

Frequently asked questions about Change Healthcare Cardiology Hemodynamics™

System capabilities, outputs, and configurations

Our integrated monitoring system, Change Healthcare Cardiology Hemodynamics, aggregates hemodynamic data, waveforms, and images into one cardiac patient record, eliminating redundant data entry and improving care decisions.

Continuous vitals monitoring provides critical information during Cath procedures.

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Q: What are the capabilities of the solution?

A: Change Healthcare Cardiology Hemodynamics is an integrated hemodynamic monitoring system for monitoring vital signs and performing measurements and calculations. The system documents procedure and patient data, and interfaces with other systems and devices before, during, and after procedures.

The system provides comprehensive hemodynamic monitoring and recording for cardiology, cardiac catherterisation, electrophysiology, radiology, and invasive radiology procedures.

Change Healthcare Cardiology Hemodynamics also imports patient data from other hospital information systems and shares hemodynamic data in return. Change Healthcare Cardiology Hemodynamics seamlessly interfaces with hospital information systems as well as image management, archiving, and reporting systems via the Change Healthcare Cardiology solution.

Q: What patient vitals does the system monitor?

A: Change Healthcare Cardiology Hemodynamics is intended for physiological/hemodynamic monitoring, as well as clinical data acquisition. Medical image and data processing, and analytical assessment is done via the Change Healthcare Cardiology solution.

Change Healthcare Cardiology Hemodynamics provides patient monitoring via:

- ECG leads for ECG traces, heart rate, and respiration rate
- Invasive Blood Pressure (IBP) using up to 4 simultaneous IBP channels, plus optional Fractional Flow Reserve (FFR) measurement
- SpO2 finger clip for peripheral saturation and heart rate (HR)
- Non-invasive blood pressure (NIBP) cuff
- Body temperature probe
- Thermal Dilution Cardiac output temperature probe
- Capnograph and etCO2 for inspired CO2 and respiration rate

Q: What are the components of the system?

A: Change Healthcare Cardiology Hemodynamics is composed of:

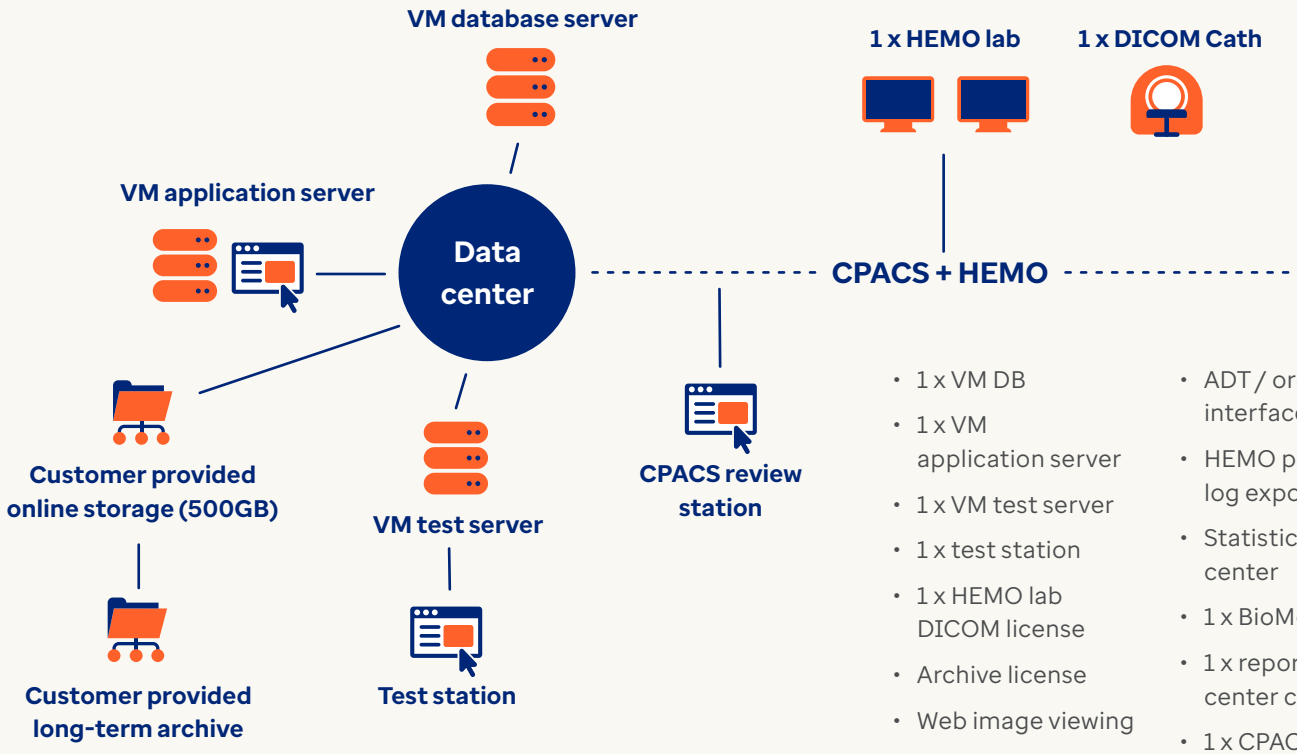
- **A control and documentation unit** that performs measurements, records full disclosure, and takes samples. Procedure notes are entered directly into this unit, and overall data input and management of the patient and procedure data is performed within this unit.
- **The 'front-end' unit and the real-time monitor.** The clinical unit acquires, analyses, and displays patient vital signs and other pertinent clinical data. The clinical data is subsequently displayed on monitors.

Q: How is the system set up and integrated?

A: Providers can use the Change Healthcare Cardiology Hemodynamics system in one of 3 configurations.

Configuration 1

Hemo + Change Healthcare Cardiology CVIS (Cath and EP reports) + CPACS

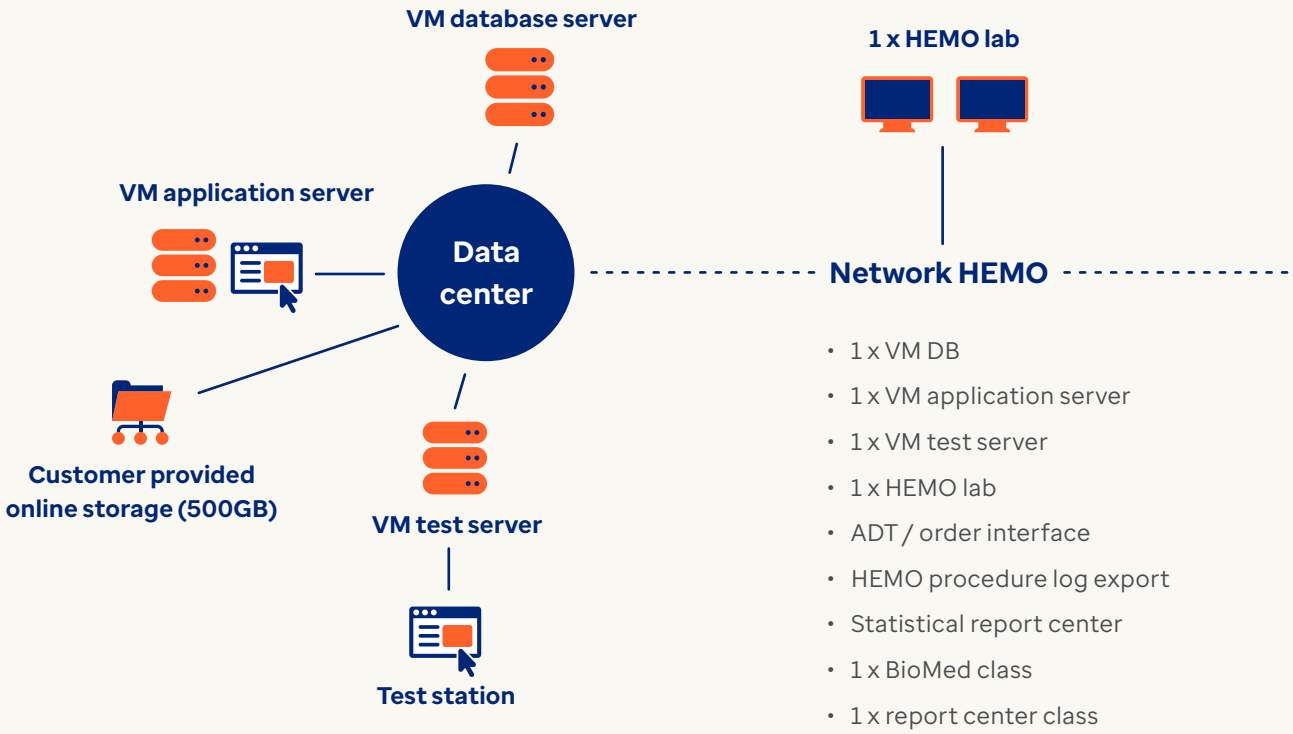


This configuration provides a comprehensive solution enabling:

- Extensive interface (import and export) capabilities with the EPR/PAS, modalities and various consumers (e.g., ADT, orders, lab results, allergies, medications, and reports)
- The sharing of patient and procedural data between multiple Hemodynamics stations
- Monitoring and documenting invasive procedures via Change Healthcare Cardiology Hemodynamics
- Storing, managing, and viewing images captured during the procedure via the different modalities, for example, by Cath and IVUS
- Producing physician reports

Configuration 2

Network Hemo + Change Healthcare Cardiology CPACS



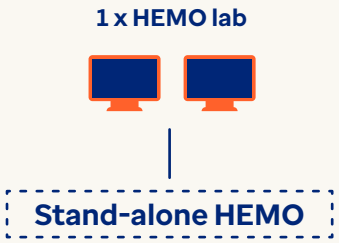
- 1 x VM DB
- 1 x VM application server
- 1 x VM test server
- 1 x HEMO lab
- ADT / order interface
- HEMO procedure log export
- Statistical report center
- 1 x BioMed class
- 1 x report center class

This configuration provides a hemodynamic monitoring solution, that enables:

- Extensive interface (import and export) capabilities with the EMR, modalities and various consumers (e.g., ADT, orders, lab results, allergies, medications, procedure results, and reports)
- The sharing of patient and procedural data between multiple Hemodynamics stations
- Monitoring and documenting invasive procedures via Change Healthcare Cardiology Hemodynamics

Configuration 3

Stand-alone Hemo



- 1 x HEMO lab
- 1 x BioMed class

This configuration focuses solely on the hemodynamic monitoring solution, which enables a very limited interface and file export.

Q: What is the cardiology procedure workflow using this system?

A:

1. The technologist places a generic EP or Cath Lab CV order in the EMR scheduling system.
2. Change Healthcare Cardiology Hemodynamics will refresh the worklist to display this order.
3. Cath, EP (and/or other modalities) will query the DICOM Worklist for ordered procedure.
4. Patient and procedure data is automatically enhanced with additional interfaced information, such as lab results and EPR/PAS data **(Configurations 1 and 2).**
5. The technologist will launch Change Healthcare Cardiology Hemodynamics for the relevant procedure and begin monitoring and documenting the procedure.
6. Procedural data is populated to the physician report **(Configuration 1).**
7. The technologist will end the procedure on the Cath Lab modality (or any other modality, such as ultrasound or intravascular ultrasound).
8. Procedure data from the modality will be stored to Change Healthcare Cardiology CPACS **(Configuration 1).**
9. The EP modality will send the XML file to Change Healthcare Cardiology CVIS **(Configuration 1).**
10. Charges and the documentation of used devices will be verified by the technologist in Change Healthcare Cardiology Hemodynamics **(Configurations 1 and 2).**
11. The technologist will sign the Hemo procedure in Change Healthcare Cardiology Hemodynamics and generate a PDF.
12. As all cardiovascular images are now accessible, the cardiologist/electrophysiologist will launch the physician report and viewer to view images and complete the report. Once signed, a structured report PDF is produced in Change Healthcare Cardiology **(Configuration 1).**
13. Additional interfaces are triggered to export procedural data to the EPR/PAS system in HL7 or XML format **(Configurations 1 and 2).**

Q: What features are included with the new PB-3000 front-end unit?

A: The PB-3000 will take full advantage of the latest technology to help improve patient care and quality outcomes with enhancements to security, administration, and interoperability. The simplified hardware design has a smaller footprint, improved usability and reduced potential failure points to improve robustness and make troubleshooting easier.

In addition, updates to the PB-3000 and Change Healthcare Cardiology Hemodynamics™ 15.0.1 includes:

- Procedure room controls (IBP zeroing, NIBP start/stop) that enable the physician or nurse to perform IBP zeroing and start/stop NIBP measurement from within the procedure room.
- All the parameters that were available in the previous front-end units (PB-1000, PB-2000), including ECG, NIBP, IBP (4 channels), Body Temperature, Cardiac Output, SpO2, and CO2, are now in a smaller device footprint.
- LED indicators that highlight a certain module (IBP, NIBP, ECG, Battery, etc.) state to the user in the control room
- Buttons for additional control in the procedure room (Start/Stop NIBP, Zero IBP (P1-P4), Zero CO2, Device On/Off)
- Two additional analog outputs for communicating signals to third party devices in the procedure room
- New SpO2 settings and optimizations to help improve accuracy and sensitivity

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Change Healthcare Canada Company
10711 Cambie Road
Richmond, BC V6X 3G5
Canada

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