

# Medical device and IT **convergence**

You are charged with building and maintaining an IT infrastructure that includes medical devices to support the business and clinical goals of your organization – including those that may not have been thought of yet. This requires that every new information system investment be evaluated not just how it can serve your organization now, but for how it will serve you in the future. It requires that you evaluate security, mobility, interoperability, and future costs – choosing secure, standards-based systems that support virtualization and scalability and interoperate with your existing infrastructure, including your EMR and HIS.

Philips IntelliVue Information Center iX (PIIC iX) answers these requirements. The central point of information for your clinicians as well the platform to organize workflow, it provides not only central monitoring, but also the infrastructure required for interoperability with other systems, patient data access, mobility devices, and telehealth.

### **Key advantages**

- Designed for enterprise deployment
- Supports virtualization and high availability
- Designed to support a complete medical record, even through network outages
- Supports interoperability between devices and your hospital's information systems
- Decreases training needs because the interface is harmonized with bedside monitors

# Built-in **serviceability** helps identify and resolve potential I/T problems

The IntelliVue Customer-Supplied Clinical Network uses industry standards and best practices and comes with built-in tools that monitor the system in order to support ongoing maintenance. It stores historical information for analysis and trend reporting and provides the information to Philips remote support for remote diagnosis. This fosters a collaborative approach to servicing the system, fast problem resolution, and historical performance data that can be used in root cause analyses.

We provide an end-to-end patient monitoring solution that includes primary monitoring at the bedside, monitoring at the central station within the unit, and mobile applications on caregivers' smartphones. This continuous monitoring solution simplifies patient monitoring and helps align resources, processes, and technologies. And because PIIC iX interfaces with your HIS applications and EMR, it also simplifies clinical workflow.



The IntelliVue Customer-Supplied Clinical Network supports your efforts to:

- Address potential problems
- Provide appropriate ongoing maintenance
- Limit service calls
- Collect long-term information
  for reporting and trend analysis

PIIC iX collects and combines data from bedside monitors and works as a data hub to distribute that data needed to other systems in your enterprise. Using open-systems architecture, it interoperates with your enterprise infrastructure so you can leverage your existing hardware, software, and networking investments. It also supports IT standards and best practices to simplify IT operations, and supports high-quality patient care by providing clinicians with timely access to critical patient information. In addition, the user interface is harmonized with bedside monitors, to decrease training needs.



#### Follows IT standards and best practices

- Offers centralized deployment of updates, including Philips, Microsoft<sup>®</sup> and anti-virus vendors (Symantec<sup>™</sup> and McAfee<sup>®</sup>) to support efficient ongoing maintenance and upgrades
- Allows you to directly download applicable
  OS patches from Microsoft and supports Microsoft
  Windows Server Update Services (WSUS), which is
  included with System Center Configuration Manager
  (SCCM)
- Supports standard enterprise AV configurations
- Utilizes your hospital's Domain Name Services (DNS) and Dynamic Host Control Protocol (DHCP) for large, networked system deployments
- Leverages your Active Directory (AD) Infrastructure for your roles-based user administration and authentication; servers can join your domain
- Supports your password policy of configurable passwords that meet complexity and expiration requirements
- Hardened using the U.S. Department of Defense Security Technical Implementation Guides for Operating Systems, SQL, .Net, and Internet Explorer
- Client server architecture supports centralized management, security, scalability, and enterprise deployments

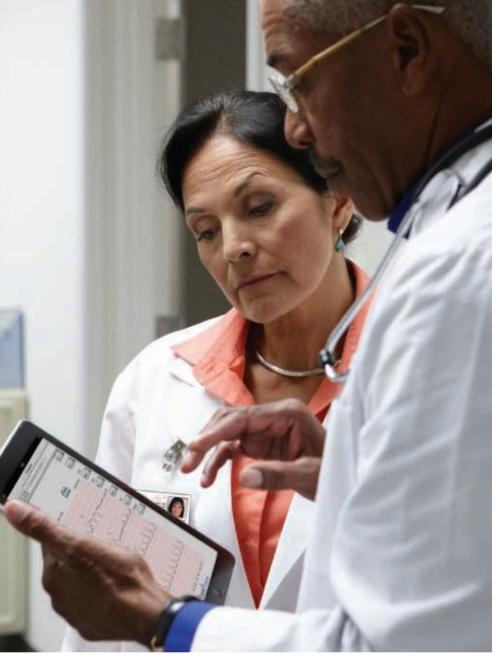
## Leverages your hardware and network investments

- + Supports both VMware  $^{\otimes}$  and Microsoft Hyper-V  $^{\otimes}$  for virtualization technology
- Virtualization provides support for high availability and may reduce operational costs associated with downtime and data-center deployment
- Customer-provided SQL Enterprise Deployment PIIC iX supports the customer-provided robust SQL Enterprise infrastructure, including encryption

- You can select your existing network to run Philips IntelliVue Monitoring solutions, or run on Philips separate, isolated, turnkey system. If you choose to leverage your existing network, there is advanced support for networking best practices, including:
  - Full layer 3 support between the surveillance station and servers, so you can centralize servers in your data center
- Flexible IP addressing according to your enterprise standards
- Wireless environments for Philips IntelliVue bedside monitors and MX40 patient wearable monitor – 802.11 or Smart-hopping network (1.4 WMTS and 2.4 GHz)

## Data exchange between devices and your hospital's information systems

- Third-party ICU devices (ventilators, infusion pumps, etc.) interface through EC10 bedside module or EC40/80 device concentrator to provide a single HL7 information stream from the patient monitoring source
- HL7 messages can be configured and changed while the system is still running from a single screen
- Enhanced ADT interface, including ADT update transaction
- New inbound LAB interface to display labs on the IntelliVue Patient Monitor and support Philips Protocol Watch Sepsis
- Supports ten HL7 destinations for HL7 Vitals interface (results outbound)
- Through PIIC iX Patient Data Warehouse Connect, provides the PIIC iX patient monitoring data into a SQL Enterprise Storage Area Network



### **Continuous patient record**

- Tested and validated to the IHE PCD Profiles Patient Care Device (PCD-01)
- Auto Reconnect (for Enterprise and Small Network PIIC iX) Supports auto reconnect if a server is disconnected and comes back online.
- Sync from Local mode (for Enterprise and Small Network PIIC iX)
   If the server goes down, the PIIC iX

surveillance station continues to function as a central monitor; when the server comes back up and the system reconnects, the data that is stored locally on the surveillance station then uploads to the server.

• Trend Upload

The IntelliVue Patient Monitor will accumulate numeric vital sign data when off network and upload this data to PIIC iX when the monitor reconnects (8 hours of buffered data).

• HL7 Store and forward

PIIC iX will buffer and store the data if there is a disruption of network services and send the data to the EMR or Interface Gateway (including IntelliBridge Enterprise, a communication server and HL7 message broker); it will also send buffered data from Trend Upload.

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