

## Workflow Solutions

Finding efficient ways to support patient needs begins with better workflow management. MGC Diagnostics has developed a complete workflow system which combines healthcare industry standards and best practices with flexibility and support.

MGC Diagnostics makes it easy to build and customize powerful workflow solutions to save time and effort – allowing the focus to be on the patient. MGC Diagnostics' flexible workflow solutions are separated into 3 categories:

DATA COLLECTION | DATA REVIEW | DATA MANAGEMENT



### DATA COLLECTION

#### ASCENT™ CARDIORESPIRATORY DIAGNOSTIC SOFTWARE

The all new Ascent software is at the center of MGC Diagnostics' workflow solutions package. This versatile software combines pulmonary function testing, data review and reporting into one powerful application that sets a new standard for ease of use.



### DATA REVIEW

#### ASCENTREVIEW™ PHYSICIAN REVIEW SOFTWARE

With AscentReview physician review software, the physician can review and interpret diagnostic test results, electronically sign and send final results to the Electronic Medical Record.



### DATA MANAGEMENT

#### ASCENT NETWORKING

Ascent Networking connects diagnostic workstations and review stations so data can be shared and stored in a central SQL database.

#### ASCENTCONNECT™ HL7 INTERFACE SOFTWARE

AscentConnect HL7 interface software allows networked systems to exchange data with the EMR system.



## DATA COLLECTION

### [ ASCENT™ CARDIORESPIRATORY DIAGNOSTIC SOFTWARE ]

The heart of MGC Diagnostics' Workflow solutions package is Ascent cardiorespiratory diagnostic software. Improving the diagnosis of patients starts with diagnostic tests done correctly and accurately. The all-new Ascent software has been designed from the ground up to ensure data collection, data review and data management results in an effective patient outcome. The easy to use Windows® based system contains extensive options for predicted, customizable displays and reports and integrated software options. Ascent cardiorespiratory diagnostic software provides several technological advantages:

- Works with Microsoft Windows® operating system.
- Compatible with commercial off-the-shelf (COTS) anti-virus and anti-malware software
- Works over customer's network domain
- Supports Active Directory Authentication
- No Administrator or Power User rights needed for daily use
- Encryption of ePHI at rest and in-transit
- Full-Disk Encryption support



## DATA REVIEW

### [ ASCENTREVIEW™ PHYSICIAN REVIEW SOFTWARE ]

With AscentReview physician review software, the physician can review and interpret diagnostic test results, electronically sign and send final results to the Electronic Medical Record.\*

\* Purchase of Data Service License required.

\*\*Purchase of Ascent Server Licensing required.

AscentReview physician review software can be installed on any Windows based workstation within the network or installed on a Windows server for use with Remote Desktop Services (RDS) or Citrix.\*\*



## [ ASCENT NETWORKING ]

Ascent networking connects diagnostic workstations and review stations so data can be shared and stored in a central Microsoft SQL Server® database. This networking allows all workstations to share one database from either a local area network (LAN) or a wide area network (WAN). Reports, reference values, and statements can be standardized per database installation. With an enterprise friendly approach, IT/IS departments can use their approved hardware without separate vendor hardware. Ascent networking provides the following benefits:

- All diagnostic workstations, review stations and HL7 interface software to connect to one database.
- All diagnostic workstations and review stations use the same software and software version.
- Diagnostic test results are immediately available for physician review.
- The use of Microsoft SQL Server for database management with no dedicated server requirement.
- The automated data backup reduces the risk of data loss and expense of retesting.
- Virtual Server support is available.
- SQL Server Clustering support is available.



DATA  
MANAGEMENT



## [ ASCENTCONNECT™ HL7 INTERFACE SOFTWARE ]

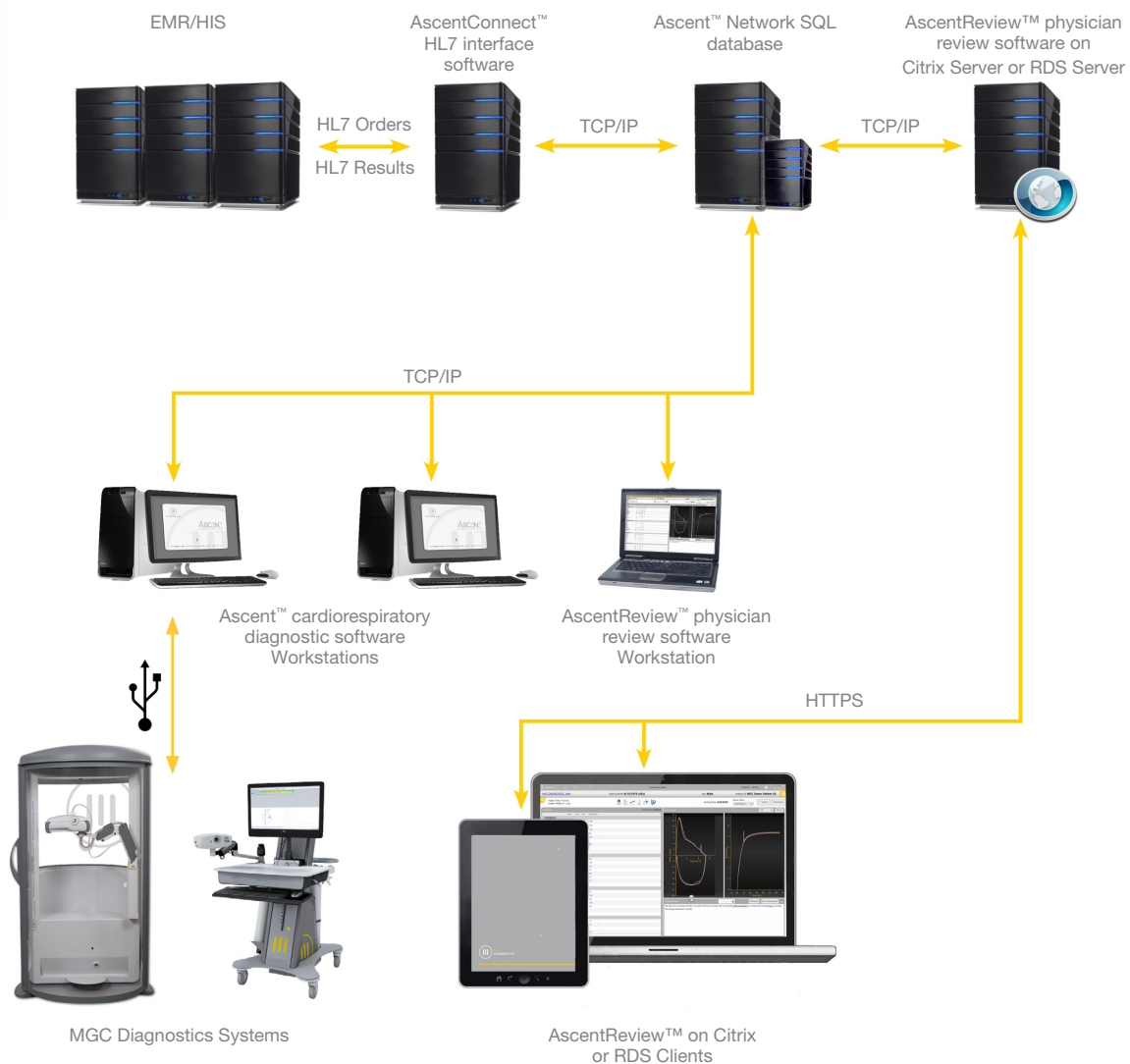
AscentConnect HL7 interface software allows any number of networked systems to exchange data with the electronic medical records (EMR) system. The interface software is compatible with most commercial and facility-developed hospital information systems (HIS), allowing access to patient information from any location tied to the facility's EMR system. Here is how it works: Patient orders and patient demographics (ADT) are received on a workstation. After testing is complete and interpreted, the test data, PDF report, text report or a combination of these is sent to the EMR system in HL7 format. AscentConnect HL7 interface software also provides the following advantages:

- Real-time data transfer is time-efficient and reduces the unnecessary expense of errors.
- Eliminates the need for customized programming to convert HL7 data.
- Utilizes HL7 2.x standard and MLLP (minimal lower layer protocol) via TCP/IP.
- Virtual server support.
- Concurrent test/development and production environments supported.

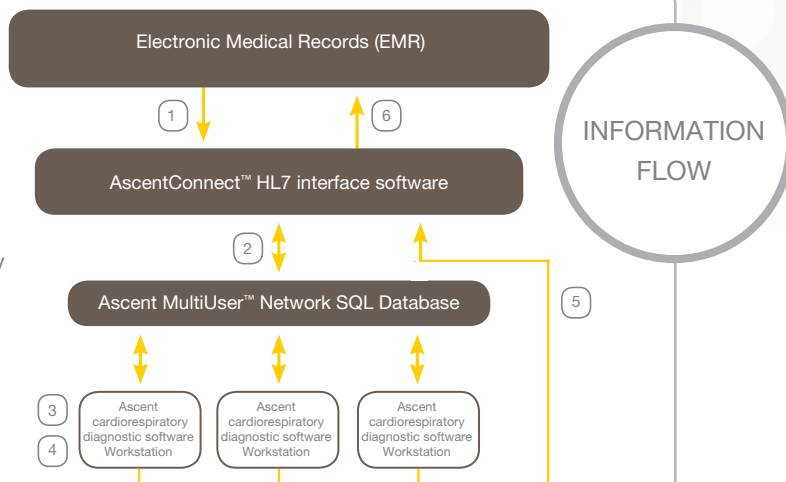


DATA  
MANAGEMENT

## HOW IT WORKS



1. Patient ADT (Demographics) or Orders are sent from the EMR to the AscentConnect™ HL7 interface software.
2. The patient ADT or Orders are sent from the AscentConnect HL7 interface software to Ascent Network SQL database.
3. The appropriate data fields in Ascent cardiorespiratory diagnostic software are populated with Patient Demographics and/or Orders.
4. Operator performs requested patient tests.
5. The preliminary or final test result is released by the operator or physician.
6. Results are converted to HL7 and sent to Electronic Medical Records (EMR). Additionally, reports containing graphics may be sent via PDF file in the HL7 message to the EMR.



Order Details			
Visit Number <b>953717</b>	Order Id <b>Test001</b>	Status <b>New</b>	Order/Requested Date <b>9/19/2017 11:31:52 AM</b>
Description <b>PULMONARY FUNCTION TEST</b>			
Notes <input type="text" value="Complete PFT with Bronchial Provocation (Methacholine)"/>			

Ascent™ cardiorespiratory diagnostic software displays patient tests ordered by the clinician.

ELECTRONIC  
PHYSICIAN  
ORDER ENTRY



## APPLICATION

**Rapid Access to Patient Data**  
 “We want to bring a patient into any testing room and pull up their historical test results or view clinic spirometry data from the Pulmonary Lab.”



**Ascent Network software** Install networking software on MGC Diagnostics’ systems and connect to a centralized database located on a server. Patient data can now be retrieved and viewed on any testing system or department workstation connected to the network without interrupting workflow.

**Faster Turnaround of Reviews and Interpretations** “Our doctors want to review, interpret and save test data from their office or home.”



**Ascent Network software and AscentReview physician review software**  
 Create an Ascent diagnostic system network and add AscentReview physician review software to computers on the network. Physicians can now retrieve, interpret and trend patient results in their office, eliminating the need to manage paper reports. This accelerates completion of interpretations and makes the diagnosis available for rapid clinical follow up.

**Wider Availability to Patient Test Results** “We want to get our final reports into the EMR so it can be viewed from anywhere in the hospital.”



**Ascent Network software with AscentConnect HL7 interface software** Using the AscentConnect HL7 interface software, patient results can be sent from the Ascent Network workstation to the EMR for viewing on any EMR workstation.

**Enhanced Workflow and Reduced Errors** “We need to reduce entry errors and add the efficiency of entering new patient demographics by accessing the information electronically.”



**Ascent Network software with AscentConnect HL7 interface software**  
 With AscentConnect HL7 interface software, patient demographic records and physician orders can be sent to the Ascent Network database for access from all diagnostic workstations.

## [ SPECIFICATIONS FOR ASCENT WORKSTATION ]

Operating System	<ul style="list-style-type: none"> <li>Windows 11 (Professional, Enterprise edition or LTSC)</li> <li>Windows 10 (Professional, Enterprise edition or LTSC)</li> </ul>
Processor	<ul style="list-style-type: none"> <li>Dual Core or Greater</li> </ul>
Hard Disk	<ul style="list-style-type: none"> <li>250+ GB recommended</li> </ul>
Memory	<ul style="list-style-type: none"> <li>16+ GB recommended</li> </ul>
Windows Display Properties	<ul style="list-style-type: none"> <li>1920 x 1080 (widescreen) recommended</li> <li>1024 x 768 minimum</li> </ul>
Other Hardware	<ul style="list-style-type: none"> <li>3+ USB-A ports</li> </ul>
System Type	<ul style="list-style-type: none"> <li>64-bit OS and Hardware recommended</li> </ul>

## [ SPECIFICATIONS FOR ASCENTREVIEW ]

Operating System	<ul style="list-style-type: none"> <li>Windows 11 (Professional, Enterprise edition or LTSC)</li> <li>Windows 10 (Professional, Enterprise edition or LTSC)</li> <li>Windows Server 2012/2012 (R2) (64-bit)**</li> <li>Windows Server 2016**</li> <li>Windows Server 2019**</li> <li>Windows Server 2022**</li> </ul>
Processor	<ul style="list-style-type: none"> <li>Dual Core or greater recommended</li> </ul>
Hard Disk	<ul style="list-style-type: none"> <li>100+ GB recommended</li> </ul>
Memory	<ul style="list-style-type: none"> <li>16+ GB Recommended</li> </ul>
Windows Display Properties	<ul style="list-style-type: none"> <li>1920 x 1080 (widescreen) recommended</li> <li>1024 x 768 minimum</li> </ul>
Network	<ul style="list-style-type: none"> <li>TCP/IP networking installed</li> </ul>
Virtual Machine Support	<ul style="list-style-type: none"> <li>Yes</li> </ul>

*\*\*Purchase of Ascent Server Licensing required.*

## [ SPECIFICATIONS FOR ASCENT NETWORK SQL DATABASE SERVER ]

Operating System	<ul style="list-style-type: none"> <li>Windows Server 2012 (R2) (64-bit)</li> <li>Windows Server 2016</li> <li>Windows Server 2019</li> <li>Windows Server 2022</li> </ul>
Processor	<ul style="list-style-type: none"> <li>2.0 GHz or faster recommended</li> </ul>
Hard Disk	<ul style="list-style-type: none"> <li>250+ GB recommended</li> </ul>
Memory	<ul style="list-style-type: none"> <li>16+ GB recommended</li> </ul>
Network	<ul style="list-style-type: none"> <li>TCP/IP networking installed</li> </ul>
Virtual Machine Support	<ul style="list-style-type: none"> <li>Yes</li> </ul>
Cloud Server Support	<ul style="list-style-type: none"> <li>No</li> </ul>
SQL Server Versions Supported	<ul style="list-style-type: none"> <li>SQL Server 2012 (Standard or Enterprise edition)</li> <li>SQL Server 2014 (Standard or Enterprise edition)</li> <li>SQL Server 2016 (Standard or Enterprise edition)</li> <li>SQL Server 2017 (Standard or Enterprise edition)</li> <li>SQL Server 2019 (Standard or Enterprise edition)</li> <li>SQL Server 2022 (Standard or Enterprise edition)</li> </ul>
SQL Server Configuration	<ul style="list-style-type: none"> <li>TCP/IP protocol enabled on Server Service and Native Client Service</li> <li>SQL Browser Service Enabled if Named Instance used</li> </ul>

## [ SPECIFICATIONS FOR ASCENTCONNECT HL7 INTERFACE APPLICATION SERVER ]

Operating System	<ul style="list-style-type: none"> <li>Windows Server 2012 (R2) (64-bit)</li> <li>Windows Server 2016</li> <li>Windows Server 2019</li> </ul>
Processor	<ul style="list-style-type: none"> <li>Dual Core minimum, Quad Core recommended if over 1K messages/day</li> </ul>
Hard Disk	<ul style="list-style-type: none"> <li>500+ GB Recommended</li> </ul> <p><i>NOTE: Additional hard disk space is required based on the amount of data to retain and duration.</i></p>
Memory	<ul style="list-style-type: none"> <li>16+ GB recommended</li> </ul>
EMR/HIS Connectivity	<ul style="list-style-type: none"> <li>Options include: Client/Server connectivity via TCP/IP (Static IP address) or file exchange</li> </ul>
Virtual Machine Support	<ul style="list-style-type: none"> <li>Yes*</li> </ul>
Cloud Server Support	<ul style="list-style-type: none"> <li>No</li> </ul>
Prerequisites	<ul style="list-style-type: none"> <li>.NET Framework 3.5</li> </ul>

\* Purchase of Data Service License required.

MGC DIAGNOSTICS CORPORATION, through its subsidiary Medical Graphics Corporation  
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