# Global Variables

* BtrConfig – Global config data (Stored in Registry HKLM:/DaveWare/Beater)
  + LogFile – Location of log file
  + LogLevel – Detail level of log file
  + ConsoleLevel – Detail level of console output
  + RootPath – Root path for everything
  + AppFolder – Folder to store apps in
  + CertFolder – Folder with certificates to install
  + OscdimgPath – Path to oscdimg.exe
  + BaseImageFolder – Folder to store Base Images in
  + HDDFolder – Folder to store VM HDD files in
  + SnapShotFolder - Folder to store VM snapshots in
  + WorkingFolder – Temp folder
  + VMFolder – Folder to store VM config files in
  + VMTempFolder – Temp folder on the VMs
* BtrApplications – List of installable applications (Stored in Registry HKLM:/DaveWare/Beater/Applications)
  + Apps (Array)
    - Name – Name of application to install
    - Installer – Name of installer
    - Transform
    - Patch
    - AdditionalFiles
    - InstallSwitches
    - PatchSwitches
    - URL
    - HardInstall
* BtrDefaults (Stored in config/Defaults.json)
  + RootPath
  + AppFolder
  + CertFolder
  + OscdimgPath
  + BaseImagePath
  + HDDPath
  + SnapShotPath
  + WorkingFolder
  + VMPath
  + VMTempFolder
  + TimeZone
  + Network
    - UseNAT
    - IPPrefix
    - SubnetMask
    - SubnetLength
    - Gateway
    - DHCPStart
    - DHCPEnd
  + BaseImage (Array)
    - LocalAdmin
    - LocalPassword
    - CustomUpdateSource
    - AppsToInstall (Array)
  + OSList (Array)
    - Name
    - DownloadURL
    - Key
    - ImageIndex
  + Domains
    - Name
    - NBName
    - DomainAdmin
    - DomainPassword
  + Apps (Array)
    - Name
    - Installer
    - AdditionalFiles
    - InstallSwitches
    - URL
    - HardInstall
    - PreInstall
    - PostInstall
* BtrNetworks (Array) (Stored in json under Notes on vSwitch)
  + UseNAT – Y/N use NAT on switch
  + IPPrefix – first 3 octets of network
  + SubnetMask – 255.255.255.0 version of subnet mask
  + SubnetLength - /24 version of subnet mask
  + Gateway – IP of gateway on network
  + DHCPServer – Name of VM hosting DHCP
  + DHCPStart – Start of DHCP range
  + DHCPEnd – end of DHCP range
* BtrBaseImages (Array) (Stored in JSON file in same folder as .vhdx)
  + Name – Name of Base image
  + OS – Type of OS installed
  + LocalAdmin – Local admin username
  + LocalPassword – Password for local admin
  + Apps (Array) – List of installed apps
  + Roles (Array) – List installed apps
  + <Role config> - Same as BtrVMs
* BtrVMs (Array) Stored per VM (Stored in json under Notes)
  + Domain – Blank or domain it’s a member of
  + LocalAdmin – Local admin username
  + LocalPassword – Password for local admin
  + Roles – Array of installed roles
    - DC
    - CertServer
    - DNS
    - DHCP
    - Exchange
    - SQL
  + Domain (DC Only)
    - Name – Name of domain
    - NBName – NetBios name of domain
    - DomainAdmin – Domain admin account name
    - DomainPassword – Domain admin password

# Functions

* General
  + Write-BTRLog – Write info to log and/or console
    - Parameters
      * **Entry** – text to log
      * Level
        + Error
        + FunctionProgress
        + Progress
        + Debug
  + Import-BtrConfig – Refreshes Global Variables from registry/files/notes
    - Returns T/F
  + Connect-BTRPSSession – Connect PS Session to VM
    - Parameters
      * **VMName**  - Name of VM to connect to
    - Returns - PSSession
  + Install-BTRSoftware – Install software, downloading if required
    - Parameters
      * **VMName** – Name of VM to install software on
      * Name – Descriptive name of product to install
      * **Installer** – Name of Installer. A \* means to find latest version that matches pattern in the folder
      * InstallSwitches – Switches to apply to installer
      * URL – Url to download software from if it is not in AppFolder
      * HardInstall – Switch use psexec to install remotely
      * PreInstall – Array of powershell commands to run before the installer
      * PostInstall – Array of powershell commands to run after the installer
    - Returns T/F
  + Wait-BTRVMOnline – Wait for VM to come online
    - Parameters
      * **VMName** – Name of VM
      * MaxWaitTime – Max time to wait in minutes. Default 5
      * WaitForLogin – Wait for logon to succeed
    - Returns T/F
  + Wait-BTRVMOffline – Wait for VM to go offline
    - Parameters
      * **VMName** – Name of VM
      * MaxWaitTime – Max time to wait in minutes. Default 10
    - Returns T/F
  + Wait-BTRVMReboot – Wait for VM to finish rebooting
    - Parameters
      * **VMName** – Name of VM
      * MaxWaitTime – Max time to wait in minutes. Default 10
      * WaitForLogin – Wait for logon to succeed
    - Returns T/F
  + Get-BtrNextIP – Get next available IP on switch
    - Parameters
      * **SwitchName** – Name of VSwitch
    - Returns – Next IP
  + New-BTRVirtualDisk – Creates a new Virtual Disk on an existing VM. VM must be powered on.
    - Parameters
      * **VMName** – Name of VM to add disk too
      * Size – Size of disk defaults to 10 GB
      * Letter – Letter of disk – Defaults to next available
      * Label – Label of disk
    - Returns True/False
  + New-BTRDNSRecord
    - Parameters
      * **Name** – Name to add
      * **Domain** – Name of domain to add record to
      * Zone – zone name. Defaults to domain zone
      * Data – Date to add
      * SkipReverse – No not add reverse record on A
      * Type – Type of record. Defaults to A
    - Returns True/False
  + Remove-BTRDNSRecord
    - Parameters
      * **Name** – Name to remove
      * **Domain** – Name of domain to remove record from
      * Zone – zone name. Defaults to domain zone
      * SkipReverse – No not remove reverse record on A
      * Type – Type of record. Defaults to A
    - Returns True/False
  + Initialize-BTRServer – Configures the existing server to run Beater
    - Returns True/False
* Network
  + New-BTRNetwork – Create a new network
    - Parameters
      * **Name** – Name of switch
      * UseNAT – Y/N use NAT on switch
      * IPPrefix – first 3 octets of network
      * SubnetMask – 255.255.255.0 version of subnet mask
      * SubnetLength - /24 version of subnet mask
      * Gateway – IP of gateway on network
    - Returns True/False
  + Remove-BTRNetwork – Removed switch
    - Parameters
      * **Name** – Name of switch
      * Force – Will delete any VMs using switch
    - Returns True/False
* Base Image
  + New-BTRInstalISO – Creates a new install ISO
    - Parameters
      * **Name** – Name of ISO to create
      * OS– Version of of OS to install. Must be known
      * InstallMedia – Path to installation media
      * LocalAdmin – Local admin username
      * LocalPassword – Password for local admin
      * ProductKey – Product key to use
      * ImageIndex – Index of install image on DVD
      * User – User name to register
      * Org – Organization to register
      * HostName – Host name for new machine
    - Returns True/False
  + New-BTRBaseImage – Creates a new base image
    - Parameters
      * Name – Name of Base image
      * OS – Type of OS installed
      * InstallMedia – Custom ISO to install from
      * LocalAdmin – Local admin username
      * LocalPassword – Password for local admin
      * Apps (Array) – List of installed apps
      * Network – Name of network switch to use
      * UseDHCP – Use DHCP to configure VM
      * StaticIP – Static IP address to use
      * HDDSize – Size of HDD to create
      * CustomUpdateSource – URL of WSUS Server
      * SkipUpdates – Do not run M$ updates
      * SkipDotNetOptimize – Skip optimizing .Net. This is slow
      * LeaveISO – Do not delete ISO when done
      * DoNotDeleteOnError – Do not deleteVM on error
    - Returns True/False
  + Remove-BTRBaseImage – Delete BaseImage and any references to it. Will fail if any VMs are still using it.
    - Parameters
      * **Name** – Name of base image to delete
      * Force – Will delete any child VMS of the base image
    - Returns True/False
* VM Functions
  + New-BTRVM – Creates a new VM from template
    - Parameters
      * **Name** – Name of VM to create
      * **BaseImage** – Name of base image to create from
      * CPUs – Number of vCPUs
      * Memory – GBs of RAM to attach
      * HDD – Size in GB of HDD
      * Apps (Array) – List of apps to install
    - Returns True/False
  + Remove-BTRVM – Delete a VM
    - Parameters
      * Name – Name of VM to delete
    - Returns True/False