<table>
<thead>
<tr>
<th>Abstract</th>
<th>Describes all administration- and operations-related information for the DigitalGlobe implementation of Request Tracker V3.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Issue</td>
<td>05</td>
</tr>
<tr>
<td>Date</td>
<td>06/20/2007</td>
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</tbody>
</table>
# Document History

<table>
<thead>
<tr>
<th>Issue</th>
<th>Author(s)</th>
<th>Date</th>
<th>Description Change</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>N. Metrowsky</td>
<td>01/03/2006</td>
<td>Document Creation</td>
</tr>
<tr>
<td>2</td>
<td>N Metrowsky</td>
<td>04/24/2006</td>
<td>Added information on daily backups and data responsibility.</td>
</tr>
<tr>
<td>3</td>
<td>N Metrowsky</td>
<td>08/07/2006</td>
<td>Added mysql_rotate.sh to backup_mysql.sh.</td>
</tr>
<tr>
<td>4</td>
<td>N Metrowsky</td>
<td>02/06/2007</td>
<td>Updated backup_mysql.sh. Added parameters to the backup command.</td>
</tr>
<tr>
<td>5</td>
<td>N Metrowsky</td>
<td>06/20/2007</td>
<td>Updated backup_mysql.sh. Added max_allow_packets parameter to backup command. Added backup of the OpsLog database.</td>
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1 Introduction

From the Request Tracker website at http://www.bestpractical.com:

RT is an enterprise-grade ticketing system which enables a group of people to intelligently and efficiently manage tasks, issues, and requests submitted by a community of users.

The RT platform has been under development since 1996, and is used by systems administrators, customer support staffs, IT managers, developers and marketing departments at thousands of sites around the world.

Written in object-oriented Perl, RT is a high-level, portable, platform independent system that eases collaboration within organizations and makes it easy for them to take care of their customers.

RT manages key tasks such as the identification, prioritization, assignment, resolution and notification required by enterprise-critical applications including project management, help desk, NOC ticketing, CRM and software development.
2 Description

Text Here

2.1 Software Release and Patches Information

Please refer to the IT Operations Register.

2.2 Server Environment

Request Tracker requires a Linux based PC, with a fast CPU speed (Pentium 4 2.0 Ghz), ample amount of memory (2.0 Gb) and disk storage for its database (100 Gb).

<table>
<thead>
<tr>
<th>Component / Module (if applicable)</th>
<th>Development</th>
<th>Testing (includes BCP &amp; Training)</th>
<th>Production</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.3 Media Location

2.3.1 Installation CDs

N/A

2.3.2 Softcopies of the CDs

Request Tracker is available for web download at http://www.bestpractical.com. Source code to installed Request Tracker and required software is located in /usr/local/src on helpdesk.digitalglobe.com

2.4 Documentation Location

See RT Essentials. Documents in the IS Documentation folder under Request Tracker/Asset Tracker.

2.5 Customizations (If Applicable)

For details on installing or upgrading Request Tracker involving customizations, see the document Installation of Request Tracker.
3 Configuration

Follow the instructions in the *Installation of Request Tracker* Documentation.

3.1 Global Variables

N/A

3.2 Environment Variables

N/A
4 Operations

4.1 Remote Access to System

Request Tracker requires Apache, Perl, mod_perl, Perl modules from CPAN and MySQL to function properly.

<table>
<thead>
<tr>
<th>Production Connection Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameters</td>
</tr>
<tr>
<td>Start Method</td>
</tr>
<tr>
<td>Program Type</td>
</tr>
<tr>
<td>User ID</td>
</tr>
<tr>
<td>Password</td>
</tr>
<tr>
<td>Host</td>
</tr>
<tr>
<td>Host Type</td>
</tr>
<tr>
<td>Command</td>
</tr>
<tr>
<td>Prompt</td>
</tr>
<tr>
<td>Prompt Shell (in Other tab)</td>
</tr>
</tbody>
</table>

4.2 Startup

Apache and MySQL need to be up and running, for Request Tracker to function. The following commands start up MySQL and Apache respectively:

```
/etc/init.d/mysql start
/usr/local/apache2/bin/apachectl start
```

4.3 Shutdown

Request Tracker will not function, once Apache and MySQL are shut down.

4.4 Periodic Operations

4.4.1 Clean-up and Purges (If Applicable)

N/A

4.4.2 Regular Bounces (Starts & Stops)

None

4.4.3 Refreshing Databases (load Test with Prod data)

Database maintenance, backup and disaster recovery is described in *RT Essentials* on pages 73 -76. See also Chapter 5 of this document.
4.4.4 Monitoring and Event Log(s)


4.5 Thresholds

N/A

4.6 Internal & External Dependencies

Request Tracker is self contained on its installed environment. Its only dependencies are related to required software packages, i.e. Apache, MySQL, Perl, etc. More details are provided in the Installation of Request Tracker documentation.
## 4.7 Data Management

### 4.7.1 Responsibility Model

The responsibility areas for Request Tracker can be depicted as follows:

<table>
<thead>
<tr>
<th>Area of Responsibility</th>
<th>Description</th>
<th>Responsible Parties</th>
</tr>
</thead>
</table>
| **Application**        | This area includes the maintenance of Request Tracker and its related components. It also includes maintenance of software required to support the application including:  
- Apache httpd  
- MySQL  
- perl  
- mod_perl2  
- perl CPAN modules | UNIX/Linux System Administration in collaboration with all IS groups. Specifically, the primary for Support Systems. |
| **Configuration**      | This area includes management and maintenance of the Request Tracker environment. This includes adding and maintaining queues, asset types, and custom fields. Setting up e-mail addresses on the Request Tracker server and MS Exchange. | Software Assets – Software License Specialist  
Hardware Assets – Hardware Specialist  
Tickets/Queues_Asset Types – UNIX/Linux System Administration  
E-mail – UNIX/Linux Administration; Windows Administration |
| **Data**               | This area includes ownership of the data, data and database maintenance. Ultimately, all data is the responsibility of the IS Management Team to ensure that the engineers are entering and maintaining the data in an appropriate manner. | Database (Backups/Maintenance) – UNIX Operations Manager  
Asset Data Integrity  
- Windows Servers & Peripherals – Windows Manager  
- Windows Servers, PCs & Storage – UNIX Manager & Hardware Specialist  
- Network Equipment – Network Engineer  
- Software – Software License Specialist  
- IS Director |
4.8 Other Notable Considerations

4.9 Known Areas of Concern / Issues

Please refer to the Known Issues appendix.
5 Backup/Restore

5.1 Backup

5.1.1 Data

The /usr/local/mysql/mysqldump command is used to backup the MySQL database.

5.1.2 Frequency

The database data is saved on a daily basis to /dg/backup, and is also saved to tape. The disk backups are retained for 7 days.

5.1.3 Process

The backups run each night at 4:00 AM via /etc/cron.daily. The cron.daily submits the /usr/local/bin/backup_mysql.sh script at that time. The script is as follows:

```bash
#!/bin/bash
# backup_mysql.sh - Perform dump of MySQL database on a daily basis
#
# Description: This script will perform a mysqldump of the entire MySQL database to an output file.
# The file will contain the date of the dump for easy recovery.
# The dump files will be retained for 8 days, as the system is being backed up to tape.
#
# Author: N. Metrowsky Date: 10 January, 2006
#
# Revision History:
#
# 01/10/2006 Original Creation
# 02/05/2007 Added switches to mysqldump command. Added MySQL password.

# todays_date=`date +%F`
dump_file="$todays_date.sql"
mysql_password="xxxxxxxxxxxxx"
backup_dir="/dg/cots/helpdesk/backup"
backup_command="/usr/local/mysql/bin/mysqldump --max-allowed-packets=64M --flush-logs --add-drop-table --add-locks --extended-insert --single-transaction -u root -h localhost -c --password=$mysql_password"

# find /dg/cots/helpdesk/backup -type f -mtime +8 -exec rm -fr '{}' >/dev/null 2>&1 \;
$backup_command --databases mysql > $backup_dir/mysql_$dump_file
$backup_command --databases rt3 > $backup_dir/rt3_$dump_file
$backup_command --databases test > $backup_dir/test_$dump_file
$backup_command --databases opslog > $backup_dir/test_$dump_file
# Rotate MySQL logs
#/usr/local/bin/mysql_rotate.sh
```

The following is a copy of the /usr/local/bin/mysql_rotate.sh script:

```bash
#!/bin/bash
# mysql_rotate.sh - Rotate MySQL General Log and Request Tracker Housekeeping
#
# This script will rotate the MySQL General Log File, on a daily basis. It will also stop and start sendmail, the MySQL daemon and the Apache webserver. Finally, it will clear the Request Tracker cache. This script is called by the daily mysql_backup.sh
```
# script, so a good backup is created prior to running this script.
#
logdir="/usr/local/mysql/var"
/usr/bin/find $logdir -type f -mtime +8 -exec rm -fr '{}' >/dev/null 2>&1 \\
/etc/init.d/sendmail stop
/usr/local/apache2/bin/apachectl stop
/bin/rm -rf /opt/rt3/var/mason_data/obj
/etc/init.d/mysqld stop
/bin/mv $logdir/mysql.log $logdir/mysql.log."date '+%Y-%m-%d-%H:%M'" sleep 15s
/etc/init.d/mysqld start
/usr/local/apache2/bin/apachectl start
/etc/init.d/sendmail start

5.1.4 Restore

Restoration of the MySQL database is done via /usr/local/mysql/bin/mysql and uses the output from /usr/local/mysql/bin/mysqldump as input.

5.1.5 Process

One should initialize the database area on the system performing and run the mysql command. For example:

```bash
mysql -u root
mysql> drop database rt3;
mysql> exit
/usr/local/mysql/bin/mysql -u root -password=xxxxxxxxx <
/dg/cots/helpdesk/backup/rt3_YYYY_MM_DD.sql
```
6 Troubleshooting

# 7 User Administration and Security

User Administration and access is performed within the Request Tracker application. User Accounts and privileges are maintained via the Request Tracker application.

## 7.1 Framework

User Access information maintained in Request Tracker database.

## 7.2 Standard User Admin

Via GUI interface within Request Tracker. Please see *RT Essentials*, Chapter 5, Pages 63 – 70 for information about User and Group maintenance.

## 7.3 User Administration by Exception

Via GUI interface within Request Tracker. Please see *RT Essentials*, Chapter 5, Pages 63 – 70 for information about User and Group maintenance.

## 7.4 Security

Only run software and TCP/UDP ports required for accessing Request Tracker. Security of Request Tracker data is maintained via the GUI interface. The *root* account password should be changed, once Request Tracker is installed. The default password is *password*. The *root* account has complete rights to maintain the entire Request Tracker environment. DigitalGlobe uses *dgroot* for the main Request Tracker account and has deactivated the *root* account for security purposes.
8 Customizations

Customization to Request Tracker include Statistic3 and Asset Tracker.

8.1 Custom Attributes (If Applicable)

8.1.1 Brief Description

RTx::Statistics is a freeware plug in which provides statistics about Trouble Ticket handling. RTx::Assetracker is a freeware plug in which provides the ability for Asset and Inventory Management. RTx::RightsList is a freeware plug in which provides the ability to view and manage rights within Request Tracker and Asset Tracker.

8.1.2 Creation

The Request Tracker User’s Guide documentation has detailed information about the RTx::Statistics and RTx::RightsList modules. The Asset Tracker User’s Guide provides documentation about RTx::AssetTracker.

8.2 Custom Development (If Applicable)

N/A
9 Upgrade Considerations

To perform Request Tracker upgrades, the user should read the README file that is included with the Request Tracker installation kit. Read the Cautions and Notes section of the Installation to Request Tracker documentation.

Also, in regards to Asset Tracker this warning:

Installing the modules RTx::AssetTracker and ExtractCustomFieldValues, before upgrading the Request Tracker database, may have unexpected results. These modules make modifications to the Request Tracker database to accommodate the new features. Therefore, perform the database upgrade and data migration, before installing these modules.
## Appendix A: Known Issues / Defects

<table>
<thead>
<tr>
<th>Issue / Defect No.</th>
<th>Component</th>
<th>Description</th>
<th>Resolution</th>
<th>Process</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
11 Appendix B: Supplier Information

11.1 Contact Information

<table>
<thead>
<tr>
<th>Name</th>
<th>Best Practical</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main URL</td>
<td><a href="http://www.bestpractical.com">http://www.bestpractical.com</a></td>
</tr>
<tr>
<td>Support URL</td>
<td><a href="http://www.bestpractical.com">http://www.bestpractical.com</a></td>
</tr>
<tr>
<td>Address</td>
<td>N/A</td>
</tr>
<tr>
<td>Account Manager Info (name, tel #, email)</td>
<td>N/A</td>
</tr>
<tr>
<td>Support Contact Info (name, tel #, email)</td>
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</tr>
</tbody>
</table>

11.2 Support Process

<table>
<thead>
<tr>
<th>Hours of Support</th>
<th>Open Source; supported in house and via Open Source community</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Reference Identifier</td>
<td>N/A</td>
</tr>
<tr>
<td>Description</td>
<td>N/A</td>
</tr>
</tbody>
</table>
12 Appendix C: BCP and DR Considerations

12.1 Business Continuity Planning (BCP) / 7x24 Operations

Definition: business continuity refers to maintaining access to a standby or temporary environment to support production services during outages relating to planned activities such as OS, database and other similar upgrades (successful or otherwise), facility moves, power outages, etc.

12.2 Disaster Recovery

Definition: a disaster is an unexpected outage to normal production operation that renders the application completely unavailable. This could be due to a system failure or a catastrophic failure of the complete production facility.

12.3 Data Load Process

The following sections describe the data export/import process executed to synchronize the Request Tracker database with the Production data in accordance with the BCP planning.

12.3.1 General Information

The following table lists general information about the sync process and databases involve.

<table>
<thead>
<tr>
<th>Database</th>
<th>rt3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prod Server Name</td>
<td>Helpdesk</td>
</tr>
<tr>
<td>Prod Database Name</td>
<td>rt3</td>
</tr>
<tr>
<td>BCP Server Name</td>
<td></td>
</tr>
<tr>
<td>BCP Database Name</td>
<td></td>
</tr>
<tr>
<td>Process Owner</td>
<td></td>
</tr>
<tr>
<td>Process Execution</td>
<td></td>
</tr>
<tr>
<td>Process Execution Time</td>
<td></td>
</tr>
<tr>
<td>Backup Size</td>
<td></td>
</tr>
</tbody>
</table>

12.3.2 Data Refresh Process

12.3.2.1 Daily Export

12.3.2.2 Weekly Export
13 References

1  RT Essentials, O'Reilly, J. Vincent, R. Spier, et. al.
2  Installation of Request Tracker, Word Document, N. Metrowsky
5  Asset Tracker System Manager's Users' Guide, Word Document, N. Metrowsky
# 14 Glossary

<table>
<thead>
<tr>
<th>Term:</th>
<th>Definition</th>
</tr>
</thead>
</table>

Please see *RT Essentials, Appendix A, Pages 163 – 170* for the Glossary.