Why a Cloned or Restored file system has less used space than the source

When Cloning or restoring a Disk Image you may notice that the copied file system has less used space than the source. This is by design, and is caused by Microsoft Volume Shadow Copy Service (VSS) Optimization Writer excluding System Restore Points (SRP) from the copy.

System Restore Points are created regularly during the normal operation of Windows and can grow in size to 10% (or more) of the total disk size. For example, a 1TB disk could contain 100GB of SRP data and this may be greater than the accessible used space on the file system. Existing System Restore Points are not required to transfer or recover your Windows partition and can substantially increase imaging/cloning time and size if unnecessarily copied.

To include all SRP data in a Disk Image or Clone please run from the Windows PE rescue environment. Running a Clone or Disk Image from Windows PE does not use VSS.