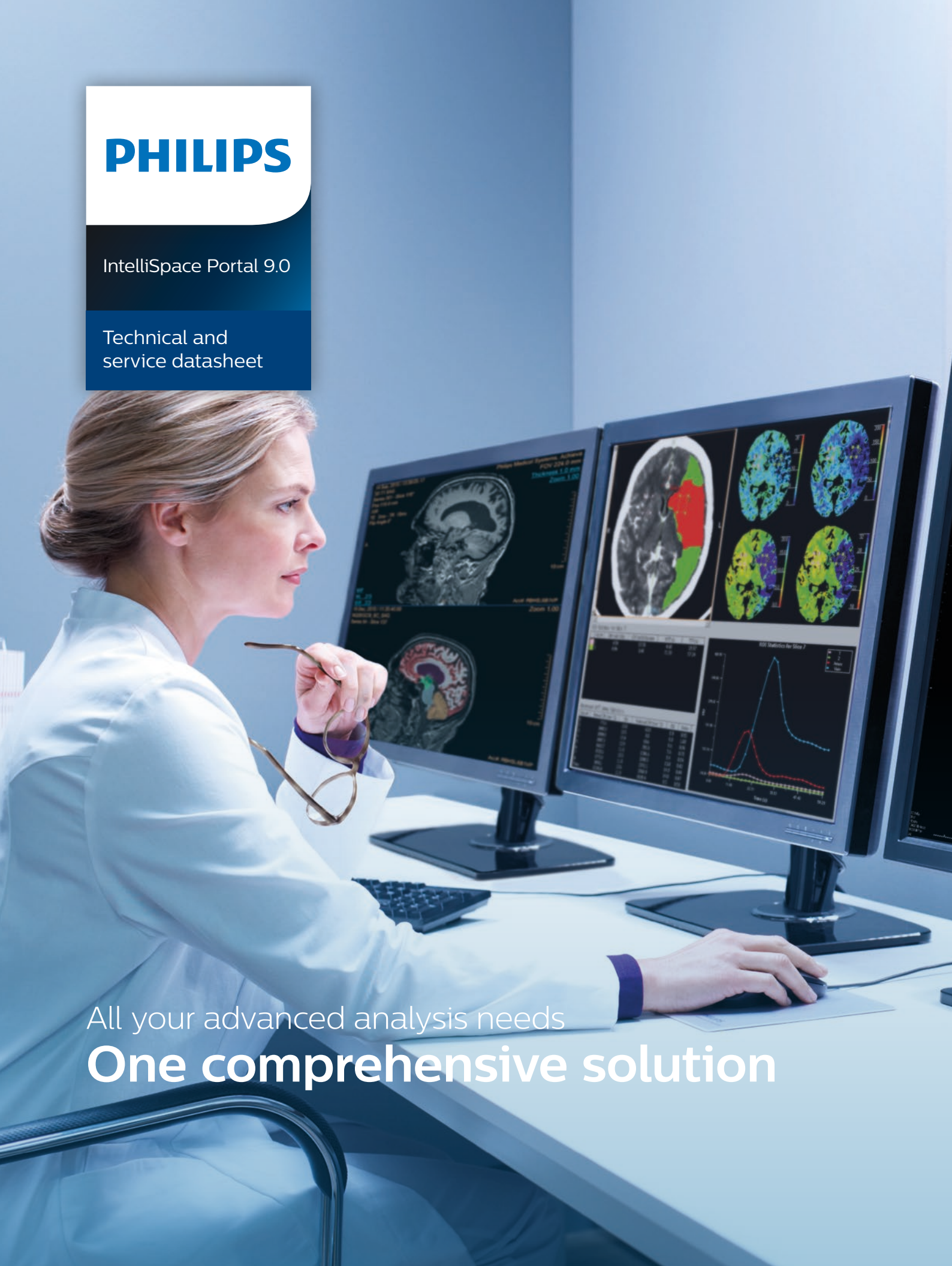
PHILIPS

IntelliSpace Portal 9.0

Technical and service datasheet



All your advanced analysis needs

One comprehensive solution

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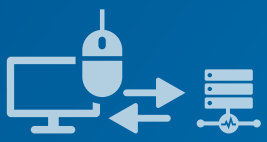
Multiple **clinical domains**

Multiple **modalities**

Multiple **patient data sets**



Multiple **third-party applications and scanners**

Multiple **imaging data systems**

One **solution**

- **Single** license set
- **Single** version
- **Single** advanced platform for all modalities
- **Single** point of service

Multiple clients

Multiple departments

Network of hospitals

A single, integrated solution

Manage all the hospital's advanced analysis needs with a single, comprehensive solution.

Philips IntelliSpace Portal 9.0 is an advanced visualization platform that offers a comprehensive set of advanced clinical and IT tools on a single platform. Applications are designed to provide rich clinical insight for complex cases, while scaling easily to meet your growing IT needs.

Key advantages

- Manage a single centralized solution for all advanced visualization needs throughout your enterprise
- Enjoy the latest advances in technology year after year with Philips' proven track record
- Scale up as you need quickly and easily
- Work with a single service agreement that covers the lifecycle needs of your advanced visualization platform

IntelliSpace Portal 9.0 connects your entire radiology department
Since it's server-based, it's easy to use and manage. Everyone works with the same software version, and all applications and licenses are handled in one solution.

Unmatched scalability and integration
With IntelliSpace Portal 9.0, you can scale up to the exact number of users you need quickly and easily with resource-based licensing. Open interfaces with most PACS systems help easily transport required data, and the connectivity is even smoother with the Philips Suite of HealthCare Informatics solutions. With broad multi-vendor compatibility*, IntelliSpace Portal can also connect to virtually any conventional scanner. And thanks to its new machine learning tools. IntelliSpace Portal 9.0 now even adapts preprocessing rules to match hospital needs, all automatically.

The IntelliSpace server/client architecture makes deploying and managing upgrades simple. All users remain consistent on the same version which can be pushed centrally. User preferences and settings can be ported to any client and new modalities can be easily connected.

Reap the benefits of a single partner
The IntelliSpace Portal has demonstrated time savings for clinical users, but it also offers time-saving tools to help you benefit from peak performance across your radiology department. By maintaining remote connectivity services with Philips, you can take advantage of proactive assistance from our experts, and streamline your maintenance. In addition, thanks to new tools, Philips can connect directly with clients to offer them technical and clinical support "on the fly."

One solution for today and tomorrow
Each year, the IntelliSpace Portal has brought to market not only clinical innovation, but the latest in IT technology. From WADO data transfer, VMWare scalability and Citrix to multi-site deployment, Philips delivers the technology you need to help your radiology department deliver. Philips RightFit Service Agreements let you stay at the forefront of clinical and hospital IT innovation by keeping you connected to a steady stream of clinical and IT innovations, including education and training services.

*Please contact your local Philips representative for details on multi-vendor coverage.

Application overview

A rich portfolio of clinical depth – all on a single platform

With IntelliSpace Portal, your clinicians benefit from leading applications across a broad spectrum of clinical domains. All are optional additions to the standard features and functionality of the platform. And since the IntelliSpace Portal works on a client-server architecture, these applications are available to anyone across your enterprise.

IntelliSpace Portal 9.0 – Clinical applications portfolio

● New application
● Enhanced application

Feature	Option	
Standard features and functionality	• CRT Endo • Full 2D capabilities, including compare, pan, zoom, scroll, region of interest (ROI), and annotation • Full slab review capabilities • High-priority login for emergencies, regardless of network traffic • Lossy or lossless compression • Multi Modality Viewing (CT, MI, MR, US) • Multiplanar reformations in curved, paddlewheel, and MasterCut • Overall system enhancement; Collaboration Viewer • VIP, surface MIP, MIP, minMIP, and average displays • Volume rendering	
Multi Modality applications	● Multi Modality Advanced Vessel Analysis (AVA) ● Multi Modality Tumor Tracking (MMTT)[1] ● Multi Modality Tumor Tracking qEASL[1] ● Multi Modality Viewer	
CT clinical applications	● CT Dual Energy Viewer ● CT Brain Perfusion ● CT Comprehensive Cardiac Analysis (CCA) ● CT TAVI Planning • CT Acute MultiFunctional Review (AMFR) • CT Advanced Vessel Analysis (AVA) Stent Planning • CT Body Perfusion • CT Bone Mineral Analysis (BMA) • CT Calcium Scoring • CT Cardiac Plaque Assessment • CT Cardiac Viewer	• CT COPD • CT Dental Planning • CT Dynamic Myocardial Perfusion (DMP) • CT EP Planning • CT Liver Analysis • CT Lung Nodule Assessment (LNA) • CT Lung Nodule CAD[2] • CT-MI Fusion • CT Myocardial Defect Assessment • CT Pulmonary Artery Analysis (PAA) • CT Virtual Colonoscopy
CT Spectral applications[3]	● CT Spectral Advanced Vessel Analysis ● CT Spectral Comprehensive Cardiac Analysis	● CT Spectral Magic Glass on PACS ● CT Spectral Tumor Tracking[1]
MI clinical applications	● NM Review ● NM Corridor4DM[4] 2016 • NM Astonish Reconstruction • NM Cedars Sinai Cardiac Suite 2015[5] • NM Emory Cardiac Toolbox (ECTb) v4.1[6] • NM Emory Cardiac Toolbox (ECTb) HeartFusion[6]	• NM Emory Cardiac Toolbox (ECTb) SyncTool[6] • NM[7] EQuAL • NM JETPack Application Suite • NM NeuroQ[7] 3.7 • NM NeuroQ[7] Amyloid • NM Processing Applications Suite
MR clinical applications	● MR Longitudinal Brain Imaging (LoBI)[1] ● MR NeuroQuant[8] ● MR Cardiac ● MR Cardiac Whole Heart ● MR Cardiac Quantitative Mapping ● MR T2* (Neuro) Perfusion • MR Cartilage Assessment • MR Diffusion • MR Echo Accumulation	• MR FiberTrak • MR IViewBOLD • MR MobiView • MR Permeability • MR QFlow • MR SpectroView • MR Subtraction • MR T1 Perfusion • MR Cardiac Temporal Enhancement
US clinical applications	• US Q-App Elastography Analysis (EA)[9] • US Q-App Elastography Quantification (EQ)[10] • US Q-App General Imaging 3D Quantification (GI3DQ) • US Q-App Intima Media Thickness (IMT)	• US Q-App Microvascular Imaging (MVI) • US Q-App Region of Interest (ROI) • US Q-App Vascular Plaque Quantification (VPQ)

[1] Pending 510(k), not available for sale in the US
[2] CAD functionality not available for sale in the US
[3] For use with IQon Spectral CT scanner only
[4] Corridor4DM is a registered trademark of Invia, LLC.
[5] Not available for sale in all countries. Please check for availability in specific countries.
[6] Emory Cardiac Toolbox, ECTb, HeartFusion, and SyncTool are registered trademarks of Emory University.
[7] NeuroQ and EQuAL are trademarks of Syntermed.
[8] NeuroQuant is a trademark of the CorTechs Labs, Inc.
[9] Only available for sale in the US
[10] Not available for sale in the US

Leverage the power of a single integrated solution

With just one solution, IntelliSpace Portal 9.0 connects your entire radiology department. Since it's server-based, it's easy to use and manage. Everyone works with the same software version, and all applications and licenses are handled in one solution.

Reduce the likelihood of study retrieval error
IntelliSpace Portal maintains rich information about patient demographics and synchronizes it with the latest information from HIS and EMR systems. It also supports patient reconciliation.

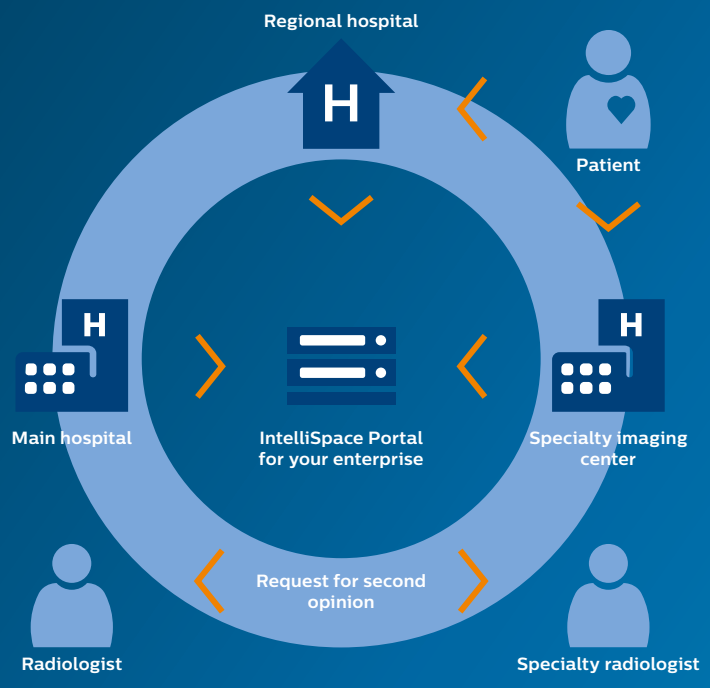
Keep information flowing
Even before clinicians start working, the system starts pre-fetching priors based on the list of patients scheduled for today or tomorrow. When reading exams using IntelliSpace Portal, clinicians can launch the patient context from the EMR.

When they complete their analyses, clinicians can export patient reports – including tables and graphs – which may reduce the likelihood of errors in data transfer.

Keep track of it all
Help your solution run at peak performance with a set of web-based tools to monitor and administer your installation. Configure alerts to take a proactive approach against system performance degradation.

Make the most of your hardware through virtualization
You can also deploy IntelliSpace Portal 9.0 within your IT infrastructure when you choose the solution's software-only model. This can increase the flexibility of your hardware and help you use it to the fullest. With VMware certification, IntelliSpace Portal runs server-side virtualization on your or Philips-owned equipment.
IntelliSpace Portal is Citrix®-ready, which allows the solution to run on virtualization of the client as well. It's deployed throughout your enterprise via a virtualized client application.

vmware® READY



A single platform connecting multiple locations

Advanced analysis is changing rapidly. It can be anything but simple for an enterprise to leverage the full potential of these developments. IntelliSpace Portal Concerto lets you work as one across your network, bringing locations and people together. It connects multiple sites to boost productivity and helps reduce the complexity of resource planning today while preparing you for growth tomorrow.

Growing with you
Join separate geographical sites with IntelliSpace Portal Concerto to create common access and workflows. With up to 100 concurrent users, it easily adapts when more users and sites come online without interrupting busy workflows.

Do more with one worklist
When clinicians see all of a patient's prior studies, they can work efficiently which may help prevent duplicate scanning. The IntelliSpace Portal Concerto server creates a unified global worklist containing all studies stored in your IntelliSpace Portal servers.

Say goodbye to downtime
Patient care can't wait. That's why IntelliSpace Portal features a failover system to help maintain high availability. Should one IntelliSpace Portal server from the single site "farm" go down, another server automatically takes over. IntelliSpace Portal continues working with the remaining portal server's resources.

Rely on consistent performance
Even at heavy loads, expect IntelliSpace Portal Concerto to deliver exceptional performance for exceptional patient care. It balances the load by automatically routing users to the best Portal server on site, based on data type and server load.

Continuous evolution and services

Clinical imaging technologies and approaches are evolving all the time. Turn this change into your advantage with IntelliSpace Portal 9.0. Designed around the principle of continuous evolution, this platform helps you manage shifting challenges and shape high-efficiency and technology-driven healthcare for the years to come.

Protect your investment from day one
With RightFit Service Agreements, advanced visualization capabilities adjust to the specific needs of your enterprise at the lowest possible cost. Continuous software upgrades and enhancements and hardware updates, for example, enhance return on investment. They also help maintain your hospital's competitive advantage by securing your investments with locked-in pricing and obsolescence protection.

Maintain your clinical and operational standards
Tomorrow's already planned for with RightFit Service Agreements. They connect you to a steady stream of innovations, such as applications and modalities, which expand and deepen your clinical coverage. Clinical education and training services show caregivers how to apply these advances to patient care and make best use of their solution. Professional support teams are available for rapid telephone and remote support, as well as on-site assistance where needed.

Furthermore, with our best-practice based Event Management* approach, utilizing remote monitoring technologies, we support your hospital to minimize disruptions and pro-actively resolve potential incidents.

Expect peak system performance from IntelliSpace Portal 9.0. RightFit Service Agreements include automatic software updates and upgrades. And with scheduled hardware upgrades, you can be confident your software and hardware work together hassle-free.

With just one system to update, IntelliSpace Portal 9.0 brings simplicity to a complex environment. The platform is updated continually through the server. You can scale the solution as your organization grows while reducing the need to acquire multiple workstations by modality and specialty over the years. It can also reach throughout your enterprise as an application server interfacing with PACS, as well as EMR and RIS systems.

Your partner for improving patient care
When you choose Philips, you're investing in a long-term relationship. We're committed to helping you realize the full clinical and operational potential of IntelliSpace Portal 9.0 throughout your organization. But our product portfolio is just one element of successful growth and change.

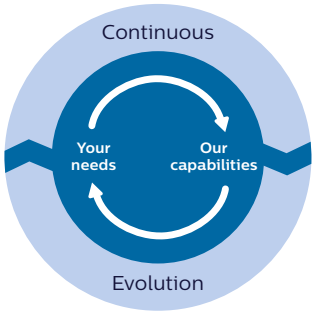
Our solutions are informed by a strong track record, deep clinical insights, global delivery capabilities, and a broad spectrum of services. Turn to us for everything from clinical guidance, technical phone support, and remote problem resolution directly from experts at our Customer Care Help Desk, to on-site support and implementation services, business improvement consulting, flexible payment options, and more.

The key benefits of Philips services solutions

Obsolescence protection	The pace of technology is very fast, but investments will not become obsolete year by year
Financial considerations	**Lower total cost of ownership** for dealing with rotation of staff (training), pace of technology (software and hardware upgrades), and support **Predictable costs** operationalized through budgets instead of capital expenditure
Clinical and workflow advancement	**Continuous evolution of clinical depth** in applications, workflow performance (speed and power), and IT integration

Please check with your local market representative about other Service Maintenance Agreements if RightFit is not yet available in your market. For additional details, please refer to the terms and conditions applicable to your market.

* Event Management is available in select regions only. Please check with your Philips representative.



Make the most of your investment in your IntelliSpace Portal 9.0 with our all-inclusive RightFit Service Agreements. Based on customer insight, they're structured around your service challenges and business priorities.

Key components of continuous evolution with our service offering*	
Continuous evolution	**Software upgrades** – every 12-18 months, customers receive a new version of IntelliSpace Portal software (platform, all purchased applications, added base software). Throughout the major releases, Philips also provides updates when they are available. **Installation Services** – Philips will provide for either on-site or remote installation of the software upgrades and updates for the duration of the service agreement. Moreover, Philips provides professional services, installation, and implementation, including supported PACS, RIS, and third-party integrations.* **Software updates** – all IntelliSpace Portal updates, including emergency fixes, minor releases, complete with consulting on implementation. **Software updates installation** – Philips will provide for either on-site or remote installation of the software update. **Hardware support and refreshment** – customers' hardware will be replaced once in every five-year agreement and customers receive on-site hardware support provided hardware has been supplied by Philips. Only available with RightFit protection extended agreements.
Continuous education	**Continuous education** – customers receive necessary clinical education and IT system admin education as part of the service offering, and online IntelliSpace KnowledgeScape education.**
Supplemental services	Customers can benefit from additional service days, extended coverage hours & 24/7 technical support (only applicable in certain markets), optional IT and clinical services and consultation.

* Services and availability may be dependent on local market. Check with you representative for more information
** Requires client remote, secured connection similar to the server connection with Philips remote services.

System specifications and requirements

IntelliSpace Portal 9.0[1] configurations

Server hardware specifications

- HP
  - DL360 Gen9 8-SFF CTO Rack server*
  - ML350 Gen9 8-SFF CTO Tower server*
    *32GB Memory and 3x 1.2TB SAS 10K RAID5 Hard Drive; further specifications available on the HP website

Server power requirements

Dual power supplies for 120-240V AC

Server software specifications

- Windows Server 2012 R2 (Standard Edition)
  Philips IntelliSpace Portal server software, including:
  - Proprietary Portal Server Application
  - Clinical application usability and IT Dashboard
  - IntelliSpace Portal management application for managing user database and additional settings
- McAfee® antivirus software
- Networking
  - TCP/IP protocol only
  - Gigabit network card(s)
  - Static IP address
- Security
  - No unused Windows services running
  - No shared drives
  - Windows access control defined by client (hospital site IT)
  - Encrypted users/groups database file
  - User management application available only to defined Portal administrators
  - Encrypted transfer over the network of username and password information
  - Event logging
  - Windows firewall
- Administrative access through server console or remote desktop

Server VM specifications (for deployment on customer site)

Virtualization supported:
- VMware vSphere 5.1 – 6.0

OS (Pre-installed by Client):
- Windows Server 2012 R2 (Standard Edition) – English Locale .NET version installed 4.5.2

Storage – Two local virtual drives required (2000 IOPS):
1. Drive C (OS + apps): 95GB
2. Drive D (Data): 0.5 – 5TB

- Network:
  - At least 1Gbps
  - In installations of EX (Master, Slave) and Collaboration connected by a private switch (vSwitch)[4]
- Antivirus:
  - Either use preinstalled McAfee antivirus or install one of the others after Portal is installed:
  - Symantec Endpoint Protection
  - Trend Micro OfficeScan

Concurrent users	Number of Cores	RAM [GB][5]
1	6	12
3	8	16
5	8	24
10	12	32

Client hardware requirements[4]

Screen resolution: 1280 x 1024 or above (recommended) or 1024 x 768 (minimum)

- Minimum screen resolution for MI applications: 1280 x 1024
  - Up to 3 megapixel monitors are supported
  - No support for monochrome or grayscale-only monitors
  - 96 DPI
  - 24 bpp (or higher) color depth monitors
  - Dual monitor capability requires adequate support of client display card and driver.
- The client machine should also support a graphic card with the following requirements:
  1. Native DirectX 9.c support
  2. Native GDI+ Support
  3. Native Windows Aero interface support
  4. 128MB RAM (for the graphic card)
- Processor (CPU minimum): 2 cores @ 1.8 GHz / 4 cores @ 1.6 GHz
- Processor (CPU Minimum for NM applications and/or when other applications are running in parallel): 3 Cores @ 2.8 GHz / 4 Cores @ 2.4 GHz
- Processor (CPU recommended): 3 Cores @ 2.8 GHz / 4 Cores @ 2.4 GHz
- Memory (RAM)
  - Minimum: 2GB RAM
  - Minimum: 4GB RAM for clients also running PACS
  - Minimum for MI Applications and/or when other applications are running in parallel: 4 GB RAM
  - Recommended: 4 GB RAM or above
- Network adapter speed: 100 Mbit/s or above
- Free disk space on C: drive: 3 GB or higher:
  - Additional 5 GB of free disk space required to burn DVDs
- 3-button mouse

Additional 15 GB of free disk space are required in order to install iXR client

[1] The minimum requirements specifications are the estimated minimal specifications required to run the IntelliSpace Portal client. If your computer has less than the "minimum requirements," you will not be able to properly install or use the IntelliSpace Portal client. Actual requirements will vary based on the IntelliSpace Portal application you run and other software applications you run on the system in parallel with the IntelliSpace Portal client (such as PACS/RIS, client, Dictation software). For optimal performance of the IntelliSpace Portal client and typically on clients where additional applications are expected to run in parallel to the IntelliSpace Portal client itself (such as PACS/RIS client, Dictation software), clients are required to be equipped with stronger HW specifications beyond the minimum specifications (RAM and Processor) to allow optimal performance of the IntelliSpace Portal client in parallel to other software applications running on the client system.

[2] Note: The concurrency thresholds are based on average usage estimations. The actual number of concurrent users that may use the system at any given time is limited by the available system resources and may Given heightened resource requirements for Philips IQon CT Scanner Spectral applications, customers may expect Spectral application specific concurrency to be roughly 30% that of conventional applications. Server hardware may differ depending on selected number of users. Consult your local Philips sales representative for more information.

[3] Web Collaboration enables viewing and sharing – not intended for diagnosis

[4] Customers working with Spectral applications on the IQon Spectral CT Scanner require an EX dual server equivalent.

[5] This table describes the minimum RAM/CPU requirements for the selected level of concurrency.

Client software requirements

Supported operating systems:

- Windows® 7 (32 and 64 bit)
- Windows® 7 requires an administrative account for initial installation
- Windows® 8[4] (32 and 64 bit) The new versions of 3rd party cardiac applications support Windows 8, also NeuroQ 3.6 with proper settings.
- .NET® framework 4.5.2 or higher
- Windows 8, 8.1 (32 & 64 bit)
- Windows 10

- Ability to add the IntelliSpace Portal to the firewall exception list
- Additional software recommended (for optional functionality):
  - Adobe Acrobat Reader (for Reports and Help)
  - Adobe Flash Player (for online training applications)
  - Windows Media Player 9.0 or above (for saving movies)
  - IMAPIv2 (for burning CD/DVD)
  - IE 11 or higher (Firefox 7 or higher, Chrome 9 or higher)

Network requirements

Dedicated 1 Gigabit/S connections between IntelliSpace Portal servers (in case of a multi-server deployment)

- LAN Network bandwidth 100 Mbit/S and above (1 Gigabit/S or above recommended)
- VPN access (optional)
- Domain based network environment (recommended)

Recommended remote or home connection specifications

Network bandwidth and latency: 5 Mbit/s or above download speed, 512Kbit/s or above upload speed, with latency <20ms

- Network bandwidth and latency for MI applications: 10 Mbit/s or above download speed, 1Mbit/s upload speed with latency < 10ms
- Network bandwidth/latency for MI 3rd Party Applications (AutoQuant, Corridor4DM[2] v2013, ECTb, NeuroQ): 100 Mbps download/10 Mbps upload with <10ms latency

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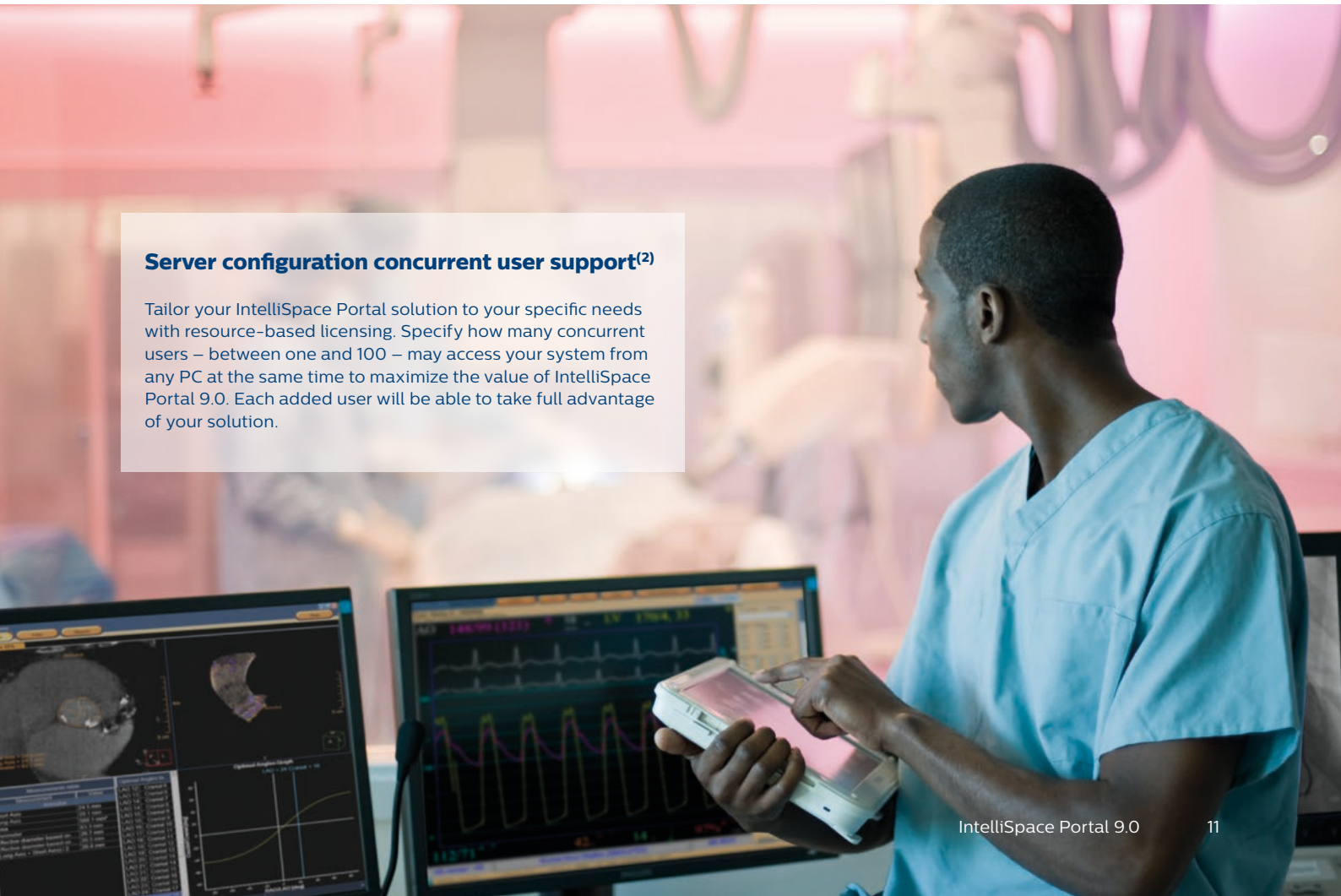

Server configuration concurrent user support[2]

Tailor your IntelliSpace Portal solution to your specific needs with resource-based licensing. Specify how many concurrent users – between one and 100 – may access your system from any PC at the same time to maximize the value of IntelliSpace Portal 9.0. Each added user will be able to take full advantage of your solution.

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