and measure the project's progress and completion of deliverables against the *Project Management Plan*. As deviations from the *Project Management Plan* are detected, corrective actions are recommended to bring the project back into alignment.

Project managers regularly capture metrics that identify variances from the project baseline. While monitoring and controlling the project, variances in activity durations, resource availability or productivity, or unanticipated risks may be discovered. This could trigger change requests that may require re-planning and changes to the project management plan. The key benefit of regularly observing and measuring project performance is to identify variances from the Project Management Plan as early as possible. The project manager controls changes and coordinates an effort to define corrective actions in anticipation of possible problems. If significant variances are discovered, adjustments are made to the Project Management Plan. Not all variances require a change to the plan, but these variances should be reviewed to determine if and when corrective action is necessary.

Monitoring and Controlling activities include collecting, measuring, and distributing performance reports, and assessing measurements and trends to effect process improvements. This process addresses the following activities:

- Monitor and Control Project Risks, Action Items, Issues, and Decisions (RAID)
- Monitoring and Controlling Changes
- Monitoring and Controlling Quality
- Reporting Project Performance Metrics

All of this information is captured in a single *Project Log* spreadsheet with tabs for risks, action items, issues and decisions which enables the project manager to manage these items. . . .

Monitoring and Controlling Project Risks, Action Items, Issues and Decisions (RAID)

Project Managers are responsible for monitoring and controlling risks, managing action items, tracking issues, and documenting major decisions through the life of the project.

Risks

Risks are identified, analyzed and prioritized and responses are developed during the planning process using the *Risk Management Plan*. Risks can also be identified as "acceptable" or "unacceptable". Often an "acceptable" risk can be seen as an opportunity. Risks that are identified as high probability and/or a high impact have a risk response plan. If an identified risk does occur, the response in the *Risk Management Plan* is implemented. The project manager communicates to the stakeholders that a risk has arisen and then describes the planned approach to address the risk. As the response is applied, the stakeholders are kept informed of the impact to the project and any changes that may arise due to the risk.

Project managers continually look for risks that have potential to impact the project. A risk response can be prepared so the project manager can react appropriately and efficiently to a risk once it occurs. There is always a possibility of risks occurring that were not documented during planning. If this happens, project managers identify, quantify, and respond to the risk. The risk tab in the *Project Log* can be used as a risk register to track and monitor project risks, update risk information, and recommend corrective action, as needed. Project managers should periodically conducting risk reviews with the project team to review all of the documented project risks.

During the review, they determine if all of the identified risks are still present or if new ones have occurred.

Action Items

Action items are unplanned work or tasks to be completed by a certain date, often discovered during meetings. They are prioritized, assigned, and managed for completion. Action items are documented activities, events, or tasks that are typically addressed by a single person. Project managers know action items are an important method to get work accomplished. Successful projects have practices and controls around managing and completing work associated with action items. The best way to manage action items is to record them in an action item log in the Project Log. Project angers manage the action item log so actions can be maintained by those responsible for resolution.

Issues

Project managers document issues as they arise throughout the life of a project. Issues can be anything that may negatively affect the project in meeting its goals. They are usually something that cannot easily be resolved and typically arise unexpectedly. An issues log in the Project Log offers a mechanism to record and address unanticipated issues.

The concept of an issue having one owner is important to effectively manage issues. The owner is someone within the project team who is responsible for ensuring the issue is resolved. All members of the team should be encouraged to log issues as soon as they arise. Generally, ownership should be at the proper level at which the issue could possibly be resolved. The project manager can assign the issue to someone as a work package with its own time and cost tolerances. The sooner an issue is logged and addressed, the more likely it will be resolved without having a major impact on the project. An escalation procedure can be determined in the event that a solution cannot be resolved within the time and cost tolerances by the initial owner.

Decisions

Throughout a project, many decisions, large and small, are made. Project managers are responsible for capturing and sharing decisions that impact the project. The *Project Log* is used to manage important decisions which should always be documented. Who, what, where, when, and why major decisions are made are recorded and are reviewed at a later date. These records become paramount during post project reviews. Examples of decisions include:

- Executive decisions on project direction
- Changes to stakeholder expectations
- Goal / strategy decisions
- Priority changes
- Go / No-Go decisions

Monitoring and Controlling Changes

Project managers use the change section in the *Project Log* to monitor and control changes in the project in accordance with the *Change Management Plan*. They monitor the implementation of approved changes and control changes by executing the process to document, analyze for

impact, and approve or deny changes. A straightforward change process will encourage team members, customers and stakeholders to follow the process instead of circumventing it.
Changes can come from many sources, and are a normal and necessary part of project management. These changes can impact project scope, time management, cost management, quality management, human resource management, communications management, risk management, and procurement management. They are both inevitable and valid during the life of a project. Often details are not known when planning a project. As unknowns become clear, changes to the project follow. Successfully managing changes is not avoiding or preventing them, but to actively monitor and document change. Integrated Change Control is further discussed in the Change Management Plan of the EPMM Process Guide.

For small projects it may be sufficient for the project manager and sponsor to review all change requests and determine if they should or should not be implemented. On larger projects it is recommended to have a change review team that reviews and decides on the approval or denial of change requests. The review team has the following options when presented with a change:

- Reject the change and provide an explanation for rejection
- Accept the change as presented
- Accept the change with revisions and provide an explanation for this action

Changes in a project do not always necessitate a change to the baseline. Changes to the baseline are significant events and should not be made without consideration of their impact. Baseline changes are made to reflect changes in project scope, not just to reflect when a project is behind schedule. A variance does not always justify a baseline change and indicates that the initial plan was not accurate. All changes to the baseline should be facilitated through the change control process. As changes are approved, the work plan is updated and the change is implemented as part of the execution of the project. Whenever a change is not approved, documentation should adequately describe the reasons for the denial. Whether through the project manager, sponsor, or change review team, a summary of all change activities should be included in the status report.

Monitoring and Controlling Quality

Project managers use the control section in the *Project Log* to monitor and control quality in accordance with the *Quality Management Plan*. Monitoring and controlling is performed throughout the life of the project. The quality process is the execution of quality activities to assess and recommend necessary changes. On some projects, organizations have an independent quality assurance group to assist with these activities. The goal of quality control is to identify and document causes of poor process or product quality and act to eliminate the root cause.

Performing quality assurance is prevention-oriented and includes the planned and systematic activities to provide confidence that the project will satisfy relevant quality standards. Performing quality control involves monitoring specific project results to determine if they meet quality standards and identifying ways to eliminate causes of unsatisfactory results. Project results can include both product deliverables and project management results such as cost and schedule performance. The primary purpose is to prevent from producing a poor quality product or service. This can be accomplished by keeping errors out of the process (prevention) and keeping errors out of the hands of the customers (inspection). Monitoring quality against

tolerances (the result is acceptable if it falls within the range) and control limits (the process is in control if the result falls within the control limits) help to achieve a successful project.

Reporting Project Performance Metrics

Project managers are responsible for monitoring and controlling the project and reporting project performance. Performance reporting is a communication process that informs the team, sponsor, and other key stakeholders about the current state of the project as measured against the project's schedule, scope, and cost baselines as well as the quality standards. These performance metrics are collected over time and can be used to report trends. This allows current performance to be monitored for improvement and help predict future project performance based on the history of key metrics. Performance reporting helps the project team know where they may need to focus attention and where to apply corrective actions in the current situation and preventative actions for the future.

Monitoring project performance is comparing actual results to the baseline to determine variance. Once variances occur, the project manager needs to respond by analyzing and communicating what has occurred. Variances are commonly displayed using project dashboards. Dashboards provide a visual status of the project's health through the use of the green, yellow and red symbols for the key project indicators (schedule, scope, cost, and quality).

Schedule

Controlling the schedule is monitoring project progress through time, and when necessary, managing changes to the baseline schedule. When monitoring the project progress, it is important to determine the current status of the project's tasks to ensure the work plan schedule accurately reflects the current condition of the project. Any factors that may influence or impact the schedule dates for these tasks must be understood. Project managers coordinate each schedule change and take action to bring variances back in line with the schedule baseline.

A schedule baseline is the approved, fixed project schedule used to measure project progress. Any project changes may invalidate the current schedule and necessitate a new baseline schedule. A project's schedule can be affected by any number of items including changes in resources, funding, vendors, or project reprioritization. The project manager's ability to adapt to change, manage the project schedule and deliver on time is important for a project's success, especially from a stakeholder's point of view. When schedule problems are discovered, they must be investigated and the root cause uncovered as soon as possible. Schedule problems can be exposed using tools such as Critical Path Analysis and PERT charts. An example is critical path tasks that fall behind schedule. Once a schedule problem is discovered, the project manager should consider creating a plan to correct the problem in the shortest allowable time with the least impact.

The project schedule is controlled by the project manager and it is their responsibility to report schedule variances to all project stakeholders. Stakeholders must be aware of problems with the schedule, their impact on the project, and what is being done to address the root causes. Project managers' report to stakeholders schedule performance metrics in terms of variances in planned versus revised schedule as they occur. Schedule status can be summarized using the following indicators:

- Green - Key milestones are on schedule
- Yellow - Key milestone has been missed but schedule contingency exists

- Red - Key milestone has been missed and no schedule contingency exists

Scope

Controlling scope is the process of monitoring changes to project requirements that may increase or decrease the project's scope beyond what was originally planned. When monitoring the project scope, it is important to determine the current status of the project's tasks to ensure the planned work accurately reflects the current condition of the project. Any factors that may influence or impact the scope for these tasks must be understood. Project managers manage the scope baseline and take action with scope changes.

A scope baseline is represented by a fixed set of requirements that are used to define what will be delivered. Any change in requirements may change the current scope baseline and may necessitate a new one. Increased scope is sometimes known as "scope creep". It may affect the number of resources needed for the project, schedule, and cost. Scope change requests can be introduced by any stakeholder involved with the project and generally represents a perceived need for a change to a product feature, a project deliverable, or some other requirement. The change process should be managed as change requests occur. Scope, and the changes made to the scope, is regularly revisited and verified by the project manager, project team, and stakeholders to ensure the product and deliverables satisfy the goals of the project. The Change Management Plan should include a formal process for the key stakeholders to formally review and accept or reject project scope changes.

Project scope is controlled by the Project Manager and it is their responsibility to report scope changes to all project stakeholders. Stakeholders must be aware of scope changes, their impact on the project, and what is being done to address them. Project managers report the scope performance metrics in terms of variances in planned versus revised scope to stakeholders as they occur. Scope status can be summarized using the following indicators:

- Green - Project Scope is being delivered, features and functionality is built as designed
- Yellow - Project Scope is being delivered and scope changes have been introduced. Impact of scope changes are unknown
- Red - Project Scope is being delivered and scope changes have been introduced. Scope changes will negatively impact project budget and/or schedule - scope changes are not approved

Cost

Controlling cost is the process of monitoring project expenditures through time, and when necessary, managing changes to the budget. When monitoring the project expenditures, it is important to know what total current costs are and anticipated expenses over time. Any factors that may influence or impact the cost for the project must be understood. Project managers are responsible for managing changes to the budget.

A cost baseline is the approved budget or funds set aside to address all project costs. Any changes in planned spend may change the current budget and may necessitate a new one. Budget updates are changes to an approved budget and are normally done in response to a change in project scope. Budget updates may also be required if cost variances become so great, that the current plan no longer provides realistic expectations for the delivered product to meet the goals and objectives of the project.

Activities related to cost control include influencing the factors that create change to the cost baseline, verifying that cost expenditures are within the limits of the authorized funding, preventing unapproved changes from being implemented, and acting to bring cost overruns within acceptable limits. Project managers report the following is reported stakeholders:

- Cost performance is reported on a consistent and regular basis. As cost changes are identified, project managers take corrective actions and inform stakeholders. Both positive and negative variances between the planned budget and actual costs require explanations.
- Cost performance metrics are reported in terms of variances in planned versus actual costs.
- Cost status can be summarized using the following indicators:
  - Green - Project spend is within 10% of planned costs
  - Yellow - Project spend is greater than 10% of planned costs and additional funding is available in the project's budget contingency fund
  - Red - Project spend is greater than 10% of planned costs and no funding is available in the project's budget contingency fund

Quality

Controlling quality is the process of monitoring quality and the continual checking for the correctness of work. Controlling quality looks at specific measurements to see if the project and processes are in control. Project managers monitor and control quality and take action to resolve the cause of unsatisfactory quality performance.

Quality performance metrics are operational definitions that describe, in specific terms, a project or product attribute and how the quality control process will measure it. Measurements are actual values, tolerance levels and allowable variations on a quality performance metric. Examples of quality performance metrics are: staying within approved tolerances on defect frequency, failure rate, availability, reliability, and test results.

Project managers are responsible for reporting quality performance metrics. Stakeholders must be aware of quality issues, their impact on the project, and what is being done to address them. Project Managers can report the quality performance metrics to stakeholders using the following indicators:

- Green - Product quality is within approved tolerances
- Yellow - Product quality has exceeded approved tolerances, contingency exists
- Red - Product quality has exceeded approved tolerances, no contingency exists

Closing

The Closing process consists of processes and activities performed to close a project. Project managers are responsible to close the project by verifying the project has met the needs of the sponsoring business and all deliverables have been accepted and approved. Also included in this process is the transition of resources off the project, the finalization and sharing of project information, and the close out of any procurement efforts. Project managers use a *Project Closeout Checklist* to assist them in closing a project. Activities in the closing process can be categorized as organizational, contractual, and administrative.

Organizational

Organizational project closing activities include the project manager soliciting customer feedback on the success or failure of the project. This can be accomplished using a customer satisfaction survey or other similar methods. Gauging customer satisfaction is one way to measure the success of a project. If customer satisfaction ratings on projects are high, or are improving, it is a good indication that the project is successful. In contrast, if customer satisfaction ratings are low, or dropping, it is an indication that the project is not successful. This could indicate a need to review the processes followed in the project and look for areas to improve.

The transfer of project knowledge is an important organizational project closing activity. Project managers should conduct a "lessons learned" session to transfer project knowledge. . The use of "lessons learned" helps prevent future project teams from making the same mistakes as preceding project teams and also establishes a framework for success in future projects. Problems encountered throughout the project can be documented and prioritized, allowing for a focus on the top problems and issues. Sessions can address the following questions:

- Did the delivered products meet the requirements and goals of the project?
- Are the sponsor and business areas satisfied with the end products?
- Were schedule and cost budgets met?
- Were risks identified and mitigated?
- What were the successes?
- What improvements could have helped the project?

Another organizational project closing activity is the release of resources that supported the project. This includes any staff, facilities, equipment, and systems used during the project. If personnel have been assigned to the project and the project is nearing its end, it is important to return the resources back into the available resource pool. This can help ensure that other projects do not fall short of resources. If the project team has occupied temporary project facilities for a period of time, it is important to notify the controlling facilities administration that the space may be no longer needed. The same applies to equipment and systems.

Contractual

As part of the closing process, contracts applicable to the project need to be discontinued or closed. The Procurement Management Plan may include a description for the activities to close out any contracted effort. Project managers work with Procurement to satisfy those activities. Contract closure is the process of concluding contracts with participating vendors. These contracts may be vehicles for providing technical support, consulting, or any number of services supplied during the project. Contracts can be brought to closure for variety of reasons, including contract completion, early termination, or failure to perform.

Other closing contract activities can include the verification that all deliverables were acceptable, the resolution of open items, the reconciliation of any changes to the contract, and the collection of any supporting documentation. The contract terms and conditions may also provide direction for contract closure that must be a part of this closeout procedure. Project managers must understand any processes that may be unique to administering and closing contracts such as retaining payments.

Administrative

Administrative closure includes the activities affecting the disposition of all project documentation. Project managers are responsible for the finalization and collection of all project documents. During the project, documentation is typically held in a single place or repository. Once the project is complete, all the project documentation should be archived or disseminated for future reference. Any archived documentation should be stored according to the program area's records management retention guidelines within the agency. The project archive should include an inventory sheet and description of the files being submitted and a point of contact for the archived data.

The sponsoring business or organization owns the documentation on the delivered product, which may include technical documents such as design documents, installation procedures, and user manuals. This documentation is usually turned over to operations and maintenance organizations that will support the product. Documentation should be stored electronically for historical reference to facilitate later review.

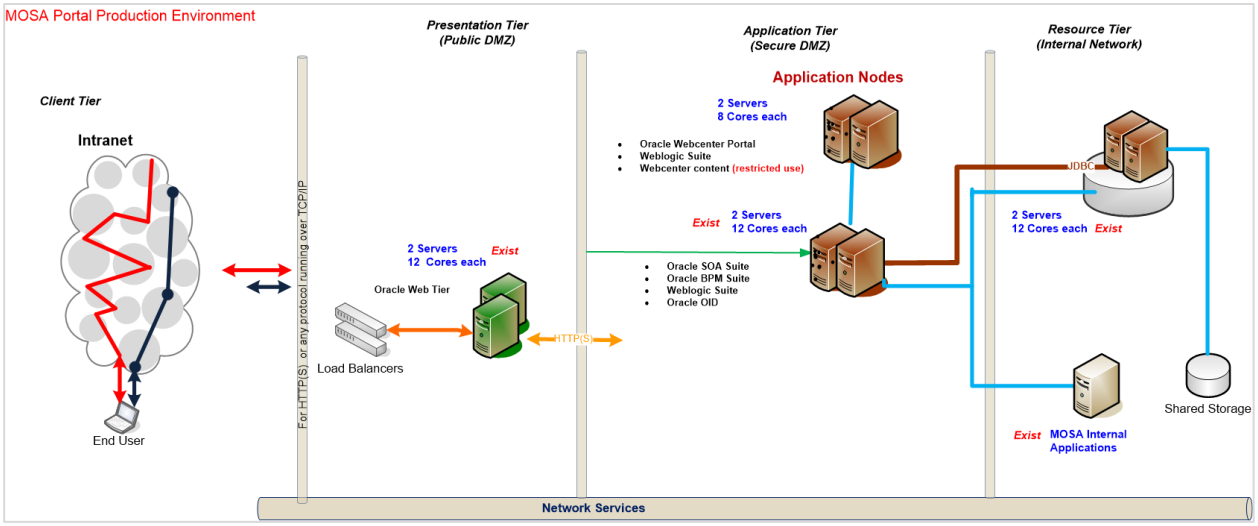
Project Closeout Checklist

Project Managers use a *Project Closeout Checklist* to assist in closing a project. The checklist serves as both a communication document and a trigger for completion of tasks that a project team may overlook. The checklist is a best practices combination of an actions and tools to ensure project completion. The *Project Closeout Checklist* includes:

- Assess and summarize planned versus actual for schedule, cost, and scope
- Document the successes and issues of the project
- Verify acceptance of final project deliverables
- Survey the customer for satisfaction
- Conduct lessons learned
- Recognize and celebrate outstanding project work
- Release project resources, including staff, facilities, and equipment
- Complete and archive final documentation
- Ensure transfer of knowledge
- Document any contributing information for team employee performance reviews
- If applicable, review the Contractor Responsibility Program (CRP) process with a sponsoring agency representative

Solution Requirements

Solution Architecture – Production Environment



Solution Architecture diagram –Production Environment

For more than 30 years Oracle has delivered world record performance and scalability. Oracle continues this trend with:

- Highest performance on all popular platforms
- Scale up and scale out with pools of shared resources in a grid infrastructure
- Record breaking industry standard benchmarks

Accordingly our Architecture Based on Oracle Technology and standards is highly available, reliable, robust & secure. Also it allows scaling horizontally or vertically.

Here after the Solution Arch. Components & description recommended for the **Production Environment:**

In the Resource Tier (P1) we will have HW farm of 2 servers 12 cores each.
These are two high available nodes server farm (12 cores each) clustered (Active/Active mode)with shared disk storage or storage network like SAN.

Both nodes should host & run and run Instances of the following:

- Oracle DB Ent Edition
- Oracle Real Application Clusters (RAC) for Active/Active & transparent application fails-Over
- Diagnostic Pack
- Tuning Packs

This database will hold customer and applications consolidated data.

In the Application Tier (P2) we will have HW farm of 2 servers 12 cores each.
These are two high available nodes server farm (12 cores each) clustered for Active/Active transparent application fails-over

Both nodes should host & run Instances of the following:

- Oracle Weblogic
- SOA Suite

- Oracle BPM
- Webcenter

In the Application Tier (P3) we will have another HW farm of 2 servers 8 cores each.
These are two high available nodes server farm (8 cores each) clustered for Active/Active transparent application fails-over

Both nodes should host & run Instances of the following:

- Oracle Weblogic
- Webcenter portal
- Webcenter Content (restricted use)

In the Presentation Tier (P4) we will have HW farm of 2 servers 12 cores each.
These are two high available nodes server farm (12 cores each) clustered for Active/Active transparent fails-over

Both nodes should host & run Instances of the following:

- **Oracle Webtier**

Moreover, for this setup we recommend **2 Identical redundant multi-domain IP load balancer** to ensure high availability with no single point of failure. Accordingly 2 redundant HW Load balancers should be installed and configured to secure no single point of failure with 99.999% availability as requested in the tender doc

Note:

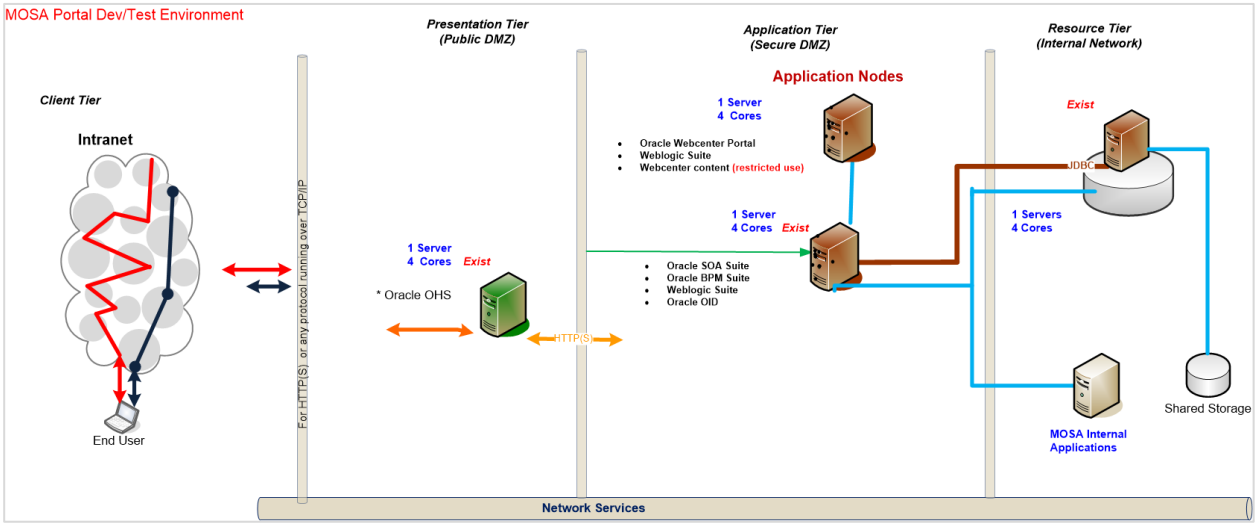
- ***As per Tender Documents, Oracle Licenses for the Production Environment are out of scope. It is the Ministry responsibility to arrange at future stage.***

- ***Tender Documents already mentioned the HW specs for the Production Environment that MOSA will provide.***

- ***The proposed solution architecture is designed to utilize the existing Family Care production environment except the Portal Farm that newly proposed to fulfil this projects's needs.***

- ***We recommend putting two redundant identical HW Load balancers to secure no single point of failure with 99.999% availability as requested in the tender doc***

Solution Architecture - Test & Development Environment



Solution Architecture diagram –Test/Development Environment

Here after the Solution Arch. Components & description recommended for the **Test/Development Environment**

In the Resource Tier (T1) we will have HW server with minimum 4 cores.

On This node we will ensure installing configuring & run Instances of the following:

- Oracle DB Ent Edition
- Diagnostic Pack
- Tuning Packs

This database will hold customer and applications consolidated Testing data.

We will install and Run **Oracle VM** on This server for virtualization purposes & to ensure meeting Oracle licensing policies and copy rights (***Especially if the HW server was higher than 4 cores)***

In the Application Tier (T2) we will have HW server with minimum 4 cores

On This node we will ensure installing configuring & run Instances of the following:

- Oracle Weblogic
- Oracle SOA Suite
- Oracle BPM
- Oracle Webcenter

In the Application Tier (T2) we will have another HW server with minimum 4 cores

On This node we will ensure installing configuring & run Instances of the following:

- Oracle Weblogic

- Oracle Portal
- Oracle Webcenter Content (Restricted use)

We will install and Run **Oracle VM** on This server for virtualization purposes & to ensure meeting Oracle licensing policies and copy rights (***Especially if the HW server was higher than 4 cores)***

In the Presentation Tier (T3) we will have HW server with minimum 4 cores

On This node we will ensure installing configuring & run Instances of the following:

- **Oracle Webtier**

Notes:

- ***As per Tender Documents, MOSA will arrange the HW for the Development Environment. Where we recommend the following minimum Specs for each Server:***
  1 CPU with minimum 4 cores
  RAM.

- ***The proposed solution architecture is designed to utilize the existing Family Care test/dev environment except the Portal Farm that newly proposed to fulfil the project's needs.***

- ***The new required Oracle Licenses for the Testing Environment are Part of the scope and Al Dar Systems will provide as specified in the BOM***

Consolidated BOM

Software

Item	Environment	Qty	License Metric
Oracle Lic. for Test & Development Environment			
Oracle Weblogic Suite Perpetual Lic With 3 Years Support (Prerequisite for OAM installation)	Test/Development	20	Named User
Oracle WebCenter Portal Perpetual Lic With 3 Years Support	Test/Development	20	Named User
Oracle Lic. For Production Environment			
Not within the scope & not Part of Our Deliverables. Should be arranged by MOSA in the Future **The following new production Licenses need to be procured from MOSA:** - Oracle WebCenter Portal Perpetual Lic With 3 Years Support, 8 Processors - Oracle Weblogic Suite Perpetual Lic With 3 Years Support , 8 Processors.			
Tools for PM			
ProjeQtOr PM tool Server Lic (Open User Lic) with Support	PM Tool	1	Server
Operating System			
Oracle Linux Basic Limited with Support	ProjeQtor- PM Tool	1	Server

Hardware

Machine ID	Installed Products	Nodes	Specifications
HW Production Environment			
Portal Server (P4)	Oracle Webcenter Portal Oracle Weblogic Suite	2	Minimum specs as follows: • 8 cores • Windows 64 bit • 128 GB RAM
Web Server (P3) **.	Oracle web tier	2	Minimum specs as follows: • 12 cores • Windows 64 bit • 32 GB RAM
BPM Server (P2) **.	Oracle BPM Suite Oracle SOA Suite Oracle Weblogic Suite	2	Minimum specs as follows: • 12 cores • Windows 64 bit • 64 GB RAM
DB Server (P1) **.	Oracle DB Enterprise Edition Oracle Real Application Cluster Oracle Diagnostic pack Oracle Tuning pack	2	Minimum soecs as follows: • 12 cores • Windows 64 bit • 32 GB RAM
Load Balancer **.	We recommend MOSA to have 2 LB in the production environment for High Availability	2	As Specified in Tender Docs. (Addendum–B) (Data Center HW Specifications)
HW for Test & Development Environment			
Portal Server (T4)	Oracle Webcenter Portal Oracle Weblogic Suite	1	Minimum specs as follows: • 4 cores • Windows 64 bit • 8 GB RAM
Web Server (T3) **.	Oracle web tier	1	Minimum specs as follows: • 4 cores • Windows 64 bit • 8 GB RAM
BPM Server (T2) **.	Oracle BPM Suite Oracle SOA Suite Oracle Weblogic Suite	1	Minimum specs as follows: • 4 cores • Windows 64 bit • 32 GB RAM
DB Server (T1) **.	Oracle DB Enterprise Edition Oracle Diagnostic pack Oracle Tuning pack	1	Minimum specs as follows: • 4 cores • Windows 64 bit

			• 8 GB RAM
HW for Tools			
PM Server **	ProjeQtOr PM Tool	1	Super micro Server Model 5018D-MF • Xeon Processor • 4 cores - 64 bit • 16 GB RAM • Oracle Linux O/S

***** The existing FC environment to be utilized.***

Testing Procedures and Methodology for its Oracle Portal projects

To make sure our Oracle Portal projects work well, we ensure the quality of the process application and ensure that it meets the functional and nonfunctional requirements of the business. Both our test teams and development teams will consider the following goals when developing the projects:

- Produce reliable process-based solutions that achieve the business outcomes.
- Provide confidence that the system is configured correctly and the application is developed correctly for a production deployment.
- Establish a baseline to test against the following types of future system changes:
    - Oracle BPM product upgrades
    - Server modifications
    - Network changes
    - Application upgrades
    - Application server upgrades
    - Database upgrades
    - System load dynamics changes over time
- Provide visibility into system scalability to allow for budget planning based on anticipated growth in system load. For example, growth might be anticipated at an annual rate of 10%, starting with 500 concurrent users.
- Troubleshoot performance problems and provide solutions or recommendations where time allows.

General testing guidelines followed by the bidder

Although applications vary by requirements and features, we apply the following common testing guidelines to use with our Oracle BPM projects:

- We make sure to have adequate resources for each test purpose.
- We make sure that we have automation tools.
- We use monitoring and analysis tools.

We use adequate resources for each test purpose

To ensure that the project works well, our testing team maintain adequate resources and dedicate a testing environment for each test purpose. Generally, test areas include functional testing, nonfunctional (or relational) testing, and regression testing.

Functional testing

Functional testing is basic quality assurance that makes sure that software components work as expected when integrated. Functional testing is divided into the following test phases:

- Unit testing
- Integration testing
- User acceptance testing
- Instance migration testing
- Globalization testing
- Mobile or browser testing

Unit testing is the first quality guarantee we make during project development. We use the continuous integration approach for unit testing to ensure the test coverage for each functional unit.

For individual Oracle BPM services, business process definitions (BPDs) and facades, or interfaces, we use a test harness that includes the following 3 sets of data with predictable results:

- The good path, also called the happy path
- The bad path, also called the unhappy path
- The ugly path, also called the system exception path

Usually we cannot ensure that the Oracle BPM project works properly under high stress testing, even after we complete basic functional testing. We always test with some volume instances. Ideally, we use a total of 10,000 instances, and at least 200 in-flight instances in a known state. For performance testing (as part of nonfunctional testing), we use a higher volume.

User interfaces are important because they impress end users more than other functional components. We consider involving users in parts of the project that have human intervention, especially for evaluating the usability of the user interface.

Nonfunctional, or relational, testing

Nonfunctional testing, also called relational testing, is as important as functional testing. It relates to the project security, reliability, interoperability, robustness, and maintainability. Relational testing includes the following testing:

- Performance testing
- High availability testing and disaster recovery testing
- Stability and stress testing and endurance testing
- Security testing

We use test scenarios for testing that make sense and that we understand how to scale and extrapolate correctly. We will have realistic expectations about the complexity of the application and the realistic response time to simulate real human interaction.

To understand the maximum capacity that the hardware will support, we will benchmark the Oracle BPM servers with a simple process before we start development and testing. During nonfunctional testing of our custom process, we run the benchmark to compare to the baseline.

To understand how performance of external systems affects the overall process and to account for it in our process design, we write separate testing for all each contact to external systems. For example, we take into account that external systems might not respond immediately when under a heavy load.

During all tests, we include threshold key performance indicators (KPIs) that are monitored. If a KPI is exceeded, we chase down that cause and we don't let errors accumulate.

We test performance with a combined manual and automated approach. We use the manual approach for human intervention, for example, measuring response time for a web page. We use automated testing for other parts of the project.

Regression testing

New changes and functions are continuously added to Oracle BPM projects, and the changes might bring in new defects. We make sure to include a subset of functional and nonfunctional tests to run whenever there is a change to the system, or whenever we deploy a new version of an Oracle BPM application.

We adopt a rolling upgrade approach to ensure that any changes to the system are first tested in the test environment, before we apply them to the production environment.

We use automation tools

Automation testing plays an important role in Oracle BPM project testing. We consider the following:

- Automation testing can save human resources from repeated regression tests.
- Manual configuration is required before business application testing, but it is time-consuming and error-prone.
- It's easy to keep static, reliable test sets as an acceptance standard for checking new changes.
- High automation testing coverage helps guarantee agile project development.

Our testing team adopts automation tools and quickly builds automation test packages. We make sure to choose automation tools that the testing team is skilled in, which reduce the learning curve and the effort to implement and maintain automation packages.

Human tasks are widely used in Oracle BPM projects. Testing teams will choose one or more automation tools to test web-based technology and mobile-based technology, if applicable.

We choose the static, reliable, well-documented test cases to automate. The automated test cases will at least cover the main path, and then will be used for regression testing.

The automation results will be detailed so that problems are easy to locate.

We use monitoring and analysis tools

We use monitoring and analysis tools that help us monitor the testing and production environments to make sure they are free of business or system problems. We will also help to troubleshoot problems that occur in testing and to analyze system bottle necks.

Finally, we use testing, monitoring and analysis tools for common testing procedures, such as performance testing.

Oracle BPM itself contains some built-in monitoring and analysis. We use the tools to monitor, analyze business processes, generate reports and help improve process definitions.

Testing in the Oracle BPM project lifecycle that the bidder follows

Agile methodology is followed by us when developing Oracle BPM applications, also we take test and validation into consideration while planning project development cycles. In addition, whenever we are about to push out a new version of a business process into production, unless it is a new feature, it is crucial to also perform a set of regression testing. We select representative test cases from our functional and nonfunctional testing. If we are updating existing active processes to a new version, we make sure that we also perform instance migration tests.

Continuous iteration testing

Continuous iteration testing is not just about running tests. It is a broad concept for a range of activities that include finding defects, gaining confidence about the level of quality, and providing information for making project decisions. In our Oracle BPM projects, we follow an incremental and iterative development approach. We do not delay testing until the last phases of the project, such as the unified process transition phase or the user acceptance testing phase. Instead, we include testing during each iteration. Quality assurance is started at the early phases of the project with test planning and definition that takes place during requirement elicitation and process modeling.

After development iterations are started, our quality assurance team will analyze existing requirements to design the tests in scope for the iteration. For an iteration (i), the tests will be executed in the next iteration (i+1) using the base code of the first iteration (i). We do not try to do testing on features that are still under unit testing and development. We might find issues the developers are most likely aware of and are trying to fix. We make our team effort work well, incorporate the people who are doing the testing as part of the project team, not as people who receive the code thrown over the wall.

Many discussions happen during the construction of business processes, coaches, and the information model. Requirements are adapted, and acceptance criteria are fine-tuned. Our testers are not expecting a rigid requirements document finalized at the beginning of the project to develop functional testing from it. Our testers have a lot of experience with setting and testing acceptance criteria and with environment constraints. Our Developers find that our testers have valuable knowledge about how systems to be integrated work together.

The goal of defining a test is to describe and implement the input to the test. The input can be values that come from the keyboard or a graphical user interface (GUI), or are read from a database or spreadsheet. The expected results can include the pre-conditions or the state of the system and what needs to be true for the test case to run as expected.

During the development iterations, our process developers and our integration developers use unit test capabilities to make sure that the features and user stories that they are developing work properly. In parallel, our testers define the tests for the next iteration and are involved in any process modeling discussions. Our testers report at the daily scrum meetings where crucial information can be exchanged. Our testers are fully aware of the iteration backlog, the release backlog, and the test strategy that is developed at the early phase of the project. Each iteration ends with a formal demonstration that is presented by one of the business stakeholders, which is call the "playback." Our testers and all stakeholders attend. After the playback is completed, a

version is created, and code is deployed to test servers so that previously defined tests can run in isolation.

This approach can continue for multiple iterations. When the entry criteria for system integration tests and user acceptance tests are met, those test phases are performed. Usually we start system integration testing before the end of development. When integrating with external systems, our developers should complete integration tests as early as possible. Delayed Oracle BPM projects are most often caused by integration issues, therefore we allocate enough attention to this phase.

Oracle BPM development roles

We use the agile testing approach during Oracle BPM project development so that we can ensure that quality solutions are delivered for user acceptance validation. In the agile testing approach, our subject matter experts, our developers, and our testers work together as one team in the following ways:

- Test cases are authored and reviewed as part of iterations.
- Change acceptance and story acceptance are managed within iterations.
- Tests are run at the end of each iteration or in the following iteration.
- Defects and changes are addressed as part of backlog.
- Regression testing is developed as a subset of each iteration.

In a traditional testing approach, the test and development teams work separately, which increases the risk of project delays in the following ways:

- Test cases are written by testers without review during development.
- Testing is done at the end of projects.
- Testing is misaligned with project changes.

For an agile approach, our developers, and our testers are all involved in Oracle BPM project development. Each role has its own responsibility and interacts with others.

Detailed testing methods followed by bidder

Our Oracle Portal project testing methods include many testing methods similar to other software testing.

Our Oracle Portal project testing methods	Detailed testing methods
Functional testing	Unit tests, integration tests, user acceptance tests, instance migration tests, globalization tests, mobile and browser tests
Nonfunctional testing	Performance tests, high availability tests, disaster recovery tests, stability tests, stress and endurance tests, security tests

Our Oracle Portal project testing methods	Detailed testing methods
Regression testing	Detailed testing methods depend on the fixes applied. Some of above functional and nonfunctional testing methods are applicable.

Unit tests

In software, a unit is defined as the smallest building block of code that other code can be built upon. In our Oracle BPM projects, the unit is the developer's test of individual components of a specific process application prior to creating new versions. For example, a unit could be one user interface, or one generic system service.

We consider the following guidelines when performing unit testing in an Oracle BPM project:

- Our developers perform unit tests in the Designer. Developers will inspect the results with the debugger.
- Each unit will have a unit test (or a test harness), and each unit test will contain the following paths:
  - the good
  - the bad
  - the ungly
- For the user interface (UI) test, it is sufficient to create a harness so we will test the UI independent from other units.
- For the generic system services test, developers can create automated tests that ensure the expected results.
- If applicable, we will create mock services to test external endpoints.

Integration tests

Typically, after unit testing and playbacks, we perform integration tests. Integration tests focus not just on individual units of work but also on the entire process, including systems that are external to the Oracle Portal project.

We consider the following guidelines when performing integration tests in an Oracle Portal projects:

- We test the entire process application pathways using agreed-upon scenarios and data sets (good, bad and ugly) to ensure all components of a process application version.
- We perform integration tests on the test environment on Server.
- Many processes include long-running process pathways and timers. For these types of processes, special considerations will be made: we use custom dates with variables for values in timer settings to facilitate timer-escalated testing. Using custom dates allows the timers to be adjusted on a sliding scale during testing so that a process that would normally take 80 days to test can be completed in 8 days. We divide all time values by 10 in integration tests.
- We include integration tests for the web interface and the end-user experience.

- We decide whether integration tests to be completed manually or with an automated tool.
- For manual continuous integration testing, we perform visual testing of user interfaces to ensure that they meet requirements.
- We consider at least the following three data sets as unit tests for integration testing:
    - Expected outcome of a specific process scenario, also known as the happy path.
    - Expected outcome of exception paths, also known as the unhappy paths.
    - Expected outcome for system failure cases, also known as the ugly paths.

User acceptance tests

User acceptance testing is the last phase of the software testing process. During user acceptance tests, actual software users test the software to make sure it can handle required tasks in real-world scenarios, according to specifications.

We consider the following guidelines when performing user acceptance tests in our Oracle BPM projects:

- We perform user acceptance tests on the staging environment. Functional user acceptance testing occurs after a version of a specific process application has been deployed to a staging environment.
- We make sure that physical users test entire process application pathways using agreed-upon scenarios and data sets from test scripts. We ensure that the following specific business requirements have been met:
    - Subject matter experts have the accountability for the specific subject's quality.
    - Risk mitigation requirements have been met.
- We replace physical users with an automated test tool if needed.
- We prioritize defects correctly.
- We ask the project sponsor to review defect priorities for valuation.

Instance migration tests

When installing new version on server, we consider how to handle the business process definition instances that are running on the server from previous versions. We will migrate those running instances to the new version and consider how to handle orphan tokens, or we will leave those running instances in old versions.

We consider the following guidelines when performing instance migration tests in our Oracle BPM projects:

- We perform instance migration tests in the test and staging environments.
- We get a list of application changes from our application development tests.
- In the test and staging environments, we make sure there is a good representation of process instances in different states. Then we will perform an instance migration and test for successful migrated instances.
- For orphan tokens, we verify that we have a valid token policy file according to business requirements.
- We make sure that we have a regression test plan for the application to be migrated.

- If we choose to leave the instances in old version, we will make sure there is a good representation of process instances in different states. Then we will ensure that all the instances can be successfully completed in the old version after new one is deployed and made the default.

Performance tests

Performance tests determine how a system acts in terms of responsiveness and stability under a particular workload. Performance tests also can investigate measure, validate or verify other quality attributes of the system, such as scalability, reliability and resource usage.

Usually before performance tests, we tune our system to meet our client performance objective. We consider the following guidelines when tuning our Oracle BPM system:

- We apply a system-wide approach to performance tuning. Tuning encompasses all of the following elements of the deployment topology:
  - Physical hardware topology choices.
  - Operating system parameters.
  - The miscellaneous Oracle BPM suite hardware and software components.
- We identify potential performance bottlenecks and tuning changes to mitigate.
- We identify issues with prerequisite dependencies and changes to mitigate, for example, network compression to combat network latency.
- We prioritize the process server network traffic, ensuring that appropriate rules are defined for routers, load balancers, and firewalls.
- We get the administrators for the database, the operating system, and Oracle BPM on the same page during load and performance testing. Work with the application designers to understand the resource needs.

Before we start performance testing, we consider the following lessons learned by our team:

- Know our metrics.
- Set goals.
- Get current.
- Give ourselves adequate of time.
- Simulate real life scenarios as best as possible.
- We age our database to simulate long-running environments.
- We consider that performance may degrade as a database ages.
- Track our results.

We consider the following systemic approach when performing performance testing in our Oracle BPM projects:

1. We establish clear performance objectives that are representative of business requirements.
2. We establish a baseline after installation for both product level and process application deployment.
3. We pick a reasonable set of initial parameter settings.
4. We tune the environment according to good practices.
5. We monitor running systems on an ongoing basis to guide future tuning.

6. For each new process application deployment, we complete the previous steps 1 to 5.
7. For each new version, we complete the previous steps 4 and 5.
8. We isolate rogue applications by completing the previous steps 4 and 5.

In addition, we consider the following guidelines for performance testing:

- We complete a performance test on the staging environment on Server that is a near clone of the production environment, including using simulated production data and production security configuration.
- We ensure that the environment is warmed up before we obtain measurements.
- We design workloads that are reliable, that producing repeatable results, and that are easy to run.
- We understand that running performance tests manually is not practical, and automated testing tools are necessary.
- We follow the following tips for performance testing loads:
    - We use realistic think times between requests.
    - We maintain a consistent flow of work into the system.
    - We maintain steady states in the databases: a consistent number of active and completed tasks and instances.
    - After running the performance test, we clean up the environment, especially queues and the databases.
- We check for errors, exceptions, and time out messages in logs and reports.

Stress tests

Stress tests are normally used to understand the upper limits of capacity in a system. This kind of test determines the system's robustness in terms of extreme load and helps application administrators determine if the system will perform sufficiently if the current load goes well above the expected maximum.

We consider the following guidelines when performing stress tests in our Oracle BPM projects:

- We perform stress tests in the staging environment.
- We include the following measures in an Oracle BPM project stress test:
    - Concurrent users
    - Instance loads
    - Task loads
- Stress tests aim to find the capacity of the Oracle BPM system, based on current hardware and software configuration.
- Any above-peak testing can be done to help determine future needs for unexpected high-load conditions. We look for bottlenecks and any of the following resources that become constrained: the operating system, the database, the Java Virtual Machine, or the product.

Endurance tests

Endurance tests determine if the system can sustain the continuous expected load. During endurance tests, memory utilization is monitored to detect potential leaks. Also important, but often overlooked, is performance degradation, for example: ensuring that the throughput or response times are as good as or better after a long period of sustained activity than at the

beginning of the test. Endurance testing essentially involves applying a significant load to a system for an extended, significant period of time. Our goal is to discover how the system behaves under sustained use.

We consider the following guidelines when performing endurance tests in our Oracle BPM projects:

- We perform endurance tests in the staging environment.
- For endurance and data-build-up testing, we test how our system performs after a long time frame of usage.
- We change the following factors about the test to scale for an accelerated schedule so that the test can model months of usage without running for months:
    - We think about how many processes and tasks will be created or closed in a week. Then calculate how many that would be for a month and year. Then we perform the same actions in a consistent but shortened amount of time.
    - To avoid load-related failures, we ensure that the items are completed in a similar manner and that we do not exceed the peak load tests.
- We look for database performance degradation due to data build-up, any space issues, and any Java Virtual Machine memory problems.
- We look at the file system and database growth to determine any needed maintenance tasks or tuning to consider.
- We look for growth in baseline memory usage that might lead to problems.
- We identify areas that need to be considered for regular maintenance.
- We identify some application issues that will only occur after long time frames.
- Tracking the effect of a month, 2 months and 3 months of usage might help project for the effect for longer time frames.
- We check the impact of a new application on the environment by adding new applications and system changes, which affects the overall picture.

High availability (HA) tests (If Applicable, depending on Hardware installed)

High availability is a characteristic of a system. Availability is usually expressed as a percentage of uptime in a given year.

We consider the following guidelines when performing high availability tests in our Oracle BPM projects:

- We perform high availability tests in the staging environment.
- We consider the following 4 types of test cases:
    - HA failover testing, which simulates a server failure while executing a stress test.
    - Controlled shutdown of a server (for example, using the administrative console).
    - Immediate shutdown of cluster members (for example, terminating the related system process).
    - Uncontrolled shutdown of a complete system hosting (for example, power lost).
- We consider the following categories of test cases:
    - White-box test cases, which pause the system at a sensitive spot and initiate a failure event.
    - Black-box test cases, which initiate a failure event while executing a stress test.
- We verify the following information:

    - We ensure that automatic recovery from HA events completes within established recovery time objectives.
    - We ensure that transaction integrity is preserved.
- We understand that Oracle BPM customers typically focus their HA testing efforts on the following types of tests:
    - Basic configuration testing.
    - Operational procedures required for fail-over.
    - Limited black-box testing.

Disaster recovery tests (If Applicable, depending on Hardware installed)

Disaster recovery consists of policies and procedures that describe how to recover or continue the technology infrastructure that is critical to an organization after a natural or human-induced disaster.

We consider the following guidelines when performing disaster recovery tests in our Oracle BPM projects:

- We perform disaster recovery tests in the staging environment.
- We consider the following types of test cases:
    - Disaster recovery configuration testing, which simulates a site fail-over against an idle system.
    - Disaster recovery function testing, which continues processing an instance after site fail-over.
    - Measurement of disaster recovery objectives, which determines how long it actually takes to execute the steps. Practice and scripting help speed up this test.
- We verify the following information:
    - We test whether the disaster recovery environment can successfully connect to the replica and take over from the primary site.
    - We test whether the disaster recovery environment can continue processing any in-flight work.
    - We test whether the disaster recovery operational procedures are expressed clearly, well scripted, and function properly.
    - We confirm whether the disaster recovery team can execute recovery procedures within the established recovery time objectives.

Security tests

We consider the following guidelines when performing security tests in our Oracle BPM projects:

- We understand the differences in security setup in the different Oracle BPM environments (test, staging, and production).
- We ensure that the security configuration on the staging environment is identical to or similar with the production environment.
- We ensure that security testing involves all parts of the infrastructure, including the system security, Oracle Weblogic Application Server security, and Oracle BPM security.
- We test for application-specific security requirements, for example that only certain users are allowed to modify certain tasks due to task assignments.
- We perform functional and nonfunctional tests after all the base security configuration has been done, like the following examples:
    - Disable unsecure HTTP access.
    - Configure third-party authentication to secure the Oracle BPM infrastructure.

- We establish a small set of functional tests to run again after security configuration is modified, especially for regular changes like the following changes:
    - A password change for administrative users.
    - A password change for database users.

Maintenance and regression tests

Regression testing is a type of software testing that seeks to uncover new software bugs, or regressions, in existing functional and nonfunctional areas of a system after changes (such as enhancements, patches or configuration changes) have been made to them. The intent of regression testing is to ensure that changes have not introduced new faults.
We consider the following guidelines when performing regression testing on our Oracle BPM projects:

- We perform maintenance and regression tests on all the environments: the development environment, the test environment, the staging environment, and the production environment.
- We understand the list of fixes before applying a fix pack or an interim fix.
- We back up the system (profile, database) before applying fix packs and interim fixes.
- We have a set of regression test cases ready for your applications and infrastructure so that we will test the system after applying the fixes.

Test for changes in deployment environments

When we deploy the application in deployment environments, we pay attention to the following issues:

- We understand and document the differences in our deployment environments.
- We note that different environments might have different configuration for security and different peripheral systems.
    - Development environments typically have relaxed security.
    - Staging environments do not fully simulate production infrastructure.
    - Different environments have different LDAP group filters and scale.
- We prepare to typically find problems in moves from test environments to staging and production environments, like the following examples:
    - Testers forget to modify the role binding.
    - Testers forget to modify the WSDL URL and endpoint for a web service.
    - Testers forget to modify the schedule interval.
- We record the detailed steps of changes when you move from test environments to staging and production environments.
- We have a set of regression test cases to verify that suitable changes are applied to the Oracle BPM application after it is deployed to different environments.

Project Plan

	Task Mode	WBS	Task Name	Duration	Start	Finish	Predecessors
1		1	**MOSA Portal Implementation Plan**	**276 days**	**Tue 1/1/19**	**Mon 1/13/20**	
2		1.1	**Project Initiation**	**23 days**	**Tue 1/1/19**	**Thu 1/31/19**	
3		1.1.1	Resources allocation and Mobilization	23 days	Tue 1/1/19	Thu 1/31/19	
4		1.1.2	Prepare Detailed Project plan and other planning documentations	8 days	Tue 1/1/19	Thu 1/10/19	
5		1.1.3	Project plan sign off	2 days	Thu 1/10/19	Mon 1/14/19	4
6		1.2	**GAP Analysis and Solution Design**	**52 days**	**Thu 1/31/19**	**Sun 4/14/19**	
7		1.2.1	**Requirements gathering and Analysis**	**20 days**	**Thu 1/31/19**	**Wed 2/27/19**	
8		1.2.1.1	Capturing the requirements of the MOSA Portal	20 days	Thu 1/31/19	Wed 2/27/19	2
9		1.2.1.2	Prepare the Portal UI Desgins	15 days	Thu 1/31/19	Thu 2/21/19	2
10		1.2.1.3	Prepare Portal Site chart	20 days	Thu 1/31/19	Wed 2/27/19	2
11		1.2.1.4	Prepare Portal Navigation scenarios	15 days	Thu 1/31/19	Thu 2/21/19	2
12		1.2.2	**Solutions Design and Documentation**	**22 days**	**Thu 2/28/19**	**Sun 3/31/19**	
13		1.2.2.1	Identify System Design and Architecture	5 days	Thu 2/28/19	Wed 3/6/19	10,11
14		1.2.2.2	Prepare Final Portal theme and ADF skin	12 days	Wed 3/6/19	Sun 3/24/19	13
15		1.2.2.3	Prepare SRS documentation	12 days	Wed 3/6/19	Sun 3/24/19	13
16		1.2.2.4	Prepare DB Design	5 days	Sun 3/24/19	Sun 3/31/19	14
17		1.2.3	**GAP Analysis Sign Off**	**10 days**	**Sun 3/31/19**	**Sun 4/14/19**	**16**
18		1.3	**System Development**	**125 days**	**Sun 4/14/19**	**Tue 10/1/19**	
19		1.3.1	Development of Portal internal pages	125 days	Sun 4/14/19	Tue 10/1/19	17
20		1.3.2	Development of Portal Home Page and Wedgits	80 days	Sun 4/14/19	Wed 7/31/19	17
21		1.3.3	Prepare Portal Content	100 days	Sun 4/14/19	Tue 8/27/19	17
22		1.3.4	Upload initial draft of portal content	60 days	Sun 4/14/19	Wed 7/3/19	17
23		1.4	**System Testing & QA**	**70 days**	**Wed 7/31/19**	**Mon 11/4/19**	
24		1.4.1	Testing portal nagivation scenarios	25 days	Tue 10/1/19	Mon 11/4/19	19
25		1.4.2	Testing Portal UI	15 days	Wed 7/31/19	Tue 8/20/19	20
26		1.4.3	Testing content	20 days	Tue 8/27/19	Tue 9/24/19	21
27		1.5	**System Implementation**	**15 days**	**Mon 11/4/19**	**Mon 11/25/19**	
28		1.5.1	Prepare the final portal content	10 days	Mon 11/4/19	Mon 11/18/19	24,25,26
29		1.5.2	UAT acceptance & Sign Off	15 days	Mon 11/4/19	Mon 11/25/19	24,25,26
30		1.6	**System Training**	**25 days**	**Mon 11/4/19**	**Sun 12/8/19**	
31		1.6.1	Prepare End User Manuals	10 days	Mon 11/4/19	Mon 11/18/19	23
32		1.6.2	Prepare Technical Documentation	10 days	Mon 11/4/19	Mon 11/18/19	23
33		1.6.3	End User Training	25 days	Mon 11/4/19	Sun 12/8/19	23
34		1.6.4	Trainer Training	10 days	Mon 11/4/19	Mon 11/18/19	23
35		1.6.5	Technical Training	10 days	Mon 11/4/19	Mon 11/18/19	23
36		1.6.6	Administration Training	10 days	Mon 11/4/19	Mon 11/18/19	23
37		1.7	**Production Preparation and Go Live**	**21 days**	**Sun 12/8/19**	**Mon 1/6/20**	**30**
38		1.8	**Project sign off and Acceptance**	**5 days**	**Mon 1/6/20**	**Mon 1/13/20**	**37**
39		2	**One Year support and Maintenance**	**535 days**	**Mon 1/13/20**	**Wed 1/12/22**	**38**

Project Team Members Resumes Summary (As per Annex G.1.)

Here after will follow the list of members assigned for this project and as per the format specified in the tender docs (Annex G.1.) along with the related Degrees/Certifications.

No.	Item	Bidder Comments				
1.	Picture					
2.	Name/Role	Toni Ibrahim – ***Certified* Program/Project Manager**				
3.	Nationality	Lebanese				
4.	Languages Spoken	1. English 2. Arabic 3. French				
4.1.	Quality of Language 1.		Basic	Advanced	Fluent	Native
		Verbal			✓	
		Writing			✓	
		Reading			✓	
4.2.	Quality of Language 2.		Basic	Advanced	Fluent	Native
		Verbal				✓
		Writing				✓
		Reading				✓
4.3.	Quality of Language 3.		Basic	Advanced	Fluent	Native
		Verbal			✓	
		Writing			✓	
		Reading			✓	
5.	Education	**Master of Degree in Electrical & Electronic Engineering** ***Lebanese University of Engineering***, *Roumieh, Lebanon* [*with Honor List. Courses covering Telecommunications, Electrical Engineering courses, Hardware and Software technologies.*]				
6.	Qualification & Certificates	• Oracle e-Business Suite Implementation Champion for Financials. • Oracle e-Business Suite Implementation Champion for HRMS Oracle e-Business Suite Implementation Champion for CRM Oracle Incentive Compensation implementation training • Oracle e-Business Suite Implementation Champion for Business Intelligence. • Oracle e-Business Suite Implementation Champion for Applied Technology. • Oracle e-Business Suite Technical Champion. • Oracle 11g Technical Champion.				

		• ISO 9001:2000 Certified Internal Auditor. • Oracle Business Intelligence technical training. • Oracle Applications with Fast Forward implementation Oracle Workflow. • Oracle Alert. • Oracle BPM • PMI Certified PMP
7.	Project Experience	
7.1.	Project 1	**Kharafi National ERP Implementation and Development** Program Director responsible for approving the client project scope and approach from the point of view of technical feasibility, adherence to standards and appropriateness to overall IS strategy. Responsible in checking plans and estimates, making IT resources available, minimizing cross-project contention (e.g. over proposed changes that affect more than one division of the overall project) and resolving technical or staff issues. Responsible for all ERP application work, projects planning and control, putting the plan into action (including getting requisite sign-offs), keeping all parties informed of plans, progress and issues, managing the projects teams (Including sometimes users directly involved). his role also includes insuring the quality assurance approach and by providing support to the projects teams (e.g. direct assistance, request for “expert help” , training etc..). Also responsible for analyzing the business and identifying the user needs and resolving design issues at any stage in the projects and for producing the program specifications, database design and network architecture, that is, how the requirements is to be met. the following describes in brief some of his responsibilities in this project: - Developing projects work plans. - Developing Quality Assurance plans. - Supervising both the implementation and the development team on a daily basis and ensuring adherence to the work plan. - Acting as a technical reference for the development team and pointing the team in the right direction. - Gathering system detail requirements and business rules from the client and developing the analysis and design directives. - Testing software modules and putting policies in quality assurance. - Developing design reports such as Data Flow Diagrams (DFD), flow charts, Entity Relationship Diagrams (ERD) and Functional Specifications. - Criticizing and suggesting corrections for work. - Making final design decision after customer approval. - Documenting the projects by writing, issuing and archiving projects reports.

		- Keeping the Client Sponsor informed of project programs, milestones and problems as well as giving advance notice or warning of upcoming problems or potential losses. - Interacting and coordinating with the client for the duration of the project. - Coordinating with the Client committee regarding company standards and avoiding pitfalls. - Motivating development and implementation team members. - Evaluating team members periodically doing a 360 degree evaluation process. - Handling the change management across the project cycle. - Presentation and demos for client's key users about the solutions provided.
7.2.	Project 2	**Integro, France: TalkMan Buromedia Project** Team Leader of a team of 25 for development of the Kernel of Talkman Buromedia which was jointly owned by Integro and France Telecom. It is a consumer oriented product offering new uses of Telecommunication services to the general public as information services (EasyLink, CompuServe,..) , mainframe and minicomputer access , Videotex (including fast videotex, alpha-photographic mode), mail box, Integrated telephone directory, Integrated Fax (Group 3Fax), scanner and printer options, digital answering machine, down-loading of files, remote control and Terminal emulation for most Host systems (IBM, DEC, Bull, Unisys,...) vial all the standard protocols (TCP/IP, IPX/SPX, NetBIOS, X25, ISDN, AppleTalk and SNA).
7.3.	Project 3	**The Sultan Center (TSC) merchandizing and distribution system** Project Director where he managed a senior team to develop and implement the whole end to end merchandizing and distribution system for all TSC Stores, Restaurants, Outlets, Warehouses, Supply Chain, Procurement, Forecasting and Point of Sale. The project covered several countries where TSC Operates including Kuwait, Jordan, Oman, Bahrain and Lebanon
8.	Other	

Certification

I, the undersigned, certify that these data are correct.

Bidder's Stamp

_____

Date and signature of the above mentioned person

_____

Date and signature of the bidder's authorized signatory

LEBANESE UNIVERSITY
FACULTY OF ENGINEERING
Branch II

الجامعة اللبنانية
كلية الهندسة
الفرع الثاني

Certificate

The Dean of the Faculty of Engineering at the Lebanese University certifies that Mr.:

Tony Youssef IBRAHIM

Born in Sourat (Lebanon) on March 05, 1968 of Lebanese nationality, has successfully completed all the curriculum and fulfilled all the academic requirements of the Engineering degree at the Faculty of Engineering.

He was therefore awarded, on July 10, 1991, the:

Degree in Electrical & Electronic Engineering

Which is equivalent to a Master of Engineering

The Director
Dr. Marlène Cordahi

LEBANESE UNIVERSITY - Faculty of Engineering Branch II

The Dean
Pr. Mohamed Zoaeter

P.S.: This certificate is delivered once.

Lebanese University - Faculty of Engineering II - Roumieh el Metn - Mount of Lebanon - Tel : 961- 4 - 872208 /10 - Fax : ext. 1, 203, 303 - http://ulfg2@ul.edu.lb
الجامعة اللبنانية - كلية الهندسة الفرع الثاني - رومیه المتن - جبل لبنان - هاتف ١٠ / ٨٧٢٢٠٨ - ٤ - ٩٦١ - فاكس : داخلي ٣٠٣,٢٠٣,١ - بريد الكتروني http://ulfg2@ul.edu.lb


Project Management Institute
THIS IS TO CERTIFY THAT
Toni Youssef Ibrahim
HAS BEEN FORMALLY EVALUATED FOR DEMONSTRATED EXPERIENCE, KNOWLEDGE AND PERFORMANCE IN ACHIEVING AN ORGANIZATIONAL OBJECTIVE THROUGH DEFINING AND OVERSEEING PROJECTS AND RESOURCES AND IS HEREBY BESTOWED THE GLOBAL CREDENTIAL
Project Management Professional
IN TESTIMONY WHEREOF, WE HAVE SUBSCRIBED OUR SIGNATURES UNDER THE SEAL OF THE INSTITUTE
Ricardo Triana • Chair, Board of Directors
Mark A. Langley • President and Chief Executive Officer
PMP® Number 1382458
PMP® Original Grant Date 18 January 2011
PMP® Expiration Date 17 January 2017
PROJECT MANAGEMENT INSTITUTE CORPORATE SEAL 1969 PENNSYLVANIA
PMI
Project Management Institute

Oracle
Education Services

This Document Certifies

Toni Ibrahim

Has Completed The Course Entitled

FastForward Financials RPM - Implementation

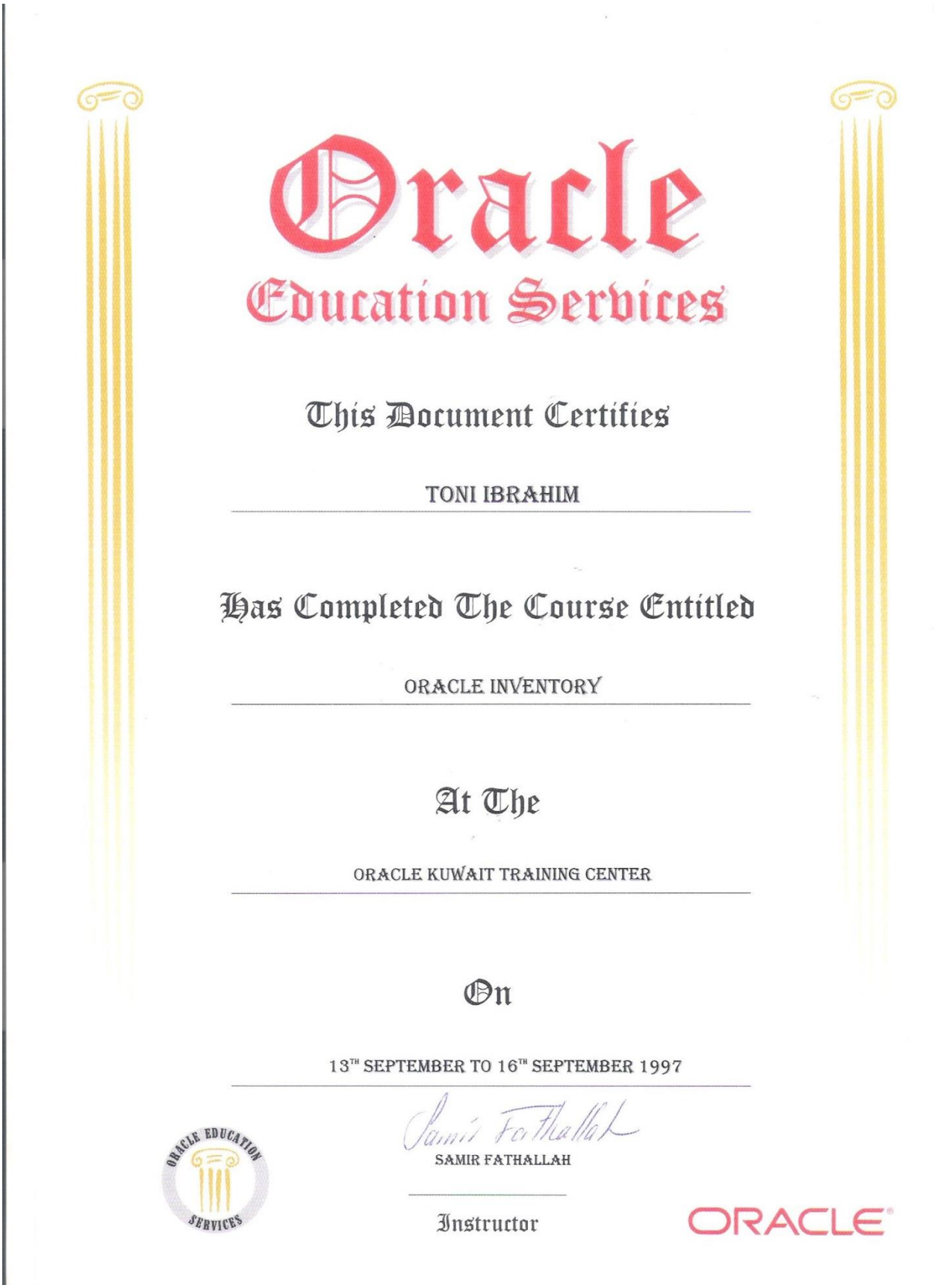
Kuwait City - Kuwait

4th July 1999 - 8th July 1999

Ghassan Mayassi

Instructor

ORACLE



Oracle

Education Services

This Document Certifies

TONI IBRAHIM

Has Completed The Course Entitled

ORACLE INVENTORY

At The

ORACLE KUWAIT TRAINING CENTER

On

13TH SEPTEMBER TO 16TH SEPTEMBER 1997

SAMIR FATHALLAH

Instructor

ORACLE

Oracle
Education Services

This Document Certifies

TONI IBRAHIM

Has Completed The Course Entitled

ORACLE RECEIVABLES

At The

ORACLE KUWAIT TRAINING CENTER

On

27TH SEPT. TO 1ST OCT. 1997

Samir Fathallah

SAMIR FATHALLAH

Instructor

ORACLE EDUCATION SERVICES

ORACLE

Oracle
Education Services

This Document Certifies

TONI IBRAHIM

Has Completed The Course Entitled

ORACLE PURCHASING

At The

ORACLE KUWAIT TRAINING CENTER

On

20TH SEPT. TO 24TH SEPT. 1997

SAMIR FATHALLAH

Instructor

ORACLE

<table>
<tr><th>No.</th><th>Item</th><th>Bidder Comments</th></tr>
<tr><td>1.</td><td>Picture</td><td>  </td></tr>
<tr><td>2.</td><td>Name/Role</td><td>Alaa Yehia – Certified Ass. Project manager</td></tr>
<tr><td>3.</td><td>Nationality</td><td>Lebanese</td></tr>
<tr><td>4.</td><td>Languages Spoken</td><td>1.English
2.Arabic</td></tr>
<tr><td>4.1.</td><td>Quality of Language 1.</td><td>
<table>
<tr><td></td><td>Basic</td><td>Advanced</td><td>Fluent</td><td>Native</td></tr>
<tr><td>Verbal</td><td></td><td></td><td>✓</td><td></td></tr>
<tr><td>Writing</td><td></td><td></td><td>✓</td><td></td></tr>
<tr><td>Reading</td><td></td><td></td><td>✓</td><td></td></tr>
</table>
</td></tr>
<tr><td>4.2.</td><td>Quality of Language 2.</td><td>
<table>
<tr><td></td><td>Basic</td><td>Advanced</td><td>Fluent</td><td>Native</td></tr>
<tr><td>Verbal</td><td></td><td></td><td></td><td>✓</td></tr>
<tr><td>Writing</td><td></td><td></td><td></td><td>✓</td></tr>
<tr><td>Reading</td><td></td><td></td><td></td><td>✓</td></tr>
</table>
</td></tr>
<tr><td>5.</td><td>Education</td><td>Bachelor Degree in Computer Communications
Business and Computer University,Beirut,Lebanon</td></tr>
<tr><td>6.</td><td>Qualification & Certificates</td><td>• ITIL V3 Foundation
• Certified IT Manager ”CITM”
• CCNA
• CCVA
• MCP
• Best Practice in Procurement
• PMI Certified PMP</td></tr>
<tr><td>7.</td><td>Project Experience</td><td></td></tr>
<tr><td>7.1.</td><td>Project 1</td><td>MOE Exadata Delivery ,Hardware Installation and Migration
Project Manager responsible for Hardware Delivery, Hardware Installation and Migration of Databases from old Database Servers to Exadata.
the following describes in brief some of his responsibilities in this project:
- Ensure that project prerequisites are met before hardware delivery
- Developing project work plan
- Supervise installation and Migration team on daily basis
- Interacting and coordinating with the client for the duration of the project
- follow up with the clients on the payments</td></tr>
</table>

7.2.	Project 2	**VIVA Exadata Delivery ,Hardware Installation , Migration and Build DR site** Project Manager responsible for Hardware Delivery, Hardware Installation, Migration of Databases from old Database Servers to Exadata and Build DR site the following describes in brief some of his responsibilities in this project: - Ensure that project prerequisites are met before hardware delivery - Developing project work plan - Supervise installation and Migration team on daily basis - Interacting and coordinating with the client for the duration of the project - follow up with the clients on the payments
7.3.	Project 3	**Kuwait University Web Content Management Solution Implementation** Project Manager responsible for Implementation of WCM for different colleges, departments and centers of the university the following describes in brief some of his responsibilities in this project: - Developing project work plan - Supervise development team on daily basis - Interacting and coordinating with the client for the duration of the project - Arrange for End User Training - Arrange for Administrators Training - Follow up with the clients on the payments
8.	Other	

Form 1: Resume Summary

Certification

I, the undersigned, certify that these data are correct.

Bidder's Stamp

_____

Date and signature of the above mentioned person

_____

Date and signature of the bidder's authorized signatory

Project Management Institute

THIS IS TO CERTIFY THAT

Alaa Yehia

HAS BEEN FORMALLY EVALUATED FOR DEMONSTRATED EXPERIENCE, KNOWLEDGE AND PERFORMANCE IN ACHIEVING AN ORGANIZATIONAL OBJECTIVE THROUGH DEFINING AND OVERSEEING PROJECTS AND RESOURCES AND IS HEREBY BESTOWED THE GLOBAL CREDENTIAL

Project Management Professional

IN TESTIMONY WHEREOF, WE HAVE SUBSCRIBED OUR SIGNATURES UNDER THE SEAL OF THE INSTITUTE

Ricardo Triana - Chair, Board of Directors

Mark A. Langley - President and Chief Executive Officer

PROJECT MANAGEMENT INSTITUTE CORPORATE SEAL 1969 NEWTOWN SQUARE PENNSYLVANIA

PMP® Number 1747287

PMP® Original Grant Date 08 September 2014

PMP® Expiration Date 07 September 2017

PMI Project Management Institute

<table>
<tr><th>No.</th><th>Item</th><th>Bidder Comments</th></tr>
<tr><td>9.</td><td>Picture</td><td>  </td></tr>
<tr><td>10.</td><td>Name/Role</td><td>Leica Roxas Delossantos – Technical Writer</td></tr>
<tr><td>11.</td><td>Nationality</td><td>Filipino</td></tr>
<tr><td>12.</td><td>Languages Spoken</td><td>1. Tagalog
2. English</td></tr>
<tr><td>12.1</td><td>Quality of Language 1.</td><td>
<table>
<tr><td></td><td>Basic</td><td>Advanced</td><td>Fluent</td><td>Native</td></tr>
<tr><td>Verbal</td><td></td><td></td><td>✓</td><td></td></tr>
<tr><td>Writing</td><td></td><td></td><td>✓</td><td></td></tr>
<tr><td>Reading</td><td></td><td></td><td>✓</td><td></td></tr>
</table>
</td></tr>
<tr><td>12.2</td><td>Quality of Language 2.</td><td>
<table>
<tr><td></td><td>Basic</td><td>Advanced</td><td>Fluent</td><td>Native</td></tr>
<tr><td>Verbal</td><td></td><td></td><td></td><td>✓</td></tr>
<tr><td>Writing</td><td></td><td></td><td></td><td>✓</td></tr>
<tr><td>Reading</td><td></td><td></td><td></td><td>✓</td></tr>
</table>
</td></tr>
<tr><td>13.</td><td>Education</td><td>Association of Certified Chartered Accountants
British Institute of Training and Education, Kuwait

B. Sc. in Commerce
Indira Gandhi National Open University, Kuwait</td></tr>
<tr><td>14.</td><td>Qualification & Certificates</td><td></td></tr>
<tr><td>15.</td><td>Project Experience</td><td></td></tr>
<tr><td>15.1</td><td>Project 1</td><td>AlGhanim Industries
Proposal/Technical Document Development
- Responsible for document development, duplication and distribution of developed materials for proposals, projects and company materials such as presentations, publications, and white papers.
- Maintain detailed records and original files of all technical documents and revisions.
- Schedule a strict review process for documentation edits and updates.
- Interact with internal subject matter experts, production and engineering personnel.
- Edit, standardize, or make changes to materials prepared by subject matter experts.
- Obtain/create photographs, drawings, sketches, diagrams, and charts to illustrate material.</td></tr>
</table>

		- Interface with customers, vendors, engineering and management to establish technical documents for projects and publications. - Support the development and implementation of proposal generation tools and processes under the direction of leadership.
15.2	Project 2	**National Cleaning Company (NCC)** Implementation & Development of Oracle ERP Partook in a 6-member finance team in successfully implementing and application of Oracle e-Business Suite for four business units. Core responsibilities: - Create invoices for and review all Payment Request Forms in the Oracle Based Financial System. - Record all Cash and Cheque Payments, and Wire Transfers in Accounts Payable Module. - Review and Create monthly invoices for Shuaiba Industrial Waste - Management Systems Customers in Accounts Receivable Module, as well as keeping record of these invoices for future referencing. - Create Customers: Companies and Individuals, in REMS; Create Rent Contracts for Real Estate. - Monthly generation and printing of records, and daily payments of rent for Real Estate in REMS. - Handling of subsidiary company, National Sewerage Company, treatment against REMS in Oracle Accounts Receivable Module. - Recording and referencing Original Letters of Guarantee, and preparing Quarter-End reports for LG facilities. - Follow-up and follow-through of Letters of Credit for purchase of Fixed Assets. - Record Cash and Cheque deposits in General Ledger. - Participate and assist in closing the Monthly, Quarterly and Annual Books of Accounts for all Business Units.
15.3	Project 3	**Taiba Hospital** HMIS Document Technical Writer - Wrote and maintained user manuals quick reference guides and release notes following established standards and style guides for helpdesk support personnel - Documented technical programming and flowcharting requirements for programmers
15.4	Project 4	**EMMS** Operation Systems Maintenance Information Technical Writer - Worked with internal teams to obtain an in-depth understanding of the product and the documentation requirements - Analyzed existing and potential content, focusing on reuse and single-sourcing opportunities - Created and maintained the information architecture - Produced high-quality documentation that meets applicable standards and is appropriate for its intended audience - Wrote easy-to-understand user interface text, online help and developer guides

		- Created tutorials to help end-users use a variety of applications
16.	Other	

Certification

I, the undersigned, certify that these data are correct.

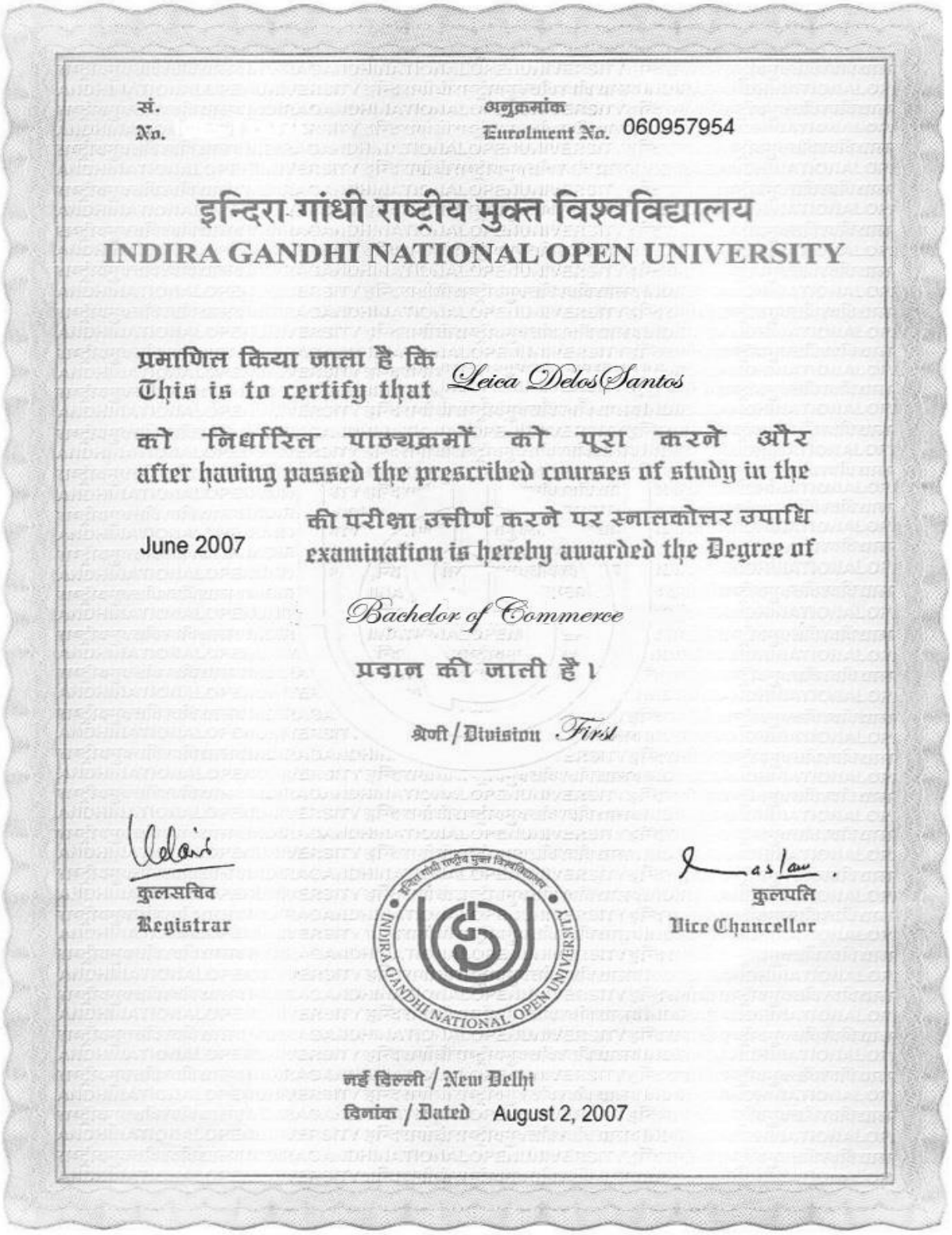
Bidder's Stamp

_____

Date and signature of the above mentioned person

_____

Date and signature of the bidder's authorized signatory



सं.
No.

अनुक्रमांक
Enrolment No. 060957954

इन्दिरा गांधी राष्ट्रीय मुक्त विश्वविद्यालय
INDIRA GANDHI NATIONAL OPEN UNIVERSITY

प्रमाणित किया जाता है कि
This is to certify that *Leica DelosSantos*

को निर्धारित पाठ्यक्रमों को पूरा करने और
after having passed the prescribed courses of study in the

June 2007

की परीक्षा उत्तीर्ण करने पर स्नातकोत्तर उपाधि
examination is hereby awarded the Degree of

Bachelor of Commerce

प्रदान की जाती है।

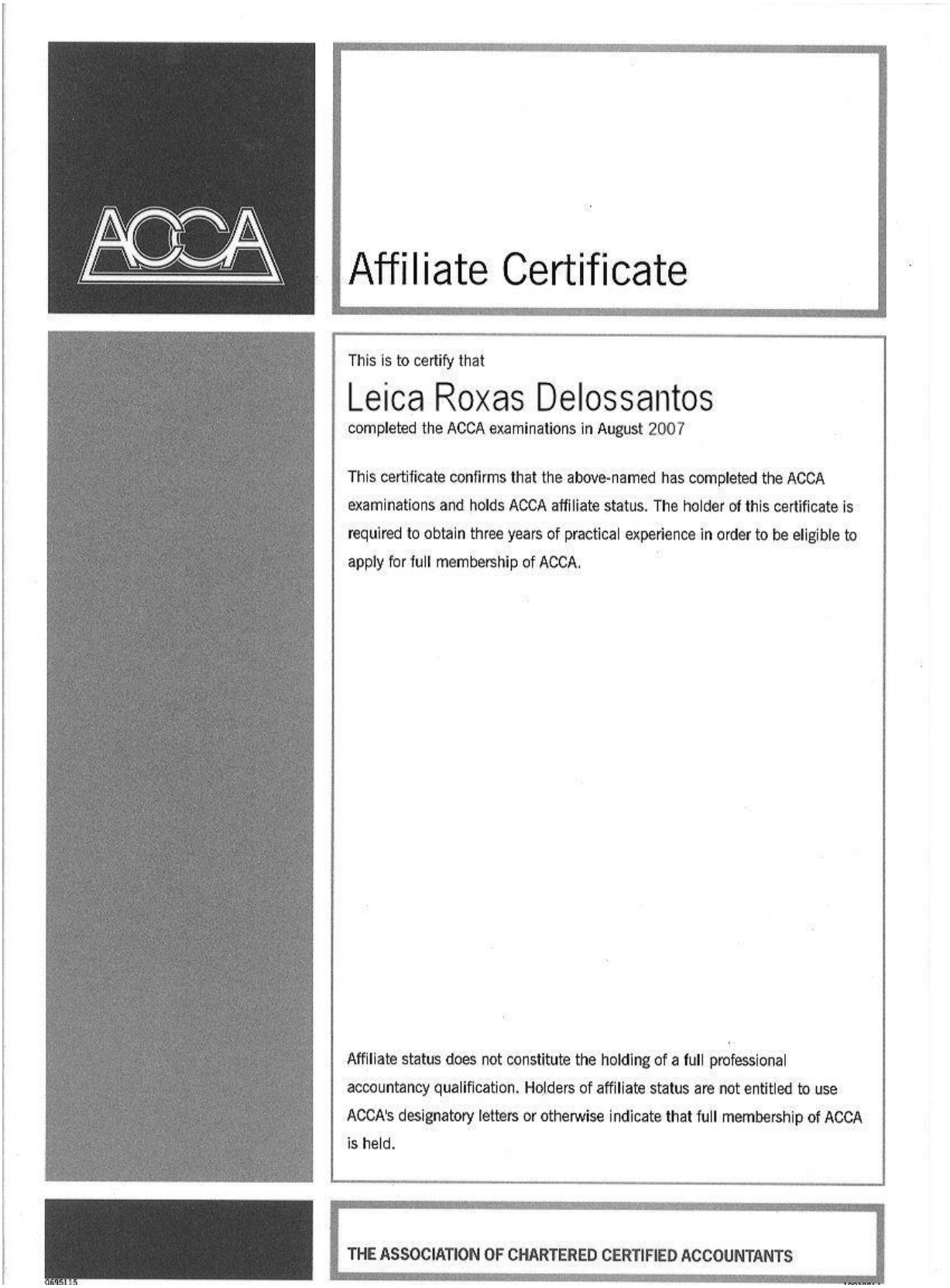
श्रेणी / Division *First*

कुलसचिव
Registrar

कुलपति
Vice Chancellor

INDIRA GANDHI NATIONAL OPEN UNIVERSITY

नई दिल्ली / New Delhi
दिनांक / Dated August 2, 2007



Affiliate Certificate

This is to certify that

Leica Roxas Delossantos

completed the ACCA examinations in August 2007

This certificate confirms that the above-named has completed the ACCA examinations and holds ACCA affiliate status. The holder of this certificate is required to obtain three years of practical experience in order to be eligible to apply for full membership of ACCA.

Affiliate status does not constitute the holding of a full professional accountancy qualification. Holders of affiliate status are not entitled to use ACCA's designatory letters or otherwise indicate that full membership of ACCA is held.

THE ASSOCIATION OF CHARTERED CERTIFIED ACCOUNTANTS

<table>
<tr><th>No.</th><th>Item</th><th colspan="5">Bidder Comments</th></tr>
<tr><td>17.</td><td>Picture</td><td colspan="5">  </td></tr>
<tr><td>18.</td><td>Name/Role</td><td colspan="5">Saad Jaradat – Technical Team Leader</td></tr>
<tr><td>19.</td><td>Nationality</td><td colspan="5">Jordanian</td></tr>
<tr><td>20.</td><td>Languages Spoken</td><td colspan="5">1.English
2.Arabic</td></tr>
<tr><td rowspan="4">20.1</td><td rowspan="4">Quality of 1. Language</td><td></td><td>Basic</td><td>Advanced</td><td>Fluent</td><td>Native</td></tr>
<tr><td>Verbal</td><td></td><td>✓</td><td></td><td></td></tr>
<tr><td>Writing</td><td></td><td>✓</td><td></td><td></td></tr>
<tr><td>Reading</td><td></td><td>✓</td><td></td><td></td></tr>
<tr><td rowspan="4">20.2</td><td rowspan="4">Quality of 2. Language</td><td></td><td>Basic</td><td>Advanced</td><td>Fluent</td><td>Native</td></tr>
<tr><td>Verbal</td><td></td><td></td><td></td><td>✓</td></tr>
<tr><td>Writing</td><td></td><td></td><td></td><td>✓</td></tr>
<tr><td>Reading</td><td></td><td></td><td></td><td>✓</td></tr>
<tr><td>21.</td><td>Education</td><td colspan="5">Computer Engineering, Yarmouk University, Irbid, Jordan</td></tr>
<tr><td>22.</td><td>Qualification & Certificates</td><td colspan="5"></td></tr>
<tr><td>23.</td><td>Project Experience</td><td colspan="5">8 Years</td></tr>
<tr><td>23.1</td><td>MEMS Project</td><td colspan="5">Played J2EE Developer role. Project description as follows:
The Awqaf and Minor Affairs Foundation had embarked on a project to implement a workflow system for the transactions that can be submitted on the foundation. In addition to build a set of e-services for AMAF customers.
I was responsible on developing the following:
• Building MEMS project prototype.
• Writing a set of SRS documents to simplify the development of processes.
• Building Shares Allocation process.
• Building Estate Limitation process.
• Update Deceased Profile e-service
• Handing over Matures Shares in the Estate eservice.
• Purchase Request e-service.
• Transactions Follow up e-service.</td></tr>
<tr><td>23.2</td><td>RAK e-Government implementation</td><td colspan="5">The government of Ras Al Khaimah (RAK) has embarked on a project to select and implement systems that support a government transformation program.
I was responsible on developing the following e-services:
Participate in developing User Management System.
Participate in developing RAK Portal Content.
Federal Electricity and Water Authority (FEWA) online bill payment.</td></tr>
</table>

		Online Recruitment for government departments which covers the administration and public user parts. Building Permits service including online fees payment. Polls. Replacement of lost documents. Sheikh Zayed Housing Program e-service. Trade license and lands inquiry e-service. Payment Reports. Sewerage online bill payment.
23.3	E-services and BPM automation	E-services and BPM automation Project for Directorate of Town Planning & Survey, Sharjah Government: Technical Leader
24.	Other	More than 8 years of experience in developing and implementing solutions using technologies: J2EE, Oracle ADF, Oracle SOA Suite & Oracle Siebel CRM

Form 2: Resume Summary

Certification

I, the undersigned, certify that these data are correct.

Bidder's Stamp

_____

Date and signature of the above mentioned person

_____

Date and signature of the bidder's authorized signatory

المملكة الأردنية الهاشمية

جامعة اليرموك

دائرة القبول والتسجيل

مصدقة

الرقم الجامعي : ٢٠٠١٩٧٤٠٠٧

الرقم الوطني : ٩٨٣١٠٠٥٤٣٦

قرر مجلس العمداء في جلسته رقم ٢٠٠٦/٠٥ تاريخ ١٤٢٧/٠١/٠٨ هـ الموافق ٢٠٠٦/٠٢/٠٧ م

منح **سعد عبدالكريم محمد جرادات.**

المولود في اربد عام ١٩٨٣م.

درجة البكالوريوس في الهندسه التكنولوجيه.

تخصص: هندسة حاسبات.

من كلية الحجاوي للهندسه التكنولوجيه.

بمعدل (٨٢,٤) اثنين وثمانين و أربعة أعشار. وتقدير جيدجدا.

وذلك في نهاية الفصل الاول من العام الدراسي ٢٠٠٥/ ٢٠٠٦م.

مدير دائرة القبول و التسجيل

زكريا ابو الذهب

اربد في ٢٠٠٦/٠٣/٠٧م.

تعتبر هذه الوثيقة لاغية في حالة الكشط أو الشطب .

No.	Item	Bidder Comments
1.	Picture	
2.	Name/Role	Tareq Zeyad Alawneh – Senior Developer
3.	Nationality	Jordanian
4.	Languages Spoken	1.English 2.Arabic
4.1.	Quality of 1. Language	
4.2.	Quality of 2. Language	

	Basic	Advanced	Fluent	Native
Verbal		✓		
Writing		✓		
Reading		✓		

	Basic	Advanced	Fluent	Native
Verbal				✓
Writing				✓
Reading				✓

5.	Education	BA in computer information system- Yarmouk University, Irbid, Jordan, 2009
6.	Qualification & Certificates	
7.	Project Experience	6 Years
7.1.	Project management System	- ADF development using (ADF Business Component , ADF Task Flow , JSF , Java , Servlets). - Oracle XE. - Created Resource Catalog to add reusable components. - Involved in design and development of Bounded and Unbounded Task Flows. - Developed UI Pages using ADF Rich Faces Components - Presented Demo to client about the UI development approach followed.
7.2.	Saudi Economic Cities Authority	- Oracle Web Center Portal Developer. - ADF Task flow design and implementation. - Involved in Working with View Criteria's, LOV's - Presented Demo to client about the UI development approach followed. - Involved in Unit Testing - Web Center Content (UCM) Developer and administrator (Configuration, Integration with web Center Spaces). - Web Center LDAP Authentication Configuration. - Creating JSF Portlets - Web Center security Management. - Customizing out-of-the Box task flows. - Discussion, Collaboration and Personalization.

		- Creating custom Page Templates, navigations, skins, Page Style, Content Presenter, Data Controls and Task Flows. - Web Center Content (UCM) security management (permission by group, permission by role, permission by role and permission by account. - Configure and Integrate dynamic convertor with web center spaces. - Web center content Archiver and content migration.
7.3.	Saudi commission for health specialties	- Oracle Web Center Portal Developer. - Designed and implemented ADF Business Components using Entity Objects, View Objects and Application Modules. - Involved in development activities including framework components, Requirement, Design and Implementation without any dependency. - Involved in design and development of Bounded and Unbounded Task Flows. - Developed UI Pages using ADF Rich Faces Components - ADF Task flow design and implementation. - Presented Demo to client about the UI development approach followed. - Designed and implemented ADF Business Components using Entity Objects, View Objects and Application Modules. - Web Center Content (UCM) Developer and administrator (Configuration, Integration with web Center Spaces). - Web Center LDAP Authentication Configuration. - Create JSF Portlets - Discussion, Collaboration and Personalization. - Creating custom Page Templates , navigations , skins , Page Style , Content Presenter ,Data Controls and Task Flows. - Web Center Content (UCM) security management (permission by group , permission by role ,permission by role and permission by account.
8.	Other	More than 6 years of experience in developing and implementing solutions using technologies: Oracle BPM, J2EE, Oracle ADF, Oracle SOA Suite & Oracle Siebel CRM

Form 3: Resume Summary

Certification

I, the undersigned, certify that these data are correct.

Bidder's Stamp

_____

Date and signature of the above mentioned person

_____

Date and signature of the bidder's authorized signatory

المملكة الأردنية الهاشمية

جامعة اليرموك

دائرة القبول والتسجيل

مصدقة

الرقم الجامعي : ٢٠٠٥٩٠٢٠٧٨ الرقم الوطني : ٩٨٧١٠٥٠٨٣١

قرر مجلس العمداء في جلسته رقم ٢٠٠٩/١٧ تاريخ ١٤٣٠/٠٦/١٤ هـ الموافق ٢٠٠٩/٠٦/٠٨ م

منح طارق زياد محمد علاونه.

المولود في الامارات عام ١٩٨٧م وجنسيته: اردنيه.

درجة البكالوريوس في تكنولوجيا المعلومات وعلوم الحاسوب.

تخصص: نظم معلومات حاسوبيه.

من كلية تكنولوجيا المعلومات وعلوم الحاسوب.

بمعدل (٦٩.٤) تسعة وستون و أربعة أعشار. وتقدير جيد.

وذلك في نهاية الفصل الثاني من العام الدراسي ٢٠٠٨ / ٢٠٠٩ م.

مدير دائرة القبول والتسجيل

حاتم الشريده

اريد في ٢٠٠٩/٠٦/١٤م

لتعتبر هذه الوثيقة لاغية في حالة الكشط أو التشطب .

No.	Item	Bidder Comments
1.	Picture	
2.	Name/Role	Bilal Yacoub Siyam – **Certified BPM consultant**
3.	Nationality	Jordanian
4.	Languages Spoken	1. Arabic 2. English

4.1.	Quality of Language 1.		Basic	Advanced	Fluent	Native
		Verbal				✓
		Writing				✓
		Reading				✓

4.2.	Quality of Language 2.		Basic	Advanced	Fluent	Native
		Verbal		✓		
		Writing		✓		
		Reading		✓		

5.	Education	Bachelor's degree in Computer Information Systems
6.	Qualification & Certificates	Oracle Unified Business Process Management Suite 11g
7.	Project Experience	3 years
7.1.	Project 1	AW Rostamani in Dubai (Oracle WebCenter Content)
7.2.	Project 2	Military Pension Fund in Bahrain (Oracle WebCenter Content)
7.3.	Project 3	Kuwait University (Oracle WebCenter Content, SiteStudio)
7.4.	Project 4	Public Authority of Minor Affairs (Oracle WebCenter Content)
7.5.	Project 5	Dubai International Conference for Awqaf website (ASP.NET, Oracle Database)
7.6.	Project 6	Laboratory Information Management Systems (LIMS) for RAK & Fujairah Municipality (VB.NET, Oracle Database)
8.	Other	

Form 4: Resume Summary

Certification

I, the undersigned, certify that these data are correct.

Bidder's Stamp

_____

Date and signature of the above mentioned person

_____

Date and signature of the bidder's authorized signatory

ORACLE

Certified Specialist

THIS CERTIFIES THAT

Bilal Siyam

HAS EARNED THE CREDENTIAL

Oracle Unified Business Process Management Suite 11g Certified Implementation Specialist

AND IS RECOGNIZED BY ORACLE UNIVERSITY AS A CERTIFIED SPECIALIST

December 29, 2014

Date

Senior Vice President, Oracle Corporation

ORACLE UNIVERSITY

23642374300BPM11GSOPN

No.	Item	Bidder Comments				
1.	Picture					
2.	Name/Role	Raed Essam Al Ghamry – **Quality Assurance**				
3.	Nationality	Palestinian				
4.	Languages Spoken	1. Arabic 2. English				
4.1.	Quality of 1. Language		Basic	Advanced	Fluent	Native
		Verbal				✓
		Writing				✓
		Reading				✓
4.2.	Quality of 2. Language		Basic	Advanced	Fluent	Native
		Verbal		✓		
		Writing		✓		
		Reading		✓		
5.	Education	Information Technology & Computing				
6.	Qualification & Certificates	Bachelor Degree in Information Technology & Computing Software Quality Assurance Test Analyst Technical Writer Software Support and Implementation Business Analysis				
7.	Project Experience					
7.1.	Project 1	E-services Project for Directorate of Town Planning & Survey, Sharjah Government: SQA Test Analyst, Technical Writer and Software Support and Implementation				
7.2.	Project 2	Internal Web Application for Ministry Of Interior, UAE: SQA Test Analyst and Technical Writer				
7.3.	Project 3	User Content Management Application for Ministry of Social Development, Bahrain: SQA Test Analyst, Technical Writer and Business Analysis				
7.4.	Project 4	Internal Web Application for Public Authority for Minors Affairs, Kuwait: SQA Test Analyst and Technical				
8.	Other					

Certification

I, the undersigned, certify that these data are correct.

Bidder's Stamp

_____

Date and signature of the above mentioned person

_____

Date and signature of the bidder's authorized signatory

الجامعة العربية المفتوحة
Arab Open University

شهـــادة تـخـرج

تشهد الجامعة العربية المفتوحة /فرع مصر/ بأن الطالب// رائد عصام رجب الغمري // قد أنهى الامتحان النهائي لدرجة البكالوريوس في// تقنيات المعلومات والحوسبة // بتقدير عام جيد جدا ، ومعدل تراكمي: 3.08 وذلك في نهاية الفصل الدراسي الثاني من العام الأكاديمي ٢٠٠٨/٢٠٠٩.

وقد تحررت هذه الإفادة بناء على طلبه لتقديمها إلى من يهمه الأمر.

علما بان الجامعة العربية المفتوحة تم تأسيسها بموجب قرار السيد رئيس جمهورية مصر العربية رقم ٢١٦ لسنة ٢٠٠٣ وموافقة مجلس الشعب المصري بجلسته في ديسمبر عام ٢٠٠٣.

وقد صدر قرار المجلس الأعلى للجامعات رقم (١٥٠) بتاريخ ٢٠٠٨/١٠/٢٣ بمعادلة درجة البكالوريوس التي تمنحها الجامعة بدرجة البكالوريوس في الحاسبات والمعلومات (علوم الحاسب) التي تمنحها الجامعات المصرية الخاضعة لقانون تنظيم الجامعات رقم ٤٩ لسنة ١٩٧٢ ولائحته التنفيذية.

شئون الطلاب
الاسم: شذى هاني
التوقيع: شذى هاني

مدير الجامعة العربية المفتوحة / فرع مصر

التاريخ : ٢٠٠٩/٧/٢١