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Team Approach 5.0.x System Architecture Requirements

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Overview

Team Approach [TA] is a sophisticated fundraising and marketing solution that utilizes Oracle technology. This document provides an overview of the technical requirements that are required for the installation and operation of the TA version family 5.x application.

Oracle Software

To operate Team Approach, your organization will need to obtain the licenses that are necessary for the following supported Oracle database version:

- Oracle 11gR2 RDBMS (version 11.2.0.3)

The Team Approach Database Server

The Team Approach database is situated on an Oracle database server. In addition to providing storage for Oracle data files, TA files and related executables, the database server facilitates various levels of processing for the TA application such as reports, uploads, downloads, queries, outputs, etc.

Supported Operating Systems

To achieve optimal performance from both Team Approach and Oracle, a multi-processor capable machine is essential such as the supported operating systems for TA 5.0.x that are noted below:

- **Sun SPARC Solaris, version 10**
- **Oracle Linux or Red Hat Linux (x86 or x86_64) version 5**

  Note: A majority of Blackbaud clients run Team Approach 5.0.x on a Linux operating system platform.

Database Server Specifications

The Oracle database server should be configured to meet an organization's current needs and accommodate future growth. Therefore, the type of server and operating system that is selected should be "scalable", or able to be built-up as the need arises. For example, the new database server should be able to accept more memory (RAM), additional processors (CPUs) and disk space. Below are the recommended configuration requirements for running TA 5.0.x:

Minimum RAM (memory) requirement – 3*2GB*

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The Oracle database server should have at least **32 GB of RAM** installed with the capacity to add more. This should be sufficient to support the server's operating system requirements, Oracle's requirements and TA's requirements. Additional memory may be needed depending on the number of concurrent users, the number of databases that will be running on the database server and the size of the database(s) situated on the server.

CPU (processor) – *minimum of 2 Intel processors*

The database server should have a **minimum of 2 Intel processors** with the capacity to expand.

Disk Space – *approximately 100 MB per 1,000 donors*

In order to determine the amount of disk space that will be needed, Blackbaud recommends approximately **100 MB per 1,000 donors** (active and lapsed), although actual storage requirements can vary widely based on usage. Your organization should be prepared to add enough additional space to accommodate its database growth over the next three years.

Storage

Blackbaud recommends **3 storage locations**, one of which will be shared (cross-mounted*) between the TA queues server and database server. Storage should be in a **RAID 10 array** with **at least 12 spindles.**

If your organization is considering running its databases on a Linux database server, the **Requirements for a Team Approach Linux/Solaris Infrastructure section of this document should be reviewed for further information regarding required cross-mounts between the Linux database server and Solaris queues server.*

TA Queue Server Specifications

The TA queues server is used for running TA processing jobs and TA reports. Oracle's Developer 6i toolkit is situated on this server along with an additional installation of Oracle RDBMS for database connectivity and use of various Oracle executables. Because a database will not be situated on this particular box and the processes that will be run on this machine do not require much power, a TA queues server need not be robust as the specs below indicate.

Minimum RAM (memory) requirement – *8 GB*

The TA queues server should have at least **8 GB of RAM** installed.

CPU (processor) – *minimum of 1 processor*

The TA queues server should have a **minimum of 1 processor.** This is all that is really needed.

Supported Operating Systems for Team Approach queue servers

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The following operating system is supported for a Team Approach queues server:

- **`Sun SPARC Solaris 10`**

Requirements for a Team Approach Linux/Solaris Infrastructure

A majority of Blackbaud clients that are running Team Approach version 5.0.x have opted to run their application databases on a Linux database server with a Solaris TA queues server. Organizations prefer this configuration because:

- ✓ A Linux server is cost-effective
- ✓ A Linux server often delivers a marked improvement in TA processing time
- ✓ A Linux/Solaris infrastructure is what Blackbaud has set up for its hosted TA 5.0.x clients and is what Blackbaud has the most expertise in

Setting up a two server architecture for Team Approach may sound a bit daunting at first, but maintaining the hardware and application configuration does not require much in the way of additional maintenance or expertise. Below is a summary of the TA/Oracle components that will need to be situated on each server. This is the set up that is recommended and <u>supported</u> by Blackbaud for clients that will be running a Linux/Solaris infrastructure for Team Approach:

Linux database server
- **`Oracle RDBMS`**
    - **`(for the operation and support of the TA database)`**
- **`Team Approach database(s)`**
- **`Database backup files (if applicable)`**
- **`Database archive log files (if applicable)`**

Solaris queues server
- **`Oracle RDBMS`**
    - **`(for TA database connectivity and use of various Oracle executables)`**
- **`Oracle Developer 6i toolkit`**
    - **`(for the operation of TA queues, reports, upload, download, processing, et al)`**
- **`Team Approach application home`**
    - **`(the TA files need to be situated on the Solaris queues server – this includes the TA executables and user output directories, upload directories, et al)`****
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** Blackbaud will not support an organization's Linux/Solaris infrastructure if the TA application home files are situated on the Linux database server rather than Solaris queues server. Situating the TA files on the Solaris queues server is a requirement for the TA Linux/Solaris infrastructure.

In order for the database on the Linux server to be able to write to the Team Approach folders, an NFS mount will need to be cross mounted from the Solaris server to the Linux server.

Additional Team Approach Configuration Considerations

Printers

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Team Approach requires that at least one post-script printer be configured on the TA queues server for the operation of TA reports. Your site may opt to set up a print server and channel TA reports through this. If your organization goes this route, it should acquire a single processor Virtual server with 1 GB of RAM. The operating system for the print server should be 32-bit Red Hat or Oracle Linux.

Display Server

The Oracle Developer 6i toolkit requires that a Display server be set up for the operation of Team Approach reports that runs a display service such as XWin32. This can be a standalone box (Blackbaud runs a 2 processor Virtual server with 32-bit Oracle Linux with 2GB of RAM), a Solaris console or an X-win emulator such as Xvfb or VNC can be installed directly on the Team Approach queues server.

Client Configuration

Team Approach can be run with either thick or thin client configurations. A thick client configuration means that the client-side processing takes place on the PC. A thin client configuration indicates that client-side processing takes place on an application server that is accessible to all users and PCs display the application (or the screens for TA).

     Team Approach 5.0.x PC Specifications

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CPU:           2.0 GHz or higher processor
RAM:           1GB+
OS:            Windows XP, Windows Vista, Windows 7
Software:      Adobe Acrobat or other PDF reader
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Backup and Recovery

Team Approach is a sophisticated fundraising and marketing solution that requires a sizeable commitment of time and resources to implement. To protect your organization's investment, Blackbaud recommends that a viable backup and recovery strategy be put into place as soon as possible during the data conversion process. A hot backup using Oracle's RMAN (Recovery Manager) feature would be ideal; however, Blackbaud can work with the appropriate staff at your site to help put the backup strategy into place that is the most appropriate for your organization's business needs.

Configuration and Deployment Consulting

Blackbaud is committed to providing the highest level of service available to ensure that your organization gets an optimal return on its hardware investment. To this end, we strongly recommend that your site consult with us on its Team Approach environment configuration prior to making its final decisions. We can assist with all stages of the deployment process from the planning stages to the actual set-up of the new hardware. For more information, contact TA Support or your Team Approach account representative.