

RightNow Environmental Configuration Guide

Purpose

This guide is intended to assist in the initial installation and proactive maintenance of your installation of the RightNow 7.x application. Adherence to the guidelines laid out in this document will help to ensure optimal performance and stability of your RightNow deployment.

Product architecture, network requirements, workstations configuration requirements, installation methodologies, network maintenance, and workstation troubleshooting are each covered herein. Please see our knowledge base at <http://rightnow.custhelp.com> for updates in each of these areas.

RightNow Architecture

The RightNow application utilizes a standard 3-Tier architecture consisting of the following:

Client Tier: The client tier consists of a web browser that presents content received from the application tier. The client tier communicates with the application tier through the Internet via Hypertext Transfer Protocol (HTTP) or Hypertext Transfer Protocol with Secure Socket Layer (HTTPS).

Application Tier: The application tier provides the logic for the RightNow product and communicates data from the database tier to the client tier. This tier resides on a web server.

Database Tier: At the base of an application is the database tier, consisting of the database management system that manages the database containing the data users create, delete, modify, and query.

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Networking Requirements and Recommendations

As the RightNow application is web-based, the corporate network plays an important role in the efficient and consistent connectivity to the application. The following items should be considered when implementing the RightNow solution:

Bandwidth: For satisfactory performance, a high-speed Internet connection is required. Dial-up connections are not supported. The information below provides guidelines for the network bandwidth to the Internet.

As a recommended minimum, 25kbps (kilobits per second) must be *dedicated* per concurrent logged in agent. For example, if there are 20 agents logged in, a minimum of 500kbps of dedicated WAN / Internet bandwidth should be available for the RightNow application.

As an example, based on the above recommendation, a T1 line will support approximately 60 concurrent agents, depending upon the particular implementation & the usage patterns of the agents in question. Regular bandwidth utilization monitoring should be done in production environments to facilitate the tuning of the amount of bandwidth provisioned and its optimal utilization.

If your network utilizes a private WAN (typically over multiple call centers) specified bandwidth must be available throughout the entire network path; that is from the Internet to the Private WAN to the LAN and to the Agent workstation.

Response Test Time: Your network connectivity to the RightNow data center (either Internet or private WAN) should provide less than a 300ms response time test (RTT) and less than 1% packet-loss. Where possible, your IT/IS staff should work to minimize WAN / Internet latency to ensure proper application performance.

Network Appliances (including Proxy Devices, Firewalls, and Content Filters):

The customer network administration team must ensure that all communication between the RightNow client application and the RightNow hosted server is allowed, in an unrestricted manner, through all levels of the customer network. All network appliances must be configured to allow all traffic between the client workstations and the following domains to occur in an unrestricted manner:

- *.csthelphelp.com
- *.rightnowtech.com
- activex.microsoft.com

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Applicable network appliances include the following (but are not limited to):

- Gateways
- Routers
- Hubs
- Bridges
- Switches
- Proxy Servers
- Firewalls
- Load Balancers

Proxy servers must be configured with authentication and caching exclusion rules for each of the domains listed above.

Firewalls must be configured to allow traffic on HTTP port 80 and HTTPS port 443 for the domains listed above.

Customers using HTTP / IP proxy devices, either directly or indirectly, must ensure that these devices are configured correctly for optimal performance by the RightNow application. These devices include but are not limited to:

- Traditional proxy server (PC server or dedicated appliances),
- Content caching/acceleration devices,
- Local content filtering/inspection appliances, and
- Hosted content filtering and inspection services.

Quality of Service (QoS) Packet-Shaping Policies: If your networks have QoS / packet-shaping policies implemented, the RightNow application should be considered a performance-sensitive application and accordingly given appropriate priority to ensure maximum performance.

If your organization has not instituted QoS/packet-shaping policies, you should consider the economic advantages of grooming network traffic to provide priority applications, such as your RightNow application, sufficient access to network resources. Whenever possible, customer LAN / WAN connectivity should be groomed to match generally-accepted VOIP standards:

- Less than 250ms response time test (RTT),
- Less than 5% latency jitter,
- Near-zero packet-loss, and
- Appropriate / consistent Layer-2/3 QoS policing.

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Wide Area Network / Internet Load Balancing

Wide area network (WAN) and internet load balancing must be performed in a per-session vs. a per-packet manner for RightNow traffic. Per-packet load balancing often leads to out of order packet delivery which will result degraded performance of your RightNow application and may result in its decreased stability.

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Workstation Requirements and Recommendations

As the RightNow application utilizes a basic web browser residing on an agent workstation, the following items are recommended to maximize application performance. Workstation specifications can also be found in answer ID 31 at <http://rightnow.custhelp.com>, along with server requirements for non-hosted customers.

Hardware Configuration: The minimum hardware recommendations for the staff member workstation listed in Table 1 are for RightNow applications. These recommendations do not include the additional disk space required for operating system swap space (refer to the operating system documentation) or other applications running on the workstation.

Table 1: Minimum Workstation Hardware Recommendations

RightNow CRM Version	Workstation Type	Memory	CPU	Hard Disk
7.0.x	Agent	512 MB	Minimum: 400 MHz Recommended: 700 MHz or greater	50 MB free with 512 MB virtual memory
	Administrator	512 MB	1 GHz	50 MB free with 512 MB virtual memory
7.5.x	Agent	Min: 512 MB Recommended: 1 GB (7.5.1 and up)	Minimum: 700 MHz Recommended: - 1 GHz (7.5.0) - 1.5 GHz (7.5.1 and up)	50 MB free with 512 MB virtual memory
	Administrator	Min: 512 MB Recommended: 1 GB (7.5.1 and up)	1.5 GHz	50 MB free with 512 MB virtual memory

*Required free hard drive space will vary depending on database size and file attachments.

Operating Systems: RightNow staff member and end-user functions are best performed on workstations running the following operating systems. Operating systems that aren't listed for a corresponding release in table 2 are not supported.

Table 2: Supported Operating Systems

RightNow CRM Version	Supported Operating Systems
7.0.x	Windows 2000 Professional Windows XP Professional
7.5.x	Windows 2000 Professional (SP 4) Windows XP Professional (SP 2) Windows 2003 Server* (7.5.4 and up only)

* If you are running Windows 2003 Server, Enhanced Security Mode cannot be enabled in Internet Explorer.

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Workstation Display Settings: To view RightNow windows, consoles, and panels, you must configure the display properties of your workstation to display a minimum screen area of 1024 by 768 pixels with the “small fonts” or “normal size” (96 dpi).

.NET Framework: RightNow staff and administrator workstations require and must support .NET Framework Version 1.1. RightNow CRM Version 7.0.0 requires this only for staff members using the campaign console, sales quotes, or computer telephony integration. RightNow CRM Versions 7.5.1 and up require Service Pack 1 for .NET Framework 1.1.

Web Browsers: RightNow CRM requires a PC version of Microsoft Internet Explorer for all agent/admin activities. Table 3 shows Internet Explorer version requirements. For end-user web browser recommendations, refer to Answer ID 31 at <http://rightnow.custhelp.com>.

Table 3: Internet Explorer Version Requirements

RightNow CRM Version	Internet Explorer Version
7.0.x	6.0 (SP1 or newer)
7.5.0 – 7.5.5	
7.5.6	6.0 (SP 1 or newer) or 7.0

Additional Requirements: If you are using RightNow Live or RightNow Sales, refer to Table 5 for software and hardware requirements. These requirements are in addition to the workstation recommendations listed above.

Table 5: Additional Requirements

RightNow CRM Version	User	Additional Requirements
7.0.x	RightNow Live Agent	Java browser plug-in Version 1.4.1_06
	Sales Quotes Staff Member	Microsoft Word 2000 or newer (merging quotes only)
	Disconnected Access Staff Member	- Apache 2.0 - Minimum of 200 MB free hard disk space.
7.5.x	RightNow Live Agent	Java browser plug-in Version 1.5.0_02
	Sales Quotes Staff Member	Microsoft Word 2000 or newer (merging quotes only)
	Disconnected Access Staff Member	- Apache 2.0 - Minimum of 200 MB free hard disk space. (CRM 7.5.0) - Minimum of 500 MB free hard disk space (CRM 7.5.1 and up) - Minimum 1.5 GHz processor (CRM 7.5.1 and up) - High-speed Internet connection for synchronizing (CRM 7.5.1 and up)

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Workstation Settings: Not all of these settings will appear for Windows 2000 workstations. Additionally, several settings are marked for troubleshooting only.

1. *(Required)* Verify current user is member of workstation Administrators Group: Start > Control Panel > Administrative Tools > Computer Management > System Tools > Local Users and Groups > Groups > Administrators
 - Verify the current Windows profile is listed under the Administrators group.
2. Verify Browser Encoding Settings: Internet Explorer > View > Encoding
 - Auto-select – Not selected
 - Western European ISO – Selected
3. Verify correct browser caching: Start > Control Panel > Internet Options > General Tab > Settings Button
 - Check for newer versions of stored pages – Every visit to the page
 - Amount of disk space to use – Greater than 1000 MB
4. Verify Browser Security Settings: Start > Control Panel > Internet Options > Security Tab > Internet (Globe Icon) Selected > Custom Level Button
 - .Net Reliant Framework
 - Run components not signed with Authenticode – Prompt
 - *(Required)* Run components signed with Authenticode – Enable
 - ActiveX controls and plug-ins
 - Run Automatic Prompting for ActiveX controls - Enable
 - Binary and script behaviors – Enable
 - *(Required)* Download signed ActiveX controls – Prompt or Enable
 - *(Required)* Run ActiveX controls and plug-ins – Enable or Prompt
 - *(Required)* Script ActiveX controls marked as safe for scripting – Enable or Prompt
 - Downloads
 - File Download – Enable
 - Miscellaneous
 - Access data sources across domains – Prompt or Enable
 - Allow scripting of Internet Explorer web browser control – Enable
 - Allow script-initiated windows without size or position constraints – Enable

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- Allow Web pages to use restricted protocols for active content – Enable or Prompt
- Display mixed content – Enable or Prompt
- Launching of programs and files in an IFRAME – Enable or Prompt
- Navigate sub-frames across different domains – Enable or Prompt
- Userdata persistence – Enable
- Web sites in less privileged web content zone can navigate into this zone – Enable or Prompt
- Scripting
 - *(Required)* Active Scripting – Enable or Prompt
 - Allow paste operations via script – Enable
 - Scripting of Java Applets – Enable
- 5. Verify Advanced Browser Settings: Start > Control Panel > Internet Options > Advanced Tab
 - Browsing
 - Always send URLs as UTF-8 – Unchecked
 - Enable third-party browser extensions – Checked
 - Disable Script Debugging (IE) – Unchecked (when troubleshooting)
 - Display notification about every script error – Checked (when troubleshooting)
 - HTTP 1.1 Settings
 - Use HTTP 1.1 through proxy connections – Checked
 - Java (Sun)
 - Use Java 2 v 1.4.1_x for applet – Checked
 - Security
 - Allow active content to run in files on my computer – Checked
 - Do not save encrypted pages to disk – Unchecked
 - Empty Temporary Internet Files when browser is closed – Unchecked
 - Use SSL 3.0 – Checked (for sites using SSL)

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6. Verify .NET Permissions: Start > Control Panel > Administrative Tools > Microsoft .NET Framework 1.1 Configuration > Configure Code Access Security Policy > Adjust Zone Security > Make Changes for Current User
 - o My Computer – Full Trust
 - o Local Intranet – Medium Trust or Higher.
 - o Internet – Medium Trust

7. When your workstation is not set up to use a proxy server, please uncheck the following checkbox:

Internet Explorer > Tools > Options > Connections > LAN Settings > Automatic Configurations

Automatically detect settings (Checked by default)

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Installation Methodologies

Web-based Installation: To use the most common installation methodology, an agent with workstation administrative rights simply navigates to the appropriate URL, for example:

<http://interface.custhelp.com/cgi-bin/database.cfg/php/admin/launch.php>

After navigating to the login page, and entering an agent username and password, the RightNow Component Manager begins to download the required components onto the workstation.

The Component Manager installs the files via the following process:

1. The installation directory for component files, executable files, and dictionary files is determined. This is typically a subdirectory under the “RNT” directory, located in each Windows user profile (e.g. C:\\Documents and Settings\\<username>\\RNT\\<sitename>).
2. The installation directory is checked for the **ComponentManager.RNTmodule** file. If the timestamp of the currently installed file does not match the timestamp of the most current version of the file, the **ComponentManager.RNTmodule** file is queued for downloading, and is downloaded. If a download occurs, the **ComponentManager.RNTModule** is restarted.
3. The timestamps of the components are compared to the timestamps of the most recent files. If these timestamps differ, the current versions of the files are added to an action queue for downloading.
4. If any controls have been queued, clearing of the browser cache and behavior files are queued.
5. The action queue is processed. This causes all queued files to be downloaded into the installation directory. It also causes the browser cache to be cleared of all RightNow HTML component behavior files.
6. Downloaded component files are registered using **DLLRegSvr**. Information regarding file registration is located.
7. All HTML component behavior files are downloaded and placed into the browser cache.
8. A new entry in the **ComponentManager.log** file is started.
9. Every component in the “RNT” directory that was just downloaded is unregistered and reregistered with Windows.

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Stand-Alone Installation: For restricted environments, companies running version 7.5 or newer of the RightNow application can implement the Stand-Alone Component Installer through the following process:

Step 1: Log into Windows with a profile that is a member of the local Administrators group.

Step 2: Log into RightNow with the “administrator” account.

Step 3: Download the Stand-Alone Component Installer by navigating to the Links menu, and selecting the “Download Standalone Component Installer” option.

Step 4: Unzip the downloaded file into the desired directory.

Step 5: Double-click Setup.exe, and follow the installation instructions.

Note: *Installation via this method prevents automatic updates to the workstation via the Internet.*

The Stand-Alone Component Installer can also be used to distribute the RightNow components via the local network. This can be done by mapping a shared network drive containing the components, and running Setup.exe. Additional methodologies include pushing the files to the workstations via SMS, and executing Setup.exe. Please consult with your IT staff on corporate application installation procedures.

Note: *Regardless of the method used, the Setup.exe file must be executed as a user that is a member of the local workstation Administrators group.*

The Stand-Alone Component Installer installs components via the standard Microsoft Installer (MSI) process, and activates the RightNow Component Manager to execute the steps listed in the web-based component installation process.

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Network Troubleshooting

Your networks should be proactively monitored to avoid false-positive reports of application issues. Even if your IT / IS staff are in another location, your staff should evaluate and check the state of corporate LAN/WAN/Internet connectivity before submitting incidents to RightNow's Technical Support team. This helps to ensure accuracy and efficiency when troubleshooting your issue.

When requesting network troubleshooting assistance, please note the following guidelines:

WAN / Internet Performance Information You or your IT/IS staff should generally be able to provide appropriate WAN / Internet troubleshooting and performance information. This includes information such as:

- ICMP/UDP traceroute information from the affected call center to the associated RNT datacenter,
- greater than 1000-byte and greater than 1000-byte ICMP echo (ping) information from the affected call center to the associated RNT datacenter, and/or other more specific IP and Layer-4 session information related to reported issues.

Network Topology: You should be able to provide a description of your network topology, such as single network, multi-site network with no connectivity, multi-site network with public [VPN] connectivity, multi-site network with private/dedicated connectivity. This description should include but not be limited to the following:

- ISP(s),
- circuit/access types (for both public and private network segments),
- routing equipment vendor to ascertain configuration capabilities,
- LAN/WAN utilization stats. Charts are preferred but the minimum, average, and maximum values for each circuit and location are acceptable statistics.
- network appliances related to connectivity, such as firewalls, proxies, content filters, plus their configurations.

Performance Monitoring Statistics: Basic LAN / WAN performance monitoring statistics should be available to analyze per site and per workstation issues. In addition, raw logs that provide information such as packet capture and network interface stats should also be available. Open source and multi-platform packages such as MRTG are inexpensive and easy to implement.

Workstation Troubleshooting

When requesting workstation troubleshooting assistance, please note the following guidelines:

Agent PC Configurations: You or your IT/IS staff should be prepared to discuss the state of agent PCs, including system components and resource utilization with tools such as Microsoft Perfmon. You should also be prepared to isolate individual agent workstations and network interfaces for comparison purposes in the event sporadic application performance conditions are present.

Appendix A

Answer ID: 2091 on <http://rightnow.custhelp.com>

Why do files from RightNow download more than once?

Question

Why do files from RightNow download more than once? Sometimes when we log in, the Component Manager downloads more files, even though we are still on the same version of RightNow. Why?

Answer

The RightNow Component Installer controls the downloading of the RightNow components by comparing the files located on the workstation with the creation date and time of the files located on the RightNow servers (for hosted sites) or the download server (for non-hosted sites). If the files do not exist on the local workstation, or if the files on the workstation have an earlier creation date than the server files, the new files are loaded. Several situations can cause a download of the files:

- ★ The temporary Internet cache is cleared on the local workstation. This causes the HTML component behavior files (*.htc files) to be re-downloaded to the temporary Internet cache.
- ★ User profiles are cleared from the local workstation by IT security policy after the user logs off the workstation. This causes all user specific files to re-download.
- ★ Updated files are placed on the download server. If newer files are available, you will download those specific files the next time you log in.

If you find that you download files every time you log in, verify that you are not clearing the temporary Internet file each time you close the browser. From your Internet Explorer browser window, select Tools > Internet Options and click on the Advanced tab. In the Security section, make sure that the option for Empty Temporary Internet Files folder when browser is closed box is NOT checked.

In addition, you may need to increase the file cache for your machine. From your machine's desktop, right click on My Computer and select Properties > Advanced tab > Performance Options > Change. You can modify the paging file size for selected drive section. Click Set and OK. Click OK on the remaining pop-ups.

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Appendix B

Answer ID: 2135 on <http://rightnow.custhelp.com>

Question

When an agent logs in for the first time, is there a specific file that is updated that we could allow the agents to have access? Our agent workstations are locked down pretty extensively and we'd like a better understanding of where the file download will write.

Answer

In versions 6.0.2 and higher, the RightNow application includes a helpful feature called the Component Manager. The Component Manager runs automatically whenever a staff member logs in to a site. It detects whether you have the correct ActiveX controls for the site you are entering. If not, it installs or upgrades all of your ActiveX files for that site automatically.

Version 7.5: RightNow version 7.5 includes a dynamically-generated component installer. This feature is available to staff members whose profile has the Administrative Settings option enabled (from the Administration tab). To download the installer, log in to the administrative console of your RightNow application. Click the Links icon on the far right side of the navigation bar and select Download Standalone Component Installer.

The link generates and downloads a .zip file. To run the component installer, unzip the file to the desired location, and double-click the setup.exe file. This installs a link to RightNow on the machine's desktop. To run the setup.exe file, you must have full admin rights on the workstation. Once the link to the RightNow application is installed on the desktop, the user does not require administrative rights to use the link to the RightNow application.

Note: In some builds of 7.5, the Download Standalone Component Installer option does not appear in the Links menu if you have custom links defined in the TBAR_LINK_LIST configuration setting. If this is the case with your site, temporarily remove the custom links from the TBAR_LINK_LIST setting and have the user log in again to the RightNow application to access the standalone component installer. You can then, re-edit the TBAR_LINK_LIST setting to add the links to the menu.

Versions 6.0 and 7.0: In versions 6.0 and 7.x, all RightNow components downloaded onto the local workstation must be registered by an administrative user. After this initial registration, all users regardless of workstation privileges are able to login to download and install future component updates for the version of software they are using, including upgraded dot releases. There are three basic methods for the registration process:

1. Navigate to the support login page as a user with administrative privileges to the local workstation. This registers the ActiveX control for RightNow Service as an administrator, and in turn properly registers the RightNow Service components.

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2. Run Internet Explorer as an administrator on the local workstation. This can be done by right-clicking on the Internet Explorer executable file, and selecting "Run As" (if available). This registers the ActiveX control for RightNow Service as an administrator, and in turn properly registers the RightNow Service components.
3. Using System Management Server (SMS) or similar method, you can push the RightNow ActiveX control (RNTProcMan.ocx) and Component Installer (RNTCompInst.exe) to a local workstation.

Appendix C

Answer ID: 2412

What is the Workstation and Network Data Collector (*rntinfo.bat* file)?

Question

Our support agent wants us to run the Workstation and Network Data Collector (*rntinfo.bat* file) on some work stations to trouble shoot our support issue.

What does this file do and why is it necessary?

Answer

The Workstation and Network Data Collector is a .bat file that can be run on a work station to collect pertinent system and performance information. This information is written to a text file so that our RightNow support agents can review and evaluate the following:

- Workstation information -- including memory and disk space
- Network connectivity -- traceroute information with loaded packets
- Component Manager Log file -- list of RNT components that have been downloaded to the machine

If you have reported performance issues related to your RightNow application, your Support Account Manager may request that you run the data collector .bat file and attach the resulting .txt file to the incident.

To run the RNT_Info.bat file, use the steps below. Typically, when the file runs, it will take 3-4 minutes for the file to run. Upon completion, the window will close automatically and a new text file named *rntinfo* is saved to your desktop.

1. Click on the file attachment, found in the referenced answer, named *rntinfo.bat*.
2. At the prompt to Open or Save the file, click Save.
3. Save the file to your desktop. When you get the Download Complete message, click Close.
4. From the desktop, double click the file or right click and select Open.
5. At the prompt, enter the site name and press Enter. This is the name of the database for your application.
6. At the next prompt, enter the interface name and press Enter.
7. While the check is performed, text will scroll in the window and then periodically pause. Leave the window running; it will close automatically upon completion.
8. When complete, a file named *rntinfo.txt* will be saved to your desktop.
9. Attach the *rntinfo.txt* file to your incident and update the incident.