

Best Practices for Upgrading Siebel Applications

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Best Practices for Upgrading Siebel Applications

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Best Practices for Upgrading Siebel Applications

As part of Oracle's commitment to Applications Unlimited, Siebel CRM Applications continue to evolve, offering greater value and providing new advantages for your business. Upgrading Siebel CRM is key to realizing the maximum return on your Oracle investment.

INTRODUCTION

Oracle's Siebel Customer Relationship Management (CRM) applications have evolved over time, and Oracle's commitment to customers, this suite of applications, and creating best-in-class products remains steadfast. The Siebel CRM product has expanded significantly in functionality, scalability, usability, and reduced cost of ownership over the past few releases, including dramatic leaps made in the recent Siebel CRM 8.0 release.

This white paper guides you through the major areas to consider in determining when an upgrade is appropriate for your organization. Based on your current release of Siebel CRM software, it reviews the most common upgrade paths and aims to provide you with a framework for determining the best possible upgrade agenda for your organization. It also includes information about future upgrade options to the next generation of application software currently branded as Oracle Fusion Applications. Combined, Applications Unlimited and Oracle Fusion Applications give you the flexibility that you need to create an upgrade plan that maximizes the value of your Siebel CRM investment.

There are many reasons to consider upgrading your current Siebel CRM version. For example:

- Upgrading may provide access to new functionality and software applications that can help keep your organization well positioned to meet your business objectives through leveraging the latest technology and built-in business processes
- Updated software versions may provide an “out-of-the-box” solution to requirements that may need to otherwise be built and maintained
- In an increasingly rigorous regulatory compliance environment, upgrading may facilitate compliance at a lower cost through retiring customizations
- Upgrading allows you to leverage the latest performance and usability enhancements, enabling you to increase the efficiency of your applications and your business
- You may need to upgrade to remain eligible for the highest levels of product support

In evaluating any upgrade, there are many factors to consider, such as support timeframes, functional capabilities, technical infrastructure, and underlying business needs. These factors are often complex and interrelated—all of which adds to the importance of determining the most appropriate upgrade strategy.

To help you make an informed decision, this paper outlines our plans for supporting and advancing Siebel CRM as well as its successor, Oracle Fusion Applications.

UPGRADE OVERVIEW

Before pursuing an upgrade, it is imperative that you fully understand the upgrade process, potential upgrade paths, and most importantly, your criteria for considering an upgrade of your Siebel CRM solution.

The Upgrade Process

An upgrade project is similar to an implementation project; however, upgrade projects can be significantly more efficient than implementations because they leverage your previous implementation efforts and outputs. In addition, upgrades can be executed within the current change management system used by your organization.

Within the upgrade project, there are several key areas of work that begin with an Upgrade Assessment and project definition, and continue through testing, deployment, and training activities. To ensure a rapid and successful migration, Oracle offers specialized expertise to support customers and partners performing upgrades and migrations.

In most instances, the Siebel CRM upgrade process will be carried out in the following sequence:

1. Perform Upgrade Assessment and Planning

Because Siebel CRM 8.0 offers greatly enhanced functionality, better performance, and a redesigned UI, upgrade projects must address human and functional impacts as well as technical considerations. For this reason, the recommended upgrade approach includes performing an Upgrade Assessment prior to initiating the actual upgrade process. The Upgrade Assessment should achieve the following objectives:

- a) Assess the current Siebel CRM environment
- b) Analyze new product functionality
- c) Evaluate the complexity of the upgrade
- d) Estimate the level of effort to upgrade
- e) Assess business processes, functional redesign, and current requirements versus obsolete requirements that may be out of scope

Although an upgrade project is similar to an implementation project, the upgrade project can be significantly more efficient because it leverages your previous implementation efforts and outputs.

- f) Recommend upgrade team roles
- g) Review interface migration tasks
- h) Plan for upgrade tuning
- i) Identify data migration tasks
- j) Provide logical end-user training recommendations

Based on a comprehensive analysis of the current deployment, the Upgrade Assessment provides valuable input into subsequent steps as well as a detailed rendering of the level of effort involved to complete the upgrade.

2. Upgrade the Development Environment

During this step, the development environment is upgraded, merging legacy customizations with the new release. The output of this step is a merged repository and schema definition that serves as input for the upgrades of the production test environment and production environment.

3. Upgrade the Production Test Environment

It is extremely important that the upgraded release be tested to validate its function and performance before deploying it to users. In addition, the upgrade process must be tuned to minimize the time required to perform the production upgrade and optimize the environment for improved performance at deployment.

Oracle provides an upgrade tuning application that analyzes how the upgrade scripts interact with the production test environment database. The Upgrade Tuner enables you to adjust how the scripts will execute against the Siebel database in your production environment; in addition, this tool provides you a platform to determine how the new application version will perform before it is deployed. Tuning the scripts can significantly reduce the time required to complete the production upgrade. For this reason, the production test environment database must contain the same data volume and topography as your production database.

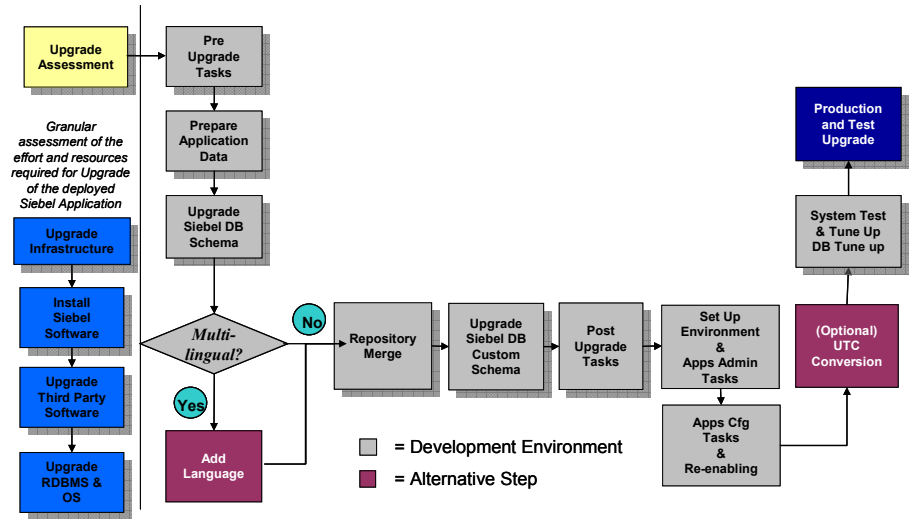
4. Upgrade the Production Environment

The production environment is your live, deployed business instance running on the new Siebel CRM release, where your internal and external users interact with the Siebel CRM applications and generate actual business data.

Because of the “customer-facing” nature of the production environment, the upgrade process assumes all production

environment databases are completely separate from the development environment and production test environment databases.

Within each environment, the standard upgrade process flow is detailed in the graphic below:



Upgrade Assessment and Planning

This phase includes a granular assessment of the technical complexity of your Siebel CRM upgrade, and an estimate of resources required for the upgrade.

Upgrade the Infrastructure

The first phase of the actual project is to upgrade your hardware and software to meet system and implementation requirements, which includes upgrading the Siebel Enterprise to the new release. This action upgrades the Siebel servers and provides the programs, scripts, input files, and other files required to merge the repository and upgrade the Siebel database.

Perform Pre-Upgrade Tasks

This upgrade project phase prepares the Siebel database for upgrade and includes such tasks as closing database connections, clearing pending workflow tasks, and disabling customized triggers.

Perform Upgrade Tasks

This phase of the upgrade cycle merges your customizations into the new release. This portion of the effort also upgrades the development environment database and includes these tasks:

- **Prepare application data.** These tasks prepare test data for migration.

- **Upgrade Siebel database schema (upgrep).** Involves running the Database Server Configuration Utility in “upgrep” mode. This utility performs a basic upgrade of the Siebel database schema and loads repositories to prepare for the repository merge.
- **Merge repository** (*Development Environment only*). Leverage Siebel Tools to merge your current repository with the repository in the new release. Postmerge utilities upgrade form applets and verify that applets and views are configured correctly.
- **Run postmerge utilities** (*Development Environment only*) Leverage Siebel Tools to run a set of utilities that examine the merged repository. The utilities analyze any customizations and apply changes to them as needed to conform to the user interface in the new release.
- **Upgrade Siebel custom database schema (upgphys).** Involves applying the Database Server Configuration Utility in “upgphys” mode. This step further upgrades the Siebel database with changes resulting from the repository merge and completes the database upgrade.

The Database Server Configuration Utility also generates the “customer repository” definition file and logical schema definition file that are used as input to the production test environment and production upgrades.

Perform Post-Upgrade Tasks

During this upgrade phase, the environments are set up, applications are configured, and the system is tested as follows:

- Set up the environment. These tasks set up the post-upgrade environment, which includes extracting the developer’s databases and running database statistics.
- Application administration. These tasks set up applications and include such things as setting up user access and visibility of views and screens.
- Application configuration. These tasks prepare applications for testing, including data migration for specific applications.
- Test the system. For development environment upgrades, you perform basic unit tests to verify application function. For production test environment upgrades, you should perform a full suite of regression and stress tests to verify the system is ready for production.

Examining Your Upgrade Criteria

There are several areas to consider as you examine your upgrade options, including application functionality, technological enhancements, operational considerations, and support availability.

If you are running multiple instances of the Siebel CRM application, your upgrade analysis should examine the value of incorporating instance consolidation into the upgrade project.

Application Functionality

When considering an upgrade, most organizations begin with a critical assessment of the new capabilities and enhancements to current features provided in the new release. A firm grasp of these new capabilities and enhancements is essential to evaluating the value to be gained through your organization's investment of time and resources.

In many instances, new capabilities can offer productivity advantages, increased business value, and lower operational costs (for example, through the retirement of customizations). In evaluating any new Siebel CRM release, think about your current environment and whether the version in place meets the needs of today as well as the demands of your business for the next three to five years.

Release notes are the best first step to understanding the major changes included in the new release. Also, these documents provide valuable references to other documentation that can help you evaluate and implement the new release. Your Oracle Consulting sales representative can help you identify new features, functionality, and processes that may provide value to your organization.

Technological Enhancements

As you evolve your application upgrade strategy, you should consider your technical infrastructure requirements, including client architecture, application server, Web services, currently supported platforms, and database options. Consider what has changed or what will change in terms of platform support, and also be aware of infrastructure enhancements that may provide additional benefits to your production environments. For example, by choosing to leverage current Oracle Fusion Middleware and database options, you could experience substantial productivity benefits by having your database and application server running on a single platform.

Siebel CRM has traditionally afforded several choices of technical infrastructure, and this flexibility continues to be available. In the past year, we expanded the choices again, with the additional infrastructure option of Oracle Fusion Middleware for your Siebel CRM applications.

Oracle's industry-leading Lifetime Support Policy of your infrastructure configuration is well documented in the document *Lifetime Support Policy: Coverage for Applications and Server Technologies*. Regardless, you should always confirm your specific infrastructure components when preparing for your upgrade.

Operational Considerations

Oracle continually seeks to improve your return on investment by leveraging technology to reduce the resources required to operate and maintain your enterprise solutions. This means customers can realize quantifiable benefits, such as installing and implementing software more quickly, simplifying upgrades,

receiving real-time support and performance diagnostics, and achieving robust integration with other e-business software.

The Siebel CRM 8.0 release takes these benefits to the next level. Oracle continues to deliver improvements that will further reduce implementation costs, enhance usability, and increase supportability.

For organizations running on more than one instance of Siebel CRM, the cost, risk, and operational value of instance consolidation should be included in your upgrade value analysis. If you don't include consolidation in this upgrade project, it may be advisable to develop a road map to address this consideration in a later phase.

Support Availability

A key reason for pursuing upgrades is to ensure continued access to the robust technical support that Siebel CRM users have come to expect. As part of our Applications Unlimited commitment to our customers, Oracle provides continued enhancements to the current Oracle applications beyond the delivery of Oracle Fusion. Oracle is committed to supporting customer investments in technology platforms for these applications as well as their certified infrastructure products (hardware, operating systems, databases and middleware). Details can be accessed at the following location: oracle.com/support/library/data-sheet/oracle-lifetime-support-policy-datasheet.pdf

With the guaranteed support announced through the Oracle Lifetime Support initiative, Oracle customers can remain on their Siebel CRM applications and be confident of support as long as they remain aligned with the currently supported platforms. Oracle is providing more visibility into product road maps, and is helping customers derive continual success from their current applications by delivering dedicated, world-class development and support for years to come.

When examining your infrastructure support availability, be sure to include an analysis of your hardware and operating system end-of-life support dates, if any.

Identifying Your Upgrade Path

In addition to the above factors, you may also want to consider the amount of time needed to upgrade and make sure you will have the full support and coverage for your solution. The timing of the release availability should not significantly alter your upgrade plans; instead, as mentioned above, your upgrade decision should be based on the ability of your currently deployed release to support your business in the near-to-medium term.

It is important to note that Oracle Fusion will evolve as an optional “path” to the future, rather than a “destination.” Your Siebel CRM solution will continue to evolve over time, adopting Oracle Fusion technologies as they become available. Portions of Oracle Fusion technology are already partially available in the new

Siebel CRM 8.0 release, and are planned for future releases of Siebel CRM applications as well.

Whether or not you are planning to upgrade to Oracle Fusion Applications in the next few years, you should still factor the upgrade path to Oracle Fusion into your plans to minimize your future cost and risk should you later discover that this next-generation product suite best satisfies your evolving business objectives. Based on customer feedback, Oracle is planning to deliver scripts to upgrade directly to Oracle Fusion Applications from Siebel CRM 8.0 and later releases. In short, while the business benefits of running on Oracle Fusion Applications may be substantial, upgrades to Oracle Fusion will be entirely optional given the continued commitment of Applications Unlimited, and your own unique business objectives. Still, as needs change rapidly in today’s dynamic business environment, it is wise to position yourself for the greatest flexibility in your future upgrade options.

The following tables demonstrate the supported and nonstandard upgrade paths for Siebel CRM applications. We expect that customers will remain on these releases for several years, and have therefore created a general set of recommended upgrade paths grouped by each release of Siebel CRM software. While each upgrade situation is unique, the recommendations should assist in providing a basic framework for upgrade discussions with your Oracle account representative.

TABLE 1—Supported Direct Upgrade Paths for Siebel CRM Applications

The following direct upgrade paths are supported for Siebel CRM applications:

SIEBEL CRM RELEASE	SUPPORTED LANGUAGES
Siebel 7 (Release 7.0.4)	English, Danish, German, French, Italian, Japanese, Korean, Simplified Chinese, Spanish, Dutch, Portuguese—Brazilian
Siebel 7 (Release 7.5.2)	English, French, Spanish, German, Italian, Danish, Japanese, Portuguese—Brazilian
Siebel 7 (Release 7.5.2)	Unicode to Unicode
Siebel 7 (Release 7.5.3)	English, French, Spanish, German, Italian, Danish, Japanese, Portuguese—Brazilian, Simplified Chinese, Czech, Finnish, Korean, Portuguese
Siebel 7 (Release 7.5.3)	Unicode to Unicode
Siebel 7 (Release 7.7)	English, French, German, Spanish, Italian, Dutch
Siebel 7 (Release 7.7)	Unicode to Unicode
Siebel 7 (Release 7.8)	English, French, German, Spanish, Italian, Dutch, Japanese, Portuguese—Brazilian, Portuguese, Simplified Chinese, Czech, Finnish, Korean, Thai
Siebel 7 (Release 7.8)	Unicode to Unicode

Siebel Industry Applications (Release 7.0.4)	English, French, German, Italian, Spanish, Portuguese—Brazilian, Japanese
Siebel Financial Services (Release 7.0.4)	English, Danish, French, German, Spanish, Korean, Japanese
Siebel Industry Applications (Release 7.5.2)	English, French, Spanish, German, Italian, Danish, Japanese
Siebel Industry Applications (Release 7.5.2)	Unicode to Unicode
Siebel Industry Applications (Release 7.5.3)	English, French, Spanish, German, Italian, Danish, Japanese, Portuguese—Brazilian, Czech, Simplified Chinese, Korean, Portuguese
Siebel Industry Applications (Release 7.5.3)	Unicode to Unicode
Siebel Industry Applications (Release 7.7)	English, French, German, Spanish, Italian, Dutch
Siebel Industry Applications (Release 7.7)	Unicode to Unicode
Siebel Industry Applications (Release 7.8)	English, French, German, Spanish, Italian, Dutch, Japanese, Portuguese—Brazilian, Portuguese, Simplified Chinese, Czech, Finnish, Korean, Thai
Siebel Industry Applications (Release 7.8)	Unicode to Unicode

TABLE 2—Indirect or Special Upgrade Paths for Siebel Applications

Customers who want to upgrade from Siebel CRM applications prior to Siebel CRM Release 7.0.4 should contact their Oracle Consulting representative for assistance in evaluating these tasks:

SIEBEL CRM RELEASE	SPECIAL NOTES
Siebel 6 (Release 6.x)	<p>At Siebel 7.8 or later versions, direct upgrades from Siebel 6.x are not supported. You must first upgrade from Siebel 6.x to Siebel 7.7.</p> <p>However, direct upgrades from Siebel 6.2.1 of Siebel Financial Services to Siebel 7.8 or later of Siebel Industry Applications on IBM z/OS platforms are supported.</p> <p>To upgrade from Siebel 6.x to Siebel 7.7, see the latest Siebel 7.7 version of the Upgrade Guide on Oracle's Siebel SupportWeb.</p>
All Siebel Versions	<ol style="list-style-type: none"> 1. Changing database platform type during an upgrade, for example changing from Oracle 8i to IBM DB2 2. Changing operating system type during an upgrade, for example changing from Windows to UNIX 3. Migrating to Unicode 4. Migrating from Oracle's Siebel Industry Solutions

	applications or Siebel Financial Services to Siebel Business Applications 5. Upgrading from one base language to another
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Consult Siebel SupportWeb for the most current information on supported upgrade paths.

UPGRADE BEST PRACTICES

In preparing to successfully upgrade, there are multiple considerations to include in your upgrade planning and execution efforts. Within this publication, Oracle has gathered tips and techniques from hundreds of experienced systems managers, consultants, and partners. These recommendations are intended to help you learn from others and manage a successful upgrade project.

Treat upgrades as combined business and technology projects to get the most value out of your Oracle investment.

General Recommendations

The following general considerations should form the backbone of your upgrade initiative.

Tip #1—Determine Your Upgrade Path

Verify whether you can upgrade directly to the latest release or whether you must first upgrade to a previous release before moving to this target release. In addition, evaluate the complexity of your upgrade effort based on the number of modules implemented, number of customizations, number of integration points, number of interfaces, total number of scripts, and number of user interface scripts. Finally, determine the metrics and cost associated with each aspect of the upgrade. Each consideration should be addressed through a thorough upgrade assessment.

Refer to Tables 1 and 2 earlier in this document, as well as relevant Siebel SupportWeb documentation, for different upgrade paths.

Tip #2—Treat Your Upgrade Activity as a Formal Company Project

The single best predictor of upgrade success may be the planning and project management rigor invested. A structured approach for managing the tasks, resolving issues, and measuring progress is absolutely critical. Equally important is a clearly defined and documented project scope. A defined scope is critical to project measurements necessary for time and cost containment. Experience has demonstrated that clear issue definition, strong project management, and executive ownership are critical success factors to a well-performing project effort.

If your organization has good project management expertise in house, you have an important asset to leverage. However, if this expertise is not readily available, it should be acquired early on in the project to ensure proper guidance and controls are in place. In either case, you will need someone with experience managing technical projects who can also help you anticipate and manage the effects of this

initiative on other parts of the organization, including end users, managers, and executives.

Tip #3—Use Change Management Appropriate for an Upgrade

During an upgrade, it is imperative to freeze metadata and system data in your production environment. With respect to the new release, ensure all relevant patches available are applied appropriately. Failure to effectively manage these different change management requirements can result in upgrade step failures and unexpected user acceptance test results.

Once you have addressed this consideration, you should proactively search for issues throughout your upgrade effort and schedule relevant updates until you reach a “go/no-go” milestone. At this point, you should enforce a content freeze to stabilize the environment. For information on relevant patches, periodically consult Siebel SupportWeb.

Tip #4—Build an Upgrade Team with Broad and Complementary Skills

Several different skill sets will be necessary to successfully upgrade your system. The following list details recommended roles that should be staffed within an upgrade project team. Note that a steering committee is critical to success. Creation of an active and interested steering committee is imperative because critical business decisions must be efficiently made and dealt with throughout the project. Furthermore, project failures are often traced to the lack of an effective governance body.

A typical upgrade team should include the following members:

- Steering committee
- Business owner of the application (such as the CFO)
- Application data owner
- Key user group representatives
- Dedicated project manager
- Technical functional lead
- Siebel administrator
- Database administrator
- Technical change management owner/release coordinator
- Operating system administrator(s)
- Testers—both technical and functional
- Technical upgrade architect(s) and specialist(s)
- Organizational change management/training lead

Tip #5—Utilize Peer and Oracle Resources

Most organizations sponsor upgrade projects infrequently, so it is important to leverage the experiences of others as much as possible.

Use these links to gather information from Oracle and interact with other users of Siebel CRM applications.

- Visit the Siebel Upgrade Web site
<https://ebusiness.siebel.com/supportweb/index.asp>

Tip #6—Decide When to Change or Add Business Processes

In most cases, there is functionality in the release being evaluated that will help your business improve processes and automate tasks. This can be a small enhancement to business processes you are already using, or larger changes such as the adoption of a new module. One critical decision for your upgrade project is whether you will implement the new functionality as part of the upgrade, or upgrade your current processes without change, and implement new functionality as a follow-on project.

Generally, implementing your current processes in a new system can be a way to mitigate risk in the upgrade project. However, your business realities may preclude this approach, especially if the updated processes native in the software can markedly improve operations. For example, the business may be driving to take advantage of new capabilities as quickly as possible, or it may be more appropriate to modify processes and engage in a coordinated training effort to increase user adoption of the new solution.

By carefully weighing the pros and cons of these approaches, you can choose the best strategy for your organization.

Tip #7—Plan for Upgrade Tuning and Determine Your Downtime Requirement

Another critical area that should be considered is the performance tuning of your new system. Tuning your production upgrade scripts can significantly reduce downtime during the final stages of your upgrade. Examples of upgrade tuning include eliminating SQL statements that do not affect any of your data, executing long-running SQL statements in parallel, and creating and altering tables in parallel. The Upgrade Tuner is available to clients for simple tuning, but for systems that require a minimal amount of downtime (such as hospitals, financial institutions, and telecommunications services), services to implement advanced tuning techniques are available from Oracle.

Take advantage of the expertise of an Oracle consultant who has experience tuning your new release to ensure you get the most from your infrastructure, even if you have the expertise to execute other areas of the project yourself.

Oracle rigorously tests each supported upgrade path for technical and functional accuracy and for optimized performance. The most productive performance

testing is completed on customer data. Whenever possible, Oracle's upgrade development experts perform detailed analysis on customer databases to tune the conversion code. To participate in the Customer Database program, contact your Oracle account manager.

Tip #8—Get Current Product and Upgrade Information

Make sure you are using available Oracle resources to help you gather current information for your project, and work with Oracle Support for critical case management throughout your conversion timeframe. Oracle has increased its focus on assembling assets to help customers with upgrades, and leveraging these resources will increase your ability to upgrade smoothly.

Oracle maintains several resources to ensure that you obtain the most relevant information for your upgrade initiative. Several outstanding resources can be located on publicly available Oracle systems. In addition, upon product general availability, the Siebel Upgrade Web site is a good starting point for all types of upgrade information.

Finally, make sure you get the most current documentation available. Oracle provides several types of documentation to help you navigate a successful upgrade project. These materials can be accessed from Siebel SupportWeb.

Tip #9—Escalate and Resolve Problems as Appropriate

Use Oracle Support if you believe application issues are being experienced. Train your first-line staff to log cases early and as completely as possible, providing the appropriate trace files and environment information, and highlighting business and technical milestone dates that will help in determining case prioritization. The Global Support Center staff and your Oracle account team can help in this area.

To ensure that your project progresses as smoothly as possible, Oracle encourages you to escalate Priority 1 (P1) issues as early as possible. These issues are typically on the critical path for your go live, and getting the right focus on their resolution early will give you the best chance of staying ahead of schedule. Depending on several factors—including your customization, issue complexity, and more—an escalated issue can take appreciable time to resolve with a fully tested solution, so the earlier the process is started, the better. P1 cases should always be logged via Siebel SupportWeb to ensure complete case detail, but the best practice is to follow up with a call to our help desk to ensure the most efficient follow-through.

Even when you encounter noncritical (non-P1) issues, it is recommended that you log cases through Siebel SupportWeb. Cases logged in this way are often resolved faster than calls to the Support Center. This is due, in part, to the details you can provide online:

- Detailed description of the issue in your own words
- Clearly articulated priority and sense of urgency

- Trace files, screen shots, log files, and other relevant information to help the analyst move quickly on your issue

Project Initiation Considerations

There are a number of things that you can do as your project begins—or even before it formally kicks off—that will ensure the project has a proper foundation and is well positioned for success.

Tip #10—Prepare the Organization

As you enter the initial stages of an upgrade project, engage the entire affected organization to help them prepare for the work ahead and the changes they will experience in their jobs. Obtain formal buy-in from the stakeholder organizations and kick off the project in a face-to-face meeting. Formality, visibility to upper management, and team building can be key aids to securing the cooperation and problem-solving help you will need as the project progresses.

These discussions should include both the business impact of the change and the associated change schedule. For example, secure agreement on all business blackout periods necessary for system changes.

In addition, efforts should be made to promote the upgrade benefits. Focus on building excitement through formal communications and informal dialogue. An upgrade will likely benefit the company and every end user!

Tip #11—Ensure the Quality of Your Data

One of the key steps in preparing for a successful upgrade is ensuring that your data is accurate and complete. You should have standard practices for handling duplicate records, verifying data integrity, and ensuring the overall health of your data. The time before an upgrade is an important time to review what practices are in place or need to be created to ensure that your data is relevant and reliable. For example, determine whether an archive policy needs to be in place, and refine the archive criteria and create an associated rollout plan for the current release. If such a plan is implemented prior to the upgrade, it could contribute to a lower-risk, more-efficient upgrade timeframe.

While not always a critical path item, ensuring high-quality data using these techniques will aid the effective completion of table conversions and will assist greatly in seamless operation of your Siebel solution after the upgrade is complete.

In like fashion, it's recommended that you complete a detailed review of your current reporting strategy prior to the upgrade. A clearly stated policy of reporting preference (for example, Web versus paper) with a goal toward report reduction or consolidation can improve the efficiency of your operations, promote cost reductions, and minimize report maintenance.

Tip #12—Inventory Your System

All configuration elements of your enterprise system should be inventoried and the current configuration items (versions) should be copied and stored for technical change management control.

Upgrading is analogous to moving; before starting, you have to make sure you identify where all your belongings are and that they are being handled appropriately. Early in your project, be diligent in gathering this information through composing and completing a preliminary upgrade questionnaire. During the upgrade assessment and planning, you should inventory your system as follows:

- UI (screens, views, and applets)
- Customizations, extensions, and modifications
- Localizations
- Workflow processes (Workflow Manager, Assignment Manager, Business Services, State Models, Activity Plans)
- Remote users
- Special Siebel modules (CTI, Complex Order Management, Product Configurator, Pricing Engines, others)
- Scripting
- Interfaces, APIs, and integrations
- Actuate reports
- Data models enhancements and custom tables
- Siebel Connectors
- Third-party products
- Hardware
- Software releases and patches, including operating system, database, and Siebel CRM applications
- Obsolete requirements

Tip #13—Adopt the Most Current Developmental Toolsets

Whenever possible, be sure to adopt the latest available Siebel toolsets. Siebel provides all the necessary upgrade tools in the Siebel database configuration GUI. Upgrading your Siebel Tools instances should be treated similarly to a standard upgrade project with appropriate planning and testing cycles.

Tip #14—Prepare a Go Live Checklist

Once you have completed the initial planning, you can create a checklist of criteria to guide the ultimate deployment of the upgraded solution. The planning activities

should allow you to develop a robust checklist to assess appropriate “go/no-go” decision points. Creating this checklist as soon as possible is a good way to organize project goals, validate your plan, and identify your success criteria before the pressure is on to complete the project. This list should be reviewed periodically before go live to ensure progress is sufficient to complete in time.

Tip #15—Understand and Mitigate Project Risks

Early in the project, a risk analysis should be undertaken to determine project risks such as resource contention, other projects going live at the same time, and so on. For risks that have a high probability of occurring and have a large impact, specific mitigation plans should be developed. These plans describe, in advance, what actions to take if the risk becomes a reality. The analysis and plans need to be reviewed on a regular basis throughout the project.

Look for key points of failure, especially in the area of resource loading for your technical and business specialists. If you lack bench strength in any particular areas, develop a plan to supplement and/or back up critical personnel.

Preparing Your Technical Environment

While many of the activities required for a successful upgrade project involve end users and net change for the applications, you must also manage the changes to your technical environment carefully.

Tip #16—Evaluate Your Architecture

There are several key technological decisions to make that will affect your project. Changing any part of the architecture increases the complexity of the upgrade project, and careful planning is required to determine when to make this change as well as account for the technical work required. If you are not planning on changing architecture (although it may be mandatory for you to change your architecture depending on the version of the applications you are on currently), it is important to clarify this throughout your organization and create consensus to minimize disruptions. You should plan to complete a full performance test prior to the go live date. This action will better allow your team to tune the system, getting all you can from your available resources and minimizing performance-related issues at go live.

It is imperative that these assessments be made early on to remove uncertainty and allow the project team to focus on other upgrade related details.

- **Platform:** Most upgrading customers choose to remain on their current hardware, operating system, and database architecture through the upgrade. However, many customers take advantage of the upgrade timeframe to upgrade hardware and transition to the latest support version of the operating system and other third-party software. If your requirements include considering a change in this area, it is vital that this decision be made early on as the platform often drives most, if not all, of the software utilized.

- **Middleware:** One of the key decisions is which middleware platform you will use. Siebel supports the IBM WebSphere products, Oracle Fusion Middleware, and many other middleware options. In choosing your middleware, be sure to understand the licensing requirements early to ensure that contractual issues will not become a barrier as the project moves forward.
- **Nonproduction Hardware:** It is important that all of your testing environments are adequate for handling the anticipated testing loads. Too often, we concern ourselves only with the production environment and assume that performance is not important in a test environment. Bad performance during critical phases of testing can not only provide users with a bad experience, but can also affect the upgrade schedule by hindering completion of testing and delaying system deployment.

Tip #17—Calculate New Hardware Sizing

Given the potential changes to your current system configuration, it is absolutely vital to get an accurate sizing for your new architecture. The combination of enhanced Siebel CRM product functionality, technological change, anticipated changes in the way you use the applications, deployment of additional users or server processes, and possible implementation of new modules could all impact sizing requirements for the upgraded solution.

Accurate sizing information will help you decide whether you can reuse current hardware, need to increase hardware resources, or should consider upgrading one or more of your servers. Similarly, sizing considerations are important whether or not you intend to upgrade in place (with potential reuse) or switch to a new hardware platform during the upgrade process. Performance and load testing can help determine if the hardware is adequate to support your production requirements.

Using production volumes and realistic user scenarios to assess the performance of the system on the current version versus the upgraded version will provide the project team critical information on hardware sizing, areas requiring tuning, and quantitative response times. Customers should seriously consider investing in a formal performance and benchmarking team to complete these tasks. In the upgrade scenario, the output from this team will be more accurate scalability and capacity requirements for the application versus a less structured, ad hoc approach.

Tip #18—Identify Custom Code and Scripting

Any custom code integrated with the Siebel CRM software may be impacted during an upgrade. It is important to not only identify any custom code but also track the progress of any retrofit efforts during the project. You need to identify the code, who owns the code, and its status. To support this analysis, when planning your Siebel upgrade, run Technical Note 481 to examine the current

Siebel scripts in the repository and determine which objects and methods will become obsolete in a new release. Script Checker assesses the current repository at once and can identify obsolete objects existing in server scripts and browser scripts.

All interfaces, form customizations, and customized reports will require extensive testing to ensure that they have not been affected by changes to tables or APIs in the upgraded software. Custom responsibilities and menus must be reviewed and potentially updated as well. In some cases, customizations can be removed following an upgrade if new features and functionality satisfy the business requirements previously met with the custom code.

Tip #19—Defragment and Reorganize Your Database

From a general database perspective, there are a few actions that can be completed to assist the upgrade project. To optimize the efficiency of the system as you upgrade, you should defragment and reorganize the database to the largest extent possible beforehand. Your database administrator should be able to use current database management tools to accomplish this goal.

Plan for database maintenance during and after the upgrade. This consideration is critical for larger implementations to address issues such as chaining, fragmentation, statistics, and index rebuilds. Database maintenance is frequently overlooked, but is vital to a successful upgrade.

Tip #20—Study and Adhere to Current Minimum Technical Requirements

A critical step in ensuring success is adhering to the technical requirements for your system. This applies to the release currently in production as well as the release to which you are moving. Make sure that you review these requirements early in the project to ensure that you have the right components and understand any updates or changes and how they will affect your upgrade plan.

Current information on minimum technical requirements can be located on Siebel SupportWeb.

Tip #21—Follow the Specific Platform Recommendations

Refer to Siebel SupportWeb for details. The document *Siebel 8_0_Reqs_Platform_* explains in detail the specific requirements and supported platforms for the target Siebel version. This document can be found at <https://ebusiness.siebel.com/supportweb/index.asp>

Tip #22—Inventory the Number of Siebel Remote Users and Siebel Replicated Nodes

A critical step to ensure that disconnected user data from the field is not lost is to identify all those users who take advantage of Siebel Remote. These users need to check in their data and be upgraded as well. Siebel Remote users have a scaled-down installation of the software on their laptops and an image of the data that they independently manage. To ensure data is not lost, these changes must be

checked in and applied to the HQ database PRIOR to upgrading. If this step is not completed, these changes, as well as the repositories and schemas, will be out of sync and the data will be lost.

Depending on the number of users, it can require a great deal of effort for remote users (such as sales reps) to check in their data and re-image their laptops with the new Siebel version. As a best practice, all remote users should be requalified, especially those being brought forward from Siebel 6.x and earlier releases.

In terms of Siebel replication, a similar process to Siebel Remote needs to be taken into consideration. In a nutshell, the process involves checking in all the changes from the replicated nodes, upgrading the HQ system, upgrading the replicated node, re-extracting the replicated node, applying the new extract, and then starting operations on the replicated node. Depending on the size of the database this can, again, be a substantial undertaking.

In sum, make sure that all Siebel Remote and replicated nodes check in their changes PRIOR to upgrading.

Installing Your New Release

Installing the new solution properly is a critical component of the upgrade process.

Tip #23—Verify Your Installation

After installing the new Siebel solution, you should complete an inventory check to confirm that all components were installed correctly and are behaving properly. Details on the installation process can be obtained on Siebel SupportWeb, and install documentation should be explicitly followed to minimize potential issues. Once all aspects of the installation are confirmed, the process can continue.

Tip #24—Get Code Current

In addition to the basic installation steps, it is critical to get “gold code current” in the new environment before you invest in the testing, configuration, and validation associated with going live. This process requires the most current aggregate fixes to be applied, such as updates and tools releases. Whether or not you install these fixes to the system early in the project is a significant predictor of project success. The best-run and most successful projects do this right after installation of the new application version.

Upgrading Your Data

Once the system is installed, you should turn your attention to data considerations. This step is a critical one in your upgrade success, and often the most time-sensitive.

Tip #25—Identify Data Migration Tasks

After the upgrade, there may be data migration and repository configuration tasks that must be performed manually. These tasks frequently involve customizations made in prior releases. For example, if you have created custom indexes that are used on interface tables, these items are dropped and not recreated during the upgrade process.

After completing a development environment upgrade or any necessary reconfiguration and unit testing, you must migrate the configuration changes and certain types of data and files from the development environment to your test or production environment. Identify and catalogue these needs early in the process to ensure that the upgrade effort is not compromised.

Tip #26—Minimize Application Data to Upgrade

There are several steps to take to prepare your application data for the conversion. The first step is to minimize the amount of data you need to upgrade. If you have a defined archiving and purge strategy for your data, be sure to apply it before the upgrade. If a defined data strategy does not exist in your organization, strongly consider implementing one.

Another important step is to run and review application integrity reports. These reports help you ensure that data is complete and accurate and helps to prevent issues when processing data through the conversion (see “Ensure the Quality of Your Data” above).

Tip #27—Test with a Representative Subset of Production Data

Converting your data accurately and efficiently depends on the quality and makeup of the data itself. Working with a current representative subset of your production data will give you valuable information about how the testing process should be structured as well as how long it will take to complete. Typically, your first conversion will be the longest and the most difficult.

When performing the development upgrade, it is important to leverage a representative subset of production data instead of an exact copy; this is because the development environment usually has less capacity in both memory and hard drive space than the test and production environments. Limiting the size of the conversion files during the development upgrade will better ensure that the processes will complete in a timely manner. Once the development database has been completed, the production test upgrade can be used to support any possible sizing reviews needed to increase performance during the actual production upgrade process.

Tip #28—Complete Parallel Batch Testing Between a Copy of the Old System and an Upgraded Second Copy

Testing investments can be reduced by making two copies of the production database and then upgrading one. Data can then be staged either through limited data entry or through batch input. Batch processes can then be run both in the old and new copies and the data/results analyzed either through query or production reports. The results can be compared electronically using compare utilities.

Tip #29—Leverage Existing Test Scripts and Plans

To prepare test scripts for use during the testing cycles, begin with the test scripts utilized during the original implementation and augment these to include testing of the new features and functionality. Also consider any modifications needed for process flow changes related to the upgrade.

If these materials do not exist from the original implementation or previous upgrade, create them and store them in a library. This material can save significant time in preparing for upgrade testing.

Tip #30—Choose a Minimum Number of Test Conversions

An effective testing cycle will involve a minimum number of testing runs. Successful upgrade projects test the data conversion multiple times. Depending on the complexity, volume, and success of the process, you might need to practice fewer than five 5 times or more than 20. This practice instills confidence in the accuracy of the final conversion timeframe. Testing after your first successful conversion will help you prove repeatability in the process.

Tip #31—Turn off Database Triggers

If your system has any database triggers, you should typically disable these while the data is being upgraded. It is important to understand the purpose of these triggers and make a decision about whether they can all be disabled. In some cases, it is possible to do the conversion with the triggers on, although this may slow processing.

Tip #32—Perform Index Management

There are two main considerations regarding indices for accelerating your conversion.

- First, ensure that the indices that are used by specific conversions, including table conversions, are present during the upgrade process. If you have not deleted any indices on your system, they will be present by default.
- Second, there are some situations where you may want to limit the amount of indices available during a process. This is an advanced consideration, and

most customers will not need to weigh this factor. However, in a complex upgrade, particularly if you are also changing platforms and converting to Unicode, you should consider whether it could help your project.

Training

While many of your team's existing skills will serve you well in your upgrade project, it is extremely important to provide training on the new features, business processes, and other changes, to help your staff become more efficient and effective with the new version.

Tip #33—Train End Users on the New Solution

When you first implement the system, your end users must be trained from the ground up to use the new application solution. However, during your upgrade, you will likely have experienced users who are already familiar with the basics. This fact can both assist and impede your upgrade project effort. Your end users, most importantly those who will be testing the system, must have good information about how the resulting solution will be different—that is, whether the changes are functional, technical, or interface-related in nature. These considerations will prevent issues from being reported that result from misunderstandings, and better position overall acceptance of the new solution.

Applicable training can be located on the Oracle University Web site; additionally, information on training offerings and available Webcasts can be found on Siebel SupportWeb.

Tip #34—Get Specific Technical Training

The project team and support team must be proficient in the new technologies introduced in the latest release. Team members must also understand the new architecture and performance best practices. An assessment is recommended to reconcile the skills needed to support the development and maintenance of the new release. This consideration is especially critical for a successful upgrade initiative.

Applicable training can be located on the Oracle University Web site; additionally, information on training offerings and available Webcasts can be found on Siebel SupportWeb.

Tip #35—Optimize Training Processes

One of the best ways to reduce the number of issues you have to track, research, and resolve is to train your users at an optimal time in the upgrade process. Although many of the core functional and administrative business processes are similar between releases, training will give your users the information they need to distinguish true issues from intended changes. For this reason, the timing of this functional training is important. While you may want key users to be trained early

on to give input to the project and assess impact, most users prefer to be trained closer to going live on the new system so they don't have to remember what they have learned over a long period of time without being able to apply this knowledge.

Post-Upgrade Activities

Once the core technical upgrade has been completed, there are several additional steps to ensure success.

Tip #36—Secure Functional User Buy-In

Functional validation of the system is a key task. Most projects use functional users, away from their main responsibilities, to accomplish this objective.

Though it may be self-evident, if you have functional users complete testing, they must see the value of the process and share the project goals to complete the task effectively. Typically, these resources are setting aside important tasks to participate in the upgrade initiative, so take the time to solicit both management and individual cooperation. Once this cooperation is achieved, ensure you are collectively allocating enough time to complete a thorough testing cycle.

Tip #37—Testing Scope

A comprehensive testing effort is one of the key steps to finishing the upgrade and going live on the new release. As such, it is important that you consider the testing element of the upgrade as a major software update. Typically, a full, integrated test is performed that includes user acceptance and performance testing, and exercises all the business processes the organization will use. This testing regimen must be detailed in priority, importance, and length of execution. You may choose to use automated testing tools; in most cases, this automated approach should be augmented with human testing as well.

Tip #38—Deciding to Go Live

Ultimately, the decision to start running the business on the new solution must be made internally, and taken seriously. As you approach the milestone of a new Siebel CRM solution, make sure that the team has enough information to enable a defensible “go” or “no go” decision to be made. The go live checklist created earlier in the upgrade process should be leveraged to verify that the success criteria have been achieved during the project.

Make sure that all affected groups from both business and IT are represented in this decision. If you have a formal steering committee, this will be the appropriate decision-making body. If for some reason there is no steering Committee, call a meeting for this purpose, gathering input from the stakeholders ahead of time and fostering the communication that will allow for an informed and broadly supported decision.

Similarly, a plan should be in place to allow a “roll back” to prior systems if critical stage gates are not achieved.

UPGRADE TOOLS

Siebel offers upgrade tools and utilities to assist in the patching, release management, and upgrade process. Table 3 provides an overview of these tools.

Keep in mind that you should reside on the most current Siebel Tools version and/or patch that is certified for your current application release. This will allow you to utilize the new and improved set of technical features that are available and be better prepared to resolve issues before they affect your Siebel CRM installation. Upgrading your Siebel Tools should be treated similarly to an upgrade project in that it should involve planning and testing cycles. Proper management of these factors will ensure that your environments are upgraded at optimal times and with the least amount of interruption.

TABLE 3—Upgrade Utilities

ENTERPRISE APPLICATION TOOLS	SIEBEL-SPECIFIC AREAS
Siebel Tools	Siebel’s integrated development environment used to configure and extend the Siebel application
Environment Verification Tool	Used to verify that the server running Siebel software is configured correctly and complies with the Siebel system requirements and supported platforms for the given version.
Database Upgrade Wizard	<ul style="list-style-type: none"> ▪ Automatically migrates customers’ current data ▪ Performs schema/data upgrade, repository import and preparation, and seed data import ▪ Wizard interface enables data upgrade to be less error-prone, restartable, and customized for your upgrade path and database platform
Database Upgrade Tuner	<ul style="list-style-type: none"> ▪ Parallelizes table creation and index creation ▪ Deactivates certain zero-row SQL statements
ICL (Incorporate Custom Layout)	<ul style="list-style-type: none"> ▪ Incorporate Custom Layout (ICL) <ul style="list-style-type: none"> ▪ Applies only to 7.x to 7.8 upgrades. ▪ Why do we need ICL? <ul style="list-style-type: none"> ▪ Traditional merge process mangles customers’ UI ▪ Traditional merge requires significant reconfiguration effort after upgrade ▪ Customers have expressed their preference to

	<p>preserve their current UI</p> <ul style="list-style-type: none"> ▪ Benefits <ul style="list-style-type: none"> ▪ Intent is to significantly reduce the reconfiguration effort caused by the upgrade ▪ Reduce the impact on end users—UI is similar to current ▪ Available for every other upgrade
Script Checker Utility	<ul style="list-style-type: none"> ▪ Facilitates migration of scripts ▪ Outputs all scripts in the repository to text or HTML ▪ Produces a summary report on each script and identifies items for review (MsgBox, Obsolete Methods, etc.)
Application Deployment Manager	Automated runtime migration of application customizations to staging or production environments
Log Parse Utility	Produces a summary for all processes and displays process name, description, time, input parameters, errors/summary, and performance info for SQL and DDL.

ORACLE FUSION

The transition to the next generation of applications is a journey. It is a worthwhile journey that you should undertake if and when your business needs warrant it. The course for this journey has been set, it can be started today, and it involves deeper delivery of the benefits in three key focus areas: better business insight, adaptive business processes, and superior ownership experience. Oracle's investments are focused in these areas, and all future releases of our applications will raise the bar in all areas. In our discussions, the preponderance of feedback from business managers and users of enterprise software falls into these three categories.

As such, our investments in these three areas have resulted in substantial benefits with the delivery of our major release, Siebel CRM 8.0, in 2007. Beyond this major release and future Siebel CRM application releases delivered under the Applications Unlimited commitment, the final step to a single, convergent, next-generation applications product line will embody the results of our design decisions and unwavering focus in these areas. The convergent product line will embed business intelligence closer to the heart of the system, so that users can attain better business insight that is presented in the context of a workflow for decision-making. Oracle's investment in a service-oriented architecture, done right, with appropriate degrees of flexibility in how processes are configured, will eliminate the proverbial business/IT divide. Our holistic approach to reducing your total cost of ownership assures you that we are improving every aspect of your experience with

our software—installation, patching, upgrading, maintenance, and end-user productivity.

ADDITIONAL RESOURCES

The following collateral resources provide further information on upgrading your Siebel CRM applications:

- Siebel SupportWeb. This is the Siebel technical support Web site. It provides search-engine access to the Siebel Bookshelf, Technical Notes, Siebel Alerts, troubleshooting information, and other important information. Siebel SupportWeb is located at <http://ebusiness.siebel.com/supportweb/>
- System Requirements and Supported Platforms on Siebel SupportWeb. This document is the definitive list of system requirements and supported third-party products. It is located on Siebel SupportWeb at Product Documentation > System Requirements and Supported Platforms & Miscellaneous Documentation.
- Publications found on Siebel Bookshelf (located on SupportWeb at Product Documentation > Bookshelf):
 - Siebel Database Upgrade Guide (i.e.; Siebel Upgrade Guide)
 - Siebel Deployment Documentation Suite:
 - Deployment Planning Guide
 - Siebel Installation Guide for Microsoft Windows: Servers, Mobile Web Clients, Tools
 - Monitoring and Diagnostics Guide for Siebel eBusiness Applications
 - Going Live with Siebel eBusiness Applications for information about how to migrate customizations from the development environment to the production environment
 - Siebel System Administration Guide for details on how to administer, maintain, and expand your Siebel servers
 - Security Guide for Siebel eBusiness Applications
 - Performance Tuning Guide
 - Configuring Siebel eBusiness Applications
- Release notes. Release notes contain late-breaking information that the Upgrade Guide does not yet contain. Release notes regarding upgrade are located on Siebel SupportWeb at Product Documentation > Release Notes > Siebel eBusiness, Industry, Midmarket Edition, and CRM Applications Version 7.8 and later > Categories > General > Upgrade.
- Maintenance release guides. Maintenance release guides contains important information about updates to applications in maintenance releases.

Maintenance release guides are located on SupportWeb at Product Documentation > Maintenance Release Guides.

- Technical notes provide important information on specific upgrade issues. Technical notes related to upgrade are located on Siebel SupportWeb at Technical Notes > Upgrade.
- Siebel Alerts provide time-critical information on key product behaviors and issues. Siebel Alerts about upgrade issues are located on Siebel SupportWeb at Siebel Alerts > Product Areas > Upgrade. ***Siebel Alert 1179*** lists Technical Notes and other resources that pertain to upgrades.
- Troubleshooting steps contain information about how to troubleshoot common error messages and unwanted behavior in Siebel applications. Troubleshooting steps for “upgrade list error messages” is found in upgrade logs and how to resolve them. Troubleshooting steps are located on Siebel SupportWeb at Troubleshooting Steps > Product Areas > Upgrade.

CONCLUSION

As part of Oracle’s commitment to Applications Unlimited, Siebel CRM applications continue to evolve, offering greater value and providing new advantages for your business. Upgrading Oracle’s Siebel CRM applications is key to realizing the maximum return on your Oracle investment.

Each organization must evaluate the costs, risks, and rewards of an upgrade in the same way it would evaluate a new business proposal. This Oracle Consulting white paper outlines best practices tips to enhance your upgrade project’s success and value to your organization.

Oracle Consulting is ready to help you analyze, plan, and execute a Siebel application upgrade, in a lead or supporting role, as your organization desires. Tight integration across Consulting, Development, Support, Education, and Global Delivery puts the entire Oracle team behind your success. To learn more, contact your local Oracle Consulting representative at +1.800.633.0615, or visit oracle.com/consulting.



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