# Contents

Chapter 1. **INTRODUCTION** .................................................................................. 1  
Welcome to the QAD Certification Program ............................................................... 1  
About This Study Guide ............................................................................................ 1  
Available Certifications ............................................................................................ 2  
About the Exams ....................................................................................................... 2  
Sample Question ....................................................................................................... 3  
Preparation for the Exams ......................................................................................... 4  
Study Hints ............................................................................................................... 5  

Chapter 2. **SYSTEM FOUNDATIONS** ................................................................. 7  
User Interface and General Capabilities .................................................................. 7  
Recommended Users Guides .................................................................................... 8  
System Implementation ............................................................................................ 8  

Chapter 3. **STANDARD FINANCIALS** .............................................................. 9  
Introduction ............................................................................................................ 9  
Estimated Preparation Time Required .................................................................... 9  
Recommended Training Courses ............................................................................ 9  
Recommended User Guides ..................................................................................... 10  
Sample Questions ................................................................................................... 10  
Product Modules Covered ....................................................................................... 11  
Financial System Implementation ............................................................................ 12  
Product Definition and Costing .............................................................................. 13  
General Accounting ............................................................................................... 14  
Accounts Receivable (AR) ..................................................................................... 14  
Accounts Payable (AP) .......................................................................................... 15  
General Ledger ...................................................................................................... 16  
General Ledger Transactions .................................................................................. 16
Activity from Other QAD Enterprise Applications Modules ........................................16
Financial Reporting .................................................................................................17
Consolidated Reporting ...........................................................................................18
Additional Topics for Review ...................................................................................18

Chapter 4. ENTERPRISE FINANCIALS .................................................................19
Introduction ..............................................................................................................19
Estimated Preparation Time Required .....................................................................19
Recommended Training Courses ...........................................................................19
Recommended User Guides .....................................................................................20
Sample Questions .....................................................................................................20
  Product Modules Covered .......................................................................................20
  Test Topics ..............................................................................................................22
Financials System Implementation ..........................................................................22
  Product Definition and Costing ...............................................................................23
Financials UI and Navigation ....................................................................................24
General Accounting ..................................................................................................24
  Accounts Receivable (AR) ....................................................................................25
  Accounts Payable (AP) .........................................................................................25
General Ledger ..........................................................................................................26
  General Ledger Setup ...........................................................................................26
  General Ledger Transactions .................................................................................27
Banking and Cash Management ..............................................................................28
Reports and Views ....................................................................................................28
Activity from Other QAD Enterprise Edition Modules ...........................................29
Additional Topics for Review ....................................................................................29
  Daemons .................................................................................................................30
  Budgets ..................................................................................................................30
  Consolidation .........................................................................................................30
  UI Customization and UDFs ................................................................................31
Financial Report Writer ..........................................................................................31
  Statutory Currency .................................................................................................32
  Structured Reports .................................................................................................32

Chapter 5. MANUFACTURING .............................................................................33
Introduction ..............................................................................................................33
Estimated Preparation Time Required .....................................................................33
Recommended Training Courses ...........................................................................33
Sample Questions .....................................................................................................34
Product Modules Covered .......................................................................................35
  Test Topics ..............................................................................................................36
Chapter 6. **CUSTOMER MANAGEMENT** ................................................. 45

Introduction ......................................................................................... 45
Estimated Preparation Time Required ................................................. 45
Recommended Training Courses ......................................................... 45
Recommended User Guides ................................................................. 45
Sample Questions ............................................................................. 46
Product Modules Covered ................................................................. 46
Addresses ......................................................................................... 47
Products and Pricing ......................................................................... 47
Inventory Control .............................................................................. 48
Sales Quotations ............................................................................... 48
Sales Orders and Customer Schedules ................................................. 49
Correction Invoices ........................................................................... 49
Allocations, Shipping and Invoicing .................................................... 50
Sales Analysis and Commissions ......................................................... 50
Legal Documents (sales side only) ....................................................... 51
Available-to-Promise (ATP) Enforcement ........................................... 51
Container and Line Charges ............................................................... 51
Customer Consignment Inventory ....................................................... 51
Shipment Performance ...................................................................... 52

Chapter 7. **SUPPLY CHAIN** ............................................................... 53

Introduction ......................................................................................... 53
Estimated Preparation Time Required ................................................. 53
Recommended Reading ..................................................................... 53
Recommended User Guides ................................................................. 54
Sample Questions ............................................................................. 54
Product Modules Covered ................................................................. 54
<table>
<thead>
<tr>
<th>Product Modules Covered</th>
<th>Sample Questions</th>
<th>Recommended User Guides</th>
<th>Recommended Training Courses</th>
<th>Estimated Preparation Time Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sourcing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inventory Control</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing/Requisitioning/Receiving</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplier Performance (Quality)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consignment (Supplier)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release Management (Supplier Schedules)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution Orders (Supplier)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kanban Loops (Supplier)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivering</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shipping</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Logistics Charges &amp; Accounting</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Consignment (Customer)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release Management (Customer Schedules)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution Orders (Shipping)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communicating</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Chapter 8. **

**SERVICE AND SUPPORT MANAGEMENT (SSM)**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>61</td>
</tr>
<tr>
<td>Estimated Preparation Time Required</td>
<td>61</td>
</tr>
<tr>
<td>Recommended Training Courses</td>
<td>61</td>
</tr>
<tr>
<td>Recommended User Guides</td>
<td>61</td>
</tr>
<tr>
<td>Sample Questions</td>
<td>62</td>
</tr>
<tr>
<td>Product Modules/Functional Areas Covered</td>
<td>62</td>
</tr>
<tr>
<td>QAD Service and Support Management (SSM)</td>
<td>63</td>
</tr>
<tr>
<td>Call/Repair Service Order Management</td>
<td>63</td>
</tr>
<tr>
<td>Service/Repair Activity</td>
<td>63</td>
</tr>
<tr>
<td>Warranties/Contracts</td>
<td>64</td>
</tr>
<tr>
<td>Setup</td>
<td>64</td>
</tr>
<tr>
<td>QAD Field Service Scheduler (FSS)</td>
<td>65</td>
</tr>
</tbody>
</table>

**Chapter 9. **

**ENTERPRISE ASSET MANAGEMENT (EAM)**

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>67</td>
</tr>
<tr>
<td>Estimated Preparation Time Required</td>
<td>67</td>
</tr>
<tr>
<td>Recommended Training Courses</td>
<td>67</td>
</tr>
<tr>
<td>Recommended User Guides</td>
<td>68</td>
</tr>
<tr>
<td>Sample Questions</td>
<td>68</td>
</tr>
<tr>
<td>Product Modules Covered</td>
<td>69</td>
</tr>
<tr>
<td>General</td>
<td>69</td>
</tr>
<tr>
<td>Maintenance</td>
<td>70</td>
</tr>
</tbody>
</table>
Chapter 10. **Configured Products** ......................................................... 73

Introduction ..................................................................................... 73
Estimated Preparation Time Required.............................................. 73
Recommended Training Courses ...................................................... 73
Recommended User Guides .............................................................. 73
Product Modules Covered ............................................................... 74
Configured Products Concepts and Setup ....................................... 74
Ordering Configured Products ......................................................... 74
Manufacturing and Shipping Configured Products ......................... 74
Forecasting Configured Items ......................................................... 74
Configurator Concepts and Setup .................................................... 75
Sales Configuration ........................................................................ 75
Product Configuration ..................................................................... 75
Configurator Questionnaire ............................................................ 75
Administration ................................................................................ 75

Chapter 11. **Customer Self Service** .................................................. 77

Introduction ..................................................................................... 77
Exam Format .................................................................................. 77
Estimated Preparation Time Required.............................................. 77
Recommended Preparation ............................................................ 77
Product Modules Covered ............................................................... 78
CSS Concepts ............................................................................... 78
How to set up CSS ........................................................................ 78
Business-to-Business (B2B) processing ........................................... 78
Credit Card Processing ................................................................. 78
Business-to-Consumer (B2C) processing ........................................ 78
Administrative Tasks ...................................................................... 78

Chapter 12. **Customer Relationship Management** ............................. 79

Introduction ..................................................................................... 79
Exam Format .................................................................................. 79
Estimated Preparation Time Required.............................................. 79
Recommended Preparation ............................................................ 79
Product Modules Covered ............................................................... 79
Recommended Areas of Study ......................................................... 80
Chapter 13. **TRANSPORTATION MANAGEMENT** ............................................. 81
  Introduction ................................................................................................. 81
  Estimated Preparation Time Required ......................................................... 81
  Recommended Training Courses ................................................................. 82
  Recommended Webinars ............................................................................. 82
  Recommended Reference Guides ................................................................. 82
  Other Documentation .................................................................................. 83
  Recommended Areas of Study ................................................................... 83

Chapter 14. **WAREHOUSING** ................................................................. 85
  Introduction ................................................................................................. 85
  Estimated Preparation Time Required ......................................................... 85
  Recommended Preparation .......................................................................... 85
  Online Training Courses ........................................................................... 85
  Instructor-led Training Courses ................................................................. 85
  Recommended Reading .............................................................................. 86
  Sample Questions ...................................................................................... 86
  Product Modules Covered .......................................................................... 87
  Recommended Areas of Study ................................................................... 87

Chapter 15. **BUSINESS INTELLIGENCE, APPLICATION** ...................... 89
  Introduction ................................................................................................. 89
  Estimated Preparation Time Required ......................................................... 89
  Recommended Training Courses ................................................................. 89
  Recommended User Guides ....................................................................... 90
  Product Components Covered .................................................................... 90
  Recommended Areas of Study ................................................................... 90
  BI Overview ............................................................................................... 90
  BI Portal User ............................................................................................ 91
  BI Portal Designer - Queries ...................................................................... 91
  BI Portal Designer - Reports ...................................................................... 91
  BI Portal Designer – Visual Items & Dashboards ......................................... 91
  BI Portal Administrator ............................................................................... 92
  BI Data Warehouse Designer (DWD) .......................................................... 92
  BI DWD Scheduler .................................................................................... 92

Chapter 16. **BUSINESS INTELLIGENCE, TECHNICAL 1** ....................... 93
  Introduction ............................................................................................... 93
  Estimated Preparation Time Required ......................................................... 93
  Recommended Preparation ....................................................................... 93
  Recommended Areas of Study ................................................................... 93
Chapter 17. **BUSINESS INTELLIGENCE, TECHNICAL 2** ............................. 95
Introduction ........................................................................................................ 95
Estimated Preparation Time Required ............................................................... 95
Recommended Preparation ............................................................................ 95
Recommended Areas of Study ......................................................................... 95

Chapter 18. **TECHNICAL FOUNDATIONS** ................................................... 97
Recommended Training ................................................................................... 97
Recommended Reading .................................................................................... 97
Sample Questions ............................................................................................ 98
Topics Covered .................................................................................................. 98
  Progress Open Edge ...................................................................................... 98
  Java and Tomcat ............................................................................................ 99
  MS.NET Framework ...................................................................................... 99
  You should know and understand the following: .......................................... 99
  Georgia Softworks - Telnet Server ................................................................ 100
  Operating Systems ....................................................................................... 100
  Architectural Overview ............................................................................... 100

Chapter 19. **ENTERPRISE EDITION TECHNICAL IMPLEMENTATION** ........ 101
Introduction .................................................................................................... 101
Estimated Preparation Time Required .............................................................. 101
Recommended Foundational Training ............................................................... 101
Recommended Training Courses .................................................................... 101
Recommended User Guides ............................................................................. 102
Sample Questions ........................................................................................... 102
Topics Covered ................................................................................................ 102
Installation and Administration ....................................................................... 103
  You should be able to: ................................................................................ 103
  Database Conversion .................................................................................... 103

Chapter 20. **ENTERPRISE EDITION CUSTOMIZATION** ............................. 105
Introduction .................................................................................................... 105
Estimated Preparation Time Required .............................................................. 105
Recommended Training Courses .................................................................... 105
Recommended Reading ................................................................................... 105
Sample Questions ........................................................................................... 105
Topics Covered ................................................................................................ 107
  Customization of Component-Based QAD Applications: ......................... 107
  Customization using QAD Applications Features and Functions, ............ 107
  Impact of QAD Enterprise Applications-EE on Development ................. 107
Chapter 21. Integrated Customization Toolkit ........................................ 109

- Introduction .......................................................................................... 109
- Estimated Preparation Time Required .................................................. 109
- Recommended Training Courses ............................................................ 109
- Recommended User Guides ..................................................................... 109
- Sample Questions .................................................................................. 110
- Product Modules Covered ....................................................................... 110
- Test Topics ............................................................................................ 110
- Administration ....................................................................................... 111
- Default Value Settings ........................................................................... 111
- Frame & Fields Settings ........................................................................ 112
- General informations ............................................................................. 112
- Groups .................................................................................................... 112
- Debugger ................................................................................................ 113
- ICT Tags .................................................................................................. 113
- Methods & Functions ............................................................................. 113
- Other options ........................................................................................ 114
- Program Hooks ...................................................................................... 114
- Shadow Tables Settings ......................................................................... 114
- Tasks ....................................................................................................... 115
- Triggers .................................................................................................. 115
- Validation Settings ................................................................................. 116
Welcome to the QAD Certification Program

The QAD Certification Program provides QAD employees, partners, and customers with a means of certifying the breadth and depth of their product knowledge. QAD customers are encouraged to work with QAD certified professionals to obtain maximum value from their QAD software.

The QAD Certification Program encompasses multiple Product Knowledge Specialization Exams that test your knowledge of core disciplines within QAD Enterprise Applications. To achieve certification for a discipline, you must achieve a passing score on the related Product Knowledge Specialization Exam. Participants can be certified in multiple disciplines by passing multiple Product Knowledge Specialization Exams.

Details about the QAD certification program can be found in the QAD Certification Program Guide, available on the Certification page of the QAD Learning Center. (Go to learning.qad.com and click on Certification in the main menu bar.)

About This Study Guide

The QAD Certification Program Study Guide is designed to assist you in preparing for the Product Knowledge Specialization Exams.

The path to certification requires significant preparation. Candidates may attempt certification at any time, but participation in a formal preparation process is highly recommended. Candidates are encouraged to read related product documentation, complete recommended coursework and work directly with QAD Enterprise Applications before attempting any certification exam.

The Study Guide will direct you to resources that can help you prepare for the exam. Chapters in the Study Guide are organized by exam with additional chapters for topics that apply to more than one exam. For each exam, the Study Guide provides a brief description, details about length and format of the exam, recommended reading,
recommended training courses and a list of concepts, terms, and other information you should know and understand before attempting an exam.

Available Certifications

QAD certification offerings are targeted to specific areas of expertise and grouped into two basic categories: functional and technical.

Functional exams certify understanding of application features and functions and the ability to apply that knowledge to solutions for specific business requirements.

Technical exams certify an understanding of the underlying application architecture and the ability to install, administer and customize QAD Applications.

About the Exams

Most exams are delivered in two parts. Part 1 is a practical exam with scenario-based questions that require hands-on work with the software. Part 2 contains true/false and multiple choice questions that can be answered without use of the application.

Time allowed for completion varies by exam, but most exams are 4 hours in length (for all parts). Participants who are not fluent in English and have an approved Request for Extra Time will be granted additional time to complete the exams.

Although 4 hours sounds like ample time to complete the test, experience has shown that participants need to use this time wisely:

- In the hands-on section, you may be tempted to answer the questions without using the computer. Do not. You may not get the right answer to this question or to a later question! Use the system to determine all of your answers.
- Make sure you read all instructions carefully before responding. In the hands-on section, make sure that you have entered all of the data, since subsequent questions may depend on it.
- If you cannot answer a true/false or multiple choice question quickly, move on to the next question. Come back to it later as time permits.
- You can use the computer to find the answers to questions, but you will not have time to look up the answer to every question. Save this method for the end of the test, after you have completed all other questions.
- When using the system to try to find answers, group related questions together. This may help you answer more than one question using the fewest steps and the least amount of time.
**Sample Question**

The example below was presented in an earlier version of an exam on Distribution. Note that it includes information about the relevant scenario (Information), instructions for Hands-on operations (Do This) and a question related to the activity just performed.

**Information:**

Quality Products Company purchases the 44-1000 sensor units for several of its sites. After reviewing the cost of this product for the previous year, the cost accounting department determined that the new standard material cost for the item should be as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Site</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>44-1000</td>
<td>10000</td>
<td>110.00</td>
</tr>
<tr>
<td></td>
<td>12000</td>
<td>110.00</td>
</tr>
<tr>
<td></td>
<td>15000</td>
<td>110.00</td>
</tr>
<tr>
<td></td>
<td>20000</td>
<td>110.00</td>
</tr>
<tr>
<td></td>
<td>30000</td>
<td>110.00</td>
</tr>
<tr>
<td></td>
<td>40000</td>
<td>125.00</td>
</tr>
</tbody>
</table>

**Do this:**

Record the new cost for this item, but do not use functions in the Cost Management module.

**Question:**

What maintenance function did you use to do this?

- a. 1.4.1 Item Master Maintenance, GL Cost Data
- b. 1.4.9 Item Cost Maintenance, GL Cost Data
- c. 1.4.18 Item-Site Cost Maintenance, GL Cost Data
- d. 1.4.22 Current Cost Set Move to GL Set

*Note: The correct answer is C. Was that your answer?*
Preparation for the Exams

The best way to learn QAD Enterprise Applications functionality is to attend QAD’s training classes, complete QAD online training courses, review product documentation and spend time practicing with the software.

Instructor-led Training Courses

The schedule of classroom training can be found on the QAD Learning Center at learning.qad.com.

Online Training Courses

Online courses feature QAD product experts delivering focused training on specific areas of QAD product functionality. A new self-study feature provides access to virtual labs where you can work directly with QAD Enterprise Applications software.

Online courses may be accessed at the QAD Learning Center at learning.qad.com.

Access to online training courses requires a QAD web account. (For information go to QAD Web Accounts at http://support.qad.com/resources/accounts.html.)

QAD Product Documentation

Use your QAD web account to access QAD Enterprise Applications product documentation, which includes user guides, glossary, release bulletins, and technical references.

Product documentation may be accessed via the QAD Document Library at http://www.qad.com/documentlibrary. User Guides and Training Guides can be viewed online or downloaded in PDF format.

Additional Information

Generic MRP II concepts and their application can be learned from publications and seminars offered through professional organizations and local colleges.

APICS certification is highly recommended. For additional information visit the Association for Operations Management website at www.apics.org.
Study Hints

All topics covered in the test are documented; be sure to access the online training presentations and product documentation referenced in this study guide.

- The QAD Enterprise Applications documentation describes the basic functionality of the software and the interrelationships among its parts. This material can provide a reasonable introduction to the system.

- If you are already familiar with the basic functioning of the system, your best way of studying is to work with the software. Go through the activities in QAD Enterprise Applications training materials and be sure that you can do the activities accurately.

- Try to familiarize yourself with control settings and the contents of key reports and maintenance screens. If changing the settings of key fields would change calculations, determine what those fields and settings are.

- Many questions ask you to determine how QAD Enterprise Applications can be used to solve business problems. Therefore it is useful when studying to think of real-world situations that would require the functionality you are studying.
There are certain tasks that must be performed in order to implement the basic functions of QAD Enterprise Applications. These include basic system management and implementation issues, including data setup.

The topics that follow will be addressed in every functional certification exam and should be mastered before any functional exam is attempted.

**User Interface and General Capabilities**

You should have a good understanding of the QAD Enterprise Applications user interface and a basic understanding of what PROGRESS is. Since each implementation begins with manager functions and control files, you should understand these in detail, particularly how they can be used to make the system easier to operate and to ensure adequate system security and control.

**You should know and understand the following:**

- How QAD Enterprise Applications functions can be selected (menus, user menus, function keys)
- In general, how QAD Enterprise Applications modules are interrelated and what data they share
- How control settings are used and what each control file field does
- Which QAD Enterprise Applications functions can be disabled if they are not in use
- What security methods are available
- How to define and manage printers and batch queues
- Which QAD Enterprise Applications Help functions are available and how these can be supplemented
- What options exist for personalizing the User Interface
- How to create and modify a Browse (Enterprise Edition only)
- The role and function of the Domain/Account Control
How generalized codes can be used for field validation
What master and transaction comments are and how they can be used
When to use batch queues and how to manage them
How to use Audit Trails

Recommended Users Guides
- User Interfaces
- Manager Functions
- Security and Controls

System Implementation
This section concentrates on the decisions you need to make at the beginning of any implementation and on the basic data elements that must be established.

You should know and understand the following:
- Which fundamental issues need to be addressed when planning a QAD Enterprise Applications implementation
- Which factors determine whether to implement single or multiple databases
- How functions operate when connected to multiple databases
- What options there are for accessing and connecting to multiple databases
- In a multiple entity database, what entity should be the primary entity
- In what situations you would define an entity, site, or location
- How domains, entities and databases are related
- What implementation and operating issues pertain to sites and locations
- What inventory status codes are and how they are used
- How the system stores inventory information in aggregate and in detail
- When inventory balances can be negative and how that is handled
- How the shop calendar and holidays are defined
- Which numbering and coding schemes make the most of QAD Enterprise Applications functionality
- How the general ledger calendar is defined
- How the general ledger calendar relates, or does not relate, to other calendars (the shop calendar, for example)
- The relationship between format positions, accounts, sub-accounts, cost centers and projects
Introduction

The Standard Edition Finance exam encompasses each of the financial modules of QAD Enterprise Applications Standard Edition and their integration with other system modules. This includes product definition and costing, general accounting, financial reporting and consolidated reporting. Multi-site, multi-entity, and multi-currency implementation issues are also included, along with product cost development and inventory valuation.

The objective of this test is to ensure that you have a broad understanding of QAD Enterprise Applications financial management functions and how they should be implemented and used.

Exam Format

The Standard Financials exam is delivered in two parts and requires hands-on interaction with QAD Enterprise Applications. Part 1 incorporates hands-on exercises, and Part 2 is multiple choice questions only. Both parts are delivered in a single 4-hour testing session. You must pass both parts in a single testing session to achieve certification.

Estimated Preparation Time Required

- 17 days (including training, documentation review and practice)

Recommended Training Courses

- Financial Management (5 days)
- General Ledger Fundamentals (1 day)
Recommended User Guides

- Financials A
- Financials B

Sample Questions

- After entering a purchase order of item 12-4012 answer the following...
  Which of the following GL transactions were created as a result of receiving a partial shipment of 45 units of item 12-4012?

<table>
<thead>
<tr>
<th></th>
<th>Entity</th>
<th>Account</th>
<th>Sub</th>
<th>CC</th>
<th>Debit</th>
<th>Credit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>1000</td>
<td>1500</td>
<td>2200</td>
<td>0600</td>
<td>63.00</td>
<td>63.00</td>
<td>Inventory PO Receipts (AP Holding)</td>
</tr>
<tr>
<td>b.</td>
<td>1000</td>
<td>1500</td>
<td>2200</td>
<td>0600</td>
<td>665.00</td>
<td>665.00</td>
<td>Inventory PO Receipts (AP Holding)</td>
</tr>
<tr>
<td>c.</td>
<td>1000</td>
<td>1500</td>
<td>2200</td>
<td>0600</td>
<td>63.00</td>
<td>63.00</td>
<td>Inventory PO Receipts (AP Holding)</td>
</tr>
<tr>
<td></td>
<td>1000</td>
<td>5000</td>
<td>2200</td>
<td>0600</td>
<td>27.00</td>
<td>27.00</td>
<td>Purchase Price Variance (PPV)</td>
</tr>
<tr>
<td>d.</td>
<td>1000</td>
<td>1500</td>
<td>2200</td>
<td>0600</td>
<td>665.00</td>
<td>665.00</td>
<td>Inventory PO Receipts (AP Holding)</td>
</tr>
<tr>
<td></td>
<td>1000</td>
<td>5000</td>
<td>2200</td>
<td>0600</td>
<td>285.00</td>
<td>285.00</td>
<td>Purchase Price Variance (PPV)</td>
</tr>
</tbody>
</table>

- If a supplier has ERS processing set to Yes, a company using ERS processing can still use standard accounts payable vouchersing. True or False?

- The Terms of Trade (ToT) code defaults from the:
  - Logistics supplier
  - Item supplier
  - Logistics charge code
**Product Modules Covered**

This test includes all of the financial modules, functions, and activities that pertain to general accounting as well as financial planning, reporting, and control. The test also covers other modules needed to implement the system.

**You should study the following:**

- Accounts Payable
- Accounts Receivable
- Addresses/Taxes
- Commission
- Currency dependent rounding
- General Ledger
- GL Transactions (Physical Inventory, Purchasing, Sales Orders, Invoices, Inventory Control)
- Manager Functions
- Multiple Currency
- Product Costing (Product Structures, Formulas, Routings, Work Centers, Process, Items, Sites)
- Product Line/Account (product lines)
- Salespersons (commission)

You should understand how to implement and use each of these modules in companies that are made up of single or multiple entities; operate with one or more currencies, in one or more countries, on one or more databases. This test will cover all aspects of QAD Enterprise Applications financial management including budgeting, product costing, and financial control functions.

Modules have been subdivided into three major topics for you to study:

- Financial System Implementation
- General Accounting
- General Ledger

The sections that follow present each of these topic areas in detail.
Financial System Implementation

This area of the test focuses on setting up financial management functionality in the system.

You should know and understand the following:

- How currency exchange rates are maintained and where they are used
- What the different types of accounts are and how each is used (asset, liability, income, expense, statistical, and memo accounts)
- What accounts may be maintained in terms of a non-base currency and how they are valued
- How rounding methods are maintained and where they are used
- How and when to run the Currency Dependent Rounding Conversion
- In general, where information can be reported in base and non-base currencies
- What realized and unrealized gain/loss represent, how they are calculated and the timing and difference between unrealized and realized gain/loss
- When spot rates can be entered; the effect of flagging a rate as “fixed”
- What bank codes must be defined and how they are used
- How and where each of the values in Domain/Account Control are used
- How credit terms are set up and used
- The various address types and how they are stored and used
- Alternative address coding schemes and which methods work best
- How customer information is maintained (in particular, credit information, salesperson, and currency)
- Which customer’s credit is checked—the sold-to, bill-to, or ship-to—and which addresses are used in Accounts Receivable
- How supplier information is maintained (in particular, credit information, prepayment balance, and remit-to)
- How salesperson commissions are entered and what reporting options exist
- How tax rates and tax exemptions are set up, calculated, and reported in all modules
- Which numbering and coding schemes make the most of QAD Enterprise Applications functionality
- What variances are calculated, when they are calculated and what they represent
Product Definition and Costing

This topic addresses on how products are defined for use in the manufacturing modules, and includes product structures, formulas, routings, and processes. The operational details are covered in the Manufacturing test, but since they also determine the standard cost of a product, you should understand what each of the cost components is and how costs are calculated. This test focuses on your understanding of cost calculations and the use of the Cost Management module.

You should know and understand the following:
- Why product lines are defined and where product line GL accounts are used
- How item prices and costs are set up
- What costs can be maintained without using the Cost Management module
- How costs are maintained for different kinds of items (purchased, manufactured, routable, phantom, or configured)
- What “this level” and “lower level” costs are
- What item information can and cannot be set up by site
- What item GL cost is and how it is used
- When and how to do cost roll-ups
- How product structures and formulas are set up and which fields affect product cost
- How BOM codes can be used to set up product structures or formulas used only for costing purposes
- How departments, work centers, routings, and processes are set up, and which fields affect product cost and cost accounting
- How the relationship between items, structures, and routings is defined, and which is used for costing
- How the system stores inventory information: in aggregate and in detail
- When inventory balances can be negative and how that is handled
- How inventory is valued; what happens to inventory value when GL cost changes; what types of inventory are revalued; what the GL transaction is
- In Cost Management, what types of cost sets can be maintained
- How standard, average, current, and simulation costs differ and how they are used
- In what way item costs, sites, and cost sets are related; what defaults apply
- What steps are involved in cost simulation
- What cost elements and cost categories represent; how they are created and used
- Why cost planning is useful; how cost plans appear on MRP and MPS summaries; and what must be done to activate planned changes
General Accounting

Here we concentrate on the functions that support day-to-day accounting activities. When studying these, think about how they can be used in both single and multi-company, multi-currency situations.

Accounts Receivable (AR)

This area of the test covers managing customer credit, invoicing sales and posting invoices, processing credits and returns, calculating finance charges, and recording customer payments. You should understand the relationship between AR and Sales Order/Invoicing functions.

You should know and understand the following:

- What the Invoice Post does
- How the shipping/invoicing process affects the number of invoices that are posted to AR
- The recommended method for handling returns
- The recommended method for handling corrections to quantity, price, and commissions
- How and when debit/credit memos are recorded
- What “contested” amounts are and what options you have to exclude them from reports
- How due and discount dates are calculated
- How to apply unapplied payments, debit memos and credit memos
- Where expected pay date is used and where it can be updated
- When taxes are calculated automatically and when they need to be entered manually
- How exchange tolerance is used
- How to check credit; what dunning letters are
- How finance charges are calculated
- What procedures should be followed for processing and applying payments; how prepayments or overpayments are handled
- How bad checks and bad debt write-off should be recorded
- In what situations drafts can be used
- What steps are involved in recording and approving a draft; how each step affects the customer balance and what GL entries are created
- What reports (audit trails) are available and in what situations each should be used
- What general ledger transactions are created by invoicing and accounts receivable; how they differ for multi-entity transactions
- What procedures should be followed at period-end
Accounts Payable (AP)

This area covers all accounts payable functions, including the relationship between Accounts Payable and Purchasing.

**You should know and understand the following:**

- The role of unconfirmed vouchers
- The recommended voucher registration procedure; what GL entries are generated and when they are created
- The process of three-way matching
- How Evaluated Receipts Settlement (ERS) works, when it should be used and how it affects three-way matching
- What AP rate and usage variances represent and when they are calculated
- When multiple vouchers are processed for one receiver and at what point variances are calculated
- How vouchers are entered for purchase receipts and miscellaneous payables
- When a voucher is automatically placed on hold and for what amount; the effect of entering a hold
- Why the voucher date should be consistent
- How due and discount dates are calculated
- Where expected pay date is used
- What taxes are calculated and when
- How prepayments are recorded and applied; how they appear on the supplier and on the purchase order
- How exchange tolerance is used
- The recommended procedural controls for selecting vouchers for payment and printing checks
- What hash totals are and where they appear
- What payment options exist (look up Check Forms and Payment Specification)
- The situations in which the Payment in Process account applies and how it is used
- The effect of a void check
- Why bank reconciliation is required
- General ledger transactions created by each of the accounts payable functions; how they differ for multi-entity payables
- How fluctuations in exchange rates are accounted for (gain/loss, price variance)
- What reports (audit trails) are available and in what situations each should be used
- What procedures should be followed at period-end
General Ledger

This topic covers general ledger functions and their integration with other modules. It also includes the procedural aspects of period-end and year-end processing, along with budgeting, financial reporting, and consolidations.

General Ledger Transactions

Here, we look at how to use QAD Enterprise Applications functions to record accounting activity and make adjustments and corrections in a single and multiple entity, multiple currency environment.

You should know and understand the following:

- The general flow of transaction activity and how it is controlled
- How to enter a general ledger transaction; when amounts should be entered as negative
- When balanced entities are needed and what the implications are
- In what situations reversing transactions should be used and what they do (know some examples)
- How effective dates are used to record future activity
- How recurring transactions are set up using Transaction Copy
- At what point GL transactions are posted
- What capabilities exist to review posted and unposted activity
- How changes to transactions generated in other modules can be prevented
- Recommended period-end and year-end procedures
- At what point revaluation of non-base currency accounts takes place and what the result is; why there is an extra revaluation function just for imported transactions
- How and when retained earnings are calculated and posted
- When retroactive transactions are used
- What Transaction Consolidation does and when it should be used

Activity from Other QAD Enterprise Applications Modules

You can get General Ledger journal transactions from other QAD Enterprise Applications modules. You should understand where these transactions are created and when, and what accounts they use. When calculations are involved (as with variances), you should understand the calculation. You should also know how to investigate the sources of these transactions in order to follow up on errors or make corrections and adjustments.
You should know and understand what GL transactions are created by the following:

- Sales order shipments and returns
- Posting invoices
- Purchase receipts and returns
- Purchase price and exchange variance
- Unplanned inventory transactions
- Cycle count and physical inventory updates
- Changes to standard and average costs

You should also know and understand the following:

- What account numbers and amounts are used in each of the above transactions
- What can cause unbalanced transactions and how they should be handled
- How transaction reference number and type are assigned and what they signify
- How to research GL transactions based on the transaction reference, type, and description information
- How posted transactions can be researched
- What financial control points exist in other modules (for example, exchange tolerances)
- What period-end and year-end procedures should be used in each of the modules
- What perpetual and periodic inventory methods are and how to implement each
- How to prevent or delete GL transactions

Financial Reporting

For this section, you should be familiar with the reports that are available in QAD Enterprise Applications and how they are used. In addition, you should understand how custom reports may be developed in the General Ledger module and how budgets are entered and calculated for use during reporting.

You should know and understand the following:

- What the various methods for entering budgets are
- At what level of detail budgets can be maintained
- When and why the Budget Calculation function is required
- Why memo accounts might be useful for storing base amounts for budgets
- How projects and cost centers may be used for detailed activity reporting
- Where project codes are used and how they can be validated
What standard financial reports and report options are available; how these may dictate what coding schemes to use for entities and accounts

When each of the report selections, such as “Level” and “Summarize Cost Centers,” would be used

How and when year-to-date profit and loss is calculated

What steps are involved in developing a custom report in General Ledger; what the capabilities and limitations are

Consolidated Reporting

You should be aware that QAD Enterprise Applications supports the consolidation of financial activity for multiple entities using the QAD Enterprise Applications General Ledger module. Within a database, each entity must use the same chart of accounts and base currency.

You should know and understand the following:

- What the consolidation process entails and how it is controlled
- How to set up account cross-references for transaction import/export
- How to handle accounts held in non-base currency at another entity and what options there are
- What capabilities exist to import transactions from an entity operating in another currency
- At what point account number and currency translation take place
- What rates may be used for currency translation and how these are entered
- What the Transaction Export and Import functions create
- What balancing entry is created when importing journal entries from entities held in another currency and what options there are regarding where it is posted
- When and why the Imported Transaction Revaluation is required

Additional Topics for Review

Part 2 of the PKS exam tests your understanding of additional financial concepts.

You should know and understand the following:

- Intercompany Accounting
- Linked-Site Costing
- Logistics Accounting
- Purchase and Work Order Accounting by Site
CHAPTER 4

Enterprise Financials

Introduction

The Enterprise Edition Finance exam encompasses each of the financial modules of QAD Enterprise Applications Enterprise Edition and their integration with other system modules. This includes product definition and costing, general accounting, financial reporting and consolidated reporting. Multi-site, multi-entity, and multi-currency implementation issues are also included, along with product cost development and inventory valuation.

The objective of this test is to ensure that you have a broad understanding of QAD Enterprise Financials functions and how they should be implemented and used.

Exam Format

The Enterprise Financials exam is delivered in two parts and requires hands-on interaction with QAD Enterprise Applications. Part 1 incorporates hands-on exercises, and Part 2 is multiple choice questions only. Both parts are delivered in a single 4-hour testing session. You must pass both parts in a single testing session to achieve certification.

Estimated Preparation Time Required

- 24 days (including training, documentation review and practice)

Recommended Training Courses

- Financials Fundamentals – Enterprise Edition (5 days)
- Advanced Financials – Enterprise Edition (4 days)
- Enterprise Financials Functional Implementation (5 days)
**Recommended User Guides**

- Financials
- Global Tax Management
- Intrastat
- Costing
- Fixed Assets

**Sample Questions**

**Do this:** Receive from supplier S09000 a supplier credit note for 2500 USD and allocate this on GL account 1670. Net this credit note against the outstanding invoice for this supplier.

What was the purchase price difference posted on the PO Price variance account as a result of the matching transaction?

- 2500 USD unfavorable
- 2500 USD favorable
- 0 USD
- 2900 USD unfavorable

What is the maximum number of levels you can create in a budget?

- 7
- 10
- 8
- 5

All system SAF concepts apply to:

- Financial transactions only
- Financial and operational transactions
- All operational transactions
- All transactions (Financial, Operational, External)

**Product Modules Covered**

This test includes all of the Financials modules, functions, and activities that pertain to general accounting, as well as financial planning, reporting, and control. The test also covers other modules needed to implement the system.
You should study the following:

- Accounts Payable
- Accounts Receivable
- Addresses and taxes
- Statutory currency
- Rounding methods
- Entities, domains, profiles, and shared sets
- Customer, supplier, salesperson, and end-user setup and data
- General Ledger setup (chart of account elements, daybooks, COA mask, GL periods, and tax periods)
- General Ledger transactions (journal entries, reversing transactions, recurring entries, mirror accounting, mass layer transfer, and open item adjustment)
- Operational GL transactions (physical inventory, purchasing, sales orders, invoices, inventory control)
- Budgets
- Consolidation
- Banking entries
- Financial Report Writer
- Multiple currencies and exchange rates
- Product costing (product structures, formulae, routings, work centers, process, items, and sites)
- Salespersons (commission)

You should understand how to implement and use each of these modules in systems that are composed of a single or multiple domains, operate with one or more currencies, in one or more countries, and on one or more databases. This test will cover all aspects of QAD Enterprise Financials.
Test Topics

Modules have been subdivided into eight major topics for you to study:

- Financial System Implementation
- Financials UI and Navigation
- General Accounting
- General Ledger
- Banking and Cash Management
- Reports and Views
- Activity from Other Enterprise Edition Modules
- Additional Topics

The sections that follow present each of these topic areas in detail.

Financials System Implementation

This area of the test focuses on setting up Enterprise Financials functionality in the system.

You should know and understand the following:

- How currency exchange rates are maintained and where they are used.
- What the different types of accounts are and how each is used (control accounts, standard GL accounts, system accounts, and banking and cash accounts).
- How to apply currency restrictions to accounts.
- How rounding methods are maintained and where they are used.
- How to set up domains, entities, profiles, and shared sets.
- Users, roles, role permissions, and role membership.
- Where to activate budgeting, user settings, COA mask options, additional GL numbering, suspended and delayed taxes, and mirror accounting.
- How to create business relations.
- Customer, supplier, end-user, and salesperson setup and data.
- What realized and unrealized gain/loss represent, how they are calculated and the difference between unrealized and realized gain/loss.
- How and where each of the values in Domain/Account Control is used.
- How credit terms and credit limits are set up and used.
- How to create and use invoice status codes.
- The various address types and how they are stored and used.
- How tax rates and tax exemptions are set up, calculated, and reported in all modules.
- What data is stored at domain-level, system level, and entity level.
• What variances are calculated, when they are calculated and what they represent.

See User Guide: QAD Financials, and Financials Fundamentals Training Guide for information on domains, COA mask settings, entities, profiles, shared sets, activating mirror accounting, activating suspended and delayed tax, currencies, rounding methods, customer, supplier, end-user, and salesperson setup, business relations, address types, credit terms and limits, invoice status codes, and GL accounts.


See User Guide: QAD System Administration for information on activating budgeting, and system and user settings.

See User Guide: QAD Security and Controls for information on users, roles, role permissions, and role membership.

**Product Definition and Costing**

This topic addresses how products are defined for use in the manufacturing modules, and includes product structures, formulae, routings, and processes. The operational details are covered in the Manufacturing test, but since they also determine the standard cost of a product, you should understand what each of the cost components is and how costs are calculated. This test focuses on your understanding of cost calculations and the use of the Cost Management module.

**You should know and understand the following:**

• Why product lines are defined and where product line GL accounts are used.
• How item prices and costs are set up.
• What costs can be maintained without using the Cost Management module.
• How costs are maintained for different kinds of items (purchased, manufactured, routable, phantom, or configured).
• What “this level” and “lower level” costs are.
• What item information can and cannot be set up by site.
• What item GL cost is and how it is used.
• When and how to perform cost roll-ups.
• How product structures and formulae are set up and which fields affect product cost.
• How BOM codes can be used to set up product structures or formulae used only for costing purposes.
• How departments, work centers, routings, and processes are set up, and which fields affect product cost and cost accounting.
• How the relationship between items, structures, and routings is defined, and which is used for costing.
How the system stores inventory information in aggregate and in detail.
When inventory balances can be negative and how that is handled.
How inventory is valued; what happens to inventory value when GL cost changes; what types of inventory are revalued; what the GL transaction is.
In Cost Management, what types of cost sets can be maintained.
How standard, average, current, and simulation costs differ and how they are used.
In what way item costs, sites, and cost sets are related; what defaults apply.
What steps are involved in cost simulation.
What cost elements and cost categories represent; how they are created and used.

See User Guide: QAD Costing for information on costing.

Financials UI and Navigation
This area covers features of the UI, such as workflows, browses, grids, and stored searches, and how to navigate through the UI.

You should know and understand the following:
How to sort within grids.
How to use drop-down filters.
Grouping search results in a browse.
Adding or removing columns in a browse.
Browsing and saving draft records.
How to set up and use a workflow.
Attaching documents.
Stored searches.
Using the Translation option for fields.
Summarizing search results.
Exporting results to XML.


General Accounting
General accounting includes the functions that support day-to-day accounting activities.
Accounts Receivable (AR)

This area of the test covers managing customer credit, sales orders, posting invoices, creating invoices directly in AR, processing credits and returns, calculating finance charges, and recording customer payments. You should understand the relationship between AR and the sales order/invoicing functions.

You should know and understand the following:

- Sales-related invoices.
- Creating miscellaneous invoices directly in AR.
- Processing payments using payment instruments.
- Adjusting the open balance of a customer invoice or credit note.
- Tracking and reporting customer AR activity.
- Sending statements and reminder letters for overdue payments.
- Calculating finance charges.
- Reporting on all customer invoice-related transactions and statuses.
- The function of Invoice Post and Print.
- How the shipping/invoicing process affects the number of invoices that are posted to AR.
- The recommended method for handling returns.
- How due and discount dates are calculated.
- When taxes are calculated automatically and when they need to be entered manually.
- How to check credit.
- What procedures should be followed for processing and applying payments; how prepayments are handled.
- How bad checks should be recorded.
- How to calculate suspended tax on customer invoices.


Accounts Payable (AP)

This area includes all accounts payable functions, including the relationship between accounts payable and purchasing.

You should know and understand the following:

- Creating and maintaining supplier invoices and credit notes.
- Preparing invoices for allocation and allocating them.
• Preparing invoices for matching.
• Identifying purchase orders and matching with supplier invoices.
• Approving an invoice for payment and releasing it for inclusion in the payment cycle.
• Adjusting the open balance of a supplier invoice or credit note.
• Generating payments to suppliers in various forms.
• Reporting on all supplier-related transactions and statuses.
• Viewing the supplier balance and open item details.
• Reversing incorrect invoices and their postings.
• Using the Scan daemon to create invoices.
• Setting defaults in Supplier Invoice Control (28.24).
• Calculating delayed tax on supplier invoices.
• Reversing and replacing supplier invoices.
• GL Correction Control (25.13.24) settings.
• What AP rate and usage variances represent and when they are calculated.
• How due and discount dates are calculated.
• What taxes are calculated and when.
• How prepayments are recorded and applied.
• The situations in which the Payment in Process account applies and how it is used.
• The effect of a void check.
• General ledger transactions created by each of the accounts payable functions.
• How fluctuations in exchange rates are accounted for (gain/loss, price variance).
• What reports are available and in what situations each should be used.


General Ledger
This topic covers general ledger setup and GL transactions.

General Ledger Setup
This area covers the QAD Enterprise Financials activities used to set up charts of accounts, account verification, layers, daybooks, GL calendar, and tax calendar.

You should know and understand the following:
• Planning and creating the different types of accounts required for the chart of account.
• How to create system accounts, and the use of each system account type.
• Defining and using units of measure on GL accounts.
• What accounts use automatic and manual posting.
• Adding analysis to accounts.
• How to define account revaluation and consolidation settings.
• Configuring the GL mask for a domain.
• Setting up GL Correction Control.
• How to create layers, daybooks, and daybook sets.
• Dividing the fiscal year into smaller subsets using the GL calendar year and GL periods.
• Defining the tax calendar.
• Closing modules to transactions.


General Ledger Transactions

This area covers the QAD Enterprise Financials functions used to record accounting activity and make adjustments and corrections.

You should know and understand the following:
• The general flow of transaction activity and how it is controlled.
• How to enter a journal entry transaction; when amounts should be entered as negative.
• In what situations to use reversing transactions.
• How to use Open Item Adjustment to reconcile unpaid or incorrectly paid invoices and credit notes.
• Using posting templates.
• Creating recurring entries for transactions that are repeated regularly
• When to use mirror accounting and how to set it up.
• The GL effects of mirror accounting.
• At what point operational GL transactions are posted.
• How and when to use Mass Layer Transfer.
• How to process intercompany and cross-company transactions, and the differences between them.
• What capabilities exist to review posted and unposted operational activity.
• How changes to transactions generated in other modules can be prevented.
• Recommended period-end and year-end procedures.
• Revaluation of non-base currency accounts.
• How and when retained earnings are calculated and posted.


**Banking and Cash Management**

This area covers how to use QAD Enterprise Financials Banking functions.

**You should know and understand the following:**
• Defining bank details and linking bank data to customers and suppliers.
• How to process transaction data contained in electronic bank files.
• Compiling a bank statement using banking entries.
• Allocating the incoming and outgoing payments on the statement lines to open items, GL accounts, selections, and payments.
• Entering bank charges.
• Recording a manual check.
• Handling exchange rate conversions during allocation.
• Maintaining daily cash movements.
• Analyzing actual and projected cash flow over a set period.


**Reports and Views**

This area covers how to use QAD Enterprise Financials reporting functions, and views.

**You should know and understand the following:**
• The various Financials reports and views, and the function of each.
• When to print a Trial Balance.
• Creating and using report variants.
• Scheduling reports.

Activity from Other QAD Enterprise Edition Modules

You can get General Ledger journal transactions from other QAD Enterprise Applications modules. You should understand where these transactions are created and when, and what accounts they use. When calculations are involved (as with variances), you should understand the calculation.

You should know and understand what GL transactions are created by the following:

- Sales order shipments and returns.
- Operational transactions and posted invoices.
- Purchase receipts and returns.
- Purchase price and exchange variance.
- Unplanned inventory transactions.
- Cycle count and physical inventory updates.
- Changes to standard and average costs.

Additional Topics for Review

Part 2 of the certification exam tests your understanding of additional financial concepts.

You should know and understand the following:

- Intercompany Accounting
- General and Linked-Site Costing
- Logistics Accounting
- Purchase and Work Order Accounting by Site
- The purpose of SAFs, how to define and use them, the types of system SAFs available, and SAF defaulting.
- Daemons
- Evaluation Receipts Settlement (ERS)
- Budgets
- Consolidation
- Structured Reports
- Financial Report Writer
- Statutory Currency

Defining and using operational and financial allocations. Excel Integration


See User Guide: QAD Costing for information on costing.

**Daemons**

This area covers how to set up and use the various system daemons.

**You should know and understand the following:**

- Which daemons are available in QAD Enterprise Applications.
- The purpose of each daemon.
- How the XML and Scan daemons interact with and benefit other EE Financials functions.


**Budgets**

This area covers how to use QAD Enterprise Financials Budget functions to record revenue and expense for a given time period.

**You should know and understand the following:**

- Use the Budget Create activity to define budgets for a single entity or for a group of entities.
- Defining the budget hierarchy and level of detail.
- How to create a structure of budget topics and the restrictions that apply.
- Defining a budget structure for use in structured reports.
- Using the Excel Hotlink to maintain budget data in Microsoft Excel and then synchronize it with the system.
- The role of the Budget daemon.
- How to use the Budget Detail and Budget Overview reports to follow the progression of spending and earnings.


**Consolidation**

This area covers how to use QAD Enterprise Financials Consolidation functions to combine financial records from a number of entities within an organization into one consolidated set of financial statements.
You should know and understand the following:

- The types of transaction you can consolidate.
- How to set up consolidation, including creating cross-references.
- How to process intercompany transactions when consolidating.
- The conditions that must exist before you can create a consolidation record.
- Creating a consolidation cycle, and consolidation record.
- How currency translation is performed at consolidation.


UI Customization and UDFs

This area covers how to use the QAD Enterprise Financials Design Mode and User-Defined Field functions to tailor the user interface of component-based functions.

You should know and understand the following:

- How to customize user interfaces using the Design Mode feature.
- How to create a User Defined Field (UDF), and add it to a screen.
- The types of UDF, and the number of UDFs of each type you can create.


Financial Report Writer

This area covers how to use Financial Report Writer to create and run custom reports.

You should know and understand the following:

- The main components of Financial Report Writer such as report charts, report calendars, analysis codes, report cubes, report columns, and report masters.
- How to build a report.
- Report charts and the types of COA elements they can include.
- How COA cross references are used in Financial Report Writer.
- The function of the Cube daemon.
- Report cubes statuses.
- How currency translation methods are used in Financial Report Writer.
Statutory Currency

This area covers statutory currency, and how it is implemented.

You should know and understand the following:

- How statutory currency is enabled and where it is used.
- Statutory currency in relation to rounding differences, exchange gains and losses, and purchase price variances.
- How statutory currency is calculated for financial transactions.
- Statutory exchange rates, and how they are used.
- Inventory exchange rates, and how they are used.
- How the Fallback to ACCOUNTING and Validity End Dates fields on the Exchange Rate Type record are used.

Structured Reports

This area covers how to use the QAD Financials Budget function to define structured reports.

You should know and understand the following:

- What reports use user-defined structures.
- How to create report structures, and the restrictions that apply to report structures.
- How to print the hierarchical design of a structured report.
- The purpose of system accounts in report structures.

Introduction

The Manufacturing exam covers MRP II implementation and basic data setup, production scheduling and control (including inventory control), sales, production and resource planning, along with material/capacity/distribution requirements planning. Multiple site concepts and lot/serial traceability are also included.

The objective of this test is to ensure that you have a broad understanding of QAD Enterprise Applications manufacturing functions and how they should be implemented and used. Since manufacturing and planning functions form the core of QAD Enterprise Applications, all consultants should be fully versed in their functionality and use.

Exam Format

The Manufacturing exam is delivered in two parts and requires hands-on interaction with QAD Enterprise Applications. Part 1 incorporates hands-on exercises, and Part 2 is multiple choice questions only. Both parts are delivered in a single 4-hour testing session. You must pass both parts in a single testing session to achieve certification.

Estimated Preparation Time Required

- 22 days (including training, documentation review and practice)

Recommended Training Courses

- Quick Start (5 days for Standard Edition)
- Manufacturing Planning (4 days covering Inventory Control, Forecasting Simulation, Master Scheduling & RCCP, and MRP/CRP Fundamentals)
- Manufacturing Execution (5 days covering Product Structures; Work Centers, Routings & WO Subcontracting; Work Orders; Advanced Repetitive; and Shop Floor Control)
Recommended Reading

- Product Costing and Cost Management Training Guide
- Lean Manufacturing: Concepts Training Guide
- WIP Lot Trace Training Guide
- Product Change Control Training Guide
- Manufacturing User Guide (all sections are relevant)
- Master Data User Guide (Product Change Control, Compliance)
- PRO/PLUS User Guide (WIP Lot Trace)
- Supply Chain User Guide (Enterprise Operations Planning)
- Kanban User Guide (Lean Manufacturing, Pull Replenishment Techniques)
- Financials User Guide (Costing)

Sample Questions

Information: The marketing department expects the demand for 44-150 to be much higher than initially expected. The manufacturing planning and production control departments decided that item 44-150 can be made in a standard production quantity of 100 instead of 10.

Do this:
- Change the standard production quantity for 44-150 to 100.
- Recalculate the Current costs for item 44-150 at site 12000.

Question: The total current labor cost for item 44-150 at site 12000 is:
- 10.00
- 11.025
- 11.25
- 13.50

The planning horizon for Material Requirements Planning (MRP) should be set to the longest purchasing or manufacturing lead time among the items to be planned. True or False?
You would create a supermarket

- Before operations that include unpredictable elements and long changeover times
- After a divergence point—a place where the process output begins to supply multiple downstream processes
- Between operations where the batch size has to change because the every-part-every interval (EPEI) is too large
- At a point where the remaining time to completion to less than the customer lead time

**Product Modules Covered**

This test covers the content of each of the manufacturing and planning modules, together with all of the modules needed to implement the system and define products.

**You should study the following:**

- Capacity Requirements Plan
- Compliance
- Co-Products/By-Products
- Distribution Requirements Planning
- Enterprise operations Planning
- Flow Scheduling
- Forecast/Master Plan
- Formula/Process
- Inventory Control
- Items/Sites
- Kanban/Lean Manufacturing
- Manager Functions
- Material Requirements Plan
- Product Costing (Product Structures, Formulas, C0/By-Products, Routings, Work Centers, Process, Items, Sites)
- Product change Control
- Product Line Plan
- Product Structures
- Purchasing (Subcontract)
- Quality Management
- Repetitive/Advanced Repetitive
- Resource Plan
The test covers implementation issues, how functions in each of these modules can and should be used, and how they are integrated. It requires an understanding of how manufacturing functions are used with and affect other modules such as Purchasing, Sales, and General Ledger.

Test Topics

The manufacturing modules have been subdivided into three major topics for you to study. These are:

- Product Definition and Costing
- Production Scheduling and Control
- Distribution, Manufacturing, and Capacity Planning

In the following sections, each of these topics is briefly described, followed by a list of what you should know and understand.

Product Definition and Costing

This topic addresses how products are defined for use in the manufacturing modules. It includes product lines and items, as well as the definition of manufacturing departments, work centers, formulas, product structures, process operations, and routings. Since all of these determine the standard cost and lead time of a product, you should understand how both are calculated and what each of the cost and lead-time components represents. You should understand how all of these can be applied in discrete, process, and mixed-mode environments.

You should know and understand the following:

- What item status codes are and how they are used
- What inventory status codes are and how they are used
- What values should be entered in each of the individual data fields in Item Master Maintenance, which fields are required and which are optional, and how each field is used
- What values should be entered in each of the individual data fields in Product Structure Maintenance, which fields are required and which are optional, and how each field is used
- How to determine the item unit of measure, where it is used, and where an alternate unit of measure can be used
- What BOM codes are and when they are used
• What functionality is provided by product structures and formulas, and the differences between product structures and formulas
• How BOM codes, formulas, and product structures are used in costing, planning, scheduling, and engineering control functions
• The difference between scrap and yield, and how each is used
• What batch quantity is and how it is used; the difference between batch and item order quantity
• How standard operations can be used and what happens when a standard operation changes
• What functionality is provided by routings and processes, and the differences between routings and processes
• How lead time and manufacturing costs are calculated from routings and processes
• What routing or process is used by planning, scheduling, and labor reporting
• How the relationship between items, structures, and routings is defined
• How substitute items are set up and used
• How common routings and structures are set up and used
• What “this level” and “lower level” costs are
• What item GL cost is and how it is used
• When and how to do cost roll-ups
• How costs are maintained for different kinds of items (for example, purchased, manufactured, routable, phantom, configured, c-products, by-products)
• What cost sets can be maintained without using the Cost Management module
• What data can be managed using Product Change Control
• How design groups, routing slips, severity lists, severity levels and PCO/PCR types are used to define and manage product change approvals;
• How PCRs and PCOs are created, routed, approved, released, distributed, incorporated and implemented
• How PCO effective dates are used
• How item revision levels are managed using Product Change Control

**Production Scheduling and Control**

This topic covers manufacturing and inventory control functions used to execute manufacturing plans and the effect that these functions have on planning, the general ledger, and other parts of the system.
Inventory Control

Here we look at the day-to-day activities of inventory control that support manufacturing operations. Particularly important are issues related to implementation, operating procedures, and integration with other modules. When reviewing each of these topics, be sure to relate them to both work orders and repetitive manufacturing functions.

You should know and understand the following:

- How item shelf life and expiration date are related
- How inventory details (lot/serial, reference, grade, assay %, and expire date) are maintained and used
- Where and how alternate units of measure are used
- What general and detail allocations are; how they are related, and how they are different
- How inventory allocations are controlled and monitored for both manufacturing orders and sales orders
- What processes can be used to move inventory from and to work center locations or manufacturing orders
- What methods are used for floor stock and bulk issue materials
- What options exist for handling component scrap
- What backflushing is and what its risks and benefits are
- What general ledger transactions are created by inventory activities and when they are created

Manufacturing

Manufacturing modules are used to schedule and monitor production in discrete, repetitive, process, and mixed-mode environments. Work Order, Shop Floor Control, and Repetitive functions are covered, as is the entire production cycle: scheduling production; printing picklists; issuing components; recording labor; processing completions, receipts, scrap, rework, and rejects; and monitoring utilization, efficiency, and work in process.

You should know and understand the following:

- How production is scheduled and controlled using work orders versus repetitive schedules, and in what types of manufacturing environments each is appropriate
- What planned orders, master scheduled orders, work orders, repetitive scheduled orders, cumulative orders and final assembly orders are and how they are related
- What needs to be set up prior to using repetitive functions
- What the steps of the advanced repetitive life cycle are, why each is used, and how they affect MRP
• What the differences are between forward and backward scheduling and loading, and when each is used
• What each of the fields on a work order is used for
• How work order release and due dates are scheduled, and when they should be manually adjusted
• How type and status codes relate to the work order life cycle, and their effect on work order bills and routings
• In what ways routable items are managed differently from other items
• How work orders can be used to track custom production, rework, or repairs
• How final assembly work orders are created and processed; what components are referenced; what options are available for receiving and shipping final assemblies
• How components are allocated and the affect of Allocate Single Lot and Critical Items on allocations
• How repetitive picklists are set up and how they differ from work order picklists
• How substitute items and alternate bills and routings are processed, and how phantom items work (in both the Work Order and Repetitive modules)
• How manufacturing operations are monitored; what operation status indicates and how it is set
• How subcontracting is managed, and the interface to Purchasing in both work orders and advanced repetitive
• What options there are for reporting labor in both work orders and advanced repetitive
• What nonproductive labor is and its consequence on efficiency and utilization
• When and how a work order is split and what happens
• How and when variances are calculated when using standard or average costing
• What rate and usage variances are and how they are calculated for material, labor, and burden
• When and how mix variance is calculated
• How the system accounts for scrap at an operation and at work order receipt
• When orders should be closed for accounting purposes and what this does
• How utilization, efficiency, and productivity are calculated and used
• What general ledger transactions are created by manufacturing activities
• How work order close and receipt dates are used
• What work order control information is set up by site
• How master specifications and item specifications are used to manage quality procedures
• How quality orders are created
• What happens when quality order results are entered
• How quality specifications can be used in routings for process inspections

**Lean Manufacturing**

Manufacturers are increasingly using lean thinking to remove waste from value streams, and this is supported in QAD Enterprise Applications by the Kanban and Flow Scheduling modules.

*You should know and understand the following:*

• When and why kanbans are used to manage production
• How to define kanban loops using kanban processes and supermarkets
• What statuses are used for kanban cards, and what each status means
• How kanban transactions are used, and the effects of each transaction
• How accumulators are used
• Sizing calculations for kanbans, and how EPEI, average demand and takt time are used
• What flow schedules are and how they are used
• How schedule periods, flow rates and takt time are used to schedule production
• The relationship between flow schedules, work orders and repetitive schedules

**Compliance**

QAD Enterprise Applications’ Compliance functionality enables businesses to comply more easily with government regulations and international agreements. The Compliance module consists of site security, batch control, lot control, work order control, and controlled substance fields. Each feature can be used in conjunction with or independent of the other features.

*You should know and understand the following:*

• What is meant by site security and how it is maintained
• How the control file is used and what each control file field does
• How inventory attributes are used and assigned
• How and why batch control is maintained in QAD Enterprise Applications and what the significance of batch control is
• How and why lot control is used in QAD Enterprise Applications and what the significance of lot control is
• How automatic lot numbering is maintained
• What is meant by single lot per receipt and how it is enforced
• How supplier lot numbers are used in QAD Enterprise Applications
• How expired inventory transactions are handled
• How component issues can be controlled
• How controlled substances are tracked
• What type of controls can be placed on work orders
• How to activate or deactivate WIP lot/serial tracking for all or specific BOMs, routing codes, parent items, component items and routing operations
• How to trace WIP lot/serials through subcontract operations
• How to combine and split WIP lots; how WIP lots can be rejected, reworked and returned
• What additional data collection frames are used for WIP lot/serial tracking in inventory control, purchasing, work orders, shop floor control, repetitive and advanced repetitive
• What information can be reported to track WIP lot/serial usage

**Distribution, Manufacturing, and Capacity Planning**

This topic covers the modules and activities necessary for manufacturing resource planning (MRP II). The disciplines involved range from high-level sales and production planning to detailed material and capacity planning. You should know how each of the planning modules works and how it is implemented. You should understand MRP II concepts such as time-phased planning, resource management, and master production scheduling, and how they are supported in QAD Enterprise Applications. For each of the following sections, you should be thoroughly familiar with all of the reports and inquiries, be able to look at each of them and determine what action needs to be taken and why.

**Sales, Production, and Resource Planning**

Sales and production planning is the starting point of the planning process; and is supported in QAD Enterprise Applications by the Forecasting, Enterprise Operations Planning, Product Line Planning and Resource Planning modules. Forecasting allows projecting future sales based on historical patterns. Enterprise Operations Planning spreads production requirements across multiple plants optimizing both total enterprise inventory and capacity. Product Line Planning states projected monthly sales and production by product group. These modules support the annual business plan and provide input to the detailed master production schedule. Resource Planning functions are used to verify the plan against the availability of critical resources.

**You should know and understand the following:**

• How to set up an operations plan at family and end item levels
• How the source matrix is set up and used
• What methods can be used to establish target inventory levels at family and end item levels
• What operations data can be loaded and what it is used for
• How operations plans are linked to resource planning, production planning and MRP
• How to create and use simulation plans
• What the elements of a product line plan are and how they are used
• How to forecast sales using forecasting simulation
• How product line plans can be used to project inventory levels, inventory turns, and backlog
• What information is used for product line resource planning
• How resources are defined and how changes are recorded
• How resource capacity and load are calculated

Master Production Scheduling and Rough-Cut Capacity Planning

Unlike sales and production planning, this topic deals with demand and supply planned at the item level. You should understand each of the sources of demand for an item (forecast, sales orders, spares, and interplant requirements) and how these demands are used to generate a master production schedule (MPS). Once developed, the plan can be checked against the availability of critical resources using rough-cut capacity planning.

You should know and understand the following:
• What types of items should be forecast; how forecasts are maintained and how net forecast is calculated
• What the process of forecast consumption is and how this can compensate for forecast errors
• The primary functions of a master schedule
• What types of items should be master scheduled, and what the difference is between a master schedule item and an MRP item
• What the advantages and disadvantages of the manual, automatic, and computer-assisted master scheduling techniques are; how items are set up when using each technique
• What methods can be used for entering and managing master schedule orders, and how repetitive schedules may be used for this
• When and how multi-level master scheduling is used and how this differs from single-level master scheduling
• Why multi-level master scheduling is not recommended for more than two levels
• How option and planning bills are identified and used and how they affect MRP
• How production forecast is calculated and how it is handled by MRP
Manufacturing

- What information is used by item resource planning

**Material Requirements Planning (MRP)**

MRP is a technique used to develop time-phased material plans based on the inventory, supply, demand, and product structures at a site. You should understand how the MRP process works, how to implement it, how to use it, and how it depends on and relates to activities in other modules.

**You should know and understand the following:**
- The four basic questions answered by MRP
- The meaning of time-phased MRP
- How independent and dependent demand are defined and how they are different
- The inputs, outputs, and sources of demand and supply for MRP
- What calculation steps MRP uses; what gross requirements are and how MRP calculates them
- How MRP projects inventory balances, re-schedules receipts, creates planned orders, and generates action messages
- What the similarities, differences, and applications are for net change, regenerative, and selective MRP
- How material plans are processed for inventory, supply and demand at multiple sites
- The relationships between MRP, DRP, CRP, and MPS
- How MRP uses order policies, order modifiers, and product structures
- How scrap and yield are used by MRP
- How and when time fences are used and how long they should be
- How long the planning horizon should be
- What action messages are generated by MRP and how they are used
- What pegging is and what information is available to support it
- What effect approving a planned order has

**Capacity Requirements Planning (CRP)**

CRP is a medium-range planning technique that schedules operations for planned orders, work orders, and repetitive schedules and determines capacity load (planned hours per person or machine). Load can be compared to available capacity to detect potential problems or delays.

**You should know and understand the following:**
- How and when Recalculate Capacity Plan is used; what work order status to include
• How operations are scheduled for planned orders, work orders, and repetitive schedules; what routing is used
• What the effect of overlap and machines per operation is; how calendars are used
• How capacity and load are calculated and how they can be adjusted
• What cumulative load represents

**Distribution Requirements Planning (DRP)**

The primary use of DRP is to manage demand, supply, and transportation of materials from one site to another. Since the calculations and procedures are similar to MRP you should already be familiar with them; but you also need to know how they differ. You should understand the situations in which DRP can be used, and how it can provide solutions to material and distribution problems.

**You should know and understand the following:**

• The inputs, outputs, sources of demand, and sources of supply for DRP
• How source networks are defined and used by DRP
• What steps DRP calculations go through, how they are similar to MRP and how they are different
• What methods can be used for managing intersite demand and supply
• How intersite requests, intersite demands, requisitions, and distribution orders interrelate
• The implementation and operating considerations of using DRP on multiple databases, and the options available for communicating requests
Introduction

The Customer Management exam covers sales quotes, sales order management and all other aspects for customer management.

The objective of this test is to ensure that you have a broad understanding of QAD Enterprise Applications customer management functions and how they should be implemented and used.

Exam Format

The Customer Management exam is delivered in two parts and requires hands-on interaction with QAD Enterprise Applications. Part 1 incorporates hands-on exercises, and Part 2 is multiple choice questions only. Both parts are delivered in a single 4-hour testing session. You must pass both parts in a single testing session to achieve certification.

Estimated Preparation Time Required

- 20 days (including training, documentation review and practice)

Recommended Training Courses

- Customer Management (5 days covering Sales Orders, Allocations and Shipping, Best Pricing, Customer Consignment Inventory, and Customer Schedules)

Recommended User Guides

- Sales
- Scheduled Order Management
- Master Data
Sample Questions
What types of price lists are available?
- List Price, Discount Percent, Mark-Up, Freight Class
- List Price, Discount Percent, Net Price, Freight Terms
- List Price, Discount Percent, Freight Class, Net Price
- List Price, Discount Percent, Mark-Up, Freight Zone

Which of the following consume forecasts?
- Sales Order Shipments
- Customer Schedules
- Inventory Transfers
- Work Order Receipt

At what point in the sales cycle, is a General Ledger Transaction created that posts a debit amount to the appropriate Cost of Goods Sold account?
- Sales Order Confirmation
- Detail Allocation of sales order inventory
- Sales Order Shipment
- Invoice Post

Product Modules Covered
This test includes all of the core Customer Management modules except Configured Products.

You should study the following:
- Sales Quotations
- Sales Orders
- Sales Analysis
- Pricing
- Scheduled Orders
- Container and Line Charges
- Customer Consignment Inventory
- Shipment Performance
The customer management modules have been subdivided into major topics for you to study. The sections that follow list what you should know and understand for each major topics area

**Addresses**
- What business relations are and how to set them up
- The various types of addresses and how they are set up and used
- The alternative address coding schemes
- How address codes and sort names are used for both searching and reporting
- How company addresses are used
- How customer information is maintained (understand each field and how it is used)
- How customer credit information is maintained and used on sales orders
- Email notification when a customer created in the Enterprise Financials
- How multiple ship-to addresses may be set up for one customer and what information can be maintained for each ship-to address
- How salesperson commissions are entered and what the reporting options are
- How trailer codes are set up and used
- How freight rates can be set up and how they are used and updated on quotes and orders
- Blocking customer transactions

**Products and Pricing**
- Why product lines are defined and how they are used for planning and reporting
- How items are set up; what information can and cannot be set up by site
- How to define conversion factors between different units of measure
- What item status codes are and how they are used
- How prices and costs are maintained for items
- How analysis codes are used and maintained
- What options are available for setting up price lists; the differences between price tables and discount tables and how each is used; each field and how it is used
- How price lists are accessed by quotes and discrete sales orders, and how they affect default prices, discounts, and net prices
- What is meant by the term “Best Pricing” and how it is determined
- What price break categories are and how they are used
- What volume discount capabilities exist and the limitations of each
- How to set up a cross-reference for customer item numbers or catalog numbers
• How prices can be updated on orders and quotes; how prices can be fixed so no update can occur
• What memo items are and how they are set up
• The effect of memo items on sales-related functions
• What is a replacement, up-sell and cross-sell item and their effect on sales-related functions
• How replacement, up-sell and cross-sell items are set up

Inventory Control
• How each sales-related inventory transaction works and when it is used
• What inventory movement codes are and what they can be used for
• How inventory details (lot/serial, reference and expire date) are maintained and used
• What general and detail allocations are, how they are related, and how they are different
• How inventory allocations are controlled and monitored for sales orders
• How inventory control file setting affect detail allocations and the picking sequence
• How inventory transaction history is maintained and used
• What general ledger transactions are created by sales related inventory activities and when they are created
• How reserved locations are defined and used

Sales Quotations
• What procedures are followed for managing sales quotes
• How sales quotes relate to sales orders, how they are similar, and how they are different
• In general, what types of data are accessed from the customer sold-to, bill-to, and ship-to addresses
• When and how recurring quotes are used; how they differ from non-recurring quotes
• What you must do in order to create a sales order from a quote; what value each of the sales order fields will be set to (in particular, order quantity, due date, confirmed flag, and action status)
• How expired quotes are handled
• How the control file is used and what each control file field does
Sales Orders and Customer Schedules

- The steps in the sales order life cycle, how and when each is used, and which are optional
- What types of data are accessed from the customer sold-to, bill-to, and ship-to addresses
- How sales orders are maintained for inventory and non-inventory items; how prices, discounts, costs, margins, and taxes are determined on each
- How Pricing What-if Inquiry works
- How sales orders handle customer items and alternate units of measure
- What options there are for multi-site sales order processing
- The operating differences between single and multiple line entry
- What customer credit information is maintained; which customer's credit is checked—the sold-to, bill-to, or ship-to—and when
- In what ways credit status affects sales order processing
- How the sales order and scheduled order control files are used and what each control file field does
- How sales orders and customer schedules differ
- The philosophy and application of customer schedules
- How customer schedules are managed, and what the net, discrete, and cumulative quantities represent
- How shipping schedules, planning schedules, and required ship schedules relate to each other and to MRP
- The steps in the scheduled order process flow
- How confirmed and unconfirmed sales orders affect MRP and forecasting
- How forecast consumption works and why it is important
- How control file settings affect sales order processing and forecast consumption

Correction Invoices

- How to enable and setup correction invoice functionality
- When to use correction invoices and the types of corrections that are supported
- The steps in the correction invoice process flow
- How to create correction sales orders
- How to ship, invoice, report and archive correction orders
- The limitations of correction invoices
Allocations, Shipping and Invoicing

- What the recommended procedural controls are for allocations, shipping, and invoicing
- How general and detail allocations apply to sales order activities
- What methods and controls are available for allocating inventory to sales orders
- How on-hand inventory and available inventory differ
- How packing slips are used; why the Print Only Lines To Pick option can be used to control the shipping process
- How shipments, returns, credits, and corrections are processed; how this is different for customer schedules
- How pre-shippers, shippers and shipping groups are created and used
- What is meant by the term “global shipping”
- How partial shipments and drop shipments are processed
- How containers are used for shipping
- How Bills of Lading and Master Bills of Lading are produced and used
- At what point general ledger transactions are created for cost of goods sold
- How information flows from sales order to pending invoice, from pending invoice to invoice, and from invoice to invoice history
- How and when Pending Invoice Maintenance is used
- How the fields Ready to Invoice and Invoiced are used to control the printing and posting of invoices
- What general ledger transactions result from shipping and invoicing activities, and how they differ across multiple sites, entities and domains
- What sales backlog is and how it is managed
- What procedures should be followed at period-end and what effective dates should be used

Sales Analysis and Commissions

- At what point in the sales order life cycle sales information is available for reporting
- The date it is based on (the shipment, invoice, or invoice post date)
- The options and constraints for summarizing sales information
- What salesperson performance reports are available
- How commissions are calculated, recognized, and reported; how commission splits are processed
- How Historical Sales Analysis data can be used with Forecast Simulation and the effect of using the delete/archive functionality
Legal Documents (sales side only)
- How to define implementation settings in Legal Document Control
- How to set up sequence IDs for generating legal document numbers and associate the sequence IDs with ship-from address codes
- How to associate a legal document form code with document formats
- The transactions that generate and print legal documents

Available-to-Promise (ATP) Enforcement
- What is ATP
- How to enable ATP enforcement
- The functions that check ATP
- How available-to-promise quantities are calculated
- How available-to-promise can be taken from the Master Schedule Summary and used for order promising and determining due dates
- Delivery transit time
- How the promise date is calculated

Container and Line Charges
- What are container and line charges
- How to activate and set up container and line charges
- How the control file is used and what each control file field does
- How to enter container and line charges
- How to ship and invoice container and line charges

Customer Consignment Inventory
- What is customer consigned inventory
- Activating and setting up customer consigned inventory
- How the control file is used and what each control file field does
- Ordering and shipping customer consigned inventory
- Consuming and managing customer consigned inventory
- Invoicing customer consigned inventory
Shipment Performance

- How to activate and set up shipment performance
- How the control file is used and what each control file field does
- Creating and modifying shipment performance transaction records
- Reporting shipment performance data
Introduction

The Supply Chain exam covers all supply chain functionality. Since all companies purchase materials and sell products, most of these functions are as applicable for manufacturing companies as they are for distributors.

The objective of this test is to ensure that you have a broad understanding of QAD Enterprise Applications supply chain functions and how they should be implemented and used.

Exam Format

The Supply Chain exam is delivered in two parts and requires hands-on interaction with QAD Enterprise Applications. Part 1 incorporates hands-on exercises, and Part 2 is multiple choice questions only. Both parts are delivered in a single 4-hour testing session. You must pass both parts in a single testing session to achieve certification.

Estimated Preparation Time Required

- 15 days (including training, documentation review and practice)

Recommended Reading

- Supplier Schedules Training Guide
- Customer Schedules Training Guide
- Customer Sequence Schedules Training Guide
Recommended User Guides

- Supply Chain Management
- Purchasing
- Scheduled Order Management

Sample Questions

- One of the following best describes the process of customer consigned inventory. Please select the correct answer:
  - Reservation of dedicated inventory locations for a specific customer or customers.
  - Supplier placing goods at customer location without receiving payment until goods are used or sold.
  - Automatic generation of purchase orders from sales orders.
  - Customer receiving goods without making payment until goods are used or sold.

- A Trading Partner relationship must be established in the EDI eCommerce module. Which function is used to establish this relationship:
  - Trading Partner Control File Maintenance
  - Customer Relationship Maintenance
  - Supplier Relationship Maintenance
  - Trading Partner Maintenance

- In order to allow EDI eCommerce Document Import (35.1) to import ASNs and update kanban transactions to “shipped”, and to allow the P O Shipper Receipt to process inventory receipts and update kanban transactions to “full”, which one of the following fields must be set:
  - Kanban Supplier = Yes in Supplier Maintenance (2.3.1) for the loop’s supplier.
  - Update Dispatched Cards = Yes in Kanban Dispatch List Processing (17.22.18.1).
  - E-mail Dispatch List = Yes in Kanban Master Maintenance.
  - Release Blanket POs = Yes in Kanban Dispatch List Processing (17.22.18.1).

Product Modules Covered

This test includes all of the Supply Chain modules.

You should study the following:

- Purchasing
- Supplier Performance
- Release Management
• Consignment Inventory
• Supply Visualization
• Supply Chain Planning
• Data Synchronization Interface

Modules have been subdivided into four major topics for you to study:
• Planning
• Sourcing
• Delivering
• Communicating

The sections that follow present each of these topic areas in detail.

Planning

Distribution Requirements Planning
• Concept and application of Distribution Requirements Planning (DRP)
• How MRP and DRP are similar and different
• When to choose DRP versus Purchase/Sales Orders

Sourcing

Inventory Control
• How control files affect inventory operations
• How each inventory transaction works and when it is used
• How inventory details (lot/serial, reference, grade, assay %, and expire date) are maintained and used
• Why cycle counting is used and the advantages and disadvantages relative to a physical inventory
• The steps involved in performing a cycle count or physical inventory; how errors are handled and how inventory tolerances are used
• What inventory movement codes are and what they can be used for
• The best way to initialize inventory balances
• What general and detail allocations are, how they are related, and how they are different
• How inventory allocations are controlled and monitored for both manufacturing orders and sales orders
• How inventory transaction history is maintained and used
• What general ledger transactions are created by inventory activities and when they are created
• How inter-site and intra-site transactions are created and their impact on the general ledger
• When and why WIP Lot Trace would be used
• Impact of Regulatory Attributes on Inventory Control
• The concept and application of Obsolete Inventory Analysis

**Purchasing/Requisitioning/Receiving**

• How supplier information is used on purchase orders; what the default PO cost is
• How supplier items are used on purchase orders. How to set up a cross-reference for supplier item numbers; how they affect default costs on purchase orders
• In what situations blanket orders, purchase orders, or supplier schedules should be used
• The operating differences between single and multiple line entry
• How receipts, returns, and corrections are processed
• How receivers are created and for what purpose
• What general ledger transactions result from purchasing activities, and how they differ across multiple sites, entities and domains
• How PO Container and PO Shipper Maintenance are used in relation to purchase orders and the advantages and disadvantages of using them instead of PO Receipts
• How QAD Enterprise Applications supports PO Fiscal Receipts; how and when they should be used
• How costs and taxes are calculated
• How subcontract, non-inventory purchases, and drop shipments are processed
• The options for multi-site purchasing; how centralized and decentralized purchasing is implemented; how multi-site purchase orders are printed by ship-to site
• How control file settings affect purchasing operations
• How current and average costs are updated by purchasing
• What options are available for purchase approvals and how they are implemented
• In what situations purchase requisitions or global requisitions should be used
• How to set up different approval types when using global requisitions
• Roles in requisition flow (requestor, approver, buyer) and their activities
Supplier Performance (Quality)
- How to define categories and events and which purpose they have to collect supplier performance data
- How supplier performance data is collected
- Different performance calculation and rating methods

Consignment (Supplier)
- The concept and application of supplier consignment. What is consignment inventory and what does it mean for inbound receipt goods.
- How to set-up Consignment Purchase Orders
- Review of consignment transactions and inventory in consignment
- Multiple points of usage, multiple tax points and the aging capabilities. How it works
- Different options to set-up GL Accounts for inventory in consignment

Release Management (Supplier Schedules)
- The concept and application of supplier schedules
- How purchase orders and supplier schedules differ
- How supplier schedules are managed and what the net, discrete, and cumulative quantity represents
- How required receipt schedules, shipping schedules, and planning schedules relate to each other and to MRP

Distribution Orders (Receiving)
- The concept and application of Inter-Site Requests and receiving of goods from Inter-Site Distribution Orders
- Follow-up of requests and inventory in transit up to reception of goods. Impact in inventory and transaction history
- When to use Purchase Orders instead of Distribution Orders to fulfill Inter-Site Requests
- What general ledger transactions are created when receiving goods from distribution orders at demand-site

Kanban Loops (Supplier)
- Creating a supplier loop with appropriate data
- Sizing a supplier loop to generate Kanban cards, supermarket limits
- Different types of information included in Kanban Workbench
- Groups of data in the workbench
- Basic data required versus optional for kanban loop
- Different types of accumulators for triggering replenishment
- Relationship of "schedule" accumulator and fixed interval used for sizing
- Relationship of time oriented accumulators to fixed order quantities
- How to run the accumulator
- Relationship between kanban replenishment and EDI Ecommerce
- Dealing with multiple sources - use of the demand percent
- Dealing with multiple sources - using steps or supermarkets to distinguish supply loops
- Relationship between kanban fill transaction and inventory updating
- Inventoring alternatives for kanban items - INV or WIP
- How and where purchase order specific data is used
- How to control inventory updating
- Use of PO Data Receipt prompt
- Various kanban transaction statuses and their use
- Use of inventory system to drive kanban status changes

**Delivering**

**Shipping**
- How Fiscal shipping documents are used and created
- Does this fall under Customer Management or should be considered as part of Supply Chain process from a general perspective?

**Logistics Charges & Accounting**
- How container and line charges can be added to sales orders
- How can container charges be calculated
- Is a separate chapter need? Doesn't this belong to Customer Management?

**Consignment (Customer)**
- Customer consignment concept and application
- Set up and processing of consigned sales order
- Consumption/Usage of customer consigned inventory
- Customer consignment aging
Release Management (Customer Schedules)
- Customer schedule concept and application
- How sales orders and customer schedules differ
- How customer schedules are managed and what the different netting logic options represent
- How sequence, planning and shipping schedules relate to each other and to MRP
- Shipper Validation

Distribution Orders (Shipping)
- Intersite Demand confirmation process and different ways to generate Distribution Orders
- Picking and shipping process of Distribution Orders
- How DO Container and DO Shipper Maintenance are used in relation to distribution orders and the advantages and disadvantages of using them instead of normal DO
- When to use Sales Orders instead of Distribution Orders to fulfill Inter-Site Demand
- What general ledger transactions are created when shipping goods using distribution orders at supply site

Communicating
- Supply Visualization
- Electronic Data Interchange (EDI)
Service and Support Management (SSM)

Introduction
This section of the study guide is designed to assist you in preparing for the QAD Product Knowledge Specialization Exam on Service and Support Management. The objective of this test is to ensure that you have a broad understanding of QAD Service and Support Management functions, and how they should be implemented and used.

Exam Format
The SSM exam is delivered in two parts and requires hands-on interaction with QAD Enterprise Applications. Part 1 incorporates hands-on exercises, and Part 2 is multiple choice questions only. Both parts are delivered in a single 4-hour testing session. You must pass both parts in a single testing session to achieve certification.

Estimated Preparation Time Required
• 15 days (including training, documentation review and practice)

Recommended Training Courses
• Service and Support Management – Enterprise Edition (5 days)

Recommended User Guides
• Service/Support Management (A and B)
Sample Questions
What 2 fields did you have to set in order to create a call with 2 lines and with a unique fault code on each line?

- Multiple Skills and Fault Codes in Call Maintenance
- Multi Items and Multiple Skills in Call Management Control
- Multi Items and Fault Codes in Call Maintenance
- Fault Codes and Multi Lines in Call Management Control

The purpose of simulation on the FSS Gantt Chart Scheduling tab is to see which of the following?

- The engineers that can respond to the selected call in an appropriate amount of time
- All visits for a call
- All visits for an engineer
- Overlapping visits

A service engineer has recommended that a particular item has its preventative maintenance schedule modified so that scheduled maintenance is performed once every six months, rather than once a year. In what function would this change be performed in?

- Installed Base Item Maintenance
- Service Call Item Maintenance
- Item Master Maintenance
- None of the above

Product Modules/Functional Areas Covered
This test includes all of the Service & Support product suite modules, functions, and activities that pertain to managing service operations.

You should understand the following modules/areas:

- QAD Service and Support Management (SSM)
- QAD Field Service Scheduler (FSS)

Detailed topics for each product module are listed in the sections that follow.
QAD Service and Support Management (SSM)

This topic covers set up and implementation of QAD Service and Support Management (SSM) functionality as part of QAD Enterprise Applications Enterprise Edition.

Call/Repair Service Order Management

This area covers knowledge of the core maintenance programs used in QAD Service and Support Management (SSM) module - when they are used, how they are used.

You should know and understand the following:

- Call Quotes - How to use call quotes functionality, expiration dates, pricing, and how does it translate into calls and call activity.
- Call Maintenance - How does the SSM set up impact call maintenance; interaction of calls with ISB.
- Call Generator - Types of Calls, situations, sources of Calls.
- Call Scheduling - How to schedule calls within SSM without using Field Service Scheduler (FSS), scheduling methods, weighted algorithm.
- RMA Maintenance - How to use RMAs, accounting and default Location settings.
- RTS Maintenance - How to use RTS functionality, similarities and differences between PO Return and RTS, inventory issue vs. transfer.
- Depot Order Maintenance - High level understanding of Depot Repair business process, how to manage depot orders, including creation, receiving/replacement of items to be repaired.

Service/Repair Activity

This area covers knowledge of how the actual service-related activity is reported and tracked.

You should know and understand the following:

- Call Activity Recording - How to record activity related with a call.
- Call Invoice Recording - How to create and invoice for a call, understand the set up related with data used for invoicing
- Call Parts Recording - Understanding the process related with parts used for a call and how to record parts.
- Call Labor Recording - Understanding the process related with repair labor activity for a call and how to record labor.
- Parts List - Understanding the process related with creating/modifying parts list for a call.
• Material Orders - Understanding the process related with material requests and transfers as part of service operations.
• RMA Returns - How to process returns related with RMAs and its impact within the system.
• Installed Base - Understanding of Installed Base data and its impact within the system in addition to being able to understand/perform following service activities:
  o Installed Base Item Move
  o Installed Item Maintenance
  o Tracking ISB
  o Preventative Maintenance

**Warranties/Contracts**

This area covers knowledge of the impact of warranties and contracts throughout the service operations.

**You should know and understand the following:**

• How to set up and update warranties, understand the impact of different Warranty Types
• Contracts: How to set up and update contracts; understand the impact and usage of Contract Types, Contract Quotes, Contract Maintenance, Contract Renewal, Contract Billing, Familiarity with contract invoicing.

**Setup**

This area covers knowledge of the setup elements required for Service and Support Management (SSM) module to run effectively.

**You should know and understand how to set up the following, as well as their impact on SSM Activity:**

• Service Items
• Service Structures (Repair BOMs, etc.)
• Service Routings
• Service Accounts
• Service Pricing
• Work Codes
• End Users
• Engineers
• Engineer Schedules
• Areas
• Call Status
• Call Queues
• Contract Types
• Warranty Types
• Control Files (Including Call Management, End User Control, Service Management Control)

QAD Field Service Scheduler (FSS)

This topic covers knowledge related with the high level setup of QAD Field Service Scheduler (FSS) as well as the functions it performs and its interaction with rest of the Service & Support product suite.

You should know and understand the following:
• Impact of user preferences and high level configurability related to QAD Field Service Scheduler (FSS) functionality.
• How the simulation functionality works within QAD Field Service Scheduler (FSS) and how it is used.
• How to schedule calls using QAD Field Service Scheduler (FSS)
• How to create/maintain visits using QAD Field Service Scheduler (FSS)
Enterprise Asset Management (EAM)

Introduction
This section of the study guide is designed to assist you in preparing for the QAD Product Knowledge Specialization exam on Enterprise Asset Management (EAM). It aims to provide an outline of test topics for EAM including high level general knowledge and detailed knowledge of Maintenance, Inventory, Purchasing, and Project Accounting.

Exam Format
The EAM exam is delivered in one three-hour session. The exam does not currently require hands-on interaction with QAD Enterprise Applications, but the next version of the exam will include that requirement.

Estimated Preparation Time Required
- 15 days (including training, documentation review and practice)

Recommended Training Courses
- Enterprise Asset Management (5 days)

Available on QAD Learning Center (learning.qad.com)
- 1-1 Introduction to EAM Training Approach
- 1-2 EAM Overview
- 1-3 Introduction to EAM UI
- 1-4 Introduction to EAM Configuration
- 1-5 Introduction to EAM Maintenance
• 1-6 Introduction to EAM Inventory
• 1-7 Introduction to EAM Purchasing
• 1-8 Introduction to Project Controls Part 1
• 1-9 Introduction to Project Controls part 2

Recommended User Guides
• Enterprise Asset Management User Guide

Recommended Reading
• Maintenance and Reliability Best Practices

Sample Questions

Which best describes Plant Operations highest responsibility?
• Is to insure all MRO inventory is readily available to insure maintenance can be performed on equipment.
• Is responsible for all maintenance related activities such as routine maintenance
• Is responsible for a manufacturers most critical assets, its production equipment
• Is responsible for a manufacturer’s most critical asset, its highest volume producing equipment.

Which work orders can have status Planned set as active?
• PM Type work orders
• CM Type work orders
• CM and PM Type Work orders
• PM and SR Type work orders

When creating a requisition, if you select an Equipment Number, WO Number, or Project Number, what happens?
• EAM activates Auto-Issue, and EAM fills in the accounting associated to the record.
• Nothing
• EAM selects Auto-Issue and requires the user to enter the accounting information
• EAM navigates to the maintenance screen for the associated areas and puts the system in modify mode
Product Modules Covered

This test includes all of the Supply Chain modules.

You should study the following:

- Purchasing
- Supplier Performance
- Warehousing
- Release Management
- Consignment Inventory
- Supply Visualization
- Supply Chain Planning
- Transportation Management (TMS)
- Data Synchronization Interface
- Demand Management
- Transportation Management

Modules have been subdivided into five major topics for you to study:

- General
- Maintenance
- Inventory
- Purchasing
  - Project Accounting (formerly Project Controls)

The sections that follow present each of these topic areas in detail.

General

This section concentrates on the general knowledge you need to understand the EAM interface and business purpose.

You should know and understand the following:

- Navigation:
  - Menus
  - Browses
  - Check boxes (v12) and switches (v11x)
  - User assistance options
- Security:
- Levels
- Groups
- Where to set
- Implementation:
  - Environments (Windows, UNIX, etc)
  - Data loads
  - Sequencing
  - Mail setup
  - Accounting structures
  - Batch Job Scheduler

**Maintenance**

This section concentrates on the knowledge you need to understand the EAM Maintenance module.

**You should know and understand the following modules:**
- Equipment
- PM Templates
- Work Orders
- Service Requests
- Labor History
- Codes

**Inventory**

This section concentrates on the knowledge you need to understand the EAM Inventory module.

**You should know and understand the following modules:**
- Inventory
- Physical inventory
- Stock replenishment
- Stores requisition lists
- Rebuild locations
- UOM conversion
- Codes
**Purchasing**

This section concentrates on the knowledge you need to understand the EAM Purchasing module.

**You should know and understand the following modules:**

- Purchase orders
- Requisitions
- Routing substitutions
- Vendor
- Standard clauses
- Currency
- Approval groups
- Codes

**Project Accounting**

This section concentrates on the knowledge you need to understand the Project Accounting module.

**You should know and understand the following:**

- Projects
- Jobs
CHAPTER 10

Configured Products

Introduction

The Configured Products exam covers QAD Enterprise Applications Configured Products as well as the QAD Configurator module.

The objective of this test is to ensure that you have a broad understanding of both modules functions and how they should be implemented and used.

Exam Format

The Configured Products exam is delivered in two parts and requires hands-on interaction with QAD Enterprise Applications, including QAD Configurator. Part 1 incorporates hands-on exercises, and Part 2 is multiple choice questions only. Both parts are delivered in a single 2-hour testing session. You must pass both parts in a single testing session to achieve certification.

Estimated Preparation Time Required

- 7 days (including training, documentation review and practice)

Recommended Training Courses

- Configurator Functional Training (4-day course)

Recommended User Guides

- QAD Enterprise Applications – Sales / Configured Products
- QAD Configurator
Product Modules Covered

This test covers QAD Enterprise Applications Configured Products as well as the QAD Configurator module.

You should study the following:
- Configured Products
- QAD Configurator

The sections that follow list what you should know and understand for each major topic area.

Configured Products Concepts and Setup
- What products are best suited for configured product functions
- How configured products are defined (understand each field and how it is used)
- How feature groups can be defined and prompted for during order entry
- How mandatory and default options are defined; what the standard bill consists of
- How components with structure code <blank> are handled in a configuration and what configured items cost

Ordering Configured Products
- Ordering configured products

Manufacturing and Shipping Configured Products
- What options are available for manufacturing and shipping configured products (understand the options in the Configured Products Control File and how they interrelate)
- The relationship between routings and configured products
- The inventory transactions associated with shipping and manufacturing configured products

Forecasting Configured Items
- What family items are and how they are useful with configuration structures
- How configured products may be planned using multilevel master scheduling
- What options are available for planning and forecasting configured items and the limitations
**Configurator Concepts and Setup**

- The business considerations, key features and benefits
- The manufacturing strategies supported by the QAD Configurator
- What products are best suited for QAD Configurator
- The generic product structure and generic routing
- The steps in the Configurator process flows and integration with QAD ERP
- How to perform system setup including setting up data in QAD ERP

**Sales Configuration**

- What is a configurable item and how configurable items are defined (understand each field and how it is used)
- The variables and features that define configurable product characteristics
- How to group and specify the sequence of questions in the Questionnaire
- How to define sales configuration rules to ensure data collected from the questionnaire is valid
- The configuration key
- The Configurator costing and pricing functionality

**Product Configuration**

- How to define rules to assign item numbers to variant items
- How to define rules to assign values to fields in variant items
- How to define rules that translate feature data collected from the Questionnaire into product structures and routings of configured products

**Configurator Questionnaire**

- How to display questions in the questionnaire in a specific sequence
- How to analyze the model to ensure there are no inconsistencies in the rules entered
- How to run the Questionnaire stand-alone and during order or quotation entry to configure products and the differences between each mode
- The different options for displaying existing configurations in the Questionnaire
- How to customize the Questionnaire
- The variant items, product structures and routings generated by the Questionnaire

**Administration**

- The administrative functions including importing/exporting models and deleting/archiving configurations
CHAPTER 11

Customer Self Service

Introduction
This exam covers the QAD Customer Self Service (CSS) module.
The objective of this test is to ensure that you have a broad understanding of the module functions and how they should be implemented, administrated and used.

Exam Format
The Customer Self Service exam is delivered in two parts and requires hands-on interaction with QAD Customer Self Service. Part 1 incorporates hands-on exercises, and Part 2 is multiple choice questions only. Both parts are delivered in a single 90 minutes testing session. You must pass both parts in a single testing session to achieve certification.

Estimated Preparation Time Required
• 3 days (including training, documentation review and practice)

Recommended Preparation
• QAD Enterprise Applications – Sales / Sales Orders/Configured Products
• QAD Configurator Introduction
• QAD Customer Self Service
  o Implementation Guide
  o Administration Guide
Product Modules Covered
This test covers QAD Customer Self Service.
You should study the following:

CSS Concepts
- The business considerations, key features and benefits
- The business processes supported by CSS
- The item types supported by CSS

How to set up CSS
- How users and security is handled
- How items and product catalog relate to each other
- The steps to populate a CSS database
- How to perform system setup
- How to personalize and customize the Web Site appearance
- System Control and System Registry

Business-to-Business (B2B) processing
- Using CSS
- Browsing the catalog
- Managing order entry and submittal
- Account reports
- Contacts and Messages

Credit Card Processing
- How the credit card process is supported

Business-to-Consumer (B2C) processing
- Differences in the B2C model

Administrative Tasks
- Tasks that have to be performed by an administrative user
- Administration Reports
Customer Relationship Management

Introduction

This exam covers the QAD Customer Relationship Management (CRM) module.

The objective of this test is to ensure that you have a broad understanding of key module functions.

Exam Format

The Customer Relationship Management exam is delivered in two parts and requires hands-on interaction with QAD Customer Relationship Management. Part 1 incorporates hands-on exercises, and Part 2 is multiple choice questions only. Both parts are delivered in a single 2-hour testing session. You must pass both parts in a single testing session to achieve certification.

Estimated Preparation Time Required

- 10 days (including training, documentation review and practice)

Recommended Preparation

- Customer Relationship Management Training Guide
- Customer Relationship Management Installation Guide
- Customer Relationship Management Administration Guide
- Customer Relationship Management User Guide

Product Modules Covered

This test covers QAD Customer Relationship Management.
Recommended Areas of Study

You should study the following topic areas:

- Campaign Management
- Opportunity Management
- Activity Management
- Customer Relationship Management
- Customer Service
- Marketing Management
- Profile Management
- Reporting
- Setup and Concepts
- Territory Management
Introduction

The QAD Transportation Management (TMS) exam predominatly covers Base, Freight Management (including Desktop Shipping), Package Exception Management and limited Trade Compliance.

The objective of the Certification is to ensure that you have a broad understanding of QAD Transportation Management (TMS) functions and how they should be implemented and used. The Certification is open to Technical and Application Consultants.

There are documents and presentations referenced below that should be reviewed prior to attempting Certification. In addition it is expected that you have had prior experience of implementing, supporting or using the product.

Exam Format

The Transportation Management exam currently consists of multiple choice questions only. The exam is delivered in one 2-hour session and does not require hands-on interaction with QAD Enterprise Applications. However, we will be introducing a practical hands-on exam in the future and you will need to pass this to remain TMS Certified.

Estimated Preparation Time Required

- 5 days (including training, documentation review and practice)
Recommended Training Courses

Available on QAD Learning Center (learning.qad.com)

- Value Chain: Transportation Management 101
- Transportation Management System (TMS) v9 R1 - 2011.1 Overview

Available on QAD Share @ https://share.qad.com/gm/folder-1.11.188138

- WEB001 - Web UI 4.x Overview - Part 1 & Part 2
- PEM001 - PEM Overview - Part 1 & 2
- PEM002 - PEM Application Configuration - Part 1 & 2
- TMS002 - TMS Routing Guide Configuration and Usage - Basic
- SOA002 - PRECISION TMS SOA Best Practice - Business - Part 1 & 2

Recommended Webinars

Available from www.qad.com/webinars

- Desktop Shipping: Simplifying your Non-Production Shipping Process

Recommended Reference Guides

The current versions of these documents can be found in the Document Library at www.qad.com/documentlibrary. If a document is not available on the Document Library please locate on the QAD Share at https://share.qad.com/gm/folder-1.11.107305.

- Topic001 - Menu Navigation and Screen Interpretation
- Topic002 - Terms, Areas, Customs and Duty Master Files
- Topic004 - Products
- Topic005 - Partners
- Topic006 - Rules and Rule Books
- Topic010 - Manual Shipments
- Topic012 - Shipment Packing
- Topic014 – Load Building
- Topic016 - Workflow
- Topic018 - General Reports
- Topic022 - Security and Menu System
- Topic025 - Documents in PRECISION
- Topic067 - Highway Overview
• Topic201 - Interface to PRECISION using XML or CSV
• Topic041 - Compliance Checking
• Topic 202 – Black Box Compliance
• Topic029 - Small Package System
• Topic039 - Standard Rates upload procedure
• Topic040 - Routing Guide and Rate Shopping
• Topic045 - Non-SPS Service Configuration
• Topic046 - LTL-TL Rates Upload Procedure
• Topic055 - LTL and TL Rating Engine
• Topic061 - XML SPS Message interface
• Package Exception Management User Guide
• Package Exception Management Admin Guide

Other Documentation
• Carrier Availability (https://share.qad.com/gm/folder-1.11.107305)
• PRECISION Product Cross Reference presentation (https://share.qad.com/gm/folder-1.11.88830)
• Web UI User Guide (https://share.qad.com/gm/folder-1.11.107305)

Recommended Areas of Study
• Transportation Management Concepts
• Navigation & Security - Windows UI & Web UI
• Rules & Workflow Setup
• Routing Guide Setup
• Carrier Setup - Integrated & Non Integrated
• Rate Table Setup
• Package Exception Management Configuration & Usage
• Desktop Shipping Wizards Configuration
• Shipping SOA / BlackBox
• Compliance SOA / BlackBox
CHAPTER 14

Warehousing

Introduction

This section of the study guide is designed to assist you in preparing for the QAD Warehousing certification exam, an exam intended for individuals who plan to work on QAD Warehousing implementation teams or support projects post implementation.

Exam Format

The QAD Warehousing certification exam is delivered in a single 2-hour session and does not require hands-on interaction with QAD Enterprise Applications.

Estimated Preparation Time Required

- 10-15 days (including training, documentation review and practice)

Recommended Preparation

Online Training Courses

- Warehousing Concepts (40 minutes)
- Introduction to Warehouse Management Systems (WMS) (15 minutes)
- Warehousing Overview (12 minutes)
- Warehousing: Introduction to Shipping (30 minutes)
- Warehousing: Introduction to Receipts (30 minutes)
- Warehousing: Introduction to Picking (30 minutes)
- Warehousing Q-Scan (18 minutes)
- Warehousing Demo (37 minutes)
Instructor-led Training Courses

- Warehouse Management (4-day class)

Recommended Reading

- World-Class Warehousing and Material Handling by Edward Frazelle
- Warehouse & Distribution Science (www.warehousescience.com)
- .NET UI Training Guide
- Warehousing Training Guide
- Warehousing User Guide

Sample Questions

QAD Warehousing Setup Hierarchy is:
- Warehouse, Area, Zone, Location
- Location, Zone, Area, Warehouse
- Zone, Route, Area, Aisle
- There is no hierarchy

The 4 basic processes in a warehouse are:
- receive, store, pick, ship
- receive, inventory management, VAS, ship
- receive, store, VAS, customer service
- cycle count, transfers, replenishments, ship
- None of the above

Lean processes supported by QAD Warehousing include
- Slotting, picking, wave planning
- Cellular manufacturing
- Direct store delivery
- All the above

Warehouse Load Consolidation aggregates and validates items and cartons?
- True
With QAD Warehousing, product can be received using a ________ or ________.
- Work station / RF Scanner
- RF Scanner / Batch
- Batch / Zone
- Area / Bulk

The easiest and most common type of picking is
- Batch
- Zone
- Discrete
- Cluster

**Product Modules Covered**
This test covers the QAD Warehousing module.

**Recommended Areas of Study**
You should understand how to use these menus and functions in support of setting up and using QAD Warehousing.

**You should have a general understanding of the following:**
- Item Master - How to navigate and maintain item master
- Cycle Count – Understand cycle counting principles
- Sales Orders - How sales orders are entered and maintained
- Purchase Orders - How purchase order are entered and maintained
- Distribution Orders - How distribution orders are entered and maintained
- Work Orders - How work orders are entered and maintained
- Truck Ship - How Pre-shippers and Shippers are used
- Inventory Control
CHAPTER 15

Business Intelligence, Application

Introduction
The Business Intelligence Application Level 1 exam covers an overview of Business Intelligence (BI) concepts and the functionality of the QAD Business Intelligence Application.

The objective of this test is to ensure that you have a broad understanding of QAD Enterprise Applications Business Intelligence application functions and how they should be implemented and used.

Exam Format
The Business Intelligence Application Level 1 exam contains multiple choice questions. You will be able to access a QAD BI self-study environment during the test. However, you are not required to access the environment.

Estimated Preparation Time Required
- 10 days (including training, documentation review and practice)

Recommended Training Courses
- BI Overview (Qbit)
- BI Portal (Qbit)
- BI Modules (Qbit)
- BI Portal Designer – Queries (Qbit)
- BI Portal Designer – Reports (Qbit)
- BI Portal Designer – Visual Items & Dashboards – Part 2 (Qbit)
- BI Portal Administrator (Qbit)
• Introduction to BI Data Warehouse Designer (Qbit)
• Introduction to BI Scheduler (Qbit)
• BI Application Level 1 Class (4 day course)

Recommended User Guides
• Business Intelligence Level 1 – Training Guide
• BI Portal User Guide

Product Components Covered
This test includes all of the Business Intelligence Application Level 1 components.

Recommended Areas of Study
You should study the following:
• BI Overview & Key Terms
• BI Portal
• BI Modules
• BI Portal User
• BI Portal Designer
• BI Portal Administrator
• Data Warehouse Designer (DWD) Overview
• BI Scheduler Overview

The Business Intelligence Application Level 1 components have been subdivided into major topics for you to study. The sections that follow list what you should know and understand for each major topics area

BI Overview
• Closed-loop decision making
• How BI supports closed-loop decision making
• How BI differs from other QAD offerings, including Browses & Collections, Operational Metrics and the Reporting Framework
• The primary benefits of BI
• Basic BI terms
• The three primary components to the QAD BI application
BI Portal User
- How the Portal user will access the BI Portal application
- How dashboards are accessed
- What are visual items
- What types of visual items are available
- How the user interacts with the visual items on a dashboard
- How the user can set parameter values on a dashboard
- How the user can access reports
- How the user can collaborate on dashboards and visual items
- How the user can export visual items
- BI Application on-line documentation available
- How the user accesses and interacts the BI Documentation functionality

BI Portal Designer - Queries
- Which portal component is the primary building block for other portal elements
- Which options are available on the BI Portal Designer toolbars
- What is the first step in designing a query
- How the user adds or removes items that are included in a query
- How the user specifies elements for sorting in a query
- How the user specifies query filters
- How the user can test a query
- What types of filters are available and how they are used
- What options are available for queries and how they are used
- What lookup queries are and how they are used

BI Portal Designer - Reports
- How the user will use the Report Wizard to create a new report
- How reports can be linked
- How reports can be modified

BI Portal Designer – Visual Items & Dashboards
- Types of visual items
- How the user creates a new visual item
- How the user creates a dashboard
- How visual items can be linked to other visual items
• How reports can be linked to visual items
• How parameter bars are created and used

**BI Portal Administrator**
• How new users are added to the BI Portal
• What Object Security groups are and how they are used
• What a Data Security Models are and how they are used
• What functions are available in Model Administration and Library Administration and when they are used
• The purpose of Data Migration and how it is used
• How Collaboration forums are created

**BI Data Warehouse Designer (DWD)**
• How a user will access the DWD
• The DWD toolbar
• The relationship between Wherescape and QAD
• Data flow within the DWD
• Data object types
• How the designer accesses and interacts with the DWD on-line Documentation
• How to use the DWD diagramming tool
• How to run a DWD report. Examples of DWD reports

**BI DWD Scheduler**
• Purpose of the DWD Scheduler
• How a user will access the DWD Scheduler
• The Scheduler components and their hierarchy
• Scheduler navigation, toolbar and panes
• Scheduler States
• Audit functionality available in the Scheduler
• Scheduler documentation available.
CHAPTER 16

Business Intelligence, Technical 1

Introduction
This certification is intended for individuals who will install and support the Business Intelligence solution.

Exam Format
The Business Intelligence Technical Level 1 exam is delivered in a single 2-hour session and does not require hands-on interaction with QAD Enterprise Applications.

Estimated Preparation Time Required
- 10 days (including training, documentation review and practice)

Recommended Preparation
- Business Intelligence (BI) V3 Level 1 - Technical (4 day class)

Recommended Areas of Study
- BI Portal installation
- CFO dashboard
- The Data Ware Designer (DWD)
- DWD Scheduler
- DW D Setup
- BI troubleshooting
Introduction
This certification is intended for individuals who will provide Tier 2 technical support for the BI V3 product.

Exam Format
The Business Intelligence Technical Level 2 exam is delivered in a single 4-hour session and does not require hands-on interaction with QAD Enterprise Applications.

Estimated Preparation Time Required
- 5 days (including training, documentation review and practice)

Recommended Preparation
- Business Intelligence (BI) V3 Level 2 - Technical (4 day class)

Recommended Areas of Study
- BI Customizations
- The Data Ware Designer (DWD)
- Performance Tuning
- Results from environments
- SQL
- BI troubleshooting
Technical Foundations

There are architecture and technology topics common to both the Technical Implementation and Customization certification exams. The topics that follow will be addressed in both exams and should be mastered before either exam is attempted.

Recommended Training

The following training is available only as online elearning:

- Introduction to Georgia Softworks Telnet Server for QAD Enterprise Edition (30 min.)
- Introduction to Java and Tomcat for QAD Enterprise Edition (30 min.)
- Introduction to QAD Interoperability (EDI eCommerce) – QAD Enterprise Edition (30 min.)
- Introduction to QAD Interoperability (QXtend) – QAD Enterprise Edition (30 min.)
- Introduction to Supported Operating Systems – QAD Enterprise Edition (30 min.)
- Introduction to the QAD .NET UI – QAD Enterprise Edition (30 min.)
- QAD Application Architecture – QAD Enterprise Edition (30 min.)

Recommended Reading

- AIX - IBM Certification Study Guide
  http://www.redbooks.ibm.com/abstracts/sg247199.html
- HP-UX - Routine Management Tasks
- Solaris - Basic Administration
  http://docs.sun.com/app/docs/doc/817-1985
- Linux - The Linux System Administrator's Guide from the Linux Documentation Project
Sample Questions

- Java memory is managed in:
  - Ages
  - Collectors
  - Generations
  - Objects

- What are the three main layers of QAD product architecture?
  - User interface, services and integration
  - Client, data access and database
  - Presentation, business services and data access
  - Presentation, integration and data access

- What is the difference between proserve and _mprosrv?
  - Nothing
  - proserve is a Java aware version of _mprosrv
  - proserve is a Windows version of _mprosrv
  - proserve is a SQL Broker for _mprosrv

Topics Covered

The sections that follow identify the topics you are expected to understand.

Progress Open Edge

This section concentrates on the knowledge you need to understand the architecture and entry level usage of Progress Open Edge, including basic database administration.

Platform Support, including a high level knowledge of

- Hardware
- Operating systems
- Databases
- Versions etc.
- Basic installation and configuration

Progress OpenEdge Suite including

- Webspeed
- Basic Appserver Administration
- High Level understanding of QAD Service Interface and AppServers

**Entry Level Database administration, including**
- Startup
- Shutdown
- Progress Explorer
- Creating and Copying databases
- Backup and recovery
- Dump and reload
- Storage areas

**Java and Tomcat**
This section concentrates on the knowledge you need to understand the architecture both Java and Tomcat.

**You should know and understand the following:**
- A high level understanding of Java
- A high level understanding of Tomcat
- The relationship between QAD software and Java
- A high level understanding of Tomcat and QAD webapp architecture
- A high level understanding of Tomcat and QAD webapps administration

**You should have the following additional requirements:**
- Basic Unix and Windows Administration Skills

**MS.NET Framework**
This section concentrates on the knowledge you need to understand the architecture and purpose of the Microsoft .Net Framework.

**You should know and understand the following:**
- A basic understanding of the architecture of the .Net framework

**You should have the following additional requirements:**
- Ability to access the .Net framework through the use of a standard Integrated development environment
Georgia Softworks - Telnet Server

This section concentrates on the knowledge you need to understand the architecture and purpose of the Georgia Softworks - Telnet Server.

You should know and understand the following:

- A basic understanding of the architecture of the Georgia Softworks - Telnet Server

Operating Systems

This section concentrates on the knowledge you need to understand an entry level overview of operating systems.

You should know and understand the following:

- A basic understanding of Operating Systems including simple navigation and file permissions.

Architectural Overview

This section concentrates on the knowledge you need to deploy Progress OE Appserver for use with QAD Applications.

You should know and understand the following:

- A basic understanding of the architecture and how the previously mentioned technologies are used by the following core QAD Products:
  - Appshell
  - QAD Applications Enterprise Edition Installation and Conversion
  - QXtend
  - EDI
Enterprise Edition Technical Implementation

Introduction

This section of the study guide is designed to assist you in preparing for the Enterprise Edition Implementation exam. This is one of two technical certification exams.

This exam is intended for technical staff, particularly technical installers, technical consultants, systems administrators and database administrators.

Exam Format

The Implementation exam is delivered in one three-hour session and does not require hands-on interaction with QAD Enterprise Applications.

Estimated Preparation Time Required

- 13-14 days (including training, documentation review and practice)

Recommended Foundational Training

Refer to the chapter titled “Technical Foundations” for additional topics that will be addressed in the Technical Implementation certification exam.

Recommended Training Courses

The technical courses listed below are available as instructor-led training only. It is strongly recommended that you complete these courses before attempting the Enterprise Edition Implementation exam.

- Installation and Administration (5 days)
- Database Conversion (3 days)
Recommended User Guides
- Installation Guide for Progress Database
- Conversion Guide for Progress Database

Sample Questions
How would you repair corrupt database index blocks most efficiently?
- Restore from backup
- Dump and reload
- Proutil dbpr
- Index rebuild

During conversion execution, conversion status information is written to which log file?
- qdtadmin.log
- convert.log
- qdt.log
- install.log

Why is it necessary to run the Sales Order Balance Update in the post-conversion stage?
- To ensure the customer’s balance is correct when a credit check is performed.
- To make sure the order quantities are still accurate.
- To recalculate any freight charges on the open orders.
- For audit purposes, to verify the accuracy of the conversion.

Topics Covered
The Enterprise Edition Implementation exam requires a thorough understanding if the following topics:
- Foundation Architecture and Technologies
- Installation
- Database Conversion
- Administration and Configuration
- Security, Reporting and Daemons
- Validation and Troubleshooting
Installation and Administration

This section concentrates on the knowledge you need to install and administer QAD Enterprise Applications (Enterprise Edition).

You should be able to:
- Understand how to manage and maintain the Progress OpenEdge databases used with QAD Enterprise Edition
- Implement a backup strategy
- Tune databases for performance and stability
- Understand and use the QAD Deployment Tool
- Validate that a QAD Enterprise Edition Installation was successful
- Troubleshoot and perform diagnostics on all technical aspects of the QAD Enterprise Edition Reference Architecture
- Install QAD Software Patches
- Understand the QAD Applications Security Model
- Understand and Configure QAD Enterprise Edition Reporting
- Understand and Configure the QAD Enterprise Edition Daemons

Database Conversion

You are expected to have a practical understanding of the conversion process and the activities that occur before, during and after conversion.
Enterprise Edition Customization

Introduction
This section of the study guide is designed to assist you in preparing for the Enterprise Edition Customization exam.

This exam is intended mainly for developers.

Exam Format
The Implementation exam is delivered in one two-hour session and does not require hands-on interaction with QAD Enterprise Applications.

Estimated Preparation Time Required
• 16 days (including training, documentation review and practice)

Recommended Training Courses
• Non-Intrusive Customization training (5 days)

Recommended Reading
• Non-Intrusive Customization training materials (presentation slides, exercises)

Sample Questions
What are the different levels of Customization in EF?
• User / Menu option / System.
• User / Program / System.
• Group / Role / System.
• User / Role / System.

In non-intrusive customization it is possible to call standard business functions. Which of the following statements is TRUE?
• Methods from other components need to be called through their proper instance.
• Methods from same components need to be called through their proper instance.
• Methods from other component can be called directly from customization code.
• Methods from other component can not be called from customization code.

What do you need to install or configure to activate the non-intrusive customization?
• Install compiled custom code in a folder named customcode in the appserver propath. The application will automatically pick up the custom code after restart of the servers.
• Install of the QAD customization controller, make a change in the financials appserver propath, and create a folder named customcode. The newly installed customization controller will pick up the custom code.
• Use the system monitor to configure the customization controller. By adding specific 4GL programs (.p) associated for financials menu entries the code in these 4GL programs will automatically be executed.
• Change the propath in the financials appserver to include a folder that contains a subfolder named customcode. The customization controller needs to be configured by entering the components that are customized in the central server.xml file on the server.
**Topics Covered**

**Customization of Component-Based QAD Applications:**
This section covers back-end and UI front-end non-intrusive customization of QAD component-based applications and requires and understanding of
- The architecture and its relevance for customization
- Configuring your system for NI customization
- Development of NI customization
- Typical customization cases
- Report Customization
- Customization Supporting Tools
- Calling standard business functions

**Customization using QAD Applications Features and Functions,**
This section of the exam covers the .NET UI application features that can be used by non-developers to customize both component-based and non-component based applications. It includes:
- UI design mode in financials screens
- Configurable screens
- User-defined fields
- Browse features
- Browse maintenance
- Saving browse settings
- Operational metrics
- Process maps

**Impact of QAD Enterprise Applications-EE on Development**

**Integrating with Financials Back End**
This section covers integration to Enterprise Financials in progress 4GL.
CHAPTER 21

Integrated Customization Toolkit

Introduction

The Integrated Customization Toolkit (ICT) exam covers basic customization techniques based on main QAD Integrated Customization Toolkit functions.

The objective of this test is to ensure that you have a broad understanding of QAD Integrated Customization Toolkit functions and how they should be used. Since QAD ICT allows customizing QAD Enterprise Applications system, all developers should be fully versed in its functionality and use.

Exam Format

The Integrated Customization Toolkit exam is a test contains of 40 questions. Only one answer in each question is correct. The exam covers main QAD ICT functions such as ICT Tasks, QAD ICT Session Triggers, QAD ICT UI Handler functions, QAD ICT Intrusive Handlers, QAD ICT Administration.

Estimated Preparation Time Required

- 33 days (including 3 days training, then 30 days of documentation review and hands-on practice)

Recommended Training Courses

- ICT Development Training (3 days)

Recommended User Guides

- ICT User Guide (all sections are relevant)
Sample Questions

What can be hidden in QAD ICT Frame and Field Properties?

- Only fields due to a limitation in .NetUI.
- Frame and Fields in any UI.
- Only fields in any UI.
- Frame and Fields in character, but only fields in .NetUI.

To get the up-to-date version of the trigger link programs:

- icqtrgXX.p should be controlled by the version control system.
- Developers should cooperate to keep this program saved with the correct content.
- The rebuild of Link&Consistency triggers process should be performed.
- All manual changes in these programs should be kept to a minimum.

Product Modules Covered

This test covers the content of each of QAD Integrated Customization Toolkit modules.

You should study the following:

- QAD ICT Session Trigger Handler
- QAD ICT UI Handler
- QAD ICT Intrusive Handler
- QAD ICT Developers menu
- QAD ICT User functions
- QAD ICT Tasks
- QAD ICT Control menu

The test covers implementation issues, and how the functions in each of these modules can and should be used.

Test Topics

The QAD ICT modules have been subdivided into fourteen topics for you to study. These are:

- Administration
- Default Value Settings
- Frame & Fields Settings
- General informations
- Groups
• Debugger
• Tags
• Methods & Functions
• Other options
• Program Hooks
• Shadow Table Settings
• Tasks
• Triggers
• Validation Settings

In the following sections, each of these topics is briefly described, followed by a list of what you should know and understand.

**Administration**

This topic addresses how to administrate Integrated Customization Toolkit. It includes basic ICT Administration options and actions which are required to manage a tool and the customizations.

**You should know and understand the following:**

• How customer customization cooperates with customizations delivered by QAD.
• How to restart ICT processing in different UIs.
• How to change ICT Developers Menu accelerator.
• What the purpose of each field in QAD ICT Control Table is
• What the purpose of using super procedures is
• What the purpose of ICT main procedure icprcs.p is

**Default Value Settings**

This topic covers Default Value Maintenance details.

**You should know and understand the following:**

• What the purpose of each field in Default Value Maintenance is.
• What technique is used to proceed default values (e.g. which trigger is used).
• What special values and 4GL functions you can use to set a default value.
Frame & Fields Settings

This topic includes all information related with ICT Frame & Fields Properties Maintenance.

You should know and understand the following:

- What actions are allowed in Frame & Fields Properties Maintenance.
- What UI objects can be manipulated in Frame & Fields Properties Maintenance.
- What technique is used to proceed UI manipulation (e.g. which trigger is used).
- What the purpose of each field in Frame & Fields Properties Maintenance is.
- How to hide an UI object.
- How to add an UI object.
- How to change UI object properties (position, width and others).
- What the difference between adding database field and adding variable is.

General informations

This topic covers general information about ICT such as supported UIs, batch processing limitations and others.

You should know and understand the following:

- What kind of ICT settings can be copied automatically using proper ICT maintenance.
- Which user interfaces are supported by ICT.
- What Progress versions are supported by ICT.
- What QAD products are supported by ICT.
- How to handle CIM and BATCH processing with ICT.
- What needs to be done to see the result of defined ICT settings.
- How customization data (such as ICT settings, message, menu changes and others) is registered by ICT.

Groups

This topic covers the group functionality which is used in most of UI Handler module programs and Program Hooks.

You should know and understand the following:

- How to add multiple settings for the same configuration using hash (#) mechanism.
- What is the order of execution records defined with hash (#) technique.
- How to define the group to block access for users in selected group.
• How to define the group to allow access for users in selected group and in the same
  time block users from another group.
• What the purpose of using exclamation mark (!) for defining group is.

**Debugger**

This topic covers the ICT Debugger functionality.

**You should know and understand the following:**
• If ICT Debugger is allowed to use in all kinds of environment (development, test,
  production).
• How to use ICT debugging for tracking errors and measuring performance.
• What the purpose of each icdbg.i include parameters is.
• What user interface is supported by debugging.

**ICT Tags**

This topic covers one of intrusive customization technique whis is ICT Tags.

**You should know and understand the following:**
• How to define executed programs.
• How to comment standard code using ICT Tags.
• What the purpose of switch on/off procedure is.

**Methods & Functions**

This topic covers functions and procedures delivered with QAD ICT.

**You should know and understand the following:**
• What functions getRecord, getBuffer, getValue return.
• What the purpose of registerTrigger, registerBuffer, registerValue functions is.
• What register and retrieve functions are defined in QAD ICT
• How saveFirstTime and firstTime functions can be used.
• What parameters are passed to functions setFieldValue and getFieldValue, which of
  them are obligatory, which optionally for each function.
• What data can be retrieved using getFieldValue.
Other options

This topic includes ICT options such as Global Value Maintenance, Auto-Save Value and Maintenance Generator.

**You should know and understand the following:**
- How to define and retrieve Global Value
- Where Global Value can be used
- For which fields Global Value can be defined
- How Auto-Save value can be defined
- Who can define and who is affected by Auto-Save value
- How to define a new maintenance using Maintenance Generator
- How to add new fields to maintenance generated with Maintenance Generator

Program Hooks

This topic covers Program Hooks – a tool of intrusive customizations.

**You should know and understand the following:**
- How to create executed program
- What program should be recompiled after Program Hook definition
- How standard program can be disabled using Program Hook

Shadow Tables Settings

This topic addresses shadow tables – a technique of non-intrusive extending the existing database.

**You should know and understand the following:**
- What files are created during Shadow Table definition.
- What the generated .df file consists of.
- What tools are executed during Shadow Table definition in character UI.
- What limitations can be observed in Shadow Table Maintenance in .netui.
- What triggers support Shadow Table mechanism.
- What the purpose od Custom Procedure in Shadow Table Maintenance is.
Tasks
This topic addresses task – a technique of customization management developed by ICT.

You should know and understand the following:
- What the purpose of “Task base directory”, “Central directory” and “Source sub-dir.”
  Fields in ICT Control Table is.
- What customized programs are moved to central environment
- Who can see the customization linked with WIP task.
- Who can see the customization linked with CLOSED task.
- What domains a new task is available in.
- How to manage ICT tasks between domains.
- If customization is possible without choosing the task.
- What actions are performed by ICT when task is closing.

Triggers
This topic addresses triggers propagation techniques.

You should know and understand the following:
- What parameters are passed to Trigger Link custom program, Shadow Table custom program.
- What parameters are passed to on assign subscriber program, on write subscribe program, on delete subscriber program and on create subscriber program.
- What are the required actions to register to on write/on create/on delete trigger.
- What super programs which include triggers are loaded during ICT stat-up.
- What ICT option can be used to define each type of trigger.
- What triggers are supported by ICT.
- When each type of trigger is executed
- What the purpose of using each type of trigger is
- What interface triggers limitations can be observed in .netui.
- Who can generate / change Link&Consistency triggers file
- What the purpose of each field in UI Trigger Maintenance is.
Validation Settings
This topic corresponds with ICT Validation Maintenance.

You should know and understand the following:
- What validation types are enabled
- What technique is used to proceed validation (e.g. which trigger is used).
- What validation techniques are enabled