
PACKETEER REPORTCENTER™ VERSION 2.0 RELEASE NOTES

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Introduction


PacketShaper and AppVantage are the only Internet application infrastructure devices that enable network managers to identify applications running on the network, baseline application performance, and allocate network bandwidth to mission-critical applications.

ReportCenter collects, sorts, analyzes and graphs network performance data from a network of PacketShaper and AppVantage products (Packetwise enabled devices) and presents this data in web browser viewable reports.

These release notes include issues related to version 2.0 of ReportCenter.

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New in Version 2.0

New Software Base	Version 2.0 of ReportCenter is the first version to be based on the Aruba reporting package from Valencia Systems. Previous versions of ReportCenter used a different reporting engine.
Collection Agents	<p>ReportCenter 2.0 introduces a unique process called a Collection Agent. The Collection Agent contacts a list of PacketShapers, collects metrics from them, and writes this information to the Oracle database on a ReportCenter Report Server. For larger installations, ReportCenter supports the use of multiple Collection Agents, each operating on a different PC, writing data to a single ReportCenter Report Server.</p> <p>By default the ReportCenter installer selects an installation of a single Collection Agent operating on the same PC as the ReportCenter Report Server.</p>
Components	ReportCenter 2.0 reporting is based on the concept of Components. Each PacketShaper subscribed to ReportCenter consists of a collection of Components that ReportCenter creates as it discovers the PacketShaper. Each PacketShaper has two types of Components: a device type (called PacketShaper) and an application type (called Traffic Class). Each discovered PacketShaper has one, unique PacketShaper component (device component) created for it in ReportCenter. A unique Traffic Class component (application component) will be created for each leaf Traffic Class on the PacketShaper. ReportCenter collects statistics for each Component based on component type. PacketShaper (device) components have statistics from the network link to the PacketShaper. Traffic Class (application) components have statistics specific for their associated Traffic Class. Reports available in ReportCenter are classified by Component type -- either Device or Application reports. Scaling of the ReportCenter solution is actually based on the total number of Components to be supported.
Query Support	Version 2.0 of ReportCenter introduces support for sending a Query to the database. You can request specific sets of recent performance information. See the <i>ReportCenter User's Guide</i> , or click Help in the web interface for more details on using the Query function.
Bundled Web Server	<p>Instead of requiring you to install and configure a web server in order to use ReportCenter, version 2.0 includes an integral web server that uses the default HTTP port, 80.</p> <p> Note: If the installer detects that an existing process is already listening on port 80 an error message will be displayed. In order to use ReportCenter you must first disable or remove any existing web server on the ReportCenter host.</p>
Improved Workflow	ReportCenter 2.0 includes improved workflow features. Most reports include links that you can use to quickly drill down to more specific and actionable details about your network.
Report Groupings	ReportCenter 2.0 reports can be grouped into three main categories:

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- **Utilization Comparisons:** These types of reports are available for both device or link views and Traffic Class or Application views. They show efficiency, total traffic, peak and average rates in all reports. For device specific reports, they also show link size, utilization, and loading. For Traffic Class reports, Guaranteed Rate Failures are part of the equation, as well as views of Top Ten Applications or Traffic Classes. Drill downs allow you to quickly isolate specific areas of bandwidth utilization.
 - **Response-time Measurement:** These types of reports are only available in Traffic Class or Application views. These reports examine application performance across multiple locations. They analyze transactions, connections, network and server delay. Additionally, drill downs are available to isolate application performance in different geographies.
 - **Exceptions:** Exception reports are the way you tailor your network reports to your specific performance needs. ReportCenter allows you to set specific thresholds on various network and application performance statistics that it monitors. Exception events are created when performance crosses one or more of these thresholds. Looking at an Exception Report can help you quickly identify specific metrics you are tracking.

ReportCenter Administrator Console

Version 2.0 of ReportCenter introduces the ReportCenter Administrator Console. This Windows program allows you to manage a ReportCenter Report Server either directly on the ReportCenter server or across a TCP network.

You can install the ReportCenter Administrator Console application on computers other than the ReportCenter Report Server, and then use the Administrator Console program to manage ReportCenter remotely. The Administrator Console program includes built-in help you can access by pressing F1. You can also refer to the *ReportCenter Administrator Console User's Guide* in PDF format on the ReportCenter installation CD.

Collection Scheduling

ReportCenter allows you to schedule the times at which the Collection Agent process contacts the PacketShapers to gather statistics. A default schedule of once per hour is configured during the installation. To configure Collection Agents use the ReportCenter Administrator Console program. All PacketShapers subscribed to a Collection Agent will be polled at the same time, as set in the Collection Agent configuration.

SNMP Trap Listener

ReportCenter installs an SNMP Trap Listener in order to support event trap reporting by the PacketShapers in your network. ReportCenter uses the typical SNMP Trap port of 162 to listen for alerts. Port 162 must be available on the ReportCenter Report Server. If you have configured the Microsoft SNMP Service for Windows Components or any other trap listener on the ReportCenter Report Server you must disable or remove it before installing ReportCenter.

ReportCenter Configurations

There are two main configuration options for ReportCenter. The default configuration installs the Report Server and the Collection Agent on one Windows computer. Optionally, the Report Server and the Collection Agent(s) may be installed on separate Windows computers. This configuration can be expanded, where multiple Collection Agents (each on unique Windows computers) can be tasked to one Report Server on its own Windows computer.

There are several advantages to each configuration. The default configuration, with a local Collection Agent (everything on one Windows computer), is the most economical approach for smaller deployments. One of the biggest advantages of moving to a multiple Windows server configuration is the ability to scale to support more PacketShapers and more components. Additionally, multiple Collection Agents allow PacketShapers to be polled at different times. Please contact Packeteer Sales or Support for more information on configurations.

Timestamps

Computer networks often span multiple time zones. In order to allow simultaneous events at different locations to be correlated in reports, ReportCenter converts data from all PacketWise enabled devices to local time for the Collection Agent. In a large network configuration with multiple Collection Agents, each could be in a different time zone.

Users accessing ReportCenter across time zone boundaries will see reports with timestamps based on the ReportCenter Collection Agent location. If you are using a Remote Collection Agent, it will apply its own time stamp to the data it collects.

PacketShapers can be set to local time for their location. ReportCenter installations, specifically Collection Agents, can also be set to local time. ReportCenter needs to know the time zone set in each PacketShaper in order to correctly request performance statistics. A Collection Agent process gathers PacketShaper statistics, and timestamps those statistics with the Collection Agent time. This allows the Collection Agent to gather statistics from different PacketShapers, in potentially different time zones, and correlate that information, based on its own time. The time ReportCenter records for statistics may be different than the local time shown on the PacketShaper. When you view reports, you see the statistics from the perspective of the Collection Agent.

Additionally, Collection Agent time is not adjusted in ReportCenter configurations with multiple Collection Agents. If different Collection Agents have different time zone settings, their aggregated data in report views will not represent one instance in time.

Understanding how timestamps work should allow most users to work around any issues they may encounter in configuring their ReportCenter installation.

Browser Support

Supported Browsers

The browser interface can be accessed using the following web browsers:

- Microsoft Internet Explorer v5.x and later (preferred)
- Netscape Communicator v4.7x and later

Be sure your web browser is configured as follows:

- Set to *accept cookies*, the default setting for most web browsers.
- Enable Java (default for most web browsers)
- Enable JavaScript.
- Verify that your cache preferences are set to verify documents *every time* in the Netscape Browser and *every visit to the page* in Internet Explorer.
- For Netscape version 4.x browsers, set the disk cache size to zero and the memory cache to a non-zero value, for example 4096.
- For optimal formatting of graphs, reports, and data charts set your screen resolution to 1024x768 (or higher).

Known Issues

Integrated Web Server

Earlier versions of ReportCenter required the user to install either the iPlanet web server or Microsoft IIS web server. ReportCenter 2.0 includes a web server of its own. In order to install ReportCenter 2.0 you must first disable or remove any existing web server on the ReportCenter host.

1.x Database Compatibility

The Oracle database used by previous versions of ReportCenter is not compatible with the Oracle database used in ReportCenter version 2. Data and reports originally created under any 1.x version of ReportCenter can not be used with, or migrated to, the new version.

Uninstall ReportCenter 1.x

You must completely uninstall any existing 1.x installations of ReportCenter including Actuate software, Oracle, and Microsoft IIS or iPlanet web server — before you install ReportCenter 2.0.

To completely uninstall ReportCenter version 1.x, begin by using the Windows **Start-->Settings-->Control Panel-->Add/Remove Programs** utility to remove:

- All of the Actuate Programs
- ReportCenter

Use **Start-->Programs-->Oracle Installation Products-->Universal Installer** to completely remove Oracle from the PC. This will also remove the Oracle database used by ReportCenter.

You must reboot Windows after removing ReportCenter or Oracle. After rebooting verify that the directories used by Oracle have actually been deleted — delete any remaining directories manually.

Operating System Localization

ReportCenter 2.0 is only supported on English language versions of Windows, with Regional Settings set to English (United States). Other-language versions of Windows, and especially other Regional Settings are NOT supported and have been known to cause operational problems for ReportCenter. Please contact Packeteer Technical Support if you have any questions on this issue.

Collecting Data from a Single PacketShaper

ReportCenter currently works well gathering data from PacketShapers with up to 2,000 unique Traffic Classes. Certain ISP PacketShapers, with up to 5,000 Traffic Classes each, do not work as well, and are not recommended at this time for use in ReportCenter solutions.

Time Zone Settings

Currently, ReportCenter 2.0 only has a subset of Time Zone settings available on the PacketShaper. Settings that are plus or minus less than an hour interval (i.e., + 5:30 GMT) are not currently available on ReportCenter. In cases where this is an issue, we suggest changing the PacketShaper Time Zone to one supported by ReportCenter to preserve integrity of same instance in time.

Insufficient Disk Space

During the installation of ReportCenter a check is made for free disk space, 10 gigabytes free space is required. If there is not sufficient space to install Oracle or ReportCenter a dialog box is presented with a single available selection, **Exit Install**.

For longer term storage more than 10 gigabytes may be required. Contact Packeteer Technical Support if you need assistance with sizing your ReportCenter installation.

Oracle Installation Path

During the installation of ReportCenter 2.0 the user is asked to select an installation path for the Oracle executables. Because of a limitation in the Oracle installer, the installation will fail if a space character exists in the path to, or name of, the installation directory. Do not type in a path that contains any spaces, for example C:\Program Files\. If you do the installation may seem to proceed normally, but Oracle will not operate.

Always select the hard drive partition with the most free space for Oracle. You can change the drive partition that will be used for Oracle by simply highlighting and replacing the first letter of the default installation path.

Viewing Traffic Classes in Newly Added Devices

You use the Define --> Network Hierarchy function in the ReportCenter Administrator Console to add a new PacketShaper. After closing the Network Hierarchy window, you will see the new device under the appropriate group in your Network Tree. If you expand the device in the network tree while ReportCenter is still retrieving the list of Traffic Classes a message indicates **No components available for this device**. In this case, the error message is literally correct, while the PacketShaper device has real Traffic Classes, ReportCenter is still discovering them and they are not yet available as components for use in ReportCenter. If you wait one or two moments you will be able to expand the tree and view the list of Traffic Classes — ReportCenter successfully discovers the Traffic Classes and creates components for each one. You can also use View --> Poll Log for the most current information.

Negative Response Times

Occasionally an entry in the Poll Log may appear to have had a negative response time. This can happen if either the PacketShaper or the ReportCenter Report Server adjusts its time as a result of configured SNTP time synchronization. Typically, this is a very rare occurrence and this issue has no impact on report integrity.

Netscape 4.x Issues

The following known issues relate to the version 4.x series of Netscape browsers:

- When you use the ReportCenter Administrator Console program, a tool bar button and a drop-down menu selection let you start a web browser and connect to the ReportCenter Report Server. If you use this method to start your web browser, and the default web browser on your computer is Netscape version 4.x, the initial display in the web browser may contain errors or missing elements. If you reload the page in your Netscape browser the errors will be corrected.
- When you click the Help tab in the ReportCenter web interface the initial help page may not properly expand the navigation frame on the left side of the help window.
- When you use the Administration tab in the web interface to change your password you may have difficulty logging in for the first time with the new password. If you experience this problem exit and restart Netscape.

Uninstalling ReportCenter 2.0

To uninstall ReportCenter 2.0, use the Windows Control Panel Add/Remove Programs utility. For a typical un-install, remove ReportCenter and ReportCenter Console. It may be necessary to manually delete the ReportCenter directory after completing the uninstall and rebooting the computer.

No Data is Available

When you request a report that contains charts for a period in the recent past you will occasionally receive a message that no data is available for one or more expected charts. This can occur because some graphic components of reports rely on RAW data or Hourly data obtained directly from the Collection Agent. Data in the Collection Agent ages out according to the settings in the Database Rollup section of the ReportCenter Administrator Console **Define --> Collection Agents** dialog.

It is possible to extend the settings for Collection Agent Database Rollup, but the impact on the size of your Oracle database can be very large. For more information on Database Rollup, use the ReportCenter Administrator Console to access the Define Collection Agents menu, select the Database Rollup tab, then press F1 for Help.

Link Size Reported as Zero

If the Inbound or Outbound link rate in a PacketShaper has never been changed from factory default values, ReportCenter will treat the link as if it were set to a rate of zero bps.

To determine if this problem affects a particular PacketShaper in your network, and correct the issue:

1. Log in as **admin** using the ReportCenter Administrator Console
2. Expand the Network Tree so that you can see a PacketShaper
3. Right-click the PacketShaper in the Network Tree
4. Select **Properties** from the pop-up menu
5. Examine the **Inbound Link Size** and **Outbound Link Size** and verify that they are non-zero values
6. For each PacketShaper displaying a zero value, perform the steps below
 - a. Access the PacketShaper web interface and log in using the Touch password
 - b. Use the **WAN settings** section of the *basic setup* page to change the **Inbound Rate** and **Outbound Rate** so they reflect the actual rates of the managed WAN links, if they are not already correct. For complete details on using PacketShaper click the PacketGuide tab in the PacketShaper web interface.
 - c. Once you change the rates, or if the current values are already correct, click **apply changes**.
7. In the ReportCenter Administrator Console, right-click a group in the Network Tree that contains all of the PacketShapers you configured, for example **Network**, and select **Perform Discovery** from the pop-up menu.

The discovery process will pickup the PacketShaper configuration changes and the issue will be resolved.

Optimizing Performance

Optimize for Network Size

You can optionally optimize the performance of ReportCenter based on whether you are using the typical Local Collection Agent on the Report Server PC, a Remote Collection Agent with up to 20,000 components (Traffic Classes), or multiple Remote Collection Agents with up to 50,000 total components and a stand-alone ReportCenter Report Server.

To optimize ReportCenter for your configuration you must edit a file `properties.prf`. You can see complete details on editing the `properties.prf` file in Chapter 3 of the *ReportCenter Administrator's Guide*, available in PDF format on the installation CD.

To modify `properties.prf` you must use a simple text editor like Notepad. The `properties.prf` file is installed into the base ReportCenter directory (for example, `c:\ReportCenter`) on the computer hosting the ReportCenter Report Server.



Note: Do not edit the `properties.prf` file on a Remote Collection Agent. These changes apply only to the computer hosting the ReportCenter Report Server.

Optimize for Local Collection Agent

1. Open `properties.prf` in Notepad.
 2. Change the line that begins with `agent.arguments=` to:
`agent.arguments=-hotspot -noclassgc -ms100m -mx200m`
 3. Locate the line that begins with `server.admin.arguments=` and change it to:
`server.admin.arguments=-hotspot -noclassgc -ms10m -mx40m`
 4. Save the file and reboot the computer.
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Optimize for Remote Collection Agent with up to 20,000 Components

1. Open `properties.prf` in Notepad.
 2. Change the line that begins with `agent.arguments=` to:
`agent.arguments=-hotspot -noclassgc -ms300m -mx500m`
 3. Locate the line that begins with `agent.max.queue.size=` and change it to:
`agent.max.queue.size=40000`
 4. Locate the line that begins with `common.classpath=` and add a new line after it, containing:
`common.max.log.size=20000000`
 5. Save the file and reboot the computer.
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Optimize for Multiple Remote Collection Agents with up to 50,000 Total Components

1. Open `properties.prf` in Notepad.
 2. Locate the line that begins with `server.admin.arguments` and change it to:
`server.admin.arguments=-hotspot -noclassgc -ms50m -mx200m`
 3. Locate the line that begins with `server.query.arguments=` and change it to:
`server.query.arguments=-hotspot -noclassgc -ms20m -mx150m`
 4. Locate the line that begins with `server.report.arguments=` and change it to:
`server.report.arguments=-hotspot -noclassgc -ms50m -mx200m -Xrs`
 5. Save the file.
 6. Use Notepad to open the file `initorcl.ora`. This file is located in the directory named **database** in the path where you installed Oracle, for example `C:\oracle\database\initorcl.ora`
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7. Locate the line that begins with `db_cache_size =` and change it to:
`db_cache_size = 150M`
If the ReportCenter server has 1 GB or more memory installed use:
`db_cache_size = 512M`
 8. Locate the line that begins with `sort_area_size =` and change it to:
`sort_area_size = 8000000`
 9. Save the file and reboot the computer.