



QAD Enterprise Applications
Enterprise Edition

Training Guide

QAD Warehousing Fundamentals

About This Course
Introduction to Warehousing
Receiving
Replenishment
Picking
Shipping
Inspection
Labor Management
Cycle Count
Printing

70-3240-2012EE
QAD Enterprise Edition
March 2012

This document contains proprietary information that is protected by copyright and other intellectual property laws. No part of this document may be reproduced, translated, or modified without the prior written consent of QAD Inc. The information contained in this document is subject to change without notice.

QAD Inc. provides this material as is and makes no warranty of any kind, expressed or implied, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. QAD Inc. shall not be liable for errors contained herein or for incidental or consequential damages (including lost profits) in connection with the furnishing, performance, or use of this material whether based on warranty, contract, or other legal theory.

QAD and MFG/PRO are registered trademarks of QAD Inc. The QAD logo is a trademark of QAD Inc.

Designations used by other companies to distinguish their products are often claimed as trademarks. In this document, the product names appear in initial capital or all capital letters. Contact the appropriate companies for more information regarding trademarks and registration.

Copyright © 2012 by QAD Inc.

Warehousing_TG_v.2012EE.pdf/crl/QAD/

QAD Inc.

100 Innovation Place
Santa Barbara, California 93108
Phone (805) 566-6000
<http://www.qad.com>

Contents

Change Summary	XV
About This Course	1
QAD Web Resources	2
Logging in to Training Success Web Site	2
Setting Up the Environment	2
Logging into QAD Enterprise Edition	3
Troubleshooting the Training Environment	3
Using the RF for Exercises	4
Logging In to Unix Character Session and Starting RF Software	5
Logging into RF as User A or User B	5
Shortcut to Enabling and Executing the RF Software	8
Chapter 1 Introduction to Warehousing	9
Overview	10
QAD Warehousing Setup	11
QAD + QAD Warehousing	12
QAD Warehousing Manages Tasks	13
Task Prioritization	14
Task Directed	15
Task Concepts	16
QAD Warehousing Main Concepts	17
Set Up a Site and Warehouse	18
Set Up Areas	19
Set Up Zones	20
Zone Example	21
QMI Layout	22
Location Examples	23
Locations are Site Specific	24
WLGs Defined by Work Practices and Printers	25
Locations Belong to a Zone and WLG	26
Use Standard Transaction Types	27

Transaction Types	28
Dependencies that Help Set Up the Warehouse	29
Enable QAD Warehousing	30
Exercise - Set up Inventory Detail Inquiry	31
Many Control Features are Managed in a Warehouse	32
Control Scan Options	33
Defaults Can Be Altered	34
Setting Up Areas	35
Exercise - What Areas are Set Up in the Warehouse?	36
Setting Up Zones	37
Exercise - Which Zones are Set Up in the Warehouse?	38
Set Up Work Sections	39
Exercise - Which Work Locations are Set Up?	40
Set Up Locations	41
Location - Caution	42
Set Up Locations - Warehouse Location Maintenance	43
Location - Alert	44
Setting Up Many of the Same Type of Location	45
Locations Setup - Implementation Alert	48
Exercise - Location Capacity	50
Define Routes	51
Define Routes - Internal Routing Maintenance	52
Auto Versus Manual Processing	53
Example - Map the Internal Routings	54
Which Routings Do You Use and When	56
Example - What are the Transaction Types Associated with the IRs? ..	58
Define Rules	61
Which Rules to Use and When	62
Example - Which Algorithms are Assigned to Material Flows	63
QMI Units of Measure	65
Know Your Units of Measure	66
Items Currently Assigned to a Site	67
Other Item Characteristics	68
User Setup	69
Implementation Consideration - Define User Parameters	70
Assign the user to a Work Location Group	71
Traditional Warehouse Tasks	72
Assign Tasks to Users	73
QAD Warehousing - Key Learning Points	74
Exercises	75
Guidelines for Initial Data Setup	76
Exercise - Set Up Warehouses	77
Exercise - Set Up Areas	78

Exercise - Set Up Zones	79
Exercise - Define Work Sections	81
Exercise - Assign Users to Work Location Groups	82
Exercise - Set Up Locations	83
Exercise - Set Up Mass Locations	85
Exercise - Enable Users	87
Exercise - Set Up a License Plate Number	88
Questions	89
Answers	90
Notes	91

Chapter 2 Receiving 93

Overview	94
QAD Warehousing Receiving Objectives	95
Functional Fit - What Warehousing Does Not Do	96
Functional Fit Continued	97
Receipt Types	98
Receiving Configuration - Dependencies to Help Set Up	99
Define Receiving and Storage Zones	100
Typical Flow is Direct to Storage	101
Look for a Specific Spot	102
Rules Available for Put Away	103
Locations Have Many Attributes	104
Support Slotting Strategy	105
Manage Location Capacities	106
Manages Workers and Work Sections	107
Example - Receive Two Pallets to Locations with Existing Inventory	109
Example - Allow Mixed Item Storage	113
Put-Away Rules	114
Bonus Coverage: Three-Step Sequence	115
Bonus Coverage - Location Stage In/Stage Out	117
Implementation Consideration	118
Item Master Considerations	119
Item Configuration- Step 1	120
Item Configuration- Step 2	121
Item Configuration- Step 3	122
Example - Receive an Item Not Set Up in the Warehouse	123
Example - Inventory Received, Nothing Happens	124
Example - Add Items to the Warehouse	125
Example - Set Up the Item at the Site and Warehouse	126
Example Test = Success	127
Example - Create New UM Groups	128
Example - UM Groups Help During Implementation	129

Example - Assign UM Group to Item	130
Example - Run the UM Conversion Generation	131
Example Test = Success	132
Implementation Consideration - Back to Locations	133
Location Popularity	134
Example - Assign Location Popularity	135
Example - Assign Popularity Codes	136
Example - Change the Receipt Put-Away Rules	137
Example - Storage by Popularity	138
Example- Receipt One	139
Example - Receipt Two	140
Example - Receipt Three	141
Implementation Consideration	142
Verbosity Reporting is a Troubleshooting Tool	143
Setting Verbosity Level for Go Live	144
Simulation	145
Example - Simulate Put Away when Locations are Full	146
Example - Simulate Receipt of an Item with Three Pallets	147
Example - Review Simulation Results	148
Example - Verbosity Report	149
Example - What About the Extra Pallet?	150
Implementation Hint: Setting Up a Trouble Location	151
Bonus Coverage: LPN Creation	152
Bonus Coverage - Configure the LPN	153
Key Learning Points	154
Exercises	155
Exercise - Set Up Items	156
Exercise - Set up Alternate Units of Measure	160
Exercise - Set up Receipt Put Away/Routing	161
Exercise - Assign a Transaction to the Routing	162
Receive Items	164
Add More Items and Create UM Groups	165
Questions	167
Answers	168
Notes	169

Chapter 3 Replenishment. 171

Overview	172
Objectives	173
Functional Fit: What We Don't Do So Well	174
Optimize Space and Material Handling	175
Reserve Storage and Forward Pick is a Best Practice	176
Replenishment is Used for Restocking Automated Equipment	177

Auto-Replenish Flags Set in Two Places	178
Overpick Replenishment	179
Dependencies that Help with Replenishment Setup	180
Which Locations Get Replenished	181
Which Locations Get Replenished - IR Maintenance	182
Which Locations Get Replenished - IR Assignment Maintenance ...	183
Which Locations Get Replenished - Warehouse Location Maintenance	184
Where Does Replenishment Inventory Originate?	185
How is Replenishment Inventory Managed?	186
Which Items and Capacities Get Replenished?	187
Example	188
Manual Replenishment	189
Replenishment Request Triggers a Product Move	190
Replenishment Via the RF	191
Replenishment Complete	192
Implementation Consideration	193
Example - Reducing Replenishment Product Touches	194
Example - Consider Filling Forward Pick Locations	195
Bonus Coverage - Zone Replenishment	196
Key Learning Points	197
Exercises - Set Up and Execute Replenishment	198
Exercise - Confirm Forward Pick Location Setup	199
Exercise - Set Up Replenishment Routing	200
Exercise - Assign a Transaction to the Replenishment Routing	201
Exercise - Define Zones for Replenishment Inventory	202
Exercise - Define Replenishment Picking Rules	203
Exercise - Set Up Replenishment Parameters for Forward Pick Locations	204
Exercise - Generate Replenishment Tasks	205
Questions	207
Answers	208
Notes	209
Chapter 4 Picking	211
Overview	212
Objectives	213
Functional Fit: Picking	214
QAD Inventory Control Versus QAD Warehousing	215
Discrete, Bulk, and Batch	216
Can You Split Unit Loads?	217
Can You Overpick?	218
Picking Levels Define Pick Zones	219
Discrete Picking	220
Discrete Picking - One Order at a Time	221

Set Up Storage and Picking Area	222
Set Up Different Zones by Material Handling Type	223
Set Up Locations in Each Zone	224
Define Which Zones are Available for Picking	225
Assign Picking Levels to Zones	226
Define Product Flow Path for Picks	227
Assign Flow Paths to Picking Transactions	228
Define Product Movement Rules to Use for Transaction	229
Example - Set Up and Execute a Discrete Pick	230
Example - Discrete Picking	231
Example - Discrete Picking, Zones	232
Example - Discrete Picking, Release Order	233
Example - Discrete Picking, Review Pick Activity	234
Bonus Coverage	235
Bonus Coverage - Pick Strategies	236
Example - Discrete Picking, User Picking Pallet	237
Example - Discrete Picking, Test=Success	238
Discrete Picking Learning Points	239
Example - Reduce Wasted Time Driving and Dropping	240
Example - Reduce Travel	241
Example - Test=Success	242
Batch Picking	243
Batch Picking Defined	244
Batch Picking Process	245
Example - Batch Picking Setup and Execution	246
Example 1- Assign Users to a WLG	247
Example 2- Specify Users as a Location	248
Example 3 - Set Batch Picking Control Parameters	249
Example 4 - Set Up and Release Multiple Sales Orders	262
Example 5 - Select Order Using RF	263
Example 5A - Select Order Using RF	265
Benefits of Batch Picking	266
Batch Pick Function Keys	267
Bulk Picking	268
Bulk Picking Defined	269
Bulk Picking Control	270
Bulk Pick Setup	271
Bulk Pick Order Selection Inquiry	272
Wave Planning	273
Bulk and Wave - What is the Difference?	274
Bonus Coverage - Engine Processing and 3-Step Routing	275
Example - Engine Processing	276
Engine Processing - Three-Step Routing Setup	277

Modify the Pick Routing	278
Enable User A to Process a Transfer Task	279
Release and Pick an Order	280
Validate an Order in Packaging	281
Activate Engine Processing	282
Process the Move from Packaging to Shipping	283
Key Learning Points	284
Exercises - Picking Setup and Execution	285
Exercise - Set Up Warehouse, Area, and Zone	286
Exercise - Set Up Pick Routing	287
Exercise - Assign Pick Routing	288
Exercise - Set Up Pick Rules	289
Exercise - Set Up Drop Pick Rules	290
Exercise - Set Up Discrete Pick Items	291
Questions	292
Answers	293
Notes	294
Chapter 5 Shipping.....	295
Overview	296
Objectives	297
Functional Fit: What We Don't Do So Well	298
Concepts	299
Shipping Configuration	300
Define Shipping and Zone Area	301
Locations Can Have Many Attributes	302
Typical Flow Direct to Shipping	303
When to Use Pick Routing	304
Look for a General Spot in Shipping	305
Any User Performs Manual Moves	306
Truck Shipping	307
Ship Truck	308
Set Up Ship Truck	309
QAD Warehousing Shipping - RF Ship Truck	310
Example - Ship Truck	313
Example - Ship Truck (RF 3.5)	314
Optional - Container Move	315
Container Move	316
Container Move Configuration	317
Set Up at Least One Truck Location	318
Define a Product Flow to Move to Truck Locations	319
Link a Transaction Path to the Product Flow Type	320
Look for a General Stage/Truck Location	321

Example - Container Move	322
Example - Container Move (RF 3.4)	323
Optional - Trucks as Temporary Storage	324
Truck Area, Zone, and Location Configuration	325
Set Up a Truck Area	326
Set Up a Truck Zone	327
Set Up at Truck Locations	328
Define Product Flow	329
Link a Transaction Type to the Product Flow Path	330
Look for a General Truck Location	331
Example - Move Container/Load to a Truck	332
Example - Use Trucks as Locations (RF 3.4)	333
Control Truck Load Building Sequence	335
Optional - Containerization	336
Containerization	337
QAD Warehousing Shipping - Containerization	338
Viewer Discretion Advised	339
Containerization Setup	340
QAD Warehousing Shipping - Containerization (RF 3.3)	341
View Containerization Progress Via RF 3.3	342
Remove Boxes from a Container Via RF 3.3	343
Remove Boxes Between Containers Via RF 3.3	344
Monitor the Order Status Via RF 3.3	345
Example - Pre-Shipper/Shipper Inquiry	346
Example - Pre-Shipper/Shipper Inquiry	347
Example - RF 3.3 Container Build	349
Bonus Coverage: Assign Carriers to Shipping Lanes	355
Parcel Manifest	356
Parcel Manifest Setup and Execute	357
Set Up Print Paperwork Controls	358
Assign a Form Printer to Shipping	359
Optionally Set Up a TMS Messaging Interface	360
Print Pre-Shipper/Shipper	361
Key Learning Points	362
Exercises - Shipping Setup and Execution	363
Warehouse, Area, and Zone Setup	364
Exercise - Ship Location Setup	365
Exercise - Review Pick Routing and Drop Rules	366
Exercise - Ship the Order	367
Exercise - Move Load to an Alternate Shipping Location/Lane	368
Exercise- Move Load to an Alternate Shipping Location/Lane (cont'd)	369
Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)	370
Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)	371

Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)	373
Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)	374
Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)	375
Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)	376
Questions	377
Answers	378
Notes	379

Chapter 6 Inspection 381

Objectives	382
What We Do Not Do Well	383
Inspection Product Flow	384
Inspection Flags Set in Multiple Places	385
Dependencies	386
Define Inventory Status - Optional	387
Activate Inspection Control	388
Set Up Inspection and QA Hold Area, Zone, and Location	389
Define Inventory Status Code Changes	390
New Product Flows=New Routings	391
Determine Product Flow through Inspection	392
Confirm Check Inspection to Trigger QA Rules	393
A Receipt Triggers Various Product Moves	394
New Rules Required for New Routings	395
Define Item-Warehouse Level Inspection Parameters	396
Example - Receive Item with Inspection Requirement	397
Example - Confirm Inspection Results	398
Example - Add Inspection Comments/Change Qty	400
Example - Add Inspection Comments/Change Qty (Cont'd)	401
Example - Success	402
Bonus Coverage: Example - Inspect Partial Pallet	403
Bonus Coverage - Example Inspect Partial Pallet (Continued)	404
Bonus Coverage: Example - Inspect Partial Pallet (Continued)	405
Bonus Coverage - Example - Success	406
Bonus Coverage: Define Inspection Parameters by Supplier	407
Bonus Coverage: Inspection Fail Processing	408
Bonus Coverage: Move Product to QA Hold	409
Key Learning Points	411
Exercises - Inspection Setup and Execution	412
Exercise - Set up an Area, Zone, and Location	413
Exercise - Set Up Inspection Product Flows and Rules	414
Exercise - Create Routings	415
Exercise - Assign Routing	417
Exercise - Use Put-Away Rules	418

Exercise - Define Inspection Parameters	420
Exercise - Activate Inspection	421
Exercise - Receive and Inspect an Item	422
Exercise - Receive and Inspect a Split Load	423
Questions	425
Answers	426
Notes	427

Chapter 7 Labor Management 429

Overview	430
Objectives	431
Functional Fit: Labor Management	432
What is Labor Management?	433
What is Labor Management - True Labor Management System	434
Implementation Planning	435
Implementation Planning - User Parameters	436
Define Work Sections	437
Assign Locations to a Zone or WLG	438
Assign User to Work Location Group	439
Traditional Warehouse Tasks	440
Tasks Link to Internal Routings	441
Assign Task Types to Users	442
Example - Set Up a New UserC	443
Example- Set Up UserC for Cycle Counting	444
Example - Change Task Priority and Assignment	445
Example - Change Task Priorities	446
Example - Change Task Assignments	447
Labor Reporting	448
Key Learning Points	449
Questions	450
Answers	451
Notes	452

Chapter 8 Cycle Count 453

Overview	454
Objectives	455
Functional Fit: What We Don't Do	456
Types of Cycle Count	457
Cycle Count Configuration	458
Setting Up Cycle Counting	459
Item Level CC Parameters	460
Warehouse Level Parameters	461

Zone Level Parameters	462
Work Location Group Parameters	463
Cycle Count Task Assignment	464
Cycle Count Processing	465
Cycle Count Execution	466
Cycle Count Simulation or Creation	467
Cycle Count Tasks	468
Cycle Count Execution - Done on RF	469
Non-RF Cycle Count Activity	470
Avoid Mixing	471
Bonus Coverage - Opportunity Counts	472
Cycle Count White Paper	473
Bonus Coverage - Opportunity Count Configuration	474
Bonus Coverage - Opportunity Counts	475
Bonus Coverage - Opportunity Count, Set OPC Threshold	476
Bonus Coverage - Confirm Opportunity Counts by Zone	477
Bonus Coverage - Opportunity Counts, Define OPC Frequency	478
Bonus Coverage - Opportunity Counts, Assign Cycle Count Tasks ..	479
Bonus Coverage - Example	480
Bonus Coverage - Example Test = Success	481
Bonus Coverage - Physical Inventory Process	482
Implementation Consideration- Using Location Audit	483
Current Inventory Positions	484
Use RF Location Audit to Change Inventory Positions	485
Use RF Location Audit to Change Inventory Positions (Continued) ..	486
Key Learning Points	487
Questions	488
Answers	489
Notes	490
 Chapter 9 Printing.....	491
Overview	492
QAD Warehouse Printing	493
Print Setup	494
Warehouse Control Print Options	495
Warehouse Maintenance Print Frames	496
Print Templates	497
Internal Routing Maintenance Print Options	498
Work Location Group Maintenance Print Frames	499
User Work Location Group Maintenance	500
Multi-Level Item Maintenance	501
Print Request Maintenance	502
Objectives	503

Example - Warehouse Setup	504
Exercise - IR Setup	505
Questions	506
Answers	507
Notes	508

Change Summary

The following table summarizes significant differences between this document and the last published version.

[illegible]

About This Course

QAD Web Resources

From QAD's main site, you can access QAD's Learning or Support sites.

<http://www.qad.com/>

Logging in to Training Success Web Site

For QAD employees, attending an internal class, exercises are built around existing data within the QMI training environment database which is built through Surgient software tools.

When using this training guide within a QAD-sponsored training class, your QAD Warehousing instructor provides information on the environment and a student ID to access the environment.

If using this guide as a self-study course, you can contact the QAD IT department to request a student ID. To do this, enter a help desk ticket through QAD's Changepoint program. Use a request type for the Demo Center. If you are with a partner, you can email the Product Center at:

<http://democenter.qad.com/>

To access the environment, use the following procedure:

- 1 Go to the following url:
<https://training.success6.qad.com/>
- 2 Click the correct AP region on the regional map page.
Note If the AP region does not connect, use either the Australia or US gateways.
- 3 Enter the *Student ID*, provided by your instructor or provided by QAD's IT department.
- 4 Enter the password as `qadtrain`.
- 5 Enter the organization as `classroom training`.

Note The system may display a message, informing you the certificate is expired. In most cases, QAD employees can click OK to bypass the message; then, select the continue to IE option. QAD customers can inform the QAD instructor should the expired certificate message display during training sessions. Note, too, that the instructor typically assigns a unique ID for every student so that IDs cannot be shared in a training session.

Setting Up the Environment

Once the Enterprise Edition screen displays, you must select additional options as part of the environment setup.

To set up the environment, use the following procedure:

- 1 Select `Launch Full Screen`.
- 2 Select `Windows Server 2003 EE 2011.1r01 - Training`.

When you select the EE 2011.1r01, the system launches the QAD EE software and presents the log in screen.

Fig. 0.1
Environment Setup



Logging into QAD Enterprise Edition

Once you launch EE 2011.1r01, you enter the following at the QAD EE login screen:

- 1 Enter the user ID as qmi .
- 2 Leave the password blank.
- 3 Log on to qadui (default).

Fig. 0.2
QAD EE Login



Troubleshooting the Training Environment

If the environment becomes unresponsive, use the following procedure:

- 1 Close the session.
- 2 Return to the lab entry screen; see Figure 0.1.

The session reconnects and you return to the screen you were in when your session became unresponsive.

Using the RF for Exercises

Many of the exercises in this training guide use the RF to select or confirm tasks and perform other steps. QAD provides the same software that displays on the RF device through a Unix character session. Commands are provided to run the software just as if you were on the RF device.

Logging Onto Putty

You can start a Unix character session that lets you run the RF version of QAD Warehousing software through the Putty tool.

There are two ways to start Putty:

- You can start Putty within the .NET UI EE software, by navigating to the bottom of the screen and clicking the QAD tab; see Figure 0.3. The tab reflects your regional environment that you selected when you set up the training session.
- If you are a QAD employee, you can start Putty from Citrx.qad.com in the Homer environment. To do this, use the following procedure:
 - a From the desktop, select the Tools folder.
 - b Within the Tools folder, select Putty.
 - c The Putty Configuration window displays.
 - d Enter `qaddemo` in the Putty Host Name (or IP Address) field.
 - e Click Open.
 - f The system starts a Unix character session.

Fig. 0.3
QAD Training Session Regional Tab



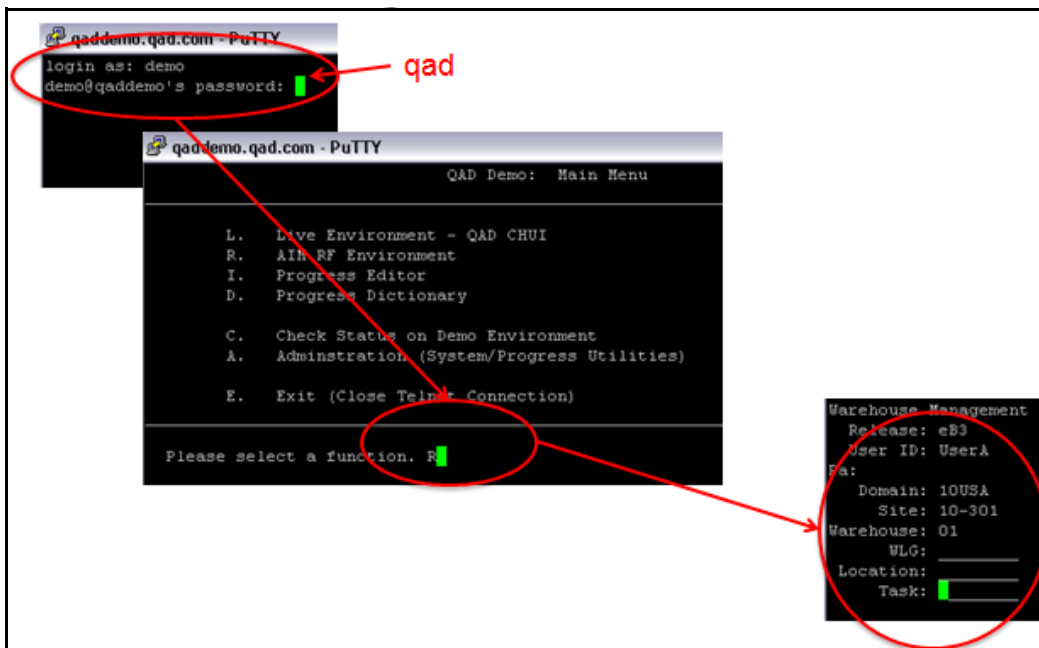
Logging In to Unix Character Session and Starting RF Software

This section tells you how to log in to a Unix character session and start the RF (radio frequency device) software.

To log in to the Unix character session and start the RF software:

- 1 When the qaddemo.qad.com putty session starts, log in as demo.
- 2 Enter the password as qad.
The qaddemo Main Menu displays.
- 3 Enter R to start the RF warehousing software.
The RF main menu displays.
- 4 Enter RF login data, such as the user ID, domain, site, warehouse, work location group (WLG), warehouse, or task; see Figure 0.4.

Fig. 0.4
RF Login



Logging into RF as User A or User B

To log into the RF software as UserA, the user in many of the exercises in this training guide, use the following procedure:

- 1 From the RF main menu, right click the mouse.
The Putty Quick Menu displays.
- 2 Select New Session.
The Putty configuration window displays.
- 3 Select Open; see Figure 0.5.

6 Training Guide — Warehousing

A new character session displays.

4 When the qaddemo.qad.com putty session starts, log in as demo.

5 Enter the password as qad.

The qaddemo Main Menu displays.

6 Enter R to start the RF warehousing software.

The RF main menu displays.

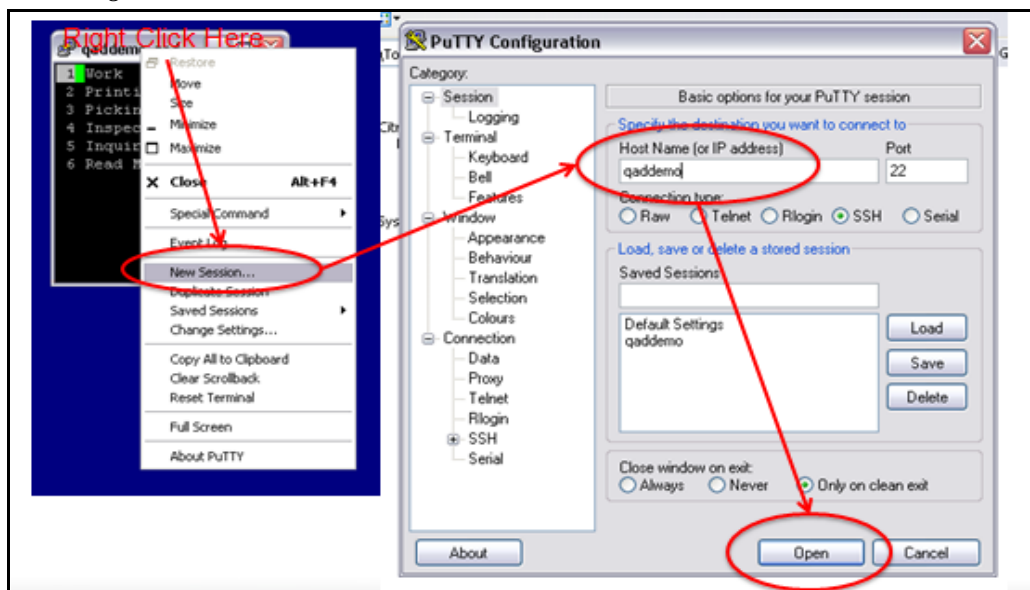
7 In the User ID field, enter UserA.

Note Leave the password field blank.

8 Enter other user data, such as warehouse, WLG, location, or task.

Note You can leave these fields blank, or accept the defaults unless otherwise noted in this training guide or by the instructor.

Fig. 0.5
User A Login

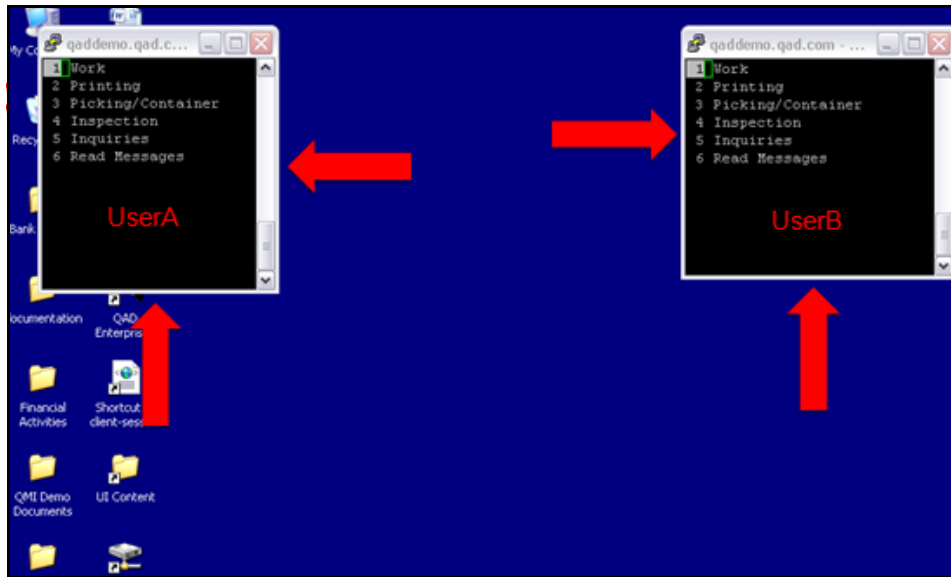


Logging In as UserB

To login as UserB for the exercises, follow all steps for logging in as User A, but change the RF user ID to UserB.

You should be able to see two putty sessions, one for User A and another for User B from the QAD database user interface.

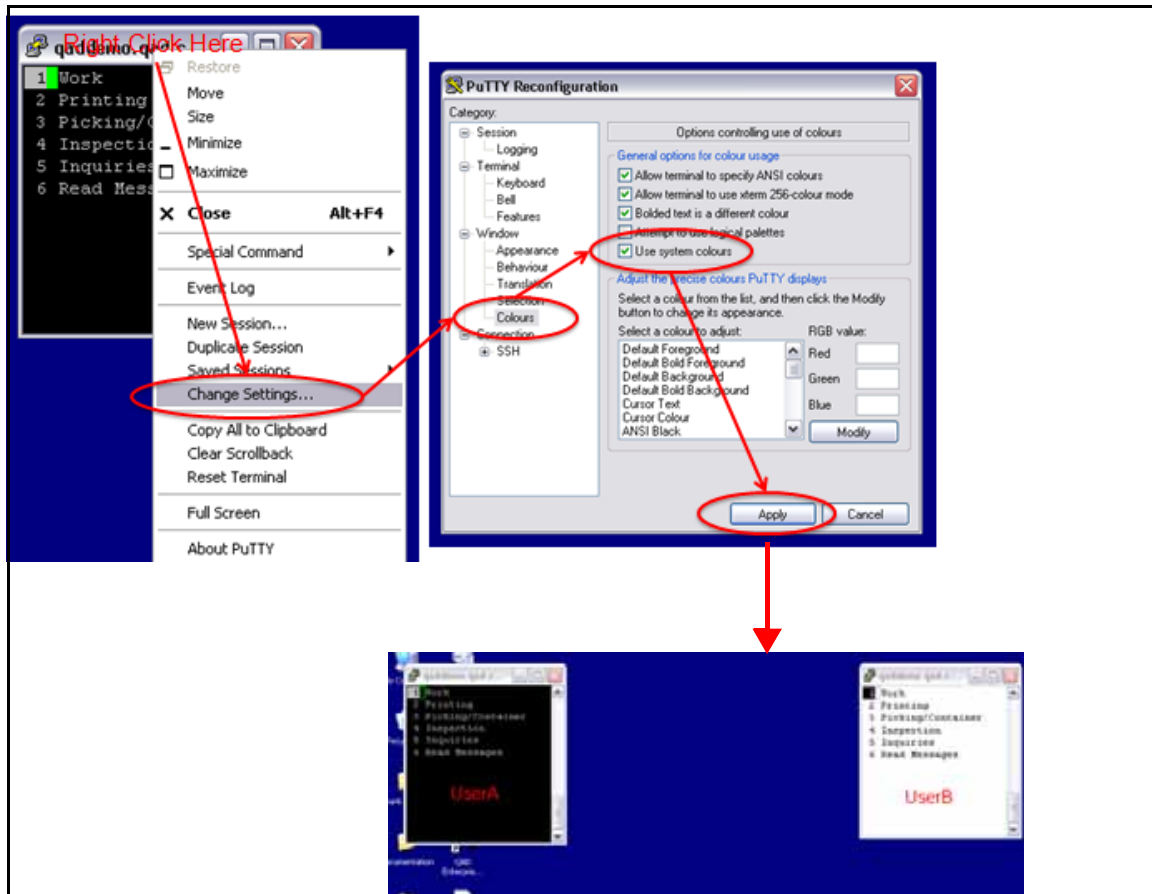
Fig. 0.6
User A and User B Sessions



You can change the color of one of the users by:

- 1 Right click in either User A's or User B's putty RF session.
The Putty Quick Menu displays.
- 2 Select Change Settings.
- 3 The Putty Reconfiguration Menu displays.
- 4 In the left Category portion of the screen, select Colors.
- 5 In the right side of the screen, select Use System Colors; see Figure 0.7.

Fig. 0.7
Reconfigure User Screen Color



Shortcut to Enabling and Executing the RF Software

If you are familiar with the Progress Editor, then you know that you can use the Editor as a means to enter commands directly.

To use the Progress Editor as a shortcut to starting the RF software, use the following procedure:

- 1 From the .NET UI interface, enter the left side Applications window, and type Progress Editor.

The system displays the Progress Editor choice before you finish typing.

- 2 Click on the Progress Editor to start it.
- 3 In the Progress Editor menu, type `run mfwhex.p`.
- 4 Select `CTRL + X` to enter the text.

The RF Login screen displays.

- 5 Log in to the RF as described in this section.

Note You may need to press the Shift key when entering the User ID field.

You can set up another user in this method.

Chapter 1

Introduction to Warehousing

Overview



QAD Warehousing is the warehouse management system product for QAD core.

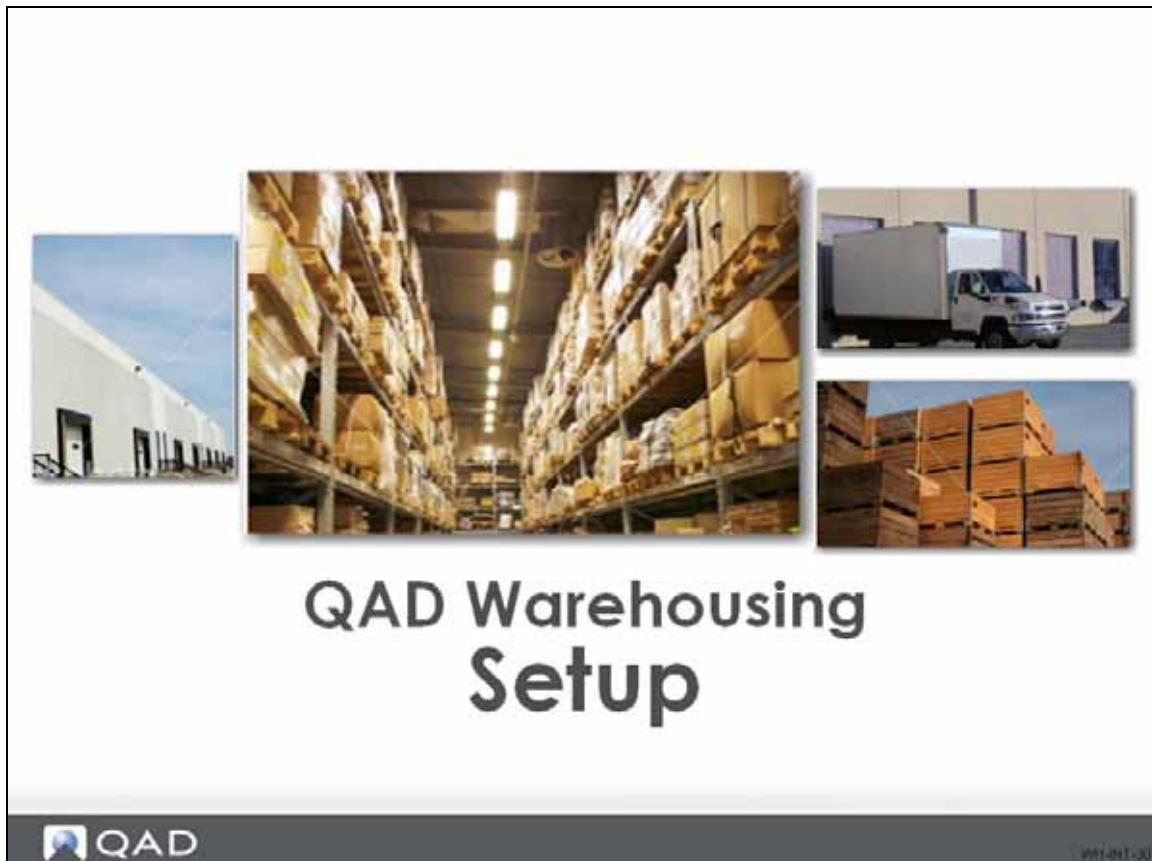
Did You Know

QAD Warehousing has two solutions, QAD Warehousing for EE and QAD Warehousing for SE (formally called Advanced Inventory Management (AIM)).

The suggested setup sequence is provided in this section,

- Understand warehouse concepts
- Set up a basic warehouse
- Configure the system to support general warehouse processes

QAD Warehousing Setup



This section covers basic setup concepts, programs, and steps you should be aware of when you begin to setup QAD Warehousing. Setup and configuration concepts are discussed first. Setup exercises follow this section.

QAD + QAD Warehousing



Did You Know

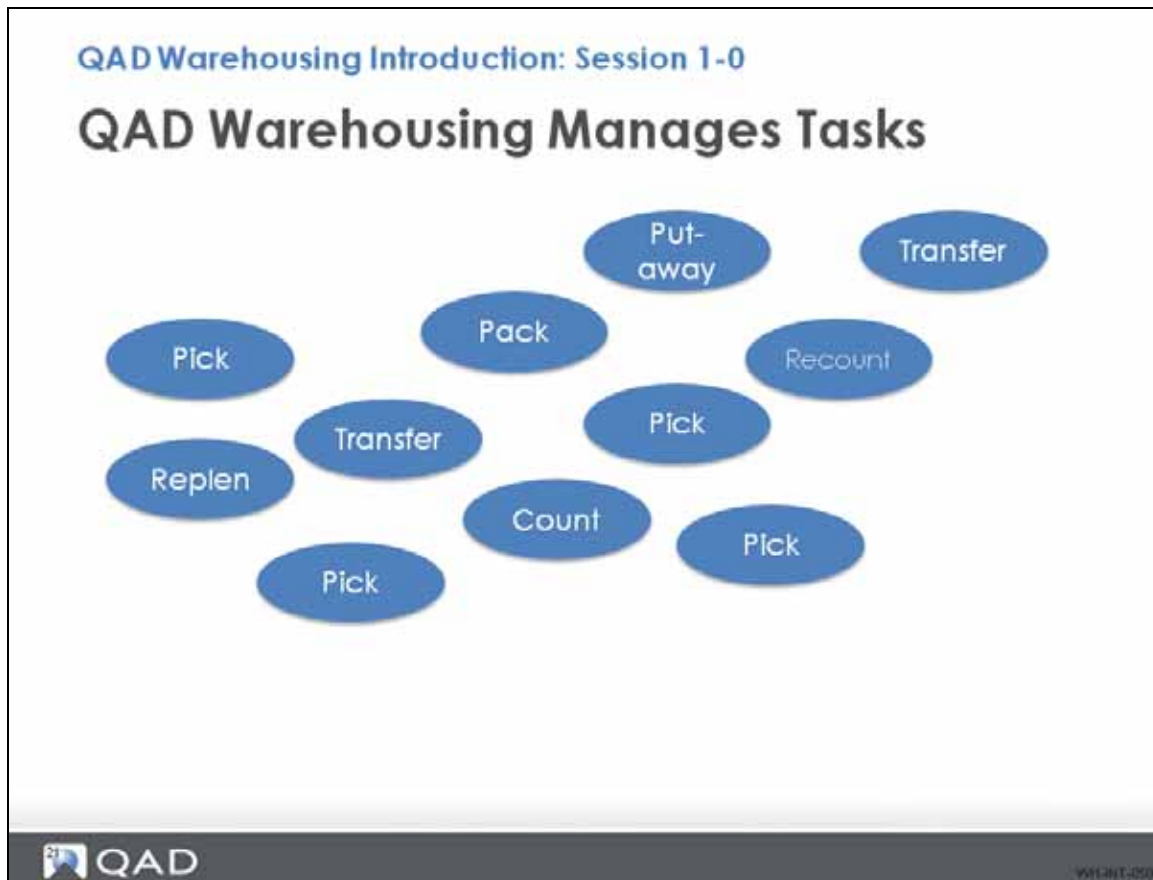
The warehouse is the highest level of specific data in QAD Warehousing.

For locations, QAD Warehousing provides a Warehouse Location Maintenance menu, replacing standard QAD EE Location Maintenance. You can, therefore, set up all your location details within QAD Warehousing. QAD Location Maintenance options are not recognized by QAD Warehousing and are not available for warehouse functions.

Part of the flexibility QAD Warehousing lets you set up as many warehouses as you need within a site, as many areas as you need within a warehouse, as many zones as you need within each area, and just one or as many WLGs as you need for your different working sections.

No rules govern the type of areas you have to set up in a warehouse. Most users define areas such as receipt, inspection, storage, picking, packing, and dispatch; however, none of these are mandatory—you choose the areas you want; then, you choose the routes through these areas that you want your inventory to take.

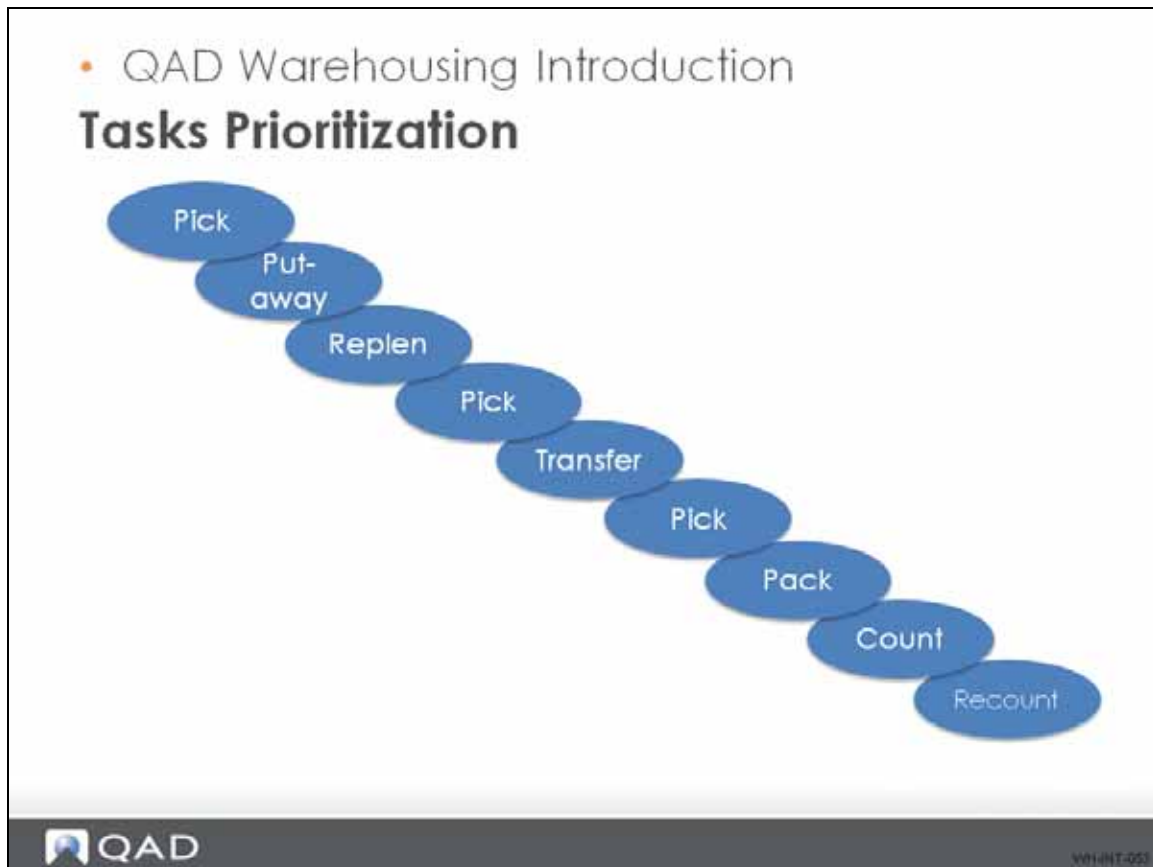
QAD Warehousing Manages Tasks



QAD Warehousing is a task management system that optimizes processes in the warehouse on a real-time, ongoing basis. At any given time a typical warehouse can have hundreds of pending tasks ranging from a load transfer from receiving into storage to a line item pick.

Important Tasks can be assigned to specific users. Also, generic tasks can be assigned on a first come, first served basis. Hard tasks are for a specific user and cannot be changed. Soft tasks can be switched to another user.

Task Prioritization

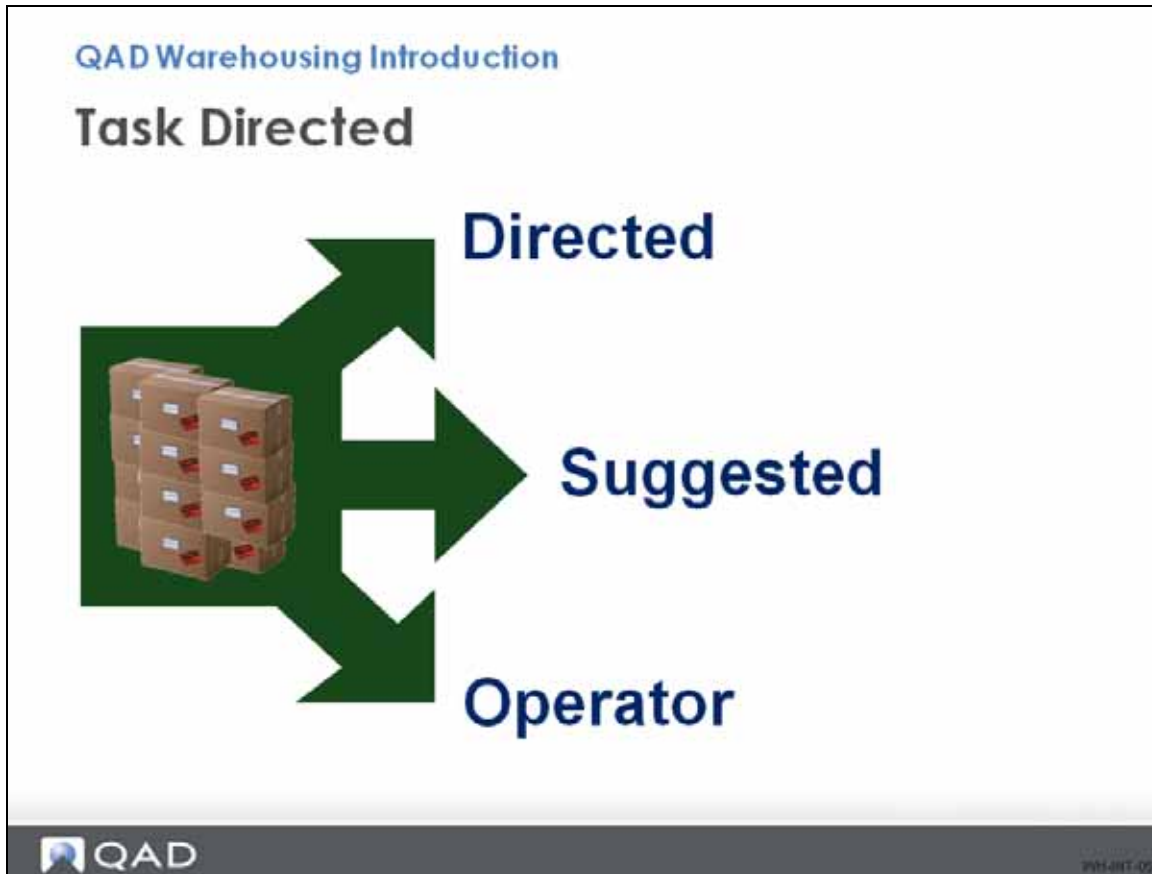


When a task (transaction) is generated, QAD Warehousing looks at multiple variables to determine when the task is executed. For example, the system can determine the best user to assign the task based on proximity or tasks can be assigned based on task age, or how long the task has been in the queue.

Did You Know

Low priority tasks can automatically increase based on age. If the task has been in the queue too long, it eventually becomes a top priority.

Task Directed



The objective of task directed activities is to minimize operator decision making. In best practices organization, everything should be task directed.

With all the open tasks considered, QAD Warehousing makes a decision on which tasks are completed first and by whom.

Did You Know

Operators have the ability to over ride origination or put-away information including location, LPN, item, and so on.

When an operator is allowed to override the system, issues can result if other open tasks are also impacted. Setting the Allow Task Switching field helps avoid this potential problem. For more information on Task Switching, refer to *User Guide: QAD Warehousing*.

Task Concepts

QAD Warehousing Introduction

Task Concepts

- Triggers
 - Auto, Manual and Timed
- Confirmations
 - Single versus Two Phase





Two concepts are key to understanding how QAD Warehousing processes requests: triggers and confirmations.

Triggers determine when a task is released for processing. When in AUTO mode, the system processes engine workfiles automatically without user intervention. This is the most common use. When in MANUAL mode, you must start one of the engine processor programs in the Engine menu to process an engine workfile request. TIMED mode is similar to AUTO, but TIMED mode processes the engine workfiles after a pre-defined delay.

Transactions are confirmed in either single or two-phase moves. In single-phase, inventory movements are created and confirmed in a single step—the single phase.

In two-phase, inventory movements are created in one step—the first phase—and confirmed in a second step, the second phase. Between the two phases, the stock is marked as being booked out of the first location and expected in the second location; however, the anticipated inventory levels are only confirmed when the stock is confirmed as arriving at the destination.

As a general rule, a two-phase operation is a much safer way of ensuring precision in inventory management. Single-phase operations should only be used in special circumstances.

QAD Warehousing Main Concepts

QAD Warehousing Introduction

QAD Warehousing Main Concepts



- Warehouse
- Area = Internal Routing Group
- Zone = Storage Location Group
- Work Location Group
- Location
- Internal routing
- Algorithms and Transaction Types
- Tasks



QAD

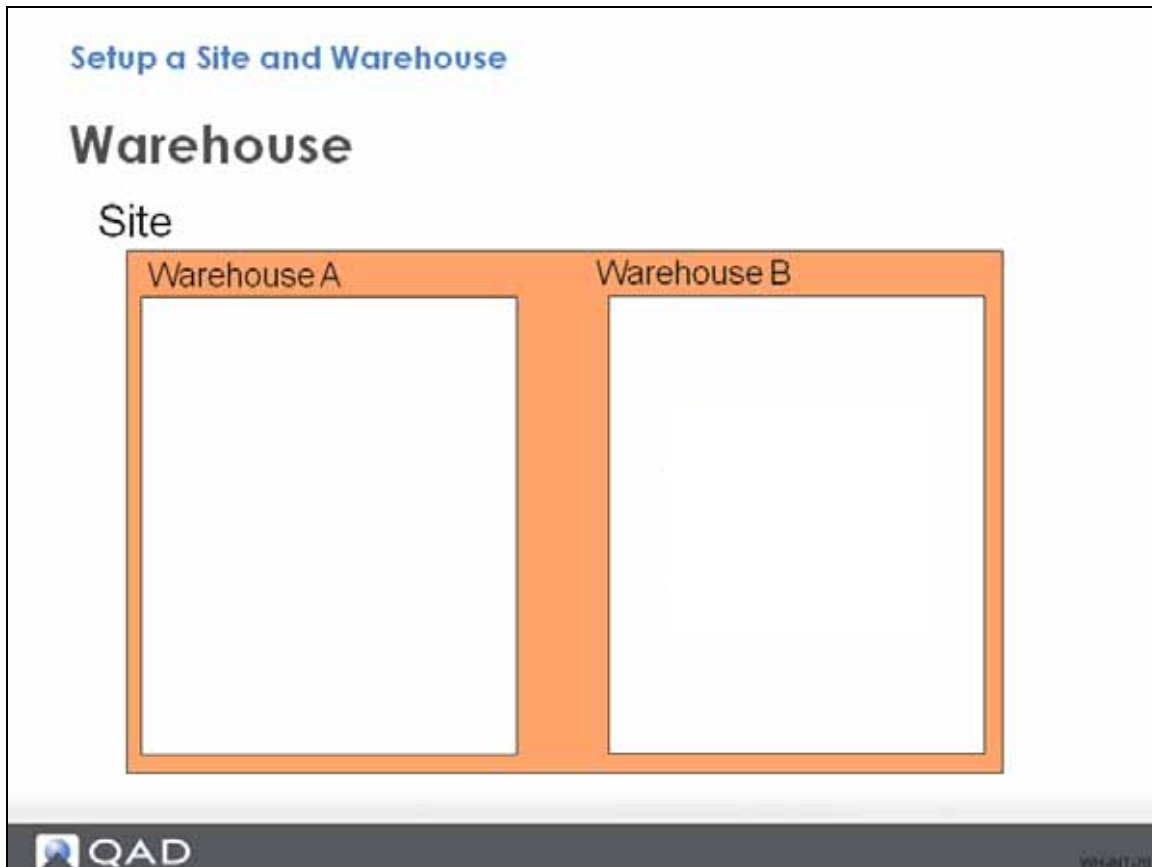
WH-INT-003

QAD Warehousing provides highly flexible and adaptable warehousing functions that let you integrate a full range of warehouse management features into a business.

In QAD Warehousing, a warehouse is the highest level of specific data. The other elements of warehousing are all subsidiary to the warehouses. They represent ways of:

- Arranging storage locations within each warehouse
- Defining the routes through the warehouses that you want your inventory to take
- Handling the inventory management transactions that are involved in managing your warehousing activities on a day-to-day basis

Set Up a Site and Warehouse



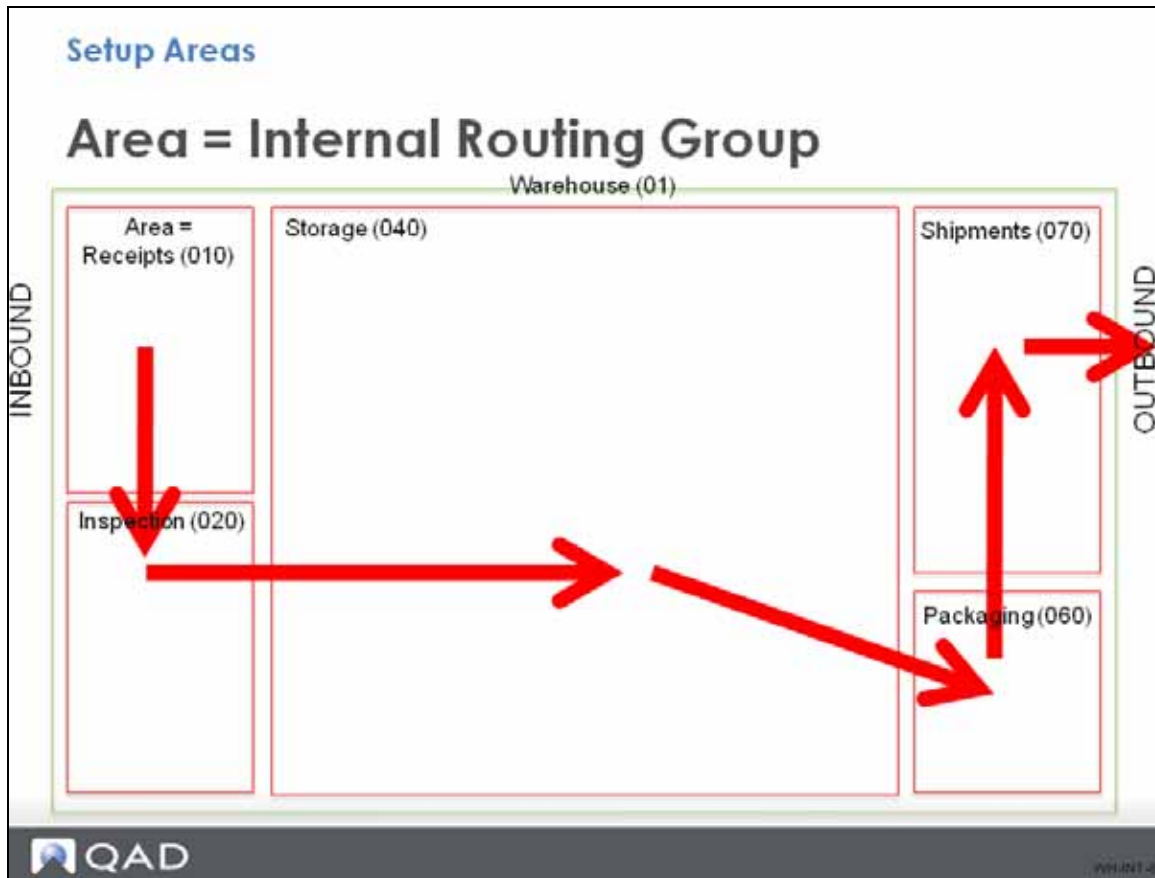
A warehouse consists of a group of storage locations and processing functions. These can constitute a single building; a part of a larger building; or, for storage of material such as construction materials, the storage locations can be in the open air. A single warehouse can actually consist of a number of separate buildings.

Because QAD core is not concerned with all the workings within the warehouse, each warehouse is defined as a standard location. This approach lets you keep all the internal warehouse operations separate from other system activities. When you want to send inventory to a warehouse, as far as QAD core is concerned, you are simply putting it in a location; however, when that location is identified as a warehouse, all the QAD Warehousing functions are available.

From a QAD core perspective, you receive inventory into a location associated with a site. However, because this is a warehouse, the inventory does not actually stay in that location. The location is used as a gateway into the actual storage locations within the warehouse.

Eventually, the inventory is put away in one or more storage locations within the warehouse. Each of these locations is defined in the same way as other locations, so the inventory is again recognized by the system as residing in a known location in a known site.

Set Up Areas



Did You Know

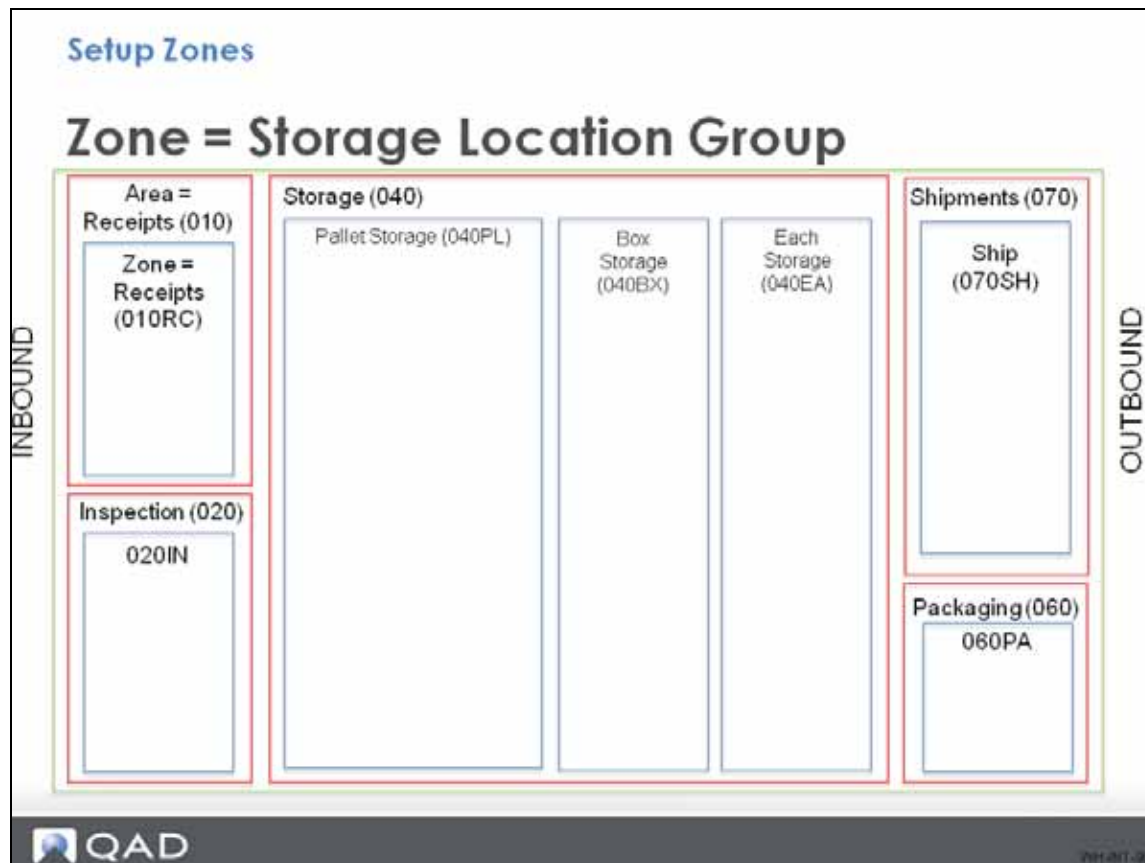
Only one area is required for QAD Warehousing to operate; however, most operations have areas for Receiving, Inspection, Storage, Packing, and Shipping areas.

QAD Warehousing manages the movement of inventory within and between warehouses by defining routes that move inventory from one part of the warehouse to another. These routes are called internal routings, and defining them involves specifying a sequence of steps that determine product flow and any specific controls to be applied at each step.

Within the warehouse, the first segregation is an Internal Routing Group (IRG) or area. An area represents a specific grouping or type of functional process (that is, receiving, inspection, storage, shipping, and so on).

The types of areas you setup also determine the types of rules you can use for product storage and retrieval.

Set Up Zones



Did You Know

An area can have multiple zones, but a zone can only have one area.

A zone is a further space segregation within an area. Typically, each area has one zone except for storage. Within storage, it is common to have a different zone for each type of picking unit (that is, pallet, case, and each).

Zone Example

Zones can be two or three dimensional

Zone: example

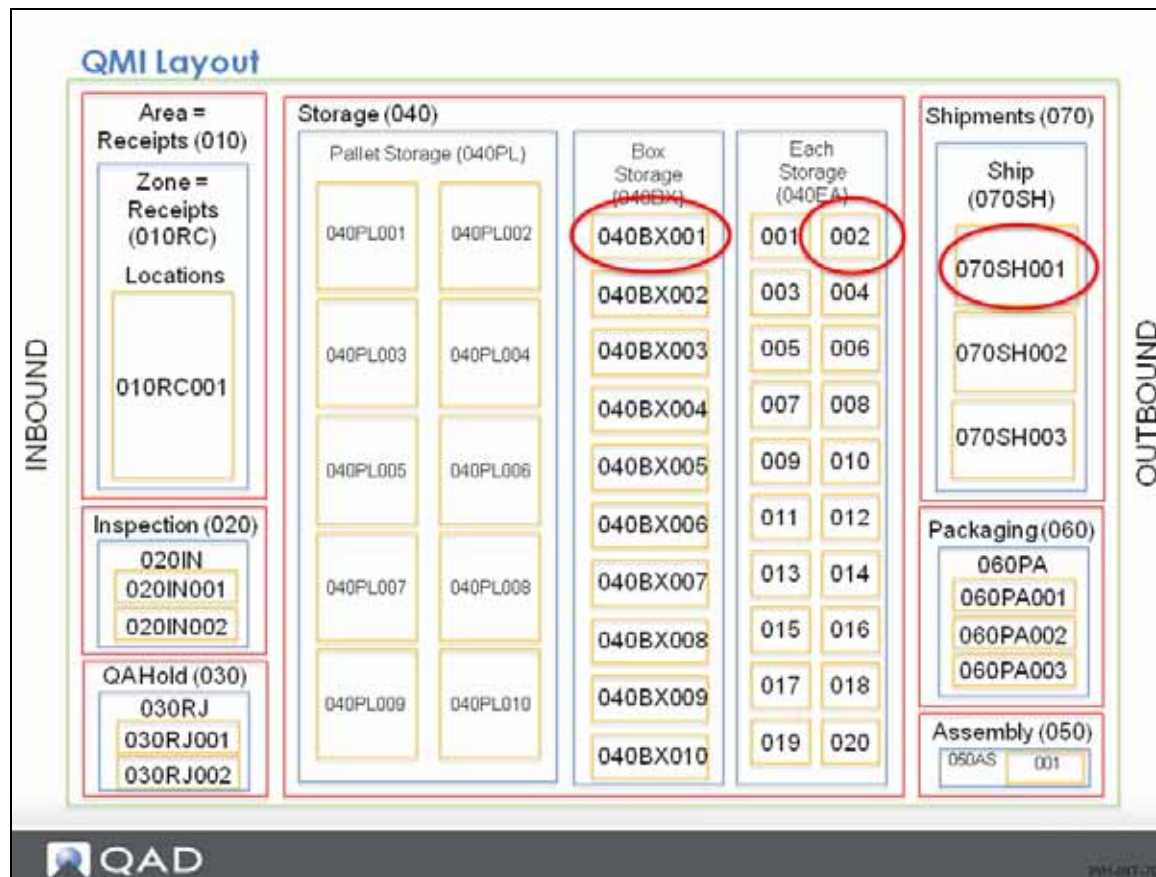


An example of a two-dimensional zone is the QMI layout with the forward pick zones on the right side of storage and pallet (reserve) storage zone on the left. A three-dimensional zone has picking locations on the lower level racks with pallet reserve storage overhead.

In the graphic above, the picture on the left is an example of a two-dimensional zone similar to the QMI layout. All locations in the entire rack are in the same zone.

On the right, a three-dimensional zone might have bulk/pallet storage zone locations on the top sections, and box or each locations on the bottom, floor-accessible sections.

QMI Layout



Did You Know

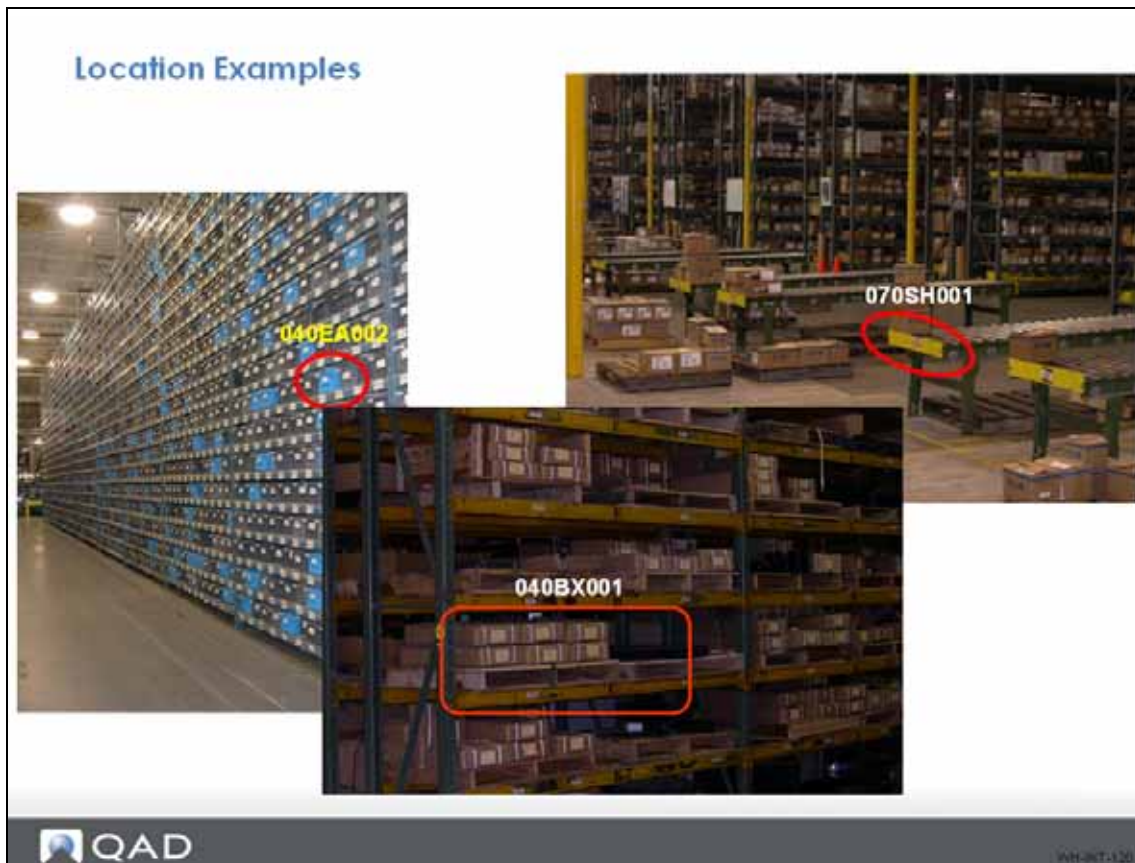
QAD Warehousing uses Warehouse Location Maintenance in place of standard Location Maintenance to establish and define characteristics for the way a product is stored and picked.

If you set up a location in Warehouse Location Maintenance, the location displays in QAD EE Location Maintenance; however, if you set up in QAD EE Location Maintenance, the location does not show up in Warehouse Location Maintenance.

The final space segregation is QAD Warehousing is location. Each zone has at least one location. Locations are used for tracking and reporting inventory positions within the warehouse.

Typically storage zones have many locations.

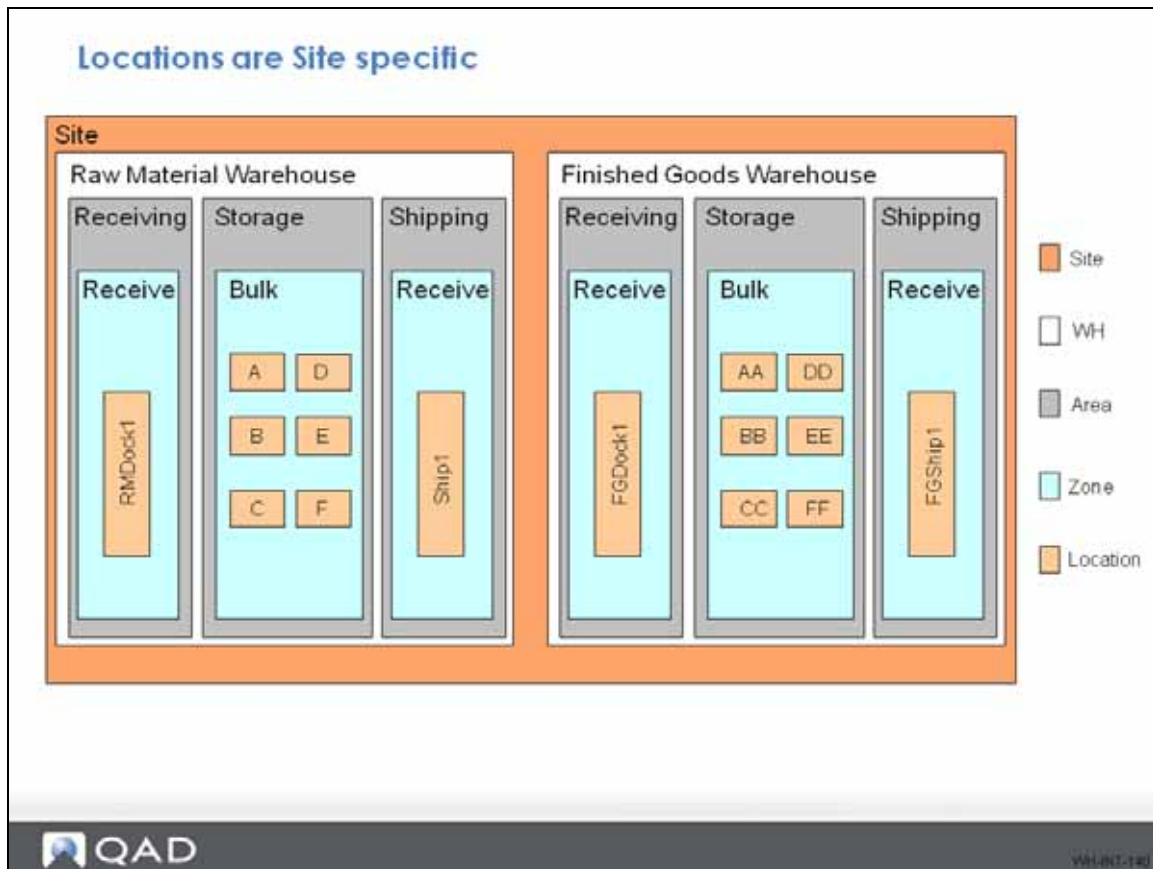
Location Examples



The rule here is that there should be a location wherever product is staged or stored.

The picture on the left above can be each storage/pick locations for small items similar to QMI location 040EA002. The middle picture is similar to a case storage/pick location (QMI 040BX001), and the picture on the right represents a shipping staging lane (QMI 070SH001).

Locations are Site Specific

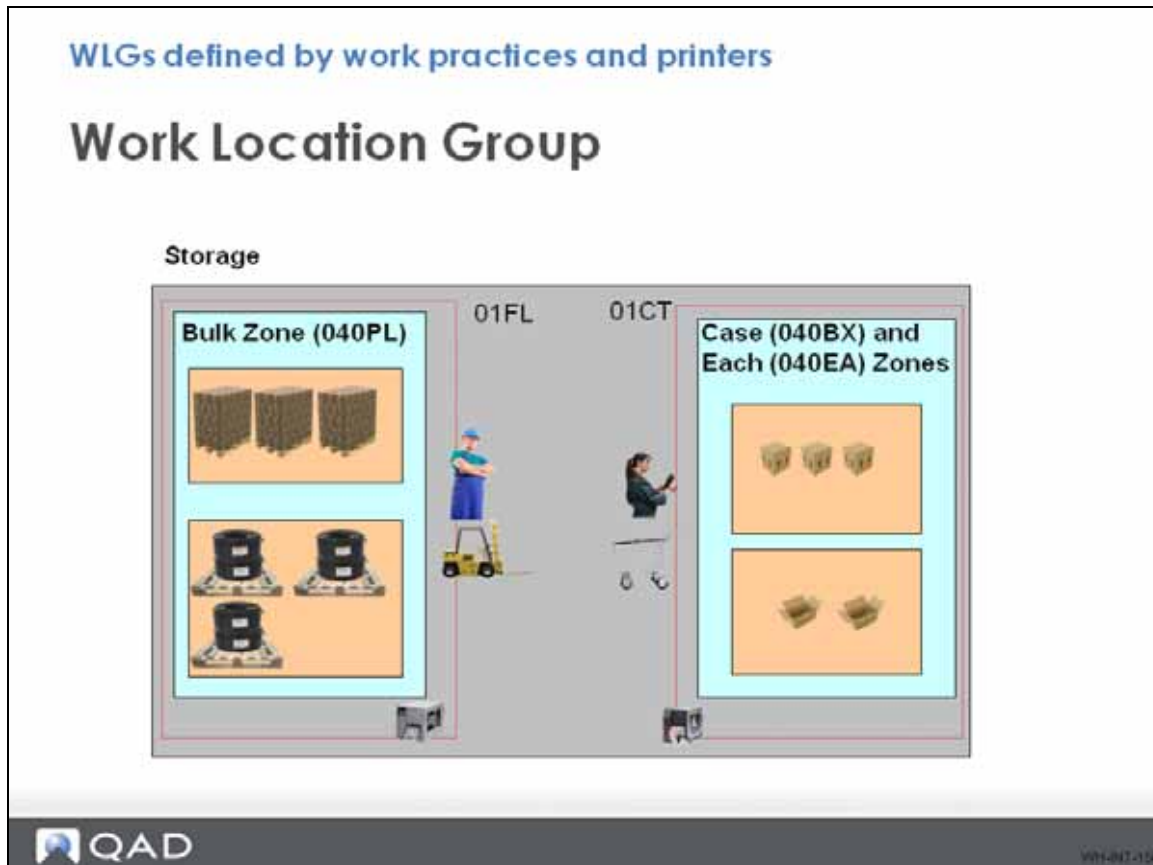


Did You Know

Locations are site specific. Two locations in two different warehouses but at a the same site cannot have the same name.

Areas and zones, however, can have the same name in different warehouses.

WLGs Defined by Work Practices and Printers



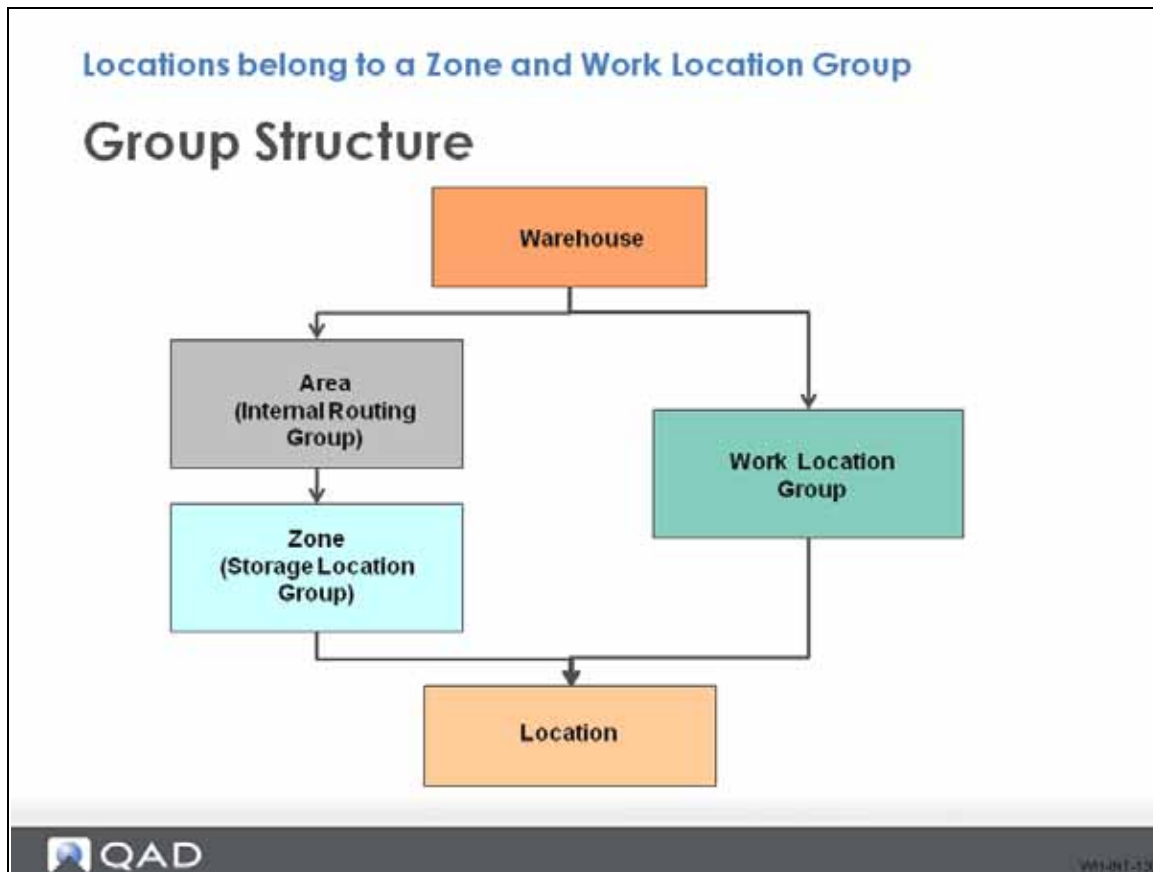
Did You Know

A Work Location Group is procedural while a zone is physical.

Work Location Groups (WLG) are defined by types or equipment used and work processes. WLGs can cross over different zones and focus on procedures rather than physical placement of inventory.

WLGs are helpful for defining where operators can work in the warehouse, the format of the RF screens and the printers they use.

Locations Belong to a Zone and WLG

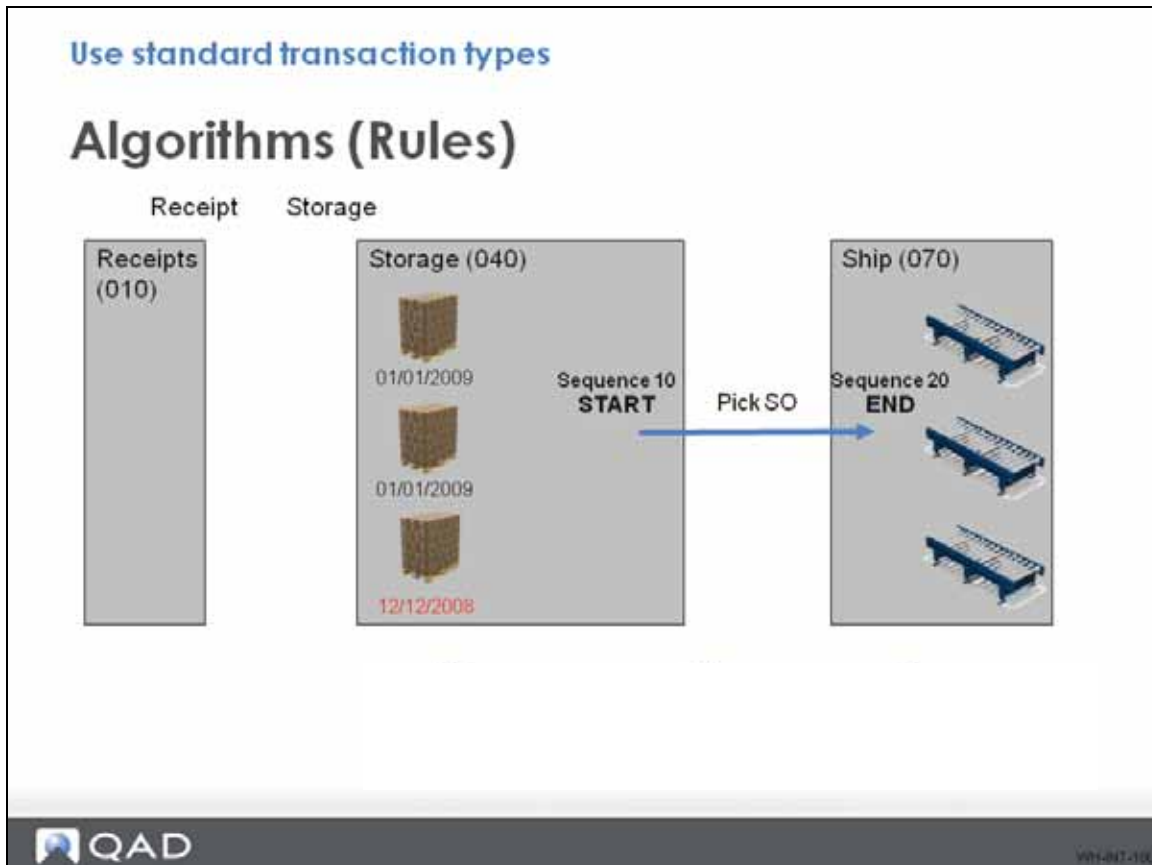


Did You Know

Locations are assigned to both a zone (storage location group) and a Work Location Group (WLG).

This helps define how the locations are used for storage and picking, and how the locations are groups by work section/process.

Use Standard Transaction Types



Did You Know

Use *Algorithm Assignment Maintenance* to link a specified sequence of rules to each transaction type or combination of transaction type, site, warehouse, item, and address.

QAD Core has one product flow rule. QAD Warehousing has multiple rules and they are configurable.

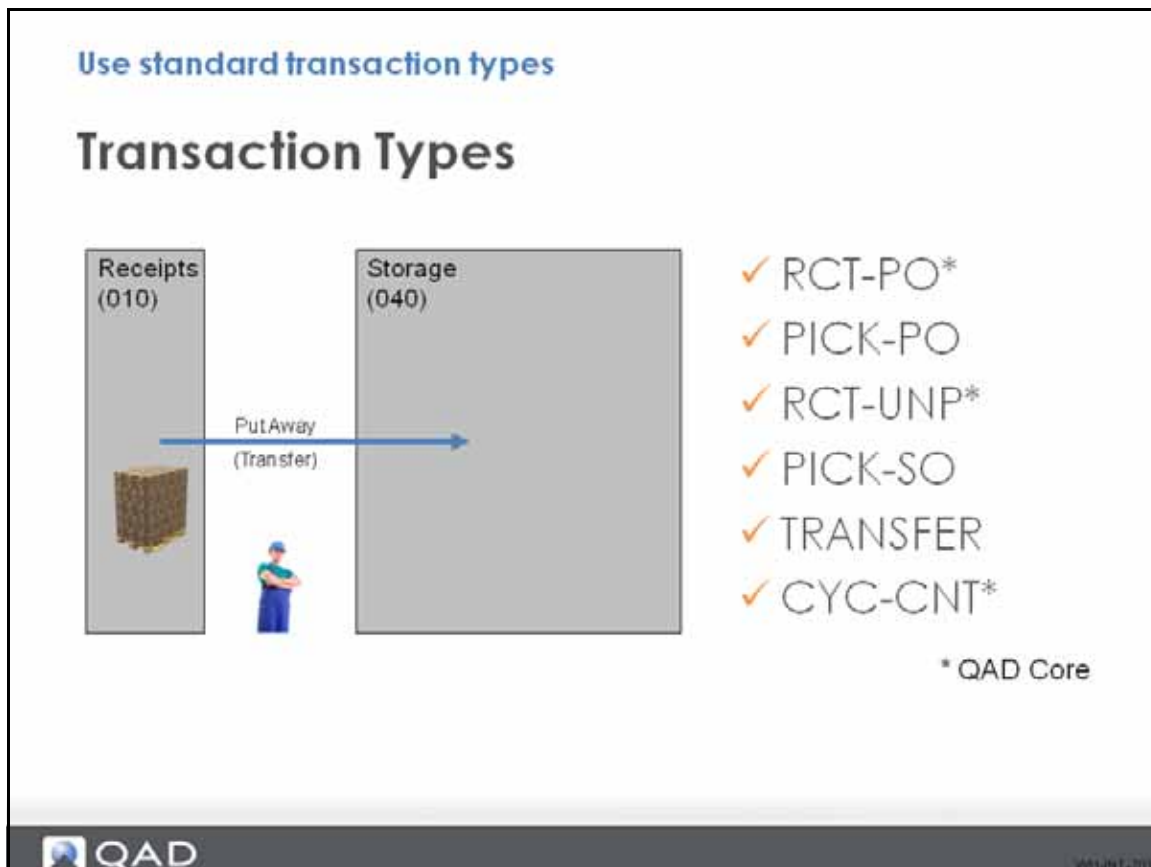
Algorithms help companies manage inventory control and space utilization by addressing specific operating scenarios.

- What inventory should be selected for picking (FIFO, LIFO, FEFO, and so on)?
- Which location is best for a product put-away?
- Which task should be completed next?

Algorithms are used whenever a system decision is required. For example, when the system must decide which inventory is picked from storage and where it is dropped in shipping. There are over 200 algorithms available to use depending on what you plan to accomplish.

If FIFO is preferred for inventory management, the 12/12/2008 pallet, in the graphic above is picked first. The specific drop conveyor depends on other parameters to be defined.

Transaction Types

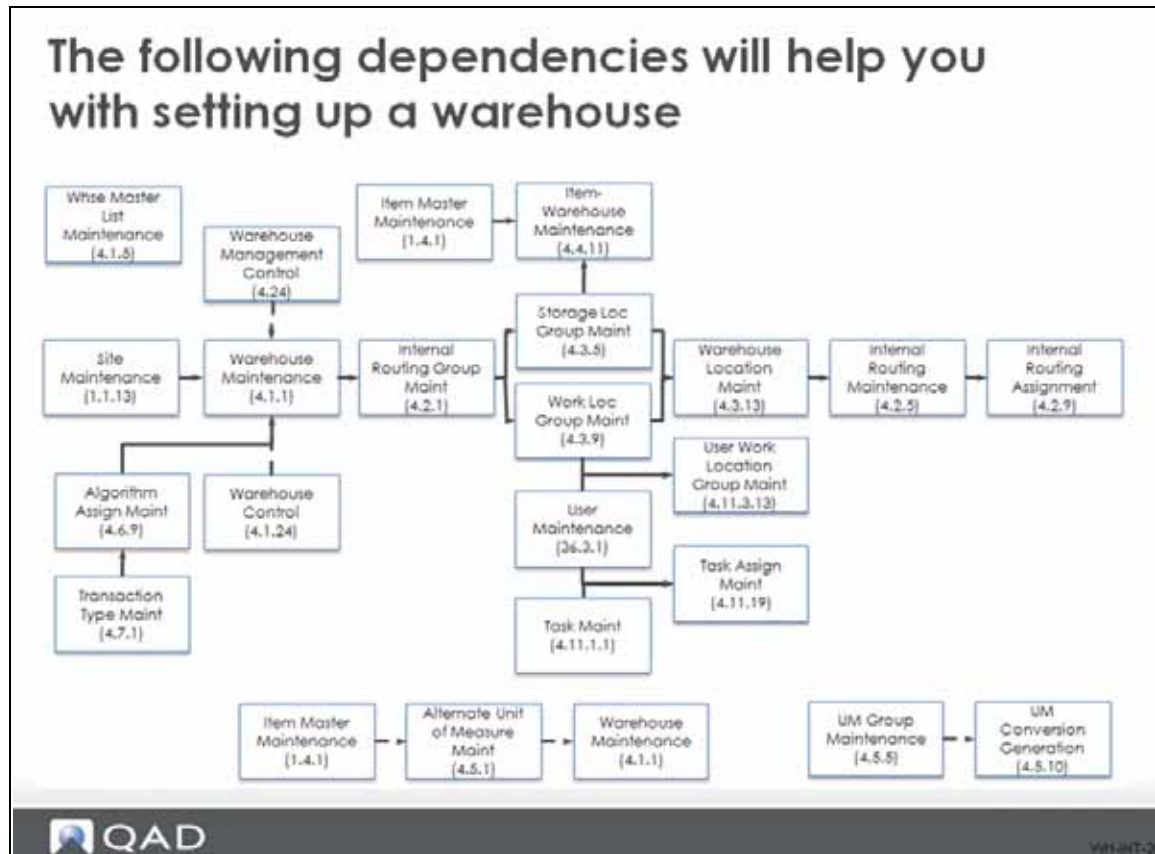


Did You Know

The standard transaction types can be configured to support the needs of QAD Warehousing using Transaction Type Maintenance (4.7.1)

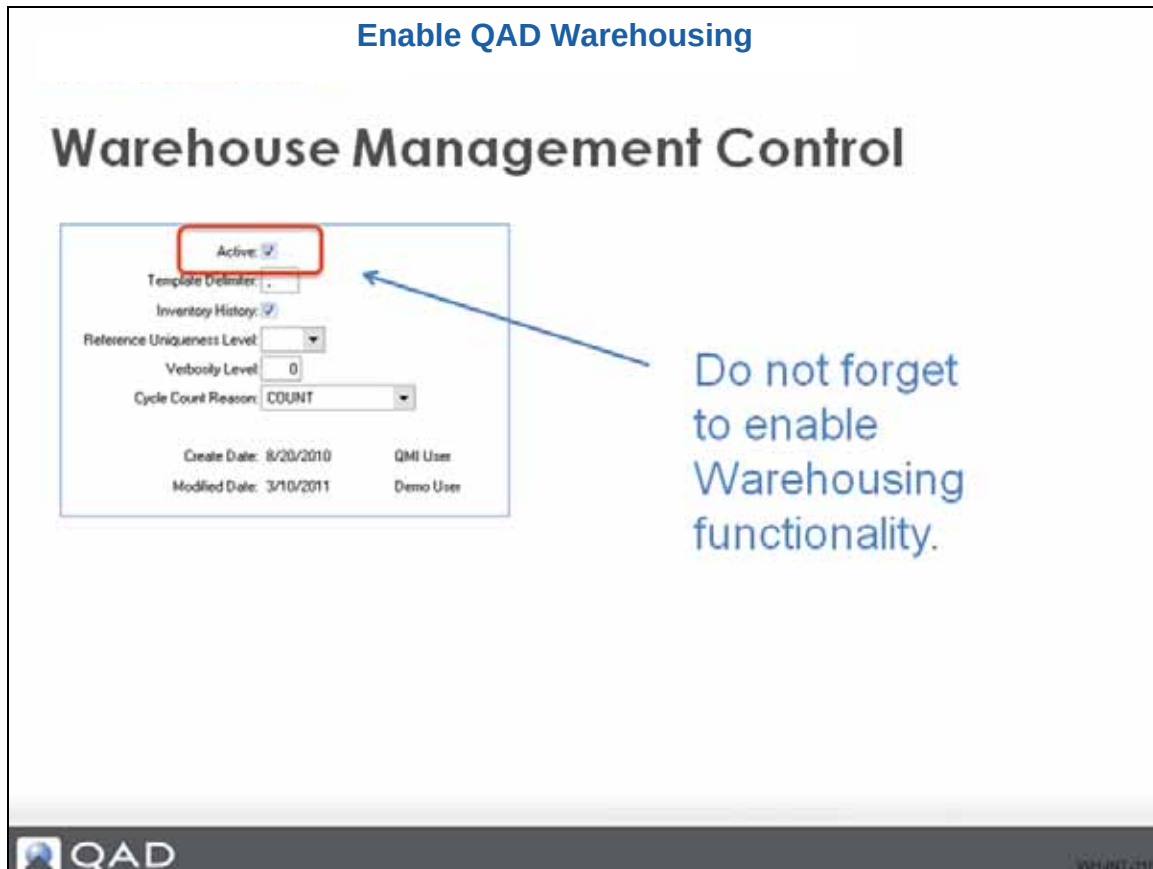
Each type of inventory transaction within QAD Warehousing is identified by a transaction type code. QAD Warehousing uses the standard QAD application transaction types. Examples are a purchase order receipt (RCT-PO) or a sales order pick (PICK-SO).

Dependencies that Help Set Up the Warehouse



Use the graphic above to determine the dependencies among QAD Warehousing programs. For example, maintenance programs that are below in the diagram above are dependent upon setup and configuration to be completed are in the upper portion of the diagram.

Enable QAD Warehousing



You must set the Active field to Yes in Warehouse Management Control to use QAD Warehousing.

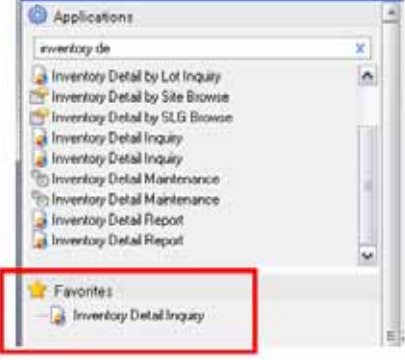
Although QAD Warehousing is offered as a standard product offering (bundled), it is sold as a separate license and need to be activated using Warehouse Management Control.

There is one frame and six fields in Warehouse Control used for configuration.

Exercise - Set up Inventory Detail Inquiry

Exercise

Setup Inventory Details Inquiry



What is the beginning inventory positions in these locations?

Location	EA020	PL005	PL010
Item			
UM			
Qty			
LPN			


YH-WH-220

You use Inventory Detail Inquiry frequently to check inventory levels in the warehouse during training exercises.

You can practice setting up Inventory Details Inquiry and enter the data in the table above.

Note This is not relevant for configuring QAD Warehousing but helps present the inventory flow picture as you test and use the system.

When testing or doing QAD Warehousing exercises, it is helpful to view inventory positions using either a browse, inquiry, or report.

- 1 In the QMI environment, add Inventory Detail Inquiry or Inventory by Site Browse to Favorites.
- 2 Fill in the beginning inventory matrix.

Many Control Features are Managed in a Warehouse

Many control features are managed in Warehouse Maintenance

Warehouse Maintenance

Site: 10-301
Warehouse: 01

General Data

Description: Warehouse 1 Flavor: A

Address: Inventory Acct Sync:

Active: ☒ Allow Mixed Status Codes: ☒

Reference Sequence ID: 00000001 Logistics UM Tolerance: 0.00%

Packaging Sequence ID: 00000002 Log w/Base UM Only: ☐ Cnt: ☐

QAD Location Data

Description: Warehouse 1

Inventory Status: Y-Y-N

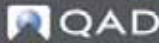
Permanent: ☐

Type:

Single Item: ☐

Single Lot/Reference: ☐

Capacity: 0.0 UM:

 QAD

WHINT-220

Warehouse Maintenance lets you set many control features. When you define a warehouse, you specify the parameters that control the way the inventory management functions work.

Some data you set in the program defaults to other QAD Warehousing programs. Some of the data in Warehouse Maintenance defaults from Warehouse Control.

There are 15 frames and roughly 165 fields in Warehouse Maintenance used for configuration. A few are required but most are optional. For now, you setup the required fields and discuss the more popular fields for a typical warehouse. Other fields are discussed through the remaining training sections as needed.

Control Scan Options

Control scan options

Warehouse Maintenance

Site: 10-301
Warehouse: 01

Transaction Create Defaults

Confirmed at Source: ☒ Task: TRANSFER
System Code: RF Priority: 10
Two Phase: ☒ Increment: 1
Keep From Status: ☒

Transaction Confirmation Defaults

From Location Option: 0  To Location Option: 0 
From Item Option: 0  To Item Option: 0 
From Lot/Serial Option: 0  To Lot/Serial Option: 0 
From Reference Option: 0  To Reference Option: 0 
Allow Quantity Increase: ☐ Alternative UM Option: 0 
Allow Quantity Decrease: ☒ Allow Task Switching: ☐
Quantity Change Option: 0 

 QAD

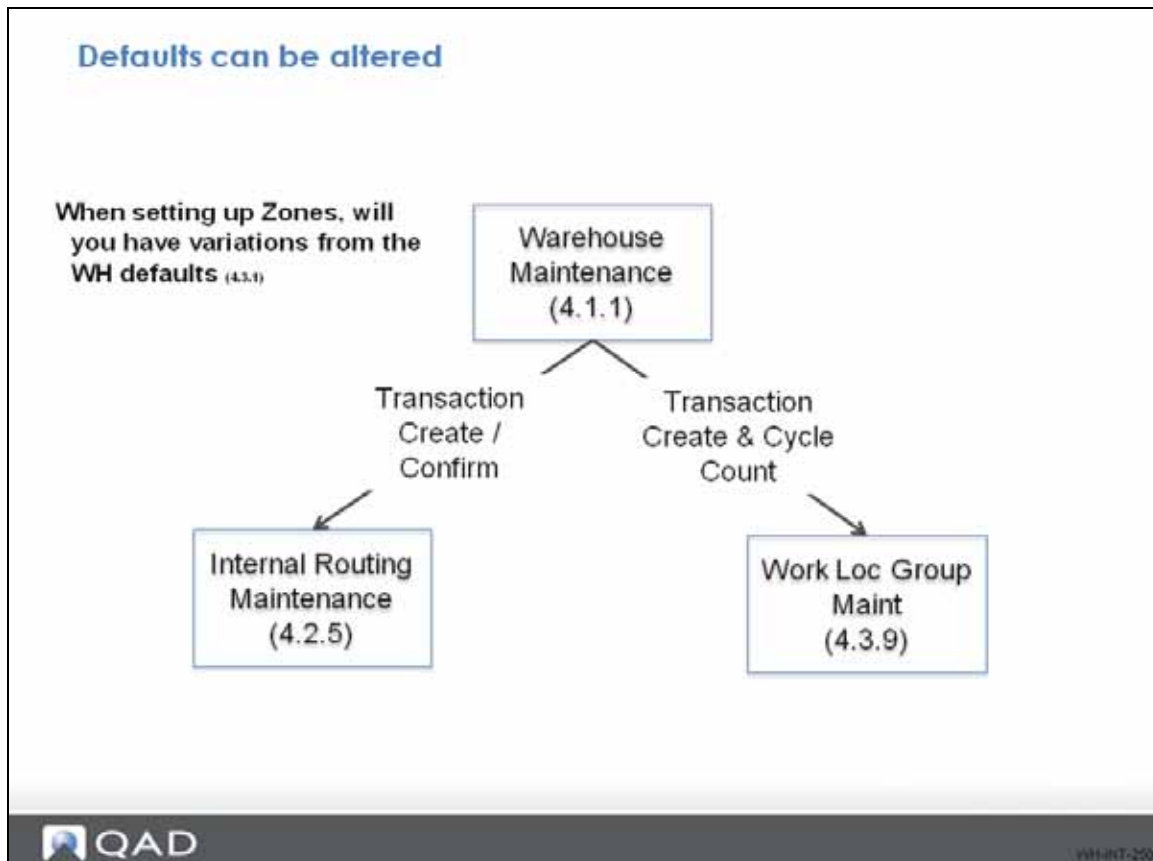
WM14NT-240

Did You Know

You can configure the frequency and need for scanning at the Warehouse Maintenance level. Too much scanning and productivity is reduced, too few scans and accuracy is reduced.

The general rule is to accept the menu defaults.

Defaults Can Be Altered



Internal Routing Maintenance and Work Location Group Maintenance defaults are set at the Warehouse Maintenance level but can be changed at lower level screens.

For configuration purposes, keep in mind defaults set at the Warehouse Maintenance menu can be changed in subsequent menus. This provides another layer of flexibility.

Setting Up Areas

Setting up Areas

Internal Routing Group Maintenance

Processes: Internal Routing Group Maint X

Go To Actions Copy Print Preview Attach

Site: 10-301

Warehouse: 01

Internal Routing Group: 010

Description: Receipts

Functional: ☒

SLG Default Values

Allow Issues: ☒

Allow Receipts: ☒

Allow Outgoing Returns: ☒

Allow Incoming Returns: ☒

QAD V01-INT-200

This is one of the easiest screens to configure. The main decision is whether or not the area is functional. Accepting the SLG default values provides more flexibility in the zone. Disabling defaults is more restrictive.

Did You Know

- Functional internal routing group: Use the LF algorithm
- Non-functional internal routing group: Use the PA and PK algorithm
- Zones can be configured to restrict product receipts and issues

Non-functional IRGs are only storage locations. Areas, such as receiving areas, are considered functional because warehouse staff perform a specific function in the area. Functional areas have a specific algorithm associated with them. Non-functional areas are concerned with storage capacity. There is, however, a put-away algorithm associated with storage areas because there is a concern for capacity when storing.

As a general rule, all pick areas are non-functional; all other areas are functional.

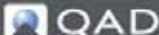
There are four frames and six fields in Internal Routing Group Maintenance used for configuration.

Exercise - What Areas are Set Up in the Warehouse?

Exercise

What Areas are setup in the warehouse?

IRG	Description	Functional Status

 QAD

Before configuring Areas, understand the warehouse layout and process flows and document the information. This helps with setup.

During implementation, you should define and document the warehouse areas as defined in the business process workshop.

Remember that an area is an IRG, so you use IRG Maintenance to configure IRGs.

It is helpful to have a large print out of the facility drawing to use as a reference. Consider laminating the drawing to let easy writing and erasing on the drawing.

Setting Up Zones

Setting up Zones

Storage Location Group Maint

Site: 10-301
Warehouse: 01
Storage Location Group: 010RC
Description: Receipts

No picking from the receiving zone!

Internal Routing Group: 010

Allow Issues: ☒
Allow Receipts: ☒
Allow Incoming Returns: ☒
Allow Outgoing Returns: ☒

Opportunity Counts:
Opportunity Count Frequency:
Check Digits:
Cycle Count Status Options:

Picking Multiple UM:

Exclude from Picking: ☒
Picking Level:
Over Pick: ☐
Multi-Trans: ☐
Detail Overflow Group:
Capacity Check when OTF: ☐
Optimized Storage: ☐
Allow Mixed Status Codes: ☐
Acquisition UM:
Recount UM:

QAD

Did You Know

SLGs (zones) can be blocked from picking based on their Picking Level in warehouse setup.

The next space segregation in an area is the storage location group (SLG) or zone. All the storage locations within an area can have the same basic function, such as storage, but the use of zones enables you to group your storage locations in more specific ways. For example, you can group all the locations in which a particular type of item is stored, or that have a common purpose, such as a primary picking area within storage. Each area has at least one zone.

Zones require more detailed configuration. Specific zone configuration is discussed in more detail in later sessions.

In the graphic above, the Exclude From Picking field is critical. A zone can be blocked from picking when you disable the field. The Opportunity Count field lets you define whether goods are counted or not when you move material.

When setting up zones, you can block them from picking all together using the Exclude from Picking field and/or set the pick level priority using the Picking Level field.

There are three frames and 30 fields used to configure a zone.

Exercise - Which Zones are Set Up in the Warehouse?

Exercise

Which Zones are setup in the warehouse?

SLG	Description	IRG

 QAD

Determine which zones are setup in the warehouse using QMI data. Name the SLGs, the description, and the associated IRGs.

Note You can take a shortcut and use SLG Inquiry to find the data above.

Set Up Work Sections

Setup work sections

Work Location Group Maintenance

Site: 10-301
Warehouse: 01
Work Location Group: 01FL

Description: Forklift

Confirmed at Source: ☒

Priority: 10

Increment: 1

Task: TRANSFER

System Code: RF

System Flavor: B

Allow Task Switching: ☐

Two Phase: ☒

Keep From Status: ☒

Device:

QAD

Did You Know

Work Location Groups define procedural work sections within the warehouse.

There are eight frames and 61 fields used to configure Work Location Groups. As a general rule, accept the system defaults during setup.

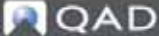
Exercise - Which Work Locations are Set Up?

Exercise

Which Work Locations are setup?

WLG	Description

What is the operational difference in the two work location groups?

 **QAD**

V01ENT-506

Use Work Location Group Maintenance to determine which work locations are set up in the warehouse.

For example, the following are work locations groups in QMI data:

- 01CT Carts
- 01FL Forklift

Carts WLG is used for case and each picks while Forklift WLG is used for moving full pallets from receiving to reserve storage and for replenishments.

Set Up Locations

Set Up Locations

WMS Uses QAD Core Location Structure

	Core	WMS
Site	R	R
Location	R	R
Description	O	O
Inventory Status	R	R
Project	O	---
Date Created	R	---
Permanent	O	O
Type	O	O
Single Item	O	O
Single Lot/Reference	O	O
Capacity	O	O
UM	O	O
Reserved Locations	O	---
Transfer Ownership	O	O
Physical Address	O	---

Location Dimensional Data: Height	O
Location Dimensional Data: Length	O
Location Dimensional Data: Width	O
Dimensional Unit of Measure: Percent Full	O
Percent Full	O
Warehouse	R
Storage Location Group	R
Work Location Group	R
Check Digit	O
Pick Type	O
Popularity	O
Preferred UM	O
Storage Type	O
Opportunity Count Frequency	O
Warehouse Location Type	O
Last Opportunity Count	O
Travel Sequence	O
Stage (In)	O
Dedicated	O
Stage (Out)	O
Item Number	O
UM	O
Quantity	O
Height	O
Length	O
Width	O

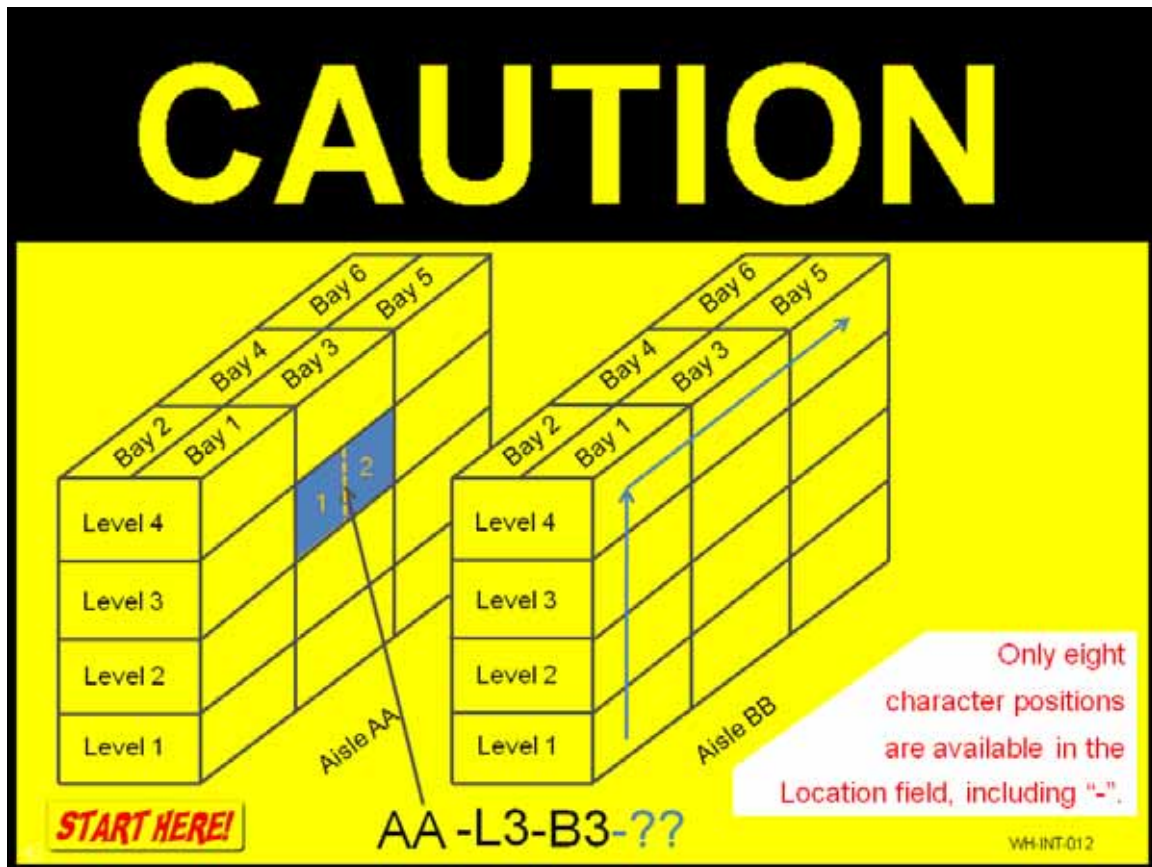
Additional Warehousing Fields →

 **QAD**

Y91-017-011

QAD Warehousing starts with the same base Location Maintenance database found in QAD Core but adds several more fields to let management run a more effective warehouse. A few of the fields are required (R) but most are optional (O).

Location - Caution



With only eight positions available in the Location field, you are limited on how you can define warehouse location addresses. For example, many warehouses define locations by:

- Aisle = AA
- Level = L3
- Bay = B3

However, in a selective rack space, there is enough room for two pallets in a typical bay. In this situation, the preference would be to add a fourth data element representing the bay position, 1 or 2. With only eight character positions, you are not able to add more characters to the XX-YY-ZZ format. You need to be creative when defining detailed locations.

Did You Know

- There are only eight characters allowed in the Location field to name the location.
- Location address impacts the picking sequence because the system defaults the picking algorithm on the location.

Set Up Locations - Warehouse Location Maintenance

Setup locations

Warehouse Location Maintenance

Warehouse Location Maintena...

Go To Actions Copy Print Preview Attach

Site: 10-301

Site: 10-301 Distribution Site: 1

Location: 040PL001

Location Groupings:

Warehouse: 01

Storage Location Group: 040PL

Work Location Group: 01FL

Warehouse Location Data:

Check Digit:

Popularity: AAA

Storage Type:

Warehouse Location Type:

Travel Sequence: 0

Dedicated: ☐

Picking Type:

Preferred UM:

Opportunity Count Frequency: 0

Last Opportunity Count:

Stage (In):

Stage (Out):

QAD

Locations can be categorized by popularity to support slotting strategies.

You can check the popularity and if items are not being picked, they may be moved to another location, based on product popularity. This lets you improve your warehouse flow.

There are five frames and 49 fields used to configure warehouse locations. Most of these are discussed in more detail in later sections.

Location - Alert

Implementation Alert

Setting up locations can be very time consuming during WMS implementation. To help save time during location setup use **Mass Location Maintenance**.

WH-INT-013

To set up many locations with a similar format, use Mass Location Maintenance. Depending on your location address format, you may need to do this multiple times to create locations by aisle, zone, or area by changing the location pre-fix and number scheme.

Did You Know

When you consider many warehouses can have thousands of locations, location setup can be very time consuming. To help save time during implementation, use Mass Location Maintenance.

Setting Up Many of the Same Type of Location

Setting up many of the same type of location

Sequence Definition Maintenance

Sequence Definition: 00000003 Description: Mass Pallet Location

Seq	T	Format	Min	Max	Inc	Description
1	F	PLT			1	Pallet Location
2	I	-999	1	999	1	Int Pallet Location

PLT 001 to PLT 999

Sequence: 1
 Type: F Fixed
 Format: PLT
 Description: Pallet Location

DB Sequence:
 Minimum Value:
 Maximum Value:
 Increment: 1

QAD WH-INT-01

Use Sequence Definition Maintenance when required to setup many locations of the same type. Sequence Definition Maintenance lets you define how controlled sequences of numbers are structured.

The program lets you specify the format and range of the location identifiers when you use Mass Location Maintenance to create a number of storage locations. You can specify the type of sequence such as integer, character, fixed, date, and so on as well as the format.

The first sequence is Type F (fixed) and is the prefix of the label. The second sequence is the variable integer. In this case, the integer is three digits starting at 1 and ending at 999 with an increment of 1. You can have more than 2 sequences but remember the location field capacity is 8 characters.

There are five frames and six fields in Sequence Definition Maintenance used for configuration.

Setting Up Many of the Same Type of Location (Continued)

Setting up many of the same type of location

Mass Location Maintenance

Site: 10-301 **1**

Template Location: 040PL001 **2**

Create/Delete Location: C **3**

Location Sequence Definition: 00000003 **4**

QAD Location Data **5**

Description: New Pallet Location 001

Inventory Status: Y-Y-N

Permanent: ☐

Item Location Type:

Single Item: ☐

Single Lot/Reference: ☐

Capacity: 0.0 UM:

You can make changes to these, and the following, fields that default from the Template Location.

QAD WH-INT-010

In Mass Location Maintenance, you:

- 1** Enter the site for the new locations.
- 2** Enter the Template Location. This is location already set up in QAD Warehousing and should have similar characteristics.
- 3** The Create/Delete Location field determines whether you can create or delete a location. To create locations, you need a template location defined; however, a template location is not required to delete locations.
- 4** Select the sequence definition you use to create the locations.
- 5** Adjust the fields in the remaining frames to customize the new locations.
The description you enter here defaults to all new locations created. It is a good idea to keep this generic rather than assign a number.
- 6** Click through all frames (mandatory) before selecting Back to trigger the mass location creation process.

Setting Up Many of the Same Type of Location (Continued)

Setting up many of the same type of location

Mass Location Maintenance - Execution

1

Site: 10-301
 Template Location: 040PL001
 Create/Delete Location: C
 Location Sequence Definition: 00000003

Location Data
 From Loc: PLT0001 To Loc: PLT0999

2 Locations created: 999

Search (1)
 Location starts at PLT Search Clear All

Viewing 1 - 100 of 1002 Records per page: 100

3

Site	Warehouse	Location	Location Type	Storage Location Group	Work Location Group	Percent Full	Length	Height	Width	Check Digit	Dedicated
10-301	01	PLT 001	040PL	01FL		0.00	0.00	0.00	0.00		No
10-301	01	PLT 002	040PL	01FL		0.00	0.00	0.00	0.00		No
10-301	01	PLT 003	040PL	01FL		0.00	0.00	0.00	0.00		No
10-301	01	PLT 004	040PL	01FL		0.00	0.00	0.00	0.00		No
10-301	01	PLT 005	040PL	01FL		0.00	0.00	0.00	0.00		No
10-301	01	PLT 006	040PL	01FL		0.00	0.00	0.00	0.00		No
10-301	01	PLT 007	040PL	01FL		0.00	0.00	0.00	0.00		No
10-301	01	PLT 008	040PL	01FL		0.00	0.00	0.00	0.00		No
10-301	01	PLT 009	040PL	01FL		0.00	0.00	0.00	0.00		No
10-301	01	PLT 010	040PL	01FL		0.00	0.00	0.00	0.00		No

QAD

- 1 Select Yes at the frame that prompts, Do You Wish to Continue?
The next frame displays the number of locations created.
- 2 View the newly created locations in Warehouse Location Browse.
- 3 Once the new location parameters are defined, click Next to proceed to the next frame.

Locations Setup - Implementation Alert

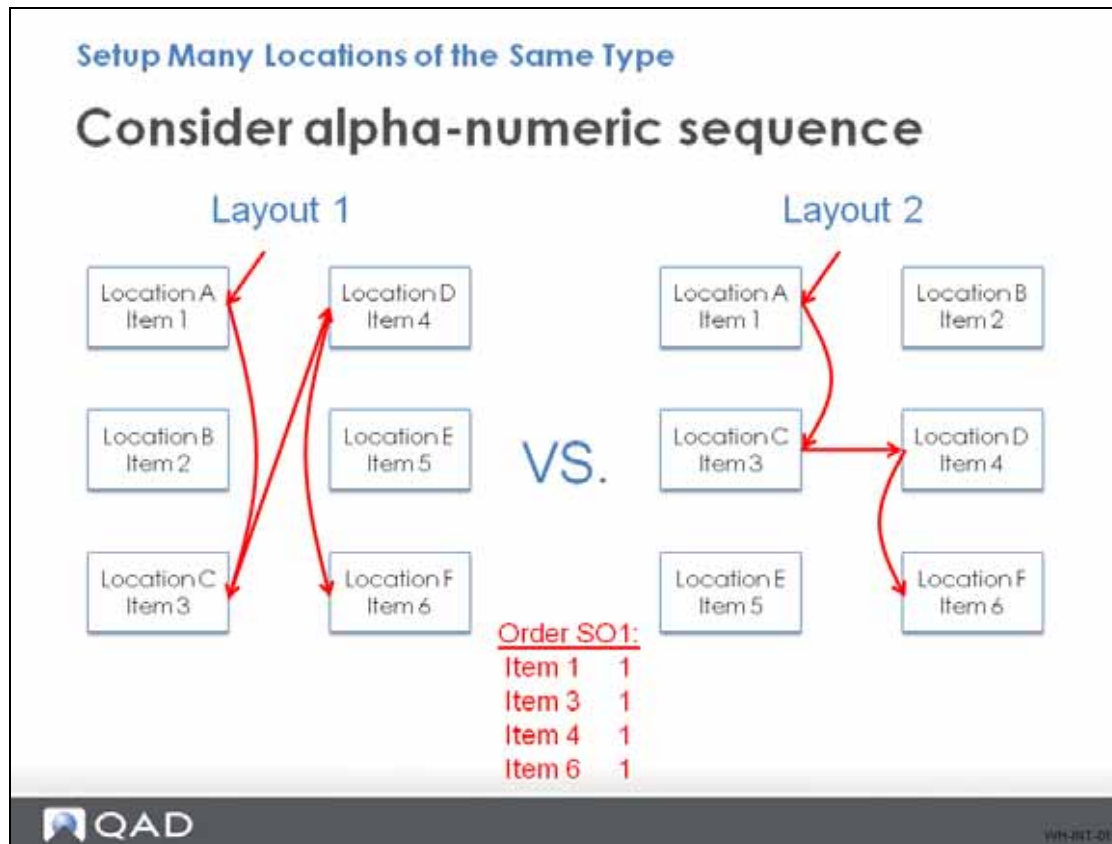
Implementation Alert

The standard pick path routing is driven by location address alpha-numeric sequence. Consider this when laying out and labeling the warehouse.

WH-INT-018

The warehouse layout and location label sequence have an impact on the system directed pick path.

Set Up Many Locations of the Same Type (Continued)



If you perform a batch pick for the single order SO1, the pick flow path follows the location alpha-numeric sequence.

Note in Layout 1, there is a significant travel time from Location C to Location D. To help reduce this travel time, you can re-label or re-layout the warehouse to Layout 2. This is also possible by assigning a travel sequence number to each location. Reference the discussion on Batch Picking for more information on travel sequence.

The goal within the warehouse is to achieve a shorter travel distance or shorter pick path.

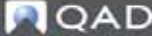
Exercise - Location Capacity

Exercise

Location Capacity

Using Warehouse Location Browse and/or Warehouse Location Maintenance how full is location 040EA020? _____

What is the capacity of location 040EA020?

WIN 011-021

Follow the instructions in the slide above to determine:

- How full is location 040EA020?
- What is the capacity of that same location?

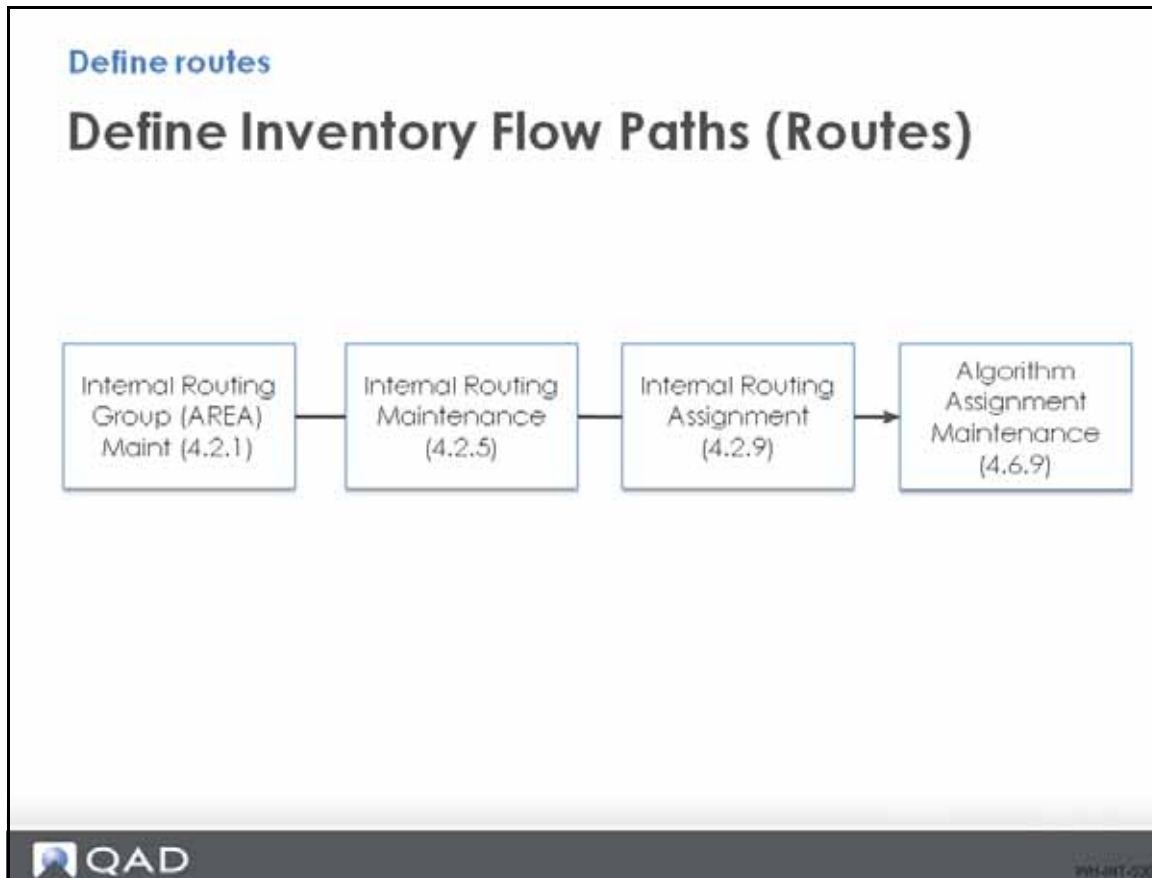
Using Warehouse Location Browse, the line for location 040EA020 shows 16.0 in the Percent Full column.

Using Warehouse Location Maintenance for Site 10-301, Location 040EA020, the location dimensional data shows Percent Full as 16.

The Warehouse Location Maintenance capacity as shown in the Percent Full field does not truly show the capacity. You need to scroll through and find the item frame in the program, then look at height, width, and so on and check the dimensions of the item. You can also run the Location Full % Report.

Clicking through to the final frame, the item number shows UM is EA and Quantity is 500. Because there is no item number listed, this is a generic capacity for all items.

Define Routes



Did You Know

Internal routings control the flow of inventory between areas.

Inventory flow paths are configured using different menus.

Follow these steps:

- 1 Set up the area using Internal Routing Group Maintenance.
- 2 Define the flow path using Internal Routing Maintenance.
- 3 Assign the routing using Internal Routing Assignment.
- 4 Define what happens to the load once it gets to the new area.

This is required for each different inventory flow path. The QMI setup for these steps is discussed in the topics that follow, starting with Internal Routing Maintenance.

Define Routes - Internal Routing Maintenance

Define routes

Internal Routing Maintenance

Site: 10-301
 Description: Receipts
 Sequence: 10
 Internal Routing Group: 010

Warehouse: 01
 Internal Routing: 01RCT

Site: 10-301
 Description: Receipts
 Sequence: 20
 Internal Routing Group: 040

Warehouse: 01
 Internal Routing: 01RCT

The standard flow for received product is from the Receiving Area (010) to the Storage Area (040)

WHL-INT-000

The standard flow for QMI received product is from the Receiving Area (010) to the Storage Area (040).

Did You Know

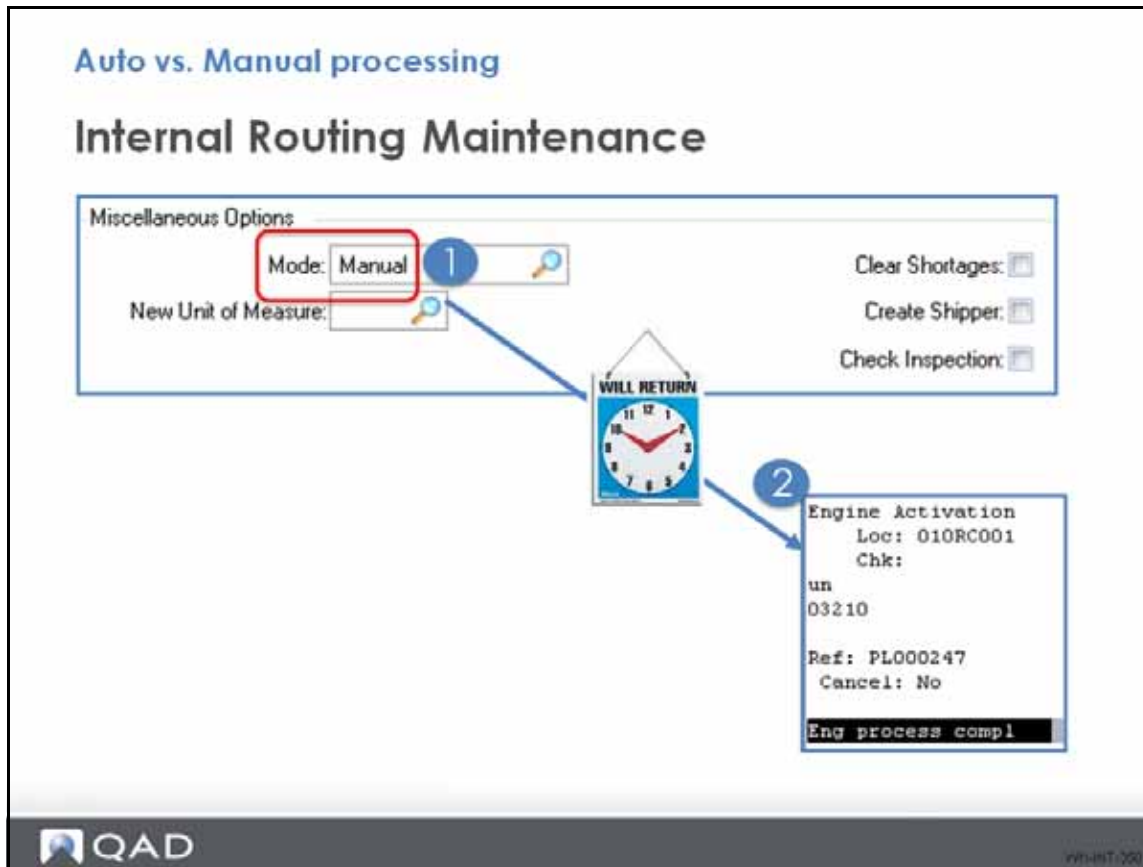
Use internal routings to create specific pathways linking Areas (IRGs) within the warehouse.

When you have defined the internal routing groups (IRGs)—areas within a warehouse—you can link specific sequences of areas to form internal routings. Each step, or sequence, within an internal routing defines the area where the inventory is moved next.

For each sequence step within an internal routing, you can also specify a number of parameters that control how the inventory is processed as it reaches that point in the sequence. The system displays default values for these processing parameters that are defined in Warehouse Maintenance. You can accept the default values, or override them with new values.

There are 10 frames and 41 fields in Internal Routing Maintenance used for configuration.

Auto Versus Manual Processing



Did You Know

There are three types of engine processing that can be applied to internal routings:

- Auto
- Manual
- Timed

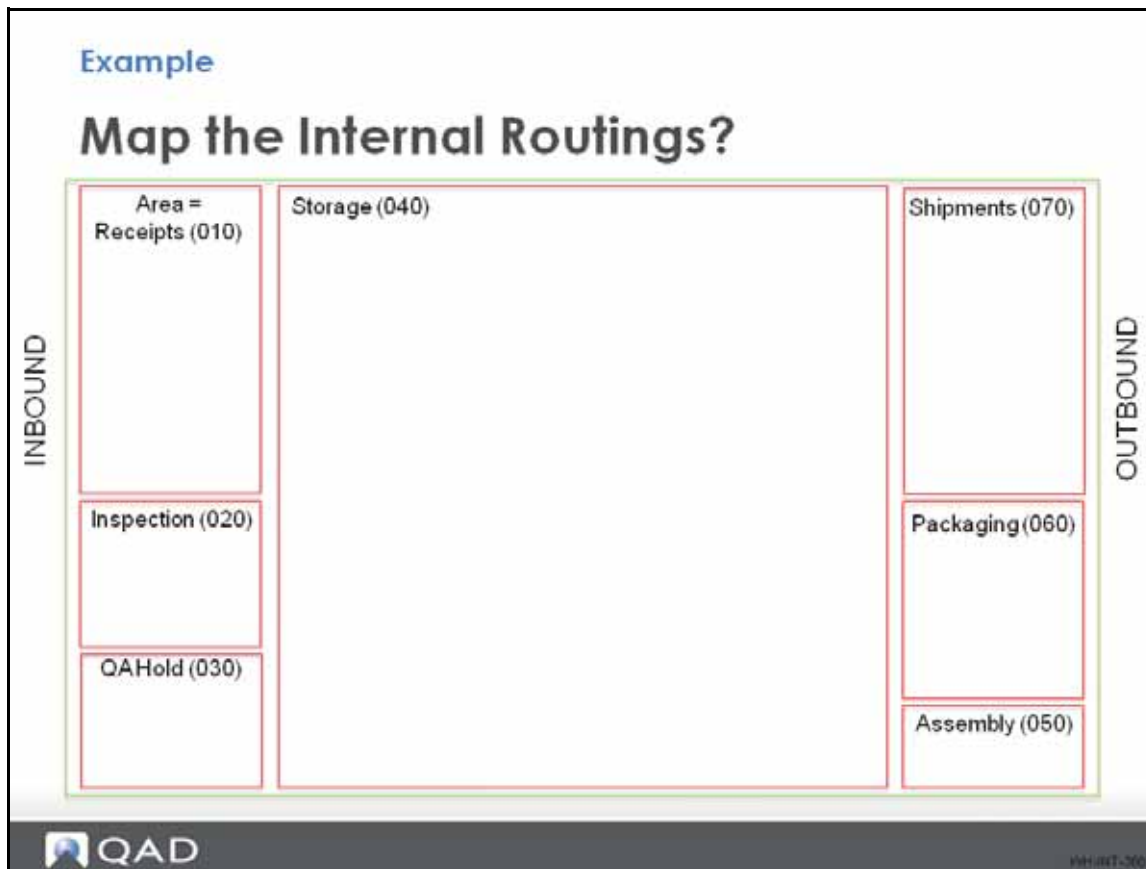
Auto mode specifies that the transaction is processed immediately. Auto engine processing means tasks are triggered automatically without user intervention. In Manual mode, the user must intervene by starting one of the engine processor programs in the Engine menu.

Manual mode specifies that the transaction is processed only when it is selected for processing by warehousing staff. Manual can be useful in many environments. For example, because staff can work on a work order for an extended period of time, can release pallets when they are finished rather than wait until the entire work order is finished.

Timed mode is similar to AUTO but process the engine workfiles after a pre-defined delay.

The default engine processing is set at the Warehouse Maintenance level. The default can be tailored for each internal routing in Internal Routing Maintenance. If a routing is not defined for the process, the system uses the mode set in Transaction Type Maintenance.

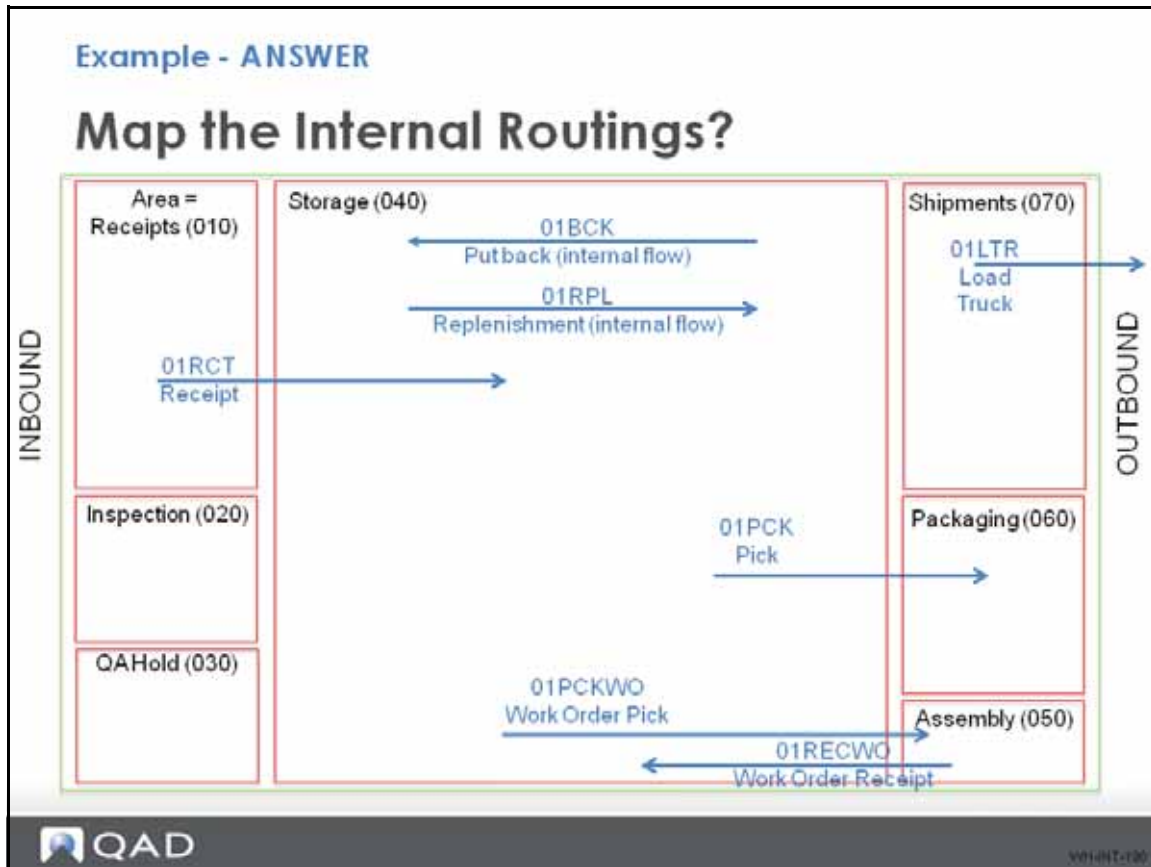
Example - Map the Internal Routings



Before you configure QAD Warehousing, it is helpful to define the product flows. You do this by mapping the internal routings.

Use the QMI layout above to map internal routings for areas between the inbound and outbound flow of goods.

Example - Answer to Mapping Internal Routings



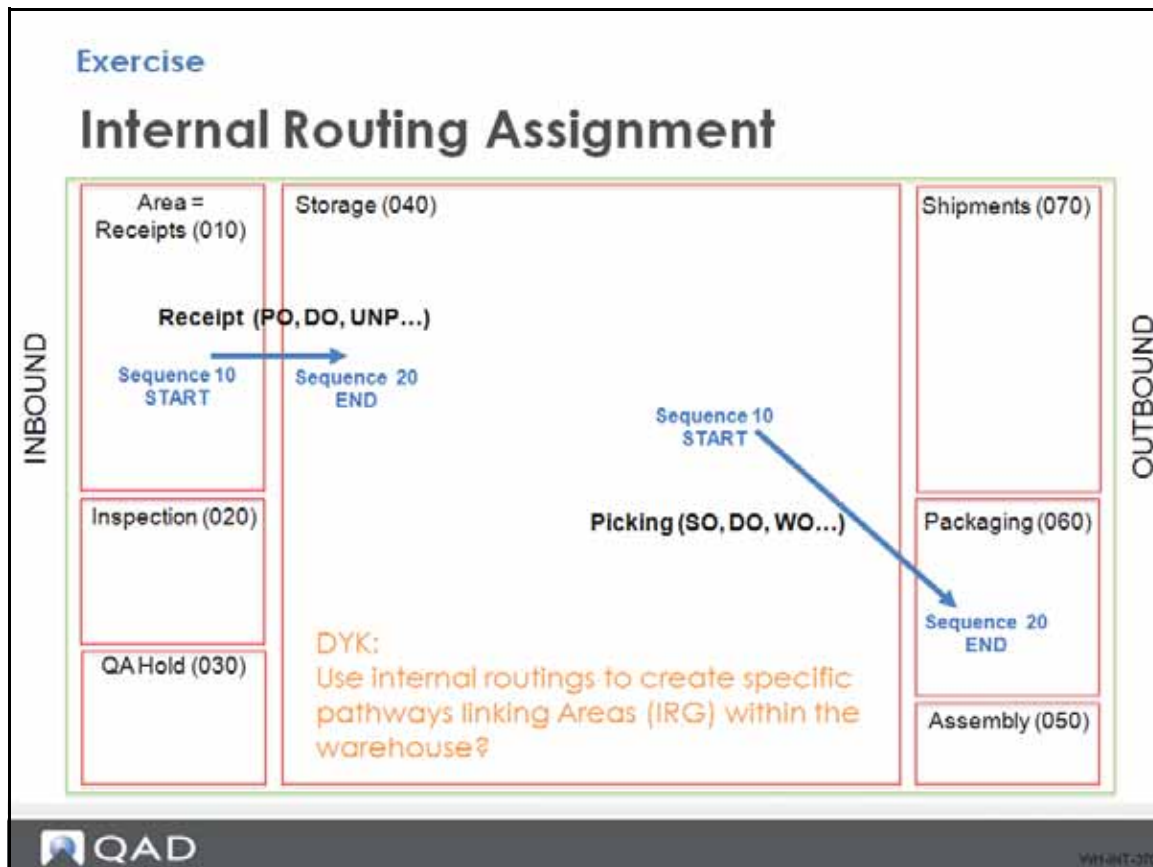
The lines in blue depict the internal routings mapped to the various areas.

Any product that moves from one area to another within a warehouse has to have the flow defined.

In QMI there are seven defined product flows:

Routing	Path	Purpose
01RCT	From Receiving to Storage	General receipts
01BCK	Forward Pick zone to Reserve Storage zone	Return replenishments
01RPL	Reserve Storage to Forward Pick	Replenishment
01PCK	Storage to Packaging	General pick
01PCKWO	Storage to Assembly	Work Order pick
01RECWO	Assembly to Storage	Assembly receipt
01LTR	Shipping to out of the system	Shipping

Which Routings Do You Use and When



Internal routings (IRs) are pathways through your warehouse that you want your inventory to take; however, it is the IR assignment that tells the system when to use the internal routing.

Once the routings are defined the next step is to determine when the specific flows are triggered.

Which routing do you use and when

Internal Routing Assignment

Int Routing Assignment Maint x

Go To Actions Copy Print Preview Attach

Item: Site: 10-301

Transaction Type: 1. When this transaction type is created...

Site: 2. And is associated to theses...

Warehouse:

Item Number:

Warehouse Item Type:

Address:

Custom: ☐

3. This material flow is initiated.

Internal Routing: 01RCT

Custom Program:

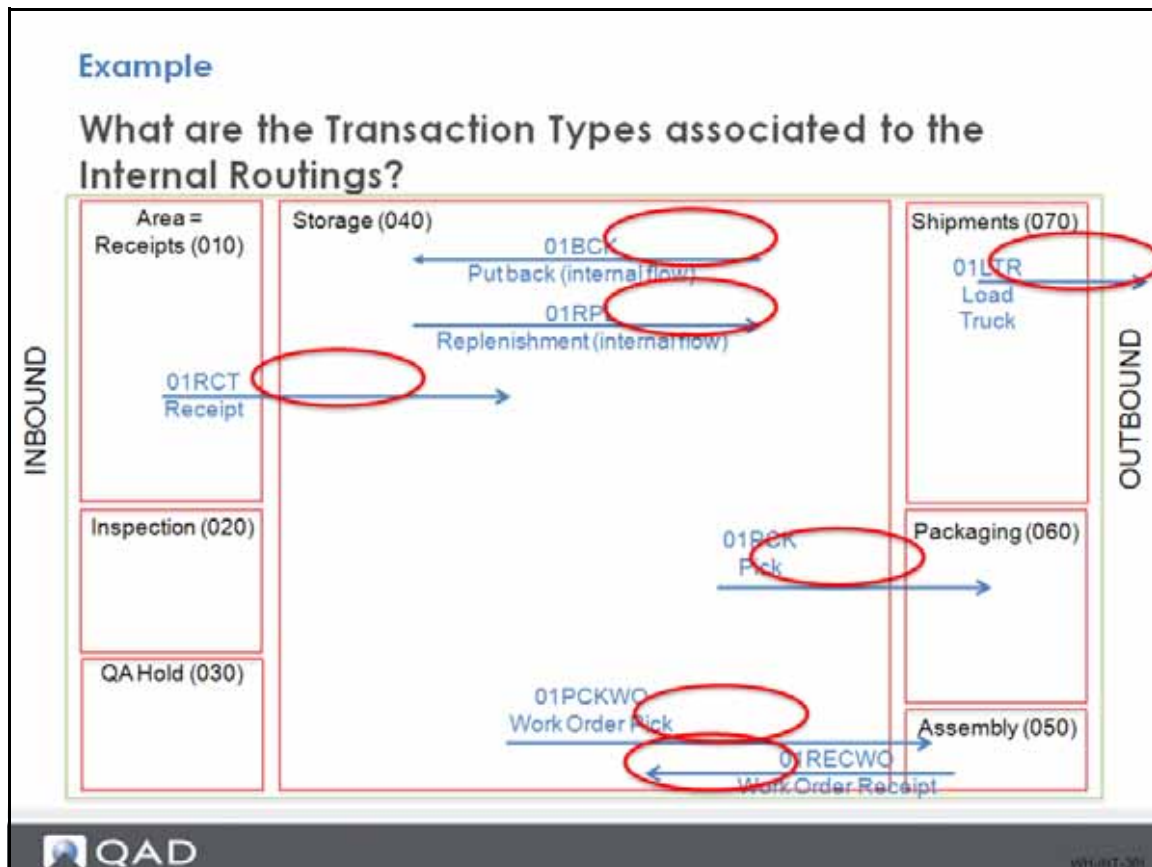
QAD

Use Internal Routing Assignment Maintenance to associate a transaction type to a site and warehouse. When the system creates the transaction type, the material flow is initiated.

You can also define other optional parameters (item number, warehouse item type, address) to create more specific triggers.

There are three frames and nine fields in Internal Routing Assignment Maintenance used for configuration.

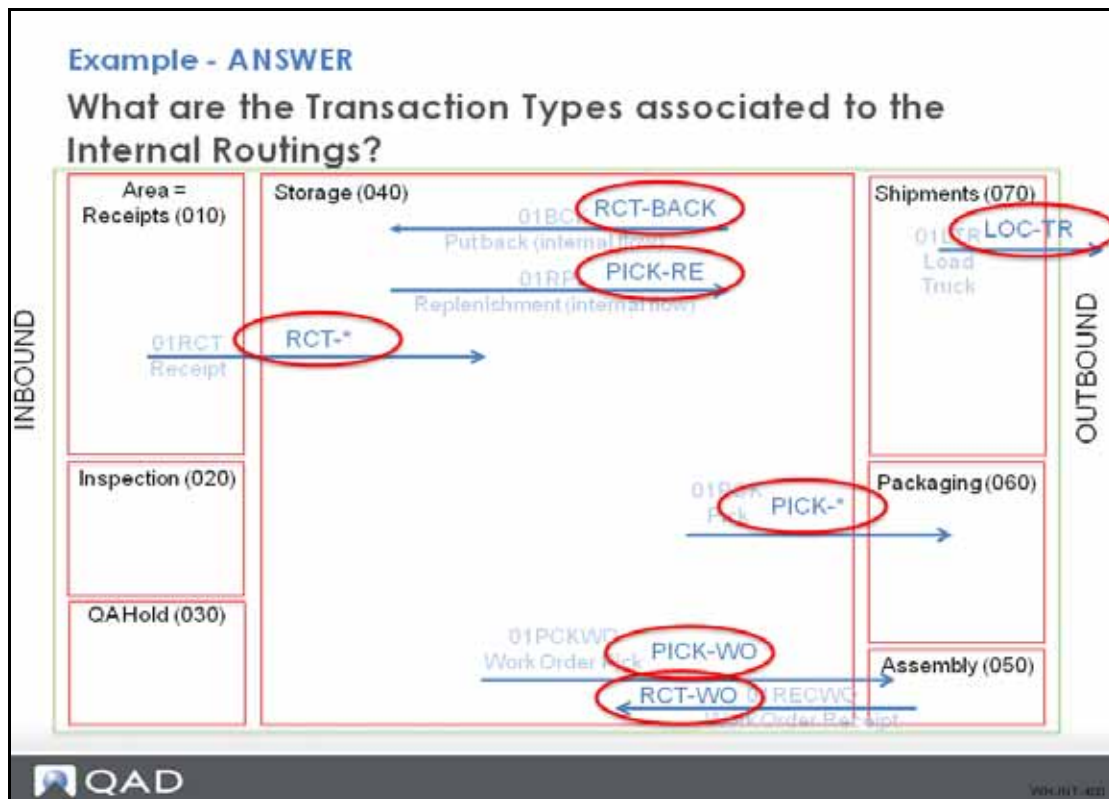
Example - What are the Transaction Types Associated with the IRs?



Each time a transaction occurs, the system looks at the internal routing.

Use Internal Routing Assignment Browse to determine the transaction types associated with the internal routings in QMI?

Example Answer - Transaction Types Associated with IRs



Throughout QAD Warehousing you can use a wildcard (*) indicator to represent a generic solution. For example, when a general receipt transaction is generated, the product flow 01RCT is triggered.

Define Rules

Define rules

Algorithm Assignment

• CM Container Move	(14) Staging and Dock locations
• LA Lane Algorithms	(5) Shipping Lanes
• LF Location Find	(13) Put-away in functional areas
• PA Put-Away	(89) Put-away in non-functional areas
• PK Picking	(68) For picking stock
• SC Shortage Clearance	(11) Back orders and cross docking
• QA Inspection	(10) Inspection processing


WH-INT-410

Did You Know

Algorithms are rules/routines used when moving, putting away or picking product.

An algorithm is a processing program that takes into account particular conditions before attempting to complete an inventory move.

There are 210 standard rules you can assign, depending on the area.

Which Rules to Use and When

Which rules to use and when

Algorithm Assignment Maintenance

Algorithm Type: PA
Site: 10-301
Item Number:
Address:

Transaction Type: RCT
Warehouse: 01
Warehouse Item Type:
Custom: ☐

Assigned Algorithms

Seq	Algo	Description
10	3	S.L. - Merge with item
20	2	Empty Storage Locations

DYK:
Algorithms can also be assigned to a Transaction Type or combinations of sites, warehouse, item, supplier or customer to provide even more flexibility.

Sequence here is different than sequence for Internal Routing.

Sequence: 10
Description: S.L. - Merge with item
Algorithm: 3

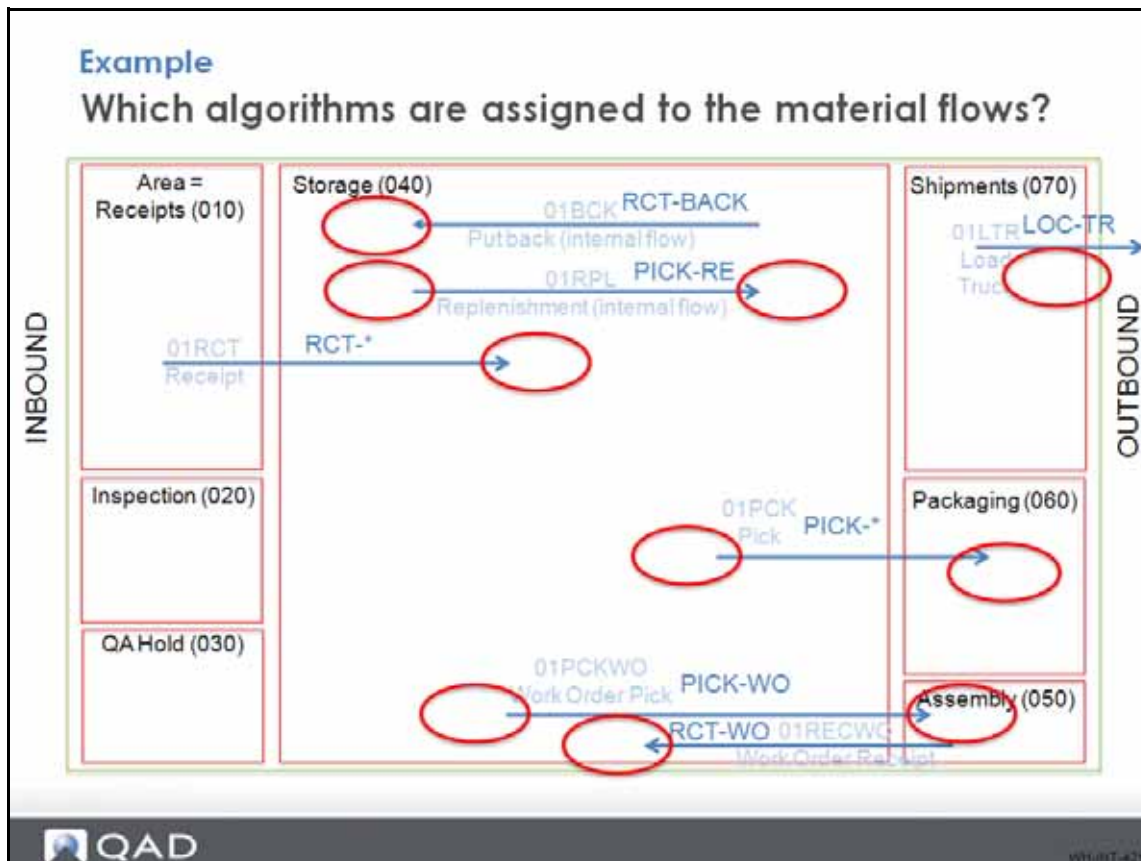
Did You Know

Similar to Internal Routing Assignment, algorithms can also be assigned to a transaction type or combinations of sites, warehouses, items, suppliers, or customers to provide even more flexibility.

Sequence in Algorithm Assignment Maintenance is different than sequence in Internal Routing Maintenance. Before, sequence was used as a start and stop control; meaning the system started with the first sequence and *always* completed the next sequence. Here, the sequence is cascading; meaning if the task can be completed using the first rule, the system stops. If not, it moves to the next rule (sequence).

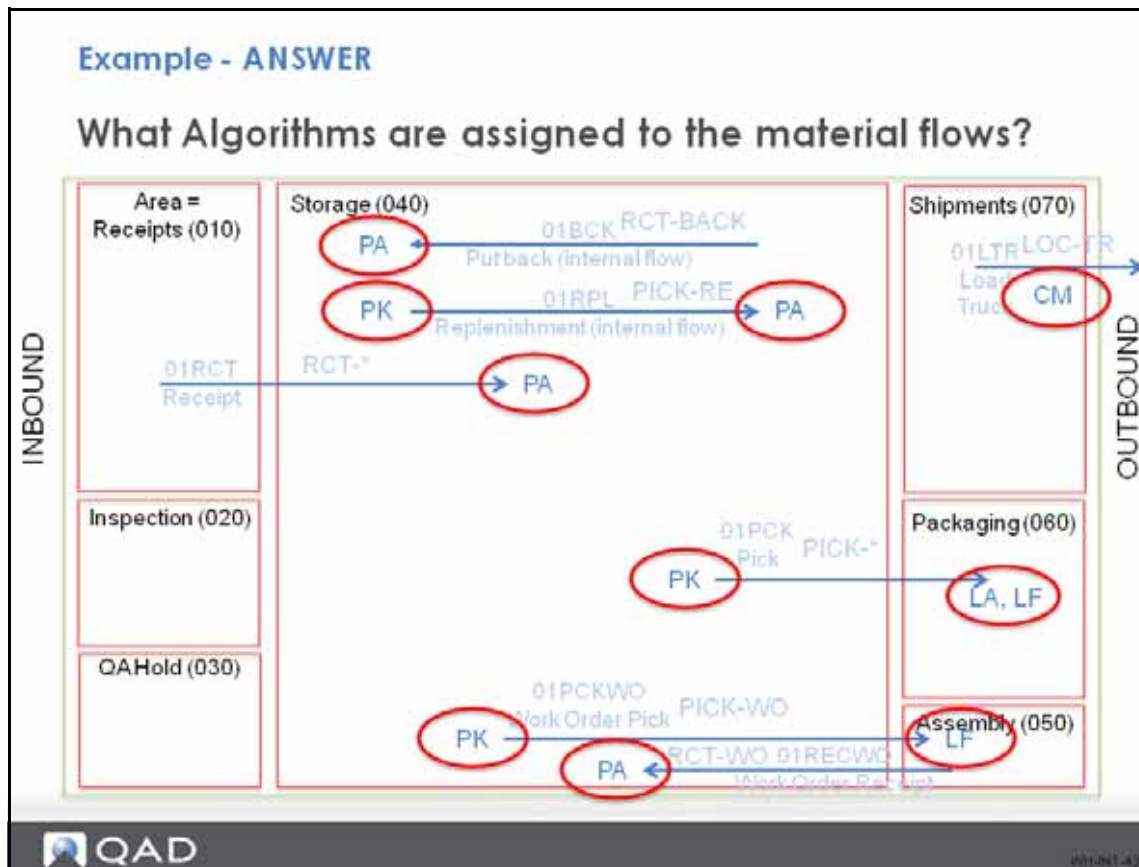
There are four frames and 10 fields in Algorithm Assignment Maintenance used for configuration.

Example - Which Algorithms are Assigned to Material Flows



In the graphic above, use Algorithm Assignment Maintenance to determine which algorithms are assigned to the material flows in QMI.

Example - Answer - Algorithms Assigned to Material Flows



The algorithms are circled in red in the graphic above.

In QMI, when product is moved into the storage area using a RCT-* transaction, the product is stored using (PA) put-away rules.

QMI Units of Measure

QMI Units of Measure

Alternate Unit of Measure Maintenance

100 10 1



The diagram illustrates the relationship between different units of measure. On the left, the number '100' is positioned above a bottle of disinfectant. In the center, the number '10' is above a cardboard box. On the right, the number '1' is above a pallet loaded with boxes. Two equals signs (=) are placed between the bottle and the box, and between the box and the pallet, indicating that 100 individual units (EA) are equivalent to 10 boxes, which are in turn equivalent to 1 pallet.

QAD

WH10T-450

Did You Know

Use Alternate Unit of Measure to establish conversion factors for item measurement. This can be done at the item or item family group level.

For example, you can define how many EA fit into a box, how many boxes fit into a pallet.

Know Your Units of Measure

Know your Units of Measure

Alternate Unit of Measure Maintenance

Alternate Unit of Measure Maint X

Go To Actions Copy Print Preview

Unit of Measure: EA
Description: Eaches

Properties

Sizing Type: [] Sizing by Base UM
Print ID: []
ID Quantity: [0]
Allow Split: ☒
Item Number: []
Ship Type: []
Round Inspected Qty: ☐

Conversion Rules

New Unit of Measure:
Change Action:

QAD V01.001.481

Did You Know

QAD Warehousing allows companies to store palletized and non-palletized product together through the use of Alternate Units of Measure Maintenance.

There are five frames and 11 fields in Alternate Unit of Measure Maintenance used for configuration.

Items Currently Assigned to a Site

Items currently assigned to the Site					
Item Browse (Site = 10-301)					
03120: Scented Disinfectant Pump		x 10		x 10	
03120-A: Disinfectant Kit		x 10		x 10	
03121: Scented Disinfectant 0.5l bottle		x 10		x 10	
03210: Disinfectant Wipes		x 10		x 10	
90091: Standard Shipping Box (Not assigned to 10-301)				X 1000	

Use Item Browse to determine which items are assigned to a site.

Item Browse Uses the same item master as QAD core.

There is a more detailed review of item setup in the Receiving training session.

Other Item Characteristics

Other item considerations

Item Characteristics

- Shelf Life
- Family Groups
- Inspection
- Logistics Unit of Measure
- Customer or Supplier Restrictions



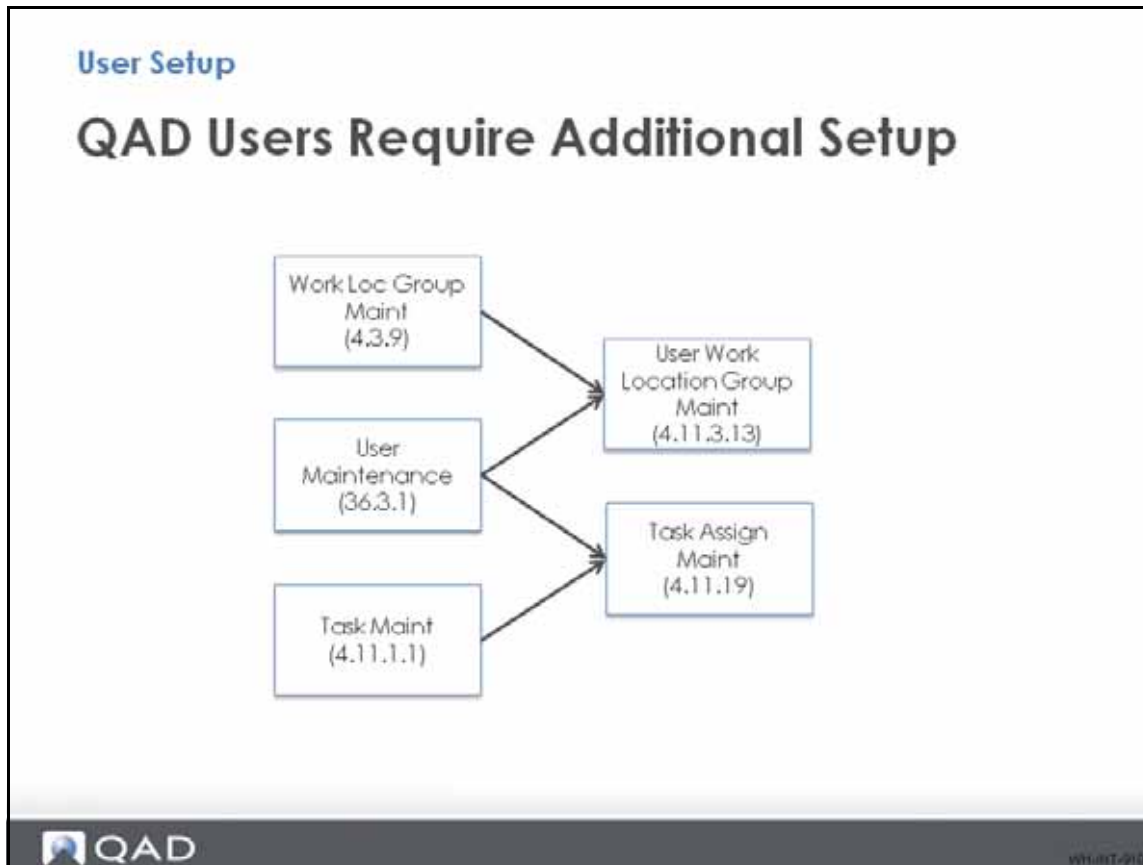
QAD

PRINT 100

Did You Know

You can pick by expiry date and mix expiry dates during storage within a specific number of days.

User Setup



The programs listed in the graphic above show you the steps you need to take to set up users.

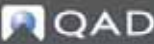
Setting up users in the warehouse requires user to first be set up in QAD core.

Implementation Consideration - Define User Parameters

Implementation Consideration

Define User Parameters

Data	Key	User 1	User2	User3	...
Name	36.3.1				
User ID	36.3.1				
Password	36.3.1				
Language	36.3.1				
Country Code	36.3.1				
Access Loc	36.3.1				
Enabled Reason	36.3.1				
Products	36.3.1				
Domain Code	36.3.4				
Entity	36.3.4				
Role	36.3.6.6				
Work Location Group	4.11.3.13				
Task Priorities	4.11.19				
RF User?					

 **QAD**

WM10NT-201

The graphic above shows you the data you need to set up and the program menu number for the program that you use to set up the data.

Assign the user to a Work Location Group

Assign the User to a Work Location Group

User Work Location Group Maintenance

Site: 10-301
Warehouse: 01
Work Location Group: 01FL
User ID: UserB

System Flavor: B

Device:

External Device Printer:

Form Printer:

ID Printer:

Task Printer:

Inspection Printer:

Use External: ☒

Use External: ☒

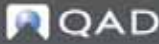
Use External: ☒

Forklift Handling 01FL

040PL

001	002
003	004
005	006
007	008
009	010

UserB

 QAD

WMINT-912

User Work Location Group Maintenance to assign users to a WLG.

There are two frames and 15 fields in User Work Location Group Maintenance used for configuration.

Traditional Warehouse Tasks

Traditional Warehouse Tasks

Task Maintenance

Task: TRANSFER

Description: Inventory Transfers

Procedure Code: TF

Confirmation Mode: Auto

Comments: ☐

Time: 0.0

Tasks: 0

Create User ID: mfg 1/1/2001

Modified By: mfg 1/1/2001

Task
Count
Pack
Pick
Put-Away
Recount
Replen
Transfer

Use Task Maintenance to set up traditional warehouse tasks for staff. The blue box depicts typical tasks.

There are three frames and five fields in Task Maintenance used for configuration.

Assign Tasks to Users

Assign Task Types to Users

Task Assignment Maintenance

User ID: qmi QMI User

Queue 0

1	PICK	Auto			
2	REPLEN	Auto			
3	PACK	Auto			
4	PUT-AWAY	Auto			
5	TRANSFER	Auto			

QAD VMI/INT-014

Did You Know

Task priority queues can be setup to help ensure important tasks are completed first.

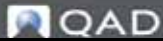
There are five frames and 6 fields in Task Assignment Maintenance used for configuration.

QAD Warehousing - Key Learning Points

QAD Warehousing Introduction: Session 1-0

Key Learning Points

- Map the warehouse layout
- Define work method sections
- Define product flow paths
- Define produce movement rules
- Define RF scanning frequency (optional)
- Define units of measure and other relevant item characteristics



©2017 QAD

Exercises

A screenshot of a presentation slide. At the top left, the word 'Exercises' is written in blue. Below it, 'Setup Exercises' is written in a larger, bold black font. A bulleted list of ten items follows, each preceded by an orange dot. The items are: 'Guidelines for initial data setup', 'Set up warehouses', 'Set up areas', 'Set up zones', 'Set up work sections', 'Assign users to work sections', 'Set up locations', 'Enable users', and 'Set up a license plate number'. At the bottom left of the slide is the QAD logo, and at the bottom right is the text 'V010117-720'.

The following topics contain warehousing setup exercises, based on information presented in this Introduction section.

You set up a second warehouse for the existing QMI site 10-301. In the end, the site has two warehouses: Warehouse 01, already setup in the demo/test environment and the warehouse you are setting up. For learning purposes, your new warehouse closely reflects existing warehouse 01. This lets you check your configuration against the existing setup. Depending on the exercise, you may be able to reuse existing data, or you may be required to create completely new information.

In some instances, space is provided in tables for you to enter the data you entered in QAD Warehousing programs; in other instances, the values you need to enter in fields are presented within the tables.

Finally, for some exercises, answers are provided.

Guidelines for Initial Data Setup

The following topics provide information regarding the nature of your warehouse, items, pallets, processes, and so on. Use the information to help you set up data for the exercises throughout this training guide.

- The customer is QMI. They provide medical supplies and disinfectants to hospitals, businesses and consumers through retailers.
- Items are in various sizes but most fit 10 each per box, 10 boxes per pallet. All pallets are one standard size.
- Lot tracking or serial numbers are not used in the warehouse and there is not special storage or handling characteristics for any item.
- For items:
 - All items can be picked in each or pallet quantities.
 - Most items are picked in eaches with FIFO movement preferred.
 - Item mixing is not allowed in storage.
 - There is no inbound or outbound item inspection requirement.
- There are three areas in the warehouse. One each for receiving, storage and shipping.
- Pallet storage locations can hold four pallets. Each locations hold 100 eaches.
- Operators cover two work sections, Fork Lift and Pick Cart.
 - Fork Lift processing is used to move loads:
 - From receiving into storage
 - From reserve storage to forward pick
 - In shipping
 - Pick Cart processing is used for each picks
 - All operators can perform cycle counts

The exercises do not populate or discuss all configurable fields. Only the required fields or fields relevant to the exercise are used.

Exercise - Set Up Warehouses

Exercise

Warehouse Maintenance

Site: 10-301
Warehouse: 01

General Data

Description: Warehouse 1
Address:
Active: ☒
Reference Sequence ID: 00000001
Packaging Sequence ID: 00000002
Flavor: A
Inventory Acct Sync:
Allow Mixed Status Codes: ☒
Logistics UM Tolerance: 0.00%
Log w/Base UM Only: ☐ Cnt:

QAD Location Data

Description: Warehouse 1
Inventory Status: Y-Y-N
Permanent: ☐
Type:
Single Items: ☐
Single Lot/Reference: ☐
Capacity: 0.0 UM:

QAD V01-INT-320

Warehouse Maintenance controls many warehouse parameters and provides configuration defaults for many subsequent screens.

Use the following to help set up the warehouse:

- 1 Ensure QAD Warehousing is active using Warehouse Management Control.
- 2 In Warehouse Maintenance, define Warehouse parameters, then note the parameters you enter here:

Field	Data to Enter
Site	10-301
Warehouse	
Description (optional)	
Reference Sequence ID	00000001
Packaging Sequence ID	00000002
Start Picking Level	10
End Picking Level	20

Note The End Picking Level is different from Warehouse 01. In the new warehouse, there are only two picking zones versus the three in Warehouse 01.

Exercise - Set Up Areas



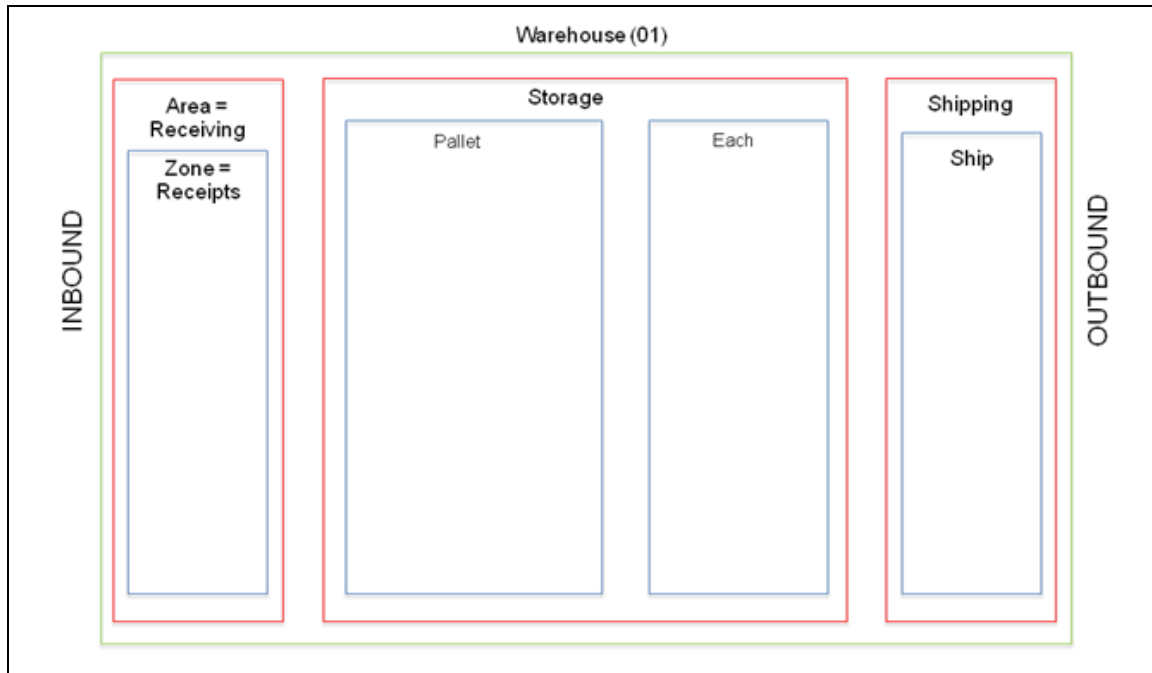
There is no inspection requirement. All product flows in through a general receiving area and is put away to storage. Product is picked from storage locations and moved to shipping for shipment prep and load consolidation.

Use the following to help set up areas:

- 1 In Internal Routing Group Maintenance, use the following matrix to help you set up data:

Site	Warehouse	SLG	Description	Functional
10-301			Receiving	Y
10-301			Storage	N
10-301			Shipping	Y

Exercise - Set Up Zones



Zones require more detailed configuration. Specific Zone configurations are discussed in more detail in later sessions.

Use the following to help set up zones within the warehouse:

- 1 Use Storage Location Group Maintenance to set up zones.
- 2 Set up zone parameters as follows, noting data you supply here:

Substep	Site	Warehouse	SLG	Description (optional)	IRG
a	10-301			Receiving	
b	10-301			Pallet Storage	
c	10-301			Each Storage	
d	10-301			Shipping	

- 3 Continue on, adding data to more Storage Location Group Maintenance fields for the data you set up in step 2.

Substep	Receipts	I Returns	O Returns	Exclude from Picking (A)	Picking Level	Picking Multiple UM (B)	UM(B)	Acquisition UM
a	Y	Y	Y	Y	--	--	--	--
b	Y	Y	Y	--	10	PL	PL	--
c	Y	Y	Y	--	20	--	--	EA
d	Y	Y	Y	Y	--	--	--	--

Note For the table above:

- (A) Zones in functional areas are excluded from picking.
- (B) Picking Multiple UM and UM should be blank in non-storage zones.
- Clicking Next on the last frame with a blank UM displays an error message. Click Back to save changes

Exercise - Define Work Sections

Exercise

Define Work Sections

Work Location Group Maintenance

Go To Actions Copy Print Preview

Site: Warehouse: whse Work Location Group: WLG01

Description: Warehouse for testing

Confirmed at Source: ☐

Priority: 1

Increment: 1

Task: Transfer

System Code: RF

System Flavor: a

Allow Task Switching: ☐

Two Phase: ☒

Keep From Status: ☐

Device:

Site	WH	WLG	Description (optional)	Flavor	Users(A)
10-301			Fork truck movement		
10-301			Cart picking		
10-301					
10-301					

QAD

WLMINT-001

Operators work in two sections: pallet/load movements and each item picking. Use the following to help assign users to work location groups.

- 1 Use Work Location Group Maintenance to set work sections.
- 2 Set up parameters, then note the parameters you enter here:

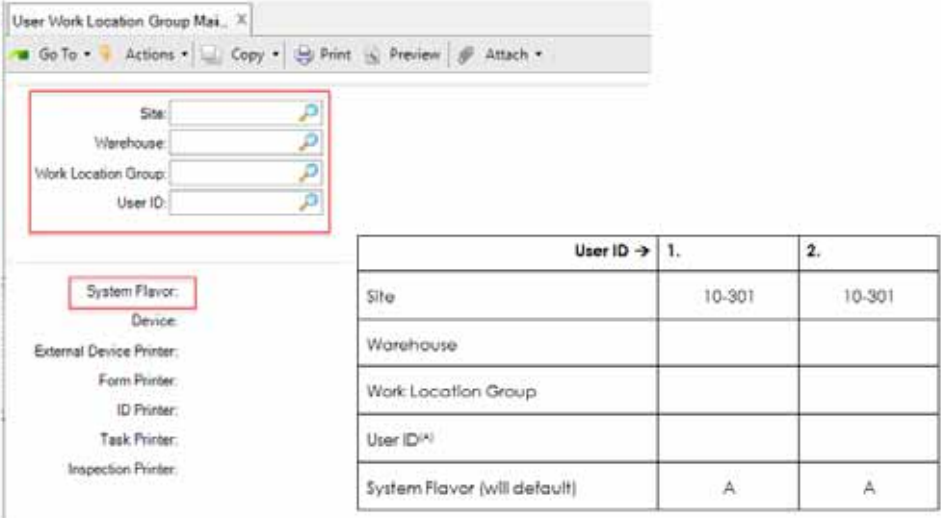
Site	Warehouse	WLG	Description (Optional)	Flavor	Users (A)
10-301			Fork truck movement		
10-301			Cart picking		
10-301					
10-301					
10-301					

Note In the table above, (A) is a user field that is not on the maintenance screen but is presented here for reference to help set up the next exercise.

Exercise - Assign Users to Work Location Groups

Exercise

Assign Users to Work Location Groups



	User ID → 1.	2.
Site	10-301	10-301
Warehouse		
Work Location Group		
User ID ^(A)		
System Flavor (will default)	A	A

Use the following to help assign users to work location groups.

- 1 Use User Work Location Group Maintenance to assign users to WLGs.
- 2 Set up parameters, then note the parameters you enter here:

	User A	User B
Site	10-301	10-301
Warehouse		
WLG		
User ID (A)		
System Favor	A	A

Note (A) You must first set up the user at the site using User Maintenance.

Exercise - Set Up Locations

Exercise

Set Up Locations

Site	Location	WH	Desc	SLG	WLG	UM(A)	Qty(A)	H(A)	L(A)	W(A)
10-301			Receive			--	--	--	--	--
10-301			Pallet			PL	--	2	2	1
10-301			Each			EA	100	--	--	--
10-301			Pack			--	--	--	--	--
10-301			Ship			--	--	--	--	--

Use Warehouse Location Maintenance to set up locations for a warehouse.

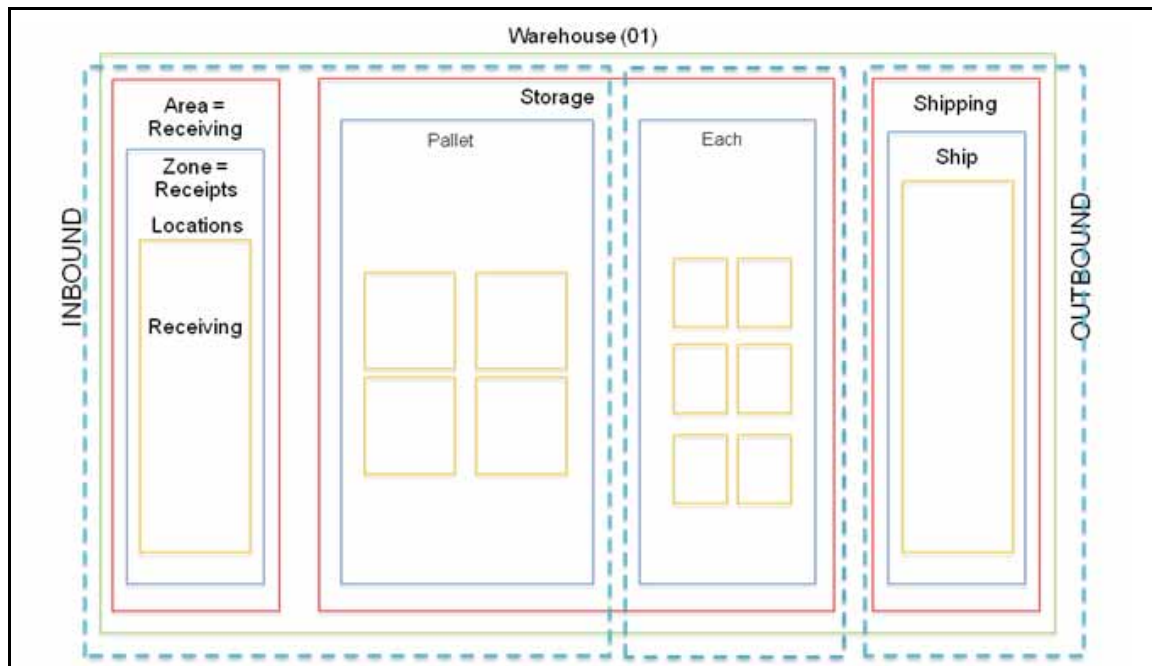
Use the following to help set up locations.

- 1 Use Warehouse Location Maintenance to set up locations.
- 2 Set up parameters, then note the parameters you enter here:

Site	Location	Description (optional)	SLG	WLG	UM (A)	Qty (A)	H (A)	L (A)	W (A)
10-301		Receive			--	--	--	--	--
10-301		Pallet			PL	--	2	2	1
10-301		Each			EA	100	--	--	--
10-301		Ship			--	--	--	--	--

Note (A) These fields are in the final frame in the program, as shown in the graphic above.

Fig. 1.1
Warehouse Locations Map



Exercise - Set Up Mass Locations

Exercise

Set Up Mass Locations

Sequence Definition Maintenance

Sequence Definition: 1 Description: sequence 1

Seq T	Format	Min	Max	Inc	Description
1	F			I	

Mass Location Maintenance

Warehouse: 01
Storage Location Group: 0400A
Inlet Location Group: 0100

Warehouse Location Date:

Check Digit:

Popularity:

Storage Type:

Warehouse Location Type:

Travel Sequence:

Dedicated:

OPC Frequency:

Picking Type:

Preferred LID:

Opportunity Count Frequency:

Last Opportunity Count:

Stage (In):

Stage (Out):

Save Reset

QAD

Setting up multiple locations can be a time consuming part of the warehousing implementation. To make the process easier, use Sequence Definition Maintenance and Mass Location Maintenance to setup the additional five locations in the pallet and each storage zones.

- 1 Make certain you have at least one location of the type you want to duplicate.
- 2 Use Sequence Definition Maintenance to create the location address format and numbering sequence. Use the following table to enter data:

Sequence	Type	Format	Min	Max
1	F	Format	--	--
2	I	999	1	4

- 3 In Mass Location Maintenance:
 - a Select a location template.
 - b Select the recently created sequence definition.
 - c Change the defaults at the location level or accept.
 - d Ensure that C is selected to create locations.
 - e Delete locations by selecting D. When deleting locations, you do not need a template location.

- f** Once all info is formatted click <back>. You must go through all frames before clicking back.
- g** Click OK.

Exercise - Enable Users

Exercise

Enable Users

Task Assignment Maintenance

Go To

Actions

Copy

Print

Preview

User ID: mfg

General User

Comments

Queue 0

1 PICK Auto

2 TRANSFER Auto

3 COUNT Auto

4 RECOUNT Auto

5 REPLEN Auto

6 PUT-EMPTY Auto

User ID: →	1.	2.
Queue	1	1
Sequence / Task	1 Transfer	1 Transfer
Sequence / Task	2 PICK	2 PICK

Queue: Seq: Task:

Confirmation Mode:

Delete

Back

Next

QAD

To ensure users receive RF tasks, they must first be enabled to perform the tasks. Use Task Assignment Maintenance to enable UserA and UserB to receive pick and transfer tasks.

Set the following fields

User ID	User A	User B
Queue	1	1
Sequence/Task	1 Transfer	1 Transfer
Sequence/Task	2 Pick	2 Pick

Note For the QMI warehouse example, the sequence order of Pick of Transfer is not relevant.

Exercise - Set Up a License Plate Number



Because all loads are tracked using a License Plate Number (LPN), you must set up the license plate number within QAD Warehousing.

Note Within QAD Warehousing, license plate numbers are called references.

Use the following information to help you setup a license plate number.

- 1 Setup/modify the LPN using Sequence Definition Maintenance.

Note You can reuse the existing sequence definitions.

- 2 Change the prefix to LPN.

Note The current LPN sequence definition has the prefix PL.

- 3 Set up or change the following in Sequence Definition Maintenance:

Field	Data to Enter
Sequence Definition	00000001
Description (optional)	Reference Generation Seq
Sequence	1
Format	LPN
Description	LPN prefix for loads

Questions

- 1 QAD Warehousing is a _____ management system that _____ processes in the warehouse on a real-time, ongoing basis.
- 2 Name the five space segregation in QAD Warehousing, in order of their hierarchy.
- 3 True or False. When setting up warehouse locations, QAD Warehousing uses a unique warehouse location maintenance program.
- 4 QAD Warehousing algorithms are best described as what?
- 5 True or False. You use Algorithm Assignment Maintenance to link a specified sequence of algorithms to a defined combination of transaction type, site or warehouse, item number, or customer/supplier address.
- 6 QAD Warehousing manages the movement of inventory within and between warehouses by defining pathways that move inventory from one part of the warehouse to another. These pathways are called what?

Answers

- 1 task, optimizes.
- 2 Site, warehouse, area, zone, location.
- 3 True. Use Warehouse Location Maintenance to set up locations for a warehouse.
- 4 Rules.
- 5 True.
- 6 Internal routings

Notes

Chapter 2

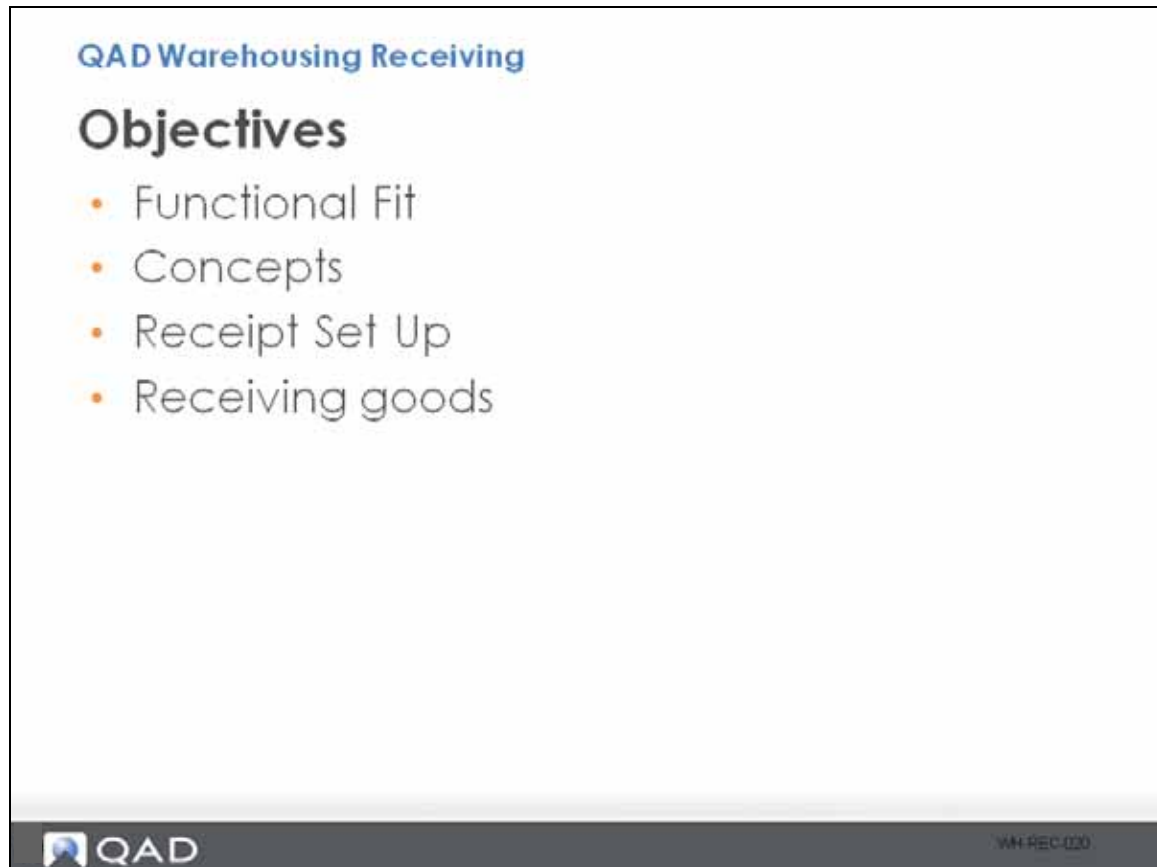
Receiving

Overview

QAD Warehousing Receiving



QAD Warehousing Receiving Objectives

A presentation slide titled "QAD Warehousing Receiving Objectives". The slide has a white background with a blue header bar at the top. The header bar contains the text "QAD Warehousing Receiving" in blue. Below the header, the word "Objectives" is written in a large, bold, black font. Underneath "Objectives", there is a bulleted list with four items: "Functional Fit", "Concepts", "Receipt Set Up", and "Receiving goods". Each item is preceded by a small orange dot. At the bottom of the slide, there is a dark grey footer bar. On the left side of the footer bar is the QAD logo, which consists of a blue square with a white stylized 'Q' and the letters "QAD" in white. On the right side of the footer bar, the text "WH-REC-020" is written in a small, white font.

QAD Warehousing Receiving

Objectives

- Functional Fit
- Concepts
- Receipt Set Up
- Receiving goods

QAD WH-REC-020

In this section, you learn receiving.

- Functional fit
- Concepts
- Receipt set up
- Receiving goods

Receiving goods into a warehouse uses nearly every warehousing concept from establishing a site and warehouse to creating various locations and storage areas. It also involves creating areas, linking the areas with pathways, invoking algorithms, and creating and confirming tasks associated with the receipt.

The receiving section of this training guide discusses item setup in more detail.

Functional Fit - What Warehousing Does Not Do

What we don't do

Functional Fit: Pre-Receiving

Functionality	Fit	Notes
Yard & Appointments - Scheduling - Dock assignment - Gate check in - Directed movements - Trailer tracking - Alerts		Not supported but typically not a deal breaker. Could potentially track yard locations using standard WMS locations.
Dock labor planning		

[Legend](#)

 Partial

 None

 QAD

WH-REC-028

Pre-receiving activities are helpful for high volume operations and facilities with large yards. Most QAD customers do not fit this criteria; hence, you have not developed many pre-receiving features.

Functional Fit Continued

What we don't do

Functional Fit: Receiving

Functionality	Fit	Notes
Attach pictures for exceptions		
Multiple operators on a single receipt		
TI x HI notes		
SN, Expiry & Catch Weight		Do not support catch weights
Pre-print receiving labels		
Ability to store product by owner		Does not support most 3PL capabilities
Display special receiving instructions on RF		

[Legend](#)

 Partial

 None

 QAD

WH-REC-083

Some companies actually take photos of trailer and other pre-receipt holding areas to know the contents so that they know what is coming into the warehouse.

Some companies need to know pre-receiving quantities and contents to prepare and improve labor management during the receipt and processing of the goods.

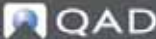
Receipt Types

RF Receiving

Available in WMS not in AIM



- Supports all receipt types
- Reduces receiving processing time
- Will improve receiving accuracy

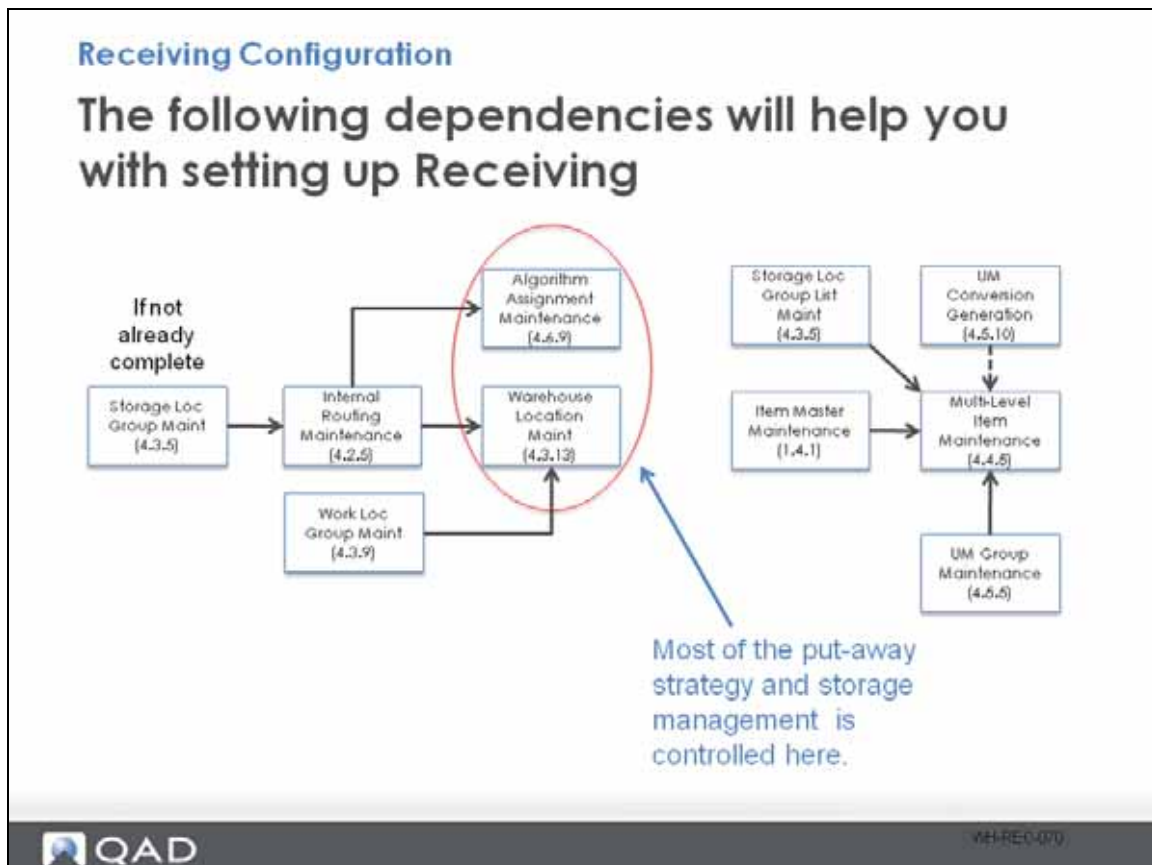

WH-REC-041

The RF device supports all receipt types, including:

- Distribution order receipts
- sales order returns
- PO receipts
- ASN receipts
- Unplanned receipts
- MO returns
- RMA receipts

These functions are available through QAD Warehousing Enterprise Edition (EE) RF software, though, and not through the Standard Edition QAD Warehousing versions, previously called Advanced Inventory Management (AIM).

Receiving Configuration - Dependencies to Help Set Up



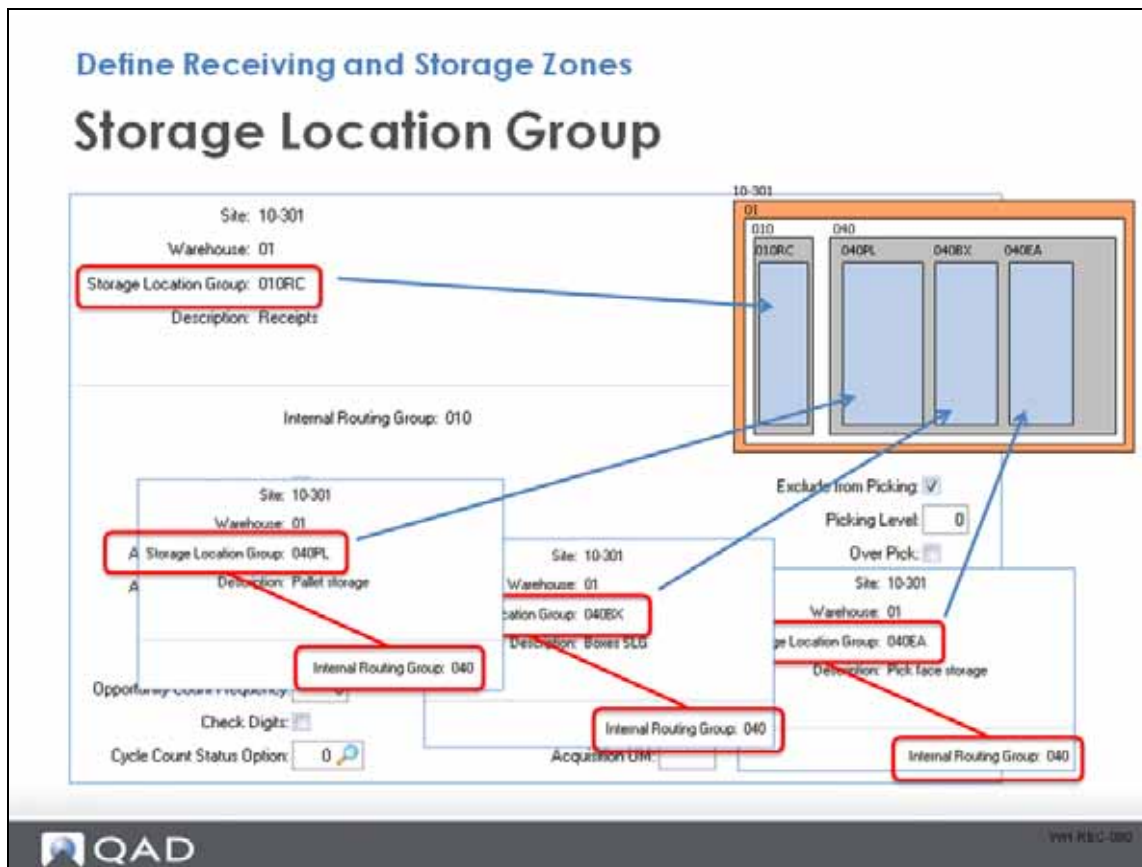
As depicted in the graphic, most of the put-away strategy and storage management is controlled by two maintenance programs:

- Algorithm Assignment Maintenance
- Warehouse Location Maintenance

All receipts work in the same way:

- You create a transaction; for example, unplanned receipt.
- The warehouse system looks for the internal routing associated with the item, transaction type, warehouse, or address.
- The system runs the algorithms associated with the transaction type; for example, put-away.
- Confirmations can be printed or sent to the RF.

Define Receiving and Storage Zones



Within a warehouse, each area can be broken down into zones-groups of locations that have a common storage function-such as a primary picking zone, or a bulk storage zone for a particular type of pallet.

The receiving and put-away process works with storage zones to optimize space utilization and handling. In QMI, there are three storage zones in the storage area, Pallet (040PL), Box(040BX) and Each (040EA).

The topics that follow discuss zone configuration in more detail.

Typical Flow is Direct to Storage

A typical flow is direct to Storage

Internal Routing Maintenance

Site: 10-301 Warehouse: 01 Internal Routing: 01RCT
Description: Receipts
Sequence: 10 Internal Routing Group: 010

Site: 10-301 Warehouse: 01 Internal Routing: 01RCT
Description: Receipts
Sequence: 20 Internal Routing Group: 040

An Internal Routing defines which Area to go to.

10-301 01

Receive (010) 010RC 010RC001

Storage (040) 040PL 040PL001 040PL002 040PL003 040PL004 040PL005 040PL006 040PL007 040PL008

01RCT

Sequence 10 START Sequence 20 END

QAD

WAREHOUSE

Did You Know

Use internal routings to create specific pathways linking Areas (IRG) within the warehouse.

You must specify each step of the internal route.

In the QMI warehouse, all product is moved from receiving into storage. Routing 01RCT is setup to facilitate this move and is built with start (10) and stop (20) sequences.

Look for a Specific Spot

Look for a specific spot

Algorithm Assignment Maintenance

Algorithm Type: PA Transaction Type: RCT-*

Site: 10-301 Warehouse: 01

Item Number: Warehouse Item Type:

Address: Custom: ☐

Assigned Algorithms

Seq	Algo	Description
10	3	S.L. - Merge with item
20	2	Empty Storage Locations
30	1	Storage Locations

Storage (040)

040PL

040PL001 040PL002

040PL003 040PL004

040PL005 040PL006

040PL007 040PL008

01RCT Algorithm

QAD

WH-REC-100

Once product is moved from receiving to storage using routing 01RCT, the next system decision is to decide which location to use for product storage. This decision is driven by algorithms, or rules, defined during setup.

For QMI, the receipt (RCT-*) put-away (PA) rules are:

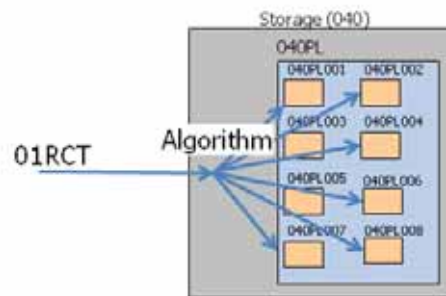
- 3: Merge the item with existing inventory of the same item as space allows.
- 2: Put the inventory in an empty location.
- 1: Put the inventory in any location that has space. This rule allows for mixing items in a location.

Rules Available for Put Away

What rules are available for Put-Away

Algorithm Assignment Maintenance

- Storage Locations
- Multi-Item Pallet Splits
- Replenished Locations
- Reverse Replenished Locations
- Popularity Codes
- Dedicated Locations
- Forecast
- Last Transaction



WH1-REC-110

The put-away rules can be categorized into smaller groups and used based on the preferred storage strategy.

Refer to *User Guide: QAD Warehousing* for more information on algorithms.

Locations Have Many Attributes

Locations can have many attributes

Warehouse Location Maintenance

Site: 10-301 Distribution Site 1

Location: 040PL001

Location Groupings

Warehouse: 01

Storage Location Group: 040PL

Work Location Group: 01FL

Warehouse Location Data

Check Digit:

Popularity: CCCC

Storage Type:

Warehouse Location Type:

Travel Sequence:

Picking Type:

Preferred UM:

Opportunity Count Frequency: 0

Last Opportunity Count:

Stage (In):

 QAD

WAREC120

Did You Know

AAA indicates a popular location that is easily accessed, while a code of ZZZ indicates an unpopular location perhaps difficult to access or does not drive the right kind of car.

Although QAD Warehousing does not support a dynamic slotting strategy, it is possible to assign popularity ranking to both locations and items. Then you can assign a popularity algorithm to be used during put-away to facilitate slotting and improve picking efficiency

Without a Popularity ranking, locations are selected in descending alpha-numeric sequence.

Use Warehouse Location Maintenance to specify the attributes of a warehouse location.

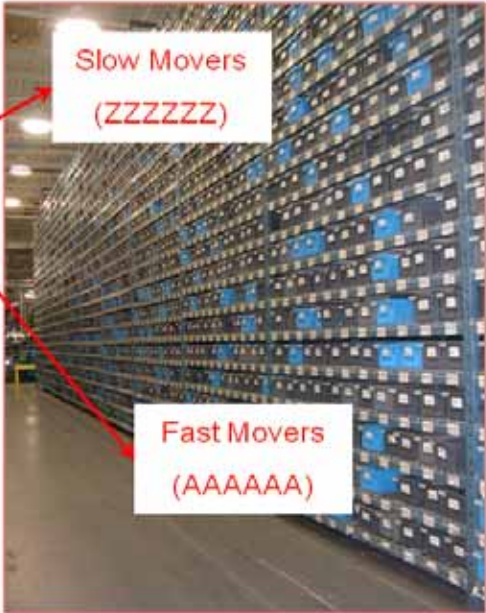
Support Slotting Strategy

Supports slotting strategies

Popularity Code

Put fast moving stock in the low value popularity code locations, and slow moving stock in the higher ones.

AAAA > BBBB > CCCC > etc.



Slow Movers
(ZZZZZZ)

Fast Movers
(AAAAAA)

QAD

Did You Know

Popularity codes can be assigned at both the item and location levels.

In this example, locations overhead are more difficult to access and has a low (Z) popularity code. Locations at ground level are typically easier to access (i.e. do not require special handling equipment) and has a higher (A) popularity code.

Other topics within this training guide cover the use of popularity in more detail.

Manage Location Capacities

Manage location capacities

Warehouse Location Maintenance

Site: 10-301 Distribution Site 1
Location: 040PL001

Item Number	UM	Quantity	Height	Length	Width
	PL	8.0000	2	2	2

Item Number	UM	Quantity	Height	Length	Width
	PL	8.0000	2	2	2

Location Dimensional Data

Height:	0.00
Length:	0.00
Width:	0.00

Dimensional Unit of Measure:

Percent Full:	87.50

Location Dimensional Data is for reference only

QAD WH REC-140

You can also define the location capacity using Warehouse Location Maintenance.

In the last frame, you can assign various combinations of items, units of measure and quantity. When the UM is PL, the quantity is calculated by multiplying Height x Length x Width.

Note that in the previous frame, Location Dimensional Data is independent of the final frame data and is for reporting purposes only while the Percent Full metric is calculated using the final frame parameters.

Manages Workers and Work Sections

Manages workers and work sections

Assign Users to Work Location Groups

The screenshot displays two side-by-side windows from the QAD software. The left window, titled 'Work Location Group Maintenance', shows fields for Site (10-301), Warehouse (01), and Work Location Group (01FL). Below these are fields for Description (Forklift), Confirmed at Source (checked), Priority (10), Increment (1), Task (TRANSFER), System Code (RF), System Flavor (B), Allow Task Switching (unchecked), Two Phase (checked), Keep From Status (checked), and Device. The right window, titled 'User Work Location Group Maintenance', shows fields for Site (10-301), Warehouse (01), Work Location Group (01FL), and User ID (UserB). Below these are fields for System Flavor (B), Device, and five printer types (External Device, Form, ID, Task, Inspection) each with a 'Use External' checkbox. A callout box at the bottom right of the right window contains the text 'Create work sections then assign users to the sections.'

Did You Know

Use User Work Location Group Maintenance to assign users to a work group location and set printing options.

Before tasks can be viewed and processed using an RF device, users must be assigned to the Work Location Groups.

Use Work Location Group Maintenance to create work sections.

Use User-Work Location Group Maintenance to assign a user to the work section and to set up print options specific to that user.

Implementation Consideration - Use Auto-Directed Put Away

Implementation Consideration

Use auto directed put-away to improve labor productivity, location utilization and dock-to-stock cycle times.

WH-REC-160

Directed put-away means QAD Warehousing determines the appropriate storage location for an item/quantity combination and directs the operator to the defined location. This approach improves labor productivity, overall location utilization, and reduces dock to stock cycle times to minimize congestion on the receiving dock.

Example - Receive Two Pallets to Locations with Existing Inventory

Example

Receive 2 pallets to locations with existing inventory

Inventory Detail Inquiry

QAD

Site: 10-301 Item Number: Displa
Warehouse: Lot/Serial: Disp No
Location: Reference:

Warehouse: 01 Warehouse 1

Location	Item Lot	Status Ref	Qty UM	On Hand	Expect In	Expect Out
040EA020	90091	Y-Y-N PL000032	EA	80		
040PL001	03210	Y-Y-N PL000240	EA PL	100		
040PL001	03210	Y-Y-N PL000241	EA PL	100		
040PL001	03210	Y-Y-N PL000242	EA PL	100		
040PL005	03120	Y-Y-N PL000092	EA PL	100		
040PL005	03120	Y-Y-N PL000093	EA PL	100		
040PL005	03120	Y-Y-N PL000094	EA PL	100		
040PL006	03121	Y-Y-N PL000095	EA PL	100		
040PL006	03121	Y-Y-N PL000096	EA PL	100		
040PL006	03121	Y-Y-N PL000097	EA PL	100		

3 Pallets – location capacity is 4

Location 040PL001 has 3 pallets.

Receiving two more pallets should put one in 040PL001 to fill the location and another in the next available location.

QAD

WM-REC-170

In this example, location 040PL001 has seven pallets. You need to receive two more pallets, putting one in 040PL001 to fill the location and another in the next available location.

Receiving two more pallets should put one more pallet in location 040PL001 to fill the location and the second pallet in another location.

Example - Continued

Example

Receive Two pallets to locations with existing inventory

Purchase Order Receipts or Receipts - Unplanned

Receipt Detail - Quantity: 200 EA					
Site	Location	Lot/Serial	Reference		Quantity
10-301	010RC001		PL000243		100.0
10-301	010RC001		PL000244		100.0

Test the put-away of two pallets into partially full storage locations.

 QAD WH-REC-270

Use Purchase Order Receipts to receive two pallets into the receipt location 010RC001.

Note If the receiving location is not defined in the report (see above), something is incorrect in the setup.

Example Test = Success

Example TEST = SUCCESS

Inventory Detail Inquiry

Site: 10-301 Item Number: Display
Warehouse: Lot/Serial: Disp Non-
Location: Reference: Ou

Warehouse: 01 Warehouse 1

Item	Status	Qty	Expect	Expect	
Location Lot	Ref	UM On Hand	In	Out	#
010RC001 01010	Y-Y-N	EA 1			
010RC001 01111	Y-Y-N	EA 100			
010RC001 03120	Y-Y-N	EA 100		100	
	PL000279	PL			
010RC001 03120	Y-Y-N	EA 100		100	
	PL000280	PL			
040EA001 90091	Y-Y-N	EA 80			
	PL000032				
040PL001 03011	Y-Y-N	EA 100			
040PL001 03011	Y-Y-N	EA 100			
	PL000278	PL			
040PL001 03111	Y-Y-N	EA 100			
040PL001 03111	Y-Y-N	EA 100			
	PL000273	PL			
040PL001 03120	Y-Y-N	EA 100		100	
	PL000279	PL			
040PL001 03130	Y-Y-N	EA 100			
	PL000276	PL			
040PL001 03132	Y-Y-N	EA 100			
	PL000274	PL			
040PL001 03132	Y-Y-N	EA 100			
	PL000277	PL			
040PL002 03120	Y-Y-N	EA 100		100	
	PL000280	PL			

QAD WH-REC-280

With directed (and auto) put-away once the product is received, two put-away tasks (moves) are created; One to location 040PL001 and another to the next available location.

Use Inventory Detail Inquiry to check the test results.

Note The put-away algorithm being used (1) allows for mixed items in a location.

What would you change to restrict mixing items in a location?

Implementation Consideration - Put Away

Implementation Consideration

Use Put-away rules to drive storage best practices.

WH-REC-290

You should understand your customers reserve storage strategy before setting up put-away algorithms.

Example - Allow Mixed Item Storage

Example

Allow mixed item storage

Algorithm Assignment Maintenance

Before

Algorithm Type: PA For RCT-*

Site: 10-301

Item Number:

Address:

Assigned Algorithms

Seq	Algo	Description
10	3	S.L. - Merge with item
20	2	Empty Storage Locations

After

Algorithm Type: PA For RCT-*

Site: 10-301

Item Number:

Address:

Assigned Algorithms

Seq	Algo	Description
30	1	Storage Locations

Changing the Put-away rule for a general receipt (RCT-*) will first attempt to fill all locations regardless of existing item match.

 QAD WH-REC-300

Changing the put-away rule for a general receipt (RCT-*) causes the system to first attempt to fill all locations, regardless of existing item match.

Put-Away Rules

Put-Away Rules

Product Put-Away

- Product put-away strategies attempt to optimize storage capacity and system performance
- Optimization is configured at both the Warehouse and Zone levels

WARES 321

Did You Know

Product put-away strategies attempt to optimize storage capacity and system performance.

Warehouse and zone level optimization are advanced concepts used to improve the overall facility storage location utilization. Warehouse / zone optimization is typically not implemented for go live.

Refer to *User Guide: QAD Warehousing* for a more detailed discussion.

Bonus Coverage: Three-Step Sequence

Bonus Coverage: Three-Step Sequence

A three-step routing represents two transactions and can help when moving product to a staging location.

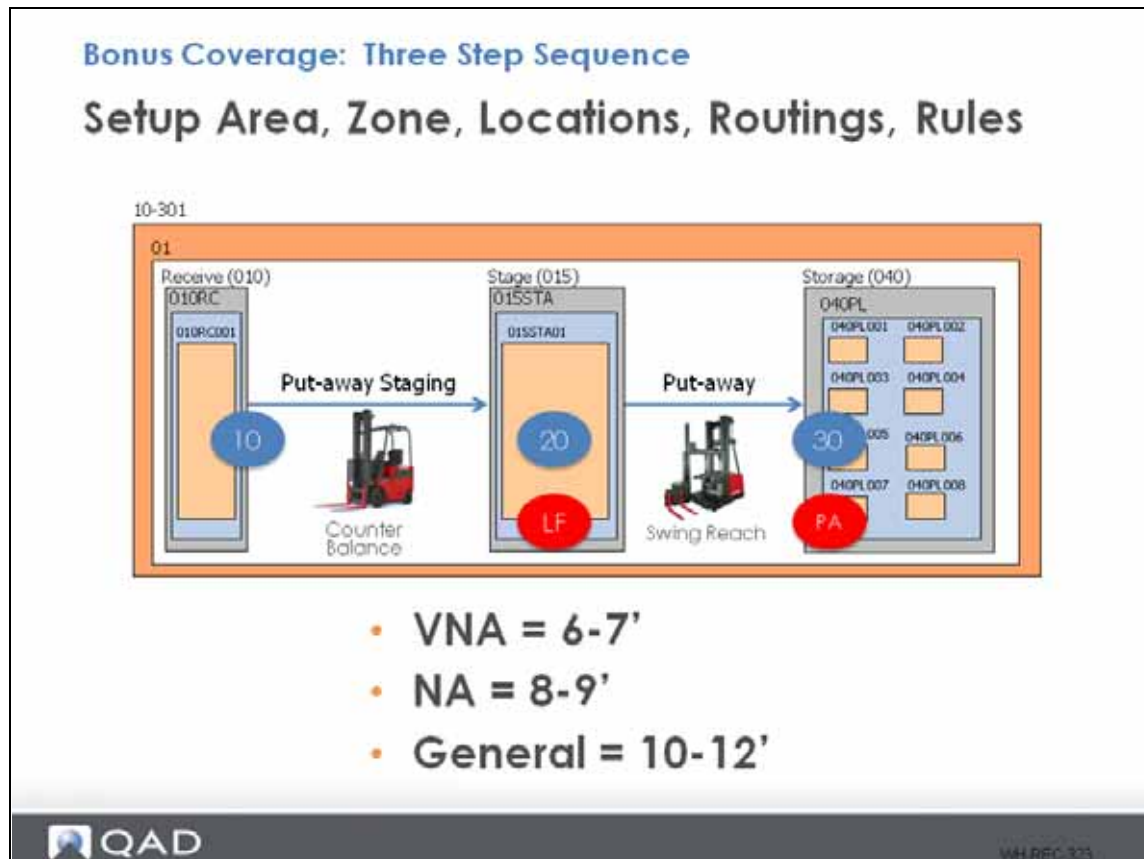
```
graph TD; 10 --> 20; 20 --> 30; 10 --- R[Receiving]; 20 --- S[Staging]; 30 --- ST[Storage];
```

The diagram illustrates a three-step routing sequence. It consists of three steps, each with a number and a label: 10 Receiving, 20 Staging, and 30 Storage. The steps are connected by downward-pointing arrows, indicating a sequential flow from step 10 to step 20, and then from step 20 to step 30.

QAD WMREC-322

So far, the examples have shown a two-step sequence moving from one area to the next. In QAD Warehousing it is possible to have a three-step sequence where product is moved to an interim position/location en route to the final destination.

Bonus Coverage Continued



Did You Know

Some warehouses are setup with different types of equipment for different areas.

For a three-step sequence, you can setup a staging area, zone and location between receiving and storage. This might occur when different equipment is used for receiving and product put-away; for example, when storing in a very narrow-aisle area.

In the above graphic, the narrow aisle (NA) has less space to pass than the general area, so only specific types of equipment can pass. The Very Narrow Aisle (VNA) requires specialized equipment. So, for example, a three-step routing is needed because the same equipment cannot be used to put-away in every area.

Given the specialized equipment and more complex design, this is a process for advanced operations.

Bonus Coverage - Location Stage In/Stage Out

Bonus Coverage: Location Stage In / Stage Out

Warehouse Location Maintenance

Site: 10-301 Distribution Site 1
Location: 040PL001

Location Groupings:

Warehouse: 01
Storage Location Group: 040PL
Work Location Group: 01FL

Warehouse Location Data

Check Digit:	Picking Type:
Popularity:	Preferred UM:
Storage Type:	Opportunity Count Frequency: 0
Warehouse Location Type:	Last Opportunity Count:
Travel Sequence: 0	Stage (In): Put Stag
Dedicated: ☐	Stage (Out):

 QAD WH REC 32

You can also experiment with Stage In and Stage Out in Warehouse Location Maintenance. This is another way to handle put-away in a location.

The Stage In and Stage Out fields in Warehouse Location Maintenance identify whether a location is staged. If both fields are blank, the location is not staged.

When the fields are filled in, this creates a phantom location or temporary location, used for staging product into or out of the designated location, in this example, 040PL001.

Implementation Consideration

Implementation Consideration

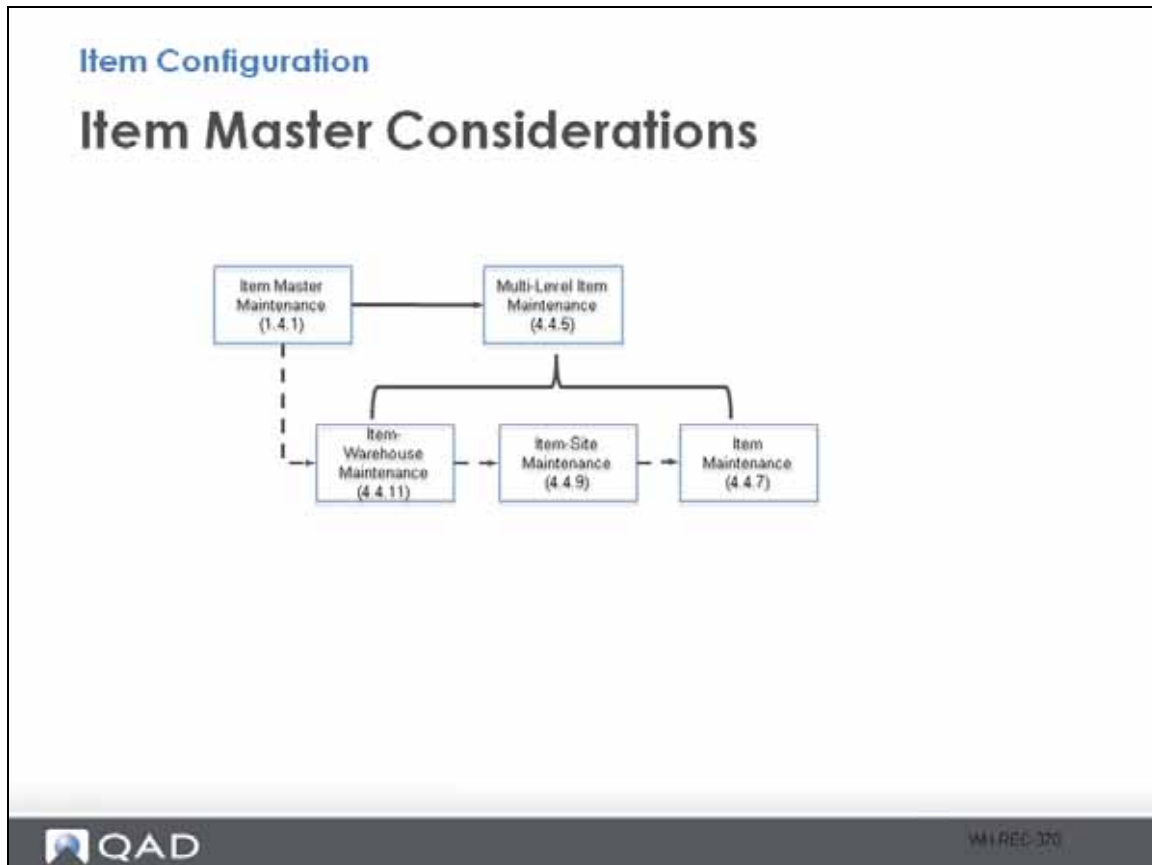
All items need to be setup in Multi-Level Item Maintenance.

If not, the item will be received into the location you assign at Purchase Order Receipt but the warehouse receiving and put-away rules will not trigger and an LPN will not be assigned.

WH-REC-325

Referring back to the warehouse introduction portion of this training guide, all items need to first be set up in the warehouse the item can be received.

Item Master Considerations



Did You Know

Items must first exist in QAD Core. QAD Warehousing has more specific item characteristics managed at the warehouse level.

Once the item is setup in QAD core using Item Master Maintenance, there are several menus you can use to link the item to the site/warehouse. For ease, use Multi-Level Item Maintenance to populate all the required and optional data for the item to use in the warehouse.

In the graphic above, the item is setup in the warehouse using Item Warehouse Maintenance, Item-Site Maintenance or Item Maintenance, depending on your needs. Alternatively, use Multi-Level Item Maintenance which aggregates all three other menus.

Item Configuration- Step 1

Item Configuration – Step 1

Item Master Maintenance

Item Number: 03130
Unit of Measure: EA

Item Data

Prod Line: 22	Item Type: SUP
Added: 3/17/2006	Status: ACT
Design Group: PRODMGMT	Group: CPG
Promo Group:	

Item Inventory Data

ABC Class: B

Lot/Serial Control:

Site: 10-301

Location: 01

Location Type:

Auto Lot Numbers: ☐

Lot Group:

Article Number:

This sets up the warehouse as the item location and all subsequent warehouse activities can be triggered.

Blanking the Lot/Serial Control field eliminates the need to capture the info on receipt.


WH REC-371

This sets up the warehouse as the item location and all subsequent warehouse activities can be triggered.

Blanking the Lot/Serial Control field eliminates the need to capture the info on receipt.

Item Configuration- Step 2

Item Configuration – Step 2

Multi-Level Item Maintenance – Site frame

Item Number: 03130	Unscented Disinfectant
UM: EA	Pump
Site: 10-301	Distribution Site 1

Site Data and Default Warehouse Data

Location: 010RC001	Single
Warehouse Item Type:	Iss
Replenishment Type:	OPC
Popularity:	Kanban F
Default Kanban Quantity: 0.0	

Next, the Site / Location is configured in Multi-Level Item Maintenance. The Location field in the Site frame is the receiving location in the warehouse.

When configured correctly, this site and location default when the item is received, eliminating the potential for a receipt into the wrong location.

QAD WH-REC-372

Next, the Site / Location is configured in Multi-Level Item Maintenance. The Location field in the Site frame is the receiving location in the warehouse.

When configured correctly, this site and location default when the item is received, eliminating the potential for a receipt into the wrong location.

There are 13 frames and 72 fields in Multi-Level Item Maintenance used for configuration.

Item Configuration- Step 3

Item Configuration – Step 3

Multi-Level Item Maintenance – Warehouse frame

Item Number: 03130
UM: EA
Site: 10-301
Warehouse: 01

Unscented Disinfectant
Pump
Distribution Site 1
Warehouse 1

Warehouse Data

Locations

Storage Location Group: 040PL

SLG List:

Warehouse Item Type:

Replenishment Type:

Popularity:

Logistics UM Tolerance: 0.00%

Auto Replenish:

Single PA Trans:

Issue Method:

Print ID:

ID Quantity: 0

OPC Threshold: 0.0

Logistics UM: PL

Pallet Max Height: 0

Auto Replenishment %: 0.00%

Print Unplanned Issue Tag:

The Storage Location Group is the zone where product is stored.
The Logistics UM is the moveable unit load.

QAD WH-REC-373

The Storage Location Group is the zone where product is stored. The Logistics UM is the moveable unit load.

Example - Receive an Item Not Set Up in the Warehouse

Example

Receive an item not setup in the warehouse

03110:
New Item

x 4 x 10

Purchase Order Maintenance

Purchase Order: 101005 Supplier: 1001002 Ln Format: L.M. Single

Ln	Site	Req	Item Number	Qty Ordered	UM	Unit Cost	Disc%
1	10-301		02110	2,000.0	EA	0.00	0.00

Line Details

Qty Received: 0.0 Due Date: 8/29/2011 CRT Inv: 0.00

Qty to Pick: 0.0 Performance Date: 8/29/2011 Pur Acct: 6610 Mech ADM

Single Lot: Location: 010AC001 Need Date: 8/29/2011 Project: Type: Taxable: Create:

Item Revision: Status: Fixed Price: [X] Inspect Req: UM Conversion: 1.0000 Stock UM Quantity: 2000.0 EA

Supplier Item: Manufacturer: Medical Disinfectant Description: Pump Update Avg Last Cost: [X] Extended Net Cost: 0.00

QAD WH/REC-360

In this example, a new purchase order exists for an item that is not set up within the warehouse. The following topics describe the results and corrective measures to add the item to the warehouse.

Example - Inventory Received, Nothing Happens

Example

Inventory is received, but nothing happens

Purchase Order Maintenance

Order: WMSP05 Supplier: 1051002 Status: Packing Slip:

Non-Taxable:	0.00	Currency: USD	Line Total:	0.00
Taxable:	0.00		Total Tax:	0.00
Tax Date: 8/23/2011				
View/Edit Tax Detail				

Error

ERROR: No destination location could be found. Please re-enter.

OK

QAD

Inventory Detail Inquiry

Site: 10-301 Item Number: 03110 Display W
Warehouse: Lot/Serial: Disp Non-W
Location: Reference: Out

Warehouse: 01 Warehouse 1

Location	Status	Qty	Qty	Expect	Expect	Det
Lot/Serial	Ref	On Hand	Alloc	In	Out	A11
010RC001	Y-Y-N	EA	1000			X

QAD WH REC-390

The item exists in QAD core so the inventory is received into the warehouse; however, because the item is not setup in the warehouse, put-away rules are not triggered, an LPN is not assigned, a pallet is not built, and the item remains in the receiving location.

Example - Add Items to the Warehouse

Example

Add items to the warehouse

03110: Medical Grade Disinfectant Pump		• Site = 10-301 • Location = 010RC001 • Warehouse = 01	• SLG = 040PL • Logistics UM = PL • Lot/SN = <blank>
03130: Unscented Disinfectant Pump			
03122: Scented Disinfectant 1l Refill			
03240: Lubricant 4 liter tub			

 WAREC-400

In this example, you add the new items to a site, warehouse, and location. You also set the SLG and the UM for the item.

To correct the problem you first need to adjust the Item Maintenance Menu and add the item to the warehouse.

Example - Set Up the Item at the Site and Warehouse

Example

Setup the item at the Site and Warehouse

Multi-Level Item Maintenance

Item Number: 03110
UM: EA
Site: 10-301

Medical Disinfectant
Pump
Distribution Site 1

Site Data and Default Warehouse Data
Location: 010RC001
Warehouse Item Type:
Replenishment Type:
Popularity:
Default Kanban Quantity:

Single PA Trans:
Issue Method:
Print ID:
ID Qty:
OPC Threshold: 0.0

Item Number: 03110
UM: EA
Site: 10-301
Warehouse: 01

Medical Disinfectant
Pump
Distribution Site 1
Warehouse 1

Warehouse Data
Location:
Storage Location Group: 040PL
SLG List:
Warehouse Item Type:
Replenishment Type:
Popularity:

Single PA Trans:
Issue Method:
Print ID:
ID Quantity: 0
OPC Threshold: 0.0
Logistics UM: PL

QAD WH REC 306

Did You Know

QAD Warehousing uses standard item data programs from QAD applications, but requires additional information per Multi-Level Item Maintenance to provide micro-level management.

Example Test = Success

Example TEST = SUCCESS

Receiving Triggers

Order: WMSP05 Supplier: 1051002 Status: Packing Slip:

Ln	Item Number	UM	Qty Open	UM	Receipt Qty	UM	Project	Due Date	T
1	03110	EA	900.0	EA	0.0	EA		8/29/2011	
2	03 Receipt Detail - Site: 10-301 Quantity: 200 EA								
	Location	Lot/Serial	Ref	Supplier Lot	Quantity				
	010RC001		PL004438		100.0				
	010RC001		PL004439		100.0				

When the item is setup in the warehouse, an LPN is assigned and put-away rules trigger

QAD

Site: 10-301 Item Number: Display
Warehouse: Lot/Serial: Disp Non-
Location: Reference: QL

Warehouse: 01 Warehouse 1

Item	Status	Qty	Expect	Expect
Location Lot	Ref	UM On Hand	In	Out
010RC001 03110	Y-Y-N	EA 100		100
010RC001 03110	PL004438 PL	EA 100		100
040PL001 03110	Y-Y-N	EA 100		100
040PL002 03110	PL004438 PL	EA 100		100
	Y-Y-N	EA 100		100
	PL004439 PL			

QAD WH REC-327

When the item is setup in the warehouse, the system builds pallets based on UM conversions, assigns an LPN and executes the put-away rules.

Example - Create New UM Groups

Example

Create new UM Groups

03110: Medical Grade Disinfectant Pump		x 100		x 10	
03130: Unscented Disinfectant Pump		x 50		x 10	
03122: Scented Disinfectant 1l Refill		x 6		x 10	
03240: Lubricant 4 liter tub		x 4		x 10	

 QAD WHREC-430

In a perfect warehouse, all items would have the same each-box-pallet unit of measure conversion; however, most warehouses have item family groups with different unit of measure conversions. If this occurs, use UM Groups to manage the unit of measure conversions by item family.

In this example, use Multi-Level Item Maintenance to add these four items to the site/warehouse.

Example - UM Groups Help During Implementation

Example UM Groups Help

UM Groups will help during implementation

- UM Group = EA1
- UM = EA
- 100 each per box
- 10 boxes per pallet

UM Group Maintenance

Unit of Measure Group: EA1 UM: EA

Description: Another UM

UM Group Detail

Alt UM	Description	Conversion
BOX	Boxes	100.0000
PL	Pallets	1000.0000

QAD VMS-REC-440

In UM Group Maintenance, use the UM Group Detail frame to define a UM group that specifies all the conversion factors from the selected base UM to a range of other alternate UMs.

Specifying all conversation factors in one program saves you time during implementation.

UM Group Maintenance helps you set up groups or families of UMs that save you time during implementation. For example, if you have 1000 items, each with a different UM, it is difficult to set up a UM for every item.

Example - Assign UM Group to Item

Example

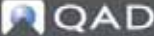
Assign the new UM Group to the Item

Item Maintenance

Item Number: 03110	Medical Disinfectant
UM: EA	Pump

Item Data

Unit of Measure Group: EA1	Shelf Life Offset: 0
	Critical Days: 0
Barcode 1:	

 QAD WH REC-451

In UM Group Maintenance, you attach the UM group to the relevant items.

Once the new UM Groups are defined they need to be assigned to the items in the family/group. If not done, the default UM conversion applies to the item.

Example - Run the UM Conversion Generation

Example

Run UM Conversion Generation

Item Number: To:

UM Group: To:

Warehouse Item Type: To:

Check Base UM: ☒

Delete Old UM Definitions First: ☒

Create UM Conversions: ☒

↓

QAD **UM Conversion Generation** **10USA**

Item Number	UM Group	Item UM	Check Result	UM Alt	UM Conversion	Conversion Result
03110	EA1	EA		EA BX	100.0000	OK
				EA PL	1000.0000	OK

QAD **WH REC-450**

Leaving all fields blank runs conversions for all UM Groups.

Be sure to check all three boxes at the bottom.

Finally, to apply the new UM Groups to the assigned items, you must run UM Conversion Generation with Create UM Conversions checked.

Example Test = Success

Exercise: TEST = SUCCESS

Receive 1000 each...what is different?

Ln	Item Number	UM	Qty Open	UM	Receipt Qty	UM	Project	Due Date	T
1	03110	EA	700.0	EA	0.0	EA		8/29/2011	
2	Receipt Detail - Site: 10-301 Quantity: 1000 EA								
	Location	Lot/Serial	Ref	Supplier Lot	Quantity				
	010RC001		PL004440		1,000.0				

Inventory Detail Inquiry

Site: 10-301 Item Number: 03110 Display
Warehouse: Lot/Serial: Disp Non-
Location: Reference: Out

Warehouse: 01 Warehouse 1

Location	Status	Qty	Qty	Expect	Expect	De
Lot/Serial	Ref	UM On Hand	Alloc	In	Out	Al
010RC001	Y-Y-N	EA	1000			1000
040PL003	PL004440	PL				
	Y-Y-N	EA		1000		
	PL004440	PL				

QAD WH REC 470

Use Inventory Detail Inquiry to test the UM changes.

With the new Unit of Measure Group, a receipt of 1,000 each creates 1 pallet versus 10.

To validate the new UM conversions, receive 1000 each of the item. Success means one pallet of the item (1000 each) is received and directed to a storage location.

Implementation Consideration - Back to Locations

Implementation Consideration

Not all locations are created equal.

When receiving and storing goods, QAD Warehousing helps manage locations and facilitate product slotting.

Easily accessible locations and locations closest to the point of use should have priority.

WH-REC-480

Location Popularity

Location Popularity

Keep Popular Product Close

Location5 CCC	Location6 CCC
Location3 BBB	Location4 BBB
Location1 AAA	Location2 AAA

Shipping & Receiving

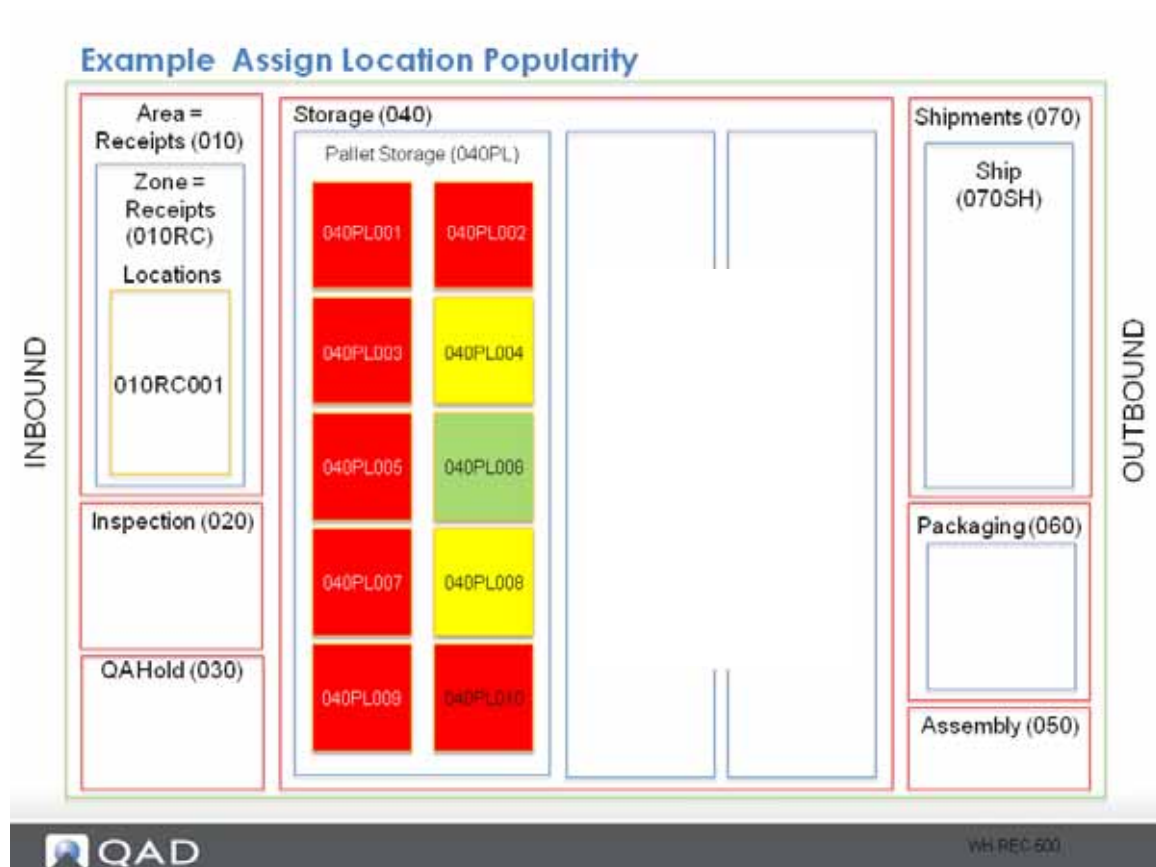
 QAD

WH REC-490

You can set up location popularity within QAD Warehousing.

As previously discussed, you can define the relative priority for the system to choose a particular location when more than one location is a possible choice for put away.

Example - Assign Location Popularity



In this example, the strategy is to keep product in 006 followed by 004 and 008, then 002 and 010. Finally, this is followed by 001, 003, 005, 007, and 009.

You can set up QAD Warehousing to support this strategy.

Example - Assign Popularity Codes

Example - Assign Location Popularity

Assign popularity codes to each location

Warehouse Location Maintenance

Site: 10-301 Distribution Site 1

Location: 040PL008

Location Groupings:

- Warehouse: 01
- Storage Location Group: 040PL
- Work Location Group: 01FL

Warehouse Location Data:

Check Digit:

Popularity: AAA

Storage Type:

Warehouse Location Type:

Travel Sequence:

Dedicated: ☐

Location	Popularity
040PL004	BBB
040PL008	BBB
040PL002	CCC
040PL010	CCC
All Others	DDD

Opport:

Estm opportunity count:

Stage (In):

Stage (Out):

QAD WHREC-ST0

First, define the location popularity code.

Remember A is more popular than B which is more popular than C.

Example - Change the Receipt Put-Away Rules

Example: Change the Receipt Put-Away Rules

Change the receipt put-away rules

Algorithm Assignment Maintenance

Algorithm Type: PA

Site: 10-301

Item Number:

Address:

Transaction Type: RCT-*

Warehouse: 01

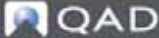
Warehouse Item Type:

Custom: ☐

Assigned Algorithms

Seq	Algo	Description
10	61	Storage Locations by Popularity Code
20	1	Storage Locations

The standard put-away rules for receiving is store by Popularity Code.

 QAD

WH REC 520

With a popularity code assigned to each location you next need to define put-away rule to search locations based on popularity. Do this by assigning algorithm 61, Storage Location by Popularity, to a general receipt (RCT-*).

Example - Storage by Popularity

Example - Storage by Popularity

Receipts should fill popular locations

Receipt	Item	Qty	Expected Result
1	03120	100	1 LPN to 040PL006
2	03120	200	2 LPNS, 1 to 004, 1 to 008
3	03120	200	2 LPNS, 1 to 002, 1 to 010

Location capacity = 100 EA = 1 Pallet

 QAD WH-REC-530

In the example above, you have three separate receipts of the same item; however, the quantity differs for the first receipt, and the receipts are based on locations that have set popularity codes. The topics that follow show details for Receipt One, Receipt Two and Receipt Three.

Example- Receipt One

Example

Receipt One: 03120, 100 each

040PL002

040PL004

040PL006

040PL008

040PL010

Receipt Detail - Quantity: 100 EA				
Site	Location	Lot/Serial	Reference	Quantity
10-301	010RC001		PL004442	100.0

Inventory Detail Inquiry

Site: 10-301 Item Number: 03120 Display

Warehouse: Lot/Serial: Disp Nor

Location: Reference: C

Warehouse: 01 Warehouse 1

Location	Status	Qty	Qty	Expect	Expect
Lot/Serial	Ref	UM	On Hand	In	Out
010RC001	Y-Y-N	EA	100		100
040PL006	Y-Y-N	EA		100	

First, receive 100 EA of item 03120. Using the popularity put-away algorithm the load should be directed to the most popular (and available) location, 040PL006

In this example, the location capacity is 100 EA which equals one pallet.

Example - Receipt Two

Example

Receipt Two: 03120, 200 each

Receipt Detail - Quantity: 200 EA

Site	Location	Lot/Serial	Reference	Quantity
10-301	010RC001		PL004444	100.0
10-301	010RC001		PL004445	100.0

Inventory Detail Inquiry

Site: 10-301 Item Number: 03120 Display W
Warehouse: Lot/Serial: Disp Non-W
Location: Reference: Out

Warehouse: 01 Warehouse: 1

Location	Status	Qty	Qty	Expect	Expect	Det
Lot/Serial	Ref	UM	On Hand	Alloc	In	Out
010RC001	Y-Y-N	EA	100			100
010RC001	PL004444	PL				100
010RC001	Y-Y-N	EA	100			
010RC001	PL004445	PL				
040PL004	Y-Y-N	EA			100	
040PL006	Y-Y-N	EA	100			
040PL006	PL004444	PL				
040PL008	Y-Y-N	EA			100	
040PL008	PL004445	PL				

Location capacity = 100 EA = 1 Pallet

WH REC 650

Next receive 200 EA of item 03120

Again, with the popularity put-away rules being used, the next most popular locations should be selected, 040PL004 and 040PL008.

Example - Receipt Three

Example

Receipt Three: 03120, 200 each

Receipt Detail - Quantity: 200 EA

Site	Location	Lot/Serial	Reference	Quantity
10-301	010RC001		PL004448	100.0
10-301	010RC001		PL004449	100.0

Inventory Detail Inquiry

Site: 10-301 Item Number: 03120 Display
Warehouse: Lot/Serial: Disp No
Location: Reference:
Warehouse: 01 Warehouse 1

Location	Status	Qty	Qty	Expect	Expect
Lot/Serial	Ref	UM	On Hand	In	Out
010RC001	Y-Y-N	EA	100		100
010RC001	PL004448	PL			100
040PL002	Y-Y-N	EA		100	
040PL002	PL004448	PL			
040PL004	Y-Y-N	EA	100		
040PL004	PL004444	PL			
040PL006	Y-Y-N	EA	100		
040PL006	PL004442	PL			
040PL008	Y-Y-N	EA	100		
040PL008	PL004446	PL			
040PL010	Y-Y-N	EA		100	
040PL010	PL004449	PL			

Location capacity = 100 EA = 1 Pallet

QAD VMI-REC-500

Finally receive 200 again of item 03120.

Following the same rationale, the loads should be directed to location 040PL002 and 040PL010.

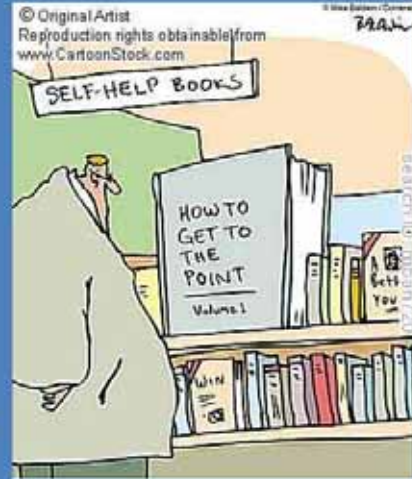
Implementation Consideration

Implementation Consideration

Use Simulation and Verbosity reporting to test configuration and trouble shoot solutions.

ver-bos-i-ty [ver-bos-i-tee] Noun
the state or quality of being verbose;
superfluity of words; wordiness.

ver-bose [ver-bohs] Adjective
characterized by the use of many or too many words;
wordy: a verbose report.

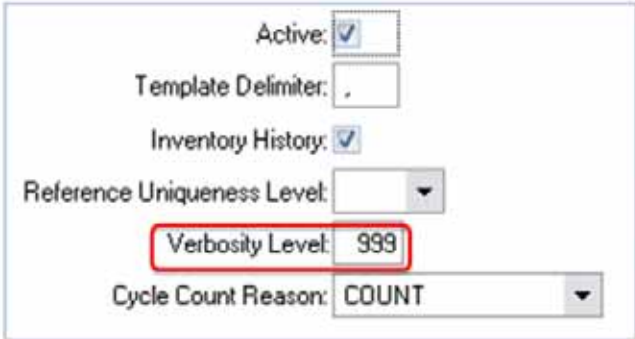


Occasionally it is helpful for you to review the process the system is going through in an effort to complete a task. To help with this process, QAD Warehousing lets you simulate various product flows and report the possible results given the current inventory and setup snapshot. Also Verbosity reporting/inquiry is available to track and report the system decision flow process used to develop the simulation results.

Verbosity Reporting is a Troubleshooting Tool

Verbosity Reporting is a trouble shooting tool

Warehouse Management Control



Active: ☒

Template Delimiter: .

Inventory History: ☒

Reference Uniqueness Level:

Verbosity Level: 999

Cycle Count Reason: COUNT



© Original Artist
Reproduction rights obtainable from
www.CartoonStock.com

"I'm looking for a troubleshooter. No offense, but do you even own a gun?"

QAD

WH REC 553

To use Verbosity reporting set the Verbosity Level field in Warehouse Management Control to a value in the range of 0 to 999 depending on the level of message detail you want to capture.

Level	Result
999	Reports all system messages
0	Turns off Verbosity reporting. No messages are reported

Although any number between 0 and 999 is allowed, the system tends to round entries to the nearest 10.

The verbosity level you need depends on how much information is required. You should test results to determine what is best for your situation.

Setting Verbosity Level for Go Live



Although Verbosity reporting is helpful for testing and solving problems, it does impact system performance. The higher the Verbosity Level, the slower the system performs. Remember to set Verbosity Level to 0 for go live.

Verbosity levels affect the log reports. When set properly, the verbosity level affects the data that displays in the log reports. This can be useful when troubleshooting.

Simulation

Simulation		
What is Available		
Simulation	Process	Algorithm
Put Away / Loc Find	Put Away	PA / LF
Picking	Picking	PK
Lane Assignment	Ship Staging	LA
Container Move	Shipping	CM

You can simulate the various transaction (types) associated with the types of algorithms used.

The put away/loc find (PA/LF) algorithm simulates the put-away of received inventory using either the PA or LF algorithm.

Picking simulates picking of inventory from locations using PK algorithms.

Lane Assignment simulates product staging to a shipping lane using LA algorithms.

Container Move simulates the movement of product to suitable stage, truck, and dock locations using CM algorithms.

Example - Simulate Put Away when Locations are Full

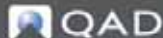
Example: Simulate put-away when all locations are full

10 pallet locations each with capacity 1

1. 8 locations are full.
2. Simulate receipt of an item with 3 pallets
3. Review simulation results
4. Review Verbosity Report

Site: 10-301		Item Number:	
Warehouse:		Lot/Serial:	
Location:		Reference:	
Warehouse: 01		Warehouse 1	
Item	Status	Qty	
Location Lot	Ref	UM	On Hand
D40PL001 03120	Y-Y-N EA	100	
D40PL002 03120	PL000082 PL	100	
D40PL003 03120	Y-Y-N EA	100	
D40PL004 03120	PL000083 PL	100	
D40PL005 03121	Y-Y-N EA	100	
D40PL006 03121	PL000084 PL	100	
D40PL007 03121	Y-Y-N EA	100	
D40PL008 03121	PL000085 PL	100	
D40PL009 03121	Y-Y-N EA	100	
D40PL010 03121	PL000086 PL	100	

1



WH REC 566

To demonstrate the simulation and verbosity-reporting tools, you can receive three pallets into the warehouse. In this situation, the pallet locations have capacity 1 (pallet) and eight of the ten locations are full, which means that there are only two pallet locations available for storage.

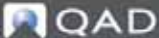
Example - Simulate Receipt of an Item with Three Pallets

Example: Simulate receipt of an item with 3 pallets

Put-away / Location Find Simulation

2

Transaction Type:	RCT-PO	
Site:	10-301	
Warehouse:	01	
Internal Routing Group:	040	
Item Number:	03210	
Lot/Serial:		
Reference:		
Quantity On Hand:	300.0	(Base UM)
Alternate UM:		

 QAD

WH REC 556

Performing a PA/LF simulation shows you where the pallets are stored. In this scenario, you use transaction type RCT-PO which uses the PA algorithm to find suitable locations in Area 040 for 300 each of item 03210.

Above, 300 each should create three pallet put-away transactions of 100 each.

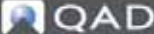
.Example - Review Simulation Results

Example: Review simulation results

Put-away / Loc Find Simulation Report

Transaction Type: RCT-PO
 Site: 10-301
 Warehouse: 01
 Internal Routing Group: 040
 Item Number: 03210
 Lot/Serial:
 Reference:
 Quantity On Hand: 300.0 (Base UM)
 Alternate UM: Output: PAGE

Site	Warehous	SLG	Location	Quantity	UM	Remarks	Algo
10-301	01	040PL	040PL009	100.0	EA		1
			040PL010	100.0	EA	No more inventory av	1

 WH REC 557

The PA/LF Simulation Report shows two pallets stored in Locations 040PL009 and 040PL010; however, there are no available locations for the third pallet.

Example - Verbosity Report

Example: Review Verbosity Report

Verbosity Report

Create Date	Create Time	User ID Session	Type ID	Site Lev Whse	SLG WLG	Location Comments
10/12/11	09:00:55	qmi 020020Cn	PA 1	40 10-301 01	040PL 01FL	040PL010 REMAINING_SPACE = 1
10/12/11	09:00:55	qmi 020020Cn	PA 1	40 10-301 01	040PL 01FL	040PL010 CONSIDERED_QUANTITY = 100
10/12/11	09:00:55	qmi 020020Cn	PA 1	40 10-301 01	040PL 01FL	040PL010 PERFORMING_EXTRA_VALIDATION.
10/12/11	09:00:55	qmi 020020Cn	PA 1	40 10-301 01	040PL 01FL	040PL010 EXISTING_INVENTORY_VALIDATION.
10/12/11	09:00:55	qmi 020020Cn	SI 1	20 10-301 01	040PL 01FL	040PL010 LOCATION_CONSIDERED.
10/12/11	09:00:55	qmi 020020Cn	PA 1	30 10-301 01	040PL 01FL	UserB Considering Location.
10/12/11	09:00:55	qmi 020020Cn	PA 1	40 10-301 01	040PL 01FL	UserB PERFORMING_RCT-TR_VALIDATION.
10/12/11	09:00:55	qmi 020020Cn	PA 1	40 10-301 01	040PL 01FL	UserB RETRIEVING_CAPACITY.
10/12/11	09:00:55	qmi 020020Cn	PA 1	40 10-301 01	040PL 01FL	UserB REMAINING_SPACE = 0
10/12/11	09:00:55	qmi 020020Cn	SI 1	40 10-301 01	040PL 01FL	040PL009 LOCATION_SELECTED.
10/12/11	09:00:55	qmi 020020Cn	SI 1	40 10-301 01	040PL 01FL	040PL010 LOCATION_SELECTED.
10/12/11	09:00:55	qmi 020020Cn	PA	10 10-301 01		'Location Find' Control complete.

QAD WH REC 558

Now, running the Verbosity Report shows us the decision process the system went through to determine the locations.

Note This is the end of the report. There several lines prior to these that do not fit into this example report

In a more complex environment, you can use this report to debug the configuration and determine what is happening.

Example - What About the Extra Pallet?

Example: What about the extra pallet

2 available locations but we need 3

Item Number: 03210

Description: Disinfectant Wipes

Quantity: 300.0

Unit of Measure: EA

Conversion: 1.0000

Lot/Serial Control: UM: EA

Site: 10-101

Warehouse: 01

Item Number: Warehouse 1

Lot/Serial: Reference:

Location	Item	Status	Qty	Expect	Expect
	Lot	Ref	UM On Hand	In	Out
010RC001	03210	Y-Y-N	EA	100	100
010RC001	03210	PL000090	PL		
010RC001	03210	Y-Y-N	EA	100	100
010RC001	03210	PL000091	PL		
010RC001	03210	Y-Y-N	EA	100	
010RC001	03210	PL000092	PL		
040PL001	03120	Y-Y-N	EA	100	
040PL001	03120	PL000082	PL		
040PL002	03120	Y-Y-N	EA	100	
040PL002	03120	PL000083	PL		
040PL003	03120	Y-Y-N	EA	100	
040PL003	03120	PL000084	PL		
040PL004	03120	Y-Y-N	EA	100	
040PL004	03120	PL000085	PL		
040PL005	03121	Y-Y-N	EA	100	
040PL005	03121	PL000086	PL		
040PL006	03121	Y-Y-N	EA	100	
040PL006	03121	PL000087	PL		
040PL007	03121	Y-Y-N	EA	100	
040PL007	03121	PL000088	PL		
040PL008	03121	Y-Y-N	EA	100	
040PL008	03121	PL000089	PL		
040PL009	03210	Y-Y-N	EA		100
040PL009	03210	PL000090	PL		
040PL010	03210	Y-Y-N	EA		100
040PL010	03210	PL000091	PL		

Error

ERROR: No destination location could be found. Please re-enter.

OK

QAD WH REC 559

Now, you are ready to actually receive three pallets with only two available locations.

When the receipt is processed an error message indicates no destination location can be found.

Inventory Detail Inquiry shows all three pallets were received. One stays in receiving while the other two are routed to the two available locations.

You should work with your customer to setup a process to address potential problems.

Implementation Hint: Setting Up a Trouble Location

Implementation Hint: Consider setting up a trouble location

A Location with Infinite Capacity

Site: 10-301 Distribution Site 1

Location: **TROUBLE**

QAD Location Data

Description: Trouble product location

Inventory Status: Y-Y-N

Permanent: ☐

Item Location Type: **HOLD**

Location Groupings

Warehouse: 01

Storage Location Group: 040PL

Work Location Group: 01FL

Item Number

UM Quantity Height Length Width

PL 99450.0000 51 50 39

Now, with full locations, receipts will be routed to the **TROUBLE** location for further resolution.

Site: 10-301 Item Number: 01130 Display
Warehouse: Location: Lot/Serial: Reference: Disp No

Warehouse: 01 Warehouse 1

Location	Status	Qty	Qty	Expect	Expect
Lot/Serial	Ref	UM	On Hand	In	Out
010RC001	Y-Y-N	EA	100		100
010RC001	PLO00093	PL			
	Y-Y-N	EA	100		100
	PLO00094	PL			
TROUBLE	Y-Y-N	EA		100	
	PLO00093	PL			
TROUBLE	Y-Y-N	EA		100	
	PLO00094	PL			

QAD WAREHOUSE

To help increase visibility to potential problem inventory, similar to the previous example, consider setting up a trouble location with a large capacity that collects all pallets that cannot find a home through the traditional rules.

You can set up a process to routinely review the inventory in this trouble location.

In the above example, you can alternatively change the warehouse location capacity to:

UM = EA, Quantity = 99999

This achieves the same results. The general rule is have enough capacity in the location to ensure anything fits (assuming you allow mixed item storage).

Bonus Coverage: LPN Creation

Bonus Coverage: LPN Creation

LPNs can be assigned at the point of receipt

Warehouse Maintenance

Site: 10-301
Warehouse: 01

LPNs can be assigned at the point of receipt

General Data

Description: Warehouse 1 Flavor: A
Address: Inventory Acct Sync:
Active: ☒ Allow Mixed Status Codes: ☒
Reference Sequence ID: Packaging Sequence ID: 00000002 Logistics UM Tolerance: 0.00%
Losses/Returns LHM Code:

Error

ERROR: Invalid warehouse reference NR ID. Cannot generate pallets. Please re-enter.
ERROR: Invalid warehouse reference NR ID. Cannot generate pallets. Please re-enter.

OK

Site	Location	Lot/Serial	Reference	Quantity
10-301	010RC001		LPN001	100.0

QAD WM-REC-570

You can disable creation of LPNs by blanking the Reference Sequence ID field in Warehouse Maintenance. This allows you to apply a pre-printed LPN at the point of receipt.

For example, if your company buys rolls of pre-printed LPNs that your staff peels off then scans, you can use the above mechanism to assign at the receipt.

Bonus Coverage - Configure the LPN

Bonus Coverage

Configure the LPN number alpha numeric format

Sequence Definition Maintenance

Sequence Definition: 00000001 Description: Reference Generation Seq

Seq	T	Format	Min	Max	Inc	Description
1	F	LPN			1	LPN prefix for ID tags
2	S	AutoRef01			1	Database sequence 01

Sequence: 1
 Type: F Fund: Minimum Value: Maximum Value: Increment: 1

Format: LPN DB Sequence: Description: LPN prefix for ID tags

Receipt Detail - Quantity: 200 EA

Site	Location	Lot/Serial	Reference	Quantity
10-301	010RC001		LPN00076	100.0
10-301	010RC001		LPN00077	100.0

QAD VAN REC-500

You can tailor the LPN format for your customer using sequence definition maintenance. In this example, you change the format prefix from PL to LPN.

This is a cosmetic change with no system impact.

Key Learning Points

QAD Warehousing Receiving

Key Learning Points

- Location data can be setup for reporting and/or capacity management
- Put-away rules drive storage best practices
- Items need to be setup in the warehouse
- Try to find common categories for item Unit of Measure
- Location Popularity category can help manage slotting



WH REC 530

Exercises

Exercise

Receipt Setup

- Set up items
- Set up a receiving dock area and storage area
- Define a route for a receipt transaction
- Define Put-Away rules
- Set up popularity codes (optional)
- Receive items
- Add more items and create UM groups



WH REC-501

The following topics contain receiving exercises that are based on information presented in this section.

In some instances, space is provided in tables for you to enter the data you entered in QAD Warehousing programs; in other instances, the values you need to enter in fields are presented within the tables.

Exercise - Set Up Items

Exercise

Set Up Items

- Add items to the warehouse
- Set up alternate UM
- Modify Item Master Maintenance for each item
- Set up Multi-Level Item Maintenance



VM-REC-081.ppt

The following topics walk you through setup of items for the exercise.

Exercise- Add Items to the Warehouse

Exercise

Add these Items to the Warehouse

03120: Scented Disinfectant Pump		x 10		x 10	
03121: Scented Disinfectant 0.5l bottle		x 10		x 10	
03210: Disinfectant Wipes		x 10		x 10	

 QAD

WH REC 062.png

In the following topics, you add these items to the warehouse.

Exercise - Adjust Item Characteristics for Use in the Warehouse

Exercise

Adjust item characteristics for use in the warehouse



Field	03120	03121	03210
Unit of Measure (EA)			
Lot/Serial Control = <blank>			
Site = 10-301			
Location = <receiving location>			

Use Item Master Maintenance to modify each warehouse item. Use the following table to enter data in fields. When data is not supplied, use the space here to record your entry:

Field	03120	03121	03210
UM	EA	EA	EA
Lot/Serial Control	blank	blank	blank
Site	10-301	10-301	10-301
Location = receiving location			

When you associated this site with a warehouse in Multi-Level Item Maintenance, the system populates the Location field in Multi-Level Item Maintenance when product is received. If not, the Location field populates incorrectly upon receipt and can cause processing errors.

Exercise - Adjust Warehouse Item Level Information

Exercise

Setup the item at the Site and Warehouse

Multi-Level Item Maintenance

Item Number: 03110 Medical Disinfectant
 UM: EA Pump
 Site: 10-301 Distribution Site 1

Site Data and Default Warehouse Data

Location: 010RC001
 Warehouse Item Type:
 Replenishment Type:
 Popularity:
 Default Kanban Quantity:

Single PA Trans:
 Issue Method:
 Print ID:
 ID Qty:
 OPC Threshold: 0.0

Item Number: 03110 Medical Disinfectant
 UM: EA Pump
 Site: 10-301 Distribution Site 1
 Warehouse: 01 Warehouse 1

Warehouse Data

Location:
 Storage Location Group: 040PL
 SLG List:
 Warehouse Item Type:
 Replenishment Type:
 Popularity:

Single PA Trans:
 Issue Method:
 Print ID:
 ID Quantity: 0
 OPC Threshold: 0.0
 Logistics UM: PL

QAD WH REC 410

For this exercise, set up the following fields in Multi-Level Item Maintenance:

Field	03120	03121	03210
Site	10-301	10-301	10-301
Location= receiving location (A)			
Warehouse			
SLG = <pallet storage zone>(B)			
Logistics UM	PL	PL	PL

Note In the table above note the following:

- (A) If this Site is the associated Site in the Item Master Maintenance, this Location defaults when the item is received. Having the correct warehouse receiving location to self-populate saves time and reduces errors.
- (B) The preferred put-away zone.

Exercise - Set up Alternate Units of Measure

Exercise

Set UP Alternate UM

Unit of Measure	Description (optional)	Sizing Type	Allow Split

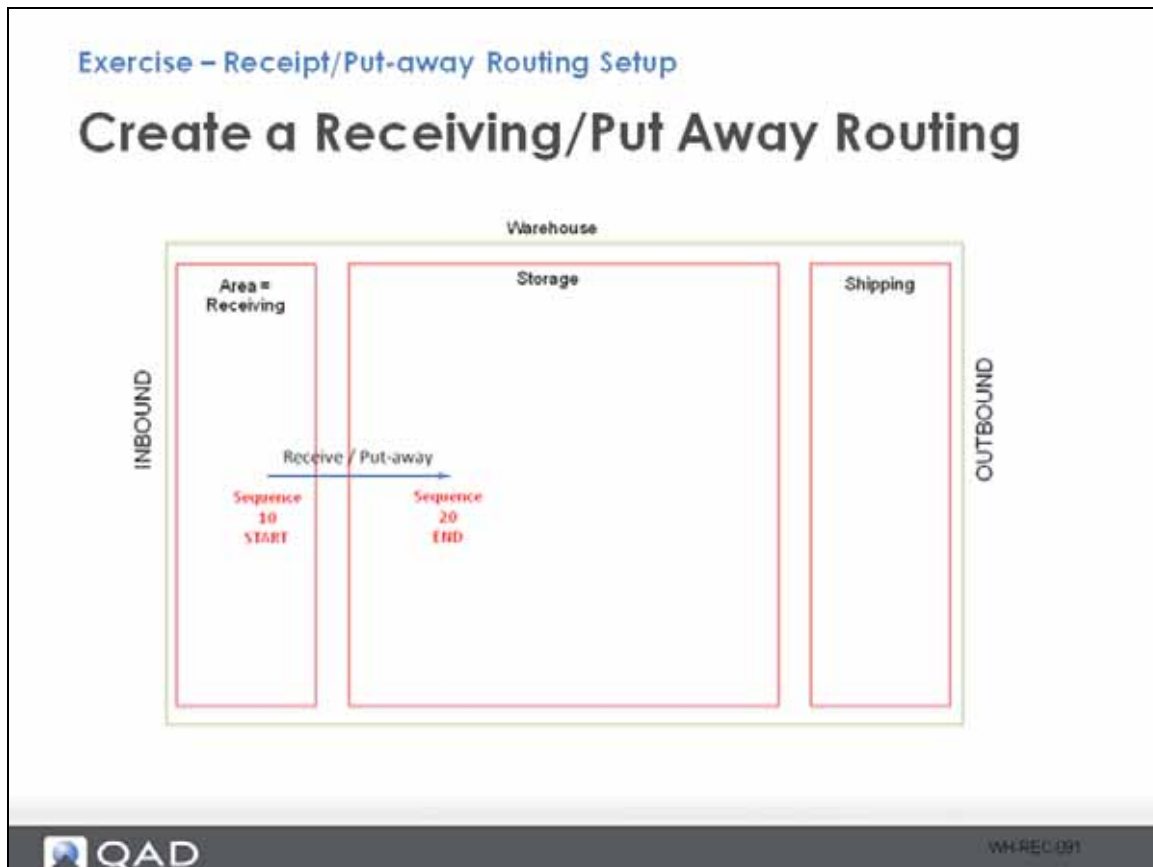
The following unit of measure conversions should be defined/confirmed using Alternate Unit of Measure.

UM	Description	Sizing Type	Allow Split
EA	Eaches	blank	N
BX	Boxes	blank	Y
PL	Pallets	R	Y

You can use Alternative Unit of Measure Browse to validate the above

This step defines an each is the smallest unit of measure to pick. Also pallet load quantities are tracked using a license plate number (Sizing Type = R).

Exercise - Set up Receipt Put Away/Routing



All product is received and moved direct to storage.

Use Internal Routing Maintenance to create a receiving/put-away routing using the following table to enter data for fields.

Field

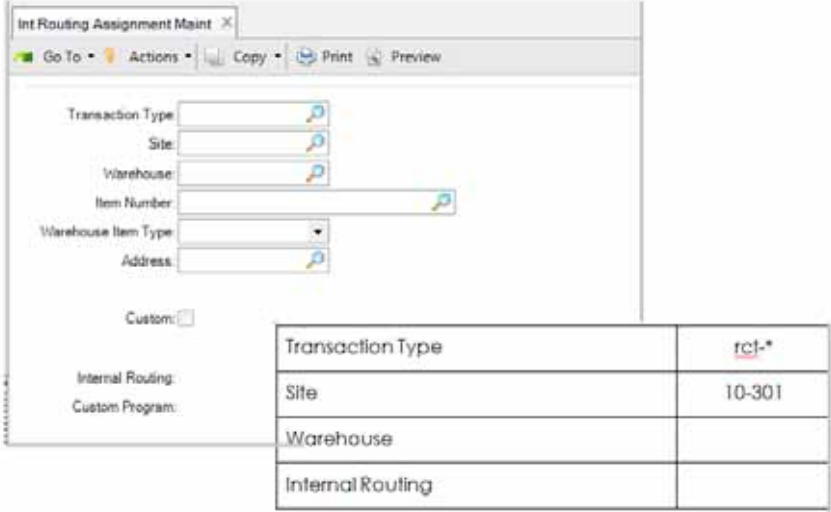
Site	10-301	
Warehouse		
Internal Routing	Put-away	
Description		
Sequence	Start =10	End =20
IRG		

Note The default engine processing is set to Auto in the Internal Routing Maintenance Miscellaneous Options frame. Auto engine processing enables a real-time automated warehouse by automatically generating work tasks when triggers occur. When set to Auto, the system automatically creates put-away tasks and releases them when an item is received. When set to Manual, put-away tasks require manual intervention to be released.

Exercise - Assign a Transaction to the Routing

Exercise – Assign a Transaction to the Routing

Receiving/Put-Away Routing Assignment



Internal Routing	
Transaction Type	rct-*
Site	10-301
Warehouse	
Internal Routing	

QAD WHREC093

All product goes to the same receiving location then direct to storage for put-away. Assign the Receiving/Put-away routing to a generic receipt transaction type using Int Routing Assignment Maint.

Field

Transaction Type	rct-*
Site	10-301
Warehouse	
Internal Routing	

Exercise - Define Put Away Rules

Exercise – Define Put-Away Rules

Using Algorithms to Define Rules

Algorithm Type: PA

Site: 10-301

Item Number:

Address:

Transaction Type: RCT-*

Warehouse: 01

Warehouse Item Type:

Customs: ☐

Seq	Algo	Description
10	3	S.L. - Merge with item
20	2	Empty Storage Locations
30	1	Storage Locations

What happens when the load/item arrives in the next area? How are storage locations selected?

Use Algorithm Assignment Maintenance to define put-away rules. For QMI, the only operational consideration is items cannot be mixed in storage.

Field

Algorithm Type	PA	
Transaction Type	rct-*	
Site	10-301	
Warehouse		
Sequence	10	20
Algorithm	3	2

What does this algorithm sequence accomplish?

Receive Items

Exercise

Receive Items

Receipts - Unplanned

Go To Actions Copy Print Preview Attach

Item Number: 03210 Lot/Serial Control UM: EA

Description: Disinfectant Wipes

Quantity: 200.00000000

Unit of Measure: EA Conversion: 1.0000

Site: 10-301

Location: 01

Lot/Serial

Reference

Multi Entry

Total Qty

Total Cost

Unit Cost

Order

Line

Sales/Job

Address

Remarks

Effective Date

Debit Account

QAD

WH REC 001

- 1 Use Receipts-Unplanned to receive: 200 EA, item 03210
 - What loads are created? (view Inventory Detail Inquiry to find out).
 - What is the LPN(reference) prefix? _____
(It should match what you setup in session 1)
 - Are put-away tasks automatically generated? _____.
- 2 Use Movement Confirmation Workbench to complete all moves. Alternatively you can perform all move tasks in the RF if you are logged into Putty as UserB.
- 3 Use Receipts-Unplanned to receive: 200 EA, item 03120 and 03121
 - What loads are created and which locations are selected for item put-away? (view Inventory Detail Inquiry)

If the put-away rules are configured correctly, each item with 200 each or two pallets are in a different location pallet storage location.
- 4 Use Movement Confirmation Workbench to complete all moves.
 - Use Location Full % Report to check the warehouse 02 space utilization. Relative Full % = 18.75, Absolute Full % = 37.50.

Add More Items and Create UM Groups

Exercise

Add More Items and Create UM Groups

03240:
Lubricant 4 liter tub

 x 4
  x 10
 

 QAD WI-REC-001

Management identified a new item 03240 to add to the warehouse inventory

- 1 Set up a new unit of measure group for the above conversions, using UM Group Maintenance.

Field	Data to Enter
Unit of Measure Group	
UM	EA
Alt UM	BX
Conversion	
(How many eaches fit in a box.)	
Alt UM	PL
Conversion	
(How many eaches fit on a pallet).	

- 2 Assign the new item to the warehouse.
 - a See Item Master Maintenance exercise above.
 - b See Multi-Level Item Maintenance exercise above.

Assign the new UM Group to the new item using Multi-level Item Maintenance. For efficiency, you can also use Item Maintenance to make this change.

Field	Data to Enter
Item Number	03240
Unit of Measure Group	

3 Run UM Conversion Generation to apply the new UM Group:

Field	Data to Enter
UM Group	
Confirm three boxes in lower frame are checked.	

The UM Conversion Generation report displays the UM changes made. If the report is blank, the UM Conversion did not occur.

4 Use Receipts-Unplanned to receive: 120 EA, item 03240

What loads are created and which locations are selected for item put-away? (View Inventory Detail Inquiry.)

When done properly, three pallets with 40 each are created and put-away to the next empty pallet location

5 Use Location Full % Report to check the warehouse 02 space utilization. Relative Full % = 28.13, Absolute Full % = 50.00.

Questions

- 1 Most of the put-away strategy and storage management is controlled by which two maintenance programs?
- 2 Which program do you use to specify the attributes of a warehouse location?
- 3 What does the QAD Warehousing put-away strategy attempt to accomplish?
- 4 True or False. To trigger warehouse receiving process, all items need to be set up in QAD Warehousing?
- 5 Popularity codes are used in QAD Warehousing to support _____ strategies.
- 6 When is verbosity reporting useful and not useful?

Answers

- 1 Algorithm Assignment Maintenance and Warehouse Location Maintenance.
- 2 Warehouse Location Maintenance.
- 3 Product put-away strategies attempt to balance storage capacity optimization with system performance.
- 4 Multi-Level Item Maintenance
- 5 Slotting
- 6 Useful when troubleshooting, not useful when you go live at a customer site.

Notes

Chapter 3

Replenishment

Overview

QAD Warehousing Replenishment

QAD Warehousing

Field Readiness





Our Passion. Your Advantage.

Objectives

QAD Warehousing Replenishment

Objectives

- Functional Fit
- Understand replenishment concepts
- Setup warehousing for replenishment
- Perform a replenishment exercise

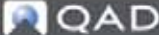
Functional Fit: What We Don't Do So Well

What we don't do so well

Functional Fit: Replenishment

Functionality	Fit	Notes
Supports all basic and advanced replenishment strategies.		

Legend
 Partial
 None

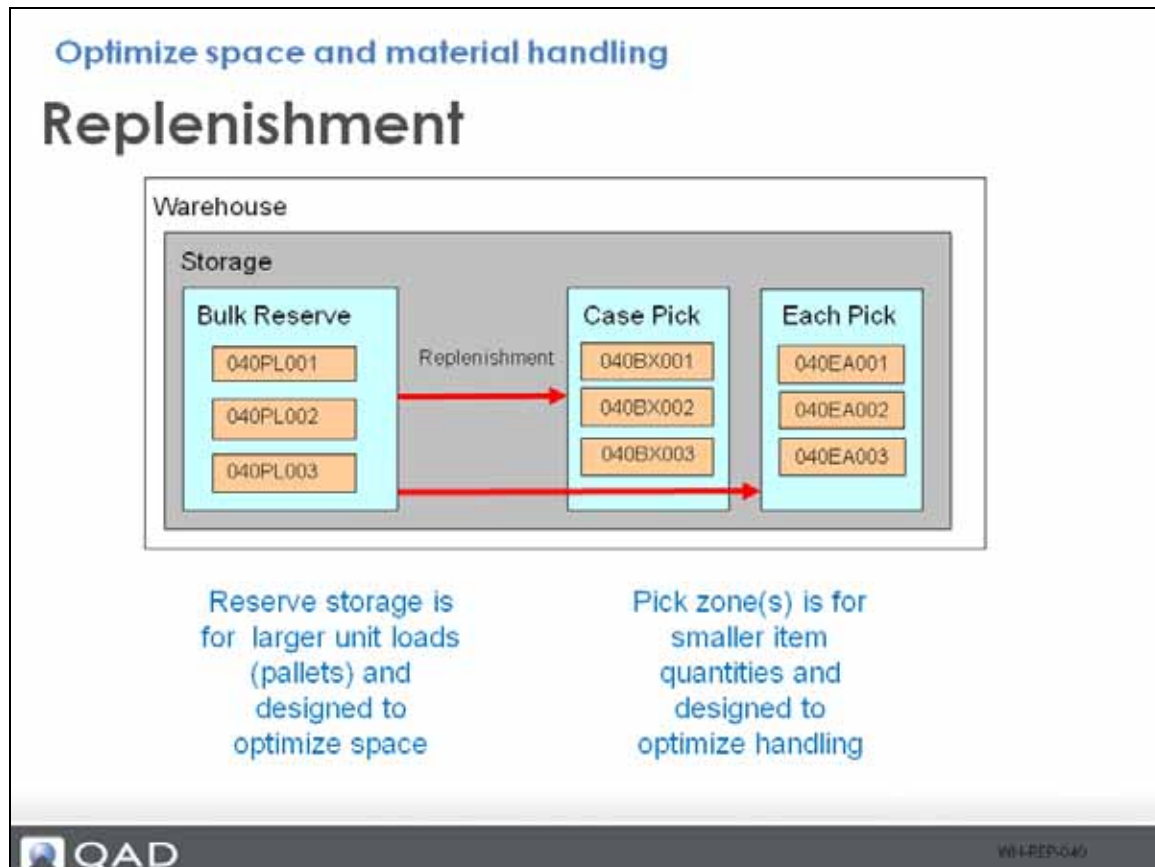
 QAD WH-REP-030

Did You Know

Replenishment is an optional configuration; however, it is very helpful in improving operational efficiencies and works in conjunction with reserve storage and forward-pick locations.

QAD Warehousing lets you define forward-pick zones in the warehouse. These zones typically contain the stock required for picking first and in quantities and locations that are easy to maintain. In order for this zone to be maintained at the optimum stock levels, the system uses a process called replenishment.

Optimize Space and Material Handling



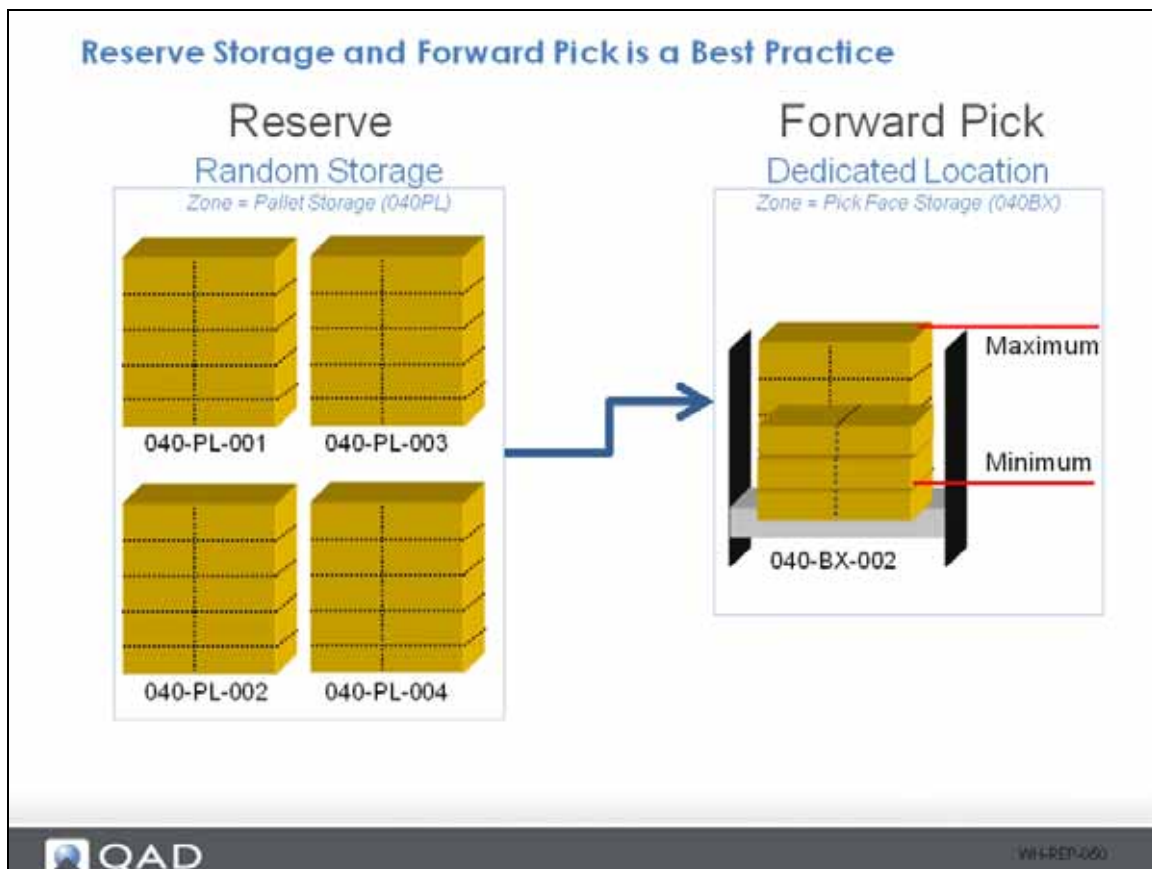
Define the types of items and the quantities that can be stored in the replenishment, or forward-pick locations typically. Picking functions look in these locations first before searching the rest of the warehouse for available inventory.

In QMI data, there is a bulk reserve, a case pick area, and an each pick area, as shown above.

Bulk Reserve storage is for larger unit loads (pallets) and designed to optimize space.

Case and Each picks are for smaller item quantities and designed to optimize handling.

Reserve Storage and Forward Pick is a Best Practice



Did You Know

Replenishment can be defined for an item/location or item/zone.

Replenishment follows similar principles of reorder point and kanban. When the forward pick location reaches the defined minimum (reorder point), the system creates a replenishment pick task for a load from the reserve storage zone (040PL).

Replenishment is Used for Restocking Automated Equipment



Replenishment is also used for restocking automated equipment. In this example, a carousel is used for picking from slot 1 at the bottom to slot 8 at the top. To improve picking productivity, restocking these locations is typically done after/before the picking process, perhaps during 2nd or 3rd shift.

Several customers use automated storage equipment interfaced to QAD Warehousing. For example, above is a picture of a customers carousel picking module.

Auto-Replenish Flags Set in Two Places

Auto Replenish flags set in two places

Replenishment

The screenshot displays two overlapping windows from the QAD software. The top window is titled 'Warehouse Maintenance Flag' and shows fields for 'Site: 10-301' and 'Warehouse: 01'. The bottom window is titled 'Item-Warehouse Maintenance Flag' and shows fields for 'Item Number: 02120', 'UM: EA', 'Site: 10-301', and 'Warehouse: 01'. Both windows have a red box around the 'Auto Replenish' checkbox, which is checked. A red arrow points from the text 'Auto replenishment requires setting Auto Replenishment flag in two screens.' to the 'Auto Replenish' checkbox in the 'Warehouse Maintenance Flag' window. Another red arrow points from the same text to the 'Auto Replenish' checkbox in the 'Item-Warehouse Maintenance Flag' window. The 'Warehouse Maintenance Flag' window also shows a 'Miscellaneous' section with 'Mode: Auto', 'Opportunity Counts' checked, 'OPC Frequency' set to 0, 'Auto Replenish' checked, and 'Completion Options' set to 0.00. The 'Item-Warehouse Maintenance Flag' window shows 'Warehouse Data' with 'Location' set to 'D40PL', 'Storage Location Group' set to 'D40PL', 'SLG List' set to 'D40PL', 'Warehouse Item Type' set to 'D40PL', 'Replenishment Type' set to 'D40PL', 'Popularity' set to 'D40PL', 'Logistics UM Tolerance' set to '0.00%', and 'Auto Replenish' checked. The bottom of the screen shows the QAD logo and the text 'WH-REPO-01'.

Auto replenishment requires setting Auto Replenishment flag in two screens.

Did You Know

Replenishment is either a manual or automatic process.

A manual replenishment request is activated using Replenishment Request.

Automatic Replenishment occurs as soon as the system issues inventory and stock drops below the minimum level. When this happens, a replenishment task is created.

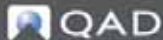
Auto replenishment is set in two places: Warehouse Maintenance and Item-Warehouse Maintenance. You need to set it in both places. If you only set it in one of the two places, replenishment does not work.

Overpick Replenishment

Overpick Replenishment

Overpick Replenishment...

- Allows operators to put-back inventory that does not fit in the pick location
- Helpful when you are not certain how much will fit in a location
- Overpicking is more common in Wave Planning/Replenishment
- Zone or Transaction Type Maintenance



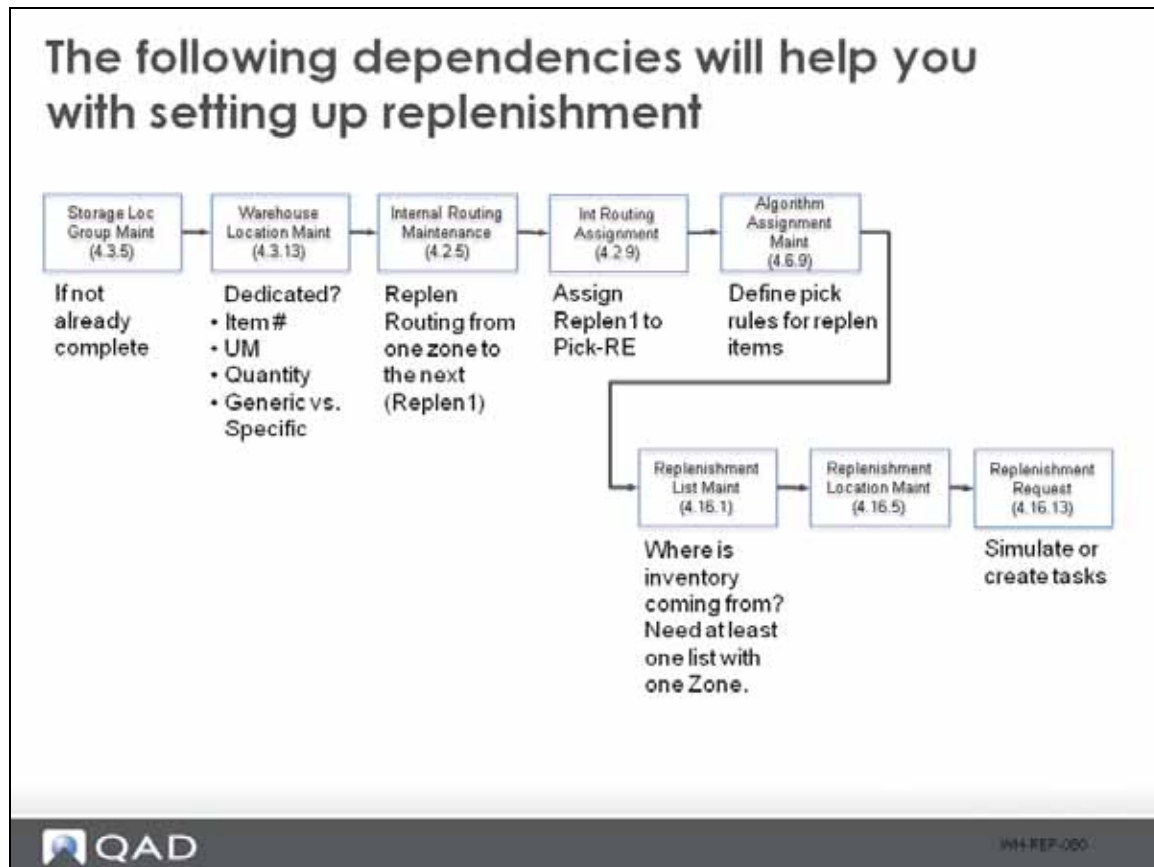
WH:REP:070

Warehouse staff can select a multi- or single-item pallet from the reserve zone and replenish one or multiple locations from the pallet in the picking zone. After staff replenish, they can return the remainder on the pallet to the reserve zone.

You can up a user (or a user cart) as a location. For example, in QMI, User A also is a location. You set this in Warehouse Location Maintenance when you enter the user ID as part of the location's parameters.

Overpicking inventory then stays with the user location, until the user drops off the inventory.

Dependencies that Help with Replenishment Setup

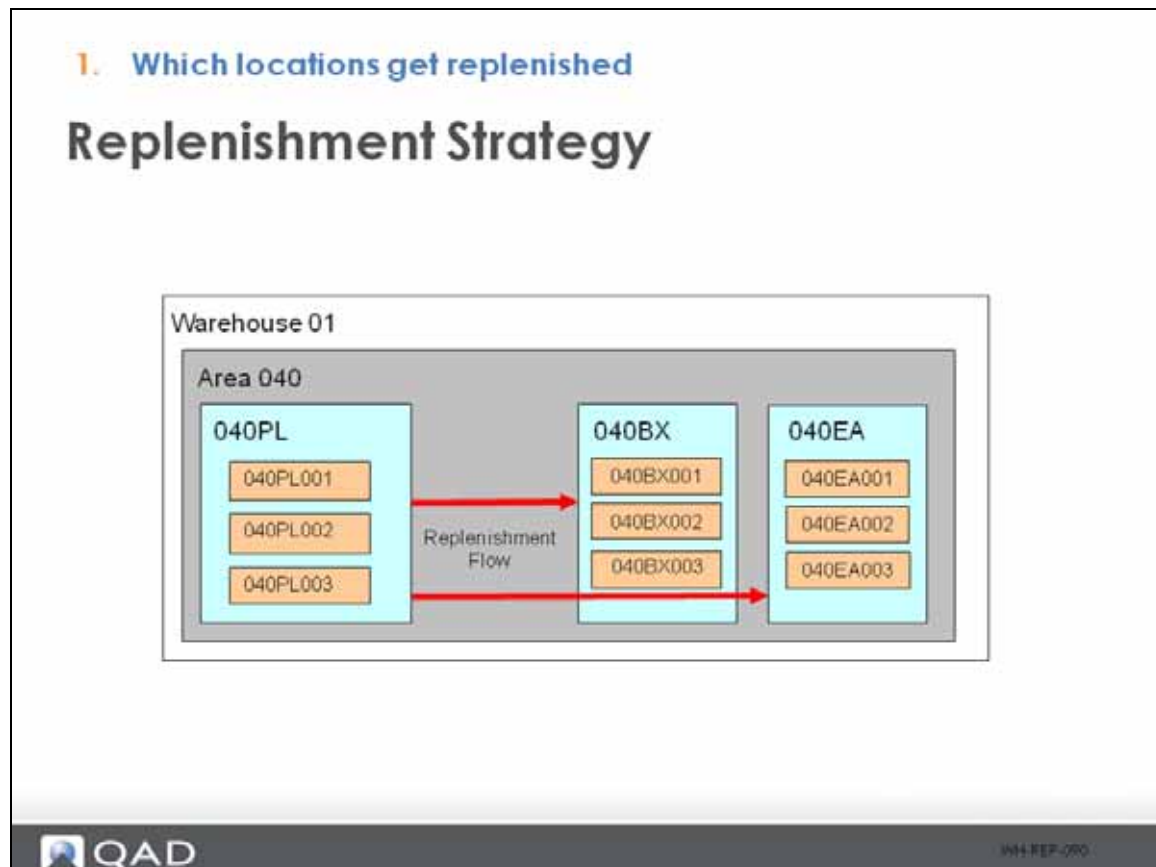


The graphic above shows which programs you use in the setup for replenishment. Under each program, the graphic shows the considerations you need to make when you enter the programs.

The following are questions to consider when defining your replenishment strategy:

- Which locations gets replenished?
- Where does replenishment inventory originate?
- How is replenishment inventory managed? (FIFO, control, capacity)
- Which items and capacities?

Which Locations Get Replenished



First define forward pick and reserve storage locations.

Typically, each zone (040BX and 040EA) is replenished from one reserve storage zone (040PL) to minimize product touches; however, it is possible to setup replenishment of zone 040BX from 040PL and zone 040EA from zone 040BX using Replenishment List Maintenance.

Which Locations Get Replenished - IR Maintenance

1. Which locations get replenished

Internal Routing Maintenance

Site: 10-301 Warehouse: 01 Internal Routing: 01RPL

Description: Replenishment

Sequence: 10 Internal Routing Group: 040

Transaction Create

Confirmed at Source: ☒ Task: TRANSFER

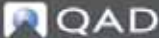
System Code: RF Priority: 10

Two Phase: ☒ Increment: 1

Keep From Status: ☒

Transaction Confirmation

From Location Option: 0	To Location Option: 0
From Item Option: 0	To Item Option: 0
From Lot/Serial Option: 0	To Lot/Serial Option: 0
From Reference Option: 0	To Reference Option: 1
Allow Quantity Increase: ☒	Alternative UM Option: 13
Allow Quantity Decrease: ☒	
Quantity Change Option: 0	

 QAD WH-REP-100

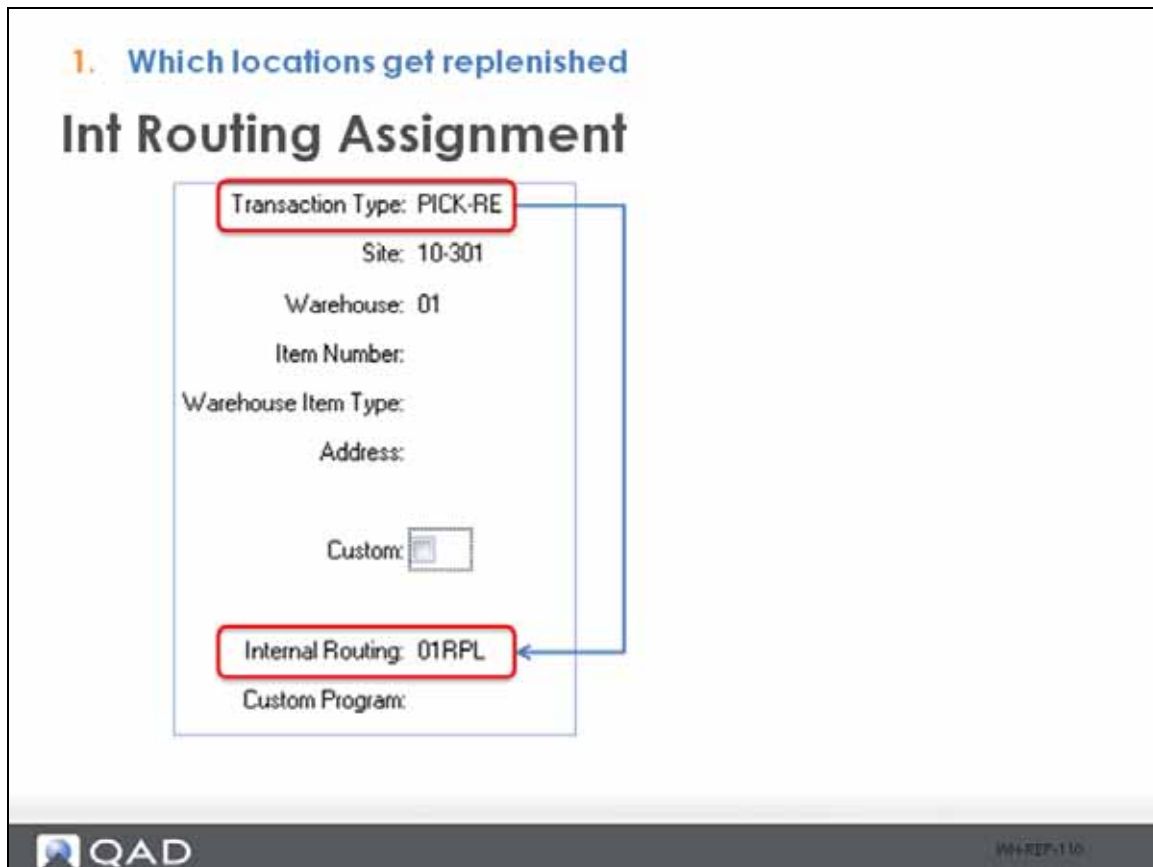
Next, define a replenishment material flow (01RPL) using Internal Routing Maintenance. Replenishment inventory stays in the same area so the internal routing has one sequence.

Which Locations Get Replenished - IR Assignment Maintenance

1. Which locations get replenished

Int Routing Assignment

Transaction Type: PICK-RE
Site: 10-301
Warehouse: 01
Item Number:
Warehouse Item Type:
Address:
Custom: ☐
Internal Routing: 01RPL
Custom Program:



Use the defined replenishment internal routing for replenishment tasks (PICK-RE). Once the replenishment material flow is defined, 01RPL, assign the routing to a transaction, PICK-RE.

Which Locations Get Replenished - Warehouse Location Maintenance

1. Which locations get replenished

Warehouse Location Maintenance

Site: 10-301 Distribution Site 1

Location: 040BX001

Box pick locations are sized for 100 boxes regardless of item number

Item Number	UM	Quantity	Height	Length	Width
	BX	100.0000			

QAD WH REP-120

Then, specify which locations get replenished in Warehouse Location Maintenance. Box pick locations (040BX) are sized for 100 boxes, regardless of the item number.

Where Does Replenishment Inventory Originate?

2. Where does replenishment inventory originate

Replenishment List Maintenance

Site: 10-301 Distribution Site 1
Description: Standard Replenishment

Replenishment List: 01RPL001
Comments:

Replenishment List Details

Seq	Warehouse	Description	SLG	Description
10	01	Warehouse 1	040PL	Pallet storage

QAD

Did You Know

A replenishment list defines a list of zones where the system looks for inventory to use for replenishment.

Next, define the zones and sequence the system uses to search for inventory to replenish to the forward pick locations.

The above example links a replenishment list to a location in Replenishment Location Maintenance or Replenishment SLG Maintenance.

The standard replenishment strategy picks inventory from the reserve storage bulk pallet zone (040PL).

In the graphic above, the replenishment list always looks in the pallet storage area.

There are four frames and seven fields in Replenishment List Maintenance used for configuration.

How is Replenishment Inventory Managed?

3. How is replenishment inventory managed

Algorithm Assignment Maintenance

Algorithm Type: PK

Site: 10-301

Item Number:

Address:

Transaction Type: PICK-*

Warehouse: 01

Warehouse Item Type:

Custom: ☐

Assigned Algorithms:

Seq	Algo	Description
10	9	Pick by Level by Location

Next, use Algorithm Assignment Maintenance to define a specific pick strategy for selecting replenishment (PICK-RE) inventory or use a generic pick strategy (PICK-*).

In this example, the same pick rules are used for replenishment picks as well as order picks, 9: Pick by Level by Location.

Which Items and Capacities Get Replenished?

4. Which items and capacities get replenished

Replenishment Location Maintenance

Site: 10-301

Location: 040BX001

Item Number: 03210

Replenishment Type:

Start Date:

End Date:

Replenishment UM: BX

Replenishment Point: 10.0

Maximum Quantity: 110.0

Replenishment List: 01RPL001

Max = 110 Bx

ROP = 10 Bx

040-BX-001

DYK: Location and Replenishment Point are required. Maximum Quantity is optional.

QAD

WH-REP-101

Did You Know

Location and Replenishment Point are mandatory fields. Maximum Quantity is an optional field.

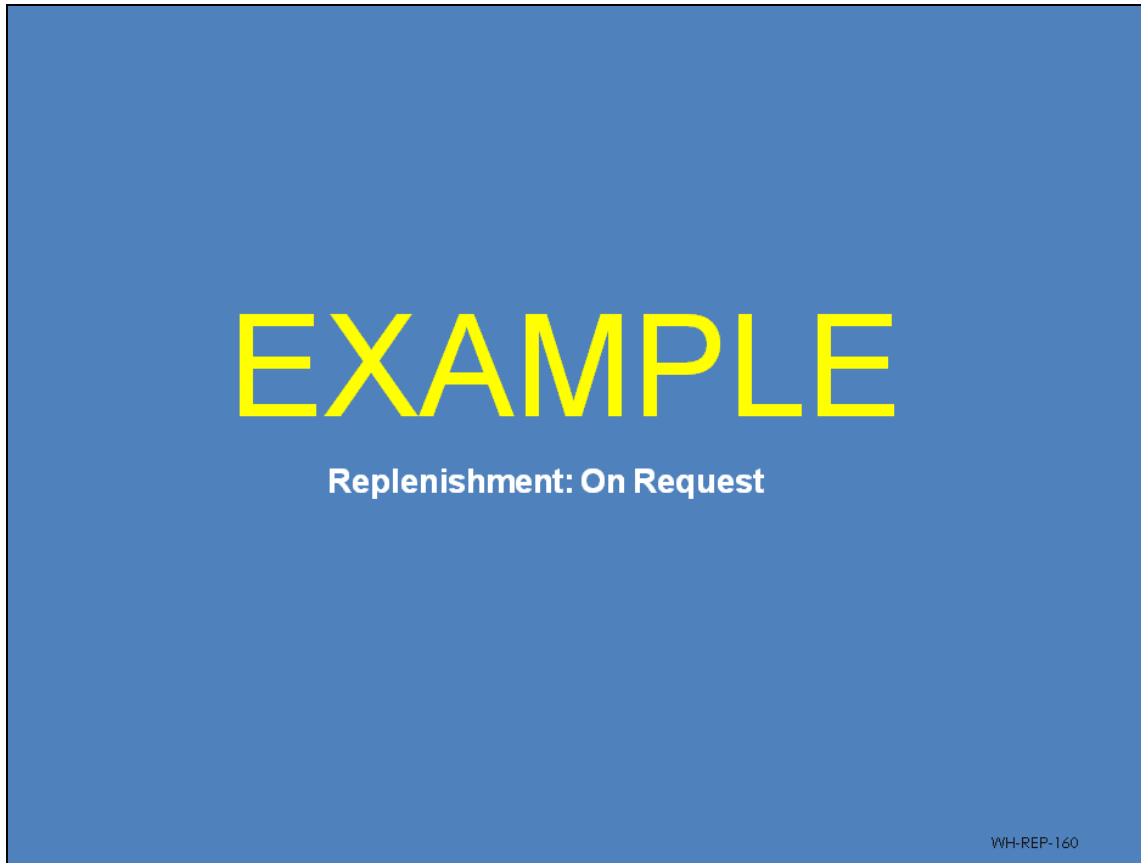
With the replenishment pick rules defined, establish the item and replenishment metrics by location.

In this example, location 040BX001 receives a replenishment when 10 boxes or fewer are in the location and a replenishment task is generated.

When configuring Replenishment Point and Maximum Quantity, consider the location might not be completely empty when the replenishment occurs. For example, if you replenish with a full pallet, you might need to size the location (Maximum Quantity) of a full pallet plus one extra row.

There are two frames and 10 fields in Replenishment Location Maintenance used for configuration.

Example



Replenishment can either occur automatically or on demand. On demand is used when you prefer replenishment is managed on an off shift.

Manual Replenishment

Manual Replenishment

Replenishment Request

Site: 10-301
Warehouse:
Internal Routing Group:
Storage Location Group:
Location:
Item Number:
Replenishment Type:

To:
To:
To:
To:
To:
To:
To:

Item/Location Replenishment: ☒
Item/Storage Location Group Replenishment: ☒

Create Transactions: ☒

Include Area below Replenishment Point: 100

Effective Date: 8/19/2011
Output:
Batch ID:


WH-REP-170

Did You Know

You can simulate replenishment activities or check the Create Transactions box to initiate replenishment transactions.

To generate replenishment tasks on demand, make sure the Create Transaction box is checked before executing the Replenishment Request menu.

Replenishment Request Triggers a Product Move

Replenishment Request triggers a product move

Pending Replenishment

QAD

Inventory Detail Inquiry 08/19/11

Site: 10-301 Item Number: 03120 Display Whse Loc: No
 Warehouse: Lot/Serial: Disp Non-Whse Loc: No
 Location: Reference: Output: PAGE
 Warehouse: 01 Warehouse 1

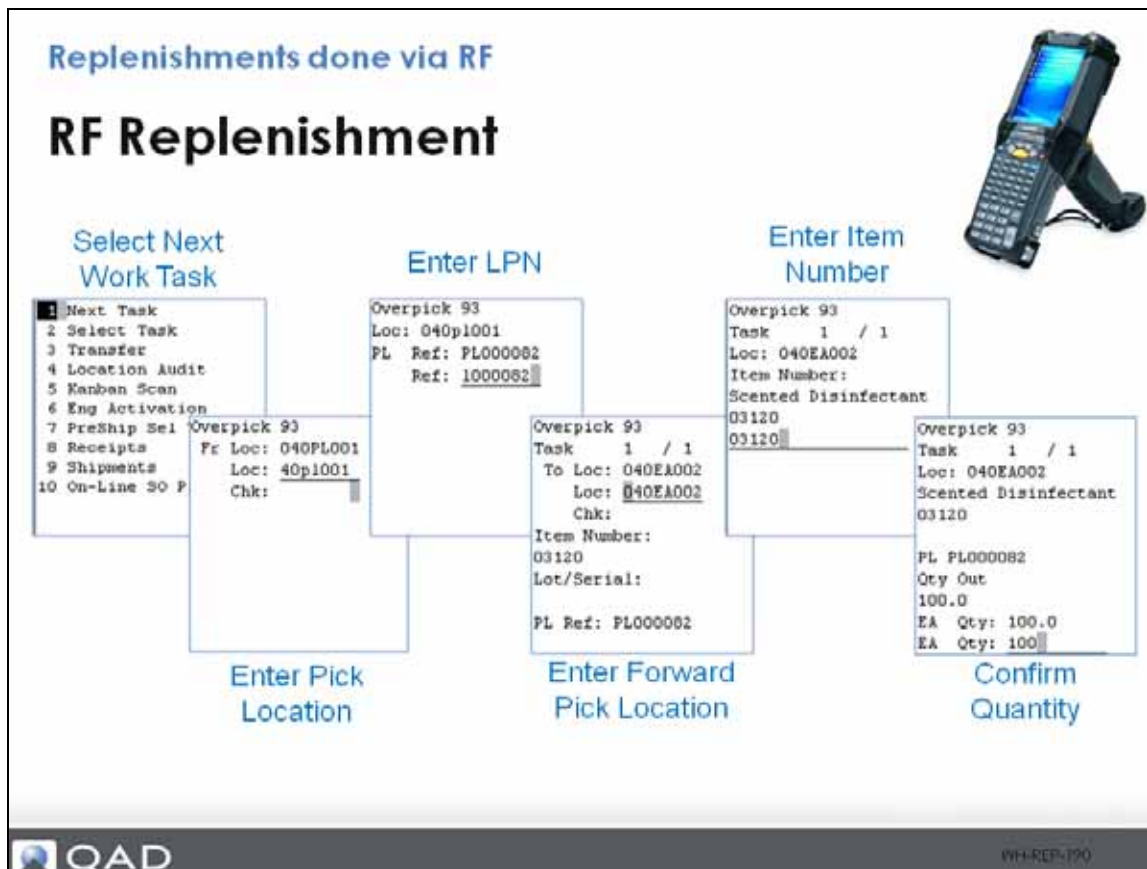
Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM	On Hand	In	Out	Alloc	Pick
040BX001	Y-Y-N	EA	100				
	PL000072	PL					
040BX001	Y-Y-N	EA	100				
	PL000075	PL					
040BX001	Y-Y-N	EA	100				
	PL000076	PL					
040EA002	Y-Y-N	EA		100			
	PL000082	PL					
040EA004	Y-Y-N	EA	90				
	PL000080	PL					
040PL001	Y-Y-N	EA	100				100
	PL000082	PL					

QAD YHREP-180

Once the replenishment tasks are released, check the pending tasks using Inventory Detail Inquiry. In this example, a full pallet is being transferred from 040PL001 to the 040BX002 forward pick location.

As a general rule, items in forward pick locations do not have a reference number (that is, PL000072, 75, 76, 80 and 82). Items in forward pick are typically tracked by the location address. To let this happen, when you set the second sequence in the internal routing To Reference field to 1 (one), the LPN is blanked when the item is moved to a forward-pick location.

Replenishment Via the RF



When replenishment pick tasks are created and released, warehouse staff can use the RF device, using Next Task (RF1.1) to complete the transaction.

Staff can use the overpick replenishment to pick for the replenishment. They can scan the source location, then scan the pallet number, shown as the Ref field in the graphic above.

To replenish a bin, scan the destination location, then scan the items, then enter the quantity that fits into the location, attempting to completely fill the location.

Replenishment Complete

Completed Replenishment

Replenishment Complete



Inventory Detail Inquiry

Site: 10-301

Warehouse:

Location:

Warehouse: 01

Item Number: 03120

Lot/Serial:

Reference:

Warehouse 1

Displ

Disp N

Location	Status	Qty	Qty	Expect	Expect
Lot/Serial	Ref	UM On Hand	Alloc	In	Out
0408X001	Y-Y-N	EA	100		
	PL000072	PL			
0408X001	Y-Y-N	EA	100		
	PL000075	PL			
0408X001	Y-Y-N	EA	100		
	PL000076	PL			
040EA002	Y-Y-N	EA	100		
	PL000082	PL			
040EA004	Y-Y-N	EA	90		
	PL000080	PL			


WH-REP-200

Once the replenishment is complete, use Inventory Detail Inquiry to check that replenishment completed. Check the Qty On Hand column for the locations replenished.

Implementation Consideration

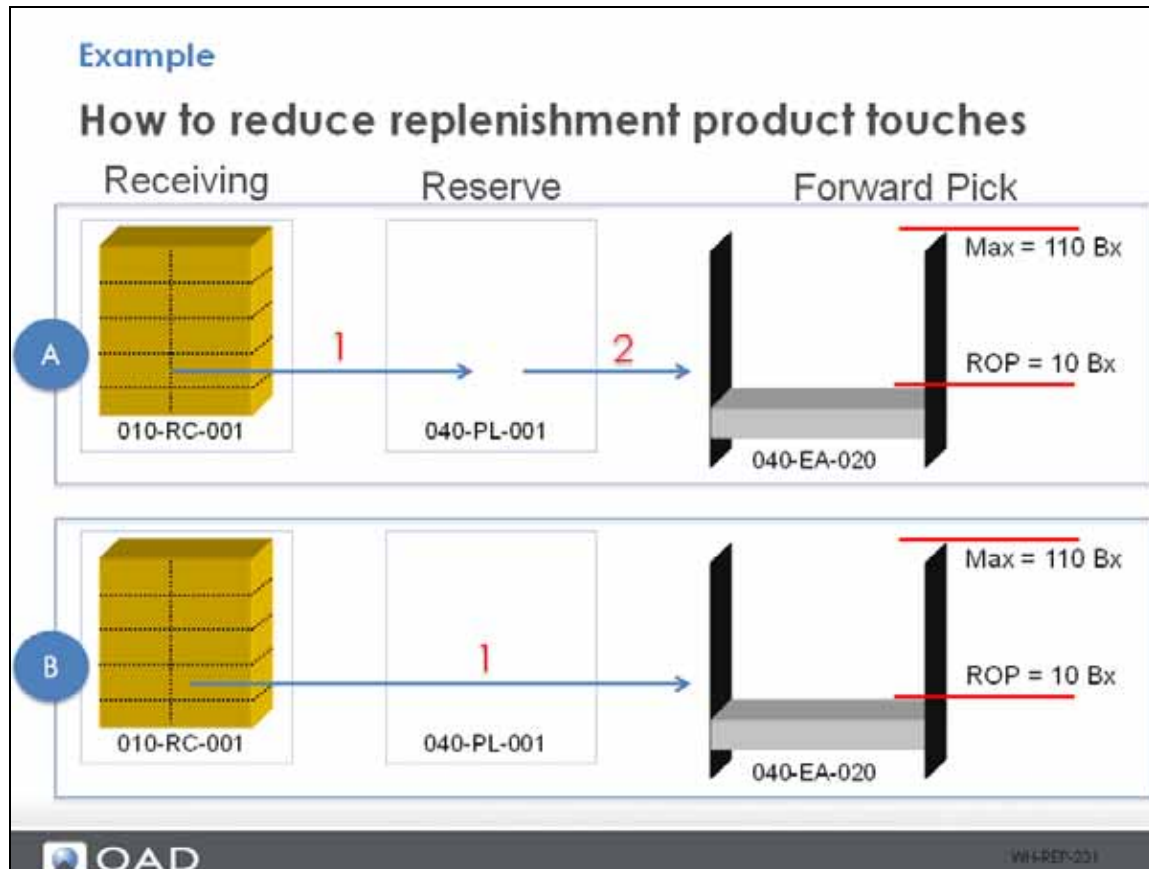
Implementation Consideration

Can you put product away direct to a forward pick location to avoid a replenishment move?

WH-REP-230

Yes, QAD Warehousing can be configured to support this process; however, this creates inventory rotation issues and complications if FIFO is preferred.

Example - Reducing Replenishment Product Touches



If FIFO is not a concern, consider filling forward pick locations during put-away. This can eliminate a material handling move.

To make this happen, setup the following:

- 1 Setup an SLG list (10 = 040EA, 20 = 040PL); then, search first the FP locations then reserve storage.
- 2 Assign the SLG list to the item in Multi-Level Item Maintenance.
- 3 Dedicate an item and associated capacity quantity to each forward pick location using Warehouse Location Maintenance.
If the location does not have a dedicated item, any item is stored there when the zone is considered for a put-away. (All locations in the zone need to be dedicated to an item.)
- 4 Setup the put-away algorithm with 101, 102, 1, 1 (Empty dedicated location merge with part in dedicated, empty storage location, any location).
- 5 Set Zone Optimization to Yes for all forward pick zones using the SLG,

Done properly, this fills the forward pick locations to capacity and moves the remainder to reserve storage. This also works in sequential order with multiple forward pick zones (that is, Box and Each).

Example - Consider Filling Forward Pick Locations

Example
Consider filling forward pick locations during product put-away

Inventory Detail Inquiry

Algorithm Type: PA
 Site: 10-301
 Item Number:
 Address:

Transaction Type: RCT-
 Warehouse: 01
 Warehouse Item Type:
 Custom:

Assigned Algorithms

Seq	Algo	Description
10	101	Empty Dedicated Storage Locations
15	102	Dedicated Storage Locations - Merge with Item
20	2	Empty Storage Locations
30	1	Storage Locations

Change Put-Away rule to first look for space in forward pick location before looking in reserve storage.

1. Case Pick
 2. Each Pick
 3. Reserve

QAD
 Inventory Detail Inquiry
 Forward Pick Capacity = 100 EA

Site: 10-301 Item Number:
 Warehouse: Location: Lot/Serial:
 Warehouse: 01 Warehouse 1 Reference:

Location	Item	Status	Qty	Expect	Expect
		Ref	On Hand	In	Out
010RC001	03121	Y-Y-N	EA	90	90
040BX004	03121	PL000250	EA	85	15
040EA020	03121	PL000250	EA	60	40
040EA020	03121	PL000247	EA		35
040PL001	03121	PL000250	EA		
		PL000250			

QAD
 VM REP 232

Notice in the graphic above, the put-away algorithm is set to fill dedicated locations first. The SLG list is setup to scan in the following order: 040EA, 040BX, 040PL.

Item 03121 is dedicated to each pick location 040EA020 and case pick location 040BX004. Both each and box locations have capacity of EA = 100, so both locations have capacity.

When you receive 90 each of item 03121, QAD Warehousing first looks at location 040BX004 and fills 15. Next, it looks at location 040EA020 and fills 40. The excess is moved to reserve storage.

This effectively keeps the forward pick locations full and reduces replenishment activity.

Bonus Coverage - Zone Replenishment

Bonus Coverage

You can replenish random locations in a zone

Replenishment SLG Maintenance:

Site: 10-301
Warehouse: 01
Storage Location Group: 040BX
Item Number: 03210
Replenishment Type:
Start Date:

End Date: []

Replenishment UM: EA
Replenishment Point: 0.0
Maximum Quantity: 100.0
Replenishment List: 01RPL001

Max = 100 EA
ROP = 0 EA
040-BX-ANY

QAD WH-REP-210

You can set up a zone replenishment with random or dedicated locations.

Rather than having dedicated pick locations, you can have a zone replenishment strategy.

In this example, zone 040BX is setup for an item and replenishment metrics using Replenishment SLG Maintenance. In this scenario, the item can be replenished to any location in the zone; however, best practice is to replenish to a dedicated location to help improve picking efficiencies by maintaining pick location consistency.

There are two frames and 11 fields in Replenishment SLG Maintenance used for configuration.

Key Learning Points

QAD Warehousing Replenishment

Key Learning Points

- QAD Warehousing supports all replenishment best practices
- Have a clearly defined replenishment strategy
- Understand location capacity impact on replenishment
- You can replenish specific locations or general Zones



Exercises - Set Up and Execute Replenishment

Exercise

Set Up and Execute Replenishment

- Confirm Forward Pick Location
- Set up replenishment routing
- Assign transaction to replenishment routing
- Define the zones for replenishment inventory
- Define replenishment picking rules
- Set up parameters for locations
- Generate replenishment tasks



WH-REP-201

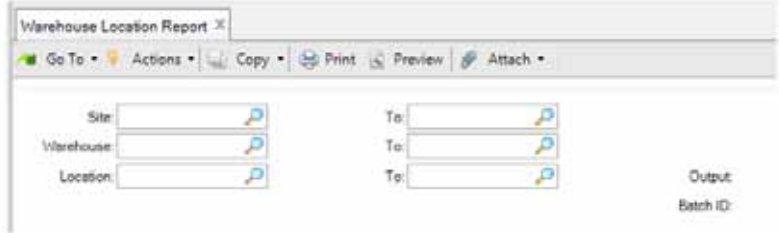
The following topics walk you through a replenishment exercise in which you set up and execute replenishment within the warehouse. You should have completed exercises in the Introduction and the Receiving topics before starting this exercise.

Exercise - Confirm Forward Pick Location Setup

Exercise

Confirm Forward Pick Locations

- Use Warehouse Location Maintenance to verify forward pick locations exist
- Or, use Warehouse Location Report to verify locations



With most items picked in each quantities, setup a reserve storage and forward pick strategy.

- 1 Confirm the Forward Pick locations are setup per a previous exercise; refer to the warehouse location setup exercises in the Introduction.
- 2 Or, you can run a report on warehouse locations and use report criteria to display forward pick locations.

Note The forward pick is the Eaches storage locations; reserve storage is the pallet storage locations.

Exercise - Set Up Replenishment Routing

Exercise

Set Up Replenishment Routing

Internal Routing Maintenance

Go To Actions Copy Print Preview Attach

Site Warehouse Internal Routing

Description:

Sequence:

Internal Routing Group:

Transaction Create

Confirmed at Source: ☐

System Code:

Two Phase: ☐

Keep From Status: ☐

Transaction Confirmation

From Location Option:

From Item Option:

From Lot/Serial Option:

From Reference Option:

Allow Quantity Increase: ☐

Allow Quantity Decrease: ☐

Quantity Change Option:

Warehouse

Area = Receiving

Storage

Shipping

Replen

Internal (Area) Flow

INBOUND

OUTBOUND

QAD

WM-REP-003

The system replenishes from pallet storage zone (reserve) locations to each storage zone (forward pick) locations. This is an internal (area) flow and requires only one sequence. Create a replenishment routing using the following:

- 1 Use Internal Routing Maintenance to create the replenishment routing. Specify data for the fields as presented in the table; otherwise, enter your own data and jot down your entered data here.

Field	Data Entered
Site	10-301
Warehouse	
Internal Routing	
Description	Replenishment
Sequence	10
IRG	
To Reference Option	1
Alternate UM Option	13

Notes

- Setting the To Reference Option to 1 removes the LPN reference from the load. If forward pick locations, the location address is the identifier. Setting Alternative UM Option to 13 reports the item measurement in the zone unit of measure, in this case, EA.

Exercise - Assign a Transaction to the Replenishment Routing

Exercise
Assign a Transaction to the Replenishment Routing

Int Routing Assignment Maint

Go To Actions Copy Print Preview

Transaction Type:

Site:

Warehouse:

Item Number:

Warehouse Item Type:

Address:

Custom: ☐

Internal Routing:

Custom Program:

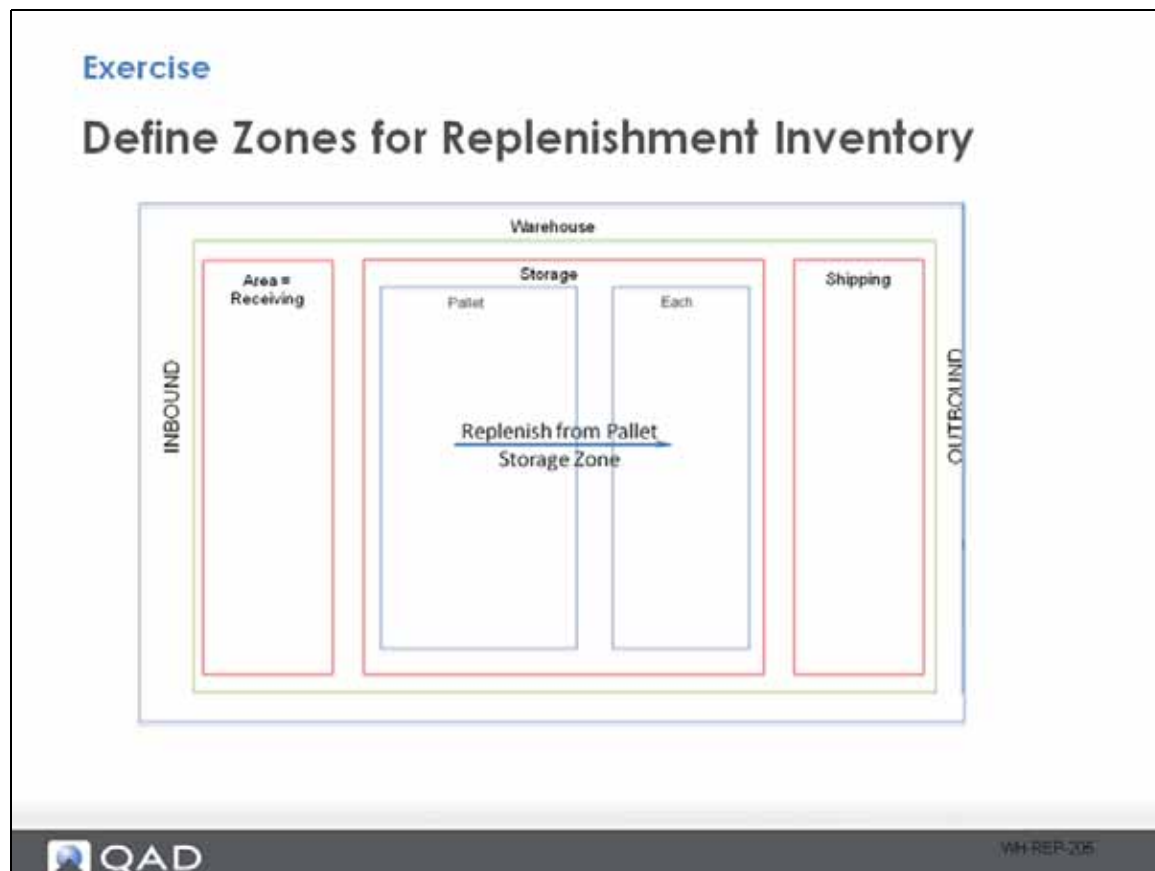
QAD WILREP-004

When a replenishment pick task is created, it follows the replenishment routing.

- 1 Assign the Replenishment routing to a generic replenishment pick transaction type using Int Routing Assignment Maintenance. Use the table below to enter data for fields. Fill in the details here:

Field	Data Entered
Transaction Type	PICK-RE
Site	10-301
Warehouse	
Internal Routing	

Exercise - Define Zones for Replenishment Inventory



You define which zones the system uses for replenishment inventory using Replenishment List Maintenance.

Establishing a replenishment list allows you to define which zones are used for replenishment inventory in priority sequence.

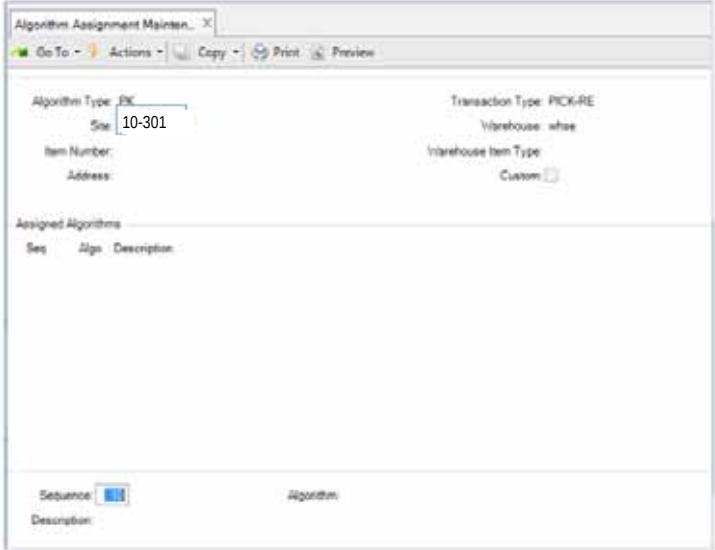
- 1 Use Replenishment List Maintenance to define the zones and priority for replenishment inventory. For QMI, all inventory is replenished from the Pallet storage zone. Use the following table to find the fields for which you enter data. Fill in the details here:

Field	Data Entered
Site	10-301
Replenishment List	
Description	Replenishment
Seq	10
Warehouse	
Storage Loc Group	

Exercise - Define Replenishment Picking Rules

Exercise

Define Replenishment Picking Rules



Algorithm Assignment Mainten...

Go To Actions Copy Print Preview

Algorithm Type: PK
Site: 10-301
Item Number:
Address:

Transaction Type: PICK-RE
Warehouse: whse
Warehouse Item Type:
Custom ☐

Assigned Algorithms

Seq	Algo	Description

Sequence: 10
Algorithm: 11

QAD WHREP-206

QMI management has a FIFO inventory preference.

Use Algorithm Assignment Maintenance to define picking rules for replenishment inventory. Use the table below to determine which fields to use and mandatory data to enter. Fill in the details here for other fields.

Field	Data Entered
Algorithm Type	PK
Transaction Type	Pick *
Site	10-301
Warehouse	
Sequence	10
Algorithm	11

Exercise - Set Up Replenishment Parameters for Forward Pick Locations

Exercise
Set Up Replenishment Parameters for Forward Pick Locations

Replenishment Location Maint

Go To Actions Copy Print Preview Attach

Site: 10-301
 Location:
 Item Number:
 Replenishment Type:
 Start Date:
 End Date:
 Replenishment UM:
 Replenishment Pt:
 Maximum Quantity:
 Replenishment List:
 Percent Full:
 Capacity:

Location -->	1.	2.	3.	4.	5.	6.
Site	10-301	10-301	10-301	10-301	10-301	10-301
Item Number	03120	03121	03210	03240	03130	03110
Warehouse						
Replenishment UM	EA	EA	EA	EA	EA	EA
Replenishment Pt	10	10	10	4	50	100
Maximum Quantity (optional)	100	100	100	40	500	1000

QAD WAREP/207

- 1 Define the items and replenishment points by location using Replenishment Location Maintenance. Use the table below to determine which fields to use and mandatory data to enter. Fill in the details here for other fields.

Location -->	1	2	3	4	5	6
Site	10-301	10-301	10-301	10-301	10-301	10-301
Item Number	03120	03121	03210	03240	03130	03110
Warehouse						
Replenishment UM	EA	EA	EA	EA	EA	EA
Replenishment Pt	10	10	10	4	50	100
Maximum Quantity (optional)	100	100	100	40	500	1000
Replenishment List						

Exercise - Generate Replenishment Tasks

Exercise

Generate Replenishment Tasks

Replenishment Request X

Go To Actions Copy Print Preview Attach

Site: 10-301 To:

Warehouse: To:

Internal Routing Group: To:

Storage Location Group: To:

Location: To:

Item Number: To:

Replenishment Type: To:

Item/Location Replenishment: ☐

Item/Storage Location Group Replenishment: ☐

Create Transactions: ☒

Include Area below Replenishment Point: 100

Location	Item	Quantity	LPN
1.			
2.			
3.			
4.			
5.			

QAD WM REP 200

With the current setup, you generate replenishment tasks manually using Replenishment Request. Enter your site and warehouse, and select Create Transactions to generate available replenishment tasks.

- 1 Review Inventory Detail Inquiry to observe pending replenishment tasks.
- 2 Use Movement Confirmation Workbench to complete open move tasks.

When done correctly, new inventory positions are in the forward pick locations, and inventory is decremented from the reserve pallet storage locations. Fill in the details here:

	Location	Item	Quantity	LPN
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

When this exercise is correct, new inventory positions are in the forward pick locations and inventory is decremented from the reserve Pallet storage locations.

Also, note several of the inventory positions do not have an LPN. Do you know why?

Questions

- 1 True or False. Replenishment is an optional configuration.
- 2 Replenishment can be defined by _____ or _____.
- 3 What is bulk reserve storage typically used for in a warehouse?
- 4 Replenishment is used in conjunction with a _____ storage and _____ pick strategy.
- 5 When the replenishment is generated, where does the system look for the replenishment flow to follow?
- 6 Replenishment is similar to _____ or _____ in manufacturing terms.

Answers

- 1 True. Replenishment is an optional configuration.
- 2 Replenishment can be defined for an location or zone.
- 3 Bulk Reserve storage is for larger unit loads (pallets).
- 4 reserve, forward
- 5 When the replenishment is generated, the system looks for the flow shown in the internal routing, defined in Internal Routing Maintenance.
- 6 kanban, re-order point

Notes

Chapter 4

Picking

Overview

QAD Warehousing Picking

QAD Warehousing

Field Readiness Team



 QAD

Our Passion. Your Advantage.

Objectives

QAD Warehousing Picking

Objectives

- Functional Fit
- Understand Picking Concepts
- Setup Picking
- Pick Orders

 QAD

WH-PK-020

There are extended picking features in QAD Warehousing that are not available in QAD EE.

Functional Fit: Picking

What we don't do so well

Functional Fit: Picking

Functionality	Fit	Notes
Pick & Pass across zones		
Voice-directed		Could support SDK
Display special pick instructions on RF		
Unpick option		
Cartonization		

[Legend](#)

 Partial

 None

 QAD

WM-PICK-1131

Pick and pass lets users pick items, for example to a box, then put the box onto a conveyor belt and pass it on to another picker who would add other items to the box.

Voice detection systems let users put a headset on the RF device, then listen to instructions on which location to report and pick. This is also known as hands-free picking.

Unpick options let staff remove items from a pick, for example when orders are cancelled.

Cartonization lets staff know the correct size of carton or box to use for the pick because they know ahead of time if the items to be picked fit into the box or item.

QAD Inventory Control Versus QAD Warehousing

QAD Inventory Control vs. WMS	
QAD Inventory Control	QAD Warehousing
One picking logic	Multiple picking logics per transaction type, item, item type, and/or warehouse
Entire site is considered	Picking by warehouse(s)
Pick only by date, expiry date, location OR lot	Pick by area, then by date, expiry date, and/or location
No splitting pallets/cases	Pick by full pallet, split pallets or boxes, SKU, optionally with overpicking
No RF picking	RF picking: • Normal picking • Bulk picking • Batch picking

QAD Warehousing offers more configurable picking options than standard QAD core.

Discrete, Bulk, and Batch

Discrete, Bulk and Batch

Types of Picking

- Discrete = One Order
- Batch= Multiple Orders, Sort on a Pick (aka Cluster)
- Bulk = Multiple Orders, Sort Later (aka Batch)

DYK:
Discrete is used for single order picks, bulk and batch are for multiple order picks

QAD WH-PICK050

Did You Know

Discrete is used for single order picks, bulk and batch are for multiple order picks.

Discrete picking is typically one order, system-like picking that does not include mechanisms to shorten picking or travel time.

In bulk picking, the orders that can be collected to form a bulk pick are sales, distribution, and works orders. These bulk picks accumulate the items together, and, using the defined picking rules, issue the instructions to the staff to pick the stock. The total item quantity is picked and sorted to individual orders during a subsequent step.

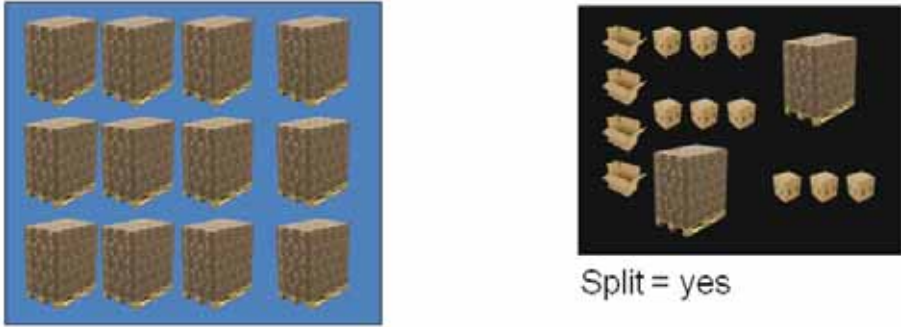
Batch picking lets warehouse staff pick items in a more efficient way. Batch picking reorders the order-picking sequence and tasks so warehouse staff can pick multiple items from multiple orders at various locations throughout the warehouse with a shortened travel sequence. The items are sorted to the individual orders during the pick process.

As a general rule, smaller warehouses use discrete order picking while higher volume (based on number of order picked) warehouses take advantage of batch picking. Bulk picking is used to a lesser degree.

Can You Split Unit Loads?

Can you split unit loads?

Picking Properties



Split = No

Split = yes

 QAD

WM-PICK-080

Did You Know

Splitting containers allows you to pick a less than full pallet, case, or box quantity.

QAD Warehousing lets you decide whether warehouse staff can split a unit --a container, box, or pallet --when picking inventory from a location. This is useful and may help you complete orders more efficiently. For example, you might want sales orders to be picked in whole packaging quantities from Bulk Storage, but then require whole packages be split in a Repackaging area.

Can You Overpick?



Did You Know

Over picking allows you to pick more inventory than what is specified on the pick task.

Over picking works in conjunction with split picking for better control. For example, when the quantity required for the pick does not match the unit of measure in which the item is stocked in the location, you can combine over picking and container splitting to pick the right amount.

Over pick is used mostly with replenishment.

Picking Levels Define Pick Zones

Picking Levels define pick zones

Picking Properties

Warehouse Start Picking Level: 10 End Picking Level: 30

Picking Level: 10 Picking Level: 20 Picking Level: 30

Picking Level: 40 Picking Level: 50

QAD WH Picking

Did You Know

Picking levels are used to determine the zone priority for selecting inventory.

QAD Warehousing lets you assign a picking level to each zone. You can set default start and end picking levels in Warehouse Maintenance or by using Warehouse Transaction Type Maintenance. These start and end settings determine the picking levels to be used for the pick. The system then looks for inventory in the storage location groups that correspond to the specified range of picking levels. In addition to specifying a start and end picking level, you can specify whether all picking must be taken from only one picking level.

Picking levels define which storage location groups the system should use for picking inventory.

Discrete Picking



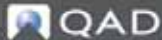
Discrete picking is typically one order, system-like picking that does not include mechanisms to shorten picking or travel time.

Discrete Picking - One Order at a Time

Discrete picking = 1 order at a time

Discrete Picking Setup

1. Set up Areas, Zones and Locations
2. Define Zone Picking Levels
3. Assign picking levels to Zones
4. Set up Internal Routings
5. Assign picking Transaction Types
6. Assign Algorithms to the picking transaction types



WH-PK-100

Follow these steps to enable discrete picking:

- 1 Use Work Location Group Maintenance to set up WLGs or zones and use Warehouse Location Maintenance to set up locations.
- 2 Use Warehouse Maintenance to set up picking levels.
- 3 Use Storage Location Group Maintenance to set up picking levels for zones
- 4 Use Internal Routing Maintenance to set up routings for picking functions.
- 5 Use Internal Routing Assignment to assign picking transaction types.
- 6 Use Algorithm Assignment Maintenance to assign algorithms to the transaction types.

Set Up Storage and Picking Area

1. Setup a storage and picking Area...

Internal Routing Group Maintenance

Site: 10-301

Warehouse: 01

Internal Routing Group: 040

Description: Storage

Functional: ☐

SLG Default Values

Allow Issues: ☒

Allow Receipts: ☒

Allow Outgoing Returns: ☒

Allow Incoming Returns: ☒

10-301

01

Receive (010)

Storage (040)

010RC

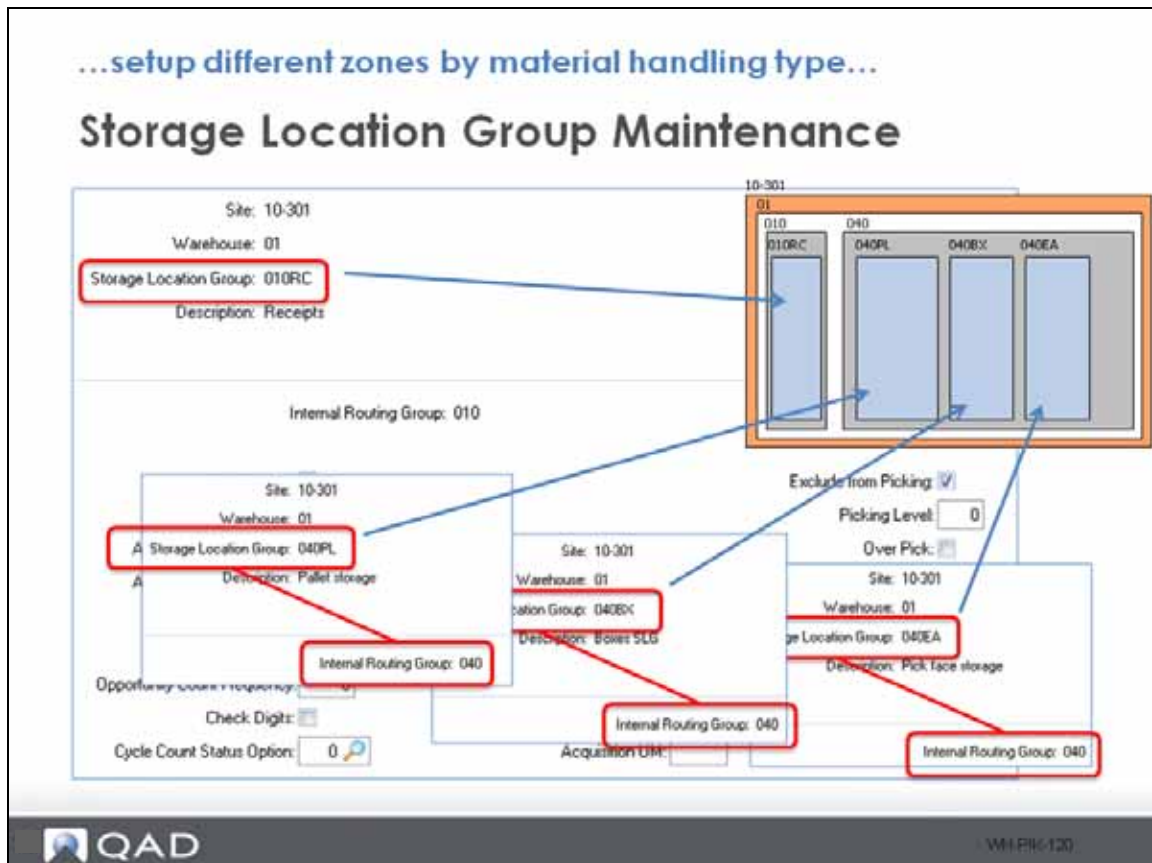
010RC001

QAD

WH-PK-110

Use Internal Routing Group Maintenance to set up a non-functional storage area. This area has multiple zones for picking.

Set Up Different Zones by Material Handling Type



Use Storage Location Group Maintenance to set up picking levels and other picking parameters.

In this example, there are three zones:

- One for reserve (bulk) storage, 040PL
- One for box storage and picking, 040BX
- One for each storage and piking, 040EA.

Note the picking level of the zones:

010RC = 0

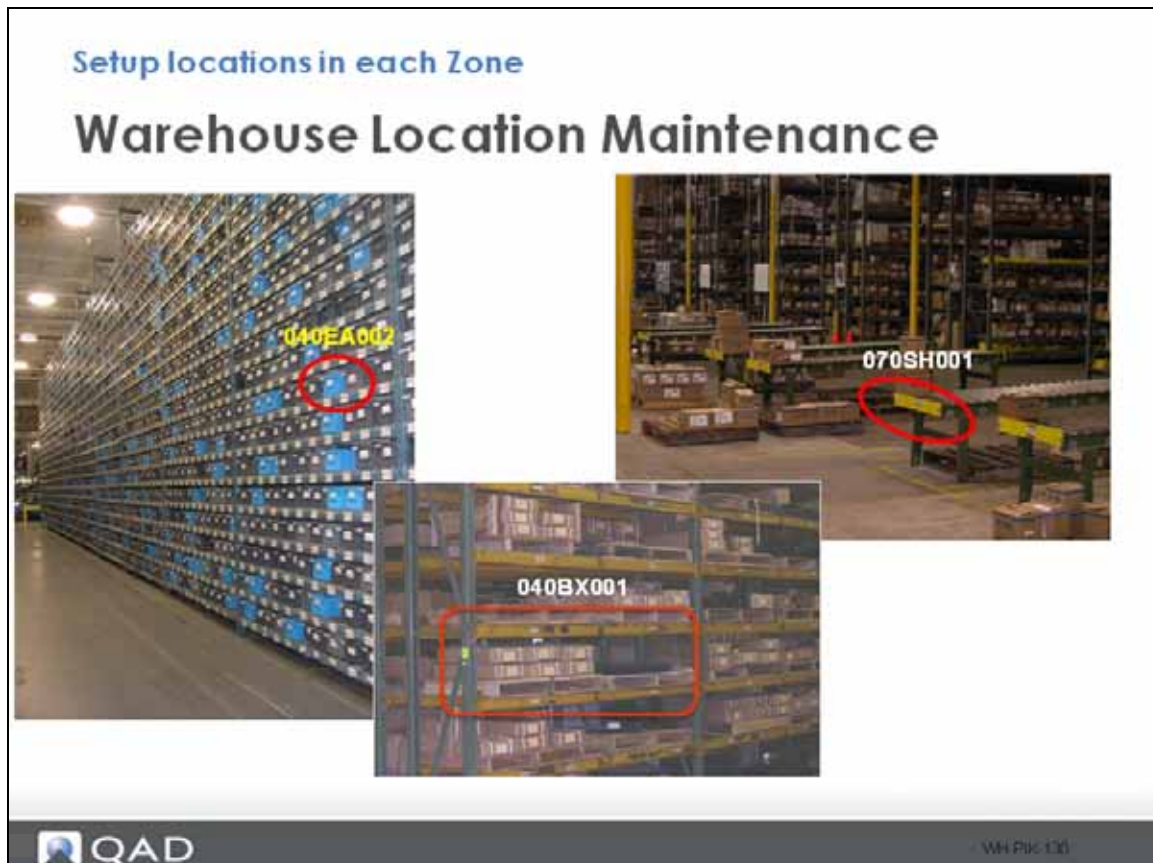
040PL = 10

040BX = 20

040EA = 30

Pick level relevance is discussed later in this section.

Set Up Locations in Each Zone



Locations should also be setup in each zone using Warehouse Location Maintenance.

Define Which Zones are Available for Picking

2. Define which Zones are available for picking

Warehouse Maintenance

Site: 10-301
Warehouse: 01

Picking

Start Picking Level: 10

End Picking Level: 30

Single-Level Picking: ☐

Max Trans Assign: 0

Def ID Print Flav C: ☐

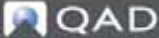
Repick Type:

Flav C Hard/Soft: Hard

Multi-Bin Pick Flavor C Sort: 0

Allow Switch Lot Ref: ☐

Expire Date (Days): 0




The fields in the picking frame in Warehouse Maintenance default to the picking frame fields in Storage Location Group Maintenance. So, you can define the Zone picking parameters in Warehouse Location Maintenance that the system uses for picking inventory.

Going back to the Warehouse Maintenance menu, set up the start and end picking levels to define the range of zones the systems use to satisfy pick tasks.

These picking levels associate back to the picking level parameters setup in storage location group maintenance (Step 1).

In this example, picking starts in 040PL move to 040BX and end in 040EA if needed.

Assign Picking Levels to Zones

3. Assign Picking Levels to Zones – Links back to Warehouse Maintenance

Storage Location Group Maintenance

Site: 10-301 Warehouse: 01

Storage Location Group: 040PL Description: Pallet storage

UM: PL Split: Over Pick: Pick Multi UM: PL

Internal Routing Group: 040

Allow Issues: ☒ Allow Receipts: ☒ Allow Incoming Returns: ☒ Allow Outgoing Returns: ☒

Exclude from picking: ☒ Picking Level: 10 Over Pick: Multi Trans: Picking Multiple UM: PL Detail Overflow Group:

Site: 10-301 Warehouse: 01

Storage Location Group: 040BX Description: Boxes 2x5

UM: Bx Split: Over Pick: Pick Multi UM: Bx

Picking Level: 20

Site: 10-301 Warehouse: 01

Storage Location Group: 040EA Description: Pick face storage

UM: Split: Over Pick: Pick Multi UM:

Picking Level: 30

QAD WHPK1193

Each zone has a picking level defined. Any zone with a picking level that is not between the start and end levels you specify here is not considered by the picking algorithms in this warehouse.

When setting up zones for picking, you can also setup the associated pick unit of measure (Pick Multi UM).

In this example, pallets are picked from 040PL, boxes from 040BX and each (<blank> Pick Multi UM) from 040EA.

Define Product Flow Path for Picks

4. Define product flow path for picks

Internal Routing Maintenance - Pick

Site: 10-301 Warehouse: 01 Internal Routing: 01PCK

Description: Picking

Sequence: 10 Internal Routing Group: 040

Transaction Create

Confirmed at Source: ☐ Task: PICK

System Code: RF Priority: 10

Two Phase: ☒ Increment: 1

Keep From Status: ☒

Transaction Confirmation

From Location Option: 0

From Item Option: 0

From Lot/Serial Option: 0

From Reference Option: 0

Allow Quantity Increase: ☐

Allow Quantity Decrease: ☒

Quantity Change Option: 0

Site: 10-301 Warehouse: 01 Internal Routing: 01PCK

Description: Picking

Sequence: 20 Internal Routing Group: 060

Transaction Create

Confirmed at Source: ☒ Task: PICK

System Code: RF Priority: 10

Two Phase: ☒ Increment: 1

Keep From Status: ☒

QAD WH Pick 160

As with all other product flows, an internal routing (01PCK) is set up, linking storage area 040 to the packaging area 060 using Internal Routing Maintenance.

In QMI, all picks are routed to Packaging.

Assign Flow Paths to Picking Transactions

5. Assign flow paths to picking transactions

Internal Routing Assignment Maintenance

Transaction Type: PICK-*
Site: 10-301
Warehouse: 01
Item Number:
Warehouse Item Type:
Address:
Custom: ☐
Internal Routing: 01PCK
Custom Program:

1. When this transaction type is created...
2. And is associated to theses...
3. This material flow is initiated.

QAD WH Pick/170

The pick routing (01PCK) is then assigned to the PICK-* transaction at the site and warehouse. The routing can also be based on combinations of item number, warehouse item type and address (in this example, the customer address).

Define Product Movement Rules to Use for Transaction

6. Define the product movement rules to use for the Transaction

Algorithm Assignment Maintenance

Algorithm Type: PK

Site: 10-301

Item Number:

Address:

Transaction Type: PICK-*

Warehouse: 01

Warehouse Item Type:

Custom: ☐

Assigned Algorithms

Seq	Algo	Description
10	9	Pick by Level by Location

Finally, use Algorithm Assignment Maintenance to define the picking rules for the PICK-* transaction.

In this example, when any pick task is created, the system picks by level, then location. This means the zones are prioritized by the Picking Level field (10, 20, 30) then within each zone, locations are searched in descending alpha-numeric sequence.

Example - Set Up and Execute a Discrete Pick

Example

Setup and execute a discrete pick

- Create an order and run pick-list or pre-shipper
- Use RF to pick orders
- Review what happens as items are picked
- Review inventory positions post pick

Example - Discrete Picking

Example: Discrete Picking

Create a sales order for 126 each, 03120

Sales Order Maintenance

Header						
Order: WMS-501	Sold To: 10C1005	Ln For: Single	Org:			
Sales Order Line						
Ln	Item Number	Qty Ordered	UOM	List Price	Discount	Net Price
1	03120	126.0	EA	3.25	0.0	3.25






WMS-501

In this exercise, you use Sales Order Maintenance to create a sales order for 126 each for item 03120.

This lets you test picking unit of measure quantities by zone:

- 1 pallet (100 each) from 040PL
- 2 boxes (20 each) from 040BX
- 6 eaches from 040EA

Example - Discrete Picking, Zones

Example: Discrete Picking

There is enough inventory in all Zones

QAD

Site: 10-301 Item Number:
Warehouse: Location: Lot/Serial:
Reference:
Warehouse: 01 Warehouse 1

Display
Disp Non
0

Item Location Lot	Status Ref	Qty UM	On Hand	In	Expect	Expect Out
040BX001 03120	Y-Y-N PL000074	EA	80			
040EA001 03120	Y-Y-N PL000075	EA	40			
040PL001 03120	Y-Y-N PL000072	EA	100			
040PL001 03120	Y-Y-N PL000073	EA	100			

Notice there is enough inventory in all three pick zones.

Box
Each
Pallet

QAD WHP90

Use Inventory Detail Inquiry to verify enough inventory exists in all zones.

Before releasing the order for picking, validate there is enough inventory of each unit of measure quantity in the associated zones:

Zone	Minimum Inventory
040PL	100 each
040BX	20 each
040EA	6 each

Example - Discrete Picking, Release Order

Example - Discrete Picking, Release Order

Release the sales order to the warehouse

Pick-List/Pre-shipper - Automatic

Due Date:

Sales Order: WMS-S01

Ship To:

Language ID:

Site:

Address List Type:

Item Number:

Reference:

To:

To:

Ship To: 10C1005

Rockland Industrial Company

566 Rockland Boulevard

Rockland, NJ 21216

USA - TAX PURPOSE

PICKLIST / PRE-SHIPPER

Pre-Shipper: PS0906110001

Page:

Print Date: 09/06/11

Sales Order: WMS-S01 Order Date: 09/06/11 Ship To PO:

Ln	Item Number	Site T Location	Lot/Serial Ref	Qty Open UM	Due Shipped
1	03120	10-301			
	Scented Disinfectant Pump				
	040BX001		PL000074	20.0	()
	040EA001		PL000075	6.0	()
	040PL001		PL000072	100.0	()

QAD

WM-PICK-220

Use Picklist/Pre-Shipper - Automatic to release the sales order and generate pick tasks. The picklist shows the locations from which items should be picked.

Example - Discrete Picking, Review Pick Activity

Example - Discrete Picking, Review Pending Pick

Review the pending pick activity

The screenshot shows the QAD Inventory Detail Inquiry screen. The title bar includes the QAD logo and the text 'Inventory Detail Inquiry' and '09/1'. The screen displays the following information:

Site: 10-301 Item Number: Display Whse Loc: No
Warehouse: Lot/Serial: Disp Non-Whse Loc: No
Location: Reference: Output: PAGE
Warehouse: 01 Warehouse 1

Item Location	Lot	Status Ref	Qty UM	On Hand	In	Expect Out	Expect Alloc	Detail Pick
040BX001	03120	Y-Y-N PL000074	EA	80		20		20
040EA001	03120	Y-Y-N PL000075	EA	40		6		6
040PL001	03120	Y-Y-N PL000072	EA	100		100		100
040PL001	03120	Y-Y-N PL000073	EA	100				
060PA001	03120	Y-Y-N PL000072	EA		100			
060PA001	03120	Y-Y-N PL000074	EA		20			
060PA001	03120	Y-Y-N PL000075	EA		6			

The QAD logo is visible in the bottom left corner, and the text 'WH P&C 233' is in the bottom right corner.

When the order is released pick tasks are created. Use Inventory Detail Inquiry to validate the test results:

Pick Quantity	Location
20	040BX001
6	040EA001h
100	040PL001

Bonus Coverage

Bonus Coverage – Pick Strategies

The diagram illustrates a warehouse layout with the following areas:

- Area = Receipts (010)**
- Storage (040)**
 - Pallet Storage (040PL)**
 - 040PL001 (17-Jul-11)
 - 040PL002
 - 040PL003 (14-May-11)
 - 040PL004 (12-Dec-10)
 - 040PL005
 - 040PL006
 - Box Storage (040BX)**
 - Each Storage (040EA)**
- Shipments (070)**
 - Ship (070SH)**

The diagram is labeled **INBOUND** on the left and **OUTBOUND** on the right. A red circle highlights the four pallets in the Pallet Storage area: 040PL001, 040PL002, 040PL003, and 040PL004. A red question mark is placed next to the circle. A text box with two questions is overlaid on the diagram.

1. With the current pick rule, 9 – Pick by Level by Location, which pallet will be picked first?
2. If you change the pick rule to 3 – Pick by Date, which pallet will be picked first?

QAD WMS-PKH-240

The pick rule used determines which inventory is selected for picking.

- 1 With the current pick rule, 9 - Pick by Level by Location, which pallet is picked first?
- 2 If you change the pick rule to 3 - Pick by Date, which pallet is picked first?

Bonus Coverage - Pick Strategies

Bonus Coverage – Pick Strategies (ANSWER)

Area = Receipts (010)

Storage (040)

Pallet Storage (040PL)

Box Storage (040BX)

Each Storage (040EA)

Shipments (070)

Ship (070SH)

INBOUND

OUTBOUND

1. With the current pick rule, 9 – Pick by Level by Location, which pallet will be picked first?

2. If you change the pick rule to 3 – Pick by Date, which pallet will be picked first?

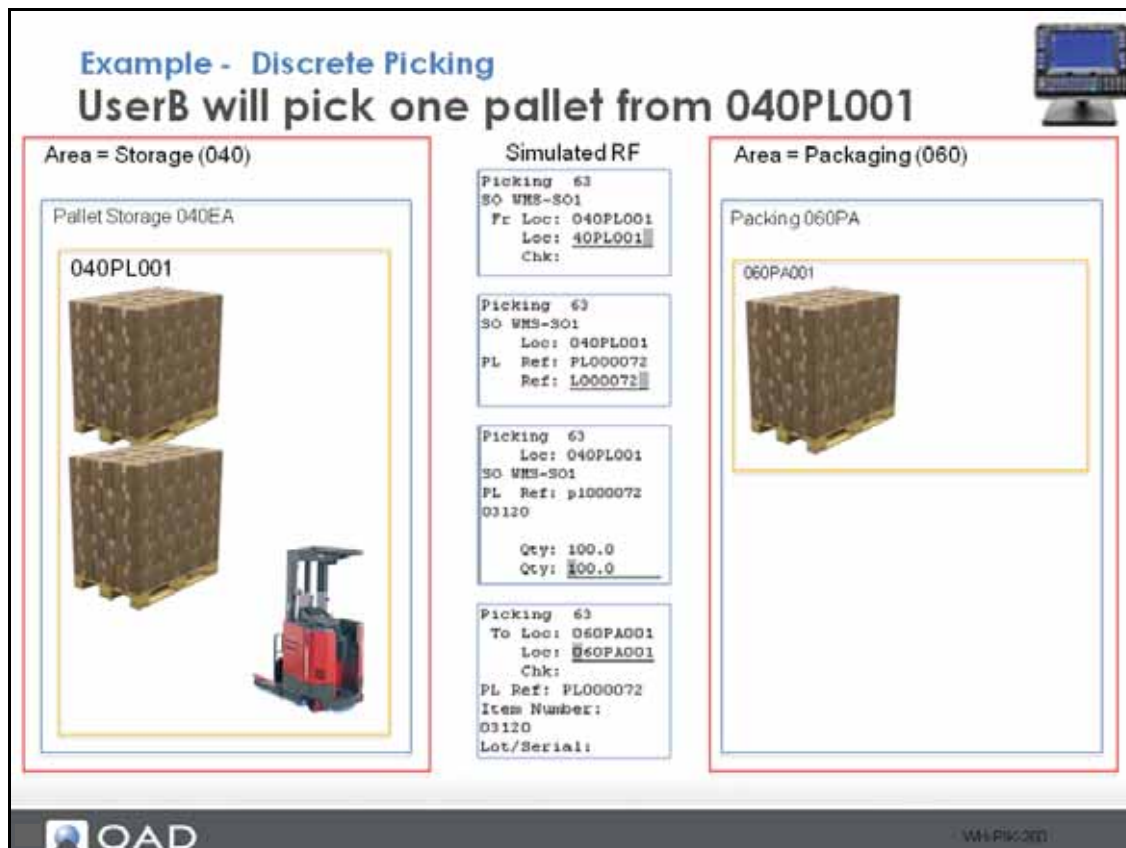
QAD

WH-Pick-350

Note that:

- 1 Pick by Level by Location first looks at the assigned zone pick level in ascending order, 10, 20, 30, then the Location in ascending alpha-numeric sequence. If the zone pick level is within the pick range per Warehouse Maintenance, (Start Pick Level = 10, End Pick Level = 30), QAD Warehousing first looks in PL (level 10) for available inventory. It then selects inventory based on alphanumeric sequence 1, 2, 3, 4, and so on.
- 2 Changing the pick rule to 3, Pick by Date, the system selects the oldest date inventory first assuming the zone is in the pick zone range.

Example - Discrete Picking, User Picking Pallet



Example - Discrete Picking
UserB will pick one pallet from 040PL001

Area = Storage (040)
 Pallet Storage 040EA
 040PL001

Simulated RF

```
Picking 63
SO WMS-SO1
Fr Loc: 040PL001
Loc: 040PL001
Chk:

Picking 63
SO WMS-SO1
Loc: 040PL001
PL Ref: PL000072
Ref: L000072

Picking 63
Loc: 040PL001
SO WMS-SO1
PL Ref: p1000072
03120
Qty: 100.0
Qty: 100.0

Picking 63
To Loc: 060PA001
Loc: 060PA001
Chk:
PL Ref: PL000072
Item Number:
03120
Lot/Serial:
```

Area = Packaging (060)
 Packing 060PA
 060PA001

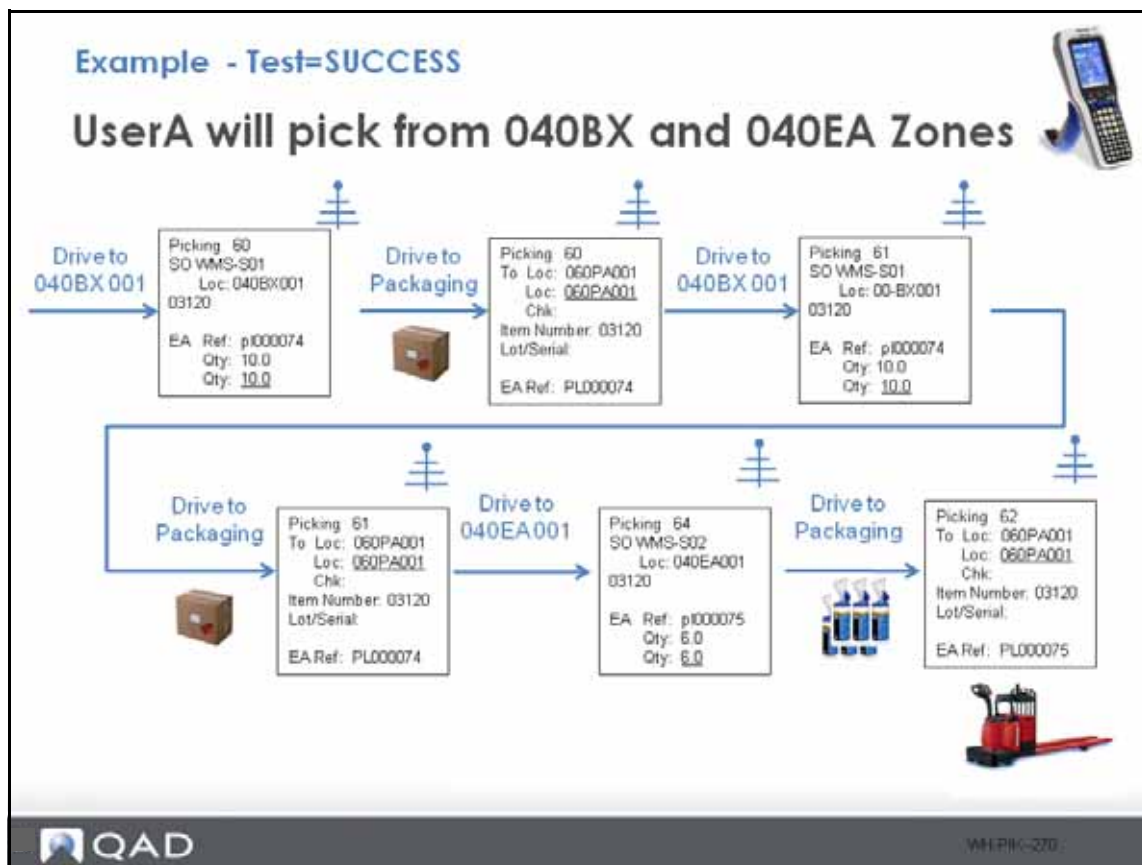
QAD WMS-PICKING

To process the example order, log into RF (Putty) with both UserA and UserB.

UserB gets the first pick task for 100 each from location 040PL001. The load is picked via RF and dropped to a packaging location, 060PA001.

When dropping the load in packaging, assign an LPN. This can be the same LPN that was picked or a different number. This helps track the consolidated order and subsequent movement or shipping.

Example - Discrete Picking, Test=Success



The RF screen flow show data for the picking exercise. You can zoom in on the screen above to see the actual data in the RF fields.

The other tasks, pick 20 each from 040BX and 6 from 040EA are processed by UserA using RF.

When the items are dropped they are either associated to the same LPN as the pallet pick of a new LPN is assigned. The system keeps the LPNs linked for shipping.

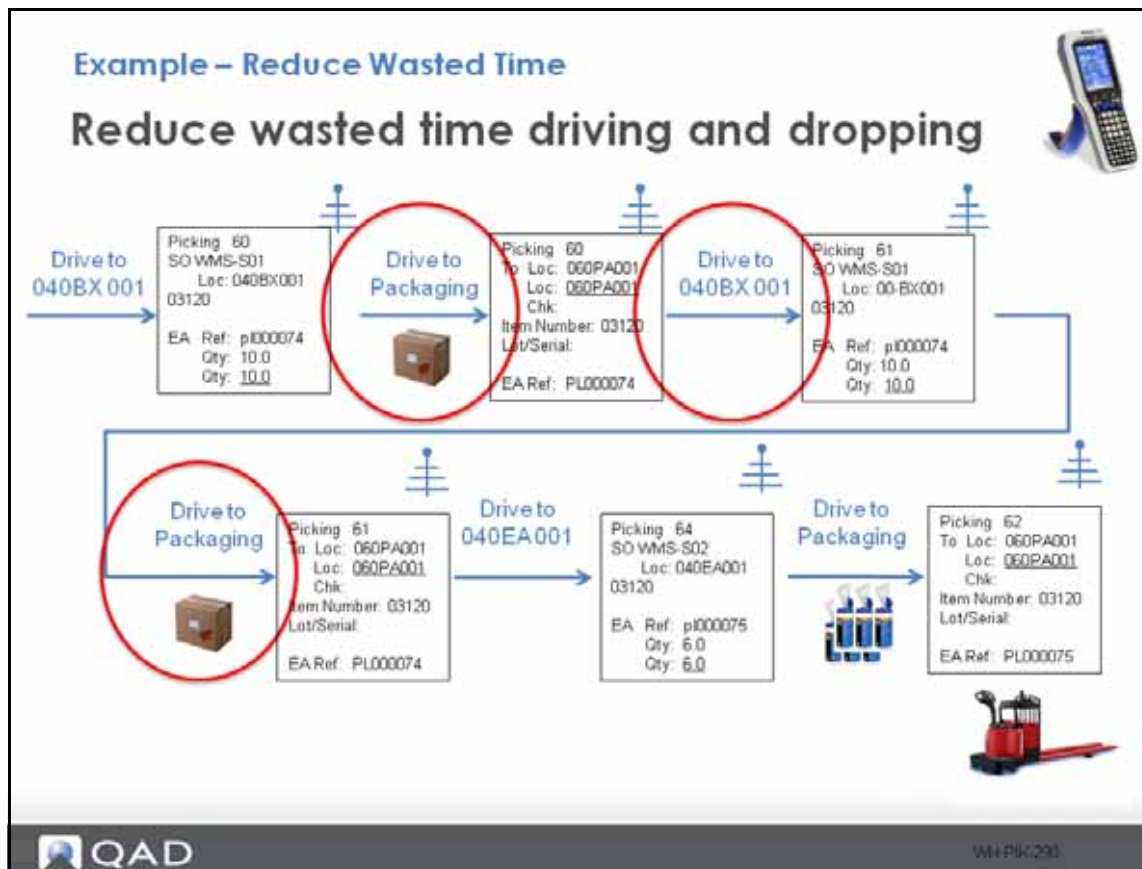
Discrete Picking Learning Points

Discrete Picking

Two Key Learning Points

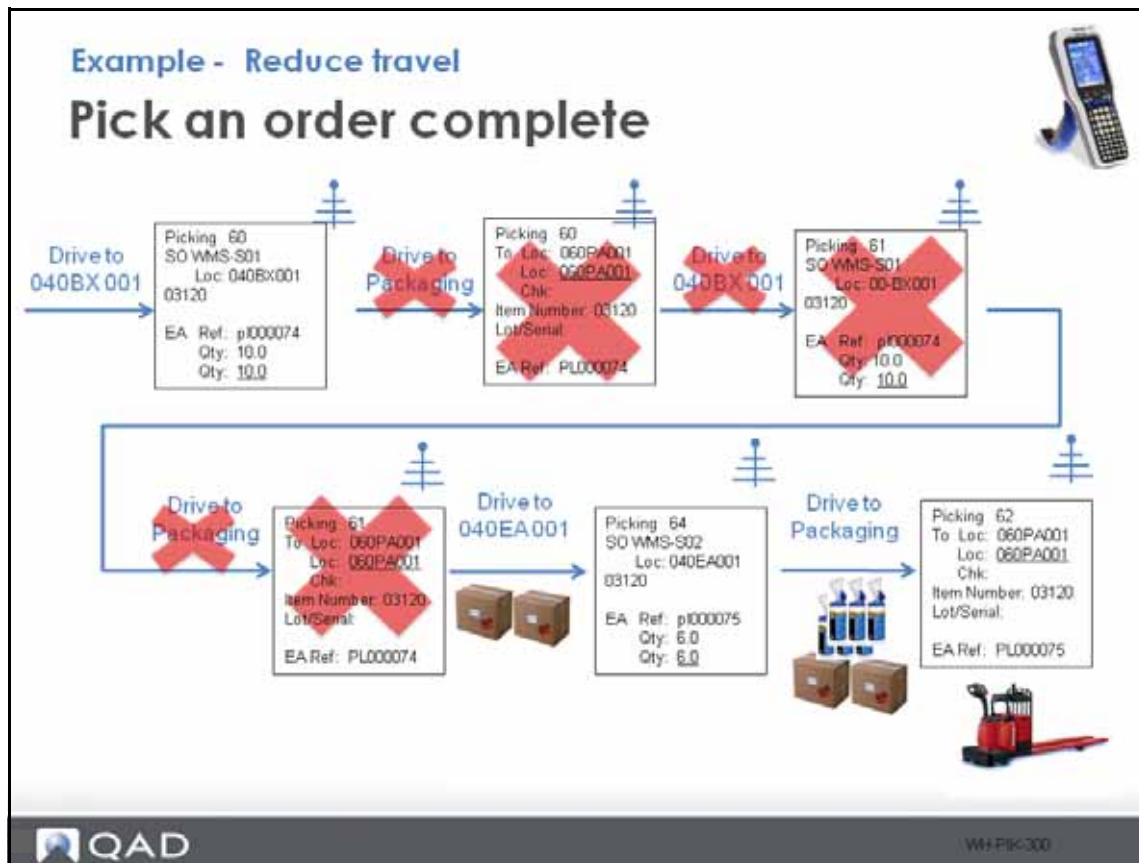
1. QAD Warehousing optimizes picking by the most efficient handling unit of measure
2. The previous box and each pick process can be improved...how?

Example - Reduce Wasted Time Driving and Dropping



In this discrete pick example, there is still significant time wasted driving back and forth between picking and packaging.

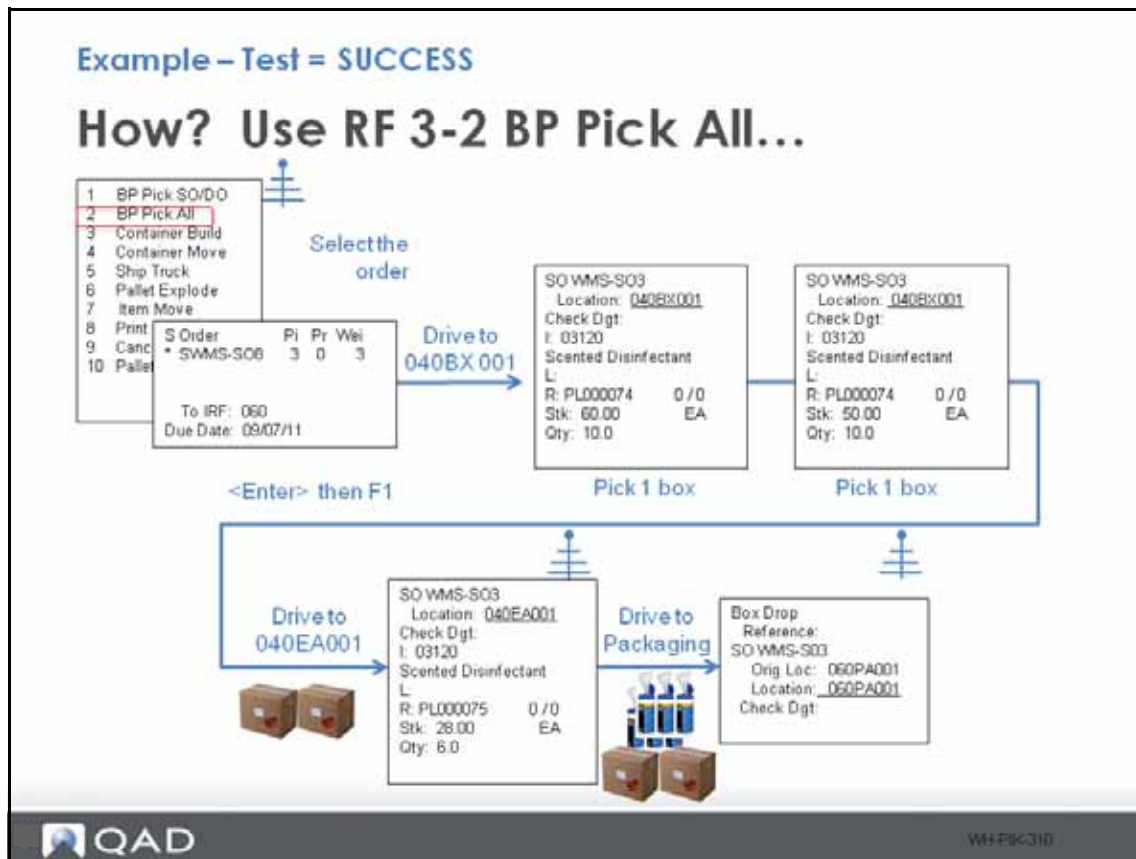
Example - Reduce Travel



These trips can potentially be reduced to one using the RF Batch Pick feature, but for only one order.

This assumes two boxes and six eaches can be handled by one operator and the operator has access (with equipment) to the inventory.

Example - Test=Success



Batch picking drives warehouse staff to pick items in a more efficient way. The time it takes to travel through the warehouse completing tasks at various locations, or the travel sequence, constitutes the largest amount of time involved when picking items from a warehouse. Batch picking functionality reorders the order-picking sequence and tasks so that warehouse staff can pick multiple items from multiple orders at various locations throughout the warehouse with a shortened travel sequence.

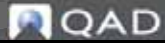
The new process does not require a system configuration change, only a change to the RF function used for picking. UserA would log into RF 3.2 (BP Pick All) and select the one order.

Batch Picking

QAD Warehousing Picking

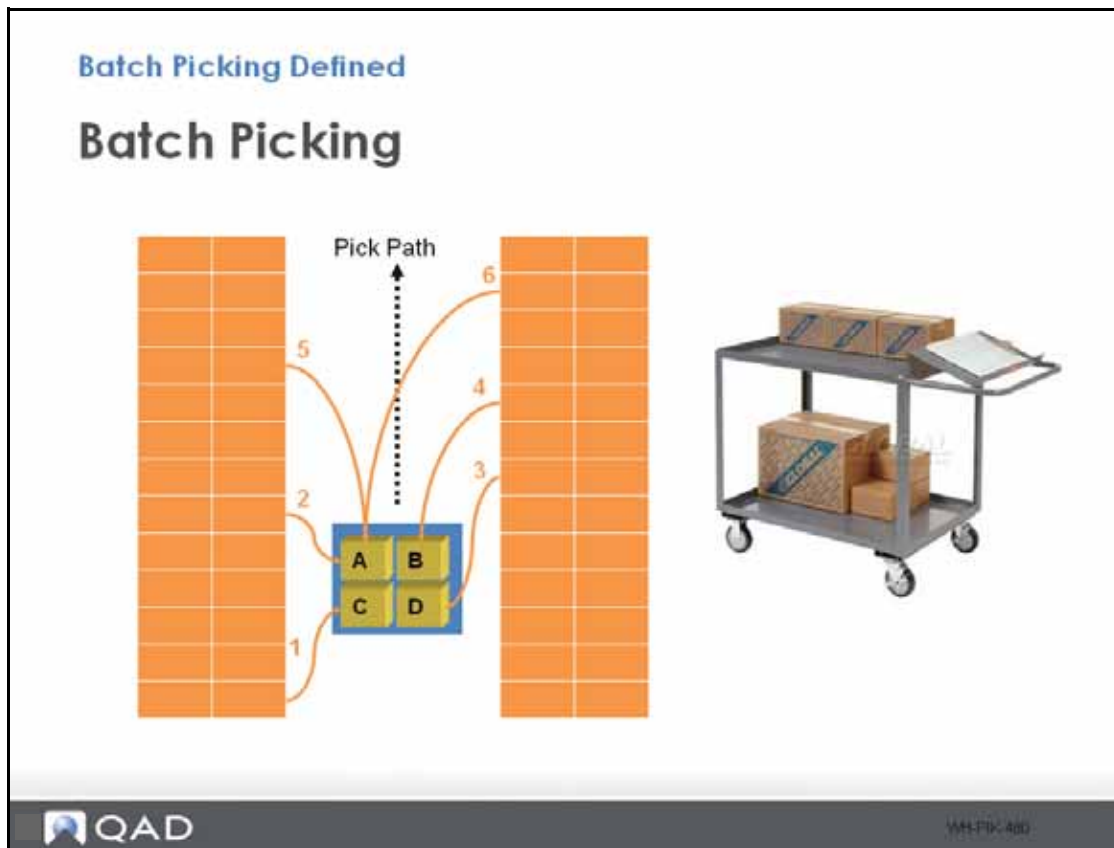


Batch Picking



WM-Pick470

Batch Picking Defined



Discrete picking relies on pick-lists generated through QAD EE, but batch picking uses more sophisticated algorithms in QAD Warehousing.

Batch pick allows an operator to pick multiple orders at the same time to minimize operator travel time. Cartonization helps here but is not required or offered by QAD Warehousing.

Batch Picking is best for companies working with small/medium size items and small volumes but many order lines.

Batch Picking Process

Using Batch Picking

Batch Picking Process

- Ensure the orders have an existing pre-shipper.
- Select orders in the RF
- Pick the items
- Confirm picking tasks in the RF

Example - Batch Picking Setup and Execution

Example – Batch Picking Setup and Execution

Batch Picking Setup & Execution

1. Assign users to a work location group
2. Specify users as locations (optional)
3. Set batch-picking control parameters
4. Setup and release multiple orders
5. Pick orders using RF

WH FHS-502

Did You Know

Batch Picking is best for:

- Small items with small volumes
- Multiple order lines
- Multi-bin items for single order

Batch Picking Control consists of several frames that control much more than picking.

Next, you review some of the main configuration fields and walk through a batch pick process.

Example 1- Assign Users to a WLG

Example 1. Assign users to a work location group

User Work Location Group Maintenance

Site: 10-301
Warehouse: 01
Work Location Group: 01CT
User ID: UserA

System Flavor: A ▼

Device:

External Device Printer: 

Form Printer:  Use External: ☒

ID Printer:  Use External: ☒

Task Printer:  Use External: ☒

Inspection Printer: Use External: ☒

 QAD WH-PICK510

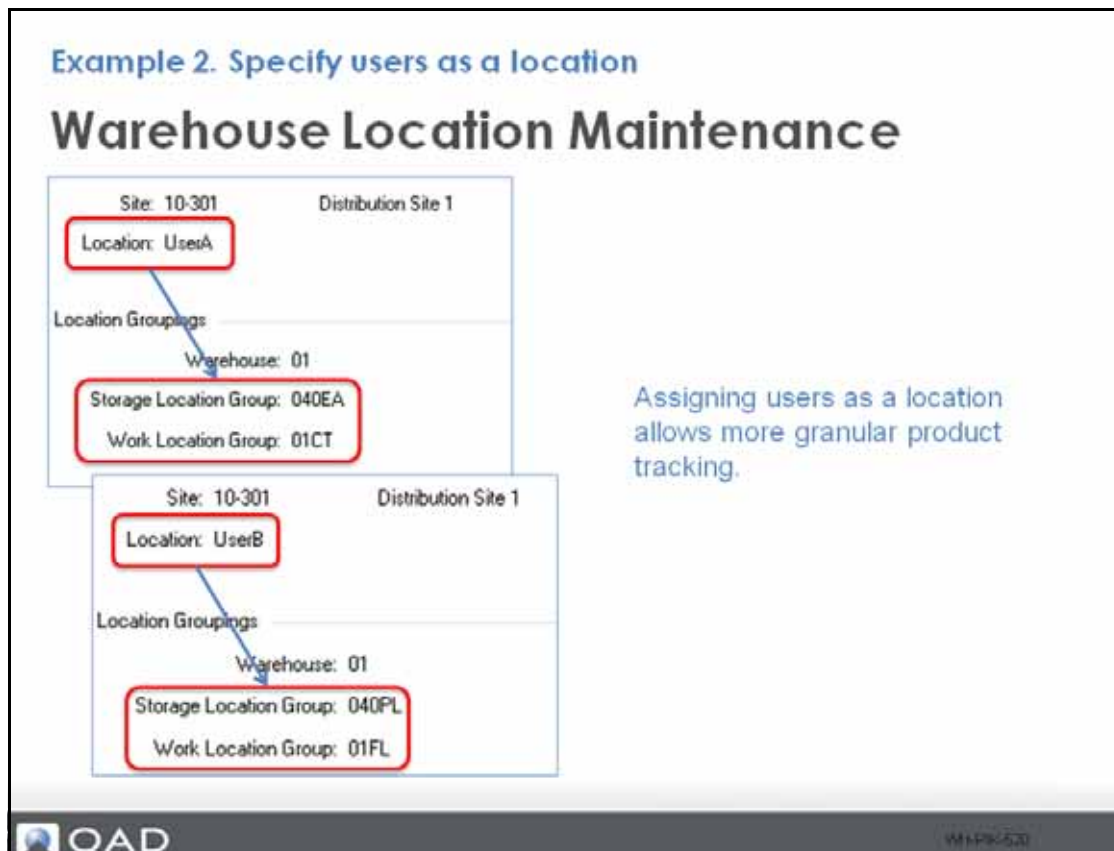
Did You Know

Use User Work Location Group Maintenance to assign users to a workgroup location and set printing options.

You must set a system flavor code for users in workgroup to specify the code to define the style and format of screens for displaying warehouse information.

A User (UserA) is assigned to the cart pick work location group 01CT. This ensures a user receives the pick task when logging into RF.

Example 2- Specify Users as a Location



To allow tracking product between storage and staging locations, it is helpful to setup each user as a location.

When the user picks an item, inventory inquiries show the inventory in the user location until they confirm a drop to the destination location. This helps track inventory (and remove inventory from origin locations) during long batch pick cycles.

Example 3 - Set Batch Picking Control Parameters

Example 3 - Set Batch Picking Control parameters

Batch Picking Control

Site: 10-301 Distribution Site 1
Warehouse: 01 Warehouse 1

S Order	Pk	Pr	Wgt
*SS05749	1	22	18
SS05745	2	1	28
SS05746	2	1	15
D610	1	0	10

To IRG: Dispatch
Due Date: 10/30/09

Include Sales Orders: ☒
Include Distribution Orders: ☒
Include Work Orders: ☒
SO/DO Batch Selection: Order
Allow Merge Orders: ☐
Close Option: 0
Auto Selection: ☐
Maximum Selection: 99
Maximum Picked Cases: 99
Container/Reference: Reference
Container Sequence ID:
Container Item:
Container Unit of Measure: BX

Scan Location: ☒
Scan Item Number: ☒
Scan Lot/Serial: ☒
Scan Reference: ☒
Scan Quantity: ☒
Single Packing Location: ☐
Default Packing Location:
Label Print Option: 0
Post-Print Option: 0
Label Print Program:
Weight UM: KG
Logical Format: 1/0

QAD WH-PICK-300

Did You Know

Batch Picking can include:

- Sales orders
- Distribution orders
- Work orders

Batch Pick Control lets you define many Batch Pick parameters, such as types of orders to batch, maximum number of orders and/or cases to batch, and RF scanning requirements.

There are eight frames and 54 fields in Batch Picking Control used for configuration.

Example 3 - Set Batch Picking Control Parameters (Continued)

Example 3 - Set Batch Picking Control Parameters (Cont'd)

Batch Picking Control (cont)

Site: 10-301 Distribution Site 1
Warehouse: 01 Warehouse 1

Include Sales Orders: ☒
Include Distribution Orders: ☒
Include Work Orders: ☒
SO/DO Batch Selection: Order
Allow Merge Orders: ☐
Close Option: 0
Auto Selection: ☐
Maximum Selection: 99
Maximum Picked Cases: 99
Container/Reference: Reference
Container Sequence ID:
Container Item:
Container Unit of Measure: BX

Scan Location: ☒
Scan Item Number: ☒
Scan Lot/Serial: ☒
Scan Reference: ☒
Scan Quantity: ☒
Single Packing Location: ☐
Default Packing Location:
Label Print Option: 0
Post-Print Option: 0
Label Print Program:
Weight UM: KG
Logical Format: 1/0

Order

#	Order	Pk	Pr	Wgt
805748		1	77	14
805747		2	55	21
805749		1	22	18
805745		2	1	28
805746		2	1	15

To IRG: Dispatch
Due Date: 10/30/09

Customer

#	Customer	Pk	Pr	Wgt
009		1	77	14
001a		2	55	21
4001		1	22	18
00010000		4	1	43

To IRG: Dispatch
Due Date: 10/30/09

Pre-Ship

#	Pre-Ship	Pk	Pr	Wgt
PATMR5		1	77	14
PATMR4		2	55	21
PATMR6		1	22	18
PATMR3		4	1	43

To IRG: Dispatch
Due Date: 10/30/09

QAD WM-PK-301

The SO Batch Selection field determines if orders, customers or pre-shipper reference numbers display on the RF screen during BP All selection on the RF device.

Example 3 - Set Batch Picking Control Parameters (Continued)

Example 3 - Set Batch Picking Control Parameters (Cont'd)

Batch Picking Control(cont)

Site: 10-301 Distribution Site 1
Warehouse: 01 Warehouse 1

Include Sales Orders: ☒
Include Distribution Orders: ☒
Include Work Orders: ☒
SO/DO Batch Selection: Order
Allow Merge Orders: ☐
Close Option: 0
Auto Selection: ☐
Maximum Selection: 99
Maximum Picked Cases: 99
Container/Reference: Reference
Container Sequence ID:
Container Item:
Container Unit of Measure: BX

Scan Location:
Scan Item Number:
Scan Lot/Serial:
Scan Reference:
Scan Quantity:
Single Packing Location:
Default Packing Location:
Label Print Option: 0
Post-Print Option: 0
Label Print Program:
Weight UM: KG
Logical Format: 1/0

28628 3/ 4
SO: 805746
**Can not merge Orders
CT001 is for
Order 805745**
R: 0/10
stk: 492.00 EA
Qty: 3.00 EA
Container: CT001

QAD VM-PK-382

The Allow Merge Order field determines if the user can combine items from different orders into the pick container.

Example 3 - Set Batch Picking Control Parameters (Continued)

Example: 3 - Set Batch Picking Control Parameters (Cont'd)

Batch Picking Control(cont)

Site: 10-301 Distribution Site 1
Warehouse: 01 Warehouse 1

Include Sales Orders: ☒
Include Distribution Orders: ☒
Include Work Orders: ☒
SO/DO Batch Selection: Order
Allow Merge Orders: ☐
Close Option: 0
Auto Selection: ☐
Maximum Selection: 99
Maximum Picked Cases: 99
Containers/Reference: Reference
Container Sequence ID: |
Container Item: |
Container Unit of Measure: BX

Scan Location: To IRG: Dispatch
Scan Item Number: Due Date: 10/30/09
Scan Lot/Serial: |
Scan Reference: ☒
Scan Quantity: ☒
Single Packing Location: ☐
Default Packing Location: |
Label Print Option: 0
Post-Print Option: 0
Label Print Program: |
Weight UM: KG
Logical Format: 1/0

S	Order	Pk	Pr	Wgt
	SO5748	1	77	14
	SO5747	2	55	21
	SO5749	1	22	18

QAD

The Maximum Selection field determines the number of orders, customers or pre-shippers to display on the RF screen during BP Pick All processing.

Example 3 - Set Batch Picking Control Parameters (Continued)

Example 3 - Set Batch Picking Control Parameters (Cont'd)

Batch Picking Control(cont)

Site: 10-301 Distribution Site 1
Warehouse: 01 Warehouse 1

Include Sales Orders: ☒
Include Distribution Orders: ☒
Include Work Orders: ☒
SO/DO Batch Selection: Order
Allow Merge Orders: ☐
Close Option: 0
Auto Selection: ☐
Maximum Selection: 99
Maximum Picked Cases: 99
Containers/Reference: Reference
Container Sequence ID:
Container Item:
Container Unit of Measure: BX

Scan Location:
Scan Item Number:
Scan Lot/Serial: ☒
Scan Reference: ☒
Scan Quantity: ☒
Single Packing Location: ☐
Default Packing Location:
Label Print Option: 0
Post-Print Option: 0
Label Print Program:
Weight UM: KG
Logical Format: 1/0

S	Order	Pk	Pr	Wgt
	SO5748	1	77	14
	SO5747	2	55	21
	SO5749	1	22	18
	SO5745	2	1	28
	SO5746	2	1	15

To IRG: Dispatch
Due Date: 10/30/09

QAD VMI-Pick 201

The Maximum Picked Cases field determines how many orders the user can pick at the same time during BP All processing.

This is typically determined by how many pick cartons fit on a pick cart considering volume, weight, quality, and operator-handling constraints.

Example 3 - Set Batch Picking Control Parameters (Continued)

Example 3 - Set Batch Picking Control Parameters (Cont'd)

Batch Picking Control(cont)

Site: 10-301 Distribution Site 1
Warehouse: 01 Warehouse 1

Include Sales Orders: ☒ Include Distribution Orders: ☒ Include Work Orders: ☒ SO/DO Batch Selection: Order Allow Merge Orders: ☐ Close Option: 0 Auto Selection: ☐ Maximum Selection: 99 Maximum Picked Cases: 99 Container/Reference: Reference Container Sequence ID: Container Item: Container Unit of Measure: BX	Required Scan Location: ☒ Scan Item Number: ☒ Scan Lot/Serial: ☒ Scan Reference: ☒ Scan Quantity: ☒ Single Packing Location: ☐ Default Packing Location: ☐ Label Print: ☐ Post-Print: ☐ Label Print P: ☐ Weight UM: KG Logical Format: 1/0

Defines container level information

QAD WM-FWK-395

The container-related fields define container level information, including:

- Container levels to create for each tote/box/pallet staff used during the batch-picking process.
- The starting sequence ID for box/tote/container numbers when printing labels before picking.
- The item number of the container.
- The unit of measure for the container.

Example 3 - Set Batch Picking Control Parameters (Continued)

Example: 3. Set Batch Picking Control parameters

Batch Picking Control(cont)

Site: 10-301 Distribution Site 1
Warehouse: 01 Warehouse 1

Field	Value	Required
Include Sales Orders:	☒	☐
Include Distribution Orders:	☒	☐
Include Work Orders:	☒	☐
S0/D0 Batch Selection:	Order	☐
Allow Merge Orders:	☐	☐
Close Options:	0	☐
Auto	☐	☐
Maximum	☐	☐
Maximum Pic	☐	☐
Containers/	☐	☐
Container Se	☐	☐
Con	☐	☐
Container Unit of Measure	☐	☐
Scan Location:	☒	☐
Scan Item Number:	☒	☐
Scan Lot/Serial:	☒	☐
Scan Reference:	☒	☐
Scan Quantity:	☒	☐
Single Packing Location:	☐	☐
Default Packing Location:	☐	☐
Label Print Option:	0	☐
Post-Print Option:	0	☐
Label Print Program:	☐	☐
Weight UM:	KG	☐
Logical Format:	1/0	☐

Enable/disable RF fields and determine scanning requirements

QAD

WM-Pick 308

he scan-related fields enable/disable RF fields and determine scanning options, including whether to scan the:

- Location from which items are picked
- Item being picked
- Lot/serial number for the picking location
- Source reference (pallet ID) when picking
- Quantity picked

Note The Required field dictates if the scan is required or optional.

Example 3 - Set Batch Picking Control Parameters (Continued)

Example 3 - Set Batch Picking Control Parameters (Cont'd)

Batch Picking Control (cont)

Site: 10-301 Distribution Site: 1
Warehouse: 01 Warehouse: 1

Include Sales Orders: ☒	Scan Location: ☒ Required
Include Distribution Orders: ☒	Scan Item Number: ☒ Required
Include Work Orders: ☒	Scan Lot/Serial: ☒ Required
SQ/DO Batch Selection: Order	Scan Reference: ☒ Required
Allow Merge Orders: ☐	Scan Quantity: ☒ Required
Close Option: 0 Search	Single Packing Location: Search
Auto: ☐	Default Packing Location: Search
Maximum:	Label Print Option: 0 Search
Maximum Pick:	Post-Print Option: 0 Search
Container:	Label Print Program:
Container Seq:	Weight UM: KG
Container Item: Search	Logical Format: 1/0
Container Unit of Measure: BX Search	

Define packing location parameters

QAD WH-PICK-387

The Single Packing Location and Default Picking Location field determine:

- If you use a single location as the packing location
- The default packing location

Example 3 - Set Batch Picking Control Parameters (Continued)

Example 3 - Set Batch Picking Control Parameters (Cont'd)

Batch Picking Control(cont)

Site: 10-301 Distribution Site 1
Warehouse: 01 Warehouse 1

Include Sales Orders: ☒ Include Distribution Orders: ☒ Include Work Orders: ☒ SO/DO Batch Selection: Order Allow Merge Orders: ☐ Close Option: 0 Auto: ☐ Maximum: Maximum Pic: Container/Item: Container Sequence ID: Container Item: Container Unit of Measure: BX	Required Scan Location: ☒ ☐ Scan Item Number: ☒ ☐ Scan Lot/Serial: ☒ ☐ Scan Reference: ☒ ☐ Scan Quantity: ☒ ☐ Single Packing Location: ☐ Default Packing Location: Label Print Option: 0 Post-Print Option: 0 Label Print Program: Weight UM: KG Logical Format: 1/0

Define printing parameters

QAD WH-PK-308

The print parameter fields specify:

- When labels should be printed after order selection is complete but before picking begins.
- When labels should be printed after picking is complete.
- The print program to use when printing labels.

Example 3 - Set Batch Picking Control Parameters (Continued)

Example 3 - Set Batch Picking Control Parameters (Cont'd)

Batch Picking Control(cont)

Site: 10-301 Distribution Site 1
Warehouse: 01 Warehouse 1

Include Sales Orders: ☒ Include Distribution Orders: ☒ Include Work Orders: ☒ SO/DO Batch Selection: Order Allow Merge Orders: ☐ Close Option: 0 Auto: ☐ Maximum: Maximum Pic: Container: Container Sequence ID: Container Items: Container Unit of Measure: BK	Required Scan Location: ☒ ☐ Scan Item Number: ☒ ☐ Scan Lot/Serial: ☒ ☐ Scan Reference: ☒ ☐ Scan Quantity: ☒ ☐ Single Packing Location: ☐ Default Packing Location: Label Print Option: 0 Post-Print Option: 0 Label Print Program: Weight UM: KG Logical Format: 1/0

Additional RF screen formatting and user interface

WH-PK-383

Additional RF screen formatting and user-interface fields let you:

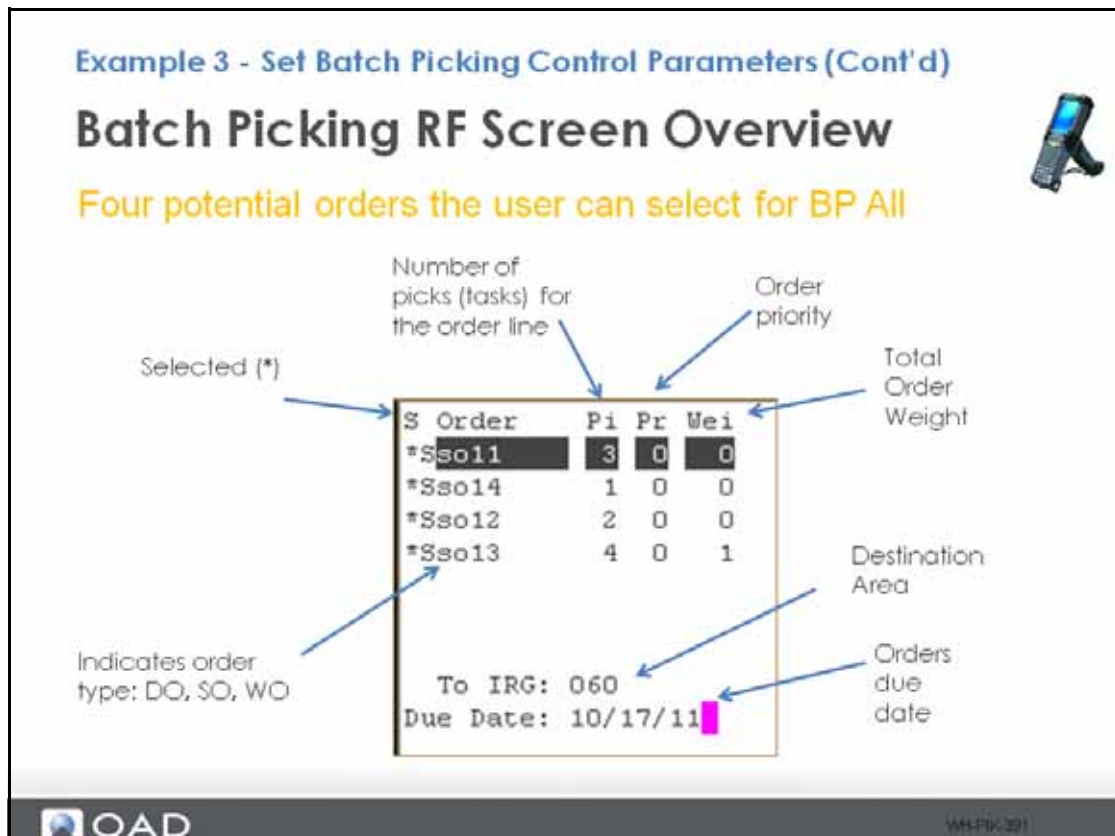
- Specify the default weight
- Specify the user confirmation input: 1/0, Yes/No, Y/N, and so on.

Example 3 - Set Batch Picking Control Parameters (Continued)

Example 3 - Set Batch Picking Control Parameters (Cont'd)

Batch Picking RF Screen Overview

Four potential orders the user can select for BP All



The diagram illustrates the layout and data presented in the RF batch-picking screen. It features a table with columns for order type, order number, number of picks, priority, and weight. Annotations point to various elements: 'Selected (*)' points to the order type column; 'Number of picks (tasks) for the order line' points to the 'Pi' column; 'Order priority' points to the 'Pr' column; 'Total Order Weight' points to the 'Wei' column; 'Destination Area' points to the 'To IRG' field; and 'Orders due date' points to the 'Due Date' field. A small icon of a handheld RF device is shown in the top right corner.

S Order	Pi	Pr	Wei
*Sso11	3	0	0
*Sso14	1	0	0
*Sso12	2	0	0
*Sso13	4	0	1

To IRG: 060
Due Date: 10/17/11

QAD

The graphic above depicts the layout and data presented in the RF batch-picking screen.

Example 3 - Set Batch Picking Control Parameters (Continued)

Example: 3. Set Batch Picking Control parameters

Batch Picking RF Screen Overview (cont)

Task ID: 104

Tasks completed / Total Tasks: 77 / 10

Order: SO SO13

Pick location: 040EA005

Line item: I: 03120

Item description: Scented Disinfectant

Lot to be picked: L:

Boxes to pick / EA per box: 0 / 0 EA

Reference to be picked: R:

Item UM: EA

Quantity in pick location: Stk: 97.00

Quantity to pick: Qty: 3.0

Note: The pick container ID is on a subsequent screen

QAD

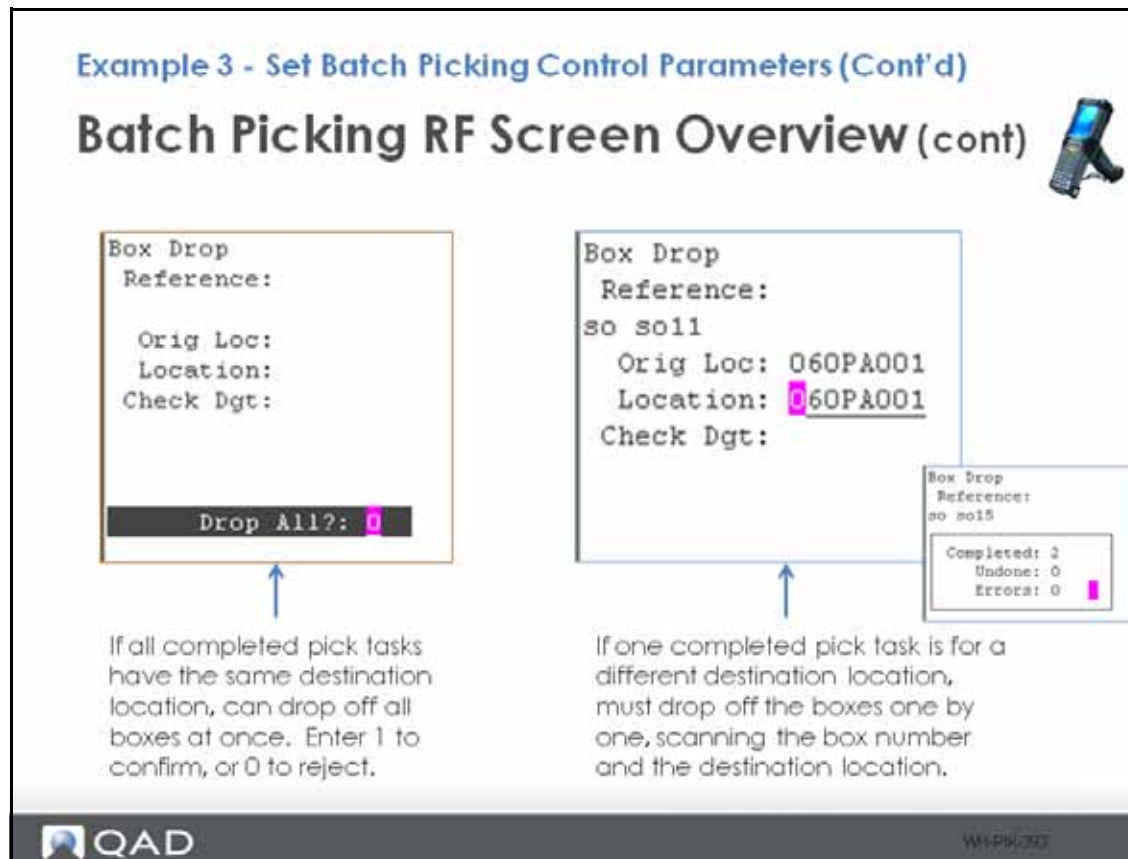
WH-PK-32

As you process batch picks, entering data and pressing return, more batch picking fields display on the RF, as shown in the graphic above.

Example 3 - Batch Picking Control Parameters (Cont'd)

Example 3 - Set Batch Picking Control Parameters (Cont'd)

Batch Picking RF Screen Overview (cont)



The diagram illustrates the Batch Picking RF Screen Overview. It shows two main screens for 'Box Drop' with a 'Reference' field. The left screen shows 'Orig Loc: Location:' and 'Check Dgt:' with a 'Drop All?: 0' button. The right screen shows 'so so11' as the reference, 'Orig Loc: 060PA001', and 'Location: 060PA001'. A small inset screen shows 'Completed: 3', 'Undone: 0', and 'Errors: 0'. Arrows indicate the flow from the left screen to the right screen and from the right screen to the inset screen.

Box Drop Reference:

Orig Loc: Location:
Check Dgt:

Drop All?: 0

If all completed pick tasks have the same destination location, can drop off all boxes at once. Enter 1 to confirm, or 0 to reject.

Box Drop Reference:

so so11
Orig Loc: 060PA001
Location: 060PA001
Check Dgt:

Box Drop Reference:

so so15

Completed: 3
Undone: 0
Errors: 0

If one completed pick task is for a different destination location, must drop off the boxes one by one, scanning the box number and the destination location.

QAD

WIPK33

The orders for which staff pick can be very large. Occasionally, staff need to drop off boxes at consolidation areas or shipping lanes before they complete batch picking for an order.

- When all completed pick tasks have the same destination location, warehouse staff can optionally drop off all items they finished picking. This lets them avoid scanning each box and the destination location for confirmation.
- If one completed pick task is for a different destination location, staff can still drop off completed boxes, but they must drop off the boxes one by one, scanning the box number, then the location in which they drop off boxes, such as the shipping lane.

Example 4 - Set Up and Release Multiple Sales Orders

Example 4 - Setup and Release Multiple Sales Orders

Sales Order Maintenance & Picklist Auto

Sales Order	Sold-To	Status	Line	Item Number	Unit of Measure	Quantity Ordered
WMS1	10C1000		1	03120	EA	1.0
WMS1	10C1000		2	03121	EA	1.0
WMS1	10C1000		3	03122	EA	1.0
WMS2	10C1000		1	03120	EA	2.0
WMS2	10C1000		2	03121	EA	2.0
WMS2	10C1000		3	03122	EA	2.0
WMS3	10C1000		1	03120	EA	3.0
WMS3	10C1000		2	03121	EA	3.0
WMS3	10C1000		3	03122	EA	3.0

QAD

Site: 10-301 Item Number: Display WMS Loc: NO
 Warehouse: Lot/Serial: Disp Non-WMS Loc: NO
 Location: Reference: Output: PAGE

Warehouse: 01 Warehouse: 1

Location	Item	Status	Ref	Qty	Expect	Expect	Detail	Detail
	Lot			On Hand	In	Out	Alloc	Pick
040EA002	03120	Y-V-N	EA	100		8	6	6
040EA004	03121	Y-V-N	EA	100		6	6	6
040EA006	03122	Y-V-N	EA	100		6	6	6
040EA008	03130	Y-V-N	EA	100				
060PA001	03120	Y-V-N	EA			8		
060PA001	03121	Y-V-N	EA			6		
060PA001	03122	Y-V-N	EA			6		

QAD

WH1PW-300

Batch orders can have multiple sales orders, which you can see in the Sales Order Maintenance picklist.

Once batch pick is configured, set up and release multiple orders.

In this example, three orders for customer 01C1000 are released. When the orders are released view the pending inventory moves using Inventory Detail Inquiry.

Example 5 - Select Order Using RF

Example 5 - Select Order using RF
Use RF 3-2 BP Pick All...

Batching reorders pick tasks to minimize trips back and forth to packaging.

4 w/ Batch Pick

Order	Qty	Item	Task
WMS1	1	03120	1
WMS1	1	03121	2
WMS1	1	03122	3
WMS2	2	03120	4
WMS2	2	03121	5
WMS2	2	03122	6
WMS3	3	03120	7
WMS3	3	03121	8
WMS3	3	03122	9

Drop 3 orders at packaging

QAD WMS-Pick-400

- 1 Select option 3, Picking/Container,
- 2 Select option 2, BP Pick All,
- 3 Select all the orders for picking

The operator is directed to pick all orders, order by order, before proceeding to the packaging area to drop the picked orders.

Operationally, how can this flow be improved?

Example 3A- Assign Travel Sequence to Location

Example 3A - Assign travel sequence to locations

Warehouse Location Maintenance

Site: 10-301 Distribution Site 1
Location: 040EA001

Location Groupings: _____
Warehouse: 01
Storage Location Group: 04
Work Location Group: 01

Without a Travel Sequence reference lines are selected by order, by alpha-numeric sequence.

Warehouse Location Data

Check Digit:
Popularity:
Storage Type:
Warehouse Location Type:
Travel Sequence:
Dedicated: ☐

Each Storage (040EA)

001 110	002 120
003 130	004 140
005 150	006 160
007 170	008 180
...	...

QAD WH-PK-402

This step is a modification step to the Example 3 steps.

You can assign the travel sequence to a location in Warehouse Location Maintenance by specifying the location in the Travel Sequence field.

Example 5A - Select Order Using RF

Example: 5A. Select order using RF
Use RF 3-2 BP Pick All...

The diagram illustrates the RF workflow for selecting orders. On the left, a screen shows a menu with options 1 through 6. Option 3, 'Picking/Container', is selected, leading to a sub-menu where option 2, 'BP Pick All', is chosen. This results in a list of items to be picked, including '1 BP Pick SO/DO', '2 BP Pick All', '3 Container Build', '4 Container Move', '5 Ship Truck', '6 Pallet Explosion', and '7 Item Order'. The screen also displays a table with columns 'Item', 'Order', 'Pi', 'Pr', and 'Wei', showing data for '3120', '3121', and '3122'. The bottom of the screen shows 'To IRG: 060'.

Below the screen, the text states: "Batching reorders pick tasks to minimize trips back and forth to packaging."

Two tables compare pick sequences:

w/o Travel Sequence				w/ Travel Sequence			
Order	Qty	Item	Task	Order	Qty	Item	Task
WMS1	1	03120	1	WMS1	1	03120	1
WMS1	1	03121	2	WMS2	2	03120	2 (4)
WMS1	1	03122	3	WMS3	3	03120	3 (7)
WMS2	2	03120	4	WMS1	1	03121	4 (2)
WMS2	2	03121	5	WMS2	2	03121	5 (5)
WMS2	2	03122	6	WMS3	3	03121	8 (6)
WMS3	3	03120	7	WMS1	1	03122	3 (7)
WMS3	3	03121	8	WMS2	2	03122	6 (8)
WMS3	3	03122	9	WMS3	3	03122	9 (9)

Arrows indicate the sequence of picks. Red arrows show a direct path from WMS1 to WMS2 to WMS3. Blue arrows show a path from WMS2 to WMS1 to WMS3. Yellow arrows show a path from WMS3 to WMS2 to WMS1. The 'w/ Travel Sequence' table shows the picks sorted by item/location, minimizing travel.

QAD

With a travel sequence assigned to each location, create and release 3 orders (see step 4).

- 1 Select option 3, Picking/Container.
- 2 Select option 2, BP Pick All.
- 3 Select all the orders for picking.

The picks are now sorted by item/ location rather than order.

Benefits of Batch Picking

The Benefits of Batch Picking

Batch Picking ROI - Travel

	# trips from EA pick to PA	# trips from Location to Location	Distance Loc to Loc	Distance EA to PA	Total Travel (ft)	% Imp
Discrete	17	0	20	500	8500	
Batch 1	1	8	20	500	660	92%
Batch 2	1	2	20	500	540	94%

Assume:

1. Average travel from EA zone to PA zone is 500 feet.
2. Average travel from location to location is 20 feet.

 QAD WH-PHC-404

The return on investment (ROI) for batch picking is the shortened travel time, as you can see when comparing discrete picking data, above, to batch picking data.

The primary benefit to batch pick is a significant reduction in travel distance and time the ROI can then be calculated based on processing more orders with the same amount of labor, a reduction in overtime, or both.

Batch Pick Function Keys

Example 5- Select Order using RF (Cont'd)

Batch Pick Function Keys

- <F1>: Display order comments for sales and distribution orders. Press F1 on any field in the picking screen to view the order line comments.
- <F3>: Display the order picking status. Displays pick information per order, including item number, quantity already picked, and quantity remaining to pick.
- <F5>: Skip a task and move it to the end of the task queue. This is useful if a warehouse aisle become blocked.
- <F6>: If all tasks are for the same destination, the system displays the Drop All prompt, letting you drop all or some boxes completed during picking.
- <F7>: Move contents from one box to another during picking. This helps staff balance the content of different boxes based on the volume of the different items. The system prompts to enter a new container ID.



WH-PIC-001

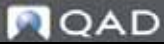
You can use several function keys on the RF device during bulk picking, as shown in the graphic above.

Bulk Picking

QAD Warehousing Picking



Bulk Picking



WM-PK-410

Bulk Picking Defined

Bulk Picking Defined

Bulk Picking

- Similar to Batch but requires a secondary pick
- Less frequently used
- Set up Bulk Picking controls

 QAD

WH-PK-420

Efficiency is improved by grouping the orders, since the detail allocations are examined and, if necessary, the allocations rationalized. There is no direct link between orders in a bulk pick, other than the fact that they have items in common and can thus be grouped together.

Bulk pick is similar to batch pick in that multiple orders are picked concurrently, the difference is bulk pick orders require sorting or a secondary pick at a subsequent stop. This typically results in more space requirements.

Bulk Picking Control

Setup Bulk Picking Parameters

Bulk Picking Control

Create Bulk Picking Orders: ☒	Pre-Shippers: ☐
Bulk Pick History: ☐	Print Pre-Shipper List: ☐
Automatically Reselect BPs: ☐	Bulk Pick Sheets: ☒
Bulk Pick Sequence ID:	Release Work Orders: ☒
Load Sequence ID:	Ship Weight UM:
Pre-Shipper Sequence ID:	Net Weight UM:
Select All: ☒	Volume Unit of Measure:
Auto Approve: ☐	Quantity UM:
Select By: Order	Auto Allocate Sales Orders: ☐
Select By Priority: ☒	Allocate Components: ☐
Min Status for WD Selection:	Override Partial OK: ☐

QAD WH-PM-330

Did You Know

Bulk pick orders can be automatically approved.

There is one frame and 22 fields in Bulk Picking Control used for configuration.

Bulk Pick Setup

Bulk Pick Setup

Bulk Pick Process

- Select order lines for bulk picking
- Approve selected order lines
- Print bulk-pick orders
- Create pre-shippers
- Confirm transactions

Bulk Pick Order Selection Inquiry

Bulk Pick Setup

Bulk Pick Order Selection Inquiry

Site: 10-301
Warehouse: 01

Include Sales Orders: ☒
Include Work Order Issues: ☒
Include Distribution Orders: ☐

Select All: ☒
Select By Priority: ☒
Select By: ☐ Order

Target Ship Weight: 0.00
Target Net Weight: 0.00
Target Volume: 0.00
Target Quantity: 0.0

Auto Approve: ☐

Load ID:
Route:
Item Number:
Whse Item Type:
Order:
Due Date:

To:
To:
To:
To:
To:
To:

Output:
Batch ID:

QAD WMS PBC-450

Did You Know

Bulk pick selection criteria includes:

- Load ID

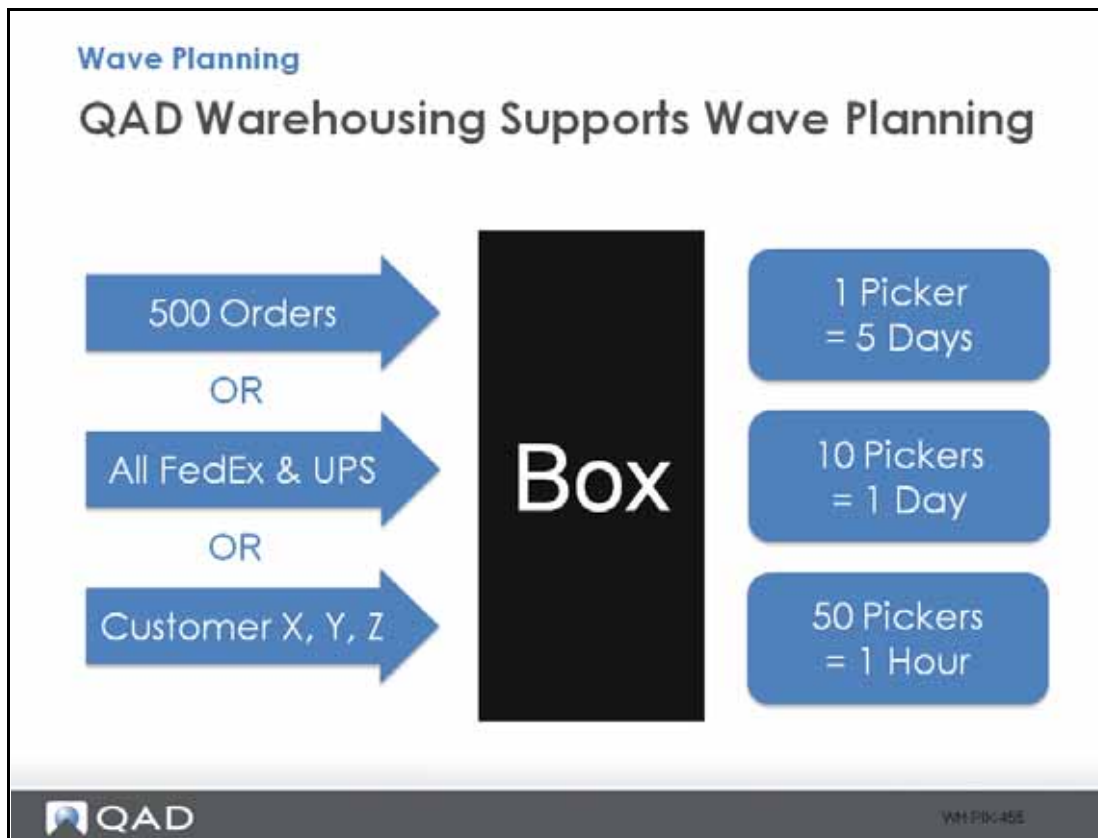
All order lines with the same load ID are combined, if possible, in the same warehouse transaction. The load ID is automatically generated when you select the order line for inclusion in a bulk pick. Multiple bulk pick details can still result from a single load ID.

- Route

This is internal routing, typically forward pick to storage. Load ID and route can be on the SO, so that they can be picked together.

- Item Number
- Due Date

Wave Planning



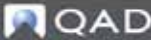
Wave planning involves the same principles as lean distribution; that is, the objective is to plan activities in a warehouse and eliminate inefficiencies. Wave planning lets you create and release a wave --a collection of orders. Wave planning is covered in Advanced topics training guides for QAD Warehousing.

Bulk and Wave - What is the Difference?

Bulk and Wave...what is the difference?

Bulk vs. Wave

	Bulk	Wave
Purpose	Group orders for more efficient picking and travel time	Group orders to balance work load across the warehouse and synchronize replenishment with picking
Pick Process	Bulk	Batch and/or Discrete
Replenishment	Manual	Synchronized
Order Types	Sales, Work, Distribution	Sales, Distribution
Can move work tasks	No	Yes
Workload	Controlled by bulk pick size	Balanced and optimized across time and physical schedules
Selection by	Load ID, Route, Item, Item Type, Order, Ship To, Due Date	Carrier Route, Ship To, Due Date, Profile
Ship Lane Capacity	No considered. All manual	Yes, automatically

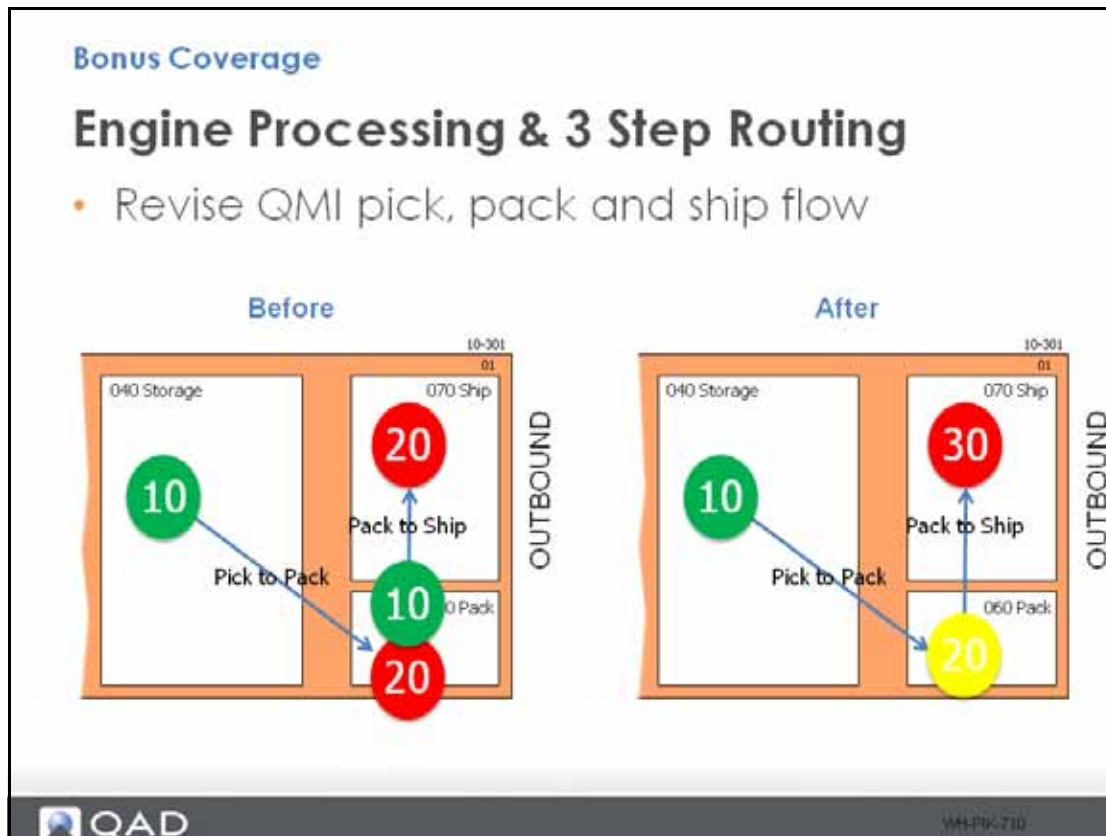
 QAD WH-PIC-200

The graphic above depicts the major differences in bulk picking and wave picking, based on the picking functionality and various aspects of warehouse picking.

Bulk picking is more of a process, that is, a method of picking for wave more of a strategy.

In bulk picking, you can pick for orders that are grouped by routes, so that all orders for a particular delivery area can be picked together. These bulk picks accumulate the items together.

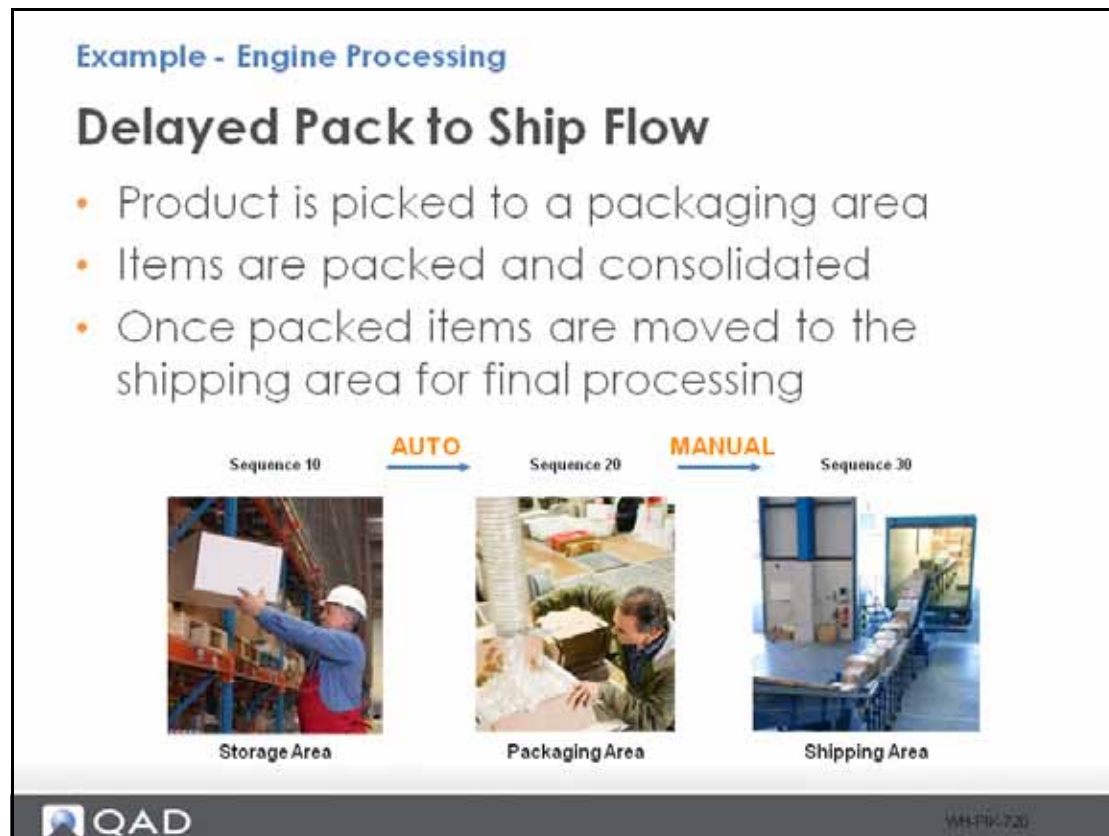
Bonus Coverage - Engine Processing and 3-Step Routing



Up to now, the design has been pick, pack and ship as two different flows; however, it is possible to set up a three-step routing by setting the Mode field in the Miscellaneous Options frame of the Internal Routing Maintenance menu to Manual to *delay* the trigger of product movement from packing to shipping.

In the after picture above, engine processing was used to delay the shipping.

Example - Engine Processing



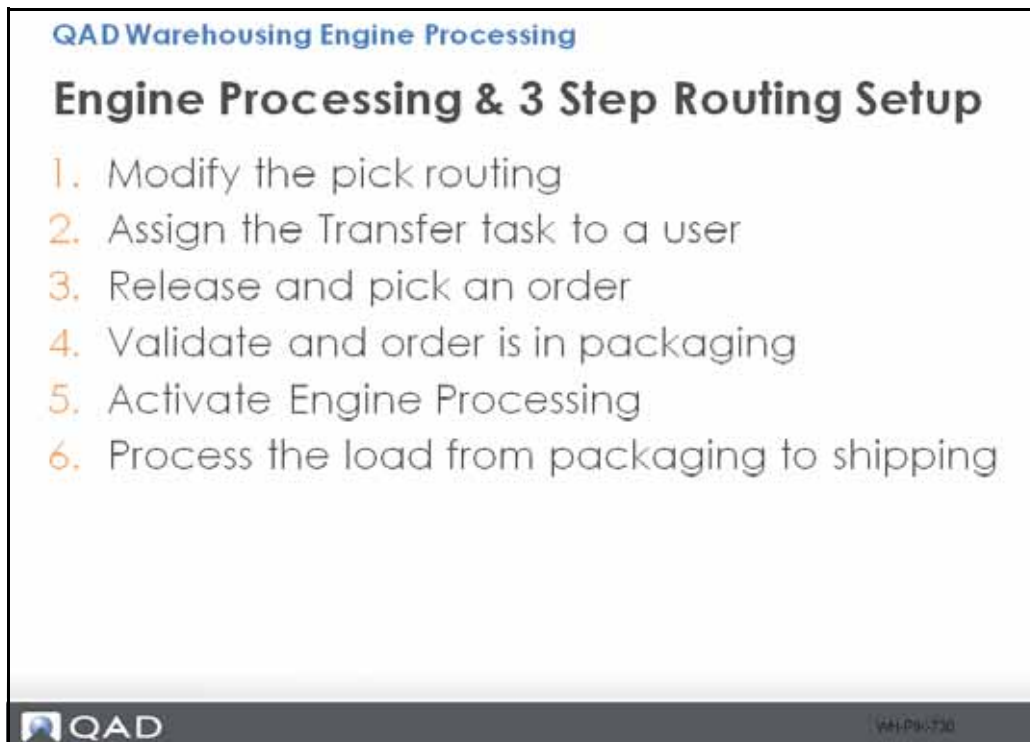
Because the last sequence is manual the move from packaging to shipping does not trigger until a user intervenes to release the task

This proves helpful when there is a long process required in packaging or frequent delays occur.

If the second arrow in the graphic above were Auto, the move from 20 to 30 would automatically trigger when 10 to 20 was complete even if the item/ load was not ready to be moved.

The following topic covers the process of setting up and processing engine processing and a 3 step delay.

Engine Processing - Three-Step Routing Setup



Start with the QMI Warehouse, then:

- 1 Add Sequence 30; 070, to internal routing 01PCK using Internal Routing Maintenance, setting these fields:
 - c Task = TRANSFER
 - d Mode = Manual
- 2 Assign the Transfer task to UserA using Task Assignment Maintenance or change Work Location Group to 01FL for location 060PL001 using Warehouse Location Maintenance.
- 3 Release and pick an order.
The item is in a packaging location using Inventory Detail Inquiry.
- 4 Activate Engine Processing using RF 1.6:
 - a Select the packaging location
 - b Select the item LPN
- 5 Move the load from packaging to shipping:
 - a Select Next Task using RF 1.1.
 - b Select location.
 - c Select LPN.
 - d Confirm drop location and LPN move using Inventory Detail Inquiry.

Modify the Pick Routing

1. Modify the Pick routing

Internal Routing Maintenance

Site: 10-301 Warehouse: 01 Internal Routing: 01PCK

Description: Picking

Sequence: 30 Internal Routing Group: 070

Transaction Create

Confirmed at Source: ☒

System Code: RF

Two Phase: ☒

Keep From Status: ☒

Task: TRANSFER

Priority: 10

Increment: 1

Miscellaneous Options

Mode: Manual

New Unit of Measure:

Clear Shortages: ☐

Create Shipper: ☐

Check Inspection: ☐

QAD W4PK:740

Adding another sequence to the Pick internal routing triggers a transfer task when the load is dropped at the packaging area; however, with Mode set to Manual, the trigger requires that the user manually release the task.

Start with the QMI Warehouse, then:

- 1 Add Sequence 30; 070, to routing 01PCK using Internal Routing Maintenance, setting:
 - a Task = TRANSFER
 - b Mode = Manual

Enable User A to Process a Transfer Task

2. Enable UserA to process a Transfer Task

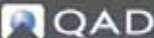
Task Assignment Maintenance

User ID: UserA RF User A

Queue 1

1	PICK	Auto						
2	TRANSFER	Auto						

Queue: 1 Seq: 2 Task: TRANSFER  Confirmation Mode: Auto


WHPK791

The locations in the packaging area are assigned to WLG 01CT, currently assigned to UserA. To ensure UserA receives the transfer task when the task is triggered, UserA must be setup to process a transfer task. Use User Task Assignment Maintenance to add the transfer task to the work Queue.

Alternatively, you can change the locations in the packaging area to WLG 01FL using Warehouse Location Maintenance.

You can assign UserB to Work Location Group 01CT using User Work Location Group Maintenance.

Doing one of the alternatives enables UserB to receive the load transfer task from the packaging to shipping areas.

Release and Pick an Order

3. Release and pick an order

1 Sales Order: S0101 Order Date: 10/30/11 Ship To PO:

Ln	Item Number	Site	Lot/Serial	Qty	Due
		T Location	Ref	Open UM	Shipped
1	03120	10-301			
Scented Disinfectant Pump					
		040EA001	PL000110	3.0 EA	10/31/11
				3.0	()

2

Task	Tran Nbr	Site	Warehous	Estimated	From Location	To Location	Item Number	Qty	Exp	Actual	Status
PICK	85	10-301	01	00:00:00	040EA001	060PA001	03120	1.0		0.0	OPEN
Total				00:00:00							

3

Picking 85
SO S0101
Loc: 040EA001
03120
EA Ref: PL000110
Qty: 3.0
Qty: 1.0

4

Picking 85
To Loc: 060PA001
Loc: 060PA001
Chk:
Item Number:
03120
Lot/Serial:
EA Ref: PL000110

QAD WH-PICK-750

To demonstrate the product flow and delayed task creation, first release and pick an order:

- 1 Release an order using Picklist/Pre-Shipper – Automatic.
- 2 View the pending task using Task Load Report. Note, only one task is created for a pick; nothing yet for the subsequent transfer.
- 3 Process the pick.
- 4 Drop at the packaging area.

Note The finger scanner, shown in the graphic above, replaces hand-held scanners.

Validate an Order in Packaging

4. Validate an order in packaging

Inventory Detail Inquiry

Site: 10-301	Item Number:	Display Whse Loc: No
Warehouse:	Lot/Serial:	Disp Non-Whse Loc: No
Location: 060PA001	Reference:	Output: PAGE
Warehouse: 01	Warehouse 1	

Item	Status	Qty	Expect	Expect	Detail	Detail
Lot	Ref	UM On Hand	In	Out	Alloc	Pick
03120	Y-Y-N PL000110	EA	3			3

 QAD WH-PIC-280

With the pick task complete, view the load in the Packaging Area using Inventory Detail Inquiry. Product has been moved to the packaging location, as shown in the display above.

Activate Engine Processing

5. Activate Engine Processing

Engine Activation RF 1.6

1 Engine Activation

```

Loc: 060PA001
Chk:
so 30101
03120

Ref: PL000110
Cancel: Go
  
```

2 Engine Activation

```

Loc: 060PA001
Chk:
so 30101
03120

Ref: PL000110
Cancel: No

Eng process compl
  
```

3

Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM On Hand	Alloc	In	Out	Alloc	Pick
060PA001	Y-V-N	EA	3			3	3
070SH001	Y-V-N	EA			3		

4

Task	Tran Nbr	Site	Warehouse	Estimated	From	To	Location	Item Number	Qty	Exp	Actual	Status
TRANSFER	86	10-301	01	00:00:00	060PA001	070SH001	03120		3.0	0.0	OPEN	
Total				00:00:00								

QAD VMI-PK-770

Once packaging activities are complete the load is ready for movement to the shipping area:

- 1** Activate Engine Processing using RF 1.6. T
This releases the tasks for packaging. This method ensures that inventory is not released before it is ready to be packaged.
 - a** Select the packaging location.
 - b** Select the item LPN.
- 2** Once the engine processing is complete, view the pending load move using Inventory Detail Inquiry.
- 3** View the new task using Task Load Report. This is the send task of the 01PCK internal routing.

Process the Move from Packaging to Shipping

6. Process the move from Packaging to Shipping

UserA RF 1.1

UserA RF 1.1

2,3

```

Transfer 86
Loc: 060FA001
03120

EA Ref: PL000110
Qty: 3.0
Qty: 0.0
  
```

4

```

Transfer 86
To Loc: 070SH001
Loc: 070SH001
Chk:

Item Number:
03120
Lot/Serial:

EA Ref: PL000110
  
```

5

Site: 10-301		Item Number: 03120		Display Whse Loc: No			
Warehouse:		Lot/Serial:		Disp Non-Whse Loc: No			
Location:		Reference:		Output: PAGE			
Warehouse: 01		Warehouse 1					
Location	Status	Qty	Qty	Expect	Expect	Detail	Detail
Lot/Serial	Ref	UM On Hand	Alloc	In	Out	Alloc	Pick
070SH001	Y-Y-N PL000110	EA	3				3

QAD WH P&C700

Move the load from packaging to shipping:

- 1 Select Next Task using RF 1.1.
- 2 Select location.
- 3 Select LPN.
- 4 Confirm drop location.
- 5 Confirm the move using Inventory Detail Inquiry.

Key Learning Points

QAD Warehousing Picking

Key Learning Points

- QAD Warehousing supports most picking best practices
- QAD Warehousing provides much deeper picking functionality than QAD Core
- Your order profile and operation performance targets will dictate your picking strategies
- Location sequence could impact pick routes

Exercises - Picking Setup and Execution

Exercise – Picking Setup and Execution

Picking Setup and Execution

- Set up warehouse, area and zone
- Set up pick routing
- Assign pick routing
- Set up pick rules
- Set up drop pick rules
- Set up discrete pick items


WH-PK-550

This exercise teaches you to set up a basic discrete pick from the new QMI warehouse.

- 1** Set up or confirm setup of the warehouse, area and zone
 - c** Confirm the pallet and each storage zones are assigned a picking level
 - d** Confirm the warehouse includes the pallet and each storage zone levels in the picking start and end picking level range.
- 2** Set up pick routing.
 - a** Inventory is picked in the Storage area and moved to Shipping.
 - b** Create a pick routing
- 3** Assign pick routing
 - a** Assign the replenishment routing to a generic replenishment pick transaction type
- 4** Set up pick rules
- 5** Set up pick drop rules
- 6** Set up discrete pick items

Exercise - Set Up Warehouse, Area, and Zone

Exercise

Set Up Warehouse, Area, and Zone

1. Confirm the warehouse, areas and zones are setup and configured per a previous exercise.
2. Confirm the pallet and each storage zones are assigned a picking level in Storage Location Group Maintenance.
3. Confirm the Warehouse includes the pallet and each storage zone levels in the picking start and end picking level range in Warehouse Maintenance.

Refer to the Introduction section of this training guide to confirm the warehouse, area, zone and locations are setup.

Next, confirm the pallet and each storage zones are assigned a picking level using Storage Location Group Maintenance.

Confirm the warehouse includes the pallet and each storage zone levels when you set the Start Picking Level and End Picking Level fields in Warehouse Maintenance. Refer to the Introduction chapter in this training guide for more information.

Exercise - Set Up Pick Routing

Exercise

Set Up Pick Routing

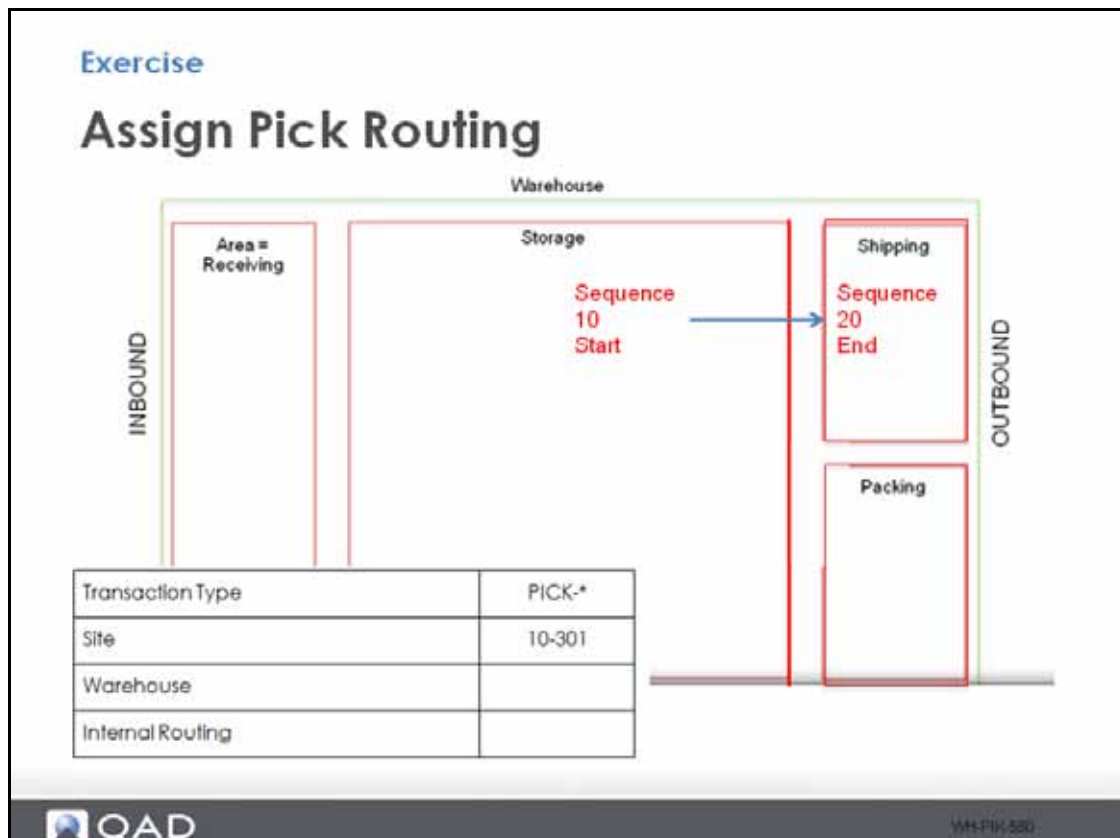
1. Inventory will be picked in the Storage area and moved to Shipping.
2. Create a pick routing using Internal Routing Maintenance.

When you set up a routing, inventory is picked in the Storage area and moved to Shipping.

In Internal Routing Maintenance, define parameters, then note the parameters you enter here:

Field	Data to Enter	
Site	10-301	
Warehouse		
Internal Routing	Picking	
Description		
	Start	End
Sequence	10	20
IRG		
To Reference Option	0	3

Exercise - Assign Pick Routing



When a pick task is created, it follows the pick routing.

Assign the replenishment routing to a generic replenishment pick transaction type using Int Routing Assignment Maint. Define parameters, then note the parameters you enter here:

Field	Data to Enter
Transaction Type	PICK-*
Site	10-301
Warehouse	
Internal Routing	

Exercise - Set Up Pick Rules

Exercise Set Up Pick Rules

Algorithm Assignment Maintenance

Go To Actions Copy Print Preview

Algorithm Type: PK
Site: 12000
Item Number:
Address:

Transaction Type: PICK-RE
Warehouse: whse
Warehouse Item Type:
Custom:

Assigned Algorithms

Seq	Algo	Description

Sequence: Algorithm:

QAD WH-PICK-330

QMI has a FIFO inventory preference.

Use Algorithm Assignment Maintenance to define picking rules for replenishment inventory.

The pick rules for picking are the same as the pick rules for replenishment. No changes are made if the replenishment exercise was performed.

Define parameters, then note the parameters you enter here:

Field	Data to Enter
Algorithm Type	PK
Transaction Type	PICK-*
Site	10-301
Warehouse	
Sequence	10
Algorithm	11

Exercise - Set Up Drop Pick Rules

Exercise
Set up drop pick rules

Algorithm Assignment Maintenance

Go To Actions Copy Print Preview

Algorithm Type: PK Transaction Type: PICK-RE
Site: Warehouse: whse
Item Number: Warehouse Item Type:
Address: Custom ☐

Assigned Algorithms

Seq	Algo	Description
10	1	

Sequence: 10 Algorithm: 1 Description:

QAD WH-PICK-BUD

All picks are moved to the shipping area for final processing and shipment.

Use Algorithm Assignment Maintenance to define pick drop rules for inventory in the shipping area. Define parameters, then note the parameters you enter here:

Field	Data to Enter	
Algorithm Type	LF	
Transaction Type	PICK-*	
Site	10-301	
Warehouse		
Sequence/Algorithm	10	1

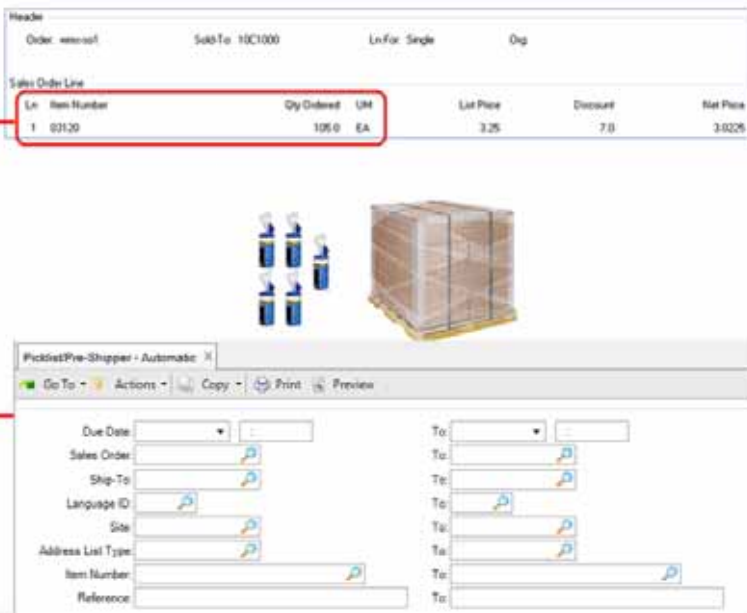
Exercise - Set Up Discrete Pick Items

Exercise
Set up Discrete Pick Items

Sales Order Maintenance

1. Create a Sales Order for 105 each of item 03120

2. Release the order to the warehouse using Picklist/Pre-Shipper -Automatic



The screenshot displays two QAD software screens. The top screen, 'Sales Order Maintenance', shows a 'Header' section with 'Order: 000001', 'Ship To: 10C1000', 'Ln For: Single', and 'Org'. Below it, the 'Sales Order Line' table has one line item: 'Ln: 1', 'Item Number: 03120', 'Qty Ordered: 105.0', 'UM: EA', 'List Price: 3.25', 'Discount: 7.0', and 'Net Price: 3.0225'. A red box highlights the 'Ln: 1' and 'Item Number: 03120' fields. The bottom screen, 'Picklist/Pre-Shipper - Automatic', shows a 'Go To' button, 'Actions', 'Copy', 'Print', and 'Preview' buttons. Below these are fields for 'Due Date', 'Sales Order', 'Ship To', 'Language ID', 'Site', 'Address List Type', 'Item Number', and 'Reference'. To the right of these fields are 'To' fields for each item. A red arrow points from the 'Release the order' instruction to the 'Go To' button.

- 1 Create a Sales Order for 105 each of item 03120 using the core Sales Order Maintenance program.
- 2 Release the order to the warehouse using the core Picklist/Pre-Shipper Automatic program.

Question

Is the inventory coming from the same location?

If set up correct, 100 each comes from a pallet location and five from an each location. This is a best practice for optimizing material handling efficiencies.

Questions

- 1 Name the three types of picking supported by QAD Warehousing.
- 2 Discrete picking means picking _____ order at a time.
- 3 True or False. QAD Warehousing lets you pick a less than full pallet, case, or box quantity.
- 4 Briefly describe why you set start and end picking levels in QAD Warehousing.
- 5 True or False. You must use the PICK-RE transaction type for picking as it is the only picking transaction type available in QAD Warehousing.
- 6 Batch and bulk picking are helpful because they allow the user to _____.
- 7 True or False. Cartonization is the process of systematically selecting the best size carton to which staff pick an order, and is supported in QAD Warehousing?
- 8 Mix and Match. Which pick type (discrete, bulk, batch) fits the following descriptions:

Attribute	Enter Best Type of Picking
Easy to use	
Requires a secondary pick	
Pick one order at a time	
Easily done with paper pick lists	
Multiple orders picked to a specific order/carton	
Better for higher order volumes with low lines per order	
The least common way to pick multiple orders at the same time	

Answers

- 1 The three types of picking supported by QAD Warehousing are discrete, bulk, and batch picking.
- 2 one.
- 3 True. QAD Warehousing lets you pick a less than full pallet, case, or box quantity.
- 4 The start and end picking settings determine the picking levels to be used for the pick. The system then looks for inventory in the storage location groups that correspond to the specified range of picking levels.
- 5 False. There are several PICK-* transaction types in QAD Warehousing; PICK-RE is just one transaction type.
- 6 pick multiple orders at the same time.
- 7 False. Although cartonization is the process of systematically selecting the best size carton to pick an order to, this is NOT supported in QAD Warehousing?
- 8 Pick types (discrete, bulk, batch) that fit the following descriptions:

Attribute	Enter Best Type of Picking
Easy to use	Discrete
Requires a secondary pick	Batch
Pick one order at a time	Discrete
Easily done with paper pick lists	Discrete
Multiple orders picked to a specific order/carton	Bulk
Better for higher order volumes with low lines per order	Bulk
The least common way to pick multiple orders at the same time	Batch

Notes

Chapter 5

Shipping

Overview

QAD Warehousing Shipping

QAD Warehousing

WMS Field Readiness Greenbelt





Our Passion. Your Advantage.

Objectives

QAD Warehousing Shipping

Objectives

- Functional fit
- Understand shipping concepts
- Setup & Execute
 - Truck Ship
 - Container Move (optional)
 - Containerization (optional)

Functional Fit: What We Don't Do So Well

What we don't do so well

Functional Fit: Pack & Ship

Functionality	Fit	Notes
Determine optimal container size and contents		
Supports system directed packing		
Display special packing instructions on RF		
Unpick option		
Supports system directed loading and auditing		
Parcel manifesting		Requires TMS

[Legend](#)

 Partial

 None

 QAD

144-75-000

Did You Know

Truck Ship features include:

- Indicate truck shipment
- Create a master bill of lading (MBOL)
- View all shippers loaded on the truck for a given truck location

Concepts

QAD Warehousing Shipping

Concepts

1. Process the paperwork and release the truck (Truck Ship)
2. Move the unit load to a truck for shipment (Container Move)
3. Consolidate orders/packages into a movable unit load for shipping (Containerization)



WHTR040

Did You Know

You can print shippers and pre-shippers for distribution orders and sales orders.

Shipping Configuration



The graphic above depicts the programs to use when setting up for and using shipping in QAD Warehousing.

Define Shipping and Zone Area

Define Shipping Area and Zone

Internal Routing Group / Storage Location Group

Internal Routing Group Maint Storage Location Group Maint

Site: 10-301
Warehouse: 01

Internal Routing Group: 070
Description: Shipments

Functional: ☒

SLG Default Values:

Allow Issues: ☒
Allow Receipts: ☒
Allow Outgoing Returns: ☒
Allow Incoming Returns: ☒

Site: 10-301
Warehouse: 01

Storage Location Group: 070SH
Description: Shipments

Internal Routing Group: 070

Allow Issues: ☒
Allow Receipts: ☒
Allow Incoming Returns: ☒
Allow Outgoing Returns: ☒

Opportunity Counts: ☐
Opportunity Count Frequency:
Check Digits:
Cycle Count Status Option:

10-301
01
070SH

OUTBOUND

QAD WH-TR-050

Use Internal Routing Group and Storage Location Group to define shipping areas and zones within the warehouse.

Ensure you have enabled the Functional field, which indicates that the system uses location-find algorithms when selecting the zones and areas when moving goods into them for shipping.

First setup a shipping area and zone using Internal Routing Group Maintenance and Storage Location Group Maintenance respectively. The shipping areas are functional.

In the graphic above, the packaging area was removed from the process flow. Note that, this might be different from the setup in the QMI environment.

Locations Can Have Many Attributes

Locations can have many attributes

Warehouse Location Maintenance

Site: 10-301 Distribution Site 1

Location: 070SH001

Location Groupings

Warehouse: 01

Storage Location Group: 070SH

Work Location Group: 01CT

Warehouse Location Data

Check Digit:

Popularity:

Storage Type: TRUCK

Warehouse Location Type:

Travel Sequence:

Dedicated: ☐

10-301
01

070SH

070SH001

070SH002

070SH003

OUTBOUND

QAD

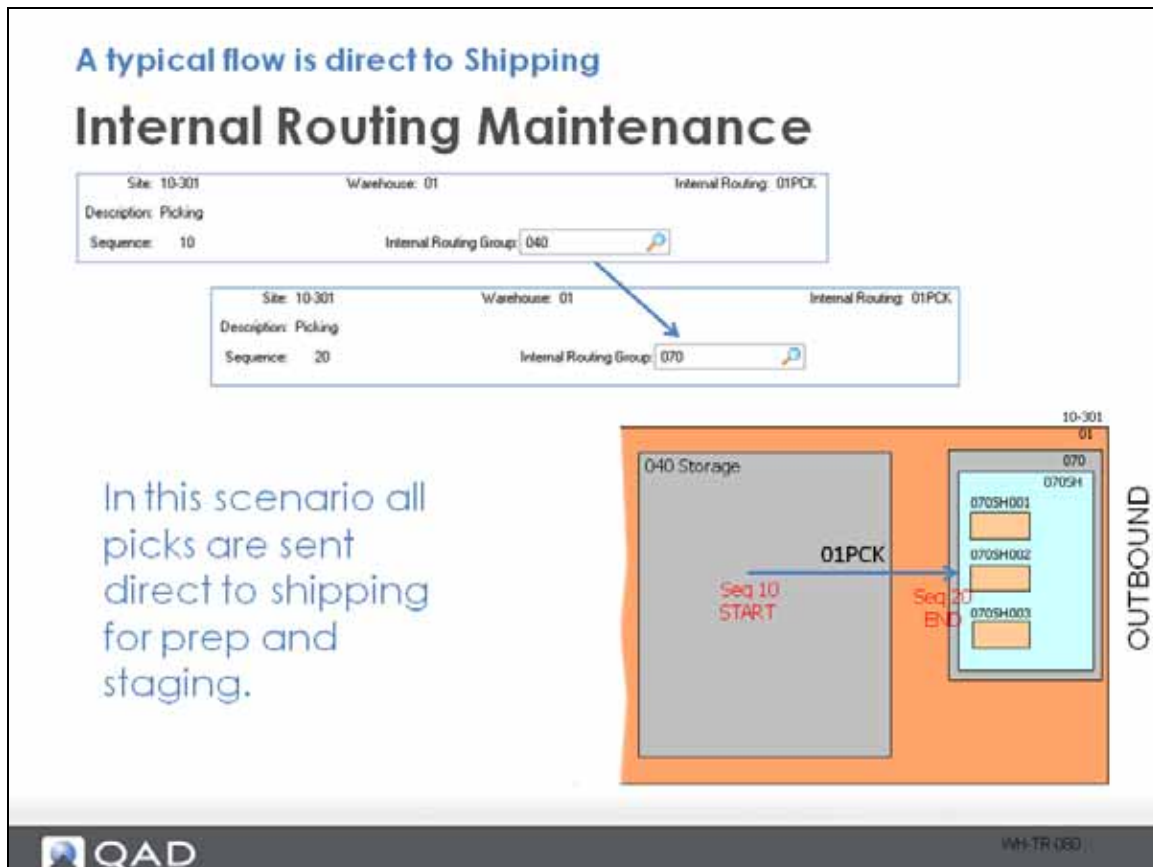
WH-TR-070

You create at least one location in the ship zone. Assign the Storage Type as Stage.

Assign the location(s) to a Work Location Group.

The Storage Type in QMI data is `Truck`. This is done to facilitate the wave planning process. In the example above, the truck classification is removed from Storage Type.

Typical Flow Direct to Shipping



Setup an internal routing to direct picks from the Storage Area 040 to the Shipping area 070.

Note When comparing the setup in the graphic above to the QMI warehouse, 01PCK might route to a packaging area for shipment preparation. For simplicity, the routing was changed to the shipping area by changing Sequence 20 to 070 for Internal Routing 01PCK.

Using this scenario lets you ship a load without the requirement of moving the container/load to a shipping location/lane. This might occur when loading direct to a truck.

When to Use Pick Routing

When to use the Pick routing

Int Routing Assignment



1. When this transaction type is created...
2. And is associated to theses...
3. This material flow is initiated.

Transaction Type: PICK-*

Site: 10-301

Warehouse: 01

Item Number:

Warehouse Item Type:

Address:

Custom: ☐

Internal Routing: 01PCK

Custom Program:

QAD

WH-TR-090

The routing is assigned to all pick tasks. This was also covered in the Pick session.

Look for a General Spot in Shipping

Look for a general spot in Shipping

Algorithm Assignment Maintenance

Algorithm Type: LF

Site: 10-301

Item Number:

Address:

Transaction Type: PICK-*

Warehouse: 01

Warehouse Item Type:

Custom: ☐

Assigned Algorithms:

Seq	Algo	Description
10	1	First Location in First Storage Location Group

An Algorithm outlines what to do once you are in the next Area. There are 13 Location Find rules.

The diagram illustrates a pick task '01PCK' being processed by a system. Three arrows point from the task to three specific storage locations: '070SH001', '070SH002', and '070SH003'. These locations are contained within a larger container labeled '070SH' and 'OUTBOUND'.

QAD W4TR-100

Shipping is a functional area so use a generic Location Find (LF) algorithm.

The pick algorithm is also required and was set up earlier. In this example, when any pick task (PICK-*) is created, the system puts the product into the first available location in the defined zone 070SH001, 070SH002, or 070SH003.

Any User Performs Manual Moves

Any user can perform manual moves

Users and Work Location Groups

Note:

Container Move and Ship transactions are manual and can be performed by any user regardless of Assignment or Work Location Group

 QAD WH-TR-110

Earlier the ship locations were assigned to Work Location Group 01CT implying UserA, who is assigned to 01CT, would process all moves into and out of shipping locations; however, container move and ship transactions are manual and can be performed by any user regardless of assignment or WLG.

Truck Shipping

Truck Ship is the basic process of getting ship ready orders on to a truck and documentation generated

WH-TR-111

Ship Truck

Ship Truck



Set Up Ship Truck

Setup Ship Truck

Batch Picking Control (Ship Truck)

Site: 10-301 Distribution Site 1
Warehouse: 01 Warehouse 1

Print Paperwork:

- Include Shipper Comments: ☐
- Inc Packing Credits: ☐
- Print Features and Options: ☐
- Print Order Details: ☐
- Assign Shipper Number: ☒
- Display Quantity In SO UOM: ☐
- Print Lot/Serial Numbers: ☐

Container Move

Sequential Shipper Option: 1
Only Shipper Option: 0

Ship Truck

1 Master Bill Ship-To/Dock: 10100

2 Confirm on Error: ☐

QAD WH-TR-130

When setting up:

- 1 Use Ship-to/dock when creating master bills of lading in Master Bill of Lading Maintenance (EE core program). Use MBOL format.
- 2 Specify whether RF Ship Truck option should confirm shipments when errors are received from a Transportation Management System (TMS).

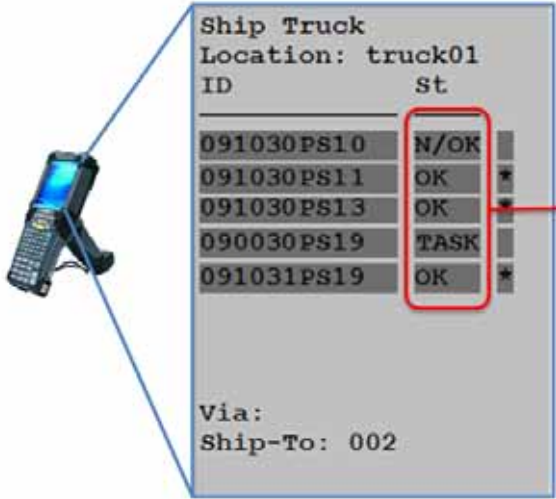
Did You Know

You can create a master bill of lading (MBOL) from within warehousing to use when truck shipping. You can also confirm shipments on the RF, even when errors are received.

QAD Warehousing Shipping - RF Ship Truck

QAD Warehousing Shipping – Ship Truck (RF 3.5)

RF Ship Truck: Monitor Order Status



The screen displays the following information:

Ship Truck
Location: truck01

ID	St
091030PS10	N/OK
091030PS11	OK
091030PS13	OK
090030PS19	TASK
091031PS19	OK

Via:
Ship-To: 002

Legend:

- OK:** Can be shipped
- N/OK:** Can be shipped but some items are not in the truck. If shipped, they will be shipped from their current location.
- TASK:** There are open pick tasks against the Pre-shipper and we can't confirm the shipment

QAD WHT-140

Warehouse staff use the RF Truck Ship (3.5) option to process and confirm truck shipping and to monitor ship status.

The pre-shipper becomes a shipper as soon as staff confirms everything is on the truck.

Did You Know

The user must be assigned to the ship zone work location group before loading begins.

QAD Warehousing Shipping - RF Ship Truck (Continued)

QAD Warehousing Shipping – Ship Truck (RF 3.5)

RF Ship Truck: Confirm Shipment Ready



Ship Truck	Location: truck01
ID	St
091030PS10	OK *
091030PS11	OK *
091030PS13	OK *
090030PS19	OK *
091031PS19	OK *

Via:
Ship-To: 002

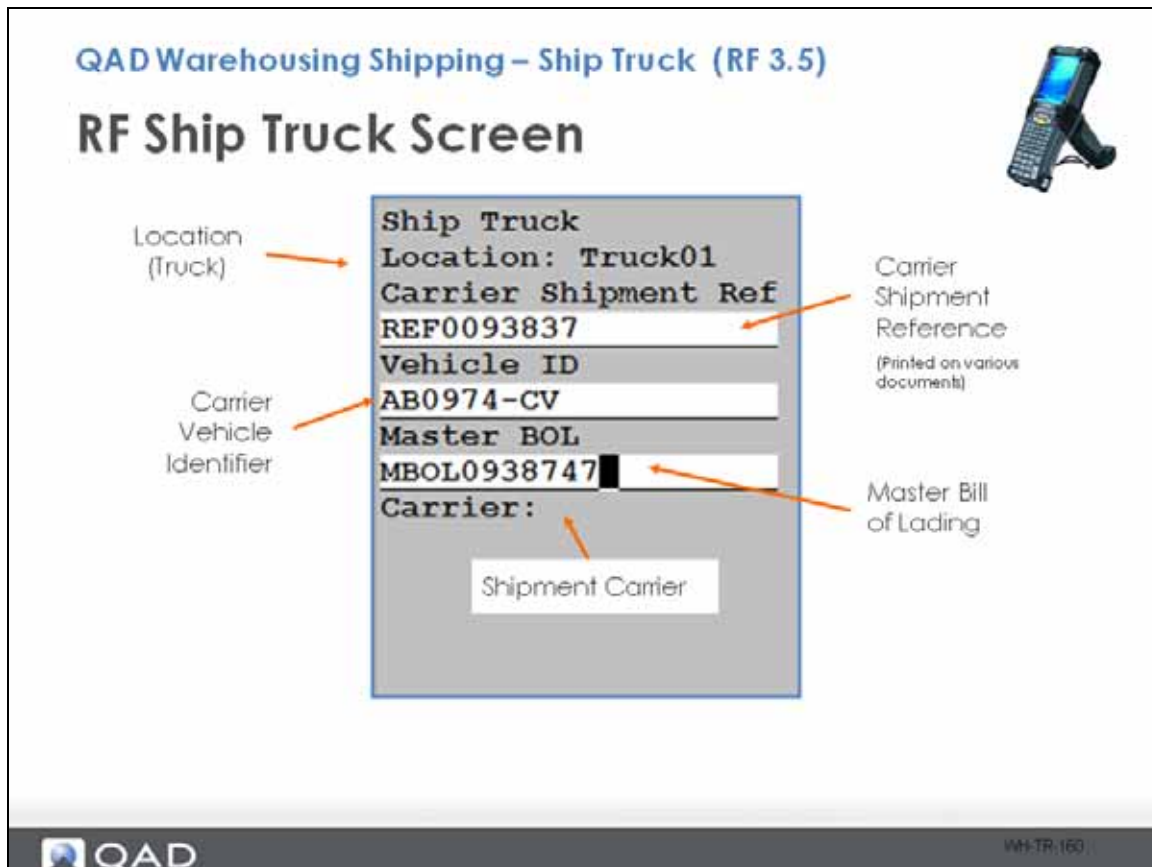
QAD WHT-150

With RF Ship Truck you can view all shippers loaded on the truck for a given truck location.

QAD Warehousing Shipping - RF Ship Truck (Continued)

QAD Warehousing Shipping – Ship Truck (RF 3.5)

RF Ship Truck Screen



The diagram illustrates the RF Ship Truck screen layout. It features a central form with several fields, each labeled with an orange arrow pointing to its corresponding field. The fields are: Location (Truck), Carrier Shipment Reference, Vehicle ID, Master BOL, and Carrier. The Carrier field is further labeled with 'Shipment Carrier'. A small image of a handheld RF device is shown in the top right corner. The QAD logo is in the bottom left, and 'WH-TR-160' is in the bottom right.

Field Label	Value
Location (Truck)	Truck01
Carrier Shipment Reference	REF0093837
Vehicle ID	AB0974-CV
Master BOL	MBOL0938747
Carrier	Shipment Carrier

Carrier Shipment Reference
(Printed on various documents)

Master Bill of Lading

QAD

WH-TR-160

RF Ship Truck allows the user to track ship ready status and select specific shippers to include.

Example - Ship Truck

Example - Ship Truck

Ship order SO100

1. Drop a pick at a shipping location
2. Confirm the load is in shipping
3. Log into Ship Truck (3.5)
4. Select the shipping location
5. Select the shipment
6. Approve shipment
7. View "Shipment confirmed" on RF screen
8. Confirm shipment removed from WMS

 QAD

WH-TR-170

This example walks you through the shipping of order SO100. The steps shown in the graphic above depict the major steps involved in the Ship Truck process.

Example - Ship Truck (RF 3.5)

Example - Ship Truck (RF 3.5)

Use RF to Process the Shipment

1 Picking 114
To Loc: 070SH001
Loc: 070SH001
Chk:
Item Number:
03121
Lot/Serial:
EA Ref: 50100

2 Site: 10-101 Item Number:
Warehouse: 070SH001 Lot/Serial:
Location: 070SH001 Reference:
Warehouse: 01 Warehouse 1
Item Status Qty Expect Expect Detail Detail
Lot Ref UM On Hand In Out Alloc Pick
03121 50100 10 10

3/4 Ship Truck
Location: 70SH001
Carrier Shipment Ref
Vehicle ID
Master BOL
Carrier:

5 Ship Truck
Location: 70SH001
ID St
PS1020110013 OK
Via: FEDX
Ship-To: 10C1000

6 Ship Truck
Location: 70SH001
ID St
PS1020110013 OK
Confirm shipment
0

7 1 Records
1 Confirmed
0 Errors
Master BOL
MBOL0009
Shipment confirmed

8 Site: 10-101 Item Number:
Warehouse: 070SH001 Lot/Serial:
Location: 070SH001 Reference:
Inventory Detail Inquiry

QAD VMLTR-100

On the RF, an asterisk next to the shipper indicates open tasks exist. Tasks include:

- 1 Drop a pick at a shipping location.
- 2 Confirm the load is in shipping.
- 3 Log into Ship Truck (3.5).
- 4 Select the shipping location.
- 5 Select the shipment.
- 6 Approve the shipment.
- 7 View Shipment Confirmed on RF screen.
- 8 Confirm the shipment removed from QAD Warehousing.

When specifying the carrier when confirming, the RF validates that all shippers being confirmed belong to a service of the carrier.

The system may send an process end of day (PEOD) message to the TMS prior to confirming the shipper issue inventory transactions.

Optional - Container Move

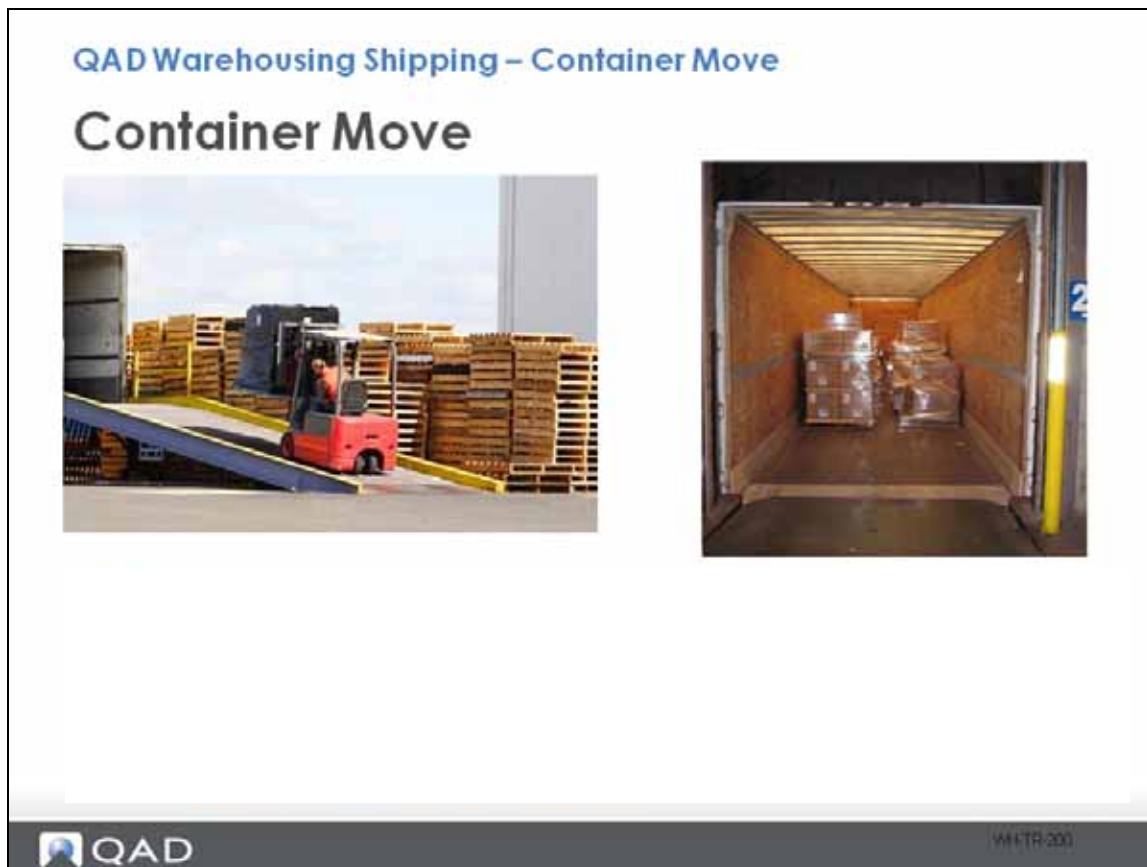
OPTIONAL

Container Move is the process of moving ship ready orders/containers to a staging lane or onto a truck without shipping

WH-TR-190

QAD Warehousing users are provided optional container move functions when shipping. Refer to User Guide: QAD Warehousing for information on container move functions.

Container Move



Container Move is helpful if you are staging containers or individual orders before shipment or if you plan to use trucks for temporary storage.

Note the following about Container Move:

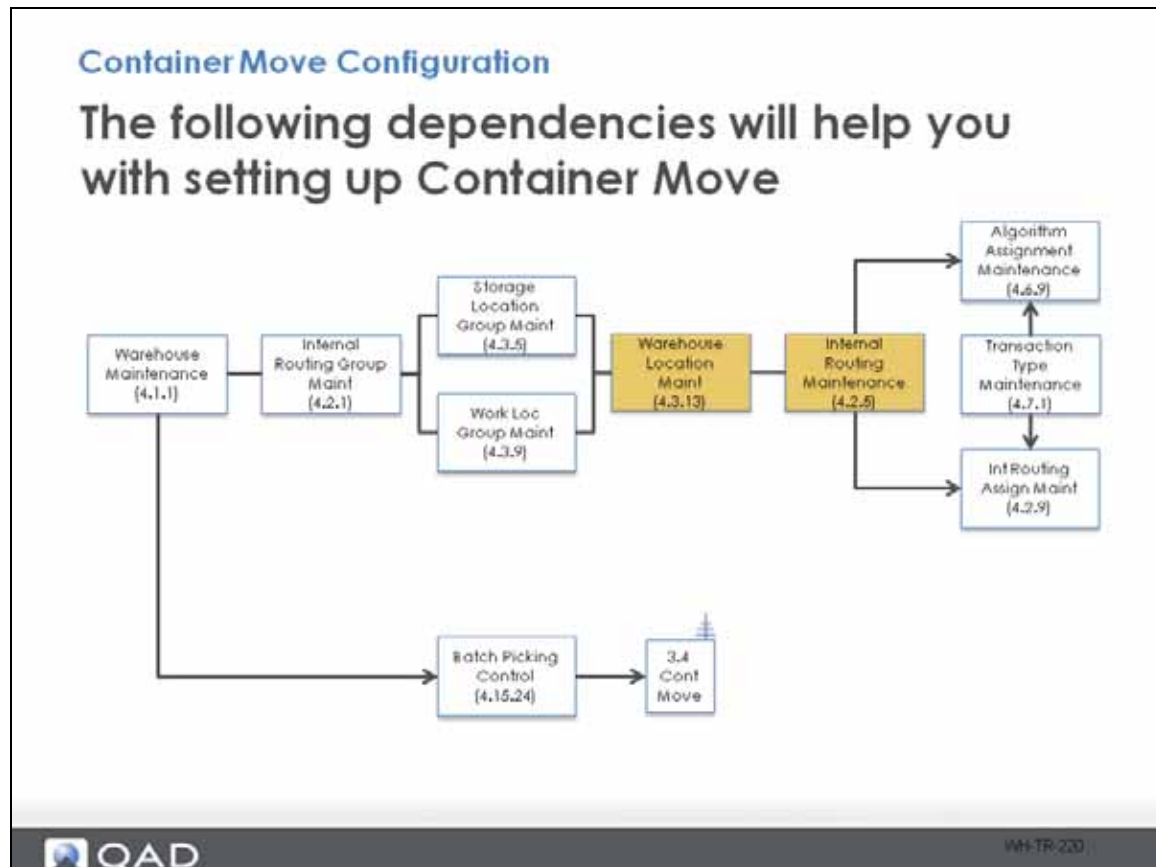
- Container Moves is not available in QAD Core.
- Items are moved to a truck but still require shipping from QAD.
- Can ship the pre-shipper without loading the truck.

Did You Know

With container move functionality you can:

- Move any pallet with detail allocation and containerization to a truck.
- Validate steps when moving containers.
- Report on the position of each pallet in the truck.
- Load pallets in reverse dropping order.

Container Move Configuration



If shipping is already configured, setting up Container Move requires minor changes to Warehouse Location Maintenance and Internal Routing Maintenance.

The highlighted boxes in the graphic above show primary menus to change for this example.

Set Up at Least One Truck Location

Setup at least one Truck location

Warehouse Location Maintenance

Site: 10-301 Distribution Site 1

Location: 070TR001

Location Groupings

Warehouse: 01

Storage Location Group: 070SH

Work Location Group: 01FL

Warehouse Location Data

Check Digit:

Popularity:

Storage Type: **TRUCK**

Warehouse Location Type:

Travel Sequence:

Dedicated: ☐

Optionally, change Storage Type of locations 070SH001 – 003 to Stage or Truck.

QAD

WH-TR-230

Setting up three new locations (one for each dock door) lets you move ship ready containers or orders to a dock prior to loading onto a truck. Or the new locations can represent physical trucks allowing the containers or orders to be loaded direct to the truck

Optionally, changing the Storage Type to Stage or Truck of the current shipping locations lets you move containers or orders to other shipping locations.

Define a Product Flow to Move to Truck Locations

Define a product flow for movement to Truck or Stage locations

Internal Routing Maintenance

Site: 10-301 Warehouse: 01 Internal Routing: 01LTR

Description: Load Pallet on Truck
Sequence: 10 Internal Routing Group: 070

Transaction Create

Confirmed at Source: ☒ Task: TRANSFER
System Code: RIF Priority: 100
1 Two Phase: ☐ Increment: 10
Keep From Status: ☒

Transaction Confirmation

From Location Option: 0 To Location Option: **2** 3
From Item Option: 0 To Item Option: 0
From Lot/Serial Option: 0 To Lot/Serial Option: 0
From Reference Option: 0 To Reference Option: 0
Allow Quantity Increase: ☐ Alternative UM Option: 0
Allow Quantity Decrease: ☒
Quantity Change Option: 0

QAD WH-TR-240

Use Internal Routing Maintenance to define product the flow to a truck location:

- 1** This is a one-phase movement staying within the shipping area, so do not enable the Two Phase field.
- 2** Setting the To Location Option to 3 lets you change drop locations within the shipping zone.

Link a Transaction Path to the Product Flow Type

Link a Transaction Type to the product flow path

Internal Routing Assignment Maint

Transaction Type: LOC-TR

Site: 10-301

Warehouse: 01

Item Number:

Warehouse Item Type:

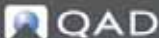
Address:

Custom: ☐

Internal Routing: 01LTR

Custom Program:

1. When this transaction type is created...
2. And is associated to theses...
3. This material flow is initiated.

 WH-TR-250

Use Internal Routing Assignment Maintenance to link a transaction type to the product flow type.

Assign the new Internal Routing to Transaction Type LOC-TR, which is triggered from Container Move on the RF.

Look for a General Stage/Truck Location

Look for a general Stage and/or Truck location

Algorithm Assignment Maintenance

Algorithm Type: CM Transaction Type: LOC-TR
 Site: 10-301 Warehouse: 01
 Item Number: Warehouse Item Type:
 Address: Custom: ☐

Assigned Algorithms

Seq	Algo	Description
10	14	Move to Dock - Find Dedicated Dock
20	12	Move to Dock - Merge with same Shipper/Ship-To
30	11	Move to Dock - Find Empty Location

01

There are 9 Container Move rules.

01LTR

070SH001 070SH002 070SH003

070TR001 070TR002 070TR003

OUTBOUND

QAD

WH-TR-350

Finally, assign an algorithm sequence to Transaction Type LOC-TR. Use Algorithm Type CM for selecting a Truck or Stage location in the shipping area.

The Move to Dock algorithms look for a location with Storage Type set to Truck; however, you can override the system and move product to locations 070SH002 or 003, even if they are assigned Storage Type as Stage.

Why? You set the To Location Option field in Internal Routing Maintenance to 3.

The box at the bottom of the graphic above shows the various locations where staff can move goods once they are ready for shipment.

Example - Container Move

Example - Container Move

Move a Container/Load

1. Identify a load in a shipping location
2. Log into Container Move (RF 3.4)
3. Select the LPN to move
4. Select the drop location
5. Confirm load was moved

 QAD WH-TR-270

The steps shown in the graphic above depict the major processing steps when using the optional container move function.

Example - Container Move (RF 3.4)

Example - Container Move (RF 3.4)

Move a Container/Load

Step 1: Selecting a load in a shipping location (identify the shipper).

Site:	Item Number:	Display Whse Loc:				
10-301		No				
Warehouse:	Lot/Serial:	Disp Non-Whse Loc:				
0705H001		No				
Location:	Reference:	Output:				
01		PAGE				
Warehouse:	Warehouse 1					
Item	Status	Qty	Expect	Expect	Detail	Detail
Lot	Ref	UM On Hand	In	Out	Alloc	Pick
03210	Y-Y-N EA	100				100
	PL000243 PL					

Step 2: Log into Container Move (RF 3.4).

Loc Transfer
Ref: PL000243
Loc: 0705H001
Chk:
S: PS1024110008
Destination
Loc: 070TR001
Chk:
Via: FEDX
Lo:

Step 3: Select the LPN to move.

Site:	Item Number:	Display Whse Loc:				
10-301		No				
Warehouse:	Lot/Serial:	Disp Non-Whse Loc:				
0705H001		No				
Location:	Reference:	Output:				
4.9.13		PAGE				
Warehouse:	Warehouse 1					
Item	Status	Qty	Expect	Expect	Detail	Detail
Lot	Ref	UM On Hand	In	Out	Alloc	Pick
03210	Y-Y-N EA	100				100
	PL000243 PL					

Step 4: Select the drop location.

4.9.13 Inventory Detail Inquiry whic

Step 5: Confirm load was moved.

QAD VMI-TR-28D

Moving a container or load might be helpful to indicate an packing or consolidation of an order is complete and it is ready for shipment. You can do this by setting up locations and assigning a Storage Type as Stage or Truck. These Storage Types are used as selection criteria with a Container Move Algorithm.

When using Container Move (RF option 3.4), the system promotes a drop location but you can select an alternative.

Steps include;

- 1 Identify a load in a shipping location (identify the shipper).
- 2 Log into Container Move (RF 3.4).
- 3 Select the LPN to move.
- 4 Select the drop location.
- 5 Confirm load was moved.

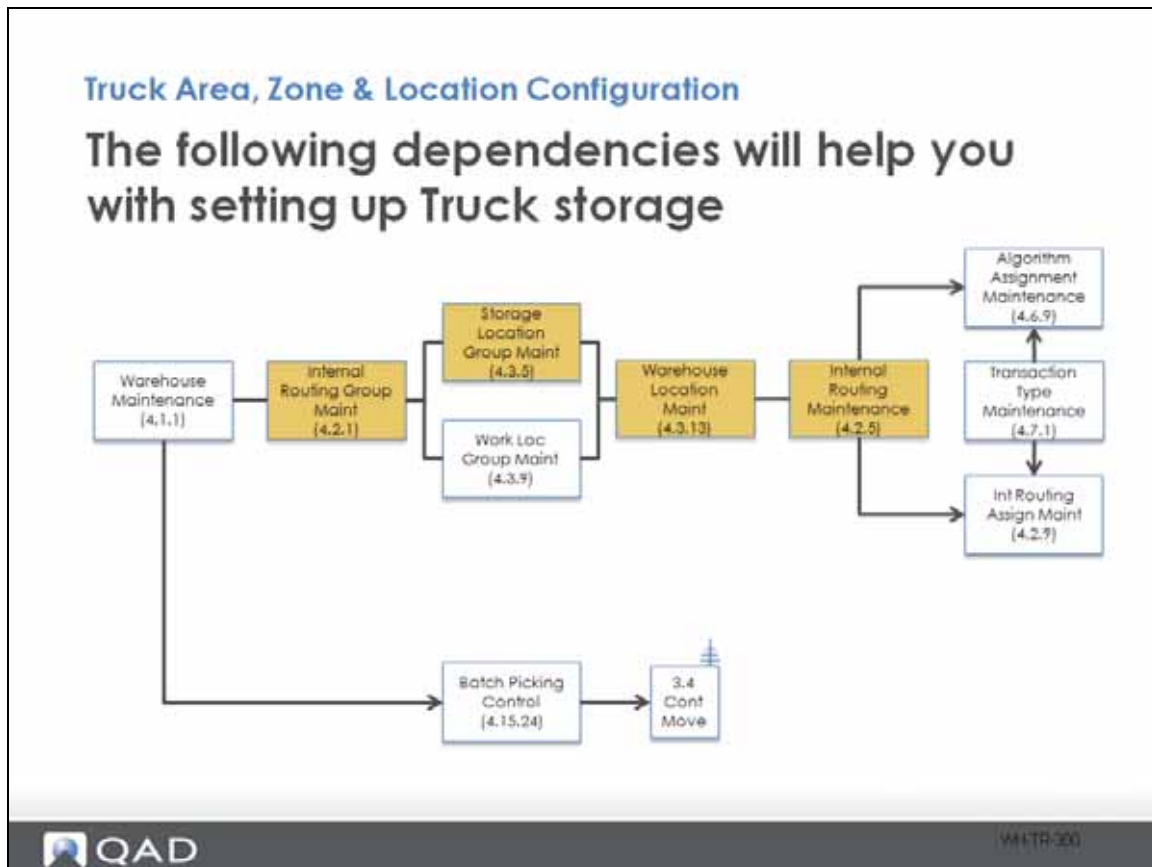
Optional - Trucks as Temporary Storage

OPTIONAL

You can use trucks as
temporary storage locations
before shipping an order

WH-TR-290

Truck Area, Zone, and Location Configuration



If shipping is already configured, setting up Container Move with a separate Truck zone requires changes to:

- Internal Routing Group Maintenance
- Storage Location group Maintenance
- Warehouse Location Maintenance
- Internal Routing Maintenance.

The boxes highlighted in the graphic above indicate programs you manipulate for this container move configuration.

Set Up a Truck Area

Setup a truck Area

Internal Routing Group Maint

Site: 10-301
Warehouse: 01
Internal Routing Group: 080
Description: Trucks
Functional: ☐

SLG Default Values

Allow Issues: ☒
Allow Receipts: ☒
Allow Outgoing Returns: ☒
Allow Incoming Returns: ☒

01
080
OUTBOUND

QAD WH-TR-310

The Location Full % Report extracts information from non-functional locations only.

In the previous example, the Truck locations were in the shipping area and zone. Given the shipping area is functional, you need to create another trucks area to be able to report on truck locations capacity. If detailed truck location capacity reporting is not relevant, keep the truck locations in the shipping area.

Did You Know

Specifying an area, zone and location for `truck` allows you to report on truck capacity and contents using the truck location for storage.

Set Up a Truck Zone

Setup a truck Zone

Storage Location Group Maintenance

Site: 10-301
Warehouse: 01

Storage Location Group: 080TR
Description: Trucks

Internal Routing Group: 080

Allow Issues: ☒
Allow Receipts: ☒
Allow Incoming Returns: ☒
Allow Outgoing Returns: ☒
Opportunity Counts: ☐
Opportunity Count Frequency: 0
Check Digits: ☐
Cycle Count Status Option: 0

Exclude from Picking: ☐
Picking Multiple UM:
Detail Overflow Group
Capacity Check
Optim:
Allow Mixed S
Acquisition UM: R

01
080
080TR
OUTBOUND

QAD WHTR-311

Setting up a new Trucks area requires least one Trucks zone.

Set Up at Truck Locations

Setup at truck Locations

Warehouse Location Maintenance

Site: 10-301
Distribution Site 1

Location: 080TR001

Location Groupings:

Warehouse: 01

Storage Location Group: 080TR

Work Location Group: 01FL

Warehouse Location Data

Check Digit:

Popularity:

Storage Type: TRUCK

Warehouse Location Type:

Travel Sequence: 0

Dedicated:

Picking T

Preferrec

Opportunity Count Frequ

Last Opportunity C

Stage

Stage

01
080
080TR
080TR001
080TR002
080TR003

OUTBOUND

QAD
WH-TR-330

Truck locations can then be assigned to the truck zone and the fork lift work location group, 01FL.

Define Product Flow

Define product flow

Internal Routing Maintenance

Site: 10-301	Warehouse: 01	Internal Routing: 01LTR
Description: Load Pallet on Truck	Internal Routing Group: 070	
Sequence: 10		

Site: 10-301	Warehouse: 01	Internal Routing: 01LTR
Description: Load Pallet on Truck	Internal Routing Group: 080	
Sequence: 20		

In this scenario all containers are moved to a truck area.

070

01LTR

Seq 10 START

080

080TR001

080TR002

080TR003

Seq 20 END

OUTBOUND

QAD

WH-TR-340

Use Internal Routing Maintenance to manage product flow from the Shipping Area to the new Trucks Area. You can actually add a Sequence 20 to the existing Internal Routing from the prior example.

Link a Transaction Type to the Product Flow Path

Link a transaction type to the product flow path

Internal Routing Assignment Maint

The screenshot shows the 'Internal Routing Assignment Maint' screen. It contains several fields: 'Transaction Type: LOC-TR' (highlighted with a red box), 'Site: 10-301', 'Warehouse: 01', 'Item Number:', 'Warehouse Item Type:', 'Address:', 'Custom:' (with a small icon), 'Internal Routing: 01LTR' (highlighted with a red box), and 'Custom Program:'. Three red arrows point from the text on the right to the form fields: one to 'Transaction Type: LOC-TR', one to 'Internal Routing: 01LTR', and one to the 'Custom:' field.

1. When this transaction type is created...
2. And is associated to theses...
3. This material flow is initiated.

QAD WH-TR-350

Assign the new routing to a transaction. This does not need to be changed if it was already setup in the prior example.

Look for a General Truck Location

Look for a general truck Location

Algorithm Assignment Maintenance

Algorithm Type: CM Transaction Type: LOC-TR

Site: 10-301 Warehouse: 01

Item Number: Warehouse Item Type:

Address: Custom: ☐

Assigned Algorithms

Seq	Algo	Description
10	14	Move to Dock - Find Dedicated Dock
20	12	Move to Dock - Merge with same Shipper/Ship-To
30	11	Move to Dock - Find Empty Location

There are 9 Container Move rules.

QAD WMLTR-360

A Container Move series of Algorithms is used to select appropriate Truck locations. Use the same Algorithm from the prior example.

Example - Move Container/Load to a Truck

Example

Move Container/Load to a Truck

1. Confirm a load is in shipping
2. Log into Container Move (RF 3.4)
3. Select the load ID
4. Select the load location
5. Select the move to truck location
6. Confirm shipment moved to a truck location
7. Use Location Full % Report to view capacity



WH-TR-37D

In this example, the steps involved to move a container (or a load) to a truck are depicted in the steps above.

Example - Use Trucks as Locations (RF 3.4)

Example - Use trucks as Locations (RF 3.4)

Move a Container/Load to a Truck



1

Site: 10-301	Item Number:	Display Whse Loc: No
Warehouse:	Lot/Serial:	Disp Non-Whse Loc: No
Location: 070SH001	Reference:	Output: PAGE

Warehouse: 01 Warehouse 1

Item	Status	Qty	Expect	Expect	Detail	Detail
Lot	Ref	UM On Hand	In	Out	Alloc	Pick
03210	Y-Y-N so2	EA	2			2

2

3

4

5

Loc Trans
Ref: so2
Loc: 070SH001
Chk:
S: PS1024110002
Destination
Loc: 080TR001
Chk:
Via: FEDX
Lo:

Via: FEDX
Transfer complete

Via: FEDX
Shipment Ready

6

Site: 10-301	Item Number:	Display Whse Loc: No
Warehouse:	Lot/Serial:	Disp Non-Whse Loc: No
Location: 080TR001	Reference:	Output: PAGE

Warehouse: 01 Warehouse 1

Item	Status	Qty	Expect	Expect	Detail	Detail
Lot	Ref	UM On Hand	In	Out	Alloc	Pick
03210	Y-Y-N so2	EA	2			2

7

Site	Warehouse	SLG	Location	Relative Full %	Absolute Full %
10-301	01	080TR	080TR001	0.09	100.00
			080TR002	0.00	0.00
			080TR003	0.00	0.00
				0.09	100.00

QAD W4TR-360

As referenced earlier, setting up a new non-functional truck area allows lets you check the location utilization using the Location Full % Report or the Percent Full column of the Warehouse Location field.

Note Percent Full information is not reported on locations in functional areas.

Steps involved include:

- 1 Confirm a load is in shipping.
- 2 Log into RF Container Move (3.4).
- 3 Select the load ID.
- 4 Select the load location.
- 5 Select the move to truck location.
- 6 Confirm shipment moved to a truck location.
- 7 Use Location Full % Report to view capacity. This only pulls data for locations in non-functional areas.

Note It is also possible to change inventory status of the item when moved to a truck location. For example, the company wants inventory in a truck not available for any purpose. To change inventory status on a move requires setting the inventory status of the truck locations to N-N-N and disabling Keep From Status on the internal routing

Control Truck Load Building Sequence

You can also control truck load building sequence

Batch Picking Control

Site: 10-301	Distribution Site 1
Warehouse: 01	Warehouse 1

Print Paperwork:

Include Shipper Comments: ☐ Print Paperwork Option: 0

Inc Packing Cmnts: ☐

Print Features and Options: ☐

Print Order Details: ☐

Assign Shipper Number: ☒

Display Quantity In SO UM: ☐

Print Lot/Serial Numbers: ☐

Container Move:

1 Sequential Shipper Option: 1

Only Shipper Option: 0 2

QAD WH-TR-380

- 1 In Batch Picking Control, you can use the Sequential Shipper Option to control how pallets are loaded onto a truck. This supports reverse stop loading to help with truck unloading efficiency.
- 2 Use Only Shipper Option to specify the type of message displayed when verifying whether users can load both pre-shippers and shippers or just shippers.

Optional - Containerization



When items/packages arrive at shipping they may need further processing prior to shipment. This might include consolidating all items/packages for the same order or customer and building a larger handling unit load (container). This is frequently done in shipping staging and/or packaging.

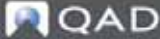
Containerization is available for both sales and distribution orders.

Containerization

QAD Warehousing Shipping - Containerization

Order / Package Consolidation



WM-TR-410

You can manually create a container and link the container to a pre-shipper in Pre-Shipper/Shipper Workbench or in DO Container Maintenance (EE core programs).

QAD Warehousing provides multi-level containerization through the RF, allowing staff to assemble pallets/packages for shipment until all items for a particular customer ship-to address are complete. The RF containerization option allows users to use RF scanning to consolidate all boxes or pallets built during picking into other containers for shipping.

QAD Warehousing Shipping - Containerization

QAD Warehousing Shipping - Containerization

Shrink Wrap and Stage



WH-TR-411

Once orders/packages are consolidated you can shrink wrap the load and stage for loading to a truck.

Viewer Discretion Advised

Viewer Discretion is Advised

The following information and setup has not been configured and tested in the QMI training environment.

Containerization Setup

QAD Warehousing Shipping – Containerization Setup

Batch Picking Control: Containerization

Site: 10-301 Distribution Site 1
Warehouse: 01 Warehouse 1

Undo Available: ☒

Release Orders Option: 2

Create Date: 1/27/2011 QMI User
Modified Date: 10/24/2011 QMI User

Containerization

- 1 Pallet Item: 03120
- 2 Pallet Print Program:
- 3 Pallet Print Option: 0
- 4 Prompt to Remove Container: ☒
- 5 Generate Identification: ☒
- 6 Explosion Option: 1
- 7 Container Sequence ID: 00000001

Include Sales Orders: ☒
Include Distribution Orders: ☒
Include Work Orders: ☒
SO/DO Batch Selection: Order
Allow Merge Orders: ☐
Close Option: 0
Auto Selection: ☐
Maximum Selection: 99
Maximum Picked Cases: 99
Container/Reference: Reference
Container Sequence ID: 00000001
Container Item:
Container Unit of Measure:

QAD QAD 701-430

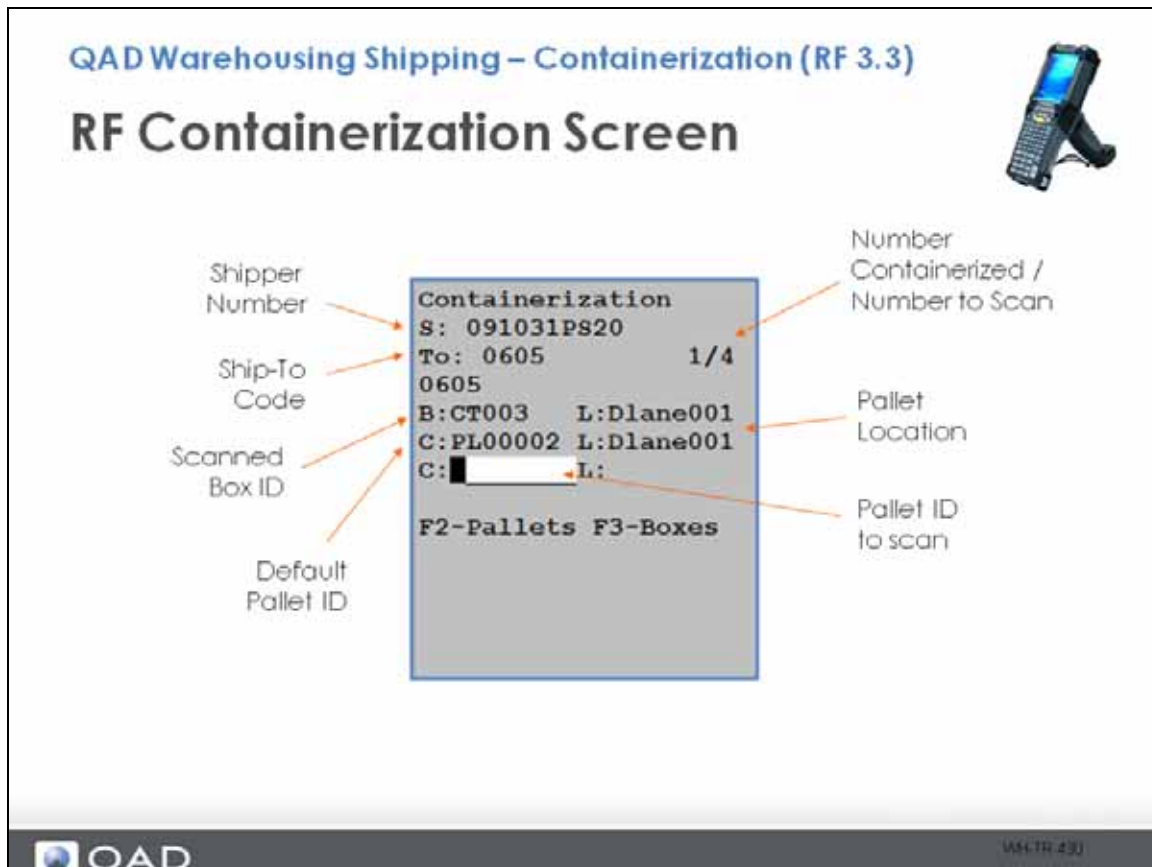
Containerization includes the following steps:

- 1 Enter the default pallet container item.
- 2 Define the program to use when printing labels for pallets. The default program is whprtpal.p.
- 3 Determine if you print pallet labels automatically, not at all, or prompt to print labels.
- 4 Indicate if you want the system to prompt the user to remove a container.
- 5 Define if the system generates a new container ID when using the RF Container Build menu option.
- 6 Explosion Option: Specific whether the system prompts the user to enter the number of boxes or splits the items into boxes when you explode the pallet.
- 7 Also, make sure a Sequence Definition is assigned to the Container Sequence ID on the initial Batch Picking Control frame.

QAD Warehousing Shipping - Containerization (RF 3.3)

QAD Warehousing Shipping – Containerization (RF 3.3)

RF Containerization Screen



The diagram illustrates the RF Containerization Screen, which is used for consolidating boxes or items into a shippable container. The screen displays the following information:

- Shipper Number:** S: 091031PS20
- Ship-To Code:** To: 0605
- Scanned Box ID:** B: CT003
- Default Pallet ID:** C: PL00002
- Pallet Location:** L: Dlane001
- Number Containerized / Number to Scan:** 1/4
- Pallet ID to scan:** C: [] L: []
- Instructions:** F2-Pallets F3-Boxes

The screen also features a QAD logo in the bottom left corner and the text "WHLTR 430" in the bottom right corner.

RF Containerization is used to consolidate boxes or items into a shippable container. This allows for more efficient loading, lower transportation costs, and easier unloading.

View Containerization Progress Via RF 3.3

View containerization progress via RF 3.3

RF Containerization: View Progress

The diagram illustrates the workflow for viewing containerization progress via RF 3.3. An RF device is shown on the left, connected to a screen. The screen displays a menu with the following text:

```

Containerization
S: 091031PS20
To: 0605      1/4
0605
B:CT003   L:Dlane001
C:PL00002 L:Dlane001
C:      L:
F2-Pallets F3-Boxes
  
```

Two red arrows, labeled F2 and F3, point from the 'F2-Pallets' and 'F3-Boxes' options respectively to two separate screens showing detailed containerization data.

F2 Screen:

```

Containerization
S: 091031PS20
To: 0605      1/4
0605
B:CT003   L:Dlane001
C:PL00002 L:Dlane001
C:      L:
PL00002   Dlane001
  
```

F3 Screen:

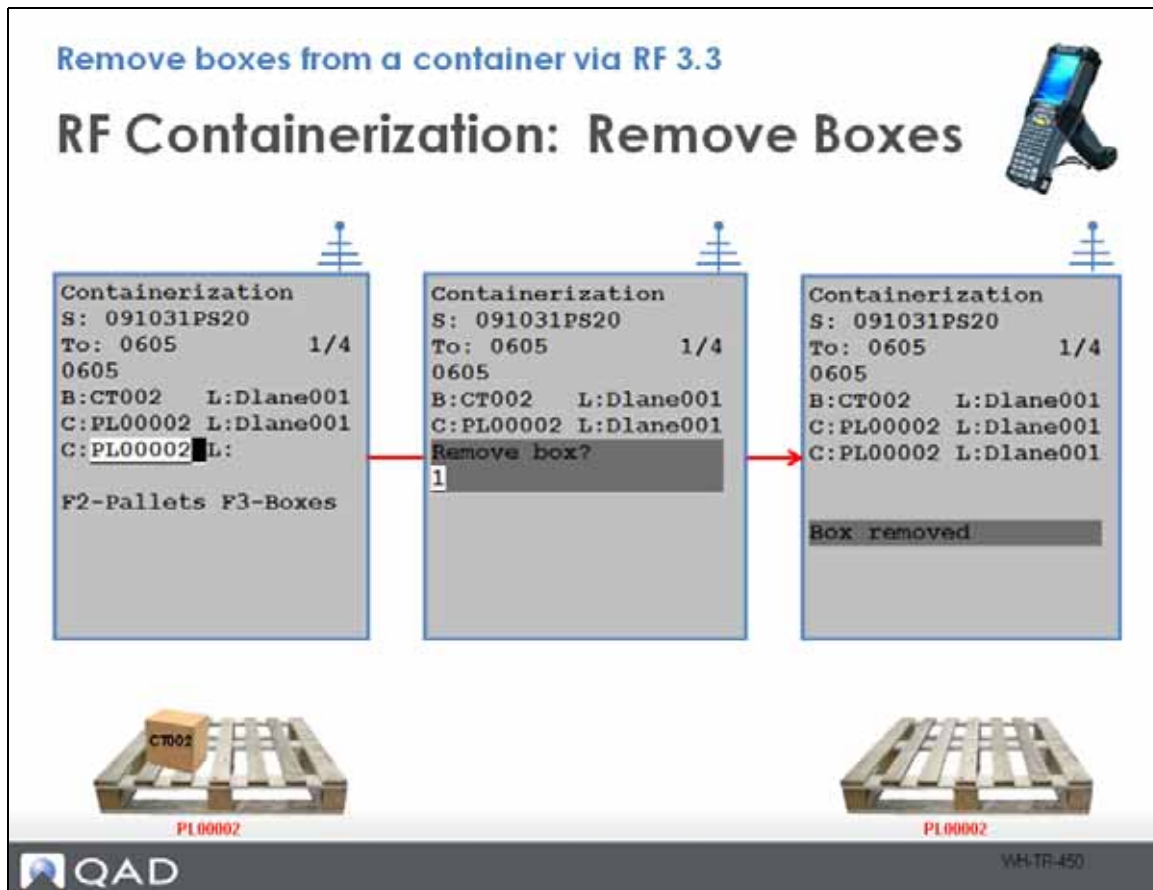
```

Containerization
S: 091031PS20
To: 0605      1/4
0605
B:CT003   L:Dlane001
C:PL00002 L:Dlane001
C:      L:
CT003     Dlane001
CT006     Dlane001
CT007     Dlane001
  
```

QAD WH-TR 443

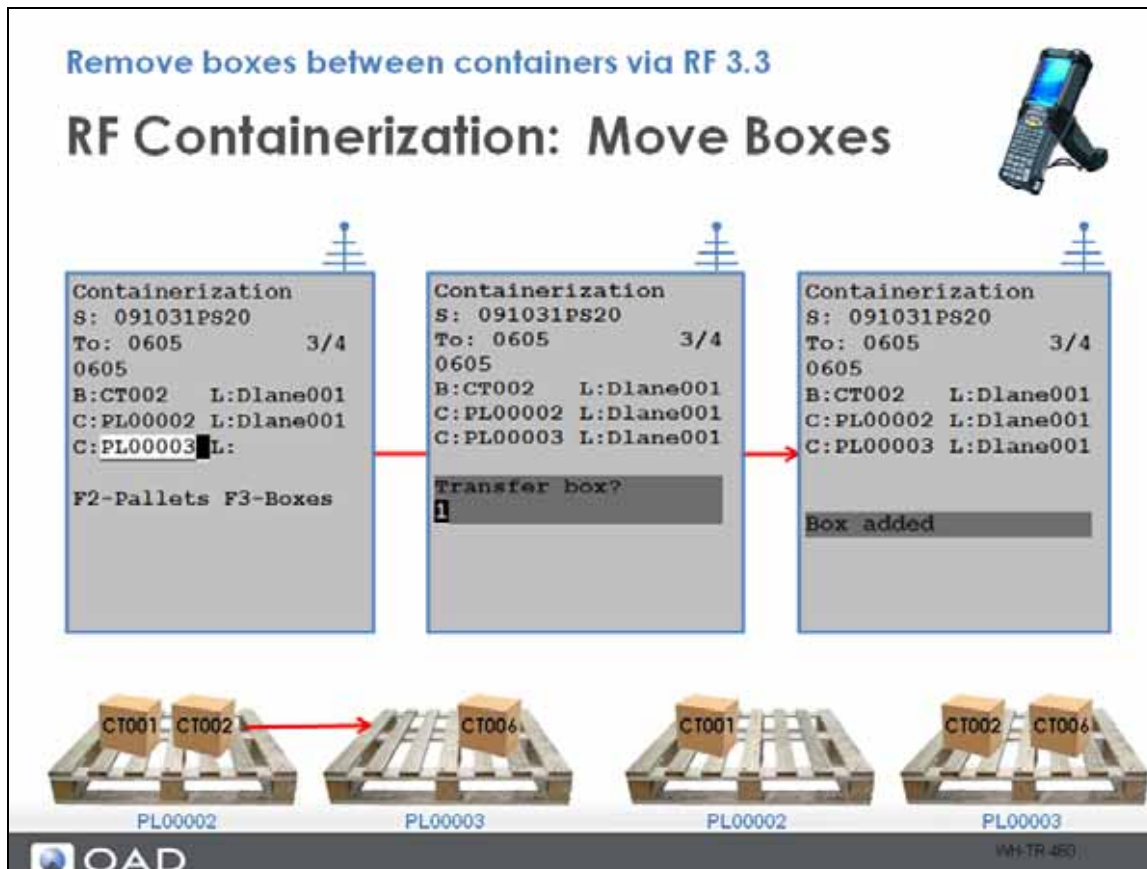
Using the RF you can view the number of boxes already containerized and the remaining boxes to be processed to complete the load.

Remove Boxes from a Container Via RF 3.3



RF Containerization lets you manage load consolidation in real time. You can remove boxes from containers or pallets.

Remove Boxes Between Containers Via RF 3.3

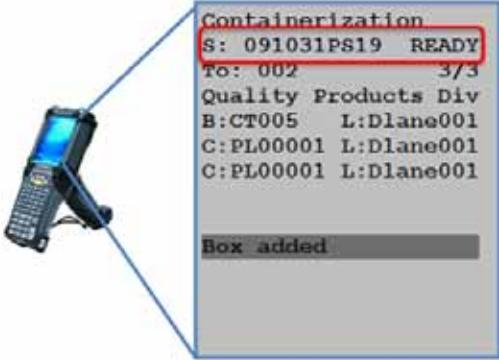


Or, you can move boxes from one pallet to another during load building/containerization.

Monitor the Order Status Via RF 3.3

A user can monitor the order status via RF 3.3

RF Containerization: Monitor Order Status



The image shows a handheld RF device on the left, with a blue line pointing from its screen to a larger screen on the right. The larger screen displays the following text:

```
Containerization  
S: 091031PS19  READY  
To: 002 3/3  
Quality Products Div  
B:CT005 L:Dlane001  
C:PL00001 L:Dlane001  
C:PL00001 L:Dlane001  
  
Box added
```

The QAD logo is in the bottom left corner, and the text "WH-TR-470" is in the bottom right corner.

During RF containerization, you can view order status or shipper data.

Additionally, RF Containerization allows a user to:

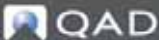
- Merge a pallet into another pallet.
- Transfer a scanned box to a pallet that is in another location on the same shipper.
- Print pallet labels if required.

Example - Pre-Shipper/Shipper Inquiry

Example - Pre-Shipper/Shipper Inquiry

Build Containers for Shipment

Order	Customer	Item	Qty	UM
SO11035	002	D-IT005	6	EA
		D-IT006	6	EA
		D-IT007	4	EA
SO11036	0605	D-IT005	3	EA
		D-IT008	6	EA
		D-IT009	5	EA
SO11038	002	D-IT006	15	EA

 **QAD** WM-TR-430

Use Pre-Shipper/Shipper Inquiry (EE Core program) to view the build containers needed in shipment.

Example - Pre-Shipper/Shipper Inquiry

Example - Pre-Shipper/Shipper Inquiry

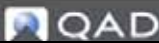
RF Containerization: Customer 002

 **CT001** D-IT005 6 EA

 **CT004** D-IT006 6 EA

 **CT005** D-IT007 4 EA
 D-IT006 15 EA

Ship-From ID: us-d3		Pre-Shipper/Shipper: Pre-Shipper		Output: PAGE	
Ship-To/Dock: 002		Quality Products Div 1000		Status:	
Master Bill ID:		Inventory Movement Code:			
ID	Item Number	PO Number	Order	Line	To
Site	Location	Lot/Serial	Ref	Stat	Ship
	Customer Ref	Model Year			
091031PS19				0	1.0
.CCT001	Box			0	EA
us-d3	Dlane001				
..I	D-IT005		S011035	1	6.0
us-d3	Dlane001				EA
.CCT004	Box			0	EA
us-d3	Dlane001				
..I	D-IT006		S011035	2	6.0
us-d3	Dlane001				EA
.CCT005	Box			0	EA
us-d3	Dlane001				
..I	D-IT007		S011035	3	4.0
us-d3	Dlane001				EA
..I	D-IT006		S011038	1	15.0
us-d3	Dlane001				EA

 QAD WH-TR 430

Pre-Shipper/Shipper Inquiry shows the details of the first customer, two orders.

Example - Pre-Shipper/Shipper Inquiry (Continued)

Example - Pre-Shipper/Shipper Inquiry

RF Containerization: Customer 0605

 **CT002** D-IT005 3 EA

 **CT003** D-IT008 6 EA

 **CT006** D-IT009 3 EA

 **CT007** D-IT009 2 EA

Ship-From ID: us-d3		Pre-Shipper/Shipper: Pre-Shipper		Number: 091031PS20		Output: PAGE	
Ship-To/Dock: 0605		0605		Status:		Inventory Movement Code:	
Master Bill ID:							
ID	Item Number	PO Number	Order	Line	To		
Site	Location	Lot/Serial	Ref	Stat	Ship		
	Customer Ref	Model Year					
091031PS20				0	1.0		
.CCT002	Box			0	EA		
us-d3	DITane001						
..I	D-IT005		5011036	1	3.0		
us-d3	DITane001				EA		
.CCT003	Box			0	EA		
us-d3	DITane001						
..I	D-IT008		5011036	2	6.0		
us-d3	DITane001				EA		
.CCT006	Box			0	EA		
us-d3	DITane001						
..I	D-IT009		5011036	3	3.0		
us-d3	DITane001				EA		
.CCT007	Box			0	EA		
us-d3	DITane001						
..I	D-IT009		5011036	3	2.0		
us-d3	DITane001				EA		

This is the Pre-Shipper inquiry for the second customer.

Example - RF 3.3 Container Build

Example - RF 3.3 Container Build

Container Build Customer 002



Containerization
S: 091031PS19
To: 002 0/3
Quality Products Div
B:CT001 L:Dlane001
C: L:
C: L:
F2-Pallets F3-Boxes

Containerization
S: 091031PS19
To: 002 0/3
Quality Products Div
B:CT001 L:Dlane001
C: L:
C:PL00001 L:Dlane001

Containerization
S: 091031PS19
To: 002 1/3
Quality Products Div
B:CT001 L:Dlane001
C: L:
C:PL00001 L:Dlane001
Box added





PL00001 PL00001

 WH-TR 510

When Batch Picking Control Container options are configured, use RF 3.3 to build a container from the different boxes/items on the order.

Example - RF 3.3 Container Build (Continued)

Example - RF 3.3 Container Build

Container Build Customer 002



Containerization

S: 091031PS19

To: 002 2/3

Quality Products Div

B:CT004 L:Dlane001

C:PL00001 L:Dlane001

C:PL00001 L:Dlane001

Box added



Containerization

S: 091031PS19 READY

To: 002 3/3

Quality Products Div

B:CT005 L:Dlane001

C:PL00001 L:Dlane001

C:PL00001 L:Dlane001

Box added



PL00001



PL00001


WH-TR-530

Add as many boxes as needed using the Container Build option.

Example - RF 3.3 Container Build (Continued)

Example - RF 3.3 Container Build

Container Build Customer 002

Ship-From ID: us-d3
Pre-Shipper/Shipper: Pre-Shipper
Number: 091031PS19

Output: PAGE

Ship-To/Dock: 002 Quality Products Div 1000

Master Bill ID: Status: Inventory Movement Code:

ID	Item Number	PO Number	Order	Line	To
Site	Location	Lot/Serial	Ref	Stat	Ship
	Customer Ref	Model Year			
091031PS19				0	1.0
.CPL00001	Pallet			0	EA
us-d3	Dlane001				
.CCT0001	Box			0	EA
us-d3	Dlane001				
...I	D-IT005		5011035	1	6.0
us-d3	Dlane001				EA
.CCT0004	Box			0	EA
us-d3	Dlane001				
...I	D-IT006		5011035	2	6.0
us-d3	Dlane001				EA
.CCT0005	Box			0	EA
us-d3	Dlane001				
...I	D-IT007		5011035	3	4.0
us-d3	Dlane001				EA
...I	D-IT006		5011038	1	15.0
us-d3	Dlane001				EA

 QAD

WH-TR 530

The new Pre-Shipper/Shipper Inquiry shows the new container contents for the first customer.

Example - RF 3.3 Container Build (Continued)

Example - RF 3.3 Container Build

Container Build Customer 0605



Containerization
S: 091031PS20
To: 0605 0/4
0605
B:CT002 L:Dlane001
C: L:
C: L:
F2-Pallets F3-Boxes

Containerization
S: 091031PS20
To: 0605 0/4
0605
B:CT002 L:Dlane001
C: L:
C:PL00002 L:Dlane001

Containerization
S: 091031PS20
To: 0605 1/4
0605
B:CT002 L:Dlane001
C: L:
C:PL00002 L:Dlane001
Box added





PL00002 PL00002

 WH-TR-640

Follow the same process to build a container for the next customer.

Example - RF 3.3 Container Build (Continued)

Example - RF 3.3 Container Build

Container Build Customer 0605



Containerization	Containerization	Containerization
S: 091031PS20	S: 091031PS20	S: 091031PS20 READY
To: 0605 2/4	To: 0605 3/4	To: 0605 4/4
0605	0605	0605
B:CT003 L:Dlane001	B:CT006 L:Dlane001	B:CT007 L:Dlane001
C:PL00002 L:Dlane001	C:PL00002 L:Dlane001	C:PL00002 L:Dlane001
C:PL00002 L:Dlane001	C:PL00002 L:Dlane001	C:PL00002 L:Dlane001
Box added	Box added	Box added



PL00002



PL00002



PL00002

QAD WIN-TR 553

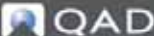
Follow the same process when building containers for customer 0605.

Example - RF 3.3 Container Build (Continued)

Example - RF 3.3 Container Build

Container Build Customer 0605

Ship-From ID: us-d3		Pre-Shipper/Shipper: Pre-Shipper		Output: PAGE	
Number: 091031P520		Ship-To/Dock: 0605		Status:	
Master Bill ID:		Inventory Movement Code:			
ID	Item Number	PD Number	Order	Line	To
Site	Location	Lot/Serial	Ref	Stat	Ship
	Customer Ref	Model Year			
091031P520				0	1.0
..CPL00002	Pallet			0	EA
us-d3	Dlane001				
..CCT002	Box			0	EA
us-d3	Dlane001				
...I	D-IT005		5011036	1	3.0
us-d3	Dlane001				EA
..CCT003	Box			0	EA
us-d3	Dlane001				
...I	D-IT008		5011036	2	6.0
us-d3	Dlane001				EA
..CCT006	Box			0	EA
us-d3	Dlane001				
...I	D-IT009		5011036	3	3.0
us-d3	Dlane001				EA
..CCT007	Box			0	EA
us-d3	Dlane001				
...I	D-IT009		5011036	3	2.0
us-d3	Dlane001				EA

 W4TR-670

Continuing on with customer 0605, view container data in Pre-Shipper/Shipper Inquiry.

Bonus Coverage: Assign Carriers to Shipping Lanes

Bonus Coverage: Assign carriers to shipping lanes

Lane Maintenance

Site: 10-301	
Warehouse: 01	
Lane: 070SH001	Storage Type: TRUCK
Description: Truck for FEDX	

Capacity:	0.00
Carrier:	FEDX 
Tasks:	0
Absolute Full %:	0.00

 WH-TR-530

Lanes are a special type of ship staging location and typically associated to a dock door. Lanes let the company to assign carriers to docks are used for identifying pick drop locations during wave picking.

Lanes are mainly used with wave planning in QAD Warehousing. You can assign specific carriers to a lane.

There are three frames and 6 fields in Lane Maintenance used for configuration.

Parcel Manifest

Parcel Manifest is the process of using RF devices to generate shipping paperwork

WH-TR-590

QAD Warehousing provides parcel manifest functions.

Parcel Manifest Setup and Execute



A presentation slide titled "QAD Warehousing Shipping" with the subtitle "Parcel Manifest Setup & Execute". It lists four steps in a numbered list. The slide has a white background with a dark blue footer containing the QAD logo and the text "WH-TR-600".

QAD Warehousing Shipping

Parcel Manifest Setup & Execute

1. Set up print paperwork controls
2. Assign a form printer
3. **Optionally** specify a routine to produce a ship shipment message to export to a TMS
4. Print pre-shipper/shippers

QAD WH-TR-600

The graphic above depicts the steps included to prepare the print paperwork.

Did You Know

A manifest is a list of goods carried on a truck, train, or ship.

Set Up Print Paperwork Controls

1. Setup print paperwork controls

Batch Picking Control

Site: 10-301 Distribution Site 1
Warehouse: 01 Warehouse 1

Print Paperwork:

☐ Include Shipper Comments:
☐ Inc Packing Cmnts:
☐ Print Features and Options:
☐ Print Order Details:
☒ Assign Shipper Number:
☐ Display Quantity In SO UM:
☐ Print Lot/Serial Numbers:

Print Paperwork Option: 0

Container Move

Sequential Shipper Option: 0 

Only Shipper Option: 0 

 QAD

WHTR 810

Use the fields in the Batch Picking Control Print Paperwork frame to set up print paperwork controls.

Assign a Form Printer to Shipping

2. Assign a form printer to shipping

User Work Location Group Maint

Site: 10-301
Warehouse: 01
Work Location Group: 01FL
User ID: UserB

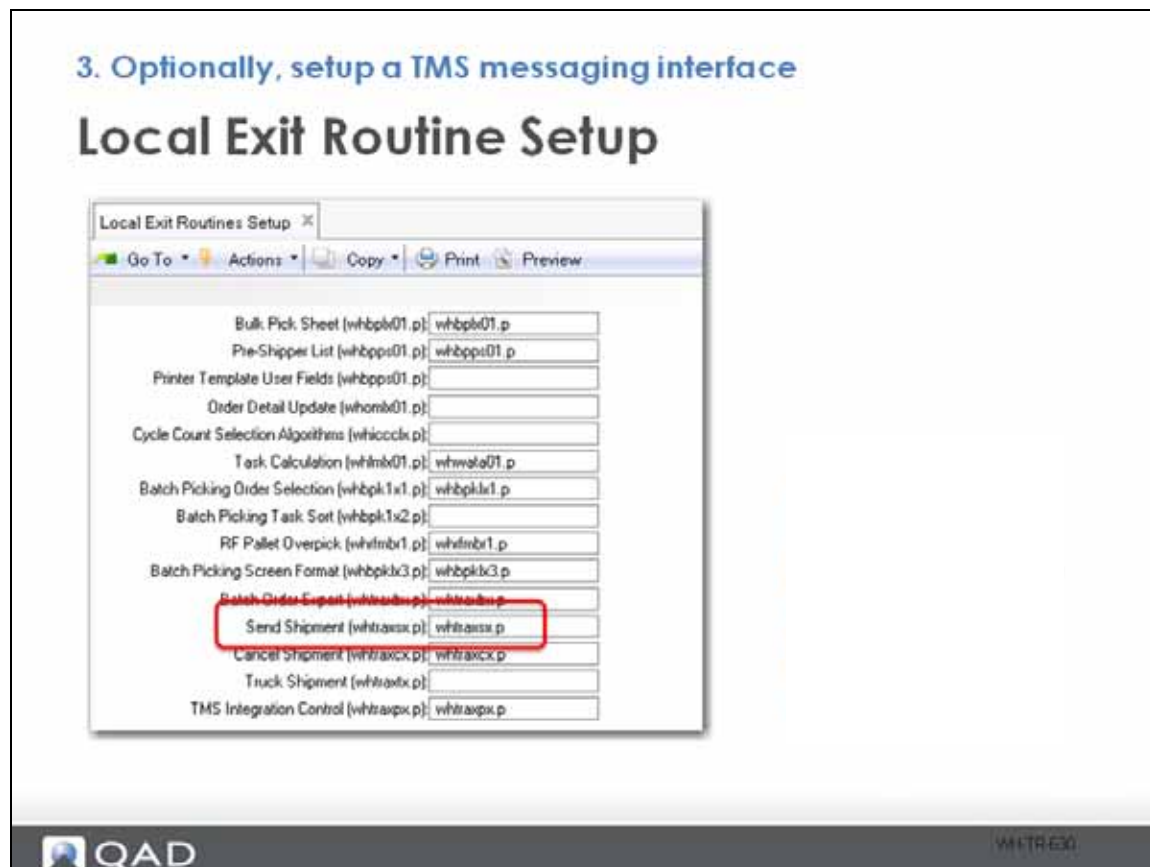
System Flavor:	B	
Device:		
External Device Printer:	printer	
Form Printer:	printer	
		Use External: ☐
ID Printer:	printer	
		Use External: ☒
Task Printer:	printer	
		Use External: ☒
Inspection Printer:		
		Use External: ☒

QAD W11TR530

Use User Work Location Group Maintenance to assign a form printer to shipping.

Note The Use External field lets you indicate whether forms should be printed on an external printer.

Optionally Set Up a TMS Messaging Interface



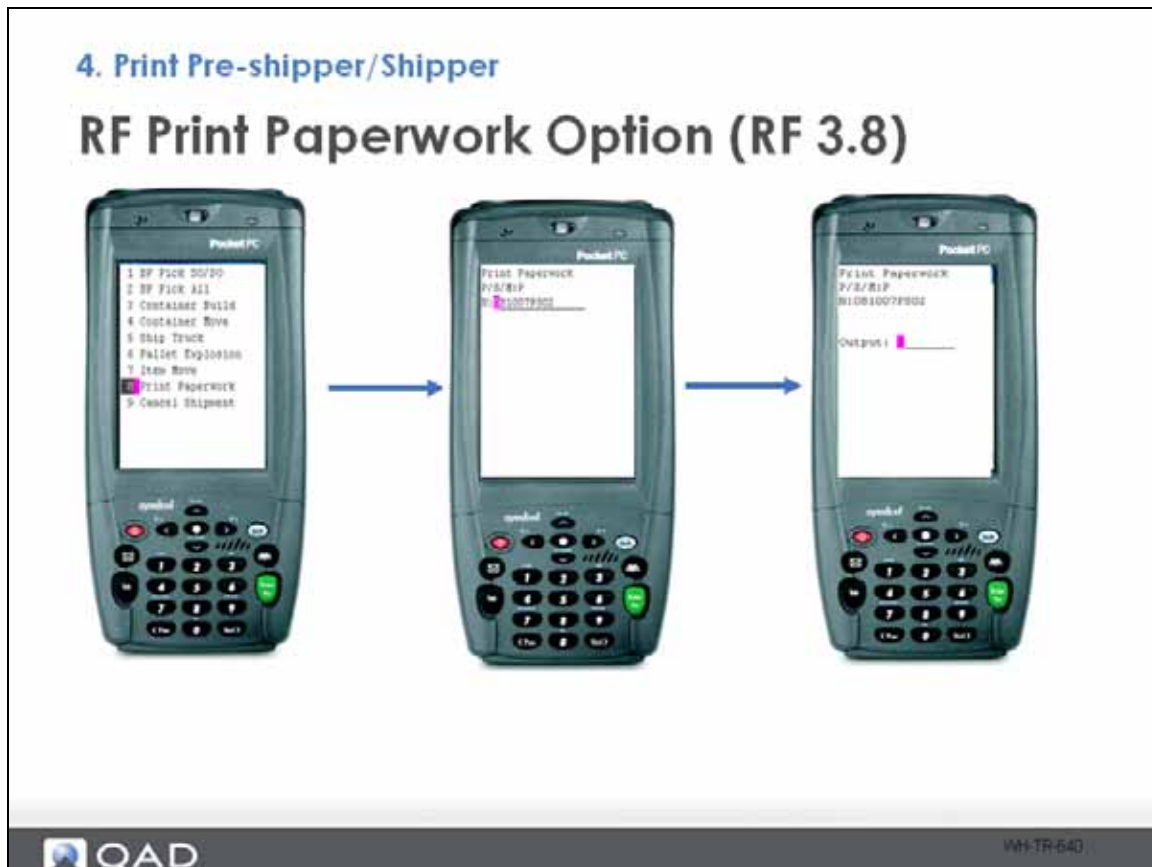
Local Exit Routines are preconfigured or custom programs a company can use to customize processes and/or third party system interfaces without changing core QAD Warehousing code.

For example, Send Shipment is a standard interface used to communicate shipping information to and from a Transportation Management System, TMS.

Did You Know

You can use Ship Truck features with an external Transportation Management System.

Print Pre-Shipper/Shipper



Use the RF Print Paperwork option (3.8) to print the pre-shipper or shipper.

Did You Know

You can print both a shipper and pre-shipper from an RF scanner.

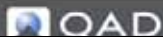
The RF screen prompts the user to print shipping documentation. Printing is done before both container move and truck ship

Key Learning Points

QAD Warehousing Shipping

Key Learning Points

- There are several shipping best practices not supported by QAD Warehousing
- You can use a trailer as a location
- You can move a container to a trailer without shipping the order
- You can use RF control for shipping with QAD Warehousing
- You can use QAD Warehousing to print all shipping paperwork



WH-TR-651

Exercises - Shipping Setup and Execution

Exercise – Shipping Setup and Execution

Shipping Setup and Execution

- Warehouse, area, and zone setup
- Ship location setup
- Review pick routing and drop rules
- Shipping movement routing setup
- Shipping movement routing assignment
- Shipping movement routing rules
- Master bill of lading setup
- Ship the order
- Use trucks for storage and reporting



WH-TR-660

For discrete picking, without wave planning, product is picked to packing area for shipment consolidation and shipment prep. Once shipment prep and/or consolidation is complete, the loads are moved to a staging location in the Shipping area.

In this exercise, you setup and configure QAD Warehousing for shipping and ship an order. Additionally, you set up trucks as locations used for storage.

Warehouse, Area, and Zone Setup

Exercise

Warehouse, Area, and Zone Setup

- Confirm the warehouse, area, and zone are set up per previous training sessions.



WH-TR-070

Confirm the warehouse, areas, and zones are setup and configured per a previous exercise. Refer to the Introduction section of this training guide for programs to use to verify setup of these aspects is complete.

Exercise - Ship Location Setup

Exercise

Ship Location Setup

Warehouse Location Maintenance

Go To Actions Copy Print Preview Attach

Site: 001 Exam Site
Location: bulk

Location Groupings

Warehouse: 001
Storage Location Group: d-stor
Work Location Group: d-work

Warehouse Location Data

Check Digit:
Popularity:
Storage Type: **Stage**
Warehouse Location Type:
Travel Sequence: 0
Dedicated: ☐

Picking Type:
Preferred UM:
Opportunity Count Frequency: 0
Last Opportunity Count:
Stage (In):
Stage (Out):

QAD W4TR-630

For scheduling and shipping purposes set the ship location Storage Type to Stage, using Warehouse Location Maintenance. Setting the Storage Type to Stage lets you use different algorithms and move product around.

Exercise - Review Pick Routing and Drop Rules

Exercise

Review Pick Routing and Drop Rules

- Check the following:
 - Internal Routing Maintenance
 - Int Routing Assignment Maintenance
 - Algorithm Assignment Maintenance

QAD

WHTR-EX

Confirm the a pick routing, routing assignment, and drop rules are associated to the shipping area. Refer to the Picking section of this training guide for more information on:

- Internal Routing Maintenance (Picking)
- Internal Routing Assignment Maintenance (PICK-*—>Picking)
- Algorithm Assignment Maintenance (PK—>PICK-*)

The above maintenance menus were set up in the picking section exercises.

Exercise - Ship the Order

Exercise

Ship the Order

1. Pick an SO
2. Process the shipment on the RF
3. Confirm the order shipped

Order:	Sold To:	Ln Fo
so1	10C1000	

Sales Order Line		Qty Ordered	UM
Ln	Item Number		
1	03210		

Site:	Item Number:	Display When Loc: No
10-101		

Warehouse:	Lot/Serial:	Disp Non-Whe Loc: No
070SH001		

Warehouse:	Warehouse 1
070SH001	

Item	Status	Qty	Expect	Expect	Detail	Detail
Lot	Ref	UM	On Hand	In	Out	Alloc
03210	Y-Y-N	EA	10			10

Site:	Item Number:	Display When Loc: No
10-101		

Warehouse:	Lot/Serial:	Disp Non-Whe Loc: No
070SH001		

Locations:	Reference:	Output:	PAGE
4,9,13	Inventory Detail Inquiry		whis

QAD WCTR-740

1 Use Sales Order Maintenance to pick the order and assure it is in a shipping location.

2 Process the shipment using RF Truck Ship (3.5) option.

a Select the shipping location.

b Confirm the pre-shipper.

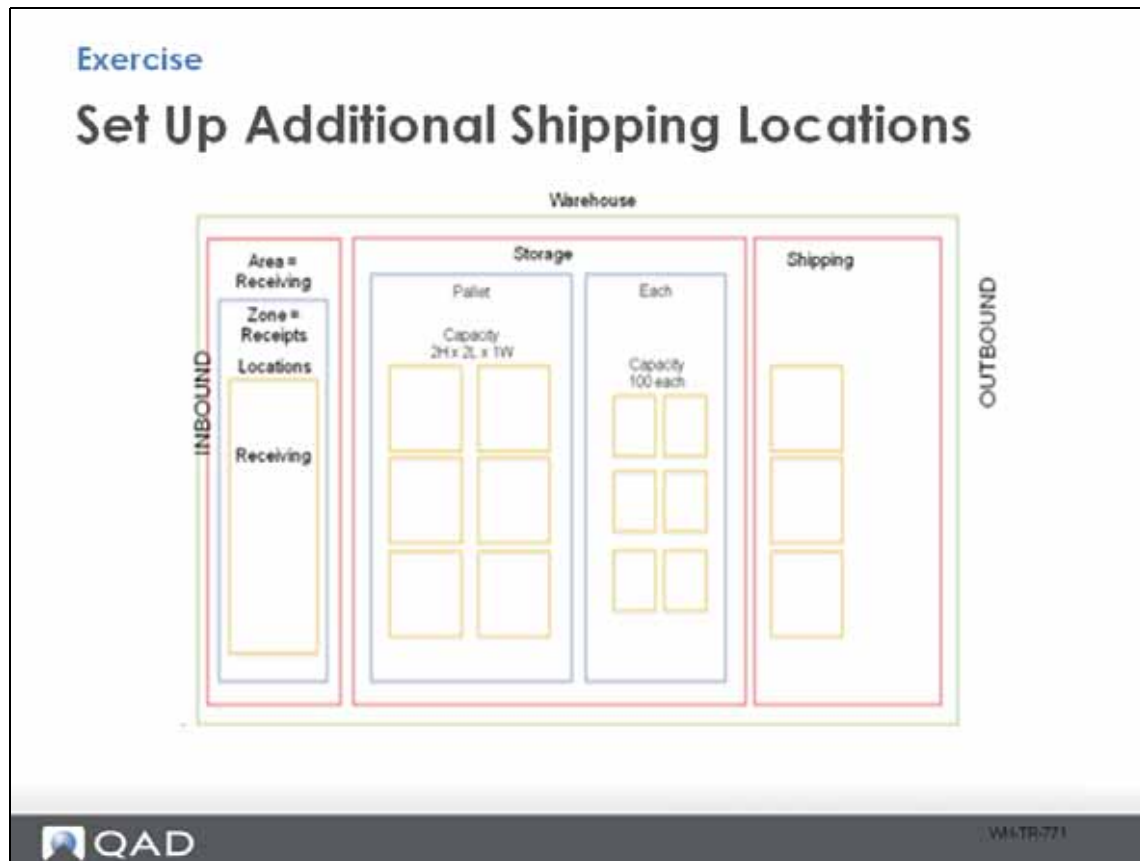
c Confirm the shipment.

Note Alternatively you can process the shipment using Pre-Shipper/Shipper Confirm in QAD core programs.

3 Confirm order shipped from shipping location using Inventory Detail Inquiry.

In shipping it is common to move loads between shipping locations/lanes before final shipment. QAD Warehousing supports this process.

Exercise - Move Load to an Alternate Shipping Location/Lane



In this exercise, you perform several steps to move a load to an alternate shipping location/lane. The remainder of this section covers the steps included in this exercise to set up alternate locations.

- 1 Set up two more shipping locations/lanes using Warehouse Location Maintenance
- 2 Copy the current shipping location format.

Field	Data
Site	10-301
Location	
Description (optional)	
Warehouse	
Storage Location Group	
Work Location Group	
Storage Type	Stage

- 3 Set up a routing to facilitate the product flow for a manual product move.

Exercise- Move Load to an Alternate Shipping Location/Lane (cont'd)

Exercise

Shipping Movement Routing Setup

Internal Routing Maintenance

Go To • Actions • Copy • Print • Preview • Attach •

Site: Warehouse: Internal Routing:

Description: Sequence: Internal Routing Group:

Transaction Create:

Confirmed at Source: Task: Priority: Increment:

System Code: Two Phase: Keep From Status:

Transaction Confirmation:

From Location Option: To Location Option:

From Item Option: To Item Option:

From Lot/Serial Option: To Lot/Serial Option:

From Reference Option: To Reference Option:

Allow Quantity Increase: Alternative UM Option:

Allow Quantity Decrease:

Quantity Change Option:

One step needed

Site	10-301
Warehouse	
Internal Routing	
Description	Ship Lane Assignment
Sequence	10
IRG	
To Location Option	3

QAD VMLTR-700

A manual container move on the RF scanner moves the load to another shipping location within the shipping area.

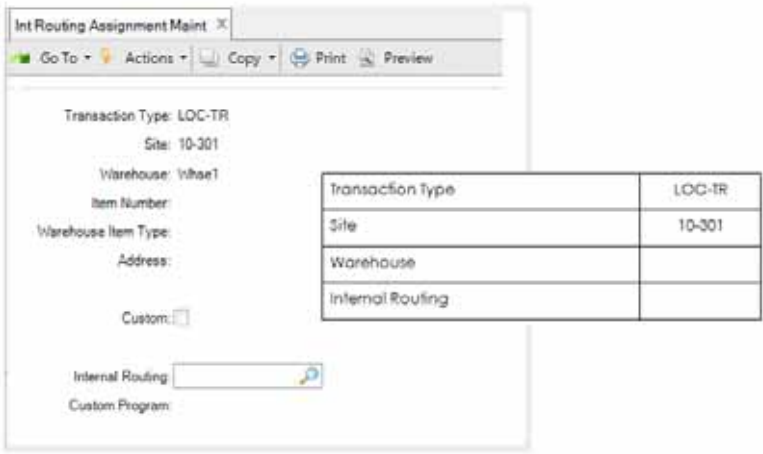
- 4 Setup a one step routing to move the load to a shipping lane using Internal Routing Maintenance.
- 5 Define parameters, and when not provided, note the parameters you enter here:

Field	Data to Enter
Site	10-301
Warehouse	
Internal Routing	
Description	
Sequence	10
IRG	
To Location Option	3

Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)

Exercise

Shipping Movement Routing Assignment



Transaction Type	LOC-TR
Site	10-301
Warehouse	
Internal Routing	

QAD WHTA-710

When the system generates a location transfer transaction during a manual container move, the transaction follows the shipping movement routing.

- 6 Assign the shipping movement routing to the location transfer transaction type using Internal Routing Assignment Maint.
- 7 Define parameters, and when not provided, note the parameters you enter here:

Field	Data to Enter
Transaction Type	LOC-TR
Site	10-301
Warehouse	
Internal Routing	

Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)

Exercise

Shipping Movement Routing Rules

Algorithm Assignment Maintenance

Go To Actions Copy Print Preview

Algorithm Type: CM Transaction Type: LOC-TR
 Site: 10-301 Warehouse: Whse1
 Item Number: Warehouse Item Type:
 Address: Custom: ☐

Assigned Algorithms

Seq	Algo	Description
10		
20		
30		

Sequence: 10 Algorithm:
 Description:

Algorithm Type	CM	
Transaction Type	LOC-TR	
Site	10-301	
Warehouse		
Sequence / Algorithm	10	14
Sequence / Algorithm	20	12
Sequence / Algorithm	30	11

QAD WHT-720

Each order has a pre-defined carrier. The ship lane assignment rules should assign the order to a specific lane based on carrier.

- 8 Use Algorithm Assignment Maintenance to define picking rules for replenishment inventory.
- 9 Define parameters, and when not provided, note the parameters you enter here:

Field	Data to Enter	
Algorithm Type	CM	
Transaction Type	LOC-TR	
Site	10-301	
Warehouse		
Sequence/Algorithm	10	14
Sequence/Algorithm	20	12
Sequence/Algorithm	30	11

- 10 Test the load movement in the shipping area

- a Confirm a load is in shipping.
- b Log into RF.
- c Select RF 3.4.
- d Select an LPN in shipping to move.

- e** Select the origination destination.
- f** Select the new location.
- g** Check Inventory Detail Inquiry to see load moved to a new location.

Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)

Exercise

Master Bill of Lading Setup

Batch Picking Control

Go To • Actions • Copy • Print • Preview • Attach •

Site: 10-301
Warehouse: 01 Warehouse 1

Print Paperwork

Include Shipper Comments: ☐ Print Paperwork Option: 0
Inc Packing Cmnts: ☐
Print Features and Options: ☐
Print Order Details: ☐
Assign Shipper Number: ☒
Display Quantity In SQ U/M: ☐
Print Lot/Serial Numbers: ☐

Container Move

Sequential Shipper Option: 0
Only Shipper Option: 0

Ship Truck

Master Bill Ship-To/Dock: 002

Confirm on Error: ☐

QAD WH-TP-730

- 11 Some companies may want to setup trucks as temporary storage locations and report on the truck location capacity. Use Batch Picking Control to set this up.

Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)

Exercise

Use Trucks for Storage and Reporting

Internal Routing Group Maint

Go To Actions Copy Print Preview Attach

Site: 10-301
Warehouse: Ylfse1
Internal Routing Group: Shipping
Description: |

Functional ☒ Disable

SLG Default Values

Allow Issues: ☐
Allow Receipts: ☐
Allow Outgoing Returns: ☐
Allow Incoming Returns: ☐

Site	Location	WH	Desc	SLG	WLG	UM(A)	Qty(A)	H(A)	L(A)	W(A)
10-301			Truck I			--	--	1	10	2

QAD WLTB-750

12 To report the capacity of locations in the shipping area, disable the Functional field in Internal Routing Group Maintenance.

13 Define parameters, and when not provided, note the parameters you enter here:

Site	Warehouse	IRG	Description (optional)	Functional
10-301			Shipping	N

Notes

Field is in the final frame.

Set Storage Type to Truck.

Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)

Exercise

Define Capacity for Ship Locations

Warehouse Location Maintenance

Site: 10-301
Location: Truck

QAD Location Data

Description: Truck1

Inventory Status:

Permanent: ☐

Item Location Type:

Single Item: ☐

Single Lot Reference: ☐

Capacity: 0.0 UOM:

Location Dimensional Data

Height: 0.00
Length: 0.00
Width: 0.00

Dimensional Unit of Measure:

Percent Full: 0.00

Site	Location	WH	Desc	SLG	WLG	UM(A)	Qty(A)	H(A)	L(A)	W(A)
10-301			Truck1			-	-	1	10	2

QAD WH-TR-760

14 Add a truck location using Warehouse Location Maintenance, and define location capacity.

15 Define parameters, and when not provided, note the parameters you enter here:

Site	Location	Warehouse	Description	WLG	UM ^(A)	QTY ^(A)	H ^(A)	L ^(A)	W ^(A)
10-301			Truck1			1	10	2	

Notes

Field is in the final frame.

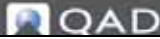
Set Storage Type to Truck.

Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)

Exercise

Move Load to Truck and View Contents

- Move the load to the truck using RF Container Move option (3.4)
- View truck contents using:
 - Location Full % Report
 - Percent Full column in Warehouse Location Maintenance.

 WMTR-770

16 You are ready to move the load to a truck. To do this, use the RF Container Move option (3.4).

17 You can view truck contents using:

- Location Full % Report
- Percent Full column in Warehouse Location Maintenance.

Note When changing the shipping area to non-functional, you are restricted in using lanes and lane assignment algorithms for wave-picking purposes. To avoid this restriction, keep the shipping area a functional area and add a new non-functional truck area.

Questions

- 1 When truck shipping, why do you use Internal Routing Group and Storage Location Group as part of the setup?
- 2 True or False. Shipping is a functional area, so you use a LF algorithm.
- 3 True or False. Only one user in the warehouse can perform the manual truck ship moves.
- 4 What does the RF Ship Truck option provide?
- 5 What does the RF Container Move option provide?
- 6 In QAD Warehousing you can use trucks as _____ locations

Answers

- 1 When setting up shipping, why do you use Internal Routing Group and Storage Location Group Maintenance programs
- 2 True. Shipping is a functional area, so you use a LF algorithm that does not factor in available space.
- 3 False. Since you associate users with the truck work location group in User Work Location Group Maintenance, any user assigned can perform the manual moves.
- 4 RF Ship Truck lets you track ship ready status and select specific shippers to include.
- 5 With container move, you can move any pallet to a truck, validate moving container steps, report the position of pallets in the truck, and load pallets in reverse dropping order.
- 6 storage

Notes

Chapter 6

Inspection

Objectives



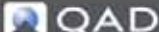
A presentation slide titled "QAD Warehousing Inspection Objectives". The slide features a list of four objectives: Functional Fit, Concepts, Inspection Setup, and Test Inspection. To the right of the list is an image of a hand holding a magnifying glass over a small, brown, rectangular object. The slide has a dark blue header with the QAD logo and a dark blue footer with the QAD logo and the text "WAREHOUSING".

QAD Warehousing Inspection

Objectives

- Functional Fit
- Concepts
- Inspection Setup
- Test Inspection



 **QAD**

WAREHOUSING

QAD Warehousing supports quality inspection with sample control, change of inventory status and creation of warehouse transactions.

What We Do Not Do Well

What we don't do...

Functional Fit: Inspection

Functionality	Fit	Notes
Quality Management		
Hold and release by item, lot, location		Improving release by lot

Legend

 Full

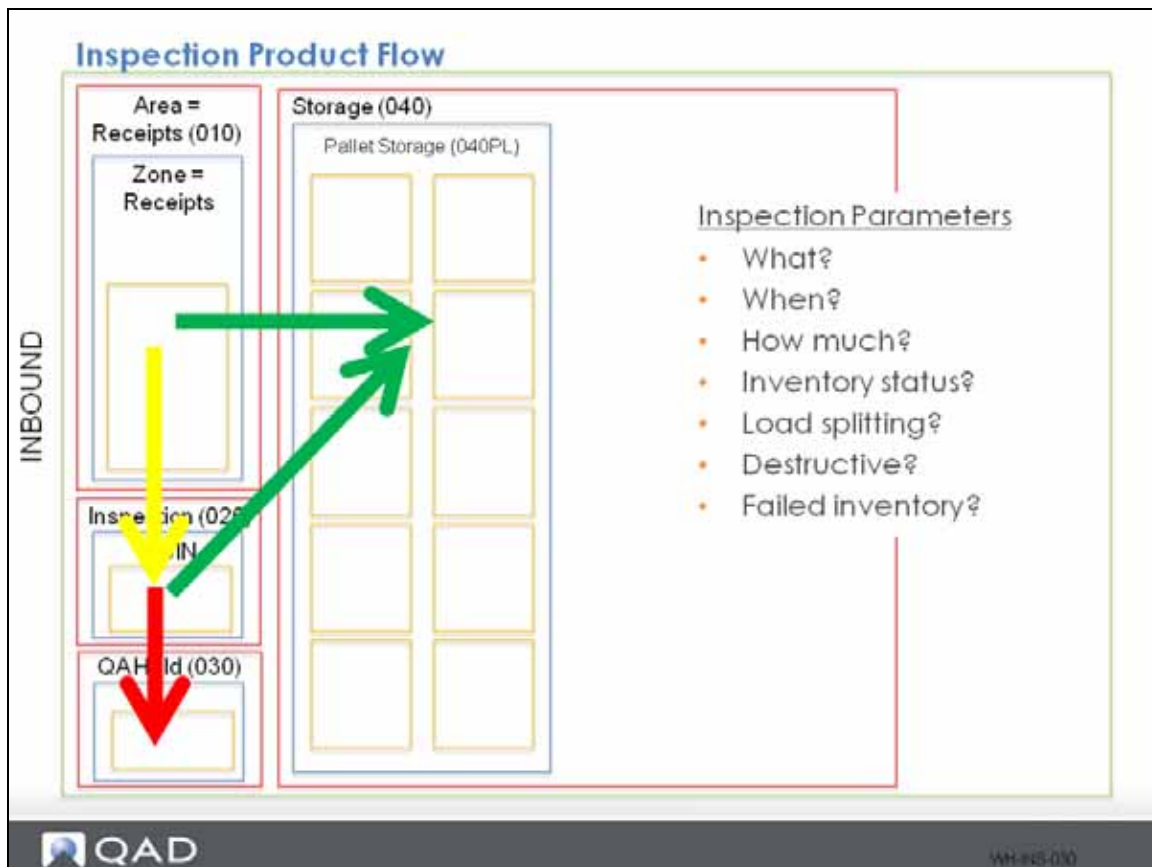
 Partial

 None

WH-FES-020

QAD Warehousing supports the product flow through the inspection process but requires a quality module interface to manage specific quality parameters.

Inspection Product Flow



When product is received, QAD Warehousing supports the product movement from receiving into inspection and on to disposition or storage. Flexible parameters can be setup to determine when product is inspected.

- What is inspected?
- When is it inspected?
- How much is inspected?
- What is the inventory status during inspection?
- What happens to the load during inspection?
- Is inspection destructive?
- What happens to failed inspections?

Did You Know

- Quality algorithms start at receiving.
- Inspection tags can be printed based on receipt frequency, a previous bad inspection, and a required inspection on the order.

Inspection Flags Set in Multiple Places

Inspection flags are set in multiple places

Internal Routing Maintenance

Site: 10-301 Warehouse: 01 Internal Routing: 01RCT

Description: Receipts

Sequence: 20 Internal Routing Group: 040

Miscellaneous Options

Mode: Auto

New Unit of Measure:

Clear Shortages:

Create Shipper:

Check Inspection: ☒

Multi-Level Item Maintenance

Item Number: 03120 Scented Disinfectant

Unit: EA Pump

Site: 10-301 Distribution Site 1

Warehouse: 01 Warehouse 1

Inspection Data

Selective Inspection: ☒ Sample Quantity: 100

Supplier Item Maintenance Inspection (Optional)

Supplier: 10S1002

Item Number: 03130

Inspection Data

Selective Inspection: ☒

QAD

Once you determine the use of inspection, next, set up the inspection process.

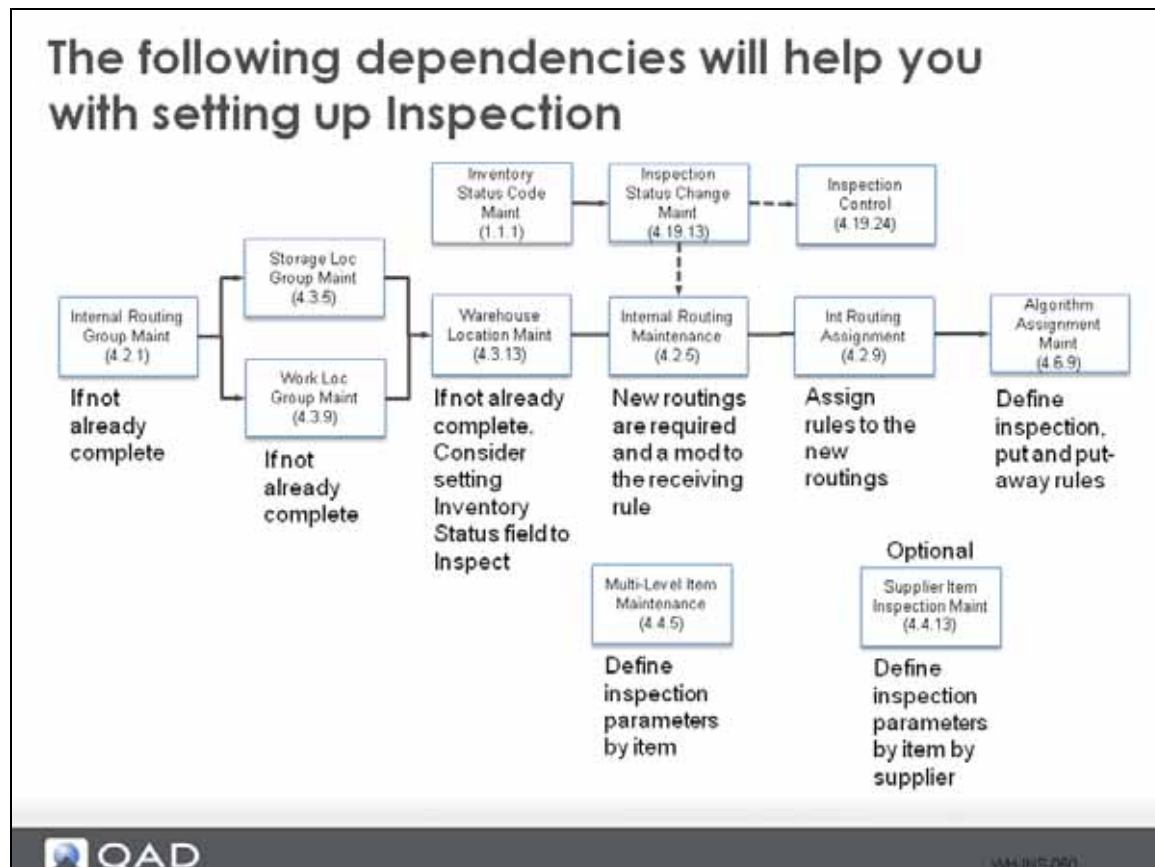
In Internal Routing Maintenance, enable the:

- Check Inspection field, confirming the receipt routing checks the item inspection parameters.
- Selective Inspection field, indicating the item requires inspection in the warehouse based on the defined inspection parameters.

Optionally, setup the Item/Supplier Selective Inspection field to trigger inspection parameters.

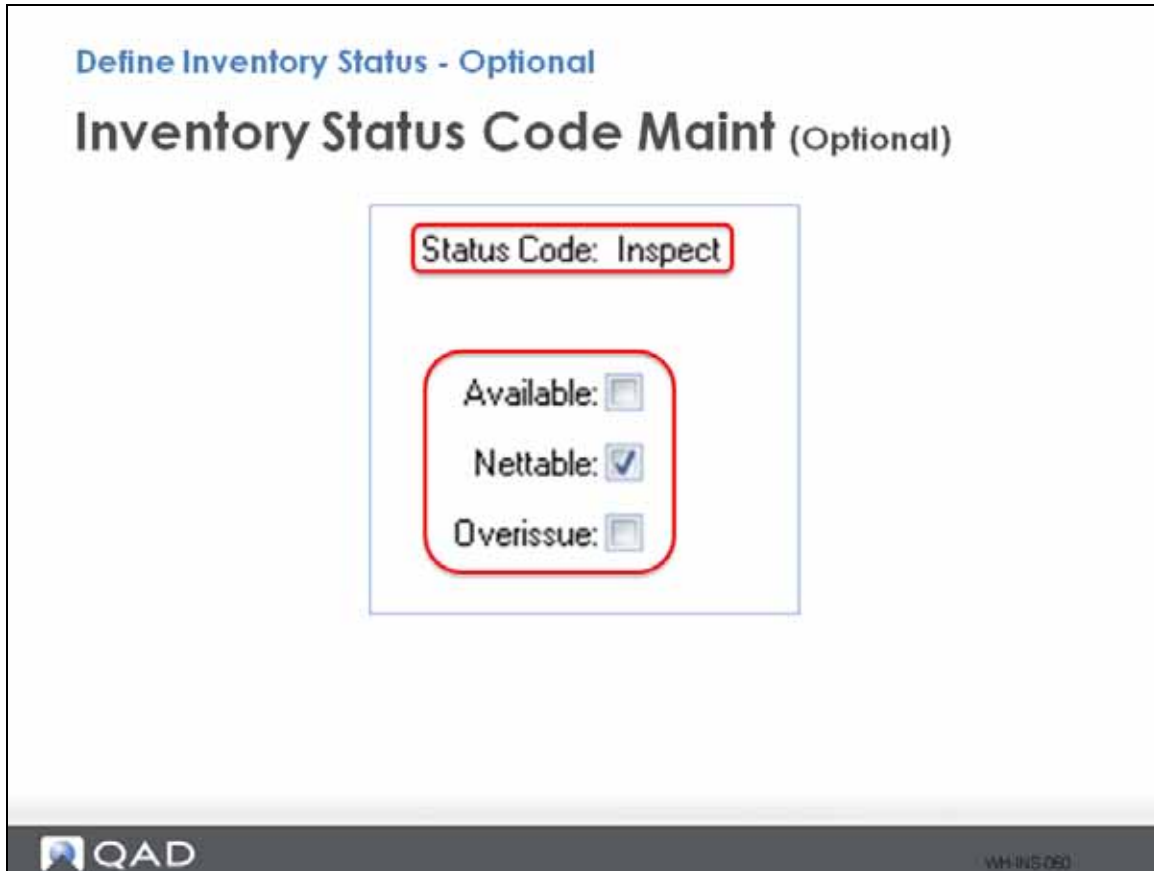
You can set the Inspection field in Internal Routing Maintenance, Multi-Level Item Maintenance, and Supplier Item Maintenance Inspection.

Dependencies



The graphic above depicts the QAD Warehousing programs you use to set up for inspection.

Define Inventory Status - Optional



Define Inventory Status - Optional

Inventory Status Code Maint (Optional)

Status Code: Inspect

Available: ☐

Nettable: ☒

Overissue: ☐

QAD

WH-INS-060

Optionally, use Inventory Status Code Maintenance to define a Status Code for inspection. This provides more detail to inventory status when in different processing areas.

This optional field lets you define new status codes when inventory moves into the inspection area. There are four frames and 6 fields in Inventory Status Code Maintenance used for configuration.

Did You Know

Inventory status codes can automatically change when moved to inspection.

Activate Inspection Control

Activate Inspection Control

Inspection Control

Active: ☒

Create Transactions: ☒

Update Quantity: ☒

Create Item/Supplier Record: ☐

Print Inspection Tag Per: Sample ID

After: 0

Good Inspections Decrease Random % by: 0

Fail Inspections Increase Random % by: 0

Destructive Inspection Status Code: N-N-N

Fail Inspection Status Code: N-N-N

QAD

The Inspection module need to be activated using Inspection Control prior to use.

Destructive Inspection Status Code lets you enter the inventory status code for destructive inspections. When a destructive inspection occurs, inspected goods are useless and cannot be re-used. The system changes the inventory status code to prevent its usage in future warehouse transactions.

Fail Inspection Status Code lets you enter the percentage to increase the random inspection percentage after a number of failed inspections.

There is one frame and 10 fields in Inspection Control used for configuration.

Did You Know

Destructive inspection means the inspected item is no longer usable.

Set Up Inspection and QA Hold Area, Zone, and Location

Setup an Inspection and QA Hold Area, Zone and Location

Internal Routing Group Maint

Site: 10-301
Warehouse: 01

Internal Routing Group: 020
Description: Inspection

Functional: ☒

SLG Default Values

Allow Issues: ☒
Allow Receipts: ☒
Allow Outgoing Return: ☒

Inspection (020)
020IN
001

QAHold (030)
030RJ
001

Storage Location Group Maint

Site: 10-301
Warehouse: 01

Storage Location Group: 020IN
Description: Inspections

Internal Routing Group: 020

Warehouse Location Maintenance

Site: 10-301
Distribution Site 1

Location: 020IN001

Location Groupings

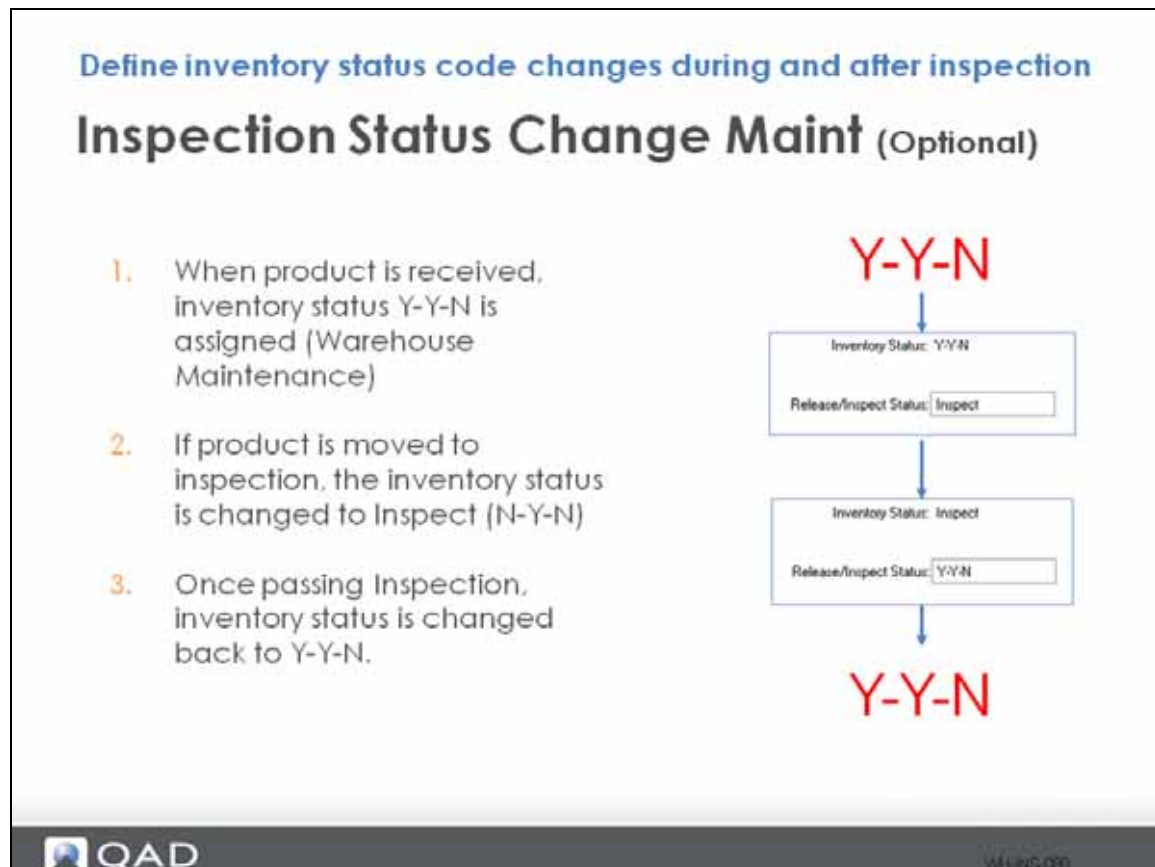
Warehouse: 01

Storage Location Group: 020IN
Work Location Group: 01FL

QAD Version 070

Set up an area and zone, using the traditional parameters for a functional area. When setting up locations for inspection and QA hold areas, you create a custom inventory status for each zone, using Inventory Status Code Maintenance. Remember that you must have at least one location within the zone.

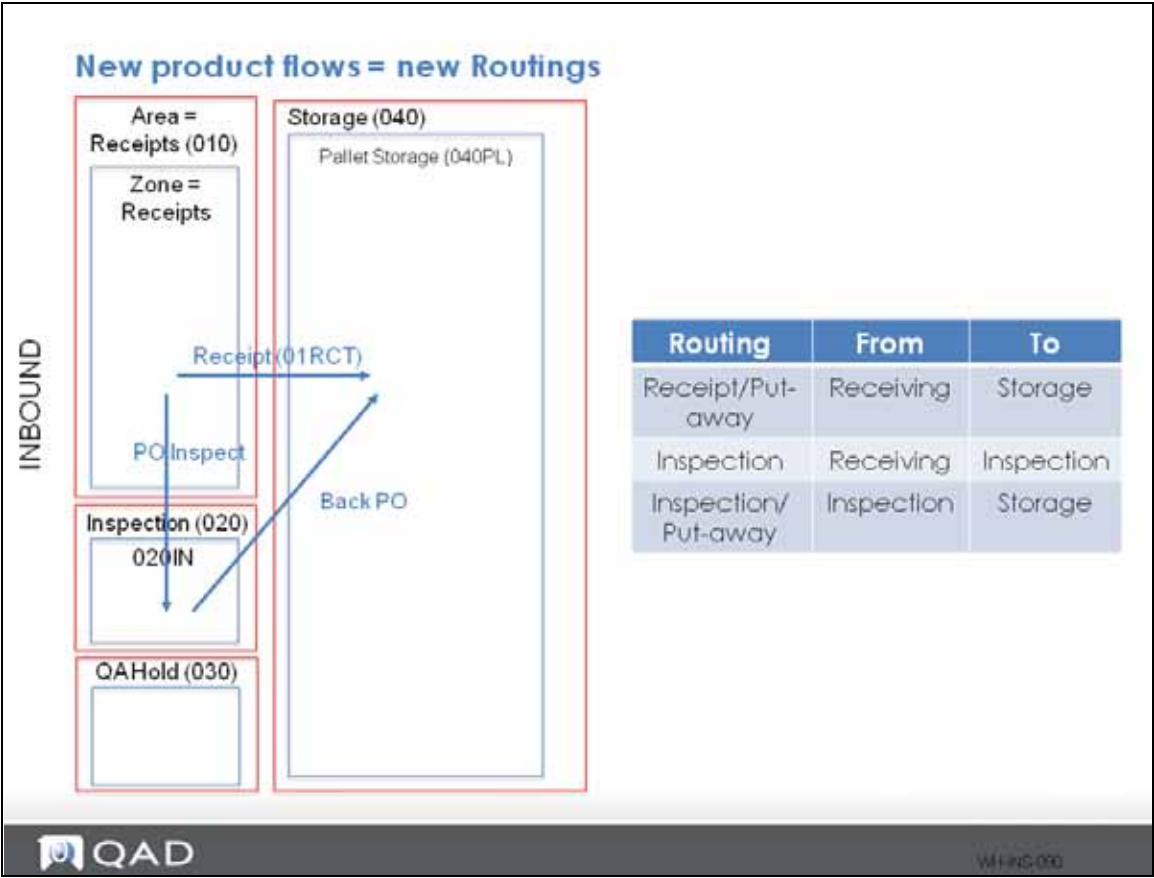
Define Inventory Status Code Changes



In some situations, it is helpful to change the inventory status when product is being inspected. Use Inspection Status Change Maintenance to define the inventory status code changes when product enters and leaves the inspection area.

There are two frames and two fields in Inspection Status Change Maintenance used for configuration.

New Product Flows=New Routings

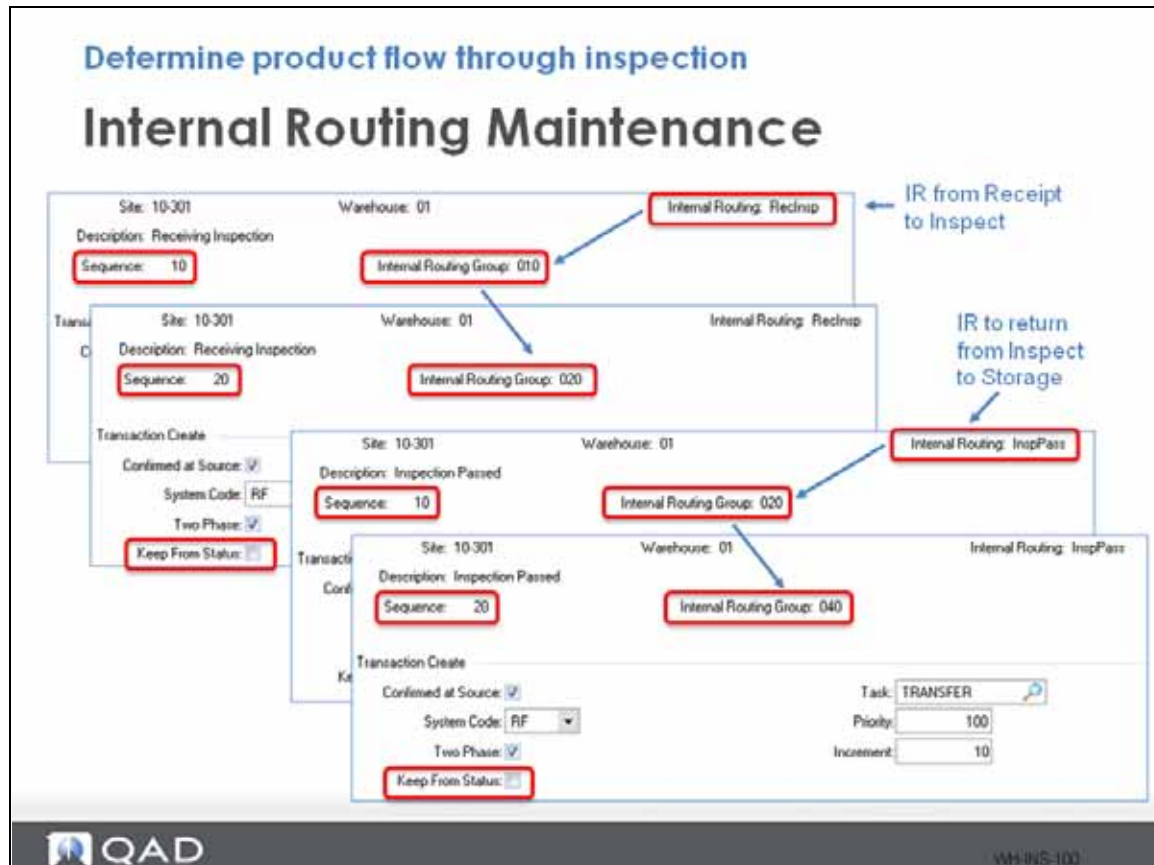


With the addition of an inspection process and area, you need to develop two new potential routings to represent the new product flows:

- One from receiving to inspection (PO Inspect in the graphic above).
- Another from inspection to storage (Back PO in graphic above).

You can also develop a routing from the inspection to QA Hold Area, but for now, you can focus on a pass inspection result.

Determine Product Flow through Inspection



Set up a routing for moving from receiving (010) to inspection (020) and from inspection (020) to storage (040).

To keep inventory status codes correct, uncheck the Keep From Status field in the Sequence 20 of both routings. This allows the inventory status code to change as the product moves into the new area. If checked, inventory keeps the previous status that it had when it is moved into the new area. In this example, you change the inventory status when the product moves into inspection so you uncheck this field.

Confirm Check Inspection to Trigger QA Rules

Confirm Check Inspection to Trigger QA Rules

Internal Routing Maintenance

Site: 10-301 Warehouse: 01 Internal Routing: 01RCT

Description: Receipts Sequence: 20 Internal Routing Group: 040

Picking Repack Type: Allow Switch Lot Ref: ☐ Expire Date (Days): 0

Print Options:

Print ID: ☐ Print Mode (ID): Auto
 Print Created Tasks: ☐ Create Print Mode: Auto
 Print Confirmed Tasks: ☐ Confirmed Print Mode: Auto
 Print Exceptions: ☐ Exception Print Mode: Auto

Miscellaneous Options:

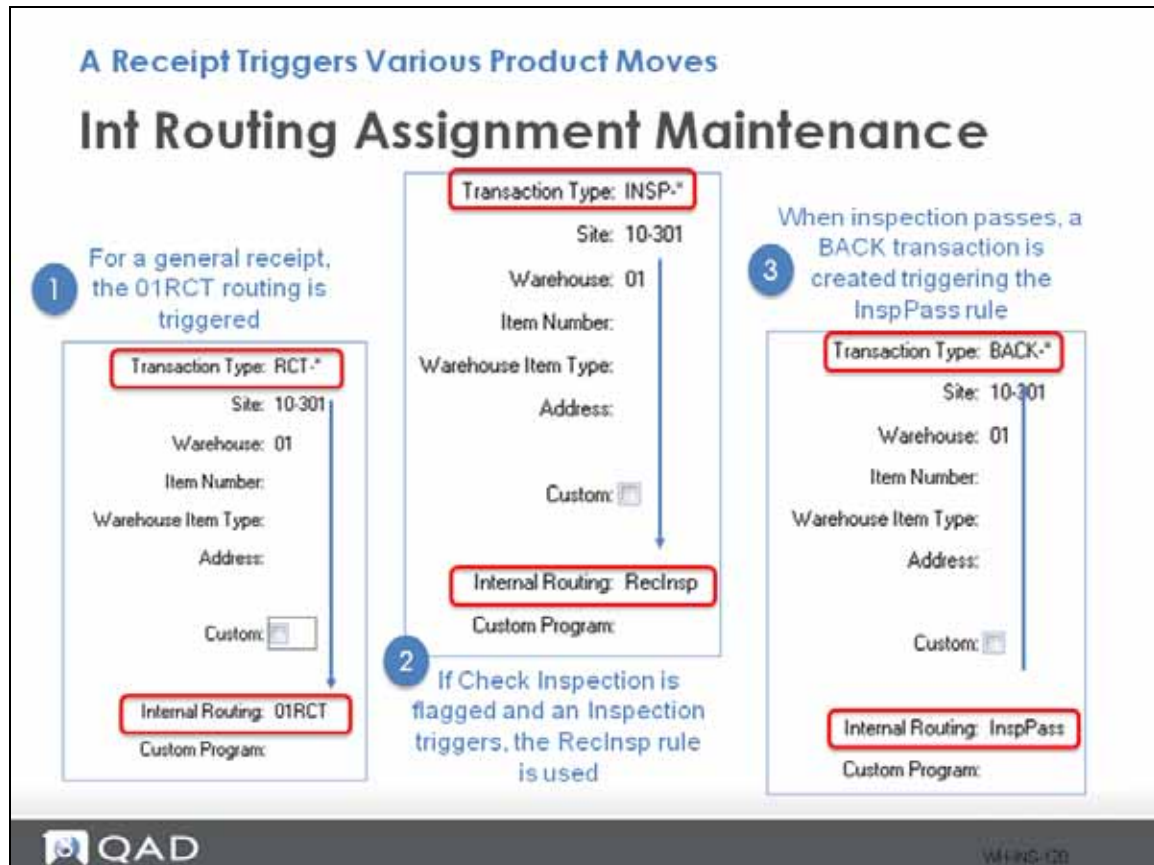
Mode: Auto Clear Shortages: ☐
 New Unit of Measure: Create Shipper: ☐

Check Inspection: ☒

Going back to the initial receipt to put-away routing developed during receiving or warehouse setup, check the Check Inspection field in the last frame of the Sequence 20 in Internal Routing Maintenance. This triggers the QA rules upon receipt and routes the load, or part of the load, to inspection as needed.

Note Enabling the Check Inspection field in Sequence 10 does *not* trigger the QA rules; however, if you have additional sequences, 10, 20, 30, and so on, the system does look at all additional sequences. Generally, sequence 10, which is the product receipt, or first step, does not get assigned an inspection step, it is the subsequent step after receiving.

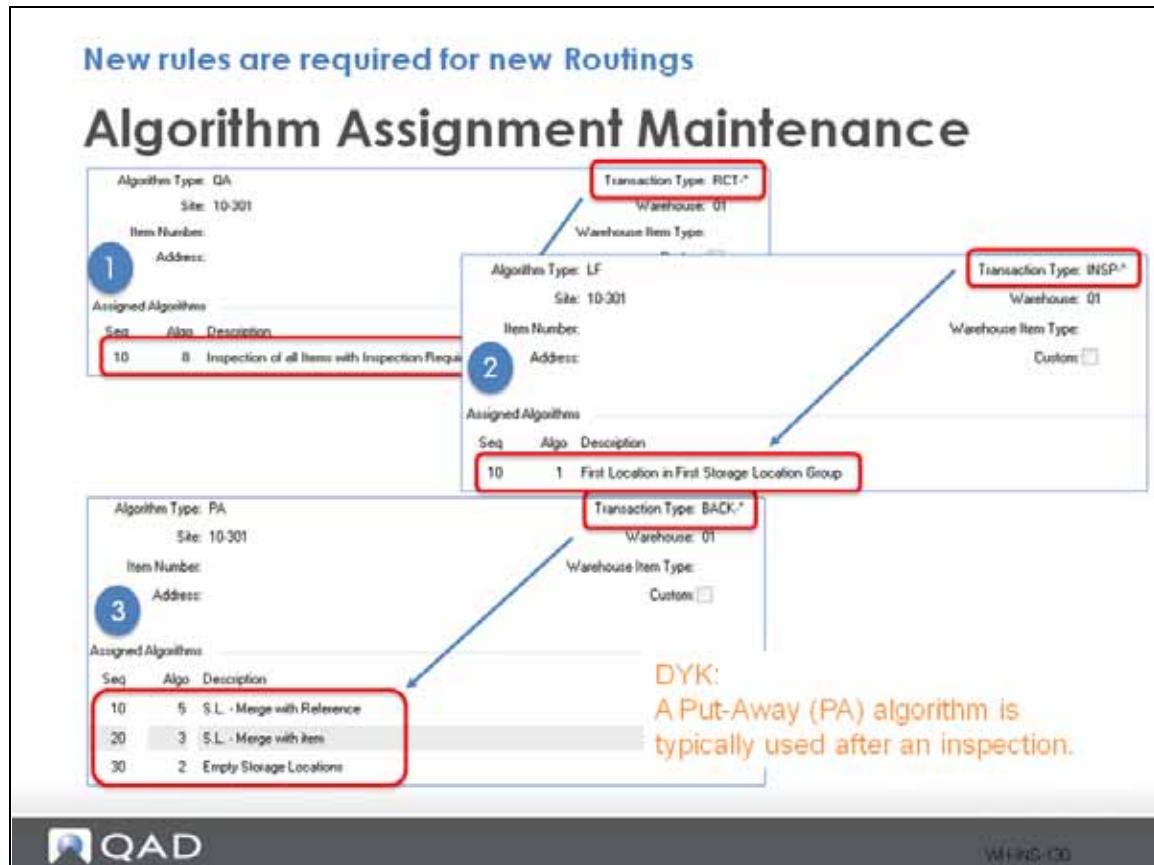
A Receipt Triggers Various Product Moves



Note the following regarding inspection triggers:

- When a product is received, the system creates a RCT transaction. This transaction triggers the general receipt routing.
- If the Check Inspection field is enabled in the 01RCT routing, the QA parameters are reviewed. If an inspection is required, the system creates an INSP transaction and triggers the inspection routing, RecInsp.
- When inspection passes, the system creates a BACK transaction, triggering the storage put-away routing, InspPass.

New Rules Required for New Routings



With the new routings, new algorithms are required to establish put-away rules.

The objective of a quality algorithm is to decide whether an inspection is required, to create an inspection tag. Inspections can be required, for example:

- Every X days
- If previous inspection was bad
- If inspection required on order (PO and WO)
- Every X receipts

In the scenario shown in the graphic above, QA rule 8 is triggered. An inspection takes place if the item is marked for inspection in Multi-Level Item Maintenance inspection data frame.

If an inspection is triggered based on the QA rules, the INSP transaction uses Location Find rule 1 to put-away product. Remember, LF rules do not consider space capacity.

When the inspection passes, the system creates a BACK transaction and uses the 5, 3, 2 rule sequence to put product away into storage. This rule sequence attempts to merge the sample back with the initial load (if a sample was used for inspection). Then, an attempt is made to consolidate in a location with the same. Finally, any empty location is sought.

Define Item-Warehouse Level Inspection Parameters

Define item-warehouse level inspection parameters

Multi-Level Item Maintenance

Item Number: 03120 Scented Disinfectant
 UM: EA Pump
 Site: 10-301 Distribution Site 1
 Warehouse: 01 Warehouse 1

Inspection Data

Selective Inspection: ☒ Sample Quantity: 100 Ref:

Inspection Frequency: 0 Sample Percent: 0

Insp Freq (Days): 0 Destructive: ☐

Random Inspection %: 0

QAD WMS-100

When the QA rule 8 is triggered, an inspection takes place if the item is marked for inspection in the Multi-Level Item Maintenance inspection data frame.

In the graphic above, you setup item 03120 to inspect 100 each whenever the product is received.

Did You Know

You can inspect items for inspection by quantity or percent.

Note When using Multi-Level Item Maintenance, there are three frames where you can enter inspection data. To get the inspection triggers to work in the warehouse, use the final Inspection Data frame to enter the item inspection parameters. Alternatively, you can enter the inspection parameters using Item-Warehouse Maintenance.

Example - Receive Item with Inspection Requirement

Example – Receive item with inspection requirement

Receive 200 each of item 03120

QAD

Site: 10-301

Warehouse:

Location:

Warehouse: 01

Item Number:

Lot/Serial:

Reference:

Warehouse 1

2 pallets are received.
One is routed to
storage and the other
to inspection. Note the
inventory status change
for both.

Item Location	Lot	Status Ref	Qty UM	On Hand	In	Expect Out
010RC001	03120	Y-Y-N PL000090	EA PL	100		100
010RC001	03120	Y-Y-N PL000091	EA PL	100		100
020IN001	03120	Inspect PL000090	EA PL		100	
040PL001	03120	Inspect PL000091	EA PL		100	

In this example:

- 1

Ensure all inspection flags, routings, and parameters are set for item 03120 as outlined earlier.
- 2

Receive 200 each of item 03120.

Because the inspection flag is set for 100 each of item 03120, one full pallet (100 each) is routed to inspection. The remaining pallet is moved into a pallet storage location, but the inventory status is changed to Inspect, making it not available (N-N-N).
- 3

Move all pallets using Movement Confirmation Workbench to prepare for the next example step.

Example - Confirm Inspection Results

Example - Confirm inspection results

Sample Inspection Maintenance

Sample ID: 6	Item Number: 03120
Site: 10-301	Employee:
Warehouse: 01	Receiver: 2309523
Location: 020IN001	Data Set: unplan
ID:	Work Order:
Reference ID: PL000090	Line:
Sample Quantity: 100	Algorithm: B
Sample Percent: 0	Destructive: ☐
Create Date: 10/11/2011	Create User ID: qmi
Quantity to Inspect: 100.0000	Failed: ☐
Remarks:	Reason:
Create Transactions: ☒	
Return Quantity: 100.0000	

QAD WH-INS-160

Use Sample Inspection Maintenance in QAD Warehousing to confirm inspection of one line item at a time. To do this:

- 1 Select the Sample ID.
- 2 Click twice to get to the Create Transactions and Return Quantity fields.
- 3 Ensure the Create Transactions field is checked and the successful inspection quantity is entered.
- 4 Click Next.

Example - Confirm Inspection Results (Continued)

Example - Confirm inspection results

Sample Inspection Workbench

Site: 10-301

Warehouse:

Item Number:

Address:

Receiver:

To:

To:

To:

To:

To:

Default Include: ☐

ID	Item Number	Lot/Serial	Ref	Qty to Insp	Fail	Inc
15	03120		PL000090	100.0000	☐	☐

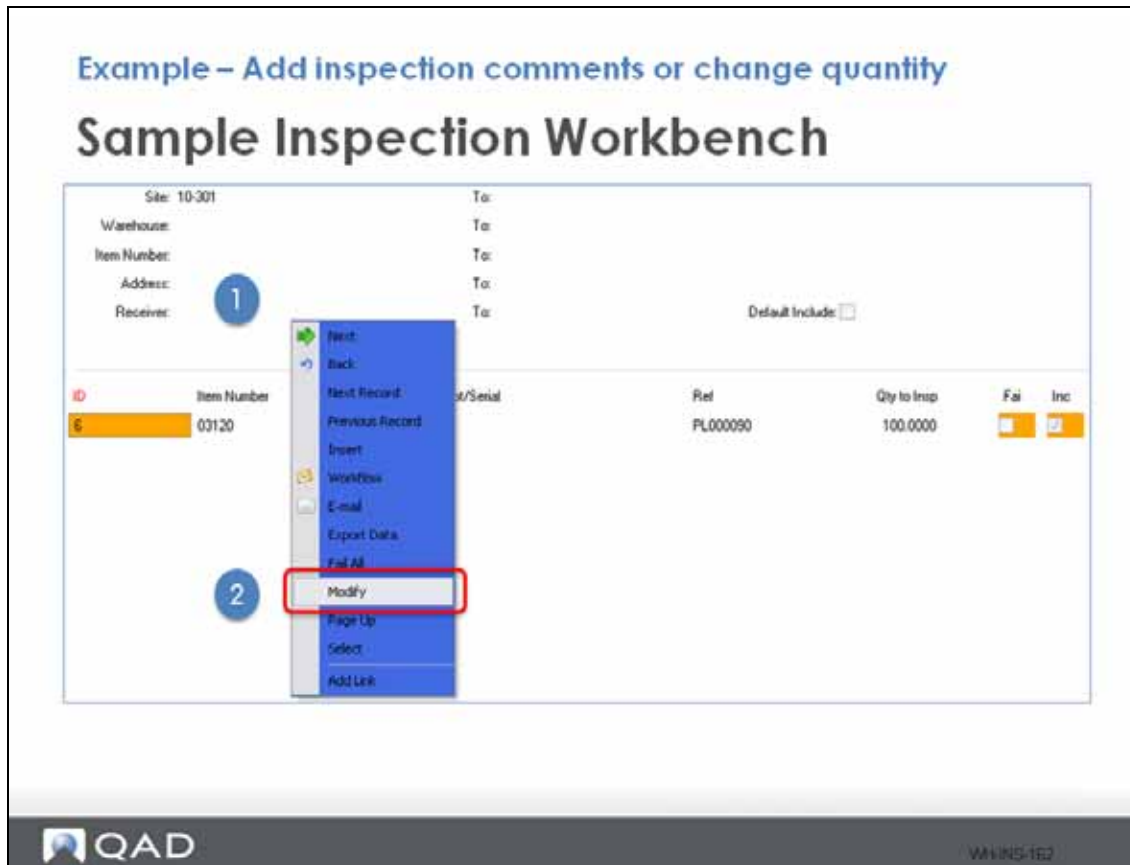
QAD

VN115-101

Alternatively, you can use Sample Inspection Workbench to approve multiple inspection samples and trigger a BACK put-away transaction.

Select the line to accept and click anywhere in the line item frame. This enables the Inc field. To change the quantity or add a remark, right click anywhere in the above frame to open a drop down menu.

Example - Add Inspection Comments/Change Qty



To change the quantity or add a remark:

- 1 Right click anywhere in the frame one.
- 2 Select Modify in the drop down menu.

Example - Add Inspection Comments/Change Qty (Cont'd)

Example – Add inspection comments or change quantity

Sample Inspection Workbench

Sample Details ID: 6 Site: 10-301 Warehouse: 01 Location: 020N001 Lot/Serial: Reference: PL000090 Sample Quantity: 100 Sample Percent: 0 Create Date: 10/11/2011		Item Number: 03120 Address: Receiver: 2309523 Data Set: unplan Order: Line/ID: Algorithm: 8 Destructive: ☐ Create User ID: qmi	

Qty to Insp: 100.0000

1 Remark: Add a remark

2 Failed ☐
Reason:

3 Create Transactions: ☒
Return Quantity: 100.0000

4 Next

5 Is all information correct
Yes No

Back Next

QAD WIN/MS-1E3

In the Sample Inspection Maintenance frame, before confirming the inspection you can:

- 1 Add a remark.
- 2 Fail the inspection.
- 3 Change the inspection quantity.
- 4 Clicking Next.
- 5 Select Yes in the next frame confirms the inspection results and creates a BACK movement transaction to storage.

Example - Success

Example – SUCCESS



Inventory Detail Inquiry

Site: 10-301

Warehouse:

Location:

Warehouse: 01

Item Number:

Lot/Serial:

Reference:

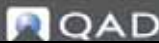
Warehouse 1

Display

Disp Non

0

Item Location	Lot	Status Ref	Qty UM	On Hand	Expect In	Expect Out
020IN001	03120	Inspect	EA	100		100
040PL001	03120	Y-Y-N	EA		100	
040PL001	03120	Y-Y-N	EA	100		

 WH-00100

Use Inventory Detail Inquiry to check the results.

When the inspection results are confirmed, the load is moved from inspection back into storage where is it merged with the same item. The inventory status code is changed to available (Y-Y-N).

Bonus Coverage: Example - Inspect Partial Pallet

Bonus Coverage: Example - Inspect partial pallet

Inspect a Partial Pallet

- Change inspection sample to 25
- Receive 100
- Observe results

 QAD WHS 100

Try the inspection again, changing the sample to 25 and receiving 100. Then, observe the results.

Bonus Coverage - Example Inspect Partial Pallet (Continued)

Bonus Coverage: Example - Inspect partial pallet

Receive 100 each of item 03120

Inventory Detail Inquiry

QAD

Site: 10-301 Item Number:
Warehouse: Lot/Serial:
Location: Reference:

Warehouse: 01 Warehouse 1

Location	Item	Status	Qty	Expect	Expect
	Lot	Ref	UM On Hand In		Out
010RC001	03120	Y-Y-N	EA 100		100
020IN001	03120	Inspect	EA 25		
040PL001	03120	Inspect	EA 75		

QAD

Because the inspection flag is set for 25 each of item 03120, 25 are routed to inspection. The remaining pallet is moved into a pallet storage location, but the inventory status is changed to Inspect, making it not available (N-N-N).

Move all pallets using Movement Confirmation Workbench to prepare for the next example step.

Bonus Coverage: Example - Inspect Partial Pallet (Continued)

Bonus Coverage: Example - Inspect partial pallet

Sample Inspection Workbench

Site: 10-301 To:
 Warehouse: To:
 Item Number: To:
 Address: To:
 Receiver: To: Default Include: ☐

ID	Item Number	Lot/Serial	Ref	Qty to Insp	Fai	Inc
7	03120		PL000092	25.0000	☐	☐

Is all information correct

 QAD

WIN5-170

Confirm the inspection results using Sample Inspection Workbench. Note that only 25 are in the sample, but they maintain the original LPN.

Bonus Coverage - Example - Success

Bonus Coverage: Example - SUCCESS

Inventory Detail Inquiry

QAD

Site: 10-301 Item Number:
Warehouse: Lot/Serial:
Location: Reference:

Warehouse: 01 Warehouse 1

Item Location	Lot	Status Ref	Qty UM	On Hand	Expect In	Expect Out
020IN001	03120	Inspect PL000092 PL	EA	25		25
040PL001	03120	Y-Y-N PL000092 PL	EA	75	25	

Site: 10-301 Item Number:
Warehouse: Lot/Serial:
Location: Reference:

Warehouse: 01 Warehouse 1

Item Location	Lot	Status Ref	Qty UM	On Hand	Expect In	Expect Out
040PL001	03120	Y-Y-N PL000092 PL	EA	100		

QAD

WMH0220

When the sample is released from inspection, is it routed back to storage. The first put-away rule (5) attempts to merge the item reference number with the same (original) reference number already in storage. In this instance, the 25 are merged back with reference number PL000092.

Once the item is merged, the new quantity for reference PL000092 is 100.

Bonus Coverage: Define Inspection Parameters by Supplier

Bonus Coverage: Define inspection parameters by supplier

Supplier Item Inspection Maint (optional)

Supplier: 10S1002
Item Number: 03130

DYK:
Setting up supplier
level inspection
criteria is
OPTIONAL

Inspection Data

Selective Inspection: ☒

Inspection Frequency:

Inspection Frequency (Days):

Destructive: ☐

Sample Quantity: Ref: ☐

Sample Percent:

Random Inspection %:

 QAD WH-IG-730

Rather than inspect an item every time it is received, you can set up the item to be inspected when it is received from a specific supplier. This might be helpful when setting up a new supplier for an item or if a supplier has temporary issues. You can set this up using Supplier Item Inspection Maintenance.

There are two frames and 10 fields in Supplier Item Inspection Maintenance used for configuration.

Bonus Coverage: Inspection Fail Processing

Bonus Coverage: Inspection fail processing

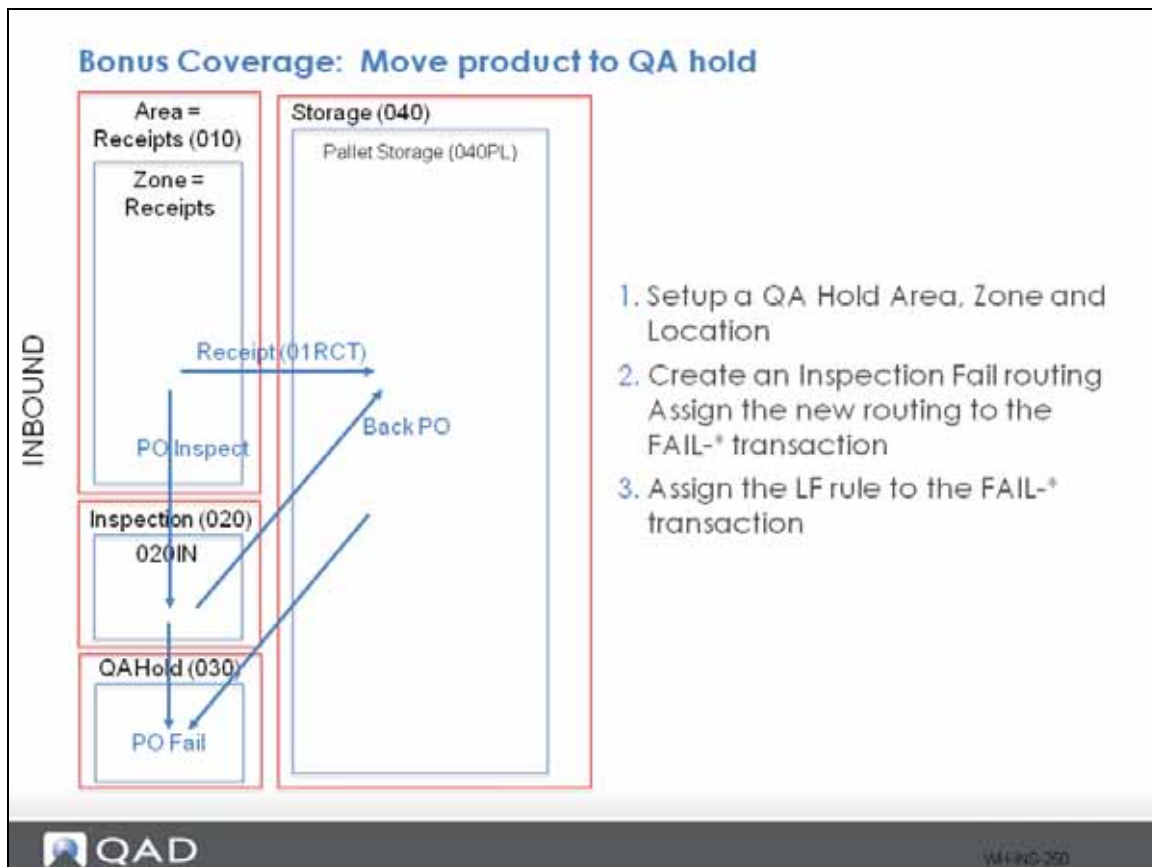
What happens when things don't work out quite the way you planned?



QAD

You can view details of failed inspections, using Failed Inspections Inquiry and Inspection Status Change Maintenance.

Bonus Coverage: Move Product to QA Hold



Setup

- 1 Setup a QA Hold Area, a zone, and a location.
- 2 Create an inspection fail routing; then, assign the new routing to the FAIL-* transaction.
 This is a one sequence routing with the destination Area
- 3 Assign the LF rule to the FAIL-* transaction.
- 4 Use Sequence 10 = 1.

Process

- 1 Receive an item requiring inspection.
- 2 Complete the moves.
- 3 Fail the open inspection.
- 4 Confirm the items in inspection and storage are moved to QA Hold Area.
- 5 Complete moves.
- 6 Confirm inventory status for all failed items.

Note This process works when the entire load is inspected. If the load is split between storage and inspection, the inventory status of all items changes to FAIL, and the partial load in storage is moved to the reject area. However, the partial quantity in the inspection area is not moved. You need to further review the internal routing setup and failed quantity confirmation.

Key Learning Points

QAD Warehousing Inspection: Session 7-0

Key Learning Points

- Can handle the timing and movement of inventory into inspection
- Can record and track inspection results and status
- We offer variable inspection parameters
- You can establish inspection parameters by item by supplier

Exercises - Inspection Setup and Execution

Exercise

Inspection Setup and Execution

- Set up area, zone, and location
- Set up inspection product flows and rules
 - Create routings
 - Assign routings
 - Use put-away rules
 - Define inspection parameters
 - Activate inspection
- Receive and inspect an item
- Receive and inspect a split load

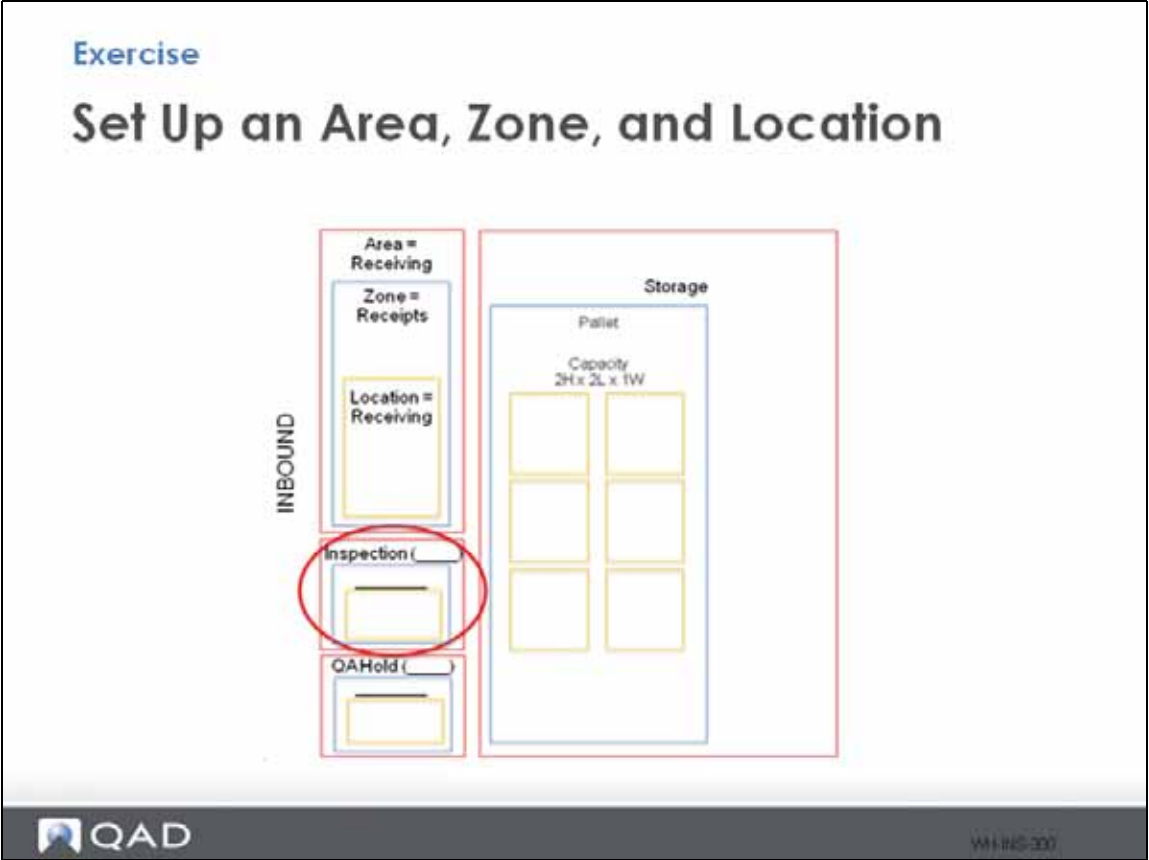


WAREHOUSING

QAD Warehousing supports the inspection process.

In this exercise, and using QMI data, you set up one item for inspection and test the process using various inspection parameters.

Exercise - Set up an Area, Zone, and Location



Setup an area, zone and location for inspection, as depicted in the graphic above.

You can use information in the Introduction chapter of this training guide to help you set up.

To set up an area, use Internal Routing Group Maintenance. Set the following, using parameters when dictated in the tables, and entering parameters when you define your own into the tables:

Site	Warehouse	IRG (Area)	Description (optional)	Functional
10-301			Receiving	Y

To set up a zone, use Storage Location Group Maintenance. Set the following, using parameters when dictated in the tables, and entering parameters when you define your own into the tables:

Site	Warehouse	SLG (Zone)	IRG	Exclude from Picking	Picking Level	Picking Multiple UM	UM	Acquisition UM
10-301				Y	0	blank	blank	blank

To set up a location, use Warehouse Location Maintenance. Set the following, using parameters when dictated in the tables, and entering parameters when you define your own into the tables:

Site	Location	Warehouse	Description (Optional)	SLG	WLG	UM	QTY	H	L	W
10-301			Inspect	Y	0	blank	blank	blank	blank	blank

Exercise - Set Up Inspection Product Flows and Rules

Exercise

Set up Inspection Product Flows and Rules

- Create routings
- Assign routings
- Use put-away rules
- Define inspection parameters
- Activate inspection

```

graph LR
    subgraph INBOUND
        subgraph Receiving [Area = Receiving  
Zone = Receipts]
            Receipts[ ]
        end
        subgraph Inspection [Inspection ( )]
            Inspection[ ]
        end
        subgraph QA_Hold [QA Hold ( )]
            QA_Hold[ ]
        end
    end
    subgraph Storage [Storage  
Pallet Storage]
        Storage[ ]
    end
    Receipts -- 10 --> Inspection
    Inspection -- 10 --> Receipts
    Receipts -- 20 --> Storage
    Inspection -- 20 --> Storage
    
```

The diagram illustrates the product flow and inspection process. It shows an INBOUND area with three sub-areas: Receiving (Area = Receiving, Zone = Receipts), Inspection (), and QA Hold (). The Storage area is labeled 'Pallet Storage'. Arrows indicate the flow of product units: 10 units flow from Receipts to Inspection, 10 units flow from Inspection back to Receipts, 20 units flow from Receipts to Storage, and 20 units flow from Inspection to Storage.

If inspection parameters are set, QA rules trigger and product can be routed from receipt to inspection to storage or both. Also, once product passes inspection, it is moved to storage for put-away. New routings and rules are required along with a change to an existing routing.

Exercise - Create Routings

Exercise

Create Routings

- Create a new routing from receipt to inspection.
- Create a new routing from inspection to storage.
- Enable Check Inspection field.
- Define the inventory status changes when product moves into and out of inspection.

QAD

WM 11/2013

- 1 Create a new routing from receipt to inspection using Internal Routing Maintenance. Define parameters, and when not provided, note the parameters you enter here:

Field	Data to Enter	
Site	10-301	
Warehouse		
Internal Routing		
Description (Optional)	Inspection	
	Start	End
Sequence	10	20
IRG		
Keep from Status	N	N

- 2 Create a new routing from inspection to storage using Internal Routing Maintenance. Define parameters, and when not provided, note the parameters you enter here:

Field	Data to Enter	
Site	10-301	
Warehouse		
Internal Routing		
Description (Optional)	Inspection	
	Start	End

Field	Data to Enter	
Sequence	10	20
IRG		
Keep from Status	N	N

- 3 Using Internal Routing Maintenance to enable the Check Inspection field in the final frame.
- 4 Use Inspection Status Change Maintenance to define the inventory status changes when product moves into and out of inspection.

Exercise - Assign Routing

Exercise

Assign Routings

Int Routing Assignment Maint

Go To Actions Copy Print Preview

Transaction Type:

Site:

Warehouse:

Item Number:

Warehouse Item Type:

Address:

Custom: ☐

Internal Routing:

Custom Program:

Transaction Type	INSP-*
Site	10-301
Warehouse	
Internal Routing	

Transaction Type	BACK-*
Site	10-301
Warehouse	
Internal Routing	

QAD

WM INS 284

Assign the new routings to the associated transaction types using Int Routing Assignment Maintenance. Define parameters, and when not provided, note the parameters you enter here:

Field	Data to Enter
Transaction Type	INSP-*
Site	10-301
Warehouse	
Internal Routing	

Field	Data to Enter
Transaction Type	BACK-*
Site	10-301
Warehouse	
Internal Routing	

Exercise - Use Put-Away Rules

Exercise

Use Put-Away Rules

The screenshot shows the 'Algorithm Assignment Maintenance' window in QAD. It contains fields for Algorithm Type, Transaction Type, Site, Warehouse, Item Number, Warehouse Item Type, and Address. Below these are 'Assigned Algorithms' and 'Sequence' fields. To the right, two tables show the configuration for 'LF' and 'PA' algorithms.

Algorithm Type	LF
Transaction Type	INSP-*
Site	10-301
Warehouse	
Sequence	10
Algorithm	1

Algorithm Type	PA
Transaction Type	BACK-*
Site	10-301
Warehouse	
Sequence	10 20 30
Algorithm	5 3 2

Product in the inspection area is put away into any location regardless of available space. Product put back into storage should first attempt to merge with the same LPN, the same item then find an empty location.

What happens when the load/item arrives in the next area? How are storage locations selected? Storage rules should first attempt to merge same item loads, next look for an empty location.

- 1 Use Algorithm Assignment Maintenance to define the new rules. Define parameters, and when not provided, note the parameters you enter here:

Field	Data to Enter	
Algorithm Type	LF	
Transaction Type	INSP-*	
Site	10-301	
Warehouse		
	Start	End
Sequence	10	blank
Algorithm	1	blank

Field	Data to Enter		
Algorithm Type	PA		
Transaction Type	BACK-*		
Site	10-301		
Warehouse			
Sequence	10	20	30
Algorithm	5	3	2

Question - What does this algorithm sequence accomplish?

- 2 With the addition of inspection, you now use the QA algorithms. Set up anew QA algorithm to determine the inspection type required upon receipt:

Field	Data to Enter		
Algorithm Type	QA		
Transaction Type	RCT-*		
Site	10-301		
Warehouse			
	Start	End	
Sequence	10	blank	
Algorithm	1	blank	

Exercise - Define Inspection Parameters

Exercise

Define Inspection Parameters

Item-Warehouse Maintenance X

Go To Actions Copy Print Preview Attach

Item Number: 1
UM: 2
Site: Exam Site
Warehouse:

Site	10-301
Warehouse	RCT-*
Item	03120
Selective Inspection	Y
Sample Quantity	100

Inspection Data

Selective Inspection: ☐ Sample Quantity: Ref: ☐

Inspection Frequency: Sample Percent:

Insp Freq (Days): Destructive: ☐

Random Inspection %:

QAD WH-INS-209

Each item requires specific inspection parameter. Define these parameters using Item-Warehouse Maintenance or Multi-Level Item Maintenance.

Define parameters, and when not provided, note the parameters you enter here:

Field	Data to Enter
Site	10-301
Warehouse	
Item	03120
Selective Inspection	Y
Sample Quantity	100

Exercise - Activate Inspection

Exercise

Activate Inspection

Active: ☒

Create Transactions: ☒

Update Quantity: ☒

Create Item/Supplier Record: ☐

Print Inspection Tag Per: Sample ID ▼

Alter:

Good Inspections Decrease Random % by:

Fail Inspections Increase Random % by:

Destructive Inspection Status Code: N-N-N

Fail Inspection Status Code: N-N-N 

 QAD

10/1/2017

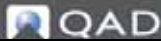
Use Inspection Control to activate warehouse inspections. Enable the Activate field.

Exercise - Receive and Inspect an Item

Exercise

Receive and Inspect an Item

- Use Receipts-Unplanned to receive.
- Use Movement Confirmation Workbench to complete all moves.
- Use Sample Inspection Maintenance or Sample Inspection Workbench to confirm successful inspection.
- Use Movement Confirmation Workbench to complete all moves.



WH-INC-370

- 1 Use Receipts-Unplanned to receive: 200 EA, item 03120:
 - What loads are created? View Inventory Detail Inquiry to determine the LPN, item, and quantity. Note the parameters here:

LPN	Item	Quantity

- One pallet should be pending movement to inspection; the other to storage.
 - Did the inventory status of both loads change to the status you defined using Inventory Status Change Maintenance?
- 2 Use Movement Confirmation Workbench to complete all moves.
 - 3 Use either Sample Inspection Maintenance or Sample Inspection Workbench to confirm a successful inspection:
 - The load in inspection should have a pending move back into storage.
 - Did the inventory status of both loads change to the status you defined using Inventory Status Change Maintenance?
 - 4 Use Movement Confirmation Workbench to complete all moves.

Exercise - Receive and Inspect a Split Load

Exercise

Receive and Inspect a Split Load

- Change the sample quantity.
- Use Receipts-Unplanned to receive.
- Use Movement Confirmation Workbench to complete all moves.
- Confirm a successful inspection.
- Use Movement Confirmation Workbench to complete all moves.

QAD

WH-INS-200

- 1

Using Item-Warehouse Maintenance change the sample quantity to 25 for item 03120.
- 2

Use Receipts-Unplanned to receive: 100 EA, item 03120

 - What loads are created? View Inventory Detail Inquiry to determine the LPN, item, and quantity. Note the parameters here:

LPN	Item	Quantity
 - There should be two loads both with the same LPN. One for 25 the other for 75 each with a pending move. Where is each load scheduled for movement? Note the parameters here:

LPN	Item	Quantity	Move To
 - Did the inventory status of both loads change to the status you defined using Inventory Status Change Maintenance?
- 3

Use Movement Confirmation Workbench to complete all moves.
- 4

Confirm a successful inspection using either Sample Inspection Maintenance or Sample Inspection Workbench.

- The load in inspection should have a pending move back into storage. Where is the load scheduled for movement? Note the parameters here:

LPN	Item	Quantity	Move To

- Did the inventory status of both loads change to the status you defined using Inventory Status Change Maintenance?

5 Use Movement Confirmation Workbench to complete all moves.

- What is the new inventory position of the load? Note the parameters here:

LPN	Item	Quantity	Move To

If done successfully, the load should be moved back to pallet storage and merged with the original LPN. The new load quantity is 100.

Questions

- 1 True or False. You can set inspection flags in multiple places throughout QAD Warehousing.
- 2 You can optionally use which program to define a status code for inspection.
- 3 Use which program to define the inventory status code changes when product enters and leaves the inspection area?
- 4 True or False. You can define inspection parameters by supplier.
- 5 True or False. Once you set up inspection in the various maintenance programs, there is nothing preventing you from starting inspections.
- 6 True or False. The QAD Warehousing inspection module manages specific quality parameters?

Answers

- 1 True. You can set inspection flags in multiple places throughout QAD Warehousing.
- 2 You can optionally use Inventory Status Code Maintenance to define a status code for inspection.
- 3 Use Inspection Status Change Maintenance to define the inventory status code changes when product enters and leaves the inspection area.
- 4 True. You can define inspection parameters by supplier.
- 5 False. You must activate inspection first in Inspection Control.
- 6 False. QAD Warehousing supports the product flow through the inspection process but requires a quality module interface to manage specific quality parameters

Notes

Chapter 7

Labor Management

Overview



The slide features a white background with the text "QAD Warehousing Labor Management" in blue at the top left, followed by "QAD Warehousing" in large black font, and "Field Readiness Team" in smaller black font below it. A horizontal strip of three images is positioned below the text: a man and a woman smiling at a computer screen, a close-up of red cables being plugged into a port, and a perspective view of a warehouse aisle with high shelving units filled with boxes. At the bottom left is the QAD logo, and at the bottom right is the tagline "Our Passion. Your Advantage." in a serif font.

QAD Warehousing Labor Management

QAD Warehousing

Field Readiness Team



 Our Passion. Your Advantage.

QAD Warehousing lets you manage resources by monitoring and assigning warehouse tasks. Resources are users of the system, who work specifically within the warehouse.

Using labor management, the warehouse staff can be assigned the tasks most suited to their individual or collective skill sets or experience.

Objectives

QAD Warehousing Labor Management

Objectives

- Functional Fit
- Setting Up Task Management
- Other Features

Functional Fit: Labor Management

What we don't do so well

Functional Fit: Labor Management

Functionality	Fit	Notes
Engineering standards		Can be populated
Applying actuals against standards		
PF&D Adjustments		
Capture and track Indirect labor		
XYZ travel mapping		

[Legend](#)

Partial

None

QAD

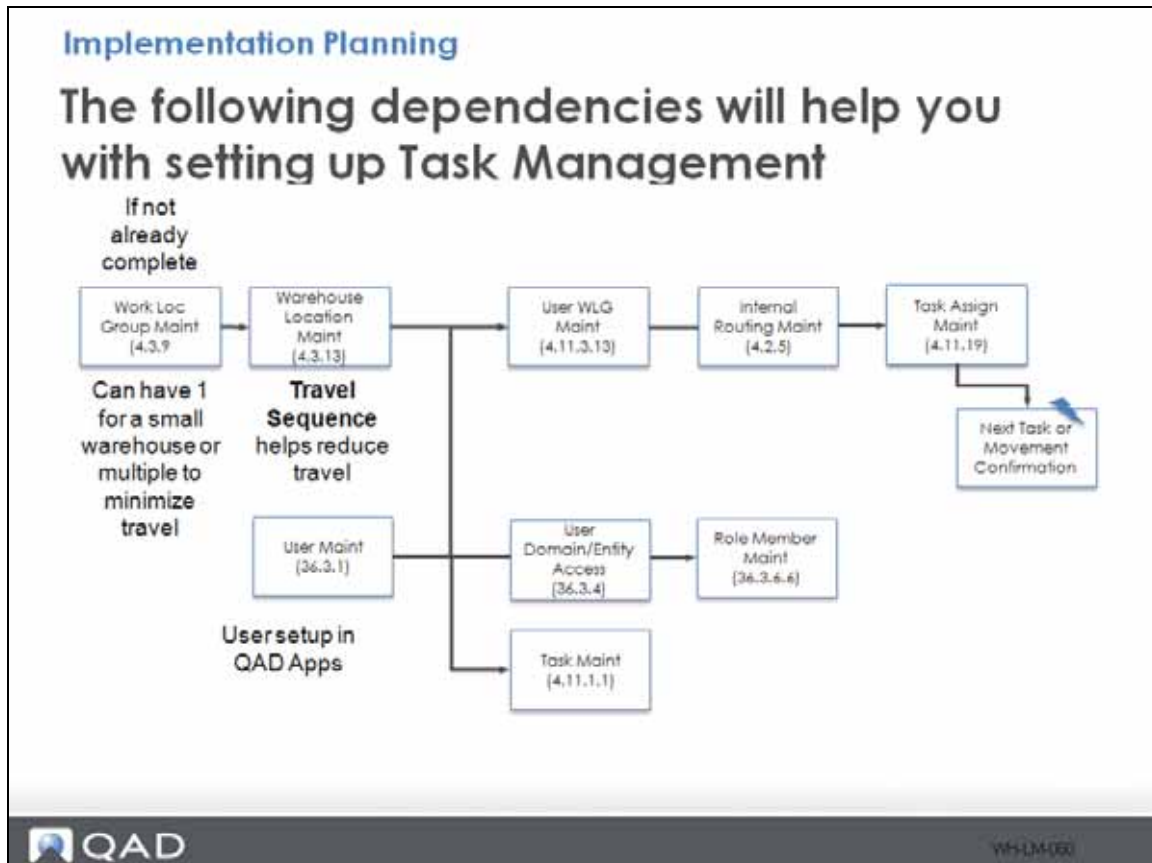
WH-LM-030

As shown in the graphic above, QAD Warehousing provides partial functionality for engineering standards and applying actuals against standards; however, QAD Warehousing lacks some labor management features.

QAD Warehousing supports general labor tracking and reporting capabilities but falls short of having true labor management capabilities.

Note PF &D is personal fatigue and delay.

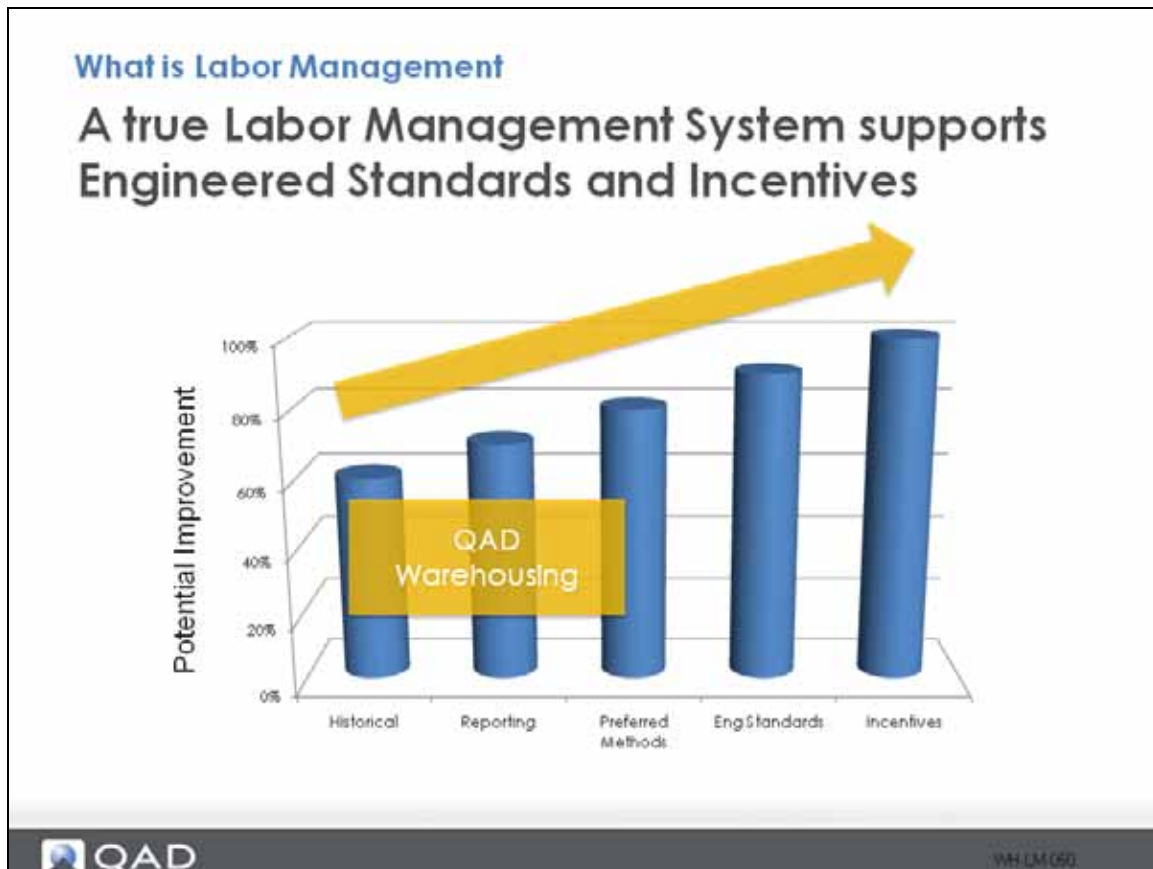
What is Labor Management?



A true labor productivity improvement program is built on three axioms:

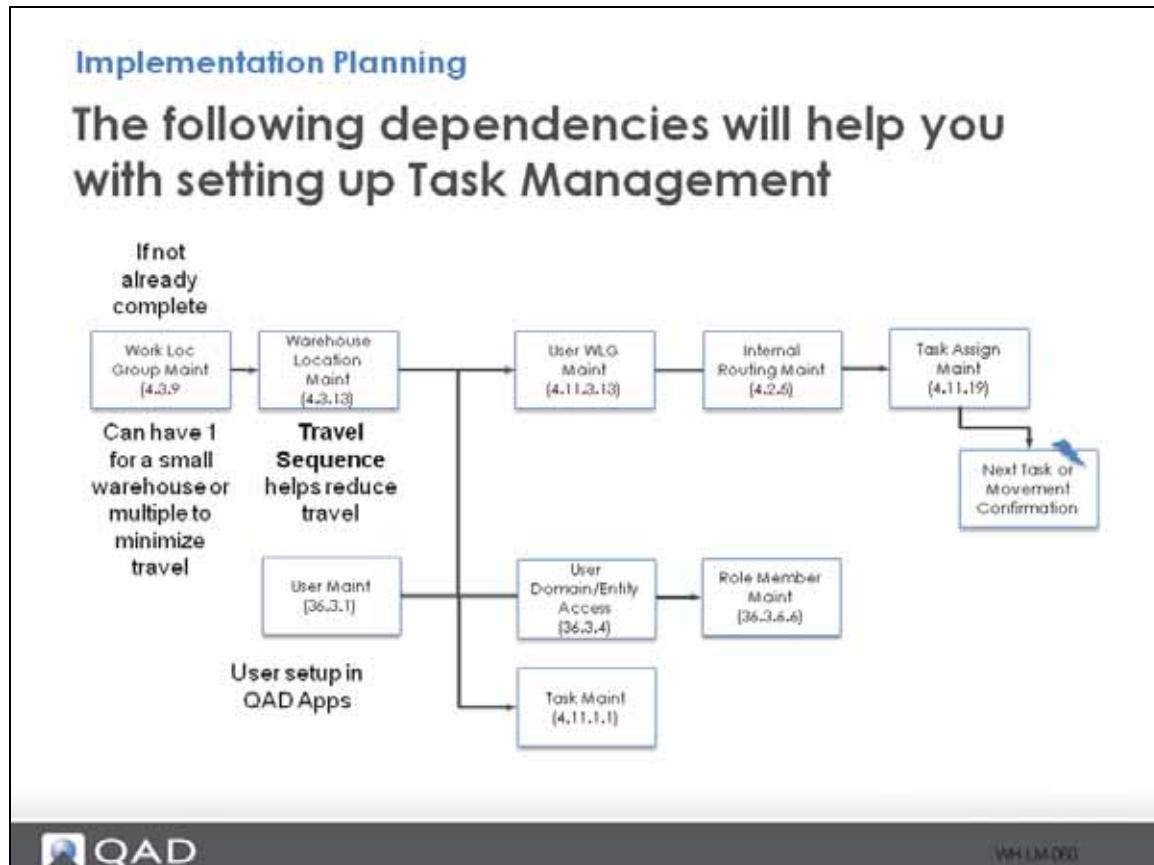
- **Industrial Engineering:** Defines the optimal operating methods and develops appropriate performance standards.
- **Labor Management System (LMS):** Enables improved workforce management and compares actual work accomplished with expected standards.
- **Change Management:** Ensures potential gains from productivity improvement initiatives are realized during and after implementation.

What is Labor Management - True Labor Management System



QAD Warehousing provides historical performance reporting and can provide expected work but does not equate to a true LMS; however, the data in QAD Warehousing feeds into a third party LMS solution.

Implementation Planning



You set up the following:

- **Resources**
Define each warehouse staff, the warehouse groups, and optionally the warehouse shifts. Each warehouse staff member is a resource.
- **Tasks**
Define each variation of warehouse task (transaction).
- **Assign Resources to Tasks**
Define which tasks can be performed by which users.
- **Approve Tasks**
Use the RF (Radio Frequency), RDT (Radio Data Terminal), or non-RF movement confirmation to approve the movement of inventory from one location to another (tasks).
- **Flavor**
Style and format of Radio Frequency screens to be used for displaying information.

Implementation Planning - User Parameters

Implementation Planning

Define User Parameters

Data	Key	User 1	User2	User3	...
Name	36.3.1				
User ID	36.3.1				
Password	36.3.1				
Language	36.3.1				
Country Code	36.3.1				
Access Loc	36.3.1				
Enabled Reason	36.3.1				
Products	36.3.1				
Domain Code	36.3.4				
Entity	36.3.4				
Role	36.3.6.6				
Work Location Group	4.11.3.13				
Task Priorities	4.11.19				
RF User?					

 QAD WH UM 070

The graphic above shows you the data you need to set up and the program menu number for the program that you use to set up the data.

Define Work Sections

Define work sections

Work Location Group Maintenance

Site: 10-301
Warehouse: 01
Work Location Group: 01FL

Description: Forklift

Confirmed at Source: ☒

Priority: 10

Increment: 1

Task: TRANSFER

System Code: RF

System Flavor: B

Allow Task Switching: ☐

Two Phase: ☒

Keep From Status: ☒

Device:

Forklift Handling
01FL

040PL



Pick Cart Handling
01CT

040BX 040EA



QAD WH-LM-080

Work Location Groups (WLG) are defined by types or equipment used and work processes. WLGs can cross over different zones and focus on procedures rather than physical placement of inventory.

WLGs are helpful for defining where operators can work in the warehouse, the format of the RF screens and the printers they use.

Did You Know

Work Groups help by:

- Assigning users to work sections based on equipment type
- Assigning users to work sections based on capability type
- Defining RF screen parameters for the work section

Assign Locations to a Zone or WLG

Assign Locations to a Zone and WLG

Warehouse Location Maintenance

Site: 10-301 Distribution Site 1

Location: 040PL001

Location Groupings

Warehouse: 01

Storage Location Group: 040PL

Work Location Group: 01FL

Warehouse Location Data

Check Digit:

Popularity:

Storage Type:

Warehouse Location Type:

Travel Sequence:

Dedicated: ☐

Forklift Handling
01FL

040PL

001	002
003	004
005	006
007	008
009	010

QAD WH LM 090

Use Warehouse Location Maintenance to set up all locations within a warehouse. You can also set up a user as a location.

A user location is used to temporarily store the stock on a cart until staff move stock to the shipping location. The user location represents the cart, which temporarily stores stock that staff picked from the picking location.

Did You Know

Locations can be assigned to a User to track inventory during long pick cycles.

Assign User to Work Location Group

Assign the User to the Work Location Group

User Work Location Group Maintenance

User Work Location Group Maintenance

Go To Actions Copy Print Preview

Site: 01FL
Warehouse: US-D-3
Work Location Group: ForkLift
User ID: UserB

System Flavor: B
Device:

External Device Printer:
Form Printer: Use External ☐
ID Printer: Use External ☒
Task Printer: Use External ☒

Forklift Handling
01FL

040PL

001	002
003	004
005	006
007	008
009	010

UserB

Back Next

QAD

WM (M100)

Use User Work Location Group Maintenance to assign a user to a work location group, set up print options specific to that user, and set the system flavor for the user.

Traditional Warehouse Tasks

Traditional Warehouse Tasks

Task Maintenance

Task Maintenance

Go To • Actions • Copy • Print • Preview

Task: **TRANSFER**

Description: Inventory Transfers

Procedure Code: TF

Confirmation Mode: Auto

Comments:

Time: 0.0

Task: 0

Create User ID: mfg 1/1/2001

Modified By: mfg 1/1/2001

Task

- Count
- Pack
- Pick
- Put-Away
- Recount
- Replen
- Transfer

WARNING: End of data.

Back Next

QAD WH LM110

Use Task Maintenance to create and update the tasks performed in a warehouse.

Tasks Link to Internal Routings

Tasks Link to Internal Routings

Internal Routing Maintenance

Internal Routing Maintenance X

Go To * Actions * Copy * Print * Preview *

Site: US-D3 Warehouse: US-D-3 Internal Routing Receipt

Description: Receipts Sequence: 1 Internal Routing Group: Storage

Transaction Code:

Confirmed at Source: ☒ Task: TRANSFER

System Code: RF Priority: 100

Two Phase: ☒ Increment: 10

Keep From Status: ☐

Transaction Confirmation

From Location Option: 0	Repick Type:	To Location Option: 0
From Item Option: 0		To Item Option: 0
From Lot/Serial Option: 0		To Lot/Serial Option: 0
From Reference Option: 0		To Reference Option: 0
Allow Quantity Increase: ☐		Alternative UM Option: 0
Allow Quantity Decrease: ☒		Expire Date (Days): 0
Quantity Change Option: 0		

WARNING! End of data.

Back Next

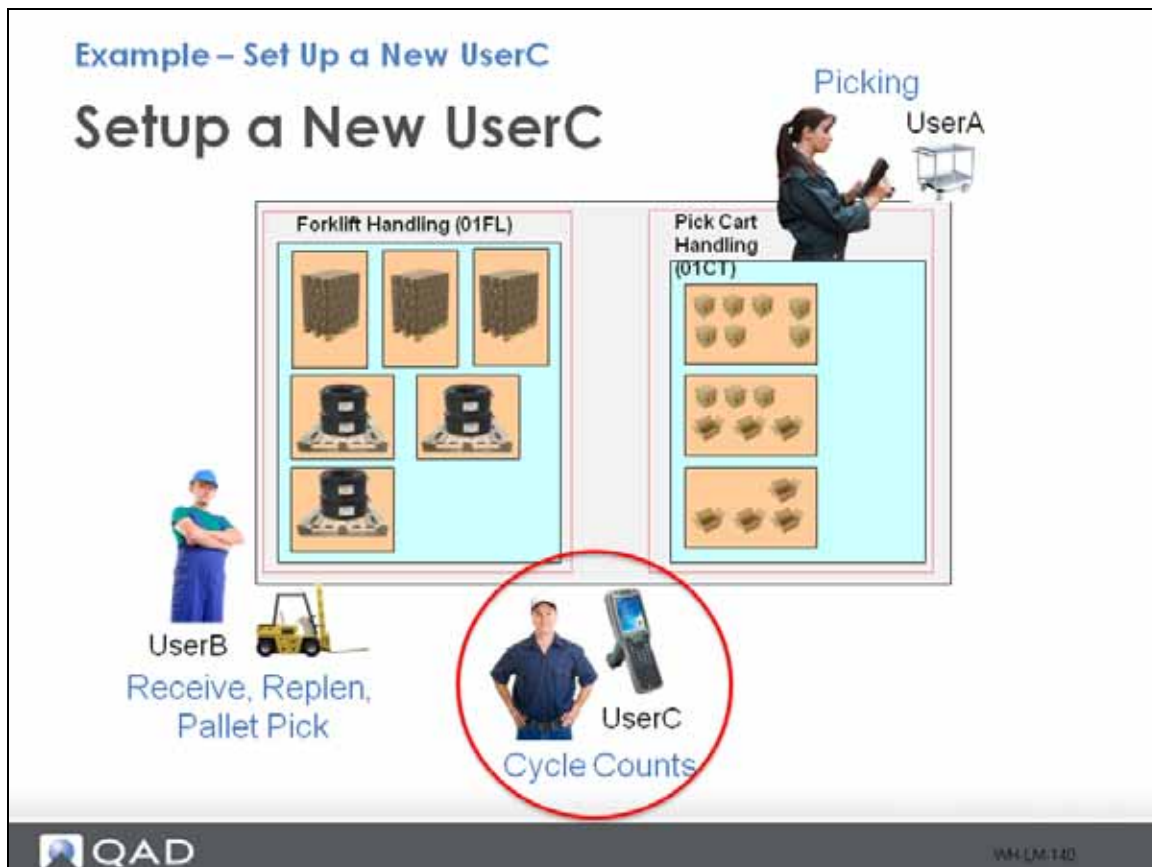
QAD

WM-LM-123

Use Internal Routing Maintenance to define the pathways through the warehouse that you want inventory to take. You can specify the task for a particular internal routing.

Key fields are identified in the graphic above, but you can change these at any time. You can configure the tasks for each user.

Example - Set Up a New UserC



In this example, User B is assigned to the pallet area due to a forklift handling requirement and UserA to Boxes area for handling less than pallet quantities (for example, boxes).

UserC needs to be assigned to a WLG so that he/she can perform cycle counts.

Example- Set Up UserC for Cycle Counting

Example – Set Up UserC for Cycle Counting

Task Assignment Maintenance

Task Assignment Maintenance X

Go To Actions Copy Print Preview

User ID: UserC RF User C Comments

Queue 1

10	COUNT	Auto								
20	RECOUNT	Auto								

1. UserC must first be setup in QAD Core
2. Assign UserC to all Work Location Groups

Queue: 1 Seq: 0 Task: RECOUNT Confirmation Mode: Auto

Back Next

QAD WH LM 150

You must set up the user in User Maintenance in QAD EE.

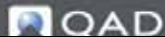
You must assign the user to all WLGs using User Work Location Group Maintenance.

Example - Change Task Priority and Assignment

Example – Change Task Priority and Assignment

Change Task Priority and Assignment

1. Create 3-4 put-away transactions via a PO Receipt or Unplanned Receipt of 400 eaches
2. View Pending Tasks Inquiry
3. Change a Task Priority using Transaction Boost Priority
4. View Pending Tasks Inquiry
5. Select a different user using Transaction Priority Workbench



WHUMED

You change task priority and assignment by:

- 1 Creating put-away transactions using core receipt programs.
- 2 Viewing tasks in Task Load Report
- 3 Changing task priority using Transaction Priority Boost
- 4 Re-viewing pending tasks in Task Load Report.
- 5 Selecting a different use using Transaction Priority Workbench.

Example - Change Task Priorities

Example - Change Task Priorities

Pending Tasks Inquiry

System Code: RF Work Location Group:
 Site: 10-301 Task:
 Warehouse: 01 User ID: Output: PA

Tran Nbr	Task	TT	WLG	From Location	To Location	Status	Pri	Cur
69	TRANSFER RCT-PO	01FL	010RC001	040PL001	OPEN	10		
70	TRANSFER RCT-PO	01FL	010RC001	040PL001	OPEN	10		
67	TRANSFER RCT-UNP	01FL	010RC001	040PL003	OPEN	10		
68	TRANSFER RCT-UNP	01FL	010RC001	040PL003	OPEN	10		

Transaction Number: **67**

Transaction Priority Boost

Site: 10-301 Distribution Site 1
 Warehouse: 01 Warehouse 1

Order Priority: 99999999
 Task Priority: **40**

Location Group:
 Task:
 User ID: Output: PAGE

Tran Nbr	Task	TT	WLG	From Location	To Location	Status	Pri	Curr
69	TRANSFER RCT-PO	01FL	010RC001	040PL001	OPEN	10		
70	TRANSFER RCT-PO	01FL	010RC001	040PL001	OPEN	10		
67	TRANSFER RCT-UNP	01FL	010RC001	040PL003	OPEN	40		
68	TRANSFER RCT-UNP	01FL	010RC001	040PL003	OPEN	10		

QAD

Use Task Load Report to view pending tasks, then use Transaction Priority Boost.

In the example above, the priority increased from 10 to 40. The next time a user logs in to Next Task and is assigned Transfers, they receive this transfer task, assuming there are no other accessible tasks with a higher priority than 40.

Example - Change Task Assignments

Example - Change Task Assignments

Transaction Priority Workbench

Site: 10-301 Warehouse: 01 Sort Order: Ascending Priority Operators: 0 Auto Refresh: ☒

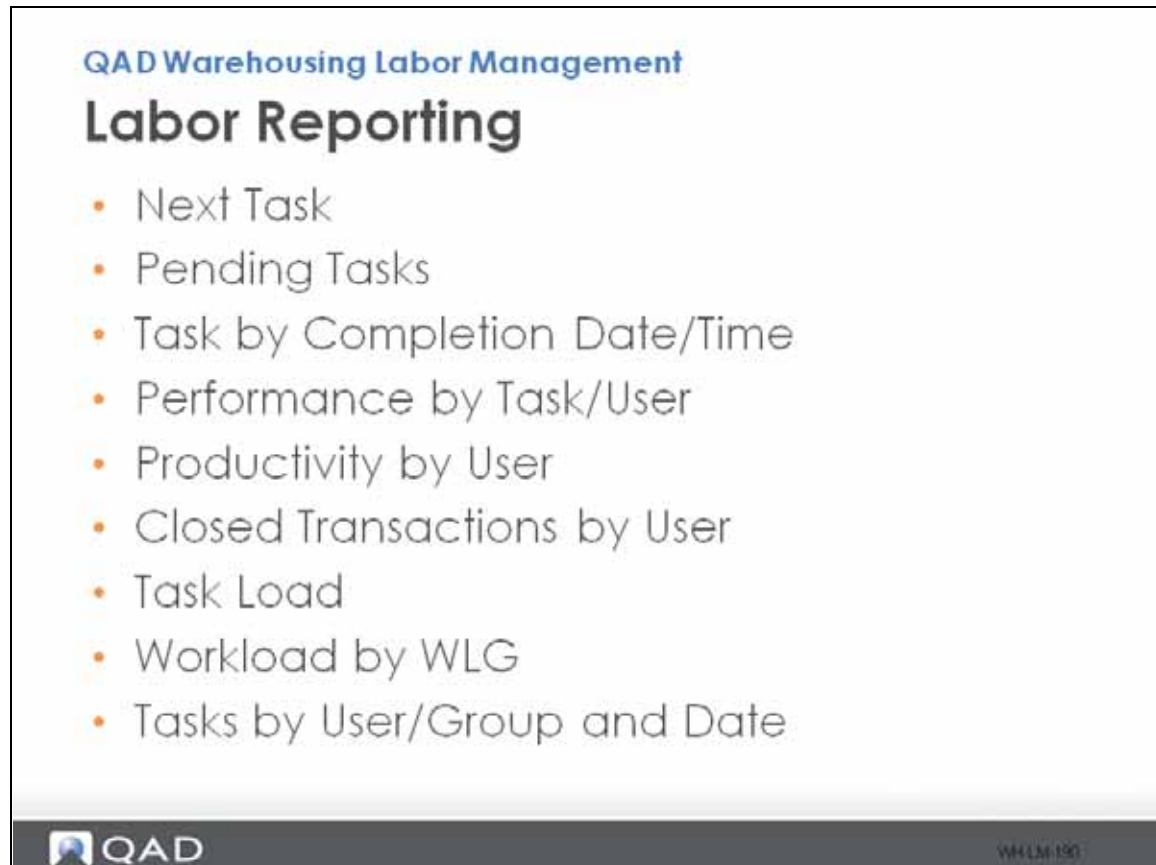
Select a Transaction to Change

Item Number	Ref	User ID	Description	From Loc	To
03210	PL000004	QMI User	QMI User	010RC001	040PL003
03210	PL000004	RF User B	RF User B	010RC001	040PL003
03120	PL000004			010RC001	040PL001
03120	PL000004		TRANSFER 10	010RC001	040PL001

QAD

You can assign/re-assign tasks using Transaction Priority Workbench. You can see which user is working on which task; then, you can reassign tasks as necessary.

Labor Reporting



The screenshot shows a software interface titled "QAD Warehousing Labor Management" with a sub-header "Labor Reporting". Below the header is a list of reporting options, each preceded by an orange bullet point. The options are: "Next Task", "Pending Tasks", "Task by Completion Date/Time", "Performance by Task/User", "Productivity by User", "Closed Transactions by User", "Task Load", "Workload by WLG", and "Tasks by User/Group and Date". At the bottom of the interface is a dark grey footer bar containing the QAD logo on the left and the text "WHLM190" on the right.

QAD Warehousing Labor Management

Labor Reporting

- Next Task
- Pending Tasks
- Task by Completion Date/Time
- Performance by Task/User
- Productivity by User
- Closed Transactions by User
- Task Load
- Workload by WLG
- Tasks by User/Group and Date

 **QAD** WHLM190

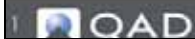
You can use any of the reporting tools, shown above, within QAD Warehousing's Labor Management module to view labor management data.

Key Learning Points

QAD Warehousing Labor Management

Key Learning Points

- QAD Warehousing partially supports labor management best practices
- Work processes and location groups will drive labor management strategies
- Define and document user capabilities and work section accessibility



Questions

- 1 True or False. QAD Warehousing provides some functions of a true labor management system but not all functionality. For example, there are no engineering standards or incentives in QAD Warehousing.
- 2 What is system flavor?
- 3 Name at least two traditional warehouse tasks.
- 4 Which QAD Warehousing program defines the priority of generic tasks a user receives when multiple tasks are available?
- 5 Which QAD Warehousing programs help you view warehouse staff tasks?
- 6 True or False. Users must first exist in QAD core before being setup in QAD Warehousing?

Answers

- 1 True. QAD Warehousing provides some functions of a true labor management system but not all functionality. For example, there are no engineering standards or incentives in QAD Warehousing.
- 2 System flavor defines the style and format of Radio Frequency (RF) screens and printing preferences.
- 3 Traditional warehouse tasks can include count, pick, pack, put-away, recount, replenish, and transfer.
- 4 Task Assignment Maintenance helps prioritization when multiple tasks are available.
- 5 Task Priority Workbench helps you view warehouse staff tasks.
- 6 True. QAD Warehousing depends on users for first be setup in User Maintenance.

Notes

Chapter 8

Cycle Count

Overview

QAD Warehousing Cycle Count: Session 8-0

QAD Warehousing

Green Belt Certification



 QAD

Our Passion. Your Advantage.

Objectives

QAD Warehousing Cycle Count

Objectives

- Functional Fit
- Understand cycle count concepts
- Cycle count example

Functional Fit: What We Don't Do

What we don't do

Functional Fit: Cycle Counting

Functionality	Fit	Notes
Supports all basic and advanced cycle count strategies.		

[Legend](#)

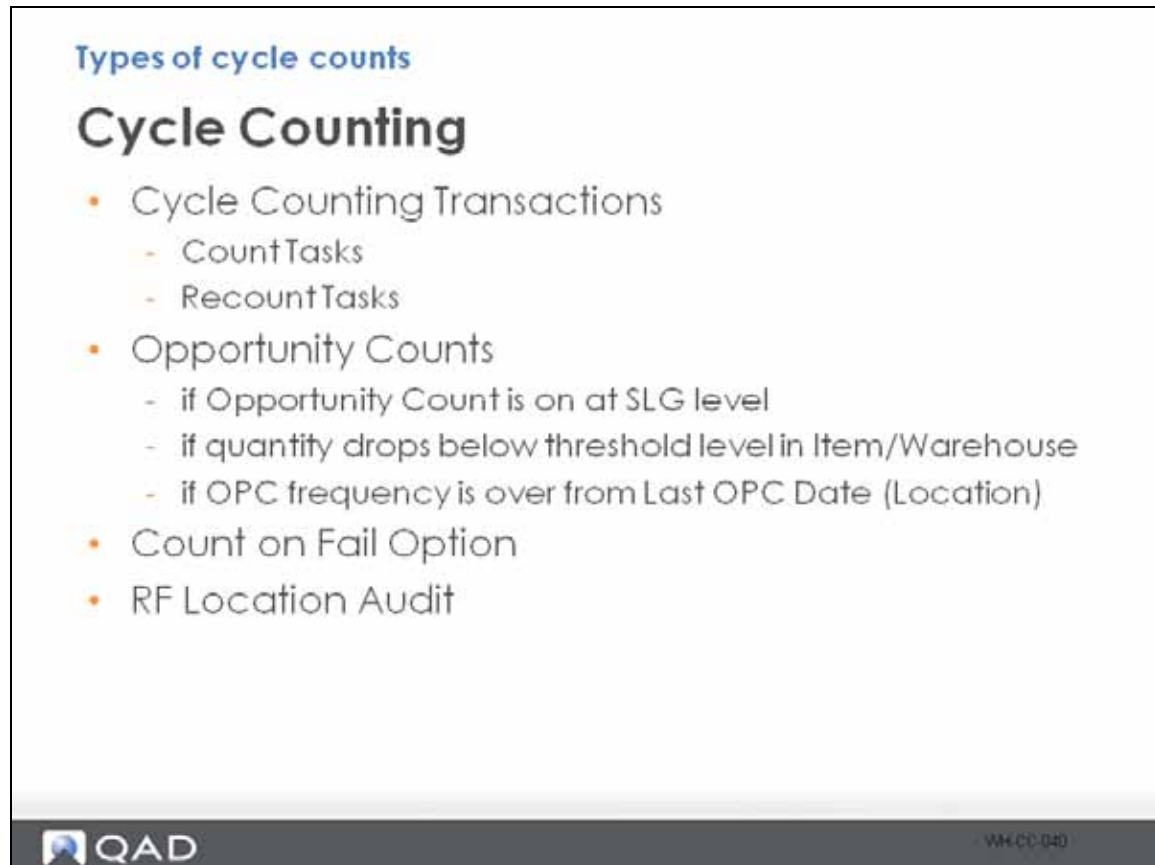
-  Partial
-  None

 QAD

WM-CC-030

As you can see in this graphic, QAD Warehousing cycle count functions provide all basic and advanced warehousing cycle count strategies.

Types of Cycle Count



The screenshot shows a presentation slide with a white background and a dark blue header. The header text is 'Types of cycle counts' in a light blue font. Below it, the main title 'Cycle Counting' is in a large, bold, dark blue font. The slide contains a bulleted list of cycle counting methods. At the bottom, there is a dark blue footer bar with the QAD logo on the left and the text 'WH-CC-040' on the right.

Types of cycle counts

Cycle Counting

- Cycle Counting Transactions
 - CountTasks
 - RecountTasks
- Opportunity Counts
 - if Opportunity Count is on at SLG level
 - if quantity drops below threshold level in Item/Warehouse
 - if OPC frequency is over from Last OPC Date (Location)
- Count on Fail Option
- RF Location Audit

QAD WH-CC-040

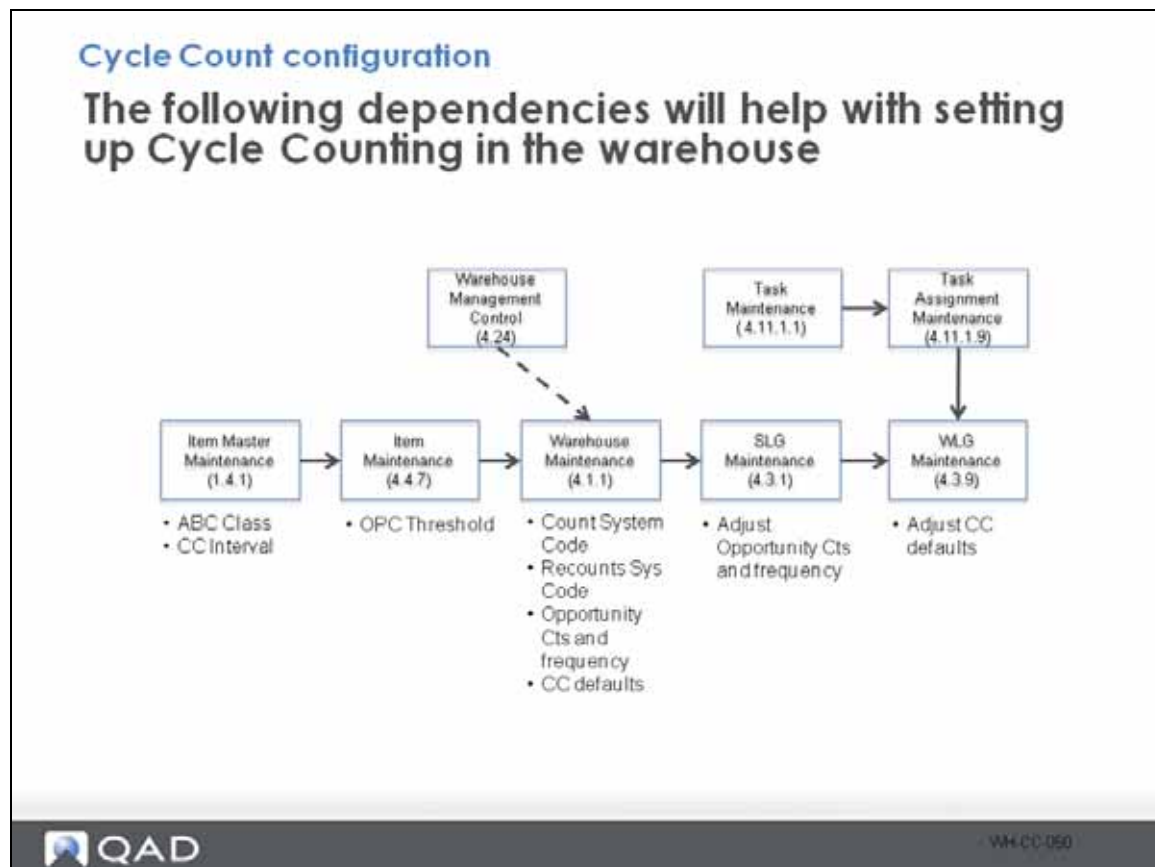
Did You Know

- You can count the contents of a pallet or bin through the RF Location Audit option?
- Cycle counts are planned and scheduled events while opportunity counts are driven by triggers/events.

A cycle count is a count of inventory items to monitor stock levels and maintain inventory accuracy. You initiate cycle counts manually or automatically.

Once you do, the RF displays a cycle count frame, prompting the warehouse employee to count the level of stock remaining in a location.

Cycle Count Configuration



Cycle count setup includes the following:

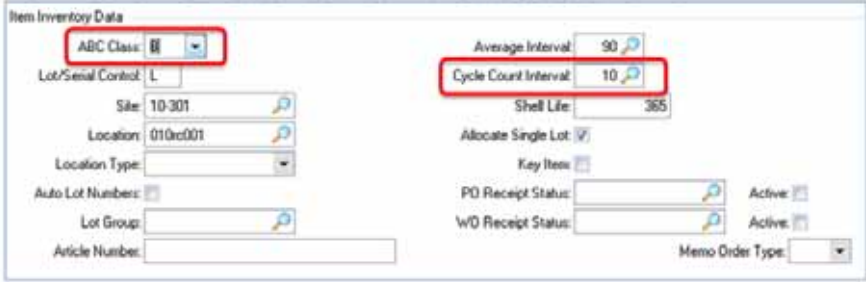
- Generate cycle count transactions/task.
- Classify the value of items to be counted.
- Specify the threshold that triggers an opportunity count during stock movement.
- Specify the RF device for system-created WLG cycle count or recount requests.
- Specify that warehouse staff perform a cycle count and set the frequency in days.
- Specify cycle count tasks at the WLG level.
- Enable users to perform cycle count tasks.

Setting Up Cycle Counting

Setting up cycle counting

Assign ABC Class and count frequency to the item

Item Master Maintenance - Item Inventory Data Frame



The screenshot shows the 'Item Master Maintenance - Item Inventory Data Frame' window. The 'ABC Class' dropdown menu is highlighted with a red box, showing the value 'B'. The 'Cycle Count Interval' field is also highlighted with a red box, showing the value '10'. Other fields visible include 'Average Interval' (90), 'Shell Life' (365), 'Lot/Serial Control' (L), 'Site' (10-301), 'Location' (010rc001), 'Location Type', 'Auto Lot Numbers', 'Lot Group', 'Article Number', 'Allocate Single Lot' (checked), 'Key Item', 'PO Receipt Status', 'W/O Receipt Status', 'Active' checkboxes, and 'Memo Order Type'.

WMS cycle counting works in conjunction with QAD Core

QAD VM-CO-060

Did You Know

- ABC Class is used as a selection category for cycle count setup.
- Cycle Count Interval (frequency) is measured in Days only.

Use Cycle Count Maintenance to set up these functions.

Item Level CC Parameters

Item level CC parameters

CC Requires additional setup in WMS

Multi-Level Item Maintenance

Item Number: 03121 Scented Disinfectant

UM: EA SI Bottle

Item Data:

Unit of Measure Group: Shelf Life Offset:

Barcode 1: Critical Days:

Barcode 2:

Default Site Data:

Warehouse Item Type: Single PA Trans: ☐

Replenishment Type: Issue Method:

Popularity: Print ID: ☐

ID Quantity:

OPC Threshold:

QAD WH-CC-070

Did You Know

Opportunity counts are not triggered by a manual product move.

When a pick or replenishment task is complete and the inventory level drops below the OPC Threshold, an opportunity cycle count is generated.

Warehouse Level Parameters

Warehouse level parameters

CC is also configured at the Warehouse level

Warehouse Maintenance

Cycle Count Defaults

Cycle Count Task:	COUNT	Recount Task:	RECOUNT
Count System Code:	RF	Recount System Code:	RF
Cycle Count Priority:	50	Recount Priority:	50
Count Increment:	1	Recount Increment:	1
Cycle Count on Fail:	☐	Cycle Count Status Option:	0
Use Recount UM of SLG:	☐	Blind Location Audit:	☐

QAD WM-CC-080

Use Warehouse Maintenance to specify the RF is the device where the system creates a cycle count or recount request in the WLG.

You can specify that cycle counts are done on the RF. You set up priority and by how many days the cycle count increments, or whether the cycle counts occur on fails.

Zone Level Parameters

Zone level parameters

...and the Zone level...

Storage Location Group Maintenance

Site: 10-301
Warehouse: 01
Storage Location Group: 040PL
Description: Pallet storage

Internal Routing Group: 040

Allow Issues: ☒
Allow Receipts: ☒
Allow Incoming Returns: ☒
Allow Outgoing Returns: ☒
Opportunity Counts: ☒
Opportunity Count Frequency: 20
Check Digits: ☐
Cycle Count Status Option: 0

Exclude from Picking: ☐
Picking Level: 10
Over Pick: ☐
Multi Trans: ☐
Detail Overflow Group:
Capacity Check when OTF: ☐
Optimized Storage: ☐
Allow Mixed Status Codes: ☐
Recount UM:

Picking Multiple UM: PL

Acquisition UM:

QAD V4.00.090

Use Storage Location Group Maintenance to:

- Set the Opportunity Counts field so the system requests warehouse staff perform a cycle count.
- Specify the frequency in days since the last count you want to perform a new count.

Did You Know

Opportunity counts are setup by zone and trigger an interleaved cycle count when the item is picked below the threshold set in Item Maintenance.

Work Location Group Parameters

Work Location Group parameters
...and the work sections

Work Location Group Maintenance

Site: 10-301
Warehouse: 01
Work Location Group: 01FL

Cycle Counts

Cycle Count Task:	COUNT	Recount Task:	RECOUNT
Count System Code:	RF	Recount System Code:	RF
Cycle Count Priority:	50	Recount Priority:	50
Count Increment:	1	Recount Increment:	1
Cycle Count on Fail:	☐		

 QAD

WH-CC-100

Use Work Location Group Maintenance to specify whether the system creates a cycle count task at the WLG level.

Cycle Count Task Assignment

Cycle count task assignment

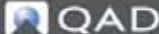
Which users are allowed to do cycle counts?

Task Assignment Maintenance

User ID: UserB RF User B

Queue 1

1	TRANSFER	Auto	
2	PICK	Auto	
10	COUNT	Auto	
20	recount	Auto	

 QAD

WH-CC-110

Use Task Assignment Maintenance to assign warehouse users to cycle count tasks.

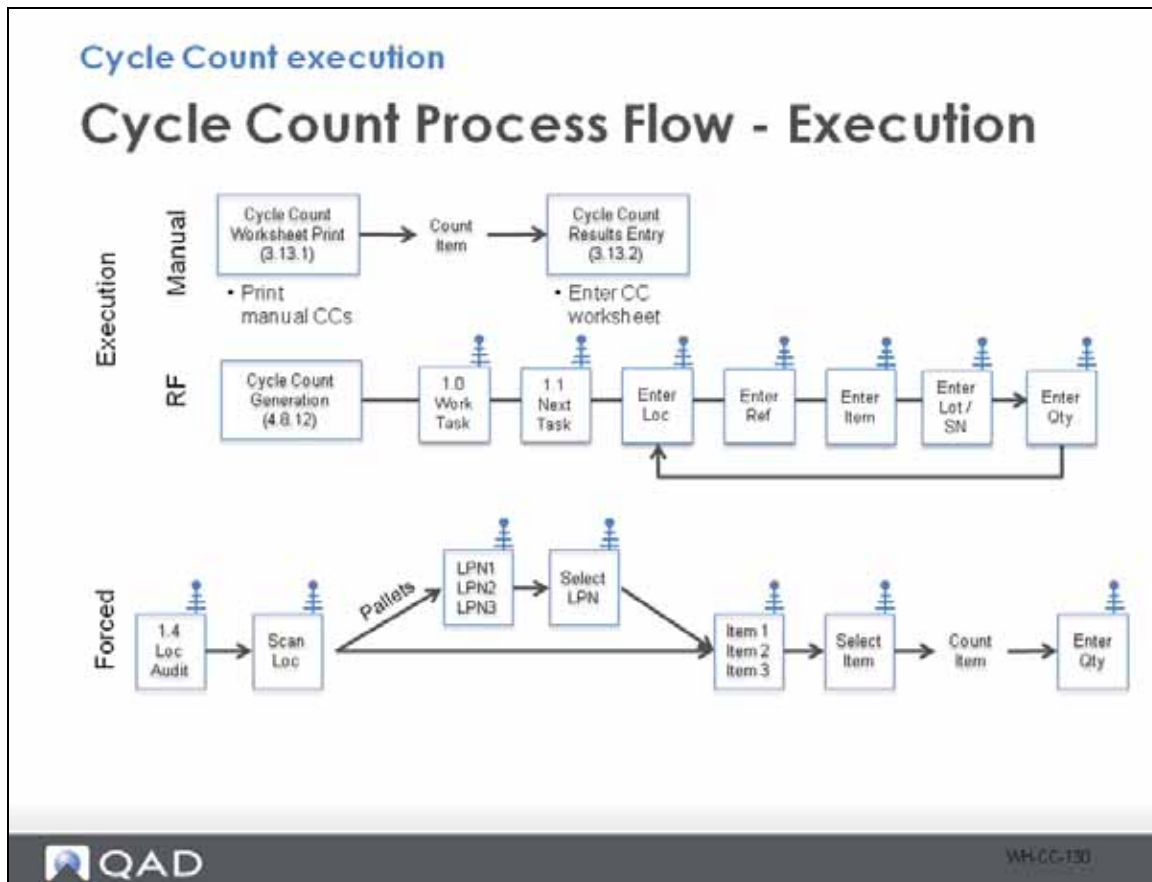
Cycle Count Processing

Cycle Count Processing

- Ensure there is inventory in various locations
- Ensure the cycle count intervals are set to trigger a cycle count task
(see Cycle Count Interval field @ 1.4.1)
- Use the Cycle Count process flow maps to test cycle counting

WH-CC-120

Cycle Count Execution



The graphic above depicts the programs, both within QAD Warehousing and the RF, the system uses when executing cycle counting, either RF cycle count or manual cycle count.

Cycle Count Simulation or Creation

Cycle Count simulation or creation

Cycle Count control options

Cycle Count Generation

Create Transactions: ☒ Count Reason: COUNT Blind: ☒

Item Number: To:

Product Line: To:

Item Type: To:

Site: 10-2011 To:

Warehouse: To:

Store Loc Group: To:

Work Location Group: To:

Location: To:

Last Count: To:

ABC Class: To:

Number of Items: 99999999 A: 0% B: 0% C: 0% Other: 0%

Empty Locations: 0 Functional Locations: ☐

Sort by Item/Whse: Item Zero Quantity: ☐

Randomize Selection: ☐ Negative Quantity: ☐

Past Due Only: ☒ Phantom Items: ☐

Existing Counts: ☐

Output:
Batch ID:

QAD WH-CC-140

Did You Know

Use Cycle Count Generation to create cycle count transactions. You can set up rules here for cycle count tasks.

You can specify whether the count is visible to the person counting or not by setting the Blind field.

Cycle Count Tasks

Cycle Count tasks

View cycle count tasks



Cycle Count Generation
10USA

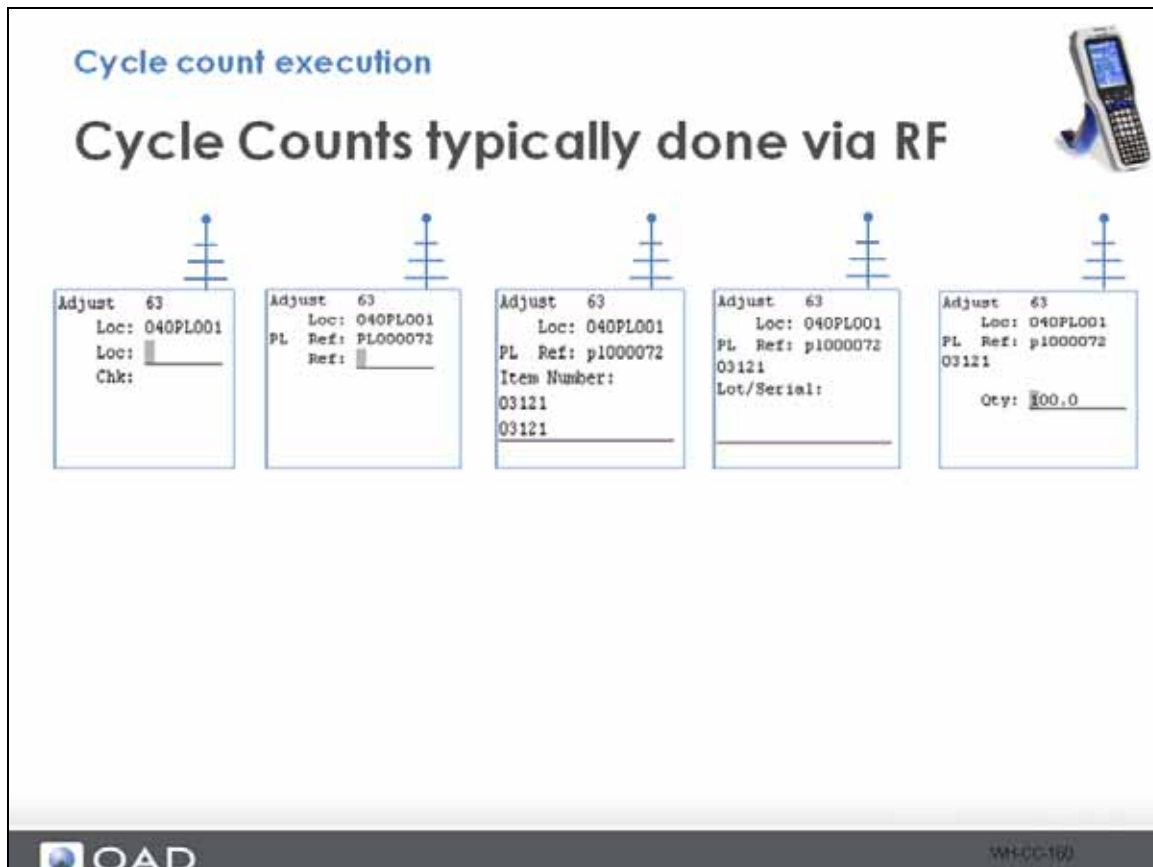
Tran	Nbr	Site	Warehous	Location Reference	Item Number Lot/Serial	Message
61	10-301	01		040EA001 PL000032	90091	
61	10-301	01		040PL001 PL000073	03120	
61	10-301	01		040PL001 PL000072	03121	
61	10-301	01		040PL001 PL000074	03210	

End of Report

 QAD WH-CC-150

Cycle Count Generation displays the cycle count tasks it generates.

Cycle Count Execution - Done on RF



Use the RF Next Task option to receive the cycle count task and confirm the cycle count transaction. Staff scan the location, reference, item, and quantity.

Did You Know

- The RF displays a cycle count task prompting the warehouse employee to count the level of stock.
- You can also confirm Cycle Count tasks without RF using Movement Confirmation.

Non-RF Cycle Count Activity

Non-RF Cycle Count activity

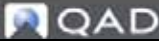
Manual cycle counts can be performed



Cycle Count Worksheet Print

08/17/11 10:32:14
10USA
Page: 1

Item Lot/Serial	Ref	Site Location Description	ABC Last Cnt	Qty on Hand UM	Qty Counted	Counted By	Date Counted
D3120	PL000073	10-301 Scented Disinfectant 040PL001 Pump	B	100.0 EA	() () ()		
D3121	PL000072	10-301 Scented Disinfectant 040PL001 5l Bottle	B	100.0 EA	() () ()		
D3210	PL000074	10-301 Disinfectant Wipes 040PL001	A	100.0 EA	() () ()		
90091	PL000032	10-301 Standard Shipping Box 040EAD01	C	80.0 EA	() () ()		

 WH-CC-170

Did You Know

If cycle counts are created on a Cycle Count Worksheet they are not recreated with Cycle Count Generation.

Avoid Mixing



Avoid mixing RF and
manual cycle counts

Bonus Coverage - Opportunity Counts

Bonus Coverage: Opportunity Counts

Integrated cycle counts

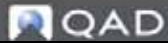
- Opportunity counts
- Occur at pre-defined thresholds
- Reduces number of planned cycle counts
- Saves time
- Must balance with pick labor productivity

Cycle Count White Paper

Cycle Count White Paper

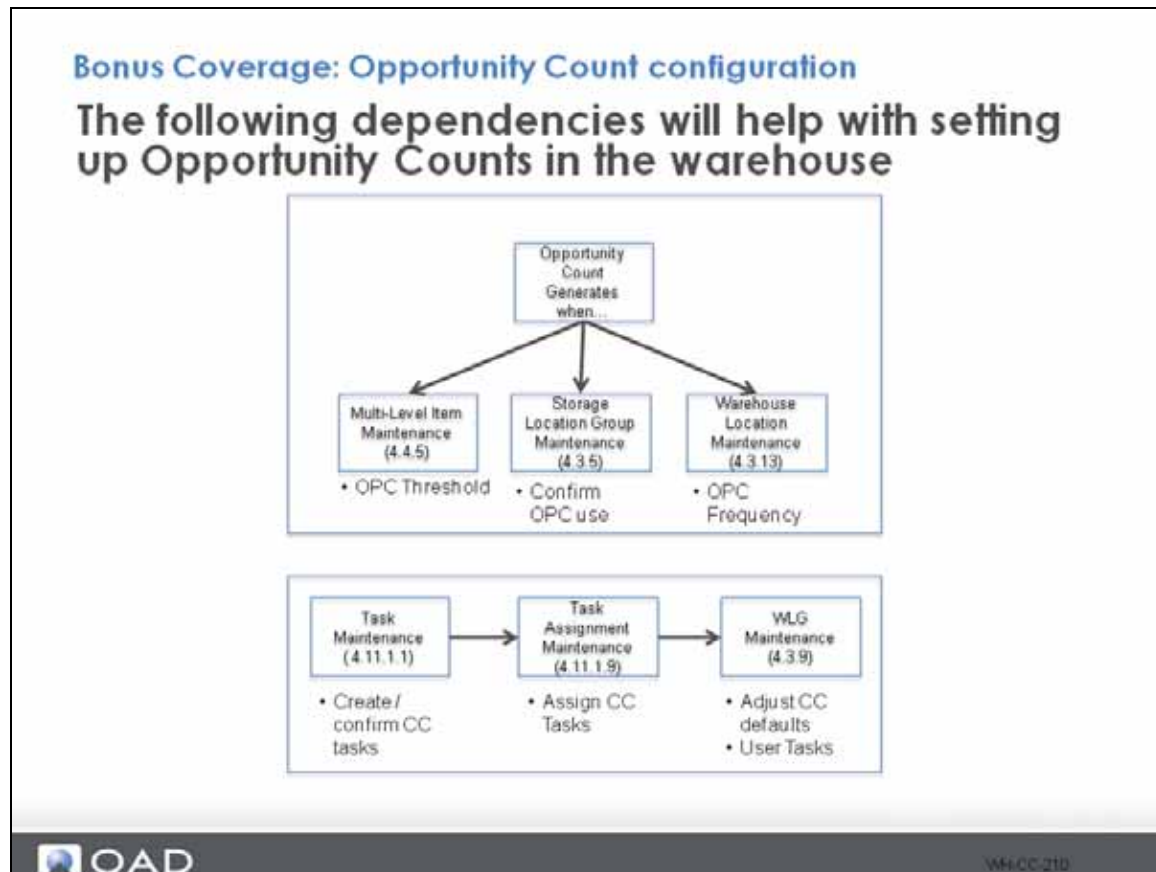


Contact Chris Barnes (c9b@qad.com)
for a white paper on cycle count
processes and concepts.



WH-CC-000

Bonus Coverage - Opportunity Count Configuration



The graphic above depicts the QAD Warehousing programs you use when you set up for cycle counts through QAD Warehousing.

Bonus Coverage - Opportunity Counts

Bonus Coverage: Opportunity Counts

Opportunity Count setup example

1. Setup OPC parameters in Multi-Item Level Maintenance
2. Allow OPC by Zone using Storage Location Group Maintenance
3. Define the OPC frequency using Warehouse Location Maintenance
4. Assign cycle count tasks to UserA
5. Get 60 EA, item 03121, into 040EA020
6. Setup and release an order for 60 EA, item 03121
7. Process the order with UserA RF

WM-CC-220

The graphic above depicts the setup steps involved in an opportunity count.

Unlike cycle counts, opportunity counts are triggered automatically by stock movements. Certain conditions—for example when stock is picked or transferred—causes the system to check the opportunity count threshold for that item.

If this is found to be at or below the threshold level set using the Opp Cnt Threshold field, the system initiates a cycle count. This allows cycle counts to be performed on an on-going basis, reducing the need to do a large cycle count all at once.

Also, if the OPC frequency is over the date specified in the Last OPC Date (Location), the system triggers an opportunity count.

Bonus Coverage - Opportunity Count, Set OPC Threshold

Bonus Coverage: Opportunity Counts

1. Setup OPC Threshold to 1.0

Multi-Level Item Maintenance

Item Number: 03121 Scented Disinfectant
 UM: EA 5l Bottle

Default Site Data

Warehouse Item Type: Single PA Trans: ☐
 Replenishment Type: Issue Method:
 Popularity: Print ID: ☐
 ID Quantity: 0 OPC Threshold: 1.0

Site Data and Default Warehouse Data

Location: 01 Single PA Trans: ☐
 Warehouse Item Type: Issue Method:
 Replenishment Type: Print ID: ☐ ID Qty: 0
 Popularity: OPC Threshold: 1.0

Warehouse Data

Location: Single PA Trans: ☐
 Storage Location Group: 040PL Issue Method:
 SLG List: Print ID: ☐
 Warehouse Item Type: ID Quantity: 0
 Replenishment Type: OPC Threshold: 1.0

QAD WH-CC-230

The OPC Threshold field relates to opportunity counts, which you can specify. When inventory is taken out of the location, the system checks whether the quantity on-hand falls below the threshold level you specify for the item, and also checks the OPC frequency value for the location where the item is stored. If both conditions are met, a cycle count is requested.

You can specify an OPC threshold value for each item, and also for items related to a specific zone.

The graphic above shows three screens for item, site, and zone where you can set up the OPC threshold.

Bonus Coverage - Confirm Opportunity Counts by Zone

Bonus Coverage: Opportunity Counts

2. Confirm Opportunity Counts by Zone

Storage Location Group Maintenance

Site: 10-301
Warehouse: 01
Storage Location Group: 040EA
Description: Pick face storage

Internal Routing Group: 040

Allow Issues: ☒	Exclude from Picking: ☐
Allow Receipts: ☒	Picking Level: 30
Allow Incoming Returns: ☒	Over Pick: ☐
Allow Outgoing Returns: ☒	Multi-Trans: ☐
Opportunity Counts: ☒	Picking Multiple UM:
Opportunity Count Frequency: 0	Detail Overflow Group:
Check Digits: ☐	Capacity Check when OTF: ☐
Cycle Count Status Option: 0	Optimized Storage: ☐
	Allow Mixed Status Codes: ☐
	Acquisition UM: EA
	Recount UM:

 QAD

WH-CC-240

You can specify an OPC threshold value for each item, and also for items related to a specific zone.

Bonus Coverage - Opportunity Counts, Define OPC Frequency

Bonus Coverage: Opportunity Counts

3. Define the OPC frequency by location

Work Location Maintenance

Site: 10-301 Distribution Site 1

Location: 040EA020

Location Groupings

Warehouse: 01

Storage Location Group: 040EA

Work Location Group: 01CT

Warehouse Location Data

Check Digit:

Popularity:

Storage Type:

Warehouse Location Type:

Travel Sequence:

Dedicated ☐

Picking Type:

Preferred UM:

Opportunity Count Frequency:

Last Opportunity Count:

Stage (In):

Stage (Out):

Defines minimum interval between counts. 0 = unlimited counts per day.

QAD WH-CC-250

If the Opportunity Count flag is set to No at the SLG Maintenance screen you cannot change the Opportunity Count Frequency field here.

- Enter 0 to let unlimited numbers of opportunity accounts
- Enter 1 to let one opportunity count per day
- Enter 2 to let one opportunity counts every 2 days, and so on.

Bonus Coverage - Opportunity Counts, Assign Cycle Count Tasks

Bonus Coverage: Opportunity Counts

4. Assign cycle count tasks to UserA

Task Assignment Maintenance

User ID: UserA RF User A

Queue 1

10	PICK	Auto	
20	COUNT	Auto	

 QAD WM-CC-250

Use Task Assignment Maintenance to assign warehouse users to cycle count tasks.

Bonus Coverage - Example

Bonus Coverage: Example

- Test OPC by picking a location clean

5. Get 60 EA of 03121 into location 040EA020
6. Setup and release order for 60 EA, 03121

Site: 10-301		Item Number:	Displa
Warehouse:		Lot/Serial:	Disp No
Location:		Reference:	
Warehouse: 01		Warehouse 1	
Item	Status	Qty	Expect
Location Lot	Ref	UM On Hand In	Expect Out
040EA020 03121	Y-Y-N	EA 60	
PL000072			

Header	
Order: WM5501	Sold To: 10C1000 Ln For:
Sales Order Line	
Ln	Item Number Qty Ordered UM
1	03121 60.0 EA

PICKLIST / PRE-SHIPPER	
Wal-Mart 702 S.W. 8th Street Waterfront Bentonville, AR 72716 USA - TAX PURPOSE	
Pre-Shippers: P0903110001 Page:	
Print Date: 09/02/11	
Sales Order: WM5501 Order Date: 09/02/11 Ship To PO:	
Ln	Item Number Site Lot/Serial Qty Due
1	03121 10-301 Open UM Shipped
Scented Disinfectant	
51 Bottle	
040EA020 60.0 EA 09/03/11	
PL000072 60.0 ()	



WMCC-270

Use Inventory Detail Inquiry to pick a clean location.

Use Sales Order Maintenance, then Picklist/Pre-Shipper workbench to get the 60 EA into the location, then set up and release the order.

Bonus Coverage - Example Test = Success

Bonus Coverage: Test = SUCCESS

7. Opportunity Count triggers

Item Location Lot	Status Ref	Qty UM	On Hand	In	Expect Out	Expect Detail	Detail Alloc	Detail Pick
040EA020 03121	Y-V-N	EA	60				60	60
060PA001 03121	Y-V-N	EA			60			

Picking 59
SO WHSS01
Fr Loc: 040EA020
Loc: 040EA020
Chk:

Picking 59
SO WHSS01
Loc: 040EA020
Item Number: 03121
03121

Picking 59
SO WHSS01
Loc: 040EA020
Item Number: 03121
03121
PL000072
Qty: 60.0

Picking 59
SO WHSS01
To Loc: 060PA001
Loc: 060PA001
Chk:
Item Number: 03121
Lot/Serial:
EA Ref: PL000072

OPPORTUNITY
040EA020
03121
PL000072
Qty: 60.0

Pending pick for 60EA, 03121

Picking 60 from the location with 60 triggers an (opportunity) cycle count

QAD

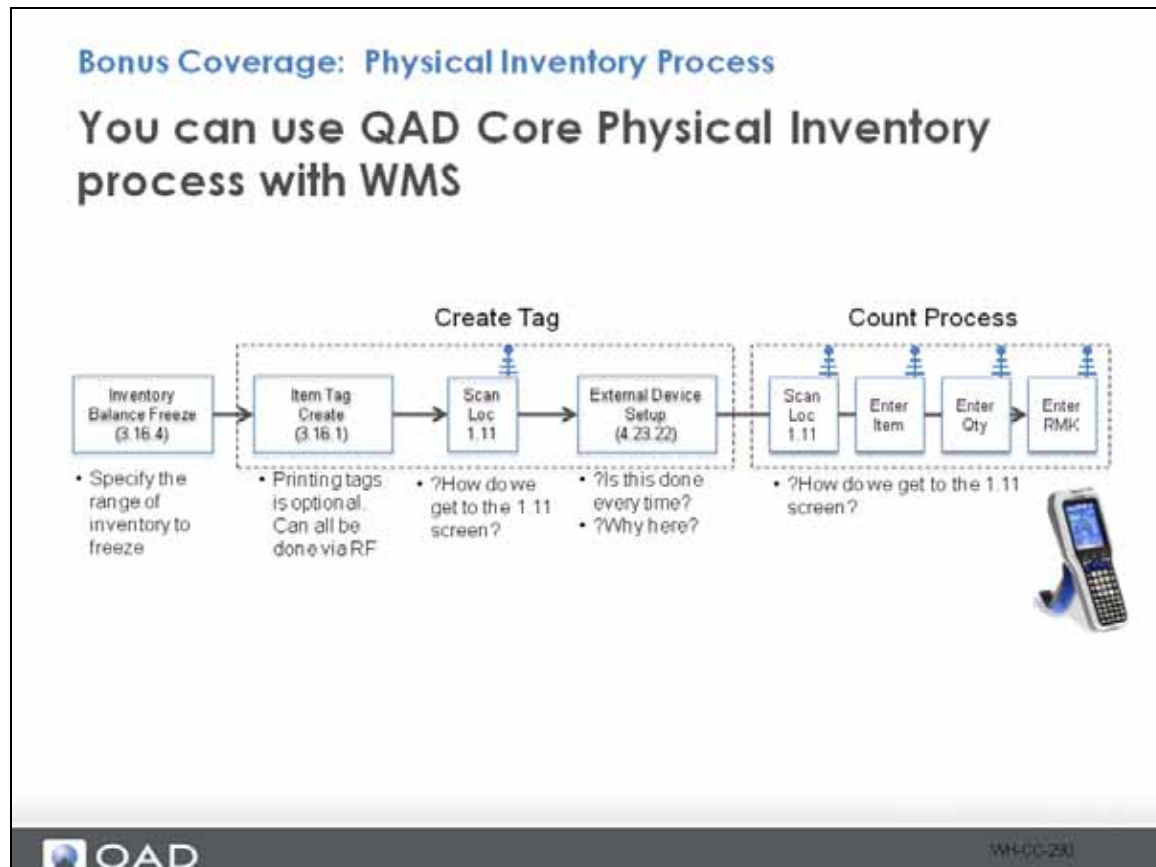
WH CC 290

Use Warehouse Detail Inquiry to see the pending pick for 60EA of item 03121.

The RF screens involved in an opportunity count are displayed at the bottom of the graphic above.

In the graphic above, when 60 each of item 03121 is picked from 040EA020, the system triggers a cycle (opportunity) count to the user. This lets the user perform the count while the user is already at the location.

Bonus Coverage - Physical Inventory Process



Physical inventory enables you to count and compare actual, on-hand inventory balances with on-hand quantities recorded in the system. This can also be done with cycle counting. Warehouse staff can conduct a physical inventory through the RF device within the warehouse.

Implementation Consideration- Using Location Audit

Implementation Consideration

- Use Location Audit to:
 - Add inventory
 - Perform on demand cycle counts
 - Perform random inventory audits

30

WH-CC-400

Location audit is a forced cycle count that typically occurs when it is expected that something is not right with inventory quantities.

Current Inventory Positions

INBOUND

Current Inventory Positions

Area =
Receipts (010)

Receipts (010RC)

010RC001

Inspection (020)

020IN

QA Hold (030)

030RJ

Storage (040)

Pallet Storage (040PL)

040PL001

040PL002

040PL003

040PL004

040PL005

040PL006

040PL007

040PL008

040PL009

040PL010

Inventory Detail Inquiry

Site: 10-301 Item Number:

Warehouse: Lot/Serial:

Location: Reference:

Warehouse: 01 Warehouse: 1

Item Location	Lot	Status Ref	Qty UM	On Hand	Exp In
040PL001	03120	Y-Y-N	EA	100	
		PL000080	PL		
040PL001	03120	Y-Y-N	EA	100	
		PL000081	PL		
040PL001	03120	Y-Y-N	EA	100	
		PL000082	PL		
040PL002	03121	Y-Y-N	EA	100	
		PL000083	EA		
040PL002	03121	Y-Y-N	EA	100	
		PL000084	EA		
040PL003	03122	Y-Y-N	EA	100	
		PL000088	EA		
040PL003	03122	Y-Y-N	EA	100	
		PL000089	EA		
040PL003	03122	Y-Y-N	EA	100	
		PL000090	EA		
040PL004	03210	Y-Y-N	EA	100	
		PL000091			

QAD

WH-CO-410

Use RF Location Audit to Change Inventory Positions

Use RF Location Audit to validate, add or change inventory positions

Add Inventory Using Location Audit

Task Assignment Maintenance

User ID: UserB RF User B

Queue 1		
1	TRANSFER	Auto
2	PICK	Auto
3	COUNT	Auto
4	RECOUNT	Auto

Changing inventory positions might trigger a Recount task. Make sure Recount is assigned to at least one user in the Work Location Group.

 QAD

YH-CC-430

Use RF Location Audit to Change Inventory Positions (Continued)

Use RF Location Audit to validate, add or change inventory positions

Location Audit

1 Site: 10-301 Item Number:
Warehouse: Lot/Serial:
Location: 040PL001 Reference:

2 Adjust/Count
Loc: 040PL001
Ref: PL01
I: 03210
Disinfectant Wipes
Lot:
Qty OH: 0.0
Qty Alloc: 0.0
Qty Cnt: 100
Alt UM:

3 Enter alt um

4 Task Load Report
10USA
From To
Task Tran Site Warehouse Location Location Item
RECOUNT 89 10-301 01 040PL001 040PL001 03210

5 Item/Lot Selection
F4 - F4

6 Adjust 89
Loc: 040PL001
EA Ref: PL01
03210
Qty: 100

7 No task available
Pausing 10 seconds

8 Warehouse: 01 Warehouse 1
Item Status Qty Expect Expect Detail Detail
Lot Ref UM On Hand In Out Alloc Pick
03210 Y-Y-N EA 100
PL01

QAD

WH-CC-486

Key Learning Points

QAD Warehousing Cycle Count

Key Learning Points

- QAD Warehousing supports cycle counting best practices
- Define user cycle count capabilities
- Use Opportunity Counts to integrate cycle counting into the pick process

Questions

- 1 True or False. Cycle counting is one area of QAD Warehousing where all functions are met for a true warehousing cycle count system.
- 2 When do warehouse staff perform count tasks as opposed to recount tasks?
- 3 Which programs let you generate cycle count tasks?
- 4 Opportunity count is a type of cycle count directing a picker to?
- 5 True or False. QAD Warehousing uses the same cycle count program as QAD core?
- 6 Cycle counting in the warehouse uses parameters setup exclusively in QAD Warehousing?

Answers

- 1 True. Cycle counting is one area of QAD Warehousing where all functions are met for a true warehousing cycle count system.
- 2 Warehouse staff perform count tasks when stock quantities are inside the tolerance; they perform recount tasks when stock quantities are outside the tolerance.
- 3 Count locations during the pick process, after the pick and prior to leaving.
- 4 False. QAD Warehousing has different cycle count flags but can use the QAD core cycle count worksheet option.
- 5 False. QAD Warehousing cycle counting starts with ABC and frequency parameters setup in QAD core, Item Master Maintenance

Notes

Chapter 9

Printing

Overview



Warehouse staff are required to print several documents during normal warehouse processing.

You can control the printing of tags, pallet labels, or exception tags from various menus within the system, with a flexible choice of format for the output.

You have the choice of printing at the following times:

- When creating transactions
- When confirming transactions
- When transactions do not complete successfully (exceptions)
- When inventory is received into the warehouse

QAD Warehouse Printing

QAD Warehousing Printing

Flexible Printing Parameters

QAD Warehousing allows you to print:

- When creating transactions
- When confirming transactions
- When transactions do not complete successfully (exceptions)
- When inventory is received

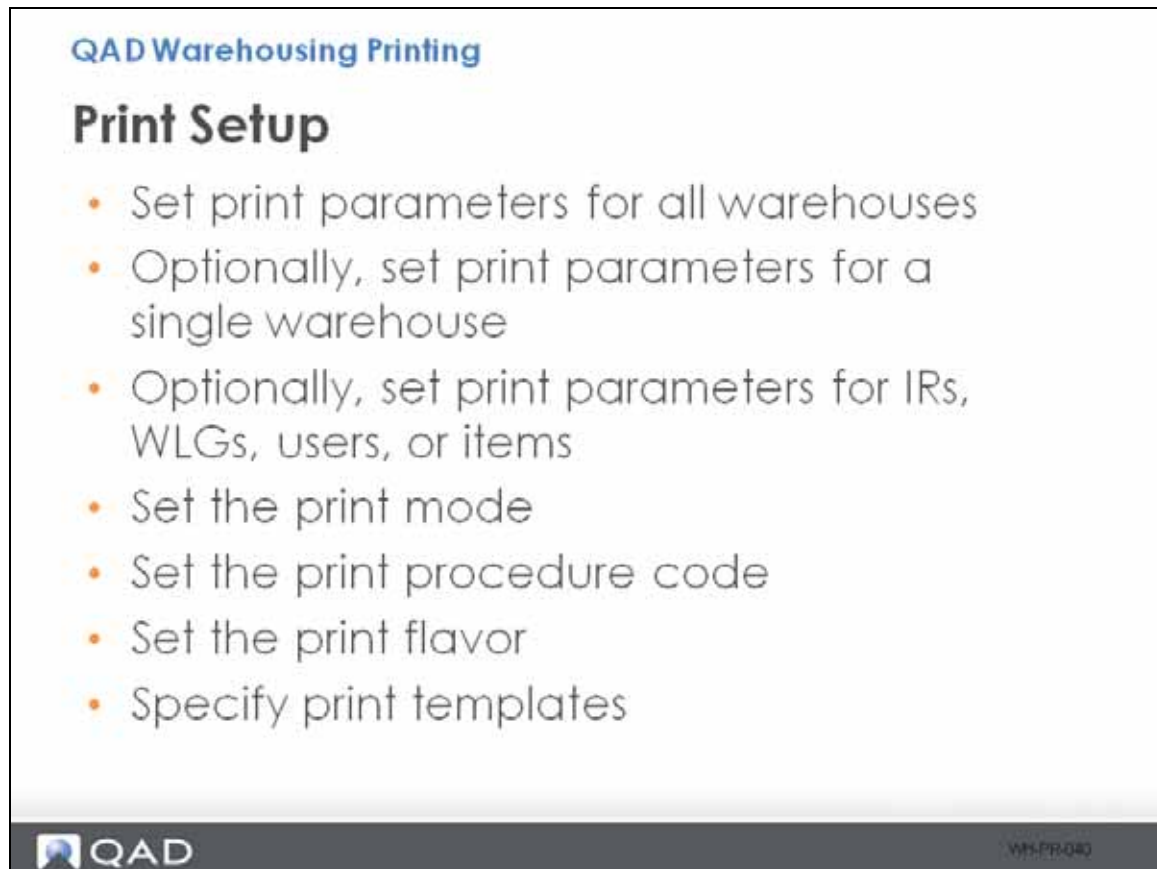


WH-PR-030

You can print:

- Inventory IDs
- New, confirmed, or exceptions to transactions
- QA inspection tags
- Unplanned issue tags
- Picklists/preshippers
- Shipping documents

Print Setup

A presentation slide titled "QAD Warehousing Printing" with a subtitle "Print Setup". It contains a bulleted list of seven steps for setting up printing. The slide has a dark blue header and footer. The footer includes the QAD logo on the left and the code "WH-PR-040" on the right.

QAD Warehousing Printing

Print Setup

- Set print parameters for all warehouses
- Optionally, set print parameters for a single warehouse
- Optionally, set print parameters for IRs, WLGs, users, or items
- Set the print mode
- Set the print procedure code
- Set the print flavor
- Specify print templates

 QAD WH-PR-040

The graphic above lists the steps involved when setting up printing within QAD Warehousing.

Warehouse Control Print Options

QAD Warehousing Printing

Warehouse Control – Print Options

Identification Printing

Print ID: Lines of Each: Print Mode (ID): Auto

ID Printer: Width of Each: Use External: ☒

Number Across: 132 Mode (ID): ☐

Task Printing

Print Create: ☐ Number Across: Create Print Mode: ☐

Print Confirm: ☐ Lines of Each: Confirmed Print Mode: ☐

Print Except: ☐ Width of Each: Exception Print Mode: ☐

Task Printer: 132 Mode (Task): ☐ Use External: ☐

Inspection Printing

Inspection Printer: Width of Each: Use External: ☐

Number Across: 132 Mode (Ins): ☐

Lines of Each: Print Mode:

Form Printing

Form Printer: 132 Mode (Form): ☐ Use External: ☐

External Devices

Device Printer: Lines of Each: 132 Mode (Ext): ☐

Number Across: Width of Each:

Miscellaneous Printing

Print Flavor: A Manufacturer Code: Print by WLG: ☐

QAD WH-PR-050

Use Warehouse Control to set print options for all warehouses. Print options default to Warehouse Maintenance.

The fields in the Printer Defaults frame set default values used when you set up individual warehouse details.

The Print frame is divided into several areas: Identification, task, inspection, form, external, and miscellaneous printing. You can control the printing of transaction details in each of the areas.

Warehouse Maintenance Print Frames

QAD Warehousing Printing

Warehouse Maintenance - Print Frames

Site: 10-301
Warehouse: 01

Identification Printing

Print ID: Lines of Each: Print Mode (ID):
 ID Printer: Width of Each: Use External: ☒
 Number Across: 132 Mode (ID): ☐

Task Printing

Print Create: ☐ Number Across: Create Print Mode:
 Print Confirms: ☐ Lines of Each: Confirmed Print Mode:
 Print Except: ☒ Width of Each: Exception Print Mode:
 Task Printer: 132 Mode (Task): ☐ Use External: ☐

Inspection Printing

Insp Printer: Width of Each: Use External: ☒
 Number Across: 132 Mode (Insp): ☐
 Lines of Each: Print Mode:

QAD WH-PR-000

Warehouse Maintenance has several frames devoted to setting up print parameters.

Did You Know

Print Flavor determines the format of the printed output, either a default format or a template.

Print Templates

QAD Warehousing Printing

Print Templates – Samples

Simple Template

```

-BANNER-

Transaction Number: -TRNR- (-TYPE-)
Site: -SITE- -SITEDS-
Location: -LOC- -LOCDS-
Item Number: -PART- -PARTDS-
Lot/Serial: -SERIAL-
Reference: -REF-

Quantity: -QTY_CHG- -UM-

```

Simple Template Result

```

Identification

Transaction Number: 123 (RCT-PD)
Site: JONSITE Jon Miller's Site
Location: RCO1 Receipt's Dock 1
Item Number: 100101 Box of Things
Lot/Serial:
Reference:

Quantity: 10 EA

```


WH-PR-070

Templates are flat ASCII files that contain the layout of required printed output. Use Print Template Load to load the template into the database.

A template can contain the following elements:

- All the escape and control sequences required by specific printer types for specific functions such as bar coding, line drawing, font selection, and character position.
- Literal text that should appear as output such as field labels, headings, and banner messages.

Internal Routing Maintenance Print Options

QAD Warehousing Printing

Internal Routing Maintenance – Print Options

Site: 10-301 Warehouse: 01 Internal Routing: 01RCT

Description: Receipts
Sequence: 10 Internal Routing Group: 010

Picking

Repick Type: Allow Switch Lot Ref: ☐
Expire Date (Days): 0

Print Options

Print ID: ☐ Print Mode (ID): Auto

Print Created Tasks: ☐ Create Print Mode: Auto

Print Confirmed Tasks: ☐ Confirmed Print Mode: Auto

Print Exceptions: ☐ Exception Print Mode: Auto

Miscellaneous Options

Mode: Auto Clear Shortages: ☐
New Unit of Measure: Create Shipper: ☐
Check Inspection: ☐

QAD WH-PR-000

Use Internal Routing Maintenance to set print options for an individual step in an IR and to define the print mode.

The Print Options frame in Internal Routing Maintenance contains fields where you define the printing operations that are performed in relation to inventory transactions for this sequence step in the internal routing.

The types of printing are:

- ID, identification of the inventory
- Created tasks
- Confirmed tasks
- Exceptions, when changes have been made to the original transaction

Work Location Group Maintenance Print Frames

QAD Warehousing Printing

Work Location Group Maintenance – Print Frames

Site: 10-301
Warehouse: 01
Work Location Group: 01CT

Identification Printing

Print ID: Lines of Each: 0 Print Mode (ID): Auto
ID Printer: Width of Each: 0 Use External: ☒
Number Across: 0 132 Mode (ID): ☐

Task Printing

Print Create: Number Across: 0 Create Print Mode: Auto
Print Confirm: Lines of Each: 0 Confirmed Print Mode: Auto
Print Except: ☒ Width of Each: 0 Exception Print Mode: Auto
Task Printer: 132 Mode (Task): ☐ Use External: ☒

Inspection Printing

Insp Printer: Width of Each: 0 Use External: ☒
Number Across: 0 132 Mode (Insp): ☐
Lines of Each: 0 Print Mode: Auto

Form Printing

Form Printer: External Devices
Device Printer: Lines of Each: 0 132 Mode (Ext): ☒
Number Across: 0 Width of Each: 0

Miscellaneous Printing

Print Flavor: A Manufacturer Code:

QAD WH-PR-000

Use Work Location Group Maintenance to specify the printer and set up print options for the WLG and for the RF.

The Printing frames of Work Location Group Maintenance contains fields where you define the printing operations that are performed in this WLG. The initial values default from the Printing frame in Warehouse Maintenance, but you can change the values.

User Work Location Group Maintenance

QAD Warehousing Printing

User Work Location Group Maintenance

Site: 10-301
Warehouse: 01
Work Location Group: 01CT
User ID: UserA

System Flavor: A

Device:

External Device Printer:

Form Printer:

ID Printer:

Task Printer:

Inspection Printer:

Use External: ☒

Use External: ☒

Use External: ☒

Use External: ☒

 QAD

WH-PR-100

Use User Work Location Group Maintenance to set up print options specific to a user. In the Printer fields in the graphic above, you add a specific printer name to these fields so the correct print request is sent to the correct printer.

Multi-Level Item Maintenance

QAD Warehousing Printing

Multi-Level Item Maintenance

Item Number: 03120

UM: EA

Site: 10-301

Warehouse: 01

Scented Disinfectant

Pump

Distribution Site 1

Warehouse 1

Warehouse Data

Location:

Storage Location Group: 040PL

SLG List:

Warehouse Item Type:

Replenishment Type:

Popularity:

Logistics UM Tolerance: 0.00%

Auto Replenish: ☒

Single PA Trans:

Issue Method:

Print ID:

ID Quantity: 0

OPC Threshold: 0.0

Logistics UM: PL

Pallet Max Height: 0

Auto Replenishment %: 0.00%

Print Unplanned Issue Tag:

QAD

WH-PR-110

Use Multi-Level Item Maintenance to set up a print ID for an item.

Print Request Maintenance

QAD Warehousing Printing

Print Request Maintenance

Engine Type:

Transaction Type:

Site:

Warehouse:

New Mode:

Batch ID:

 WAREHOUSING

Use Print Request Maintenance to manually process print requests through QAD Warehousing print functions.

Objectives

QAD Warehousing Printing

Objectives

- Set printing for items received into a single warehouse
- Set printing for a internal routing step for a receipt
- Receive the items and print the receipt confirmation transaction

Example - Warehouse Setup

QAD Warehousing Printing

Example – Warehouse Setup

Warehouse Maintenance

Site: 10-301
Warehouse: 01

Identification Printing

Print ID: ☒	Lines of Each: 0	Print Mode (ID): Auto
ID Printer: sfama.so	Width of Each: 0	Use External: ☒
Number Across: 0	132 Mode (ID): ☐	

Task Printing

Print Create: ☐	Number Across: 15	Create Print Mode: Auto
Print Confirm: ☒	Lines of Each: 15	Confirmed Print Mode: Auto
Print Except: ☒	Width of Each: 0	Exception Print Mode: Auto
Task Printer: sfama.so	132 Mode (Task): ☐	Use External: ☒

Use Warehouse Maintenance to set several print frames for a single warehouse that default to other warehousing maintenance programs. Use Warehouse Maintenance to set the print mode, also.

Exercise - IR Setup

QAD Warehousing Printing

Exercise – IR Setup

Internal Routing Maintenance

Site: 10-301 Warehouse: 01 Internal Routing: 01RCT

Description: Receipts
Sequence: 10 Internal Routing Group: 010

Picking

Repick Type: Allow Switch Lot Ref: ☐
Expire Date (Days): 0

Print Options

Print ID: ☒ Print Mode (ID): Auto

Print Created Tasks: ☐ Create Print Mode: Auto

Print Confirmed Tasks: ☒ Confirmed Print Mode: Auto

Print Exceptions: ☐ Exception Print Mode: Auto

QAD WH-PR-150

In this exercise, you use Internal Routing Maintenance to set print options for an individual step in an IR and to define the print mode.

The Print Options frame in Internal Routing Maintenance contains fields where you define the printing operations that are performed in relation to inventory transactions for this sequence step in the internal routing.

Questions

- 1 What printing can you control with QAD Warehousing print functions?
- 2 True or False. There are print frames in several Warehousing maintenance programs, and most fields default from Warehousing Control or Warehouse Maintenance.
- 3 What are print templates?
- 4 Which program do you use to set up print options specific to a user?
- 5 Which program do you use to manually process print requests through QAD Warehousing print functions?

Answers

- 1 You can control the printing of tags, pallet labels, or exception tags from various menus within the system, with a flexible choice of format for the output.
- 2 True. There are print frames in several Warehousing maintenance programs, and most fields default from Warehousing Control or Warehouse Maintenance.
- 3 Templates are flat ASCII files that contain the layout of required printed output.
- 4 Use User Work Location Group Maintenance to set up print options specific to a user.
- 5 Use Print Request Maintenance to manually process print requests through QAD Warehousing print functions.

Notes