



## Antivirus and Port Exclusions for Opal-RAD software

\*Microsoft Security Essentials recommended

### **Opal-RAD Server** *(pre-configured on 2020i equipment) \*LAN Only/Internal*

Exclude Directory: **C:\opal**

Program Exceptions: **C:\opal\bin\OpalImageServer.exe, OpalRouter.exe, OpalDicomRecv.exe, OpalListener.exe**

Local Ports: OpalViewer: **33333-33338** | OpalStudyList: **1433** | OpalWeb: **80**

**\*Port 1433 SHOULD ALWAYS BE CLOSED AT THE ROUTER LEVEL ON THE NETWORK!**

### **If using DICOM send/receive** (on Opal Server) *\*WAN*

**104, 33336**

### **External Ports to open** (if using external web access to Server):

**443** (https) *\*recommended port, security certificate is required*

**80** (http) *\*port 443 is recommended over using port 80 to enhance security (see above)*

### **Workstations** (viewers) *\*LAN Only/Internal*

Exclude Directory: **C:\opal**

Program Exceptions: **C:\opal\bin\prefetchlistener.exe, C:\opal\bin\webkicker.dll**

Exclude Ports (Outgoing & Incoming) for OpalWeb/OpalViewer: **80, 33333-33340**

Exclude Ports (Incoming) for OpalClient only: **1433**