OMNINET
SOFTWARE SOLUTIONS

OMNITRACKER System Requirements

System Requirements of OMNITRACKER 10.2
Version: 05.08.2015

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General Notes

In addition to the system requirements mentioned in this document, OMNITRACKER also requires that all supported third-party products are installed according to their respective hardware and software requirements. It is especially important that these third-party products are installed in a way that is compatible with the products and technologies mentioned in this document.

Those products that are described as “supported” in this document are supported only as long as the respective manufacturers offer standard support for that product.

Even if a product is described as “supported” in this document, it is no longer supported, if the date mentioned in the document “Retired 3rd-party product support” is reached. You can download this document from the OMNINET web site or request it via email from support@omninet.de .

OMNINET makes no warranty, implied or otherwise, about the performance or reliability of the mentioned third-party products.

Software Requirements

OMNITRACKER Client

Windows Server 2003 with SP2, Windows Vista with SP2, Windows 7 with SP1, Windows Server 2008 SP2, Windows Server 2008 R2 SP1, Windows Server 2012, Windows Server 2012 R2, Windows 8, or Windows 8.1. (Only 32-bit clients are provided. 32-bit clients are supported on 64-bit operating systems. “Home” editions are not supported.)

- Microsoft .NET Framework Version 4.0, Version 4.5 with KB2805221 (on Windows 7 with SP1, Windows Server 2008 with SP2, Windows Server 2008 R2 with SP1, and Windows Vista with SP2) or KB2805222 (on Windows 8 or Windows Server 2012), or Version 4.5.1. Please note that a full installation (as opposed to a client profile) is required.
- If you create your own report layouts, or if you want to change the standard layouts delivered with OMNITRACKER, then licenses for one of the following products are required on each PC intended for report development:
  - Crystal Reports 2008[1]
  - Crystal Reports 2011[2]
  - Crystal Reports 2013
- In order to view reports, Crystal Reports Visual Studio 2010 .NET runtime components are required.
- Please note: To view and print already defined reports, at least one Crystal Reports license provided by OMNINET is required; this license, however, must not be necessarily installed on the PCs on which you are viewing the report.
- If you want to integrate the Outlook address book with the OMNITRACKER client, Outlook 2010 with SP1 or Outlook 2013 32-bit must be installed on the client PC.
- Microsoft Excel 2010 or higher must be installed, if you want to import data from Excel.
- Microsoft Word 2010 or higher must be installed, if you want to use the “mail merge” feature.
- The OMNITRACKER Windows client can be run on Windows terminal servers. Any supported Windows server version can be used, but it is recommended to use at least Windows Server 2008 R2 with SP 1 and Vista clients with SP2 for optimum performance.
- The OMNITRACKER Windows client can be run on Citrix (XenApp) servers. At least Citrix Presentation Server 4.5 with FP1 is required. Make sure to configure the Citrix server for optimum WPF performance according to Citrix’s recommendations.

OMNITRACKER Server

Windows Server 2003 with SP2 (except Windows Server 2003 Web Edition) or Windows Server 2008 with SP2, Windows Server 2008 R2 with SP1, Windows Server 2012, or Windows Server 2012 R2 are supported. (Only 32-bit servers are available. 32-bit servers are supported on 64-bit operating systems.) Windows Cluster Services can optionally be used if necessary.

- Microsoft .NET Framework Version 4.0, Version 4.5 with KB2805221 (on Windows 7 with SP1, Windows Server 2008 with SP2, Windows Server 2008 R2 with SP1, and Windows Vista with SP2) or

[1] Please note that the support for Crystal Reports 2008 ends on 31-DEC-2015.

[2] Please note that the support for Crystal Reports 2011 ends on 31-DEC-2015.

KB2805222 (on Windows 8 or Windows Server 2012), or Version 4.5.1. Please note that a full installation (as opposed to a client profile) is required.

- OMNITRACKER supports the following databases:
  - Built-in Microsoft Jet database. Please note that this is not supported in an OMNITRACKER Multi Server Architecture (MSA) cluster.
  - Oracle Standard or Enterprise Edition versions 12.1.0.1 The Oracle client software must have the same version number as the server.
  - Microsoft SQL Server 2008 with SP3 Standard or Enterprise Edition (with Native Client 10.0 with SP3), SQL Server 2008 R2 with SP2 Standard and Enterprise Edition (with Native Client 10.5 with SP2), and SQL Server 2012 with SP2 Standard and Enterprise Editions (with Native Client 11.0 with SP2).
- Microsoft Excel 2010 or higher must be installed, if you want to import data from Excel in server-side actions.
- Microsoft Word 2010 or higher must be installed, if you want to use the “mail merge” feature in server-side actions.

Version Compatibility

- You must install compatible versions of OMNITRACKER clients and server. Usually, this means that clients and server must have the same version number (unless specified otherwise in the OMNITRACKER Release Notes). This also applies to the OMNITRACKER Development Environment.
- All other components (Email Gateway, Web Gateway, and so on) must have the same version number as the OMNITRACKER server.

OMNITRACKER Email Gateway

Windows Server 2003 with SP2 (except Windows Server 2003 Web Edition) or Windows Server 2008 with SP2, Windows Server 2008 R2 with SP1, Windows Server 2012, or Windows Server 2012 R2 are supported. (Only a 32-bit version of the Email Gateway is available. The 32-bit Email Gateway is supported on 64-bit operating systems.)

- Mail server: An email server providing Internet email protocols (SMTP, IMAP4 and/or POP3) or MAPI must be available.

  When using the MAPI protocol, certain advanced email functionalities of OMNITRACKER cannot be used.
- When using MAPI Outlook 2010 with SP1 or Outlook 2013 32-bit must be installed on the OMNITRACKER server computer.

ODBC Data Import

For ODBC data import, only those data bases are supported that can be used as back-end database for the OMNITRACKER server. (See page 3.) Exception: Microsoft Jet is not supported via ODBC; there is a dedicated Microsoft Jet (MDB) import instead.

Data Export to External Databases

For data export to external databases, only those data bases are supported that can be used as back-end database for the OMNITRACKER server. (See page 3.)

Interface Bus

The Interface Bus supports the following systems:

- Microsoft Exchange Server 2010.
- Windows SharePoint Services 3.0.
- Microsoft SharePoint Foundation 2010.
- Microsoft SharePoint 2010.
- baramundi Management Suite 8.0, 8.0.1, 8.1, 8.1.1, 8.2, 8.5.
- SAP Solution Manager 4.0 with activated service desk.

Windows Server 2003 with SP2 (except Windows Server 2003 Web Edition) or Windows Server 2008 with SP2, Windows Server 2008 R2 with SP1, Windows Server 2012, or Windows Server 2012 R2 are supported. (Only 32-bit servers are available. 32-bit servers are supported on 64-bit operating systems.)

The function BmsGw.FillClientInfo and the client details view of the ITSM Center reference integration require Internet Explorer 7.0 or higher to be installed.

OMNITRACKER Telephony Integration

The OMNITRACKER Windows client can be integrated with TAPI 2.x compliant telephony systems.

A TAPI 2.x compliant driver must be installed on each machine on which the OMNITRACKER Windows client is running.

Non-TAPI compliant telephony systems can be integrated by using OMNITRACKER's COM-based Telephony Integration Interface. (See the Administrator's Guide for more information.)

OMNITRACKER Web Gateway

Web Server

Windows Server 2003 with SP2 (except Windows Server 2003 Web Edition) or Windows Server 2008 with SP2, Windows Server 2008 R2 with SP1, Windows Server 2012, or Windows Server 2012 R2 are supported. (Only a 32-bit version of the Web Gateway is available. The 32-bit Web Gateway is supported on 64-bit operating systems.)

- Microsoft Internet Information Server (IIS) 6.0 or higher.
- Microsoft .NET Framework Version 4.0, Version 4.5 with KB2805221 (on Windows 7 with SP1, Windows Server 2008 with SP2, Windows Server 2008 R2 with SP1, and Windows Vista with SP2) or KB2805222 (on Windows 8 or Windows Server 2012), or Version 4.5.1. Please note that a full installation (as opposed to a client profile) is required.
- In order to view reports, Crystal Reports Visual Studio 2010 .NET runtime components are required.
- For Windows Server 2008, Windows Server 2012, and Windows Server 2012 R2, the IIS 6 compatibility modules must be installed.

Web Server Dependencies

Depending on the version of the Operating System and IIS used, certain system components must be activated for the OMNITRACKER WebGateway to function properly:

- Windows Server 2003 (IIS 6)
  - Application Server / Internet Information Services (IIS) / Common Files
  - Application Server / Internet Information Services (IIS) / Internet Information Services Manager
  - Application Server / Internet Information Services (IIS) / World Wide Web Service
- Windows Vista, Windows 7 (IIS 7):
  - Internet Information Services / Web Management Tools / IIS 6 Management Compatibility / IIS Metabase and IIS 6 configuration compatibility
  - Internet Information Services / Web Management Tools / IIS Management Console
  - Internet Information Services / Web Management Tools / IIS Management Service
  - Internet Information Services / World Wide Web Services / Application Development Feature / .NET Extensibility
  - Internet Information Services / World Wide Web Services / Application Development Feature / ASP.NET
  - Internet Information Services / World Wide Web Services / Application Development Feature / ISAPI Extensions
  - Internet Information Services / World Wide Web Services / Application Development Feature / ISAPI Filters
  - Internet Information Services / World Wide Web Services / Common Http Features / Default Document
  - Internet Information Services / World Wide Web Services / Common Http Features / Static Content
  - Internet Information Services / World Wide Web Services / Security / Request Filtering
  - Internet Information Services / World Wide Web Services / Security / Windows Authentication
- Windows Server 2008 & Windows Server 2008 R2
  - Roles / Web Server (IIS)

- Web Server (IIS) - Role Services / Web Server / Common HTTP Features / Static Content
- Web Server (IIS) - Role Services / Web Server / Common HTTP Features / Default Document
- Web Server (IIS) - Role Services / Web Server / Application Development / ASP.NET
- Web Server (IIS) - Role Services / Web Server / Application Development /.NET Extensibility
- Web Server (IIS) - Role Services / Web Server / Application Development / ISAPI Extensions
- Web Server (IIS) - Role Services / Web Server / Application Development / ISAPI Filters
- Web Server (IIS) - Role Services / Web Server / Security / Windows Authentication
- Web Server (IIS) - Role Services / Web Server / Security / Request Filtering
- Web Server (IIS) - Role Services / Management Tools / IIS 6 Management Compatibility / IIS 6 Metabase Compatibility
- Web Server (IIS) - Role Services / Management Tools / IIS Management Console

Supported Web Browsers

As of V10.2.200, the following browsers are supported on the given Operating Systems:

	Windows	MAC OS	Linux	Android	iOS (iPAD, iPhone)
IE 7-10	Yes	n/a	n/a	n/a	n/a
FF 24 ESR	Yes				n/a
Safari 5	Yes (new)			n/a	Yes (new)
Safari 6		Yes (new)			
Chrome 32	Yes (new)			Yes (new)	

Please note that browser support is subject to availability on the given Operating Systems. E.g. Safari 6 is only available on Mac OS, so only this combination is supported, while Safari 5 is supported in Windows. Please also see the notes on Internet Explorer and Firefox later in this chapter.

- Internet Explorer 10. Please note that the compatibility mode of Internet Explorer is not supported. The "Display intranet sites in Compatibility View" option in particular is not supported. PLEASE NOTE that Internet Explorer is only supported if .NET Framework 4.5 is installed on the Web Server; .NET framework 4.5 in turn requires at least Windows Server 2008.[3]
- Internet Explorer 7.0 – 9.0: Please note that the compatibility mode of Internet Explorer is not supported. The "Display intranet sites in Compatibility View" option in particular is not supported. PLEASE NOTE that OMNINET strongly recommends Internet Explorer 9 as its javascript engine clearly outperforms the javascript engines of its predecessors.
- Firefox 24 ESR.

JavaScript must be activated in the browser settings.

To view reports in the browser, Adobe Acrobat Reader version 5 or higher is required.

Microsoft Excel 2010 or higher must be installed, if you want to export data to Excel using your web browser.

[3] As a corollary, Internet Explorer 10 cannot be supported from a Web Gateway running on Windows Server 2003.

OMNITRACKER Mobile Client (OMNIVELOX)

- Required PDA operating system: Windows Mobile 5 or 6.
- CPU: at least 400 MHz.
- PDA RAM: at least 32 MByte free RAM for programs and data.
- On the OMNITRACKER server, .NET Framework 2.0 or later is required.
- For Windows Server 2008, the IIS 6 compatibility modules must be installed.
- If the OMNITRACKER server is a Windows Server 2008, Windows Server 2012 or Windows Server 2012 R2 then the IIS 6 compatibility modules must be installed.
- If the push service shall be used: Your network provider must offer the usage of IP addresses without network translation (NAT).

Software Configuration Management Integration (SCM)

OMNITRACKER integration tools are available for the SCM systems listed below. (Please contact us regarding support further products or versions.)

- Microsoft SourceSafe version 6.0
- ClearCase version 5.0
- PVCS Version Manager version 6.8.1
- MKS Source Integrity version 7.3

OMNISCAN Inventory Scanner

The OMNISCAN inventory scanner can run on the following operating systems:

Windows Server 2003 with SP2 (including Web Edition) Windows Server 2008 SP2, or Windows Server 2008 R2 SP1. (Only a 32-bit version of OMNISCAN is available. 32-bit OMNISCAN is supported on 64-bit operating systems.)

The scanner can scan all Windows PCs that fulfill the following requirements:

- Windows Management Instrumentation (WMI) is installed and active. (WMI is pre-installed on Windows Server 2003 and higher.)
- The Remote Registry Service is active.
- If a firewall is present, it must allow WMI and Remote Registry communication.

More than one inventory scanner can be installed in the network. The scanner can run on a different machine than the OMNITRACKER server.

OMNITRACKER Web Service

Windows Server 2003 with SP2 (including Web Edition), Windows Server 2008 SP2, or Windows Server 2008 R2 SP1, or Windows Server 2012 are supported. (Only a 32-bit version of the Web Service is available. The 32-bit Web Service is supported on 64-bit operating systems.)

- Microsoft Internet Information Server (IIS) 6 or higher.
- Microsoft .NET Framework Version 4.0, Version 4.5 with KB2805221 (on Windows 7 with SP1, Windows Server 2008 with SP2, Windows Server 2008 R2 with SP1, and Windows Vista with SP2) or KB2805222 (on Windows 8 or Windows Server 2012), or Version 4.5.1. Please note that a full installation (as opposed to a client profile) is required.
- For Windows Server 2008, the IIS 6 compatibility modules must be installed.

Minimum Hardware Requirements

This section describes the minimum requirements to run OMNITRACKER at a reasonable speed and gives recommendations of how to increase system performance. Please note that OMNITRACKER can run on slower systems but a drop below the reasonable performance threshold is to be expected (for a more detailed definition of what can be considered speed see „Dimensioning of the OMNITRACKER Application and Database Server" below)

Unless noted otherwise, the specified hardware requirements do not describe a system configuration that allows OMNITRACKER to perform at optimal speed.

Since OMNITRACKER is an application

- which may be highly customized and
- the configuration schema may strongly affect the resource utilization (CPU, memory, disk, network, …)

it is impossible to recommend hardware sizing to optimize performance for specific configurations and load profiles without further analysis.

Server Dimensioning

The minimum hardware requirements depend on the usage scenario for OMNITRACKER.

You must take into account

- the maximum number of concurrent users, and
- the user action frequency (UAF) .

User action frequency (UAF) means the average number of actions a user performs per minute. A typical mix of action types is given in the Application Server and Database Server sections.

For less than 100 concurrent users, you usually obtain the maximum performance if application server and database server are running on the same machine. This requires that the machine is sized in a form that it can accommodate both servers; furthermore, the database server must be configured in a form that it leaves enough main memory for the OMNITRACKER server and the operating system.

If you want to separate application and database servers, you should make sure that both servers are connected via a 1.000 MBit/s link.

Below you can find dimensioning suggestions for application and database server. If you intend to use only a single server, please add up CPU Passmark rating, RAM sizes, and hard drive requirements respectively.

Dimensioning of the OMNITRACKER Application and Database Server

The following information is based on the benchmark rating calculated by the Passmark tool PerformanceTest 7.0 (www.passmark.com).

We recommend the following dimensions for your server for a given number of concurrent users and a given User action frequency.

The numbers below are based on the following mix of action types: (1)

- 5% Write actions (Create and Modify Objects)
- 2.5% Sending of emails (as part of write

actions)

- 5% Full-text searches
- 15% Read actions (Visiting folders)
- 75% Read actions (Opening objects)

With this mix of action types and the server dimensions given, a reasonable minimum performance could be achieved for peak-time user action frequencies (6 actions per user per minute): A server response time (not counting client-side processing) of less than 3s for at least 80% of all user actions.

(1) Please note that it is assumed that only typical actions are performed. Atypical actions are complex actions such as report generation, modifying many objects at once (e.g. via scripting), accessing external systems etc.

Dimensioning of the OMNITRACKER Application Server

Concurrent Users	<=		
	100	400	700
UAF (1)	6	6	6
CPU Passmark Rating	1292	2153	7967
RAM size	4 GByte	4 GByte	4 GByte
Hard drive: OT system files	1 GBytes (OT system files) + usage dependent space for full text search index and attachments. There should be three separate hard drives for 1) The Operating system, 2) The full text search index, 3) and the attachments.		

(1) UAF: User Action Frequency (Number of actions per minute per user).

Example:

A CPU Passmark rating of **2153** can be achieved by system properties such as:

Number of physical cores	2
Processor type	Xeon E5620
CPU-clock speed	2.4 GHz
RAM	4 GByte

Multi Server Architecture Dimensioning[4][5]

When using the Multi Server Architecture, all the above dimensions apply to the single server nodes with one exception: The Passmark CPU indices of all server nodes should roughly add up to the required CPU Passmark index for a given load.

2,5% 15

Example:

To support 400 users with a User Action Frequency of 6 as above, the sum of CPU Passmark ratings of all Application server nodes should be slightly greater than the CPU Passmark rating of 2153 required of a single server node.

Dimensioning of the Database Server

Concurrent Users	<=		
	100	400	700
UAF (1)	6	6	6
CPU Passmark Rating	6460	10765	39833
RAM size	4 GByte	4 GByte	8 GByte
Hard drive DB-area	Depends on use; rule of thumb: 1-10 Kbyte per OMNITRACKER data file (+ 512MB system files) Use RAID-1 or RAID-10 for DB files and transaction log.		

(1) UAF: User Action Frequency (Number of actions per minute per user).

Example:

A CPU Passmark rating of **10765** can be achieved by system properties such as:

[4] Please also verify the supported databases in the OMNITRACKER server section.

[5] Please also refer to the Networking section for additional Multi Server Architecture specific requirements.

Number of physical cores	10
Processor type	Xeon X5670
CPU-clock speed	2.93 GHz
RAM	8 GByte

For optimum performance, the database server's RAM should be as large as the database files (i.e. as large as the database tables and indices, excluding attachments). E.g. if your database files have a size of 10 GB, assign at least 10 GB RAM to your database. You must also make sure that the RAM is assigned to your database server software, not only to the hardware; some database servers require that you assign the RAM manually to the database server. You also must consult your database documentation to ensure that your specific database edition supports the required amount of memory. This also means that for RAM sizes above 3 GByte the respective 64bit edition of the operating system is usually required.

Even though it is technically possible to have other applications access the OMNITRACKER server's database server, this configuration is not recommended in order to avoid versioning problems and in order to ease diagnosis of performance issues.

Dimensioning of a Terminal Server

The most important things to take into account when dimensioning Terminal Servers for OMNITRACKER clients are required RAM size (at least 2GByte RAM + 300MByte per user) and required network bandwidth (at least 256 kbit/s per user).

Rough CPU Passmark indices for the Terminal Server can be obtained by scaling up the respective CPU Passmark indices for OMNITRACKER clients (see below).

Ethernet link between OMNITRACKER Application Server and Database Server

We recommend a gigabit Ethernet connection between the servers.

Dimensioning of the Web Server(s)

The following Passmark rating is a recommended value of the Web Server which serves about 100 concurrent Web users. The Benchmark rating consists of the rating values of the CPU, RAM and Hard Disk.

Concurrent Users	100
Web Server Passmark Rating	724
CPU Passmark	1248
RAM (4,00 GB)	698
Hard Disk (20 GB)	392

For more than 100 concurrent Web users, you should use multiple Web servers.

Client Dimensioning

Benchmark Rating:

The basis for dimensioning the Client hardware is using the **Passmark** PerformanceTest7.0 benchmark tests (www.passmark.com), using only the following measurements:

- CPU
- GPU
- memory

Minimal System Properties:

The minimal Passmark rating – only for assuring functional correctness - is **242** both for WPF- and MFC-client types, which can be achieved by system properties such as:

Number of processors	1
Processor type	Pentium 4
CPU-clock speed	2.8 GHz
RAM	1 GByte
Hard drive: OT system files	500 Mbytes
GPU system	Tier-1
Screen resolution	1280x900

The Passmark rating of 242 is composed of:

- CPU Mark: 384.1
- 2D / 3D Graphics Mark: 295.4 / 62.8
- Memory Mark: 437.4

Recommended System Properties:

The recommended Passmark rating is **400** for typical OMNITRACKER configurations both for WPF- and MFC-client types, which can be achieved by system properties such as:

Number of processors	1
Processor type	Core Duo T2250
CPU-clock speed	1.73 GHz
RAM	2 GByte
Hard drive: OT system files	500 Mbytes
GPU system	Tier-1
Screen resolution	1280x900

The Passmark rating of 400 is composed of:

- CPU Mark: 836.3
- 2D / 3D Graphics Mark: 237.4 / 104.6
- Memory Mark: 430.0

A Passmark rating of **800** can be achieved by system properties such as:

Number of processors	1
Processor type	Core2 Duo E8400
CPU-clock speed	3 GHz
RAM	2 GByte
Hard drive: OT system files	500 MBytes
GPU system	Tier-2
Screen resolution	1280x900

The Passmark rating of 800 is composed of:

- CPU Mark: 2063.3
- 2D/3D Graphics Mark: 282.7 / 218.9
- Memory Mark: 904.3

OMNINET's recommendation is that the hardware for the WPF-client performs at least twice as good (by doubling the Passmark rating) as the hardware used for the MFC-client.

Please note:

- When you are upgrading from OMNITRACKER 8.x or earlier (based on MFC technology) to OMNITRACKE 9.x or later (based on WPF technology), you need to upgrade your hardware, if you want the client to run with the same performance; this is caused by the WPF technology that is used in OMNITRACKER 9.x and later.
- The above requirements refer to situations when OMNITRACKER is the only running application on the client. If other applications are running concurrently, you must add the OMNITRACKER system requirements to the sum of the system requirements of all other applications.
- The best performance results can be achieved by using Windows 7, SP1.

Network Configuration (OMNITRACKER)

OMNITRACKER uses TCP/IP for communication.

Recommend bandwidths:

- For Windows Client connections, a bandwidth of at least 128 kbit/s per user is recommended. The network latency should not be higher than 50 ms.
- For Web Client connections, a bandwidth of at least 256 kbit/s per user is recommended.
- When operating OMNITRACKER using Terminal Services or Citrix Metaframe, a bandwidth of at least 256 kbit/s per user is recommended.

For security reasons, OMNITRACKER applications are digitally signed; when they are started, an Internet connection to a certificate revocation list server is created to ensure the validity of the signature. This check does not happen, if Windows detects that there is no Internet access. In very rare circumstances, a Windows system might be configured in such a way that it does not correctly detect that the current user has no Internet access. In this case, starting OMNITRACKER applications (e.g. the Windows client) might take up to several minutes. In order to avoid that, either grant Internet access to all users, or suppress the certificate checking using a config file (see http://support.microsoft.com/kb/936707/en-us for details).

Network Configuration (OMNITRACKER Multi Server Architecture)

Cluster-Internal Network

When using OMNITRACKER in a Multi-Server Architecture setup, a dedicated high-bandwidth (1 Gbit/s or better), low-latency (<< 1ms) network is required for inter-server communication.

For a 2 node cluster, this can be a direct link; for three or more nodes, additional networking hardware (switches etc.) is required.

Storage

When using OMNITRACKER in a Multi Server Architecture setup, several file system areas need to be shared between the cluster nodes and must therefore be available through the network (usually on a NAS), namely:

- The full-text search index files,
- The Email queue files,
- And the attachments files.

Recommendations for Remote Desktop

When running the Windows client on a Windows terminal server, the following recommendations apply to the remote desktop clients:

- On Windows Vista and Server 2003, you should install the remote desktop connection 7.0 client update (available from Microsoft's download site).
- For small-bandwidth connections, select the appropriate connection speed in the remote desktop client.
- For high-latency connections (>= 100ms round-trip), select the appropriate connection speed in the remote desktop client (e.g. "Satellite (2 kbits-16Mbps with high latency)").
- Set the color depth to 16 bit.
- Disable all checkboxes (e.g. font smoothing, visual styles, etc.) except "Persistent bitmap caching".
- Do not use large windows sizes. Use the smallest window size that still allows you to work efficiently.

Network Configuration (OMNISCAN)

OMNISCAN uses TCP/IP for communication.

OMNISCAN transfers approximately 2-3 MBytes of data between the scanned PC and OMNISCAN.

Virtualized Hardware

OMNITRACKER server and client components can be used with virtualized hardware or virtualized operating systems (VMWare, Microsoft Virtual Server, Hyper-V). In order to ensure reasonable performance, the virtualized environment must meet the same Passmark requirements as non-virtualized hardware.

Please note that the latency of most virtualized network adapters in current virtualization products is higher than in purely hardware-based environments. Please make sure the specific latency and networking requirements (see above) are met before running OMNITRACKER Multi-Server-Architecture cluster in a virtualized environment.

When using OMNITRACKER in virtualized environments, support restrictions apply (e.g. the OMNINET support team may ask the customer to reproduce the problem using real hardware or may refer the customer to the support team of the virtualization software vendor). Please note that the vendors of Windows, Crystal Reports, SQL Server, Oracle or DB2 may have similar support restrictions.

The above mentioned virtualization software products are manufactured by companies that are independent of OMNINET. OMNINET makes no warranty, implied or otherwise, about the performance or reliability of these products.