# RightNow Environmental Configuration Guide

## Purpose

This guide is intended to assist in the initial installation and proactive maintenance of your of your RightNow 8.x implementation.  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 is a rich Internet application utilizing a standard 3-Tier architecture consisting of the following:

**Smart Client Tier**: The client tier consists of a .NET Smart Client application 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 business 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 the application is the database tier, consisting of the database management system that manages the database containing the data users create, delete, modify, and query.

# RightNow Environmental Configuration Guide

## Networking Requirements and Recommendations

As the RightNow application is web services 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 round trip time (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:

> *.custhelp.com
> *.rightnowtech.com
> *.rnttraining.com
> activex.microsoft.com

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 to exclude RightNow application traffic. 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
- 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 300ms round trip time (RTT),
- Less than 5% latency jitter,
- Near-zero packet-loss, and
- Appropriate / consistent Layer-2/3 QoS policing.

# RightNow Environmental Configuration Guide

## 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.

# RightNow Environmental Configuration Guide

## Workstation Requirements and Recommendations

The RightNow solution consists of a .NET Smart Client application that is automatically installed and updated from the RightNow site. In addition, the Management and Configuration portions of the application require the Microsoft Internet Explorer Web Browser. The following items are recommended to maximize application performance. These are listed in addition to the workstation requirements published on the RightNow support website.

**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 simultaneously running on the workstation.

Table 1: Minimum Workstation Hardware Recommendations

| RightNow CRM Version | Workstation Type | Memory | CPU | Hard Disk |
|---|---|---|---|---|
| **8.x** | Agent | Min: 512 MB Recommended: 1 GB | Minimum: 700 MHz Recommended: <br> - 1 GHz <br> - 1.5 GHz | 50 MB free with 512 MB virtual memory |
| | Administrator | Min: 512 MB Recommended: 1 GB | 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 are not listed for a corresponding release in table 2 are not supported.

Table 2: Supported Operating Systems

| RightNow CRM Version | Supported Operating Systems |
|---|---|
| **8.x** | Windows 2000 Professional (SP 4) <br> Windows XP Professional (SP 2) <br> Windows 2003 Server* |

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

**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).

# RightNow Environmental Configuration Guide

**.NET Framework:** RightNow staff and administrator workstations require and must support .NET Framework Version 2.0. If the .NET Framework 2.0 is not installed on a given workstation prior to the installation of the RightNow solution, the user will be prompted to download and install the .NET Framework 2.0 before the installation can proceed.  Note that .NET Framework 2.0 and 1.1 versions can co-exist on a given workstation, therefore enabling the mass installation of the 2.0 version prior to the deployment of RightNow 8 with no disruption to the RightNow 7.X implementation.

**Web Browsers:** The 8.x version of the RightNow solution requires a PC version of Microsoft Internet Explorer.  Such users must have Internet Explorer set as their default browser.  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 |
|---|---|
| **8.x** | 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 |
|---|---|---|
| **8.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<br>- Minimum of 500 MB free hard disk space<br>- Minimum 1.5 GHz processor<br>- High-speed Internet connection for synchronizing |

# RightNow Environmental Configuration Guide

**Workstation Settings (Required for Administrators Only):** 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

    o   Verify the current Windows profile is listed under the Administrators group.

2.  Verify Browser Encoding Settings:  Internet Explorer > View > Encoding

    o   Auto-select – Not selected
    o   Western European ISO – Selected

3.  Verify correct browser caching: Start > Control Panel > Internet Options > General Tab > Settings Button

    o   Check for newer versions of stored pages – Every visit to the page
    o   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

    o   .Net Reliant Framework
        ▪   Run components not signed with Authenticode – Enable
        ▪   *(Required)* Run components signed with Authenticode – Enable

    o   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

    o   Downloads
        ▪   File Download – Enable

    o   Miscellaneous
        ▪   Access data sources across domains – Prompt or Enable
        ▪   Allow scripting of Internet Explorer web browser control – Enable
        ▪   Allow Web pages to use restricted protocols for active content – Enable or Prompt

- Allow script-initiated windows without size or position constraints – Enable
- 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 – Enabled
  - Disable Script Debugging (IE) – Unchecked (when troubleshooting)
  - Display notification about every script error – Checked (when troubleshooting)
  - Enable third-party browser extensions – Checked

- 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)

## Installation Methodologies

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

http://*interface*.custhelp.com/cgi-bin/*interface*.cfg/php/admin/launch.php

Select 'Install RightNow 8' on the launch page. Note, once the application is installed, it is no longer necessary to navigate to the launch page. Instead, RightNow 8 can be started from the Windows Start menu. The only time it is necessary to access the launch page is following an upgrade.

The following is a rough sketch of the installation process:

> **Important Note:** If the RightNow staff account has Management and Configuration permissions, administrator privileges are required on the workstation in question at the time of installation. This is necessary so that several ActiveX controls, which are required by the Management and Configuration pages, may be registered.

1. The RightNow InitEngine is downloaded and installed using Microsoft's ClickOnce installation process. The InitEngine is downloaded and placed in c:\Documents and Settings\{domain username}\Application Data\RightNow Technologies\InitEngine. If the current version of the InitEngine already resides on the system, nothing is installed. The InitEngine contains the login part of the application.

2. The RightNow Installer starts to execute and a login page is displayed, prompting for username, password, and site URL.

3. When a user presses the 'Login' button on the login page, the username/password is authenticated and, if valid, the RightNow Console application is downloaded and installed in c:\Documents and Settings\{domain username}\Application Data\RightNow Technologies\SiteFiles\{interface name}. If the current version of the console application for a site already exists on the user's workstation, nothing is downloaded and installed. The console application is downloaded in compressed .zip files and is uncompressed and installed by the InitEngine.

**Stand-Alone Installation:** An installer is available for those organizations who have concerns about the installation of software directly from the Internet or who would like to automate its mass deployment. Please consult with your IT staff for your corporate application installation procedures.

The process for stand-alone installation is as follows:

> **1** Open your web browser and type the following URL.

**Hosted:**

http://<your_interface>.custhelp.com/rnt/rnw/installer/ClientFiles/
ExtInst/RightNow.PackagedInstaller.exe

**2** Click **Save** on the File Download window and select the directory where you want the installer saved. This is a self-extracting executable file.

**3** Double-click the downloaded *.exe* file.

**4** At the prompt, enter the location where you want the files unzipped to. Two files will be extracted: *setup.exe* and *RightNow.CDInstaller.application*, along with the RightNow.CDInstaller_8_0_0_### folder.

**5** To install RightNow on your workstation, double-click *setup.exe*. Once the download is complete, the Login window will open. For information on logging in to RightNow, refer to step 2 in "To download RightNow and log in:" on page 31 of your Administration manual.

**6** To make an installation CD to distribute RightNow to your staff members, burn the resulting files and folder to a CD.

**7** To make the client installation files accessible for staff members from a local network directory, copy the *ClientFiles.zip.deploy* file from the RightNow.CDInstaller_8_0_0_### folder extracted in step 4 to a temporary location, such as your desktop.

    **a** Rename *ClientFiles.zip.deploy* to *ClientFiles.zip*.

    **b** Extract *ClientFiles.zip*. The ClientFiles folder will be extracted.

    **c** Copy the two folders and seven files contained in the ClientFiles folder to the local network directory you want staff members to download them from.

    **d** Set the configuration setting Common>General>Components>COMP_DOWNLOAD_LOCATION to the path to the local network directory where you copied the files in the previous step.

*Note: The client installation files in the local network directory must have read permissions for all staff members who will be using RightNow.*

## 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 800-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: 2412

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

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?

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.