinRE\Language\zh-CN" -NewPath $ISO

$Language = @(
    "Windows Preinstallation Environment\x64\WinPE_OC\WinPE-FontSupport-zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\lp.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\WinPE-Setup_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\WINPE-SETUP-Server_zh-CN.CAB"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-securestartup_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-atbroker_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-audiocore_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-audiodrivers_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-enhancedstorage_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-narrator_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-scripting_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-speech-tts_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-srh_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-srt_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-wds-tools_zh-CN.cab"
    "Windows Preinstallation Environment\x64\WinPE_OC\zh-CN\winpe-wmi_zh-CN.cab"
)

Extract_Language -Package $Language -SaveTo "D:\OS2022_Custom\Boot\Boot\Language\zh-CN" -NewPath $ISO
```

c. 自定义部署映像

II 自定义部署映像：Install.wim

1. 查看 Install.wim 详细信息

映像名称、映像描述、映像大小、架构、版本、索引号等；

```
$ViewFile = "D:\OS2022\Sources\Install.wim"
```

```
Get-WindowedImage -ImagePath $ViewFile | Foreach-Object {  
    Get-WindowedImage -ImagePath $ViewFile -index $_.ImageIndex  
}
```

2. 指定挂载 Install.wim 路径

```
New-Item -Path "D:\OS2022_Custom\Install\Install\Mount" -ItemType directory -ea SilentlyContinue
```

循环操作区域，开始，

3. 开始挂载 Install.wim

默认索引号： 1

```
$Index = "1"  
Mount-WindowedImage -ImagePath "D:\OS2022\sources\install.wim" -Index $Index -Path "D:\OS2022_Custom\Install\Install\Mount"
```

处理 Install.wim 映像内的文件，可选项，开始，

3.1. 自定义部署映像： WinRE.wim

注意：

- WinRE.wim 属于 Install.wim 映像内的文件；
- Install.wim 有多个索引号时， 仅处理任意一个 WinRE.wim 即可；
- 同步至所有索引号即可减少 Install.wim 体积；学习 “[如何批量替换 Install.wim 里的所有索引号里的 WinRE.wim](#)” 。

3.1.1. 查看 WinRE.wim 详细信息

映像名称、映像描述、映像大小、架构、版本、索引号等；

```
$ViewFile = "D:\OS2022_Custom\Install\Install\Mount\Windows\System32\Recovery\WinRE.wim"  
Get-WindowedImage -ImagePath $ViewFile | Foreach-Object {  
    Get-WindowedImage -ImagePath $ViewFile -index $_.ImageIndex  
}
```

3.1.2. 指定挂载 WinRE.wim 路径

```
New-Item -Path "D:\OS2022_Custom\Install\WinRE\Mount" -ItemType directory -ea SilentlyContinue
```

3.1.3. 开始挂载 WinRE.wim

默认索引号： 1

```
$Index = "1"  
Mount-WindowedImage -ImagePath $FileName -Index $Index -Path "D:\OS2022_Custom\Install\WinRE\Mount"
```

3.1.4. 语言包

自动安装语言包：按组件匹配，匹配成功后，再安装本地对应的语言包文件。

3.1.4.1. 语言包：添加

复制代码或查看源文件：[WinRE.Instl.lang.ps1](#) ([本地](#), [Github](#))

```
$Mount = "D:\OS2022_Custom\Install\WinRE\Mount"
$Sources = "D:\OS2022_Custom\Install\WinRE\Language\zh-CN"

$Initl_install_Language_Component = @()
Get-WindowsPackage -Path $Mount | ForEach-Object {
    $Initl_install_Language_Component += $_.PackageName
}

Add-WindowsPackage -Path $Mount -PackagePath "$($Sources)\WinPE-FontSupport-zh-CN.cab"

$Language_List = @(
    @{ Match = "*WinPE-LanguagePack-Package*"; File = "lp.cab"; }
    @{ Match = "*SecureStartup*"; File = "winpe-securestartup_zh-CN.cab"; }
    @{ Match = "*ATBroker*"; File = "winpe-atbroker_zh-CN.cab"; }
    @{ Match = "*AudioCore*"; File = "winpe-audiocore_zh-CN.cab"; }
    @{ Match = "*AudioDrivers*"; File = "winpe-audiodrivers_zh-CN.cab"; }
    @{ Match = "*EnhancedStorage*"; File = "winpe-enhancedstorage_zh-CN.cab"; }
    @{ Match = "*Narrator*"; File = "winpe-narrator_zh-CN.cab"; }
    @{ Match = "*scripting*"; File = "winpe-scripting_zh-CN.cab"; }
    @{ Match = "*Speech-TTS*"; File = "winpe-speech-tts_zh-CN.cab"; }
    @{ Match = "*srh*"; File = "winpe-srh_zh-CN.cab"; }
    @{ Match = "*srt*"; File = "winpe-srt_zh-CN.cab"; }
    @{ Match = "*wds-tools*"; File = "winpe-wds-tools_zh-CN.cab"; }
    @{ Match = "*-WMI-Package*"; File = "winpe-wmi_zh-CN.cab"; }
    @{ Match = "*WinPE-AppxPackaging*"; File = "winpe-appxpackaging_zh-CN.cab"; }
    @{ Match = "*StorageWMI*"; File = "winpe-storagewmi_zh-CN.cab"; }
    @{ Match = "*WiFi*"; File = "winpe-wifi_zh-CN.cab"; }
    @{ Match = "*rejuv*"; File = "winpe-rejuv_zh-CN.cab"; }
    @{ Match = "*opcservices*"; File = "winpe-opcservices_zh-CN.cab"; }
    @{ Match = "*hta*"; File = "winpe-hta_zh-CN.cab"; }
)

ForEach ($Rule in $Language_List) {
    Write-host "`n Rule name: $($Rule.Match)" -ForegroundColor Yellow; Write-host "  $('-' * 80)"
    ForEach ($Component in $Initl_install_Language_Component) {
        if ($Component -like "*$($Rule.Match)*") {
            Write-host "  Component name: " -NoNewline
            Write-host $Component -ForegroundColor Green
            Write-host "  Language pack file: " -NoNewline
            Write-host $Rule.File -ForegroundColor Green

            Write-Host "  Installing ".PadRight(22) -NoNewline
            try {
                Add-WindowsPackage -Path $Mount -PackagePath "$($Sources)\$($Rule.File)" | Out-Null
                Write-host "Finish" -ForegroundColor Green
            } catch {
                Write-host "Failed" -ForegroundColor Red
            }
        }
    }
}
```

```
        break
    }
}
}
```

3.1.4.2. 组件

3.1.4.2.1. 查看

```
Get-WindowsPackage -Path "D:\OS2022_Custom\Install\WinRE\Mount" | Out-GridView
```

3.1.4.2.2. 导出到 Csv

```
$SaveTo = "D:\OS2022_Custom\Install\WinRE\Report.${Get-Date -Format
"yyyyMMddHHmmss"}.csv"
Get-WindowsPackage -Path "D:\OS2022_Custom\Install\WinRE\Mount" | Export-CSV -
NoType -Path $SaveTo
Write-host $SaveTo -ForegroundColor Green
```

3.1.5. 更新，可选

3.1.6. 驱动，可选

3.1.7. 保存映像

```
Save-WindowsImage -Path "D:\OS2022_Custom\Install\WinRE\Mount"
```

3.1.8. 卸载映像

```
Dismount-WindowsImage -Path "D:\OS2022_Custom\Install\WinRE\Mount" -Discard
```

3.1.9. 重建 WinRE.wim 后，可缩小文件大小

复制代码或查看源文件：[WinRE.Rebuild.ps1](#) ([本地](#), [Github](#))

```
$FileName = "D:\OS2022_Custom\Install\Install\Mount\Windows\System32\Recovery\WinRE.wim"
Get-WindowsImage -ImagePath $Filename -ErrorAction SilentlyContinue | ForEach-Object {
    Write-Host "  Image name: " -NoNewline
    Write-Host $_.ImageName -ForegroundColor Yellow
    Write-Host "  The index number: " -NoNewline
    Write-Host $_.ImageIndex -ForegroundColor Yellow

    Write-Host "`n  Rebuild".PadRight(28) -NoNewline
    Export-WindowsImage -SourceImagePath $Filename -SourceIndex $_.ImageIndex -DestinationImagePath
"$($FileName).New" -CompressionType max
    Write-Host "Finish`n" -ForegroundColor Green
}

if (Test-Path "$($FileName).New" -PathType Leaf) {
    Remove-Item -Path $Filename
    Move-Item -Path "$($FileName).New" -Destination $Filename
}
```

```
Write-Host "Finish" -ForegroundColor Green
} else {
    Write-host "Failed" -ForegroundColor Red
}
```

3.1.10. 备份 Install.wim

复制代码或查看源文件: [WinRE.Backup.ps1](#) ([本地](#), [Github](#))

```
$WimLibPath = "D:\OS2022_Custom\Install\Install\Update\Winlib"
$FileName = "D:\OS2022_Custom\Install\Install\Mount\Windows\System32\Recovery\WinRE.wim"
New-Item -Path $WimLibPath -ItemType Directory -ea SilentlyContinue
Copy-Item -Path $FileName -Destination $WimLibPath -Force
```

3.1.11. 替换 Install.wim 映像内的 WinRE.wim

- 每次挂载 Install.wim 后 “[替换 WinRE.wim](#)” ；
- 学习 “[获取 Install.wim 所有索引号后并替换旧的 WinRE.wim](#)” 。

[处理 Install.wim 映像内的文件](#)，结束。

4. 语言包

自动安装语言包：按组件匹配，匹配成功后，再安装本地对应的语言包文件。

4.1. 语言包：添加

复制代码或查看源文件: [Install.Instl.lang.ps1](#) ([本地](#), [Github](#))

```
$Mount = "D:\OS2022_Custom\Install\Install\Mount"
$Sources = "D:\OS2022_Custom\Install\Install\Language\zh-CN"

$Initl_install_Language_Component = @()
Get-WindowsPackage -Path $Mount | ForEach-Object {
    $Initl_install_Language_Component += $_.PackageName
}

Add-WindowsPackage -Path $Mount -PackagePath "$($Sources)\Microsoft-Windows-LanguageFeatures-Fonts-Hans-
Package~31bf3856ad364e35~amd64~~.cab"

$Language_List = @(
    @{ Match = "*Server-LanguagePack-Package*"; File = "Microsoft-Windows-Server-Language-Pack_x64_zh-CN.cab"; }
    @{ Match = "*LanguageFeatures-Basic*"; File = "Microsoft-Windows-LanguageFeatures-Basic-zh-CN-
Package~31bf3856ad364e35~amd64~~.cab"; }
    @{ Match = "*Handwriting*"; File = "Microsoft-Windows-LanguageFeatures-Handwriting-zh-CN-
Package~31bf3856ad364e35~amd64~~.cab"; }
    @{ Match = "*OCR*"; File = "Microsoft-Windows-LanguageFeatures-OCR-zh-CN-
Package~31bf3856ad364e35~amd64~~.cab"; }
    @{ Match = "*LanguageFeatures-Speech*"; File = "Microsoft-Windows-LanguageFeatures-Speech-zh-CN-
Package~31bf3856ad364e35~amd64~~.cab"; }
```



```
@{ Match = "*TextToSpeech*"; File = "Microsoft-Windows-LanguageFeatures-TextToSpeech-zh-CN-
Package~31bf3856ad364e35~amd64~~.cab"; }

@{ Match = "*MSPaint*amd64*"; File = "Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~amd64~zh-
CN~.cab"; }

@{ Match = "*MSPaint*wow64*"; File = "Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~wow64~zh-
CN~.cab"; }

@{ Match = "*Notepad*amd64*"; File = "Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~amd64~zh-
CN~.cab"; }

@{ Match = "*Notepad*wow64*"; File = "Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~wow64~zh-
CN~.cab"; }

@{ Match = "*PowerShell*amd64*"; File = "Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~amd64~zh-
CN~.cab"; }

@{ Match = "*PowerShell*wow64*"; File = "Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~wow64~zh-
CN~.cab"; }

@{ Match = "*StepsRecorder*amd64*"; File = "Microsoft-Windows-StepsRecorder-Package~31bf3856ad364e35~amd64~zh-
CN~.cab"; }

@{ Match = "*StepsRecorder*wow64*"; File = "Microsoft-Windows-StepsRecorder-Package~31bf3856ad364e35~wow64~zh-
CN~.cab"; }

@{ Match = "*WordPad*amd64*"; File = "Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~amd64~zh-
CN~.cab"; }

@{ Match = "*WordPad*wow64*"; File = "Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~wow64~zh-
CN~.cab"; }

)

ForEach ($Rule in $Language_List) {
    Write-host "`n Rule name: $($Rule.Match)" -ForegroundColor Yellow; Write-host "  $('-' * 80)"

    ForEach ($Component in $Initl_install_Language_Component) {
        if ($Component -like "*$($Rule.Match)*") {
            Write-host "  Component name: " -NoNewline
            Write-host $Component -ForegroundColor Green

            Write-host "  Language pack file: " -NoNewline
            Write-host $Rule.File -ForegroundColor Green

            Write-Host "  Installing ".PadRight(22) -NoNewline

            try {
                Add-WindowsPackage -Path $Mount -PackagePath "$($Sources)\$($Rule.File)" | Out-Null

                Write-host "Finish" -ForegroundColor Green

                break
            } catch {
                Write-host "Failed" -ForegroundColor Red
            }
        }
    }
}

}
```

4.2. 组件

4.2.1. 查看

```
Get-WindowsPackage -Path "D:\OS2022_Custom\Install\Install\Mount" | Out-GridView
```

4.2.2. 导出到 Csv

```
$SaveTo = "D:\OS2022_Custom\Install\Install\Report.$(Get-Date -Format "yyyyMMddHHmmss").csv"
Get-WindowsPackage -Path "D:\OS2022_Custom\Install\Install\Mount" | Export-CSV -NoType -Path $SaveTo
Write-host $SaveTo -ForegroundColor Green
```

5. 更新，可选项

5.1. 下载

查阅 “[Windows Server 2022 更新历史](#)”，例如安装累积更新：[KB5030216](#)

前往下载页面：<https://www.catalog.update.microsoft.com/Search.aspx?q=Kb5030216> 或 "直连下载"（无法下载时请进入下载页面），保存到：

[D:\OS2022_Custom\Install\Install\Update\windows10.0-kb5030216-x64_cbe587155f9818548b75f65d5cd41d341ed2fc61.msu](#)

5.2. 添加

```
$KBPath = "D:\OS2022_Custom\Install\Install\Update\windows10.0-kb5030216-x64_cbe587155f9818548b75f65d5cd41d341ed2fc61.msu"
Add-WindowsPackage -Path "D:\OS2022_Custom\Install\Install\Mount" -PackagePath $KBPath
```

5.3. 固化更新，可选项

```
Dism /Image:"D:\OS2022_Custom\Install\Install\Mount" /cleanup-image /StartComponentCleanup
```

5.3.1. 固化更新后清理组件

复制代码或查看源文件：[Install.Update.Curing.ps1](#) ([本地](#), [Github](#))

```
$Mount = "D:\OS2022_Custom\Install\Install\Mount"
Get-WindowsPackage -Path $Mount -ErrorAction SilentlyContinue | ForEach-Object {
    if ($_.PackageState -eq "Superseded"){
        Write-Host " $($_.PackageName)" -ForegroundColor Green
        Remove-WindowsPackage -Path $Mount -PackageName $_.PackageName | Out-Null
    }
}
```

6. 驱动，可选

7. 健康

保存前应检查是否损坏，健康状态异常时，中止保存

```
Repair-WindowsImage -Path "D:\OS2022_Custom\Install\Install\Mount" -ScanHealth
```

8. 替换 WinRE.wim

已批量替换 Install.wim 里的所有索引号里的 WinRE.wim 请跳过该步骤。

```
$WinRE = "D:\OS2022_Custom\Install\Install\Update\Winlib\WinRE.wim"
$CopyTo = "D:\OS2022_Custom\Install\Install\Mount\Windows\System32\Recovery"
Copy-Item -Path $WinRE -Destination $CopyTo -Force
```

9. 保存映像

```
Save-WindowsImage -Path "D:\OS2022_Custom\Install\Install\Mount"
```

10. 卸载映像

```
Dismount-WindowsImage -Path "D:\OS2022_Custom\Install\Install\Mount" -Discard
```

循环操作区域，结束。

11. 如何批量替换 Install.wim 里的所有索引号里的 WinRE.wim

11.1. 获取 WimLib

前往 <https://wimlib.net> 官方网站后，选择不同的版本：[arm64](#), [x64](#), [x86](#)，下载完成后解压到：[D:\Wimlib](#)

11.2. 如何在 Install.wim 里提取和更新 WinRE.wim

11.2.1. 从 Install.wim 里提取 WinRE.wim 文件 Install.wim

复制代码或查看源文件：[Install.WinRE.Extract.ps1](#) ([本地](#), [Github](#))

```
$Arguments = @(
    "extract",
    "D:\OS2022\sources\install.wim", "1",
    "\Windows\System32\Recovery\Winre.wim",
    "--dest-dir=""D:\OS2022_Custom\Install\Install\Update\Winlib""
)
```

```
New-Item -Path "D:\OS2022_Custom\Install\Install\Update\Winlib" -ItemType Directory -ea SilentlyContinue
Start-Process -FilePath "d:\wimlib\wimlib-imagex.exe" -ArgumentList $Arguments -wait -nonewwindow
```

11.2.2. 获取 Install.wim 所有索引号后并替换旧的 WinRE.wim

复制代码或查看源文件：[Install.WinRE.Replace.wim.ps1](#) ([本地](#), [Github](#))

```
Get-WindowsImage -ImagePath "D:\OS2022\sources\install.wim" -ErrorAction SilentlyContinue | ForEach-Object {
    Write-Host "  Image name: " -NoNewline
    Write-Host $_.ImageName -ForegroundColor Yellow
    Write-Host "  The index number: " -NoNewline
    Write-Host $_.ImageIndex -ForegroundColor Yellow

    Write-Host "`n  Replacement "
    $Arguments = @(
        "update",
        "D:\OS2022\sources\install.wim", $_.ImageIndex,
        "--command=""add 'D:\OS2022_Custom\Install\Install\Update\Winlib\WinRE.wim'
        '\Windows\System32\Recovery\WinRe.wim'""
    )

    Start-Process -FilePath "d:\wimlib\wimlib-imagex.exe" -ArgumentList $Arguments -wait -nonewwindow
```

```
Write-Host "  Finish`n" -ForegroundColor Green
}
```

12. 重建 Install.wim 后可缩小文件大小

复制代码或查看源文件: [Install.Rebuild.wim.ps1](#) ([本地](#), [Github](#))

```
$InstallWim = "D:\OS2022\sources\install.wim"
Get-WindowsImage -ImagePath $InstallWim -ErrorAction SilentlyContinue | ForEach-Object {
    Write-Host "  Image name: " -NoNewline
    Write-Host $_.ImageName -ForegroundColor Yellow
    Write-Host "  The index number: " -NoNewline
    Write-Host $_.ImageIndex -ForegroundColor Yellow

    Write-Host "`n Rebuild".PadRight(28) -NoNewline
    Export-WindowsImage -SourceImagePath $InstallWim -SourceIndex $_.ImageIndex -DestinationImagePath "$($InstallWim).New" -
    CompressionType max | Out-Null
    Write-Host "Finish`n" -ForegroundColor Green
}

if (Test-Path "$($InstallWim).New" -PathType Leaf) {
    Remove-Item -Path $InstallWim
    Move-Item -Path "$($InstallWim).New" -Destination $InstallWim
    Write-Host "Finish" -ForegroundColor Green
} else {
    Write-host "Failed" -ForegroundColor Red
}
```

III 自定义部署映像: boot.wim

1. 查看 Boot.wim 文件信息

映像名称、映像描述、映像大小、架构、版本、索引号等;

```
$ViewFile = "D:\OS2022\Sources\Boot.wim"
Get-WindowsImage -ImagePath $ViewFile | Foreach-Object {
    Get-WindowsImage -ImagePath $ViewFile -index $_.ImageIndex
}
```

2. 指定挂载 Boot.wim 路径

```
New-Item -Path "D:\OS2022_Custom\Boot\Boot\Mount" -ItemType directory -ea SilentlyContinue
```

3. 开始挂载 Boot.wim

默认索引号: 2

```
$Index = "2"
Mount-WindowsImage -ImagePath "D:\OS2022\sources\boot.wim" -Index $Index -Path "D:\OS2022_Custom\Boot\Boot\Mount"
```

4. 语言包

自动安装语言包: 按组件匹配, 匹配成功后, 再安装本地对应的语言包文件。

4.1. 语言包：添加

复制代码或查看源文件: [Boot.Instl.lang.ps1](#) ([本地](#), [Github](#))

```
$Mount = "D:\OS2022_Custom\Boot\Boot\Mount"
$Sources = "D:\OS2022_Custom\Boot\Boot\Language\zh-CN"

$InitL_install_Language_Component = @()
Get-WindowsPackage -Path $Mount | ForEach-Object {
    $InitL_install_Language_Component += $_.PackageName
}

Add-WindowsPackage -Path $Mount -PackagePath "$($Sources)\WinPE-FontSupport-zh-CN.cab"

$Language = @(
    @{ Match = "*WinPE*Setup*Server_zh*Package*"; File = "WINPE-SETUP-Server_zh-CN.CAB"; }
    @{ Match = "*WinPE*Setup*Package*"; File = "WinPE-Setup_zh-CN.cab"; }
    @{ Match = "*WinPE-LanguagePack-Package*"; File = "lp.cab"; }
    @{ Match = "*SecureStartup*"; File = "winpe-securestartup_zh-CN.cab"; }
    @{ Match = "*ATBroker*"; File = "winpe-atbroker_zh-CN.cab"; }
    @{ Match = "*AudioCore*"; File = "winpe-audiocore_zh-CN.cab"; }
    @{ Match = "*AudioDrivers*"; File = "winpe-audiodrivers_zh-CN.cab"; }
    @{ Match = "*EnhancedStorage*"; File = "winpe-enhancedstorage_zh-CN.cab"; }
    @{ Match = "*Narrator*"; File = "winpe-narrator_zh-CN.cab"; }
    @{ Match = "*scripting*"; File = "winpe-scripting_zh-CN.cab"; }
    @{ Match = "*Speech-TTS*"; File = "winpe-speech-tts_zh-CN.cab"; }
    @{ Match = "*srh*"; File = "winpe-srh_zh-CN.cab"; }
    @{ Match = "*srt*"; File = "winpe-srt_zh-CN.cab"; }
    @{ Match = "*wds-tools*"; File = "winpe-wds-tools_zh-CN.cab"; }
    @{ Match = "*-WMI-Package*"; File = "winpe-wmi_zh-CN.cab"; }
)

ForEach ($Rule in $Language) {
    Write-host "`n Rule name: $($Rule.Match)" -ForegroundColor Yellow; Write-host "  $('-' * 80)"
    ForEach ($Component in $InitL_install_Language_Component) {
        if ($Component -like "*$($Rule.Match)*") {
            Write-host "  Component name: " -NoNewline
            Write-host $Component -ForegroundColor Green
            Write-host "  Language pack file: " -NoNewline
            Write-host $Rule.File -ForegroundColor Green

            Write-Host "  Installing ".PadRight(22) -NoNewline
            try {
                Add-WindowsPackage -Path $Mount -PackagePath "$($Sources)\$($Rule.File)" | Out-Null
                Write-host "Finish" -ForegroundColor Green
            } catch {
                Write-host "Failed" -ForegroundColor Red
            }
        }
    }
    break
}
```

4.2. 组件

4.2.1. 查看

```
Get-WindowsPackage -Path "D:\OS2022_Custom\Boot\Boot\Mount" | Out-GridView
```

4.2.2. 导出到 Csv

```
$SaveTo = "D:\OS2022_Custom\Boot\Boot\Report.$(Get-Date -Format "yyyyMMddHHmmss").csv"
Get-WindowsPackage -Path "D:\OS2022_Custom\Boot\Boot\Mount" | Export-CSV -NoType -Path $SaveTo
Write-host $SaveTo -ForegroundColor Green
```

4.3. 语言包：同步到 ISO 安装程序

```
Copy-Item -Path "D:\OS2022_Custom\Boot\Boot\Mount\sources\zh-CN" -Destination "D:\OS2022\sources\zh-CN" -Recurse -Force
```

4.4. 重新生成 Lang.ini

重新生成后，可调整 “安装界面” ， 选择 “语言” 时的顺序，打开 lang.ini，默认首选值 = 3，非默认值 = 2。

4.4.1. 重新生成已挂载目录 lang.ini

重新生成的 Lang.ini 文件位置：[D:\OS2022_Custom\Boot\Boot\Mount\Sources\lang.ini](#)

```
Dism /image:"D:\OS2022_Custom\Boot\Boot\Mount" /gen-langini
/distribution:"D:\OS2022_Custom\Boot\Boot\Mount"
```

4.4.2. 重新生成 lang.ini 后，同步到安装程序

重新生成的 Lang.ini 文件位置：[D:\OS2022\Sources\lang.ini](#)

```
Dism /image:"D:\OS2022_Custom\Boot\Boot\Mount" /gen-langini /distribution:"D:\OS2022"
```

5. 更新，可选项

6. 驱动，可选项

7. 保存映像

```
Save-WindowsImage -Path "D:\OS2022_Custom\Boot\Boot\Mount"
```

8. 卸载映像

```
Dismount-WindowsImage -Path "D:\OS2022_Custom\Boot\Boot\Mount" -Discard
```

D. 生成 ISO

- II 下载 oscding 后，保存到：C:\Windows\System32 目录里，保存在其它路径，或请输入 OSCding.exe 绝对位置；
- III 使用 oscding 命令行生成一个 ISO 文件，保存到：D:\WS2022.iso

复制代码或查看源文件：[ISO.ps1](#) ([本地](#), [Github](#))

```
$ISO = "D:\Win2022"
$Volume = "Win2022"
$SaveTo = "D:\Win2022.iso"
$Arguments = @("-m", "-o", "-u2", "-udfver102", "-l" "$($Volume)", "-bootdata:2#p0,e,b" "$($ISO)\boot\etfsboot.com" "#pEF,e,b" "$($ISO)\efi\microsoft\boot\efisys.bin", $ISO, $FileName)
Start-Process -FilePath "OSCding.exe" -ArgumentList $Arguments -wait -nonewwindow
```

二、 已知问题

- 1. 添加 Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~amd64~zh-CN~.cab 到 Windows Server 2022 Standard Core, Windows Server 2022 Datacenter Core 后会新增 Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~amd64~zh-CN~10.0.20348.1，执行删除会报错，暂时不建议操作。

三、 组件：未变更

系统安装包：en-us_windows_server_2022_x64_dvd_620d7eac.iso，不同版本，组件列表：

序号	类型	WINDOWS SERVER 2022 STANDARD (DESKTOP EXPERIENCE), WINDOWS SERVER 2022 DATACENTER (DESKTOP EXPERIENCE)	WINDOWS SERVER 2022 STANDARD CORE, WINDOWS SERVER 2022 DATACENTER CORE
1		Downlevel-NLS-Sorting-Versions-Server-FoD-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Downlevel-NLS-Sorting-Versions-Server-FoD-Package~31bf3856ad364e35~amd64~~10.0.20348.1
2		Downlevel-NLS-Sorting-Versions-Server-FoD-Package~31bf3856ad364e35~wow64~~10.0.20348.1	Downlevel-NLS-Sorting-Versions-Server-FoD-Package~31bf3856ad364e35~wow64~~10.0.20348.1
3		Microsoft-OneCore-DirectX-Database-FOD-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-OneCore-DirectX-Database-FOD-Package~31bf3856ad364e35~amd64~~10.0.20348.1
4		Microsoft-OneCore-RasSstp-Api-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-OneCore-RasSstp-Api-Package~31bf3856ad364e35~amd64~~10.0.20348.1
5		Microsoft-Windows-FodMetadata-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-Windows-FodMetadata-Package~31bf3856ad364e35~amd64~~10.0.20348.1
6		Microsoft-Windows-Foundation-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-Windows-Foundation-Package~31bf3856ad364e35~amd64~~10.0.20348.1
7		Microsoft-Windows-InternetExplorer-Optional-Package~31bf3856ad364e35~amd64~~11.0.20348.1	
8		Microsoft-Windows-InternetExplorer-Optional-Package~31bf3856ad364e35~amd64~~11.0.20348.75	
9		Microsoft-Windows-LanguageFeatures-Basic-en-us-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-Windows-LanguageFeatures-Basic-en-us-Package~31bf3856ad364e35~amd64~~10.0.20348.1
10		Microsoft-Windows-LanguageFeatures-Handwriting-en-us-Package~31bf3856ad364e35~amd64~~10.0.20348.1	
11		Microsoft-Windows-LanguageFeatures-OCR-en-us-Package~31bf3856ad364e35~amd64~~10.0.20348.1	
12		Microsoft-Windows-LanguageFeatures-Speech-en-us-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-Windows-LanguageFeatures-Speech-en-us-Package~31bf3856ad364e35~amd64~~10.0.20348.1
13		Microsoft-Windows-LanguageFeatures-TextToSpeech-en-us-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-Windows-LanguageFeatures-TextToSpeech-en-us-Package~31bf3856ad364e35~amd64~~10.0.20348.1
14		Microsoft-Windows-MediaPlayer-Package~31bf3856ad364e35~amd64~~10.0.20348.1	
15		Microsoft-Windows-MediaPlayer-Package~31bf3856ad364e35~amd64~~10.0.20348.169	
16		Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.1	Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.1

序号	类型	WINDOWS SERVER 2022 STANDARD (DESKTOP EXPERIENCE), WINDOWS SERVER 2022 DATACENTER (DESKTOP EXPERIENCE)	WINDOWS SERVER 2022 STANDARD CORE, WINDOWS SERVER 2022 DATACENTER CORE
17		Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~amd64~~10.0.20348.1	
18		Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~wow64~en-US~10.0.20348.1	Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~wow64~en-US~10.0.20348.1
19		Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~wow64~~10.0.20348.1	
20		Microsoft-Windows-Networking-RemoteAccess-PowerShell-Base-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.1	Microsoft-Windows-Networking-RemoteAccess-PowerShell-Base-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.1
21		Microsoft-Windows-Networking-RemoteAccess-PowerShell-Base-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-Windows-Networking-RemoteAccess-PowerShell-Base-Package~31bf3856ad364e35~amd64~~10.0.20348.1
22		Microsoft-Windows-Networking-RemoteAccess-PowerShell-Base-Package~31bf3856ad364e35~amd64~~10.0.20348.143	Microsoft-Windows-Networking-RemoteAccess-PowerShell-Base-Package~31bf3856ad364e35~amd64~~10.0.20348.143
23		Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~amd64~~10.0.20348.1	
24		Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.1	Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.1
25		Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~wow64~~10.0.20348.1	
26		Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~wow64~en-US~10.0.20348.1	Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~wow64~en-US~10.0.20348.1
27		Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.1	
28		Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~amd64~~10.0.20348.1	
29		Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~wow64~en-US~10.0.20348.1	
30		Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~wow64~~10.0.20348.1	
31		Microsoft-Windows-Server-LanguagePack-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.1	Microsoft-Windows-Server-LanguagePack-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.1
32		Microsoft-Windows-Server-LanguagePack-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.169	Microsoft-Windows-Server-LanguagePack-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.169
33		Microsoft-Windows-ServerCore-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-Windows-ServerCore-Package~31bf3856ad364e35~amd64~~10.0.20348.1
34		Microsoft-Windows-StepsRecorder-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.1	

序号	类型	WINDOWS SERVER 2022 STANDARD (DESKTOP EXPERIENCE), WINDOWS SERVER 2022 DATACENTER (DESKTOP EXPERIENCE)	WINDOWS SERVER 2022 STANDARD CORE, WINDOWS SERVER 2022 DATACENTER CORE
35		Microsoft-Windows-StepsRecorder-Package~31bf3856ad364e35~amd64~~10.0.20348.1	
36		Microsoft-Windows-StepsRecorder-Package~31bf3856ad364e35~wow64~en-US~10.0.20348.1	
37		Microsoft-Windows-StepsRecorder-Package~31bf3856ad364e35~wow64~~10.0.20348.1	
38		Microsoft-Windows-TabletPCMath-Package~31bf3856ad364e35~amd64~~10.0.20348.1	
39		Microsoft-Windows-TabletPCMath-Package~31bf3856ad364e35~amd64~~10.0.20348.143	
40		Microsoft-Windows-UserExperience-Desktop-Package~31bf3856ad364e35~amd64~~10.0.20348.1	
41		Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.1	Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~amd64~en-US~10.0.20348.1
42		Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~amd64~~10.0.20348.1
43		Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~wow64~en-US~10.0.20348.1	Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~wow64~en-US~10.0.20348.1
44		Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~wow64~~10.0.20348.1	Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~wow64~~10.0.20348.1
45		Microsoft-Windows-Xps-Xps-Viewer-Opt-Package~31bf3856ad364e35~amd64~~10.0.20348.1	
46		OpenSSH-Client-Package~31bf3856ad364e35~amd64~~10.0.20348.1	OpenSSH-Client-Package~31bf3856ad364e35~amd64~~10.0.20348.1
47		Package_for_DotNetRollup~31bf3856ad364e35~amd64~~10.0.4400.	Package_for_DotNetRollup~31bf3856ad364e35~amd64~~10.0.4400.1
48		Package_for_RollupFix~31bf3856ad364e35~amd64~~20348.169.1.7	Package_for_RollupFix~31bf3856ad364e35~amd64~~20348.169.1.7
49		Package_for_ServicingStack~31bf3856ad364e35~amd64~~20348.169.1.1	Package_for_ServicingStack~31bf3856ad364e35~amd64~~20348.169.1.1

四、组件：新增后变化

序号	类型	WINDOWS SERVER 2022 STANDARD (DESKTOP EXPERIENCE), WINDOWS SERVER 2022 DATACENTER (DESKTOP EXPERIENCE)	WINDOWS SERVER 2022 STANDARD CORE, WINDOWS SERVER 2022 DATACENTER CORE
1	Fonts	Microsoft-Windows-LanguageFeatures-Fonts-Hans-Package~31bf3856ad364e35~AMD64~~.cab	
		Microsoft-Windows-LanguageFeatures-Fonts-Hans-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-Windows-LanguageFeatures-Fonts-Hans-Package~31bf3856ad364e35~amd64~~10.0.20348.1
2	Language pack	Microsoft-Windows-Server-Language-Pack_x64_zh-CN.cab	
		Microsoft-Windows-Server-LanguagePack-Package~31bf3856ad364e35~amd64~zh-CN~10.0.20348.1	Microsoft-Windows-Server-LanguagePack-Package~31bf3856ad364e35~amd64~zh-CN~10.0.20348.1
3	Basic	Microsoft-Windows-LanguageFeatures-Basic-zh-CN-Package~31bf3856ad364e35~AMD64~~.cab	
		Microsoft-Windows-LanguageFeatures-Basic-zh-cn-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-Windows-LanguageFeatures-Basic-zh-cn-Package~31bf3856ad364e35~amd64~~10.0.20348.1
4	Handwriting	Microsoft-Windows-LanguageFeatures-Handwriting-zh-CN-Package~31bf3856ad364e35~AMD64~~.cab	
		Microsoft-Windows-LanguageFeatures-Handwriting-zh-cn-Package~31bf3856ad364e35~amd64~~10.0.20348.1	
5	OCR	Microsoft-Windows-LanguageFeatures-OCR-zh-CN-Package~31bf3856ad364e35~AMD64~~.cab	
		Microsoft-Windows-LanguageFeatures-OCR-zh-cn-Package~31bf3856ad364e35~amd64~~10.0.20348.1	
6	语音	Microsoft-Windows-LanguageFeatures-Speech-zh-CN-Package~31bf3856ad364e35~AMD64~~.cab	
		Microsoft-Windows-LanguageFeatures-Speech-zh-cn-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-Windows-LanguageFeatures-Speech-zh-cn-Package~31bf3856ad364e35~amd64~~10.0.20348.1
7	文本和语音	Microsoft-Windows-LanguageFeatures-TextToSpeech-zh-CN-Package~31bf3856ad364e35~AMD64~~.cab	
		Microsoft-Windows-LanguageFeatures-TextToSpeech-zh-cn-Package~31bf3856ad364e35~amd64~~10.0.20348.1	Microsoft-Windows-LanguageFeatures-TextToSpeech-zh-cn-Package~31bf3856ad364e35~amd64~~10.0.20348.1
8	功能包	Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~amd64~zh-CN~.cab	
		Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~amd64~zh-CN~10.0.20348.1	Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~amd64~zh-CN~10.0.20348.1
9	功能包	Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~wow64~zh-CN~.cab	
		Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~wow64~zh-CN~10.0.20348.1	Microsoft-Windows-MSPaint-FoD-Package~31bf3856ad364e35~wow64~zh-CN~10.0.20348.1

序号	类型	WINDOWS SERVER 2022 STANDARD (DESKTOP EXPERIENCE), WINDOWS SERVER 2022 DATACENTER (DESKTOP EXPERIENCE)	WINDOWS SERVER 2022 STANDARD CORE, WINDOWS SERVER 2022 DATACENTER CORE
10	功能包	Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~amd64~zh-CN~.cab	
		Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~amd64~zh-CN~10.0.20348.1	Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~amd64~zh-CN~10.0.20348.1
11	功能包	Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~wow64~zh-CN~.cab	
		Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~wow64~zh-CN~10.0.20348.1	Microsoft-Windows-Notepad-FoD-Package~31bf3856ad364e35~wow64~zh-CN~10.0.20348.1
12	功能包	Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~amd64~zh-CN~.cab	
		Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~amd64~zh-CN~10.0.20348.1	
13	功能包	Microsoft-Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~wow64~zh-CN~.cab	
		Windows-PowerShell-ISE-FOD-Package~31bf3856ad364e35~wow64~zh-CN~10.0.20348.1	
14	按需包	Microsoft-Windows-StepsRecorder-Package~31bf3856ad364e35~amd64~zh-CN~.cab	
		Microsoft-Windows-StepsRecorder-Package~31bf3856ad364e35~amd64~zh-CN~10.0.20348.1	
15	按需包	Microsoft-Windows-StepsRecorder-Package~31bf3856ad364e35~wow64~zh-CN~.cab	
		Microsoft-Windows-StepsRecorder-Package~31bf3856ad364e35~wow64~zh-CN~10.0.20348.1	
16	功能包	Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~amd64~zh-CN~.cab	
		Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~amd64~zh-CN~10.0.20348.1	Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~amd64~zh-CN~10.0.20348.1
17	功能包	Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~wow64~zh-CN~.cab	
		Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~wow64~zh-CN~10.0.20348.1	Microsoft-Windows-WordPad-FoD-Package~31bf3856ad364e35~wow64~zh-CN~10.0.20348.1