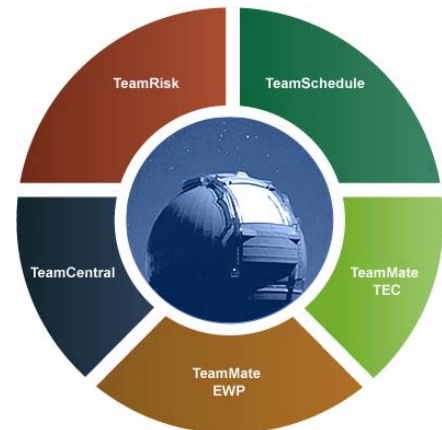


TeamMate Suite IT Overview



This document is designed to answer pre-implementation questions about the TeamMate product suite. It is written for IT departments who have been given the responsibility to implement the TeamMate R8 suite and need answers to specific questions and a high level overview before beginning the process. If you have not engaged your IT department it is strongly recommended that you do so before attempting to install the TeamMate suite of applications. The complete implementation and installation guides for the suite are also available upon request. This document contains the following sections:

- Overview of the TeamMate R8 Suite
- Hardware and software requirements for each tier
- Brief implementation overview
- Answers to most commonly asked questions

May 2007

Global Product Team

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1 About TeamMate R8

TeamMate is a suite of products combining both client and web-based technologies. The combined suite allows auditors to identify, schedule, document, report and track time and expenses on audits using a modular approach. Each module can be installed and used independently with individual databases. However, when the modules are used together with the same database, the applications can interact and automate the entire audit workflow. It is highly recommended that the entire suite be installed with the assistance of the organization's IT department.

The following is a list of the applications that comprise the TeamMate R8 suite.

TeamMate Electronic Work Papers (EWP)	
Client application that allows auditors to complete all phases of the documentation and review processes.	<ul style="list-style-type: none"> • Written in C/C++, COM • Integrates with installed version of MS Office via COM and VBA components • Includes Imaging solution • Supports replication (internally developed) between networked and off-site users.
	Storage in local or file share in Paradox databases accessed from application.
	NOTE: Current version does not use the shared global database as other applications.
TeamStore	
Client application used in conjunction with EWP allowing maintenance of knowledge base and pull into EWP.	<ul style="list-style-type: none"> • Written in C/C++, COM
	Can either use the shared global database (SQL Server, Oracle) or can use MS Access locally or on a file share.
TeamImage	
Client application used in conjunction with EWP to integrate imaging.	<ul style="list-style-type: none"> • Written in C/C++, COM
	Storage is within the EWP database explained above
TeamRisk	
Client application allowing risk assessment on the audit universe to determine what to audit based on risk.	<ul style="list-style-type: none"> • Written in C# (.NET) and WinForms • Includes ActiveReports report writer
	Can either use the shared global database (SQL Server, Oracle) or can use MS Access locally or on a file share.
TeamSchedule	
Client application that allows schedulers to schedule projects and assign resources.	<ul style="list-style-type: none"> • Written in Visual Basic with ActiveX components • Includes ActiveReports report writer
	Can either use the shared global database (SQL Server, Oracle) or can use MS Access locally or on a file share.
TeamSchedule Web	
Web application that allows users to view scheduled plans.	<ul style="list-style-type: none"> • Written in ASP.NET and C# • Requires web server • No middle-application tier • No ActiveX controls on the client
	Can either use the shared global database (SQL Server, Oracle) or can use MS Access but must access the same database used by TeamSchedule.
TeamMate Time and Expense Capture (TEC)	
Web application that allows users to enter time and expenses related to a project.	<ul style="list-style-type: none"> • Written in ASP.NET and C# • Requires web server • No middle-application tier • No ActiveX controls on the client
	Can either use the shared global database (SQL Server, Oracle) or can use MS Access locally or on a file share.
TeamMate TEC Admin	
Client application that allows administrators to setup time and expense parameters.	<ul style="list-style-type: none"> • Written in C#
	Can either use the shared global database (SQL Server, Oracle) or can use MS Access but must access same database used by TeamMate TEC.

TeamCentral

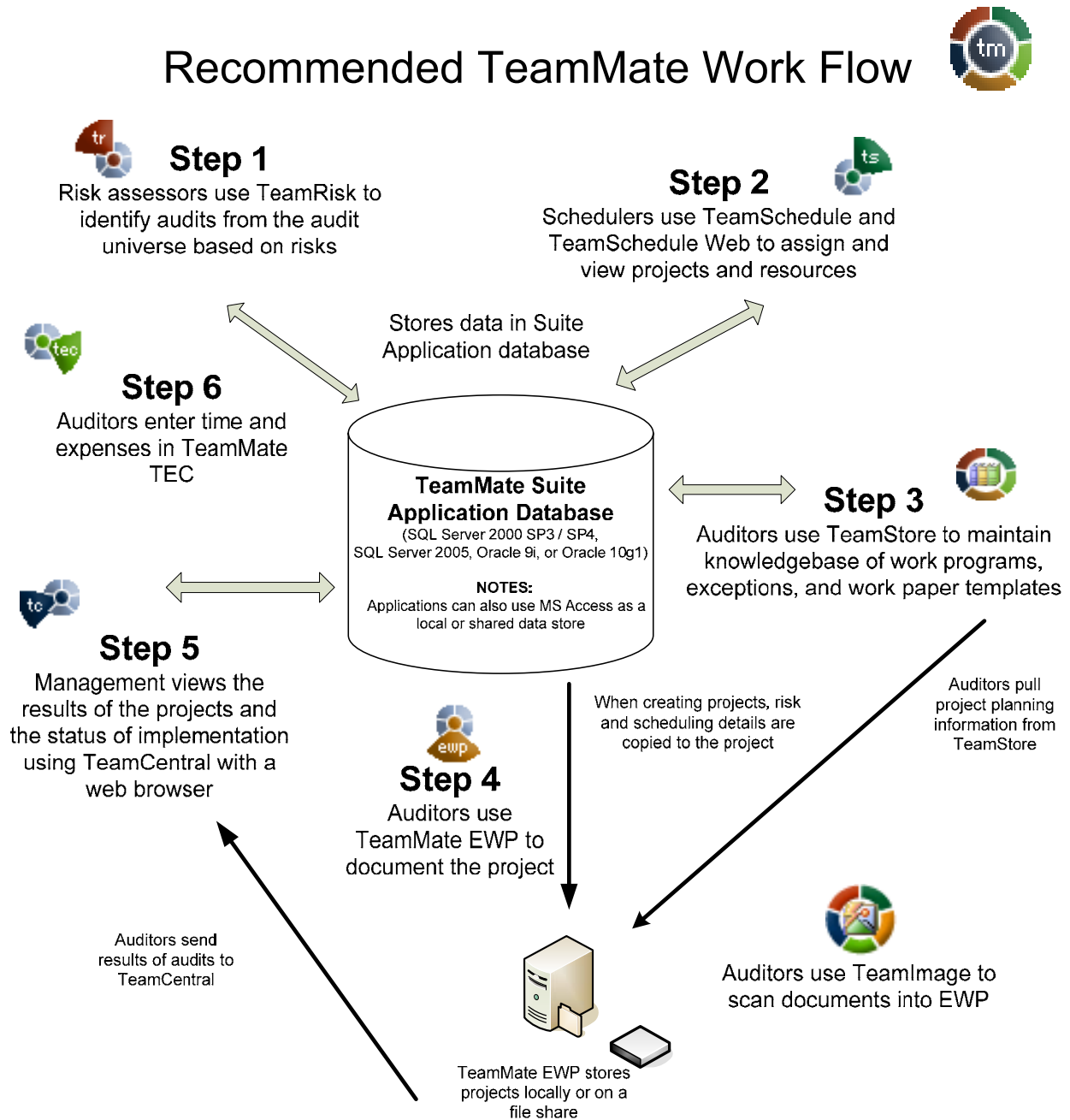
Web application (data-mining) that allows teams and audit management to view reports on the status of projects and exceptions across audits.

- Written in ASP.NET, COM (C/C++) components on the server
- Requires web server
- No middle-application tier
- No ActiveX controls on the client
- TeamMate users send information via XML over HTTP to TeamCentral

Can either use the shared global database (SQL Server, Oracle) or separate instance of database (SQL Server, Oracle, or MS Access)

1.1 TeamMate Workflow

The following diagram outlines the recommend auditing workflow that is supported by the suite of applications.



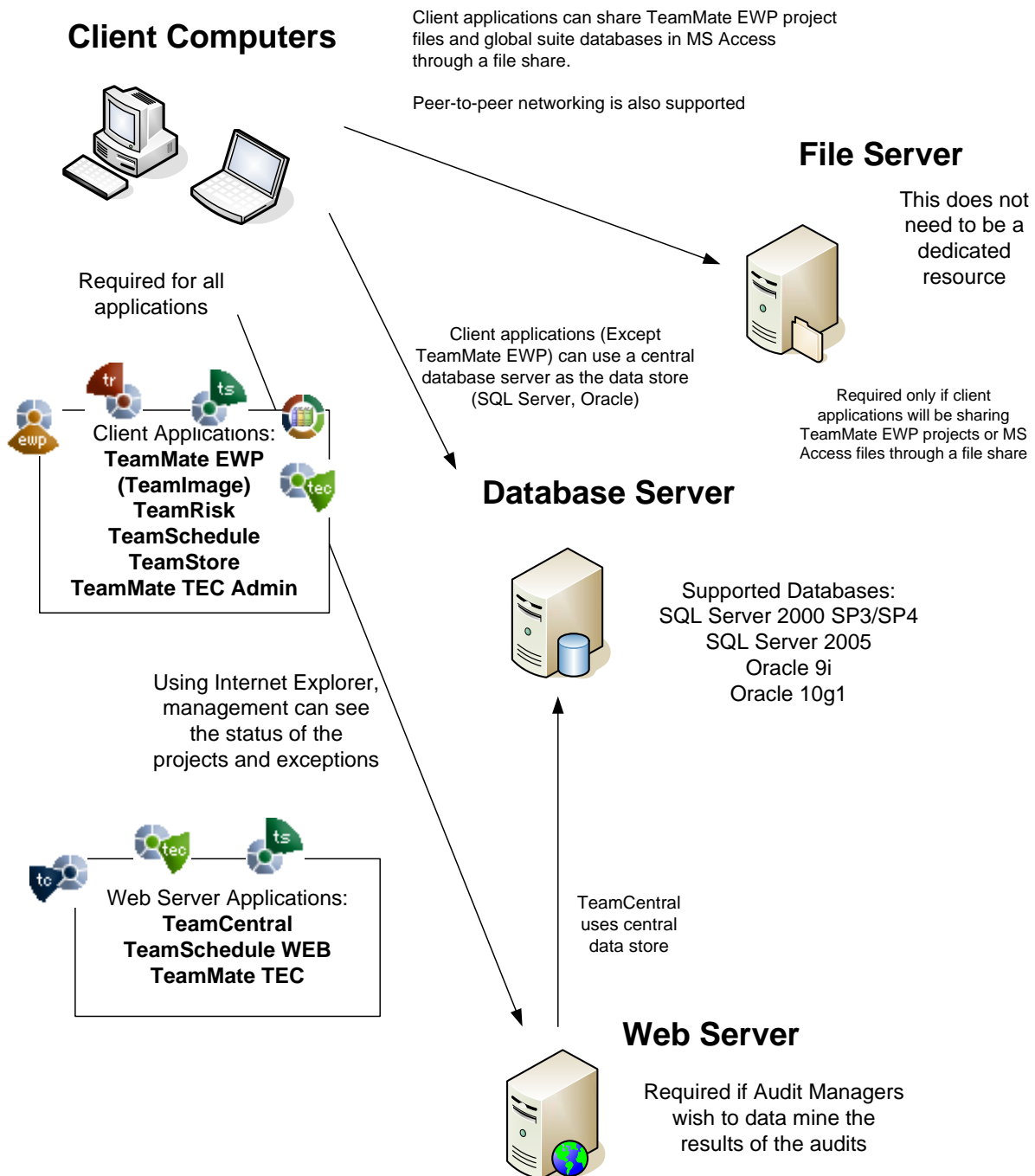
Notes:

-All applications can be installed and/or be used independently but would lack some data interoperability.

2 TeamMate Physical Tiers

The TeamMate suite requires client computers. Depending on the size and organization of the company, we also recommend a file server to share TeamMate project files among networked clients. We also recommend a database server so TeamStore, TeamSchedule, TeamRisk and TeamMate TEC can interact on the same data store, although this can also be accomplished through shared MS Access files as well. If the client wishes to data mine the results of audits through TeamCentral, a web server and database server will be required. We recommend that the same database server used by the client applications described above be used for TeamCentral and the other web server applications.

TeamMate Suite Physical Tiers



3 TeamMate System Requirements

This section lists the hardware specifications for each of the tiers listed above.

3.1 Client Computer Requirements

Applications installed on the client include: TeamMate EWP, TeamRisk, TeamSchedule, TeamStore and TEC Admin. Each application can be installed and used independently of one another.

Standard business class notebook or desktop computers are sufficient to run all the applications within the suite. For those requiring specifics the following is provided.

Processor Speed:	800 MHz Pentium or higher
Memory:	256 MB Ram (applications require 64 MB Ram)
Hard drive:	200 MB plus data storage (recommend 1 GB)
Software:	<p>We currently support 32-bit versions of the following software:</p> <ul style="list-style-type: none"> • MS Windows 2000 SP4 through Vista (Business, Ultimate and Enterprise only) • MS Office 2000 through 2007 (required for TeamMate EWP integration) • MDAC 2.8 (will be installed during suite installation if not previously installed) <ul style="list-style-type: none"> ◦ MDAC 2.8 SP1 is also supported • .NET Framework version 2.0 – TeamRisk, TeamSchedule and TEC Admin (will <u>not</u> be installed during suite installation)
Browser Support:	MS Internet Explorer 6 through 7 – TeamCentral, TeamSchedule Web and TEC
Other Considerations:	<ul style="list-style-type: none"> • An application server (Citrix or MS Terminal Server) is recommended if users will be accessing audits over a WAN or dial-up connection. The following are required to operate as the "client" for this environment: MS Windows Server 2000 SP4 or Enterprise Server 2003 (including 2003 SP1 and 2003 R2). • If using an Oracle database, Oracle Client 10.1.x (10g1) is recommended; however, clients 9.2.0.4 through 10.1.x will work. Also, Oracle .NET Provider and OLE DB components are required.

3.2 File Server Requirements

A file server will be required if TeamMate EWP users will need to share TeamMate EWP project files. TeamMate EWP project files are BDE (Paradox) tables.

Use of a file server will also be required if TeamStore, TeamRisk or TeamSchedule users plan to use MS Access and wish to interact with each other.

This does not need to be a dedicated server.

Processor Speed:	2.0 GHz or greater
Number of processors:	1 or greater
Memory:	256 MB Ram
Hard drive:	<p>20 GB or greater</p> <ul style="list-style-type: none"> • TeamMate EWP projects are typically 5-10 MB per project. You must multiply that by the number of projects the audit department intends on performing throughout the year for an estimate of the size requirements. • The MS Access files created by TeamStore, TeamRisk and TeamSchedule will typically be less than 5 MB in size. It is not anticipated that many of these files would be created. • We find that 20 GB of disk space is more than sufficient in most cases.
Software:	<ul style="list-style-type: none"> • MS Windows 2000 Advanced Server or higher is recommended, but any operating system that allows sharing files (workgroups, samba, etc.) is also supported. (We currently support 32-bit software only.)

3.3 Database Server Requirements

Although the application can use MS Access as a local data store, we strongly recommend the use of a centralized database server such as Microsoft SQL Server or Oracle for TeamCentral, TeamSchedule, TeamRisk, TeamStore and TeamMate TEC. Only by using a centralized database can all of the applications exchange information between each other.

The database server specifications can vary based on the needs and number of users in the organization. To simplify this process we have divided the database server specifications based on three different types of company types. Between these configurations, administrators should be able to plan accordingly.

	Small Audit Team	Mid-sized Audit Teams (or combined Database / Web server)	Large Audit Teams
Estimated Users	1-10	10 - 250	Over 250
Annual Audits Performed		Less than 500	Over 500
Processor	1.6 GHz Pentium 4	2 x 3.0 GHz Pentium 4	4 x 3.0 GHz Pentium 4
CPU Utilization	Less than 50% peak	Less than 50% Peak	Less than 70% Peak
Memory	2 - 4 GB	2 - 4 GB	8 GB
Hard Drive	2 GB or greater	4 GB or greater	8 GB or greater
Dedicated	Non dedicated Server	Non dedicated Server	Dedicated Server

Please note the following:

- We currently support 32-bit software only.
- The specifications are valid for all supported databases which include MS SQL Server 2000 SP3/SP4, MS SQL Server 2005, Oracle 9i and Oracle 10.1.x (10g1).
- For very small departments the database and web server components can be shared on the same machine.
- All specifications are based on Windows Advanced Server 2000 SP4, Windows Server 2003 (including 2003 SP1 or R2), or an equivalent UNIX / Oracle environment.
- The installed database will be under 30 MB for both SQL Server and Oracle. The anticipated growth at 500 annual projects at 0.3 MB / project is 150 MB annually but will vary greatly based on the types of audits being performed.
- For very large audit teams using SQL Server, Microsoft recommends Windows Server 2003 for its support of dynamic resizing of the database.

3.4 Web Server Requirements

A web server is required for TeamCentral, TeamMate TEC and TeamSchedule Web. TeamCentral is a data-mining tool mostly used by audit managers. It does not need to be a dedicated web server unless the client anticipates over 250 simultaneous users. All three applications will work in a load balanced / server farm environment.

	Small Audit Team	Mid-sized Audit Teams (or combined Database / Web server)	Large Audit Teams
Estimated Users	1-10	10 - 250	Over 250
Annual Audits Performed		Less than 500	Over 500
Processor	2.0 GHz Pentium 4	2 x 3.0 GHz Pentium 4	4 x 3.0 GHz Pentium 4
CPU Utilization	Less than 20% Peak	Less than 20% Peak	Less than 50% Peak
Memory	2 GB	4 GB	4 GB
Hard Drive	2 GB or greater	2 GB or greater	2 GB or greater
Dedicated	Non dedicated Server	Non dedicated Server	Dedicated Server or server farm recommended

Please note the following:

- We currently support 32-bit software only.
- The application will take less than 200 MB installed on the web server. As this is static program files, no additional space on the web server would be required.
- For very small departments the database and web server components can be shared on the same machine.
- Only large audit departments should consider a dedicated web server. Otherwise sharing this application with other web applications is recommended.
- Unless noted, it is assumed that the server has the latest patches and updates from Microsoft.
- Microsoft Internet Information Server (IIS) 5 or 6 is required. Apache or any other UNIX / Linux web server is not supported.
- All specifications are based on Windows Advanced Server 2000 SP4, Windows Server 2003 (including 2003 SP1 or R2).
 - If using Windows Advanced Server 2000 SP4, the scripting components on the server also need to be version 5.5 or higher. Visit www.microsoft.com/scripting to obtain the scripting components.
- MDAC 2.8 or 2.8 SP1, Windows Installer 2.0 or later, and the .NET 1.1 Framework must be installed on the web server. (Note: The .NET 2.0 Framework can also be installed on the web server, but the TeamMate web applications need to be configured for 1.1.)

4 3rd Party Software Components

This table lists the 3rd party software components licensed for distribution and are installed with the product suite. It should be noted that often these vendors will use software components licensed from other companies.

Software Component	Company Information	Used by module
Active Reports Version 2	Data Dynamics www.datadynamics.com	Reporting engine used by TeamSchedule, TeamRisk, TeamCentral, TeamMate TEC
LeadTools	LeadTools www.leadtools.com	TeamImage - TeamMate EWP's imaging engine
MSHTML 5.5	Microsoft Installed with Internet Explorer	All Applications Required for HTML editing within the products
Infragistics	Infragistics www.infragistics.com	Interface components used by TeamSchedule, TeamRisk, TeamCentral, TeamMate TEC
MDAC 2.8	Microsoft	All applications
BDE 4.5	Borland	TeamMate EWP
.NET 2.0 *	Microsoft	TeamRisk, TeamSchedule, TeamMate TEC Admin
.NET 1.1 *	Microsoft	TeamCentral, TeamMate TEC, TeamSchedule Web
Run-time libraries	Microsoft Part of the Visual Studio development environment	TeamMate EWP, TeamCentral, TeamStore
MSXML 4.0	Microsoft	TeamMate EWP Required to send projects to TeamCentral over HTTP
RoboHelp	Macromedia www.macromedia.com	All applications This is a simple auxiliary DLL to display advanced features in the help system.
RTF2HTML Version 5	EasyByte Software www.easybyte.com/products/rtf2html.html	TeamMate EWP Used in converting RTF to HTML for sending data to TeamCentral
DynaZip 5.0	Innermedia www.innermedia.com	TeamMate EWP Used to compress and encrypt projects and transfer files
SSCE Version 5	Wintertree Software www.wintertreesoftware.com	TeamMate EWP / TeamStore Spell checking engine. This can be used when

		MS Word is not used for spell checking.
Watermark 3.0	Filenet	TeamMate EWP This product is no longer supported and has been replaced with our own internal imaging product - TeamImage.

* .NET Framework 1.1 and 2.0 are not installed during the client or server installations of the TeamMate Suite.

5 Implementation Overview

This section briefly lists the recommended steps necessary to implement the TeamMate R8 Suite for a new organization. Further details can be found in the Implementation Guide. These implementation steps will require coordination between the IT web server administrators, IT database administrators and the audit team leaders responsible for the implementation of TeamMate R8.

1. **Create a test environment.** As an industry best practice we recommend that you first create an environment where a few select users can test both the client and server applications. This will give you an opportunity to ensure the applications work within your organization's environment and will give a few users an opportunity to get familiar with the various features of the product.
2. **Create a new suite database.** Once the above user tests have been performed, create a new suite wide database and point the test environment to use this new database. This will allow the same users involved in step 1 to setup the various options required within the suite.
3. **Create libraries, TeamStores, reports and global options.** This step will be reviewed with the audit team leader and the TeamMate sales representative. Having these libraries and stores available to the team before the product is rolled out completely will ensure a successful rollout.
4. **Create a production environment.** For the web applications you will now need to create a production environment that should be a duplication of the test environment created previously.
5. **Develop a client rollout strategy.** There are several options to roll out the client portion of the suite to all of the users. Most large organizations use 'push' technologies that will simply push down and launch the MSI. Other simple options for installation include setting up batch files or using scripts. Be sure to refer to the Client Installation Guide which contains information on how to install the client modules of the suite. During the rollout you should include any database connection files, TeamStores, audit libraries and reports templates and any other files necessary to your organization.
6. **Rollout the client software.** Implement the rollout strategy defined above and allow your users access to the software.
7. **Provide training and best practices.** Finally you should provide the proper training and best practices so the users can get the most from the software.

Please note that although the installation of the products take less than 1 hour, a successful rollout of the suite of applications with the appropriate training will probably take a few weeks.

6 Frequently Asked Questions (FAQ)

The following are the most commonly asked questions from IT organizations. Any question not answered below can be addressed to the following support numbers for your region.

Region	Support Number	E-Mail Address
North America	+1 800 223 0535 +1 813 351 6872	teammate.support@us.pwc.com
Europe, Middle East, Africa	+44 20 7804 1530	teammate.support@uk.pwc.com
Asia Pacific	+61 3 8603 3111	teammate.support@au.pwc.com
Southern Africa	+27 11 797 5111	teammate.support@za.pwc.com

6.1 Architecture

Question	Answer
Is TeamMate a document management system for Office documents or a database application system?	<p>TeamMate EWP is designed to take advantage of both a relational database and a tight integration with Office documents. It is unique in the marketplace in its ability to have this hybrid approach. File documents references are stored in the database and the end-user is unaware of the automatic check-out and check-in of documents.</p> <p>The other products within the suite are database management tools but also have the ability to store documents as attachments.</p>
What portion of the product suite is client vs. web-based?	<p>TeamMate EWP is designed as a client-only product that offers a flexible setup so multi-user collaboration can be setup via a file share, peer-to-peer, application server, or replication and therefore requires a client installation. There is no database server installation required and only file server space required.</p> <p>TeamRisk, TeamSchedule, TeamStore, and TEC Admin are client-server products that can either access client-based databases (MS Access) or utilize a database server (SQL Server or Oracle). It requires a client installation.</p> <p>TeamCentral, TEC, and TeamSchedule WEB are purely web-based products. It only requires browser on the client, an installation on the web-server and an installation of or access to a database server.</p>
What network protocols are required?	<p>TeamMate EWP is a client application that can store projects on a file share. Any supported protocol used to connect to file servers is supported.</p> <p>The web applications use HTTP.</p> <p>TeamRisk, TeamSchedule, TeamStore, and TEC Admin will work with any protocol used to establish connections to database servers, the most widely used being TCP/IP.</p>
Can the application be used on thin client networks or application servers?	Yes, the client applications can run on both Citrix and Microsoft Terminal Server either completely or just for the replication engine.
Is the system a J2EE or .NET architecture and what are the projected future plans?	All of the client applications except TeamMate EWP require the .NET 2.0 Framework and all the web applications require .NET 1.1 Framework. It is expected that the other components will also have this requirement and there are no immediate plans to provide a J2EE version.
Are there any ActiveX controls or COM components utilized?	<p>Both TeamMate EWP and TeamSchedule make use of installed ActiveX controls. Additionally EWP relies on COM in its architecture design including communication with Microsoft Office.</p> <p>There are no client ActiveX controls (or installation) required to use the web module.</p>
For COM components on the web server, what general operations do they perform?	There are a handful of COM components for TeamCentral that handle some of the database operations, transforming data via XML, and general encryption handling. The majority of the web product is based on ASP.NET pages.
Are there any 3 rd party tools or components included?	The 3 rd party tools are listed in Section 4 . All of which have free run-time distribution rights provided by TeamMate.
Is there any other hardware required?	For those requiring scanning, a TWAIN-compliant scanner is required. For disconnected users, it is highly recommended that any type of backup device such as CD-RW or USB flash drive be utilized to maintain proper backups.
Are 64-bit versions of software supported?	At this time, we only support 32-bit software.

6.2 Databases and Storage

Question	Answer
What database platforms are supported?	<p>TeamMate EWP currently utilizes BDE (Borland Database Engine) to store project files in Paradox tables. This was designed specifically to be a distributed database to support replication. [Note – this is architecturally equivalent to using Access files but with slighter better performance].</p> <p>All other modules support MS Access, SQL Server 2000, SQL Server 2005, Oracle 9i or Oracle 10.1.x (10g1).</p>

Which applications use a physical file or shared file for data storage as opposed to a database server?	TeamMate EWP uses BDE as described above. All other applications within the suite can use MS Access as well as server based databases.
Which applications use a database server?	TeamStore, TeamRisk, TeamSchedule and TeamCentral can use (and is recommend to use) a server based data storage such as MS SQL Server or Oracle.
When using physical database files, where can the database files reside?	TeamMate EWP projects are stored as separate databases on a file share or local machine. Each EWP project is stored in its own directory which is displayed to the user via the TeamMate Explorer. Additionally peer-to-peer networking is supported so a EWP database can reside on a co-workers machine. TeamStore, TeamRisk and TeamSchedule databases can reside on the local machine or a file share. If MS Access is used for TeamCentral, it is recommended that the file be local to the installation of TeamCentral.
How are connections made to the database?	TeamMate EWP connections to databases are done using a simple method of browsing through file directories and locating a .tm information file. These files contain the connection information necessary to access the database tables located in the same folder. The other modules connect to databases using TeamMate "connection" files. These XML-based files contain all the database location and connection information required with the authentication information encrypted. A .NET utility is available to create these connection files and they can also be created by TeamRisk, TeamSchedule and TEC.
How many user accounts need to be created for SQL Server or Oracle?	A single database user account is created in the database (SQL Server or Oracle). This user / password combination is encrypted and saved in the .TMC file using the applications provided. This .TMC file can then be distributed to any user in the organization that requires access to the database.
Is Windows NT Authentication supported to connect to SQL Server or Oracle?	This is not supported at this time. Only user authentication as described above is the supported method to connect to the database.
Where are documents or work papers stored?	TeamMate EWP stores its work paper documents as encrypted files in the file system which is referenced from the database. This allows the system to keep track of them while providing the flexibility of storing possibly a large number of documents outside of the database to not affect its performance. TeamStore and TeamRisk; however, store their work paper documents within the database as a blob (binary large object). This allows complete self-containment since these components do not support replication.
How are databases created?	Each application provides support for creating the file based databases (MS Access or for TeamMate EWP – BDE). For SQL-Server and Oracle, the DBA has access to the database creation scripts. There are detailed documents as how to perform these actions.
Can we have your data schema?	Licensed users can request the database schema by contacting their local support via e-mail.
How much space is required?	For TeamMate EWP project file, the typical amount is between 5-10 MB however there are projects that are well over 250 MB in size. The amount of work paper documents is the primary factor but more importantly the percentage of which are scanned images and the resolution for them have the greatest impact. A scanned image in color can be 10 times larger than one in grey-scale without any visual difference.

6.3 Multi-user Accessibility

Question	Answer
How many simultaneous users can the system support?	TeamMate EWP can support up to 20 users accessing the same project before performance degradation will be noticeable. This same limit would be true when using MS Access with TeamStore, TeamSchedule and TeamRisk. When using a server based database for TeamSchedule, TeamRisk, TeamStore and TeamCentral, the limit is largely based on the size of the hardware. The guidelines provided above for hardware specifications list the recommendations based on the number of users to support.

How does the system ensure there are not simultaneous edits to the same information?	<p>TeamMate EWP will create logical “locks” for each view opened. Subsequent users will be notified with a warning and the schedule will be opened as read-only should they want to proceed.</p> <p>The other products in the suite do not support database locks.</p>
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6.4 Replication

Question	Answer
Is replication supported?	<p>TeamMate EWP has an internally managed check-out and check-in process allowing the user to select and replicate specific areas of the project. These replicas can be downloaded directly from the file server to the local machine or a transport file can be created and saved to disk or e-mailed to another user. While working on a replica, the system maintains a transaction log which is processed during the merge with the master. There is one unique “master” project with any number of replicas created by the users.</p> <p>There is no replication model for the TeamRisk, TeamSchedule, TeamStore or TeamCentral applications due to the nature of the users, their locations, and extent of use of these modules as they focus on planning and not field work.</p>
How long can a replica be used?	Replicas can be used as long as required by the user, depending on their connectivity. Once a replica is merged to the master, either directly when reconnected or indirectly via a portable ‘update’ file, the user is required to create another replica.
How are conflicts managed?	TeamMate EWP has a sophisticated conflict detection and resolution capability that detects conflicts (edits on master and replica simultaneously), notifies the user, and allows the user determine which version should be retained.
Can native database replication be done?	Currently this is not supported.
Can databases be migrated from one platform to another?	A utility is available that will enable users to migrate data from MS Access to SQL Server or Oracle. Migrating to MS Access will not be supported.

6.5 Encryption and Security

Question	Answer
What is the purpose of the security mechanisms for TeamMate EWP?	The purpose is to prevent users from bypassing the system and editing procedure steps, exceptions, and workpapers after they have been signed off. It is not designed to protect the data if the computer is stolen. The only true mechanism for that concern is to use a hard disk encryption tool and standard network security procedures.
What type of encryption is used for workpaper and transport files?	<p>TeamMate EWP R8 and R8-SP1 utilize the DynaZip 5.0 product to compress and encrypt backup files (.tmb), replica files (.tmr), update files (.tmu), and workpapers (.tmd). This product is based on the PKZIP 4.5 file specifications.</p> <p>DynaZip encrypts these files based on a string which is undisclosed for security reasons. This string is run through the MD5 (Message-Digest 5) algorithm to create a 128-bit hashed value which is used to encrypt and then decrypt the files.</p> <p>Work papers stored in the database (i.e. TeamStore and TeamRisk) are not encrypted; however, they are protected through the user access security to the database.</p>
How are passwords encrypted within the TeamMate Suite?	<p>TeamMate utilizes the MD5 (Message-Digest 5) algorithm to create a 128-bit hashed value used for the storage and transmittal of user passwords, database passwords, and passwords for the four compressed file types associated with TeamMate EWP (TMB, TMR, TMU, and TMD).</p> <p>The actual password is converted to a hash value and stored in the database. It is not mathematically or theoretically possible for anyone to determine the original password even if they know the hashed value.</p> <p>When the user enters their password to login to the application, that password is run through the MD5 algorithm. The application compares this value with the value in the database without application knowing the actual password. If the hashed values match, the user is granted access.</p>

Are the TeamMate suite databases encrypted?	<p>TeamMate EWP uses the native encryption provided by BDE to encrypt the data. The encryption key is based on a unique 'seed' using an MD5 (Message-Digest 5) hash.</p> <p>When using a MS Access database for TeamStore, TeamCentral, TeamRisk, and TeamSchedule, encryption is provided through the standard password protection functionality provided by MS Access.</p> <p>When using MS SQL or Oracle for TeamStore, TeamCentral, TeamRisk, and TeamSchedule, these databases are deliberately not encrypted in order to allow organizations to integrate with their own systems or import/export data as needed.</p>
How are passwords encrypted within the TeamMate Suite?	<p>TeamMate utilizes the MD5 (Message-Digest 5) algorithm to create a 128-bit hashed value used for the storage and transmittal of user passwords, database passwords, and passwords for the four compressed file types associated with TeamMate EWP (TMB, TMR, TMU, and TMD).</p> <p>MD5 converts the actual password to a hashed value and then stores the hashed value in the database. It is not mathematically or theoretically possible for anyone to determine the actual password from the hashed value.</p> <p>When the user enters their password to login to the application, that password is run through the MD5 algorithm. This value is compared to the one in the database. Therefore, the application can match the passwords without ever knowing the actual password.</p>
Is it possible for someone to crack the encryption and obtain access to TeamMate files?	<p>Yes, it is theoretically possible that a malicious person could crack our encryption and obtain access to the encrypted workpapers and database. However, this is extremely unlikely and we have never heard of a case where it actually happened. Other security mechanisms, such as VPN and hard drive encryption, should be in place to mitigate any further security concerns. Additionally there are security mechanisms available to protect these files on the file share drives where the permanent storage resides.</p>
How can we ensure our data is securely transmitted across a WAN for both the web and client applications?	<p>There are several ways in which your data can be secured while in transit, either between servers or from a web server to the client browser. For the client applications accessing data on the network, the usual solution is to implement a Virtual Private Network (VPN) so that any data transmitted between servers (or between a server and a client over dial-up) would be encrypted. For the web server it is recommended that you utilize Secure Sockets Layer (SSL) protocol so that all web traffic is encrypted.</p>
How are database connections including database password encrypted?	<p>The primary and recommended method to connect to the central application database is via a TeamMate "connection" file. The database username and password are encrypted using AES (Advanced Encryption System) and saved in an XML-based connection file. Typically these are created by the DBA using the product and distributed to the end-users.</p>
Are there any U.S. export restrictions due to the encryption techniques?	<p>The encryption techniques used within the database and work papers have cleared export regulations required by the U.S. Department of Commerce in accordance with export control classification number '5D002' and mass market TSU. In accordance with these regulations, this software (with a valid TeamMate license agreement) can be exported to countries outside of the United States with the following exceptions: Cuba, Iran, Iraq, Libya, North Korea, Sudan, and Syria.</p>

6.6 Compression

Question	Answer
Are the databases or contents of databases compressed?	They are not in order for users to do their own integration or import and export processes. However, the work papers stored externally are compressed as are all TeamMate EWP transport and backup files.
Are the transfer files compressed?	Yes, DynaZip technology is used to compress backup files (.tmb), replica files (.tmr) and update files (.tmu).

6.7 Backup and Disaster Recovery

Question	Answer
Is there an automatic backup mechanism?	<p>TeamMate EWP has several backup options including automatic, frequency setting, and revolving backup options. The location of this backup file is customizable.</p> <p>The other components must be backed up manually or if using a central database server, would be done by the DBA using their own policies and procedures.</p>

Is there a disaster recovery option?	<p>TeamMate EWP has several recovery options. The first level is a tool on the opening screen that allows end-users to actually run database verification and validity checks and to address the most common issues. The second level is a separate and very advanced TeamMate Administration tool that the organization Champion may use to do many advanced operations. The third level would be to restore a backup file, which includes the option to replace the whole audit or individual procedures.</p> <p>For the other components, the organization's DBA should address database issues based on internal policies and procedures.</p>
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6.8 Networking

Question	Answer
What is the packet size of the network transmission?	That information is currently not available.
What network protocols are supported?	All of the products are written using standard windows libraries to take advantage of any network protocol supported by MS Windows.
Does TeamMate work in a virtual machine environment?	According to VMware specifications, there should be no problem running the entire TeamMate suite on a virtual machine. So far, we have not encountered any problems running the TeamMate web server applications with VMware as long as the virtual machine meets the system requirements listed in Section 3 . At this time, we have not performed any testing with Microsoft Virtual Server.

6.9 Authentication and Passwords

Question	Answer
What is the authentication model for the product suite?	<p>All modules use Windows Authentication to authenticate a user's login name to the Windows Domain and then, if authenticated, will be matched to the user's login name stored in the EWP project or the MS Access, SQL, or Oracle database.</p> <p>If Windows Authentication is not used, all modules also support "basic" or what is referred to as "forms" authentication, which stores the username and password in the database. If for any reason a user cannot authenticate via Windows (i.e. working on a EWP replica on your home computer), the client applications will revert back to basic authentication requiring the user to manually login with their username and password.</p> <p>In addition, TeamCentral also supports LDAP authentication and integration with Netgrity SiteMinder.</p>
What are the password restrictions or guidelines?	If Windows Authentication is not used, the only restriction is that passwords must be at least 5 characters. There are no restrictions as to composition of alpha-numeric, complexity, or expirations.
Is there any security auditing?	No – at this time we do not provide any auditing of login/logout, etc.
How are passwords encrypted within the TeamMate Suite?	See Section 6.5 .
Is single sign-on available?	Yes. All modules now support Windows Authentication, which means a user can login to all applications in the TeamMate suite based on their Windows domain account.
What happens if a user forgets their password?	There is a TeamMate Admin tool that can generate a temporary password for that day for the end-user. This can be done either by the client Champion or the TeamMate Support desk. Once generated, the end-user is asked to change their password.
How are the roles defined and can security be customized for these roles?	<p>Each of the applications has their own set of pre-defined roles that are specific to the application. The admin section of each of the applications will allow the administrator to establish the security setting as to what the particular role can access.</p> <p>Additionally TeamCentral has a concept of security groups (similar to Windows groups) that can be established to determine which group of users can access particular projects.</p>

6.10 Sending Data to TeamCentral

Question	Answer
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How is data sent from TeamMate EWP to the TeamCentral application?	There are 3 methods for sending data: 1. Sending directly to a TeamCentral ASP web page via HTTP-Post protocol that sends a stream of XML data to the web-page. The web-page then transfers the XML data to a COM component that utilizes OLE-DB to populate the database. This is a synchronous method. 2. Sending directly to a database via a local database connection. This utilizes the locally installed COM database component to write to the database. This is a synchronous event. 3. Sending indirectly via a persistent XML file that can then be imported in the TeamCentral admin tool. This is very similar to step 1, just done in two distinct phases.
Is the data encrypted during the send?	No. However with SSL (Secure Sockets Layer) installed, the data cannot be extracted on the wire and the XML data sent is never persisted on the web server since it is sent as a stream.

6.11 XML and Data Integration

Question	Answer
Does the system support XML or an API to import or export data?	The XML specification is the recommended API to exchange data into the system, out of the system and in between the applications. This can be made available upon request and includes the ability to populate TeamStores, exchanges procedures and exceptions between EWP projects, and importing data into TeamCentral.
What are the methods available to import data?	TeamRisk provides the ability to import the Risk Universe (objectives, risks, and controls) and the Organization Hierarchy via a MS Excel spreadsheet. Similarly, TeamSchedule provides the same for projects and resources either from MS Excel or MS Access databases. Templates are included in the installation.

6.12 MS Office Integration

Question	Answer
What versions of MS Office are supported and which modules?	TeamMate EWP has very tight integration with 2000, XP, 2003 and 2007. The primary modules that are supported are Word and Excel while other Office documents such as Visio, PowerPoint, and Access databases can be attached. TeamMate EWP is also capable of sending mail directly through the Microsoft Outlook client using MAPI protocol.
How is MS Office Integration accomplished?	A MS Office add-in (written in VBA) is provided for both Word and Excel. These add-ins are loaded dynamically only when these applications are launched from TeamMate EWP. All of the communication is performed via OLE-Automation.
Do we have full MS Office functionality when accessed from TeamMate?	The full power of Word and Excel are available when launched from TeamMate. The two exceptions are that the "File-Save As" and "close" are removed from Word and Excel. This is done to allow TeamMate to correctly store (and optionally encrypt) the document. TeamMate does allow the user to export a document.

6.13 Printing

Question	Answer
Is there the ability to print all of the forms and data from the application?	Currently, there is not a "print all" button; however all of the data in the applications can be printed through a variety of reporting and export options.
Are there any printer or printer drive requirements?	No.

6.14 Report Writing and Output Generation

Question	Answer
What is the report writer or software used to generate reports?	<p>TeamMate EWP uses an MS Word add-in called the 360° Report Authoring Tool to generate reports. This tool allows users to create and export custom MS Word reports based on information captured in EWP. It also allows users to import changes to those reports back into EWP. This allows an organization to provide reports exactly as they are accustomed as well as update the source documentation.</p> <p>TeamRisk and TeamSchedule both utilize ActiveReports product from DataDynamics. TeamRisk includes the report designer.</p> <p>TeamCentral utilizes XSLT (style sheets) "layout" files so that any information in the generated views can be quickly viewed differently by having the web browser render the XML data with the XSLT layout file.</p>
What is the generated output of these reports?	TeamMate EWP reports are native MS Word documents. ActiveReports within TeamRisk and TeamSchedule allow generation of reports in Word, PDF, and Excel format. In TeamCentral, Project and Exception reports can be exported to MS Word while Active Reports is used to export query results to MS Excel.
Can we use our own report engine?	If you are using the central application database, you may use any report writer. Note that this applies to TeamRisk, TeamSchedule, TeamStore, and TeamCentral only. The database schema can be provided upon request.

6.15 Installation

Question	Answer
What technology is used for the product installation?	The product client suite is based on Windows Installer 2.0 technology with an MSI file provided to the customer.
How long does it take to install the products?	<p>The client applications take only a minimal amount of time (about 5 to 10 minutes) to install.</p> <p>The web server applications take considerably longer as they require installations on both the web and database tiers. IT Professionals can install the web components and setup the database within about 2 hours.</p>
Can the installation be customized?	Yes, there are detailed documents available as how the installation can be customized and also the creation of a data file to set default preferences for each of the users automatically.
What does the installation include?	<p>The installation includes all internally developed and licensed components to run the application. Additionally the following are installed:</p> <ul style="list-style-type: none"> • MDAC 2.8 if not installed already • Although .NET 2.0 Framework is not installed for TeamRisk, TeamSchedule, or TeamMate TEC Admin, a check is made. • All system help files and sample databases. • All or most of the user manuals are contained on the CD-ROM or are available from our TeamMate User Community
Do the web applications work with .NET 2.0 Framework?	TeamCentral, TeamMate TEC, and TeamSchedule Web require .NET 1.1. The .NET 2.0 Framework can also be installed on the web server, but the TeamMate web applications need to be configured for 1.1.

6.16 Product Upgrades

Question	Answer
How often are product updates available?	Typically a major suite release is made every 12-16 months with service packs available at least every 6 months
How is database conversion handled?	For PC databases, the process is automatic after user confirms. For SQL-Server and Oracle databases, the user is notified to contact their DBA who has access to the conversion scripts.