



# Cancer Alert System (CAS) Requirements

Below is a listing of the items you will need to host the Cancer Alert System (CAS) automated casefinding system at your facility to send potential cases into CNE<sub>x</sub>T. The Cancer Alert System (CAS) can currently receive HL7 message feeds of BAR, ADT, or ORU messages from multiple departments such as pathology, hospital admit/discharge (BAR preferred), radiation oncology and radiology imaging.

## CAS Listener Workstation

<ul style="list-style-type: none"><li>• Intel Dual Core (i3, etc.) or Xeon CPU or better, 1.2GHz or better, 1 GB RAM or more * * (equivalent processors, such as those from AMD, may also work, but have not been tested)</li></ul>
<ul style="list-style-type: none"><li>• 200 mb available hard drive space</li></ul>
<ul style="list-style-type: none"><li>• Windows 7, Windows 8, Windows 8.1 Windows Server 2003 R2, Windows Server 2008, Windows Server 2008 R2, Windows Server 2012, Windows Server 2012 R2</li></ul>
<ul style="list-style-type: none"><li>• DVD or CD drive (optional installation media)</li></ul>
<ul style="list-style-type: none"><li>• Backup hardware and software (recommended daily backups of CAS database)</li></ul>
<ul style="list-style-type: none"><li>• Fixed IP address for HL7 router</li></ul>
<ul style="list-style-type: none"><li>• Video card and monitor capable of displaying 800 x 600 or better</li></ul>
<ul style="list-style-type: none"><li>• Physical location recommended in IT or in the Cancer Registry office</li></ul>

**Note:** Must be on 24/7 to receive and queue messages. User does not have to be logged on. A dedicated workstation or server is not required and may be virtualized.

## CAS MessageQ Database

<ul style="list-style-type: none"><li>• MS SQL Server 2005, SQL Server 2008, SQL Server 2008 R2, SQL Server 2012, (SQL Server 2014 *not yet tested)</li></ul>
<ul style="list-style-type: none"><li>• Server need not be dedicated to CAS</li></ul>
<ul style="list-style-type: none"><li>• 15 GB available hard drive space for database and log files</li></ul>
<ul style="list-style-type: none"><li>• SQL Server need not contain the CNE<sub>x</sub>T databases also, but it can</li></ul>
<ul style="list-style-type: none"><li>• SQL Server need not be on the CAS Workstation, but it can be</li></ul>
<ul style="list-style-type: none"><li>• Backup hardware and software (recommended daily backups of CAS databases)</li></ul>

**Note:** Must be on 24/7 to record messages. Server may be virtualized. The CAS Workstation must be able to access the SQL Server machine for CAS (MessageQ) database and the SQL Server machine for the CNE<sub>x</sub>T databases (if a different SQL Server).

## BAR or ADT Message Requirements

<ul style="list-style-type: none"><li>• Messages in HL7 format 2.1 or higher</li></ul>
<ul style="list-style-type: none"><li>• BAR^P01 or ADT^A08 message type/trigger event (<b>BAR preferred</b>)</li></ul>
<ul style="list-style-type: none"><li>• Messages must contain a facility wide unique identifier (called Medical Record in the CNEXT case database) for matching messages to the CNEXT database</li></ul>
<ul style="list-style-type: none"><li>• MSH-9.1, MSH-9.2, MessageType and TriggerEvent fields must be filled with legitimate values</li></ul>
<ul style="list-style-type: none"><li>• MSH-10, MessageControlID fields must be filled with legitimate values</li></ul>
<ul style="list-style-type: none"><li>• At least one DG1-3.1, DiagnosisCode, field MUST be present and filled with a valid ICD-9 or ICD-10 diagnosis code for determining if the message is or is not cancer related; (multiple DG1 segments, therefore multiple diagnosis codes, are allowed)</li></ul>
<ul style="list-style-type: none"><li>• A DG1 field must be filled with values to indicate ICD coding system (ICD-9 or ICD-10)</li></ul>

## ORU Message Requirements

<ul style="list-style-type: none"><li>• Messages in HL7 format 2.1 or higher</li></ul>
<ul style="list-style-type: none"><li>• ORU^R01 message type</li></ul>
<ul style="list-style-type: none"><li>• Messages must contain a facility wide unique identifier (called Medical Record in the CNEXT case database) for matching messages to the CNEXT database</li></ul>
<ul style="list-style-type: none"><li>• MSH-9.1, MSH-9.2, MessageType and TriggerEvent fields must be filled with legitimate values</li></ul>
<ul style="list-style-type: none"><li>• MSH-10, MessageControlID fields must be filled with legitimate values</li></ul>
<ul style="list-style-type: none"><li>• At least one OBX-5, ObservationValue, field MUST be present and contain legitimate text that the software can evaluate for cancer; (multiple OBX segments are allowed)</li></ul>