



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

70-3240-2013EE
QAD 2013 Enterprise Edition
March 2013

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 © 2013 by QAD Inc.

Warehousing_TG_v2013EE.pdf/crl/mdf

QAD Inc.

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

Contents

Change Summary	1
About This Course	3
QAD Web Resources	4
Logging in to Training Success Web Site	4
Setting Up the Environment	4
Logging into QAD Enterprise Edition	5
Troubleshooting the Training Environment	6
Using the RF for Exercises	6
Logging In to Unix Character Session and Starting RF Software	7
Logging into RF as User A or User B	8
Shortcut to Enabling and Executing the RF Software	10
Chapter 1 Introduction to Warehousing	13
Overview	14
Objectives	15
QAD Versions	16
QAD- Where?	17
QAD Warehousing- 100 Sites	18
Functional Fit	19
QAD + QAD Warehousing	20
QAD Warehousing Manages Tasks	21
Task Prioritization	22
Task Directed	23
Task Concepts	24
QAD Warehousing Optimizes Space	25
QAD Warehousing - Labor Productivity	26
QAD Setup	27
QAD Warehousing Main Concepts	28
Set Up a Site and Warehouse	29
Set Up Your Environment	30
Exercise - Set up Inventory Detail Inquiry	31

Set Up Areas	32
Exercise - What Areas are Set Up in the Warehouse?	33
An Area Can Have Multiple Zones	34
Zone Example	35
Exercise - Which Zones are Set Up in the Warehouse?	36
WLGs Defined by Work Practices and Printers	37
Exercise - Which Work Locations are Set Up?	38
Warehouse Locations - Different from QAD Locations	39
Location Examples	40
Locations are Site Specific	41
Locations Belong to a Zone and WLG	42
Exercise - Location Capacity	43
Main Concepts - Process Flow Setup	44
Internal Routing (Product Flows)	45
Example - Map the Internal Routings?	46
Example - Map the Internal Routings -Answer	47
Transaction Types	48
Setting Up Warehouse Specific Tasks	49
Exercise - Which Tasks are Setup for Warehouse 01?	50
Which Routings Do You Use and When?	51
What are the Transaction Types Associated to the IRs?	52
What are the Transaction Types with the IR - Answer	53
Define Selection and Drop Rules	54
Example - Which Algorithms are Assigned to Flows?	55
Example - Which Algorithms are Assigned - Answer	56
What are the General Receiving Put-Away Rules	57
Dependencies that Help Set Up the Warehouse	58
Enable QAD Warehousing	59
Many Control Features are Managed in a Warehouse	60
Control Scan Options	61
Traditional Warehouse Tasks	62
Control Scan Parameters	63
Defaults Can Be Altered	64
Exercise Aid	65
Exercise - Set Up Warehouses	66
Setting Up Areas	68
Exercise - Set Up Areas	69
Setting Up Zones	70
Exercise - Set Up Zones	71
Set Up Work Sections	73
Exercise - Define Work Sections	74
Set Up Locations	75
Location - Caution	76

Set Up Locations - Warehouse Location Maintenance	77
Manage Location Capacities	78
Manage Location Capacities (Continued)	79
Location - Alert	80
Setting Up Many Same Type Locations	81
Setting Up Many of the Same Type of Location (Continued)	82
Setting Up Many of the Same Type of Location (Continued)	83
Locations Setup - Implementation Alert	84
Exercise - Set Up Locations	86
QMI Units of Measure	88
Know Your Units of Measure	89
Items Currently Assigned to a Site	90
Other Item Characteristics	91
User Setup	92
Implementation Consideration - Define User Parameters	93
Assign the User to a Work Location Group	94
Assign Tasks to Users	95
Exercise - What Task Types are Available to QMI?	96
Traditional Warehouse Tasks	97
Bonus Question	98
Bonus Question	99
Exercise - Enable Users	100
Implementation Consideration	101
Verbosity Reporting is a Troubleshooting Tool	102
Set Verbosity level to Zero to Go Live	103
Simulation - What is Available	104
Example: Simulate Put-Away	105
Example: Simulate Receipt	106
Example: Review Simulation Results	107
Example: Review Verbosity Report	108
Example: What About the Extra Pallet?	109
Implementation Hint	110
Bonus Coverage: LPN Creations	111
Bonus Coverage: LPN Creations (continued)	112
Exercise - Set Up a License Plate Number	113
QAD Warehousing - Key Learning Points	114
Questions	115
Answers	116
Notes	117

Chapter 2 Receiving 119

Overview	120
QAD Warehousing Receiving Objectives	121

Functional Fit - What Warehousing Does Not Do	122
Functional Fit Continued	123
Receipt Types	124
QAD Warehousing Main Concepts	125
Exercise - Receive - Navigate	126
Exercise - Receive - Navigate (Continued)	127
Exercise - Receive - Navigate (Continued)	128
Exercise - Receive - Navigate (Continued)	129
Exercise - Receive - Navigate (Continued)	130
Exercise - Receive - Navigate (Continued)	131
Implementation Consideration	132
Item Configuration	133
Item Master Considerations	134
Item Configuration- Step 1	135
Item Configuration- Step 2	136
Item Configuration- Step 3	137
Exercise - Item Setup	138
Exercise - Item Setup (Continued)	139
Exercise - Item Setup (Continued)	140
Implementation Consideration	141
Create New UM Groups	142
UM Groups Help During Implementation	143
Assign New UM Group to Item	144
Run UM Conversion Generation	145
Exercise- Add a New UM Group	146
Exercise- Add a New UM Group (Continued)	147
Exercise - Add More Items and Create UM Groups	148
Define Inventory Flow Paths	150
Define Receiving and Storage Areas and Zones	151
Define Routes	152
Auto, Manual, or Timed Processing	153
Exercise - Set up an Internal Routing	154
Exercise - Which Routings Do You Use and When	155
Exercise - Which Routings Do You Use and When (Continued)	156
Exercise - Which Routings Do You Use and When (Continued)	157
Exercise - Set up an Internal Routing Assignment	158
Algorithms (Rules)	159
Algorithms - Define Rules	160
Algorithms- Rule Categories are Available for Put-Away	161
Algorithms- Rule Categories are Available for Put-Away (Continued)	162
Implementation Consideration - Use Auto-Directed Put Away	163
Example - Receive Two Pallets to Locations with Existing Inventory	164
Example - Receive Two Pallets (Continued)	165

Example - Allow Mixed Item Storage	168
Put-Away Rules	169
Exercise - Define Put-Away Rules	170
Exercise - Receive Items	171
Bonus Coverage: Three-Step Sequence	172
Bonus Coverage: Location Stage In/Stage Out	174
Bonus Coverage - Stage In/Stage Out	175
Implementation Consideration - Not all Locations are Created Equal	176
Locations Have Many Attributes	177
Popularity Code	178
Location Popularity	179
Example - Assign Location Popularity	180
Example - Assign Location Popularity	181
Example - Change the Receipt Put-Away Rules	182
Example - Storage by Popularity	183
Example- Receipt One	184
Example - Receipt Two	185
Example - Receipt Three	186
Location Popularity Ranking and Put Away Selection	187
Bonus: Cross-Docking	188
Cross-Docking - Cross-Dock Setup	189
Cross-Docking: Cross-Dock Setup (continued)	190
Cross-Docking: Cross-Dock Setup (Continued)	191
Exercise - Cross-Docking	192
Key Learning Points	195
Questions	196
Answers	197
Notes	198
Chapter 3 Replenishment.....	199
Overview	200
Objectives	201
Functional Fit: What We Don't Do So Well	202
Optimize Space and Material Handling	203
Reserve Storage and Forward Pick is a Best Practice	204
Replenishment is Used for Restocking Automated Equipment	205
Auto-Replenish Flags Set in Two Places	206
Overpick Replenishment	207
Dependencies that Help with Replenishment Setup	208
Which Locations Get Replenished	209
Which Locations Get Replenished - IR Maintenance	210
Which Locations Get Replenished - IR Assignment Maintenance ...	211
Which Locations Get Replenished - Warehouse Location Maintenance	212

Where Does Replenishment Inventory Originate?	213
How is Replenishment Inventory Managed?	214
Which Items and Capacities Get Replenished?	215
Replenish Random Locations in a Zone	216
Example	217
Manual Replenishment	218
Replenishment Request Triggers a Product Move	219
Replenishment Via the RF	220
Replenishment Complete	221
Implementation Consideration	222
Example - Reducing Replenishment Product Touches	223
Example - Consider Filling Forward Pick Locations	224
Key Learning Points	225
Exercises - Set Up and Execute Replenishment	226
Exercise - Confirm Forward Pick Location Setup	227
Exercise - Set Up Replenishment Routing	228
Exercise - Assign a Transaction to the Replenishment Routing	229
Exercise - Define Zones for Replenishment Inventory	230
Exercise - Define Replenishment Picking Rules	231
Exercise - Set Up Replenishment Parameters for Forward Pick Locations	232
Exercise - Generate Replenishment Tasks	233
Bonus Coverage: Line Slide Replenishment	235
Line Slide Replenishment (Continued)	236
Line Slide Replenishment (Continued)	237
Questions	238
Answers	239
Notes	240

Chapter 4 Picking 241

Overview	242
Objectives	243
Functional Fit: Picking	244
QAD Inventory Control Versus QAD Warehousing	245
Discrete, Bulk, and Batch	246
Can You Split Unit Loads?	247
Can You Overpick?	248
Picking Levels Define Pick Zones	249
Discrete Picking	250
Discrete Picking - One Order at a Time	251
Set Up Storage and Picking Area	252
Set Up Different Zones by Material Handling Type	253
Set Up Locations in Each Zone	254
Define Which Zones are Available for Picking	255

Assign Picking Levels to Zones	256
Define Product Flow Path for Picks	257
Assign Flow Paths to Picking Transactions	258
Define Product Movement Rules to Use for Transaction	259
Example - Set Up and Execute a Discrete Pick	260
Example - Discrete Picking	261
Example - Discrete Picking, Zones	262
Example - Discrete Picking, Release Order	263
Example - Discrete Picking, Review Pick Activity	264
Bonus Coverage	265
Bonus Coverage - Pick Strategies	266
Example - Discrete Picking, User Picking Pallet	267
Example - Discrete Picking, Test=Success	268
Discrete Picking Learning Points	269
Example - Reduce Wasted Time Driving and Dropping	270
Example - Reduce Travel	271
Example - Test=Success	272
Batch Picking	273
Batch Picking Defined	274
Batch Picking Process	275
Example - Batch Picking Setup and Execution	276
Example 1- Assign Users to a WLG	277
Example 2- Specify Users as a Location	278
Example 3 - Set Batch Picking Control Parameters	279
Example 4 - Set Up and Release Multiple Sales Orders	292
Example 5 - Select Order Using RF	293
Example 5A - Select Order Using RF	295
Benefits of Batch Picking	296
Batch Pick Function Keys	297
Bulk Picking	298
Bulk Picking Defined	299
Bulk Picking Control	300
Bulk Pick Setup	301
Bulk Pick Order Selection Inquiry	302
Wave Planning	303
Bulk and Wave - What is the Difference?	304
Bonus Coverage - Engine Processing and 3-Step Routing	305
Example - Engine Processing	306
Engine Processing - Three-Step Routing Setup	307
Modify the Pick Routing	308
Enable User A to Process a Transfer Task	309
Release and Pick an Order	310
Validate an Order in Packaging	311

Activate Engine Processing	312
Process the Move from Packaging to Shipping	313
Key Learning Points	314
Exercises - Picking Setup and Execution	315
Exercise - Set Up Warehouse, Area, and Zone	316
Exercise - Set Up Pick Routing	317
Exercise - Assign Pick Routing	318
Exercise - Set Up Pick Rules	319
Exercise - Set Up Drop Pick Rules	320
Exercise - Set Up Discrete Pick Items	321
Questions	322
Answers	323
Notes	324

Chapter 5 Shipping.....325

Overview	326
Objectives	327
Functional Fit: What We Don't Do So Well	328
Concepts	329
Shipping Configuration	330
Define Shipping and Zone Area	331
Locations Can Have Many Attributes	332
Typical Flow Direct to Shipping	333
When to Use Pick Routing	334
Look for a General Spot in Shipping	335
Any User Performs Manual Moves	336
Truck Shipping	337
Ship Truck	338
Set Up Ship Truck	339
QAD Warehousing Shipping - RF Ship Truck	340
Example - Ship Truck	343
Example - Ship Truck (RF 3.5)	344
Optional - Container Move	345
Container Move	346
Container Move Configuration	347
Set Up at Least One Truck Location	348
Define a Product Flow to Move to Truck Locations	349
Link a Transaction Path to the Product Flow Type	350
Look for a General Stage/Truck Location	351
Example - Container Move	352
Example - Container Move (RF 3.4)	353
Optional - Trucks as Temporary Storage	354
Truck Area, Zone, and Location Configuration	355

Set Up a Truck Area	356
Set Up a Truck Zone	357
Set Up at Truck Locations	358
Define Product Flow	359
Link a Transaction Type to the Product Flow Path	360
Look for a General Truck Location	361
Example - Move Container/Load to a Truck	362
Example - Use Trucks as Locations (RF 3.4)	363
Control Truck Load Building Sequence	365
Optional - Containerization	366
Containerization	367
QAD Warehousing Shipping - Containerization	368
Viewer Discretion Advised	369
Containerization Setup	370
QAD Warehousing Shipping - Containerization (RF 3.3)	371
View Containerization Progress Via RF 3.3	372
Remove Boxes from a Container Via RF 3.3	373
Remove Boxes Between Containers Via RF 3.3	374
Monitor the Order Status Via RF 3.3	375
Example - Pre-Shipper/Shipper Inquiry	376
Example - Pre-Shipper/Shipper Inquiry	377
Example - RF 3.3 Container Build	379
Bonus Coverage: Assign Carriers to Shipping Lanes	385
Parcel Manifest	386
Parcel Manifest Setup and Execute	387
Set Up Print Paperwork Controls	388
Assign a Form Printer to Shipping	389
Optionally Set Up a TMS Messaging Interface	390
Print Pre-Shipper/Shipper	391
Key Learning Points	392
Exercises - Shipping Setup and Execution	393
Warehouse, Area, and Zone Setup	394
Exercise - Ship Location Setup	395
Exercise - Review Pick Routing and Drop Rules	396
Exercise - Ship the Order	397
Exercise - Move Load to an Alternate Shipping Location/Lane	398
Exercise- Move Load to an Alternate Shipping Location/Lane (cont'd)	399
Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)	400
Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)	401
Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)	403
Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)	404
Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)	405
Exercise - Move Load to an Alternate Shipping Location/Lane (cont'd)	406

Questions	407
Answers	408
Notes	409

Chapter 6 Inspection 411

Objectives	412
What We Do Not Do Well	413
Inspection Product Flow	414
Inspection Flags Set in Multiple Places	415
Dependencies	416
Define Inventory Status - Optional	417
Activate Inspection Control	418
Set Up Inspection and QA Hold Area, Zone, and Location	419
Define Inventory Status Code Changes	420
New Product Flows = New Routings	421
Determine Product Flow through Inspection	422
Confirm Check Inspection to Trigger QA Rules	423
A Receipt Triggers Various Product Moves	424
New Rules Required for New Routings	425
Define Item-Warehouse Level Inspection Parameters	426
Example - Receive Item with Inspection Requirement	427
Example - Confirm Inspection Results	428
Example - Add Inspection Comments/Change Quantity	430
Example - Add Inspection Comments/Change Quantity (Cont'd) ...	431
Example - Success	432
Bonus Coverage: Example - Inspect Partial Pallet	433
Bonus Coverage - Example Inspect Partial Pallet (Continued)	434
Bonus Coverage: Example - Inspect Partial Pallet (Continued)	435
Bonus Coverage - Example - Success	436
Bonus Coverage: Define Inspection Parameters by Supplier	437
Bonus Coverage: Inspection Fail Processing	438
Bonus Coverage: Move Product to QA Hold	439
Key Learning Points	441
Exercises - Inspection Setup and Execution	442
Exercise - Set up an Area, Zone, and Location	443
Exercise - Set Up Inspection Product Flows and Rules	444
Exercise - Create Routings	445
Exercise - Assign Routing	447
Exercise - Use Put-Away Rules	448
Exercise - Define Inspection Parameters	450
Exercise - Activate Inspection	451
Exercise - Receive and Inspect an Item	452
Exercise - Receive and Inspect a Split Load	453

Questions	455
Answers	456
Notes	457
Chapter 7 Labor Management	459
Overview	460
Objectives	461
Functional Fit: Labor Management	462
What is Labor Management (continued)	463
What is Labor Management? (Continued)	464
Implementation Planning	465
Labor Management Control	466
Implementation Planning - User Parameters	467
User Setup: Define Work Sections	468
Assign the User to a Work Location Group	469
Traditional Warehouse Tasks	470
Assign Task Types to Users	471
Example - Set Up a New User QMI	472
Exercise: Assign User QMI to All Location Groups	473
Exercise: Assign User QMI to All Work Location Groups	474
Example - Change Task Priority and Assignment	475
Example - Change Task Priorities	476
Example - Change Task Assignments	477
Question	478
Steps: Setting Up Labor Tracking	479
Assign Tasks to Routing	480
Define Tasks Best Suited for the User	481
Executing Labor Tracking	482
Executing Labor Tracking (continued)	483
Executing Labor Tracking (continued)	484
Executing Labor Tracking (continued)	485
Executing Labor Tracking (continued)	486
Labor Reporting	487
Key Learning Points	488
Questions	489
Answers	490
Notes	491
Chapter 8 Cycle Count	493
Overview	494
Objectives	495
Functional Fit: What We Don't Do	496

Types of Cycle Count	497
Cycle Count Configuration	498
Setting Up Cycle Counting	499
Item Level CC Parameters	500
Warehouse Level Parameters	501
Zone Level Parameters	502
Work Location Group Parameters	503
Cycle Count Task Assignment	504
Cycle Count Processing	505
Cycle Count Execution	506
Cycle Count Simulation or Creation	507
Cycle Count Tasks	508
Cycle Count Execution - Done on RF	509
Non-RF Cycle Count Activity	510
Avoid Mixing	511
Bonus Coverage - Opportunity Counts	512
Cycle Count White Paper	513
Bonus Coverage - Opportunity Count Configuration	514
Bonus Coverage - Opportunity Counts	515
Bonus Coverage - Opportunity Count, Set OPC Threshold	516
Bonus Coverage - Confirm Opportunity Counts by Zone	517
Bonus Coverage - Opportunity Counts, Define OPC Frequency	518
Bonus Coverage - Opportunity Counts, Assign Cycle Count Tasks ..	519
Bonus Coverage - Example	520
Bonus Coverage - Example Test = Success	521
Bonus Coverage - Physical Inventory Process	522
Implementation Consideration- Using Location Audit	523
Current Inventory Positions	524
Use RF Location Audit to Change Inventory Positions	525
Use RF Location Audit to Change Inventory Positions (Continued) ..	526
Key Learning Points	527
Questions	528
Answers	529
Notes	530

Chapter 9 Printing.....531

Overview	532
QAD Warehouse Printing	533
Print Setup	534
Warehouse Control Print Options	535
Warehouse Maintenance Print Frames	536
Print Templates	537
Internal Routing Maintenance Print Options	538

Work Location Group Maintenance Print Frames	539
User Work Location Group Maintenance	540
Multi-Level Item Maintenance	541
Print Request Maintenance	542
Objectives	543
Example - Warehouse Setup	544
Exercise - IR Setup	545
Questions	546
Answers	547
Notes	548

Change Summary

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

Date/Version	Description	Reference
March 2013/2013 EE	Rebranded for QAD 2013 EE	---
March 2012/2012.1 EE	Rebranded for QAD 2012.1 EE	---
September 2012/2012.1 EE	New exercises and slides revised for Receipt chapter.	page 119
	New and revised slides for Replenish chapter,	page 199
	New and revised slides for Picking chapter.	page 241
	New and revised slides for Shipping chapter.	page 325
	New and revised slides for Labor chapter.	page 459
	New and revised slides for Introduction chapter.	page 459
		page 13

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`.

Record your student ID here:

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 UN = demo, PW = qad

When you select the EE 2012.1.1r01, the system launches the QAD EE software and presents the log in screen.

Note The figure below is an example. You should select the current EE version.

Fig. 0.1
Environment Setup



Logging into QAD Enterprise Edition

Once you launch EE 2012.1.1r01, 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).
- 4 Confirm that your .NET UI environment is 10USACO USA Division.

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 returns you 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

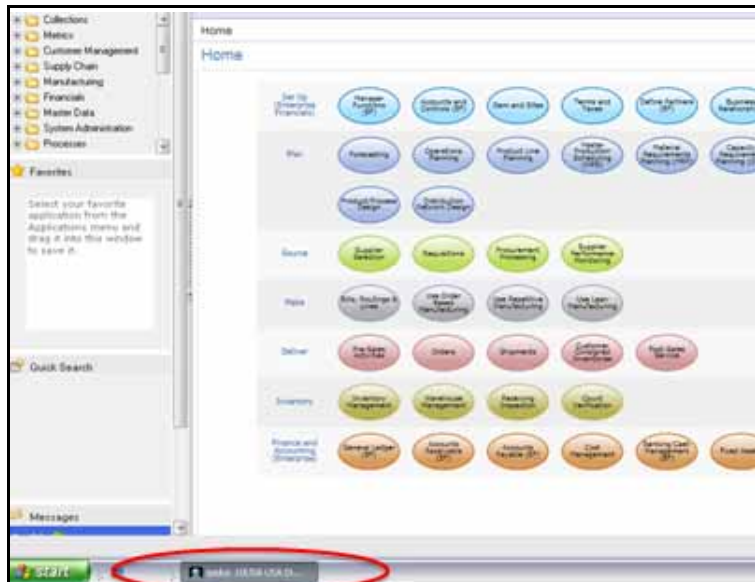
You can start a Unix character session that lets you run the RF version of QAD Warehousing software through the Putty tool.

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



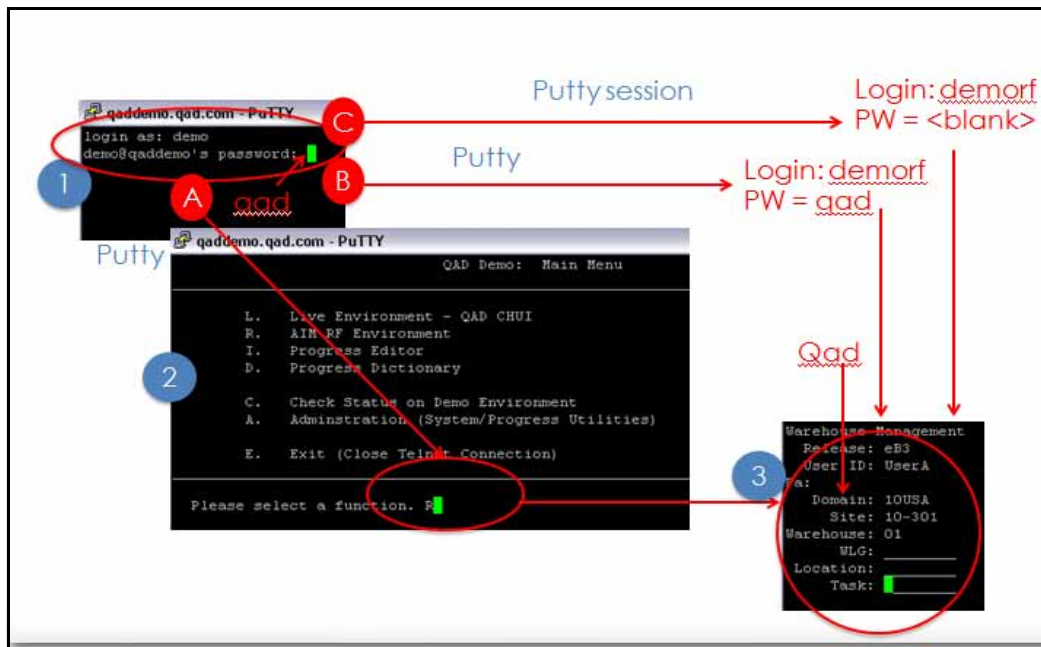
Logging In to Unix Character Session and Starting RF Software

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 Select the RF Putty application.
- 2 When the qaddemo.qad.com putty session starts, log in as demo.
- 3 Enter the password as qad .
The qaddemo Main Menu displays.

- 4 Enter R to start the RF warehousing software.
The RF login frame displays.

- 5 At the RF login frame, enter:

User ID = UserA

Password = qad

Site = 10-301

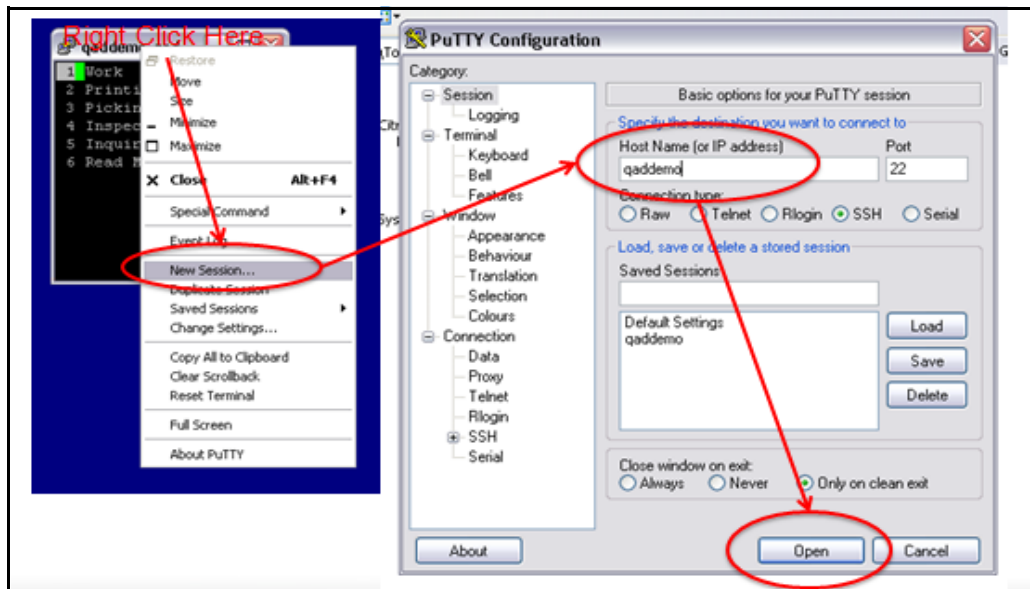
Warehouse = 01

Note Alternatively, you can enter the login User ID = demoRF, Password = qad. This moves you to the third frame of the RF menu.

- 6 Set up QMI on the RF, using the same method:
User ID = qmi
Password = blank
- 7 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

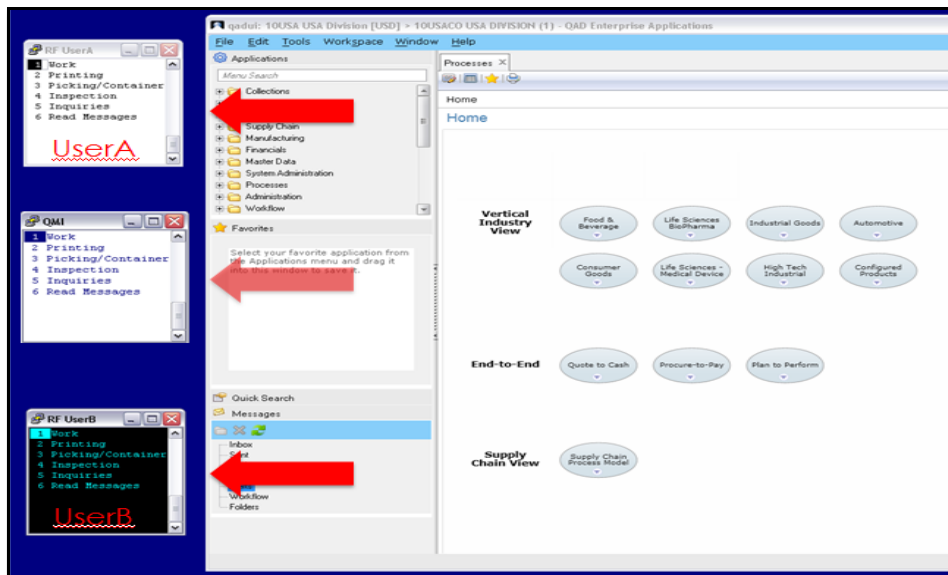


Logging In as UserB

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

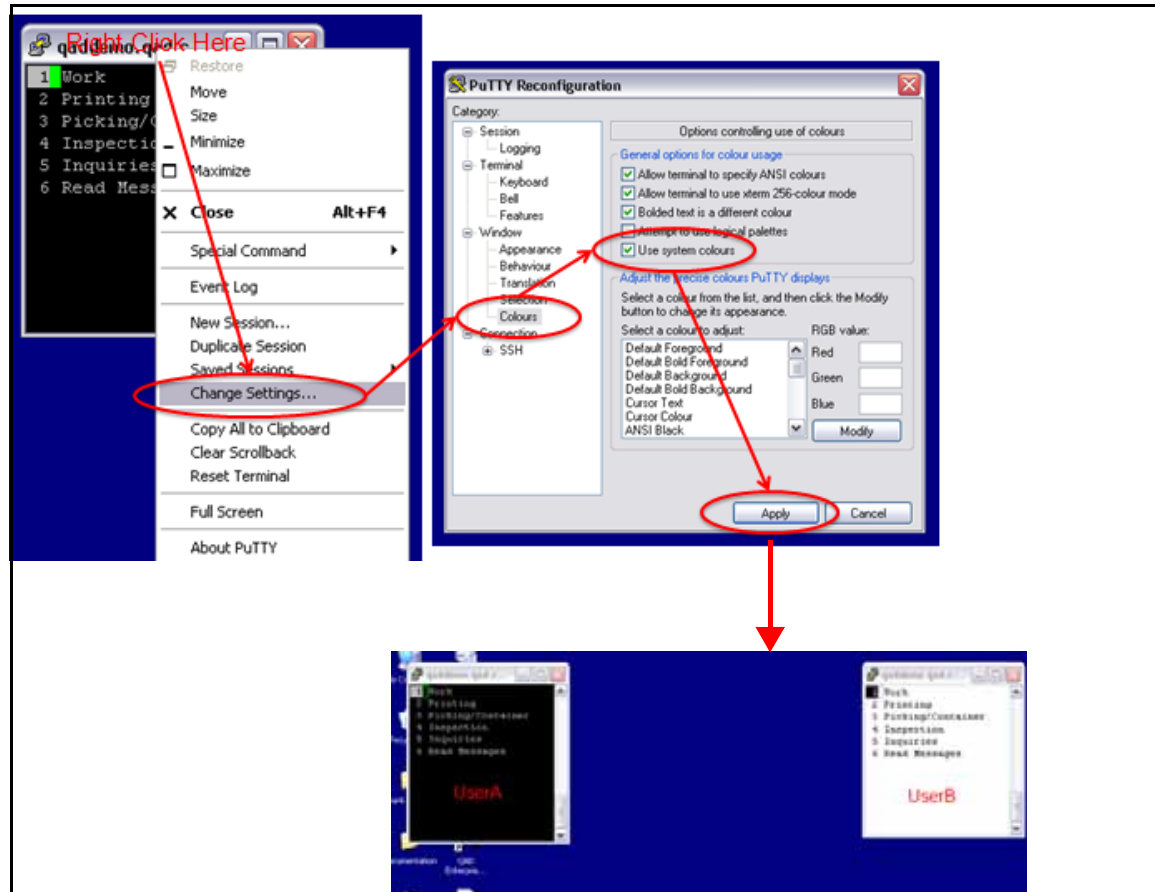


With both UserA and UserB RF sessions setup, you can resize the windows (target 20x10) and align them to fit within the QAD screen. This helps you visualize the RF interactions with QAD Warehousing.

Optionally, you can set up the QMI RF session to demonstrate real-time task assignment and labor management.

Important Putty RF sessions do not reboot from a save snapshot. For a demo, you can retrieve a snapshots from QPC, but you need to set up the RF sessions again.

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

Objectives

QAD Warehousing Introduction

Objectives

- Versions
- Customers
- Functional Fit
- Overview



QAD Versions



QAD Warehousing Introduction

Versions

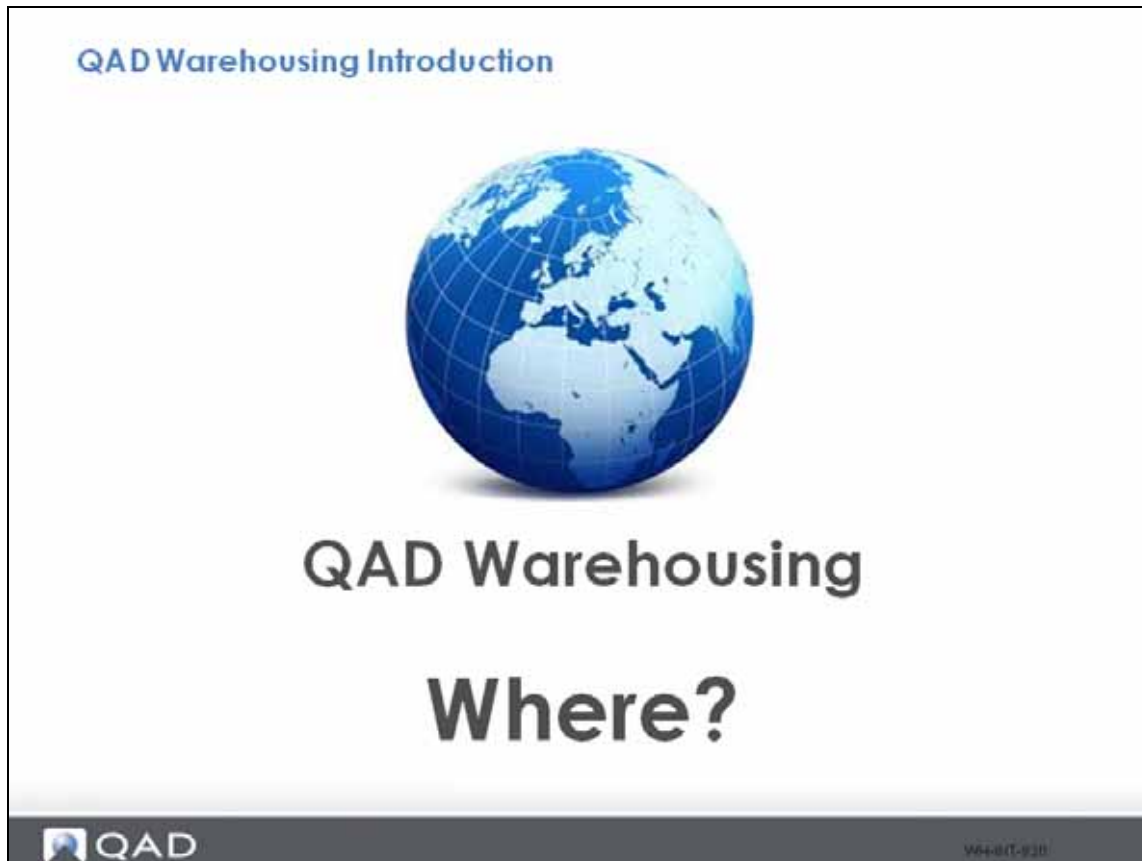
AIM	QAD Warehousing
• SE • 80 Menu • No development	• EE • 4 Menu • All development

 QAD WH-INT-000

QAD Warehousing (formally AIM) for SE uses menu numbers that start with 80.

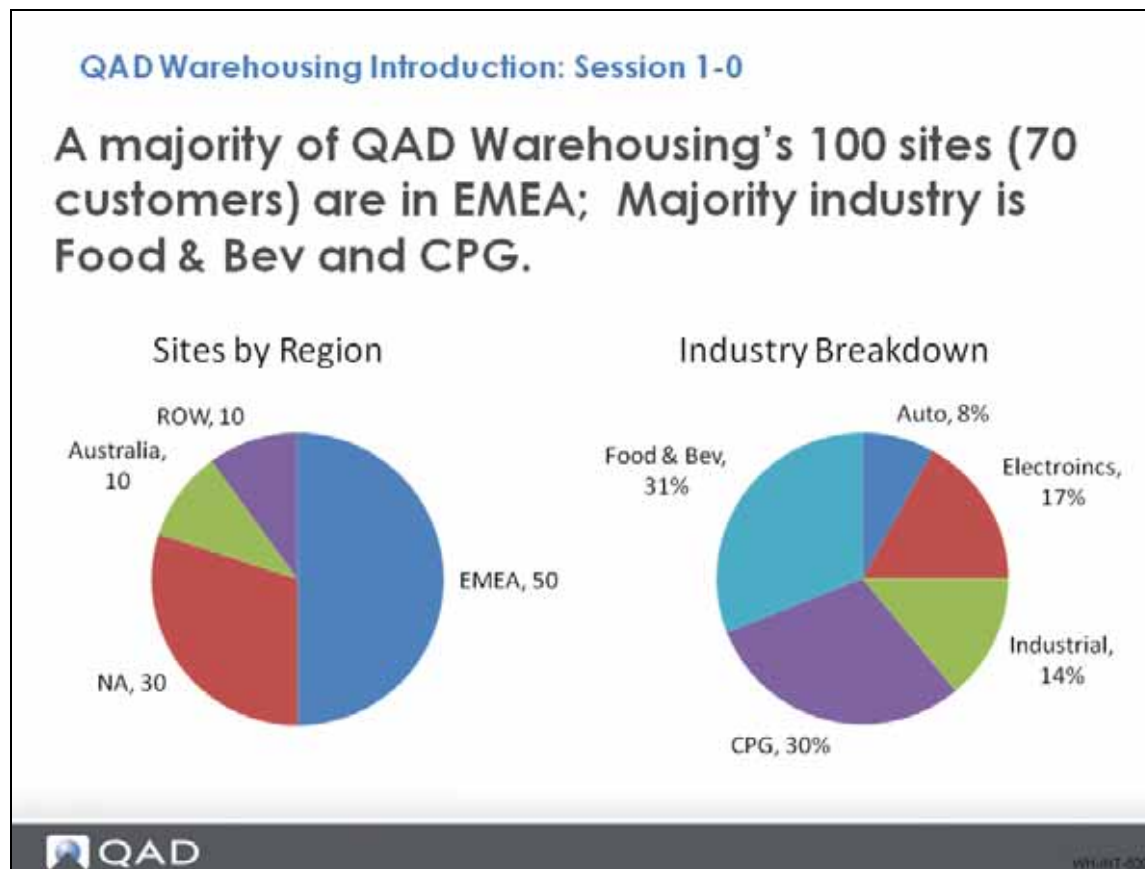
QAD Warehousing for EE is imbedded within QAD EE applications as menu number 4 within the manufacturing area.

QAD- Where?



Where is QAD Warehousing in use throughout industry? Which countries use it the most. Continue on to the next slide to see the answers.

QAD Warehousing- 100 Sites



The biggest users of QAD Warehousing are in the Europe, Middle East, and Africa (EMEA) segment. The majority of use is for warehousing in the food, beverage, and consumer packaged goods (CPG) industries.

Food and beverage manufacturers deal with many different suppliers, distributors and channels in taking their product to market. The QAD Warehousing solution accelerates communication at all levels of the value chain and provides tools to manage demand, promotions and packing and co-packing.

Functional Fit

QAD Warehousing Introduction

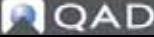
Functional Fit: General

Functionality	Fit	Notes
Mapping of acceptable equipment by zone		Combination of WLG and User setup
Integrated slotting		This is a growing request
Supports UI and RF on PDA		Emerging trend
Integrated delivery confirmation		No DSD capabilities
Visibility maintenance management		
Integrated RFID		No plans

[Legend](#)

 Partial

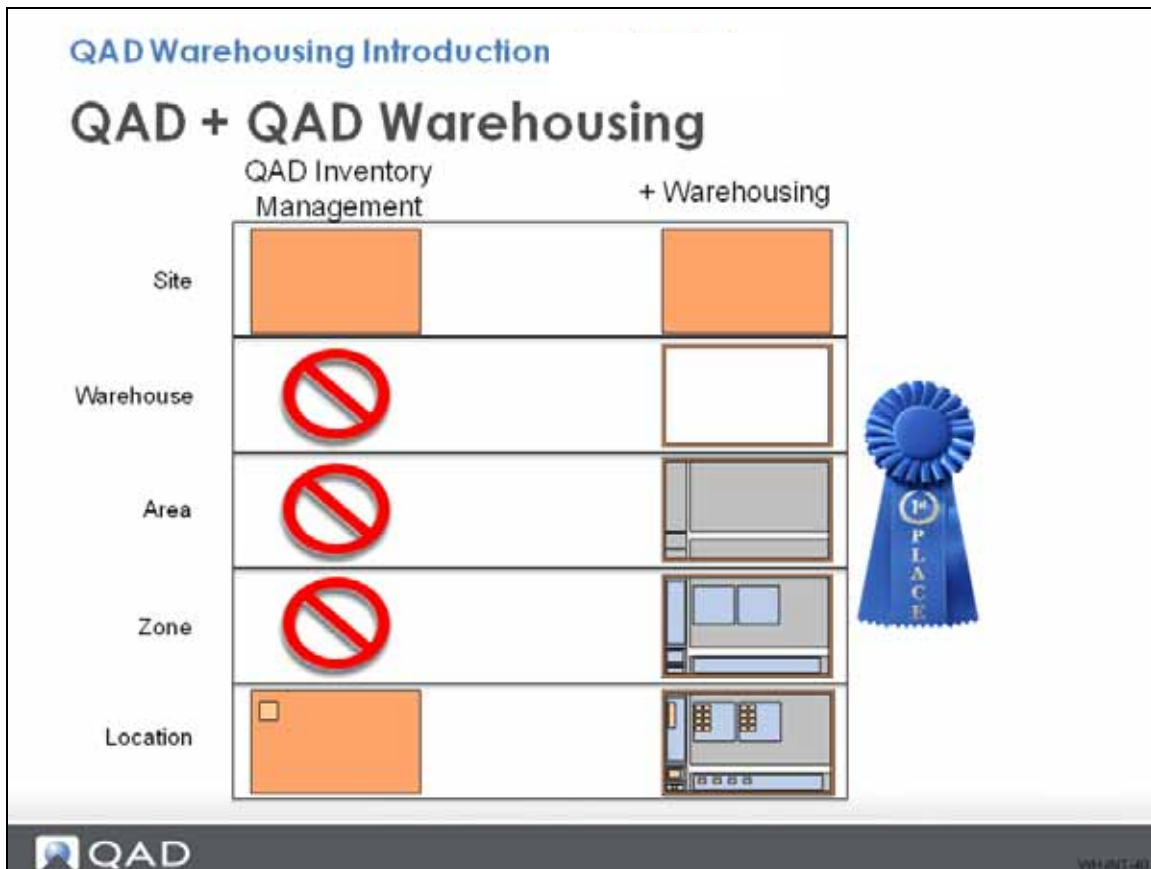
 None

 QAD

WH-INT-1052

The graphic above depicts the functionality that the warehousing industry desires for optimum performance. You can see where QAD Warehousing fits when providing the desired functionality.

QAD + QAD Warehousing



Did You Know

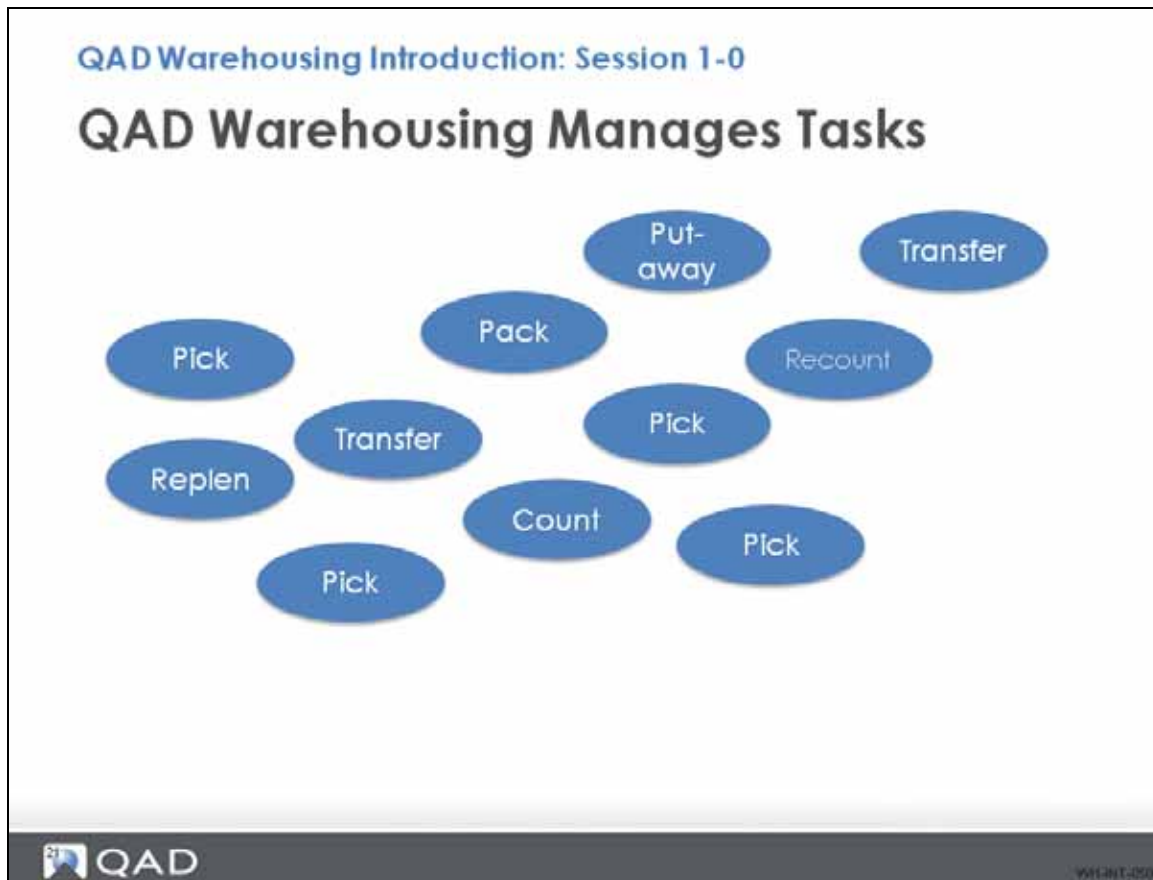
The warehouse is the highest level of specific data in QAD Warehousing.

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

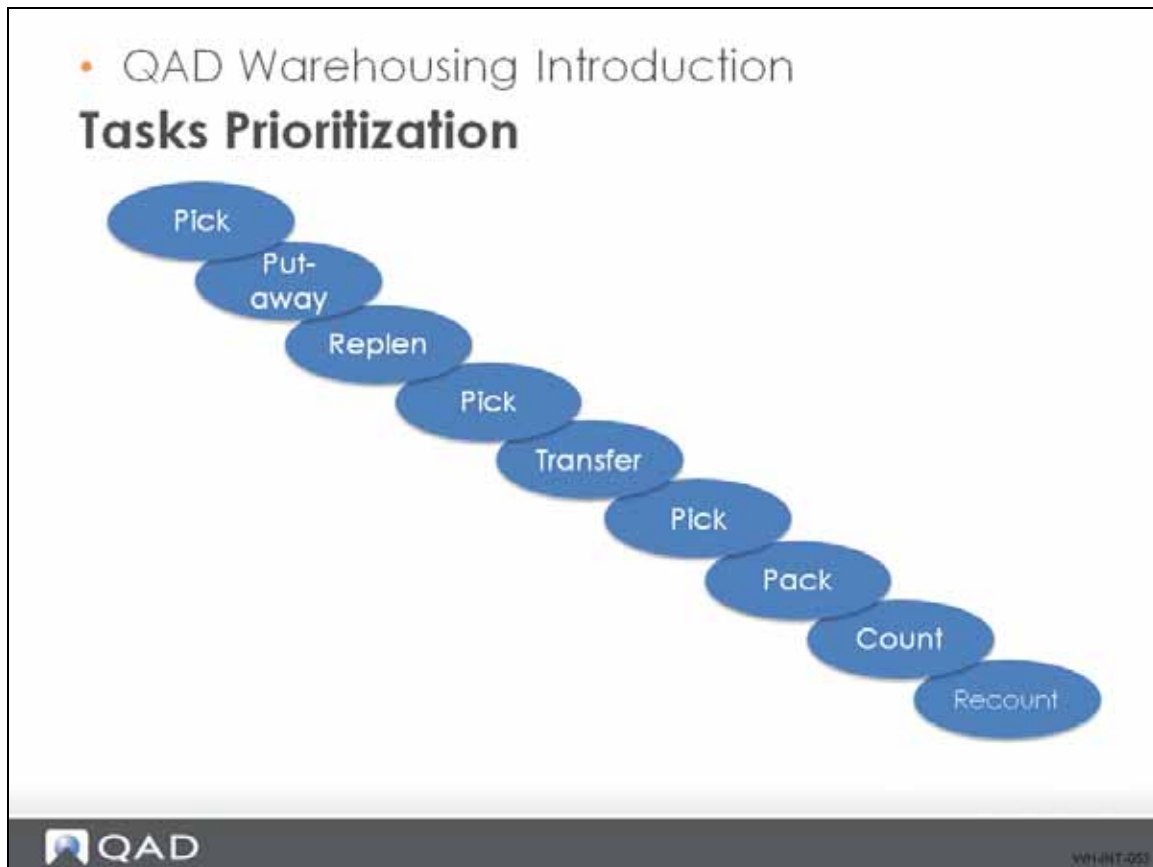


QAD Warehousing is an inventory management system that optimizes operational tasks in the warehouse on a real-time, ongoing basis. At any given time, a typical warehouse can have hundreds of pending tasks, ranging from a load transfer from receiving into storage to a line item pick.

Did You Know

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 can be switched to another user.

Task Prioritization

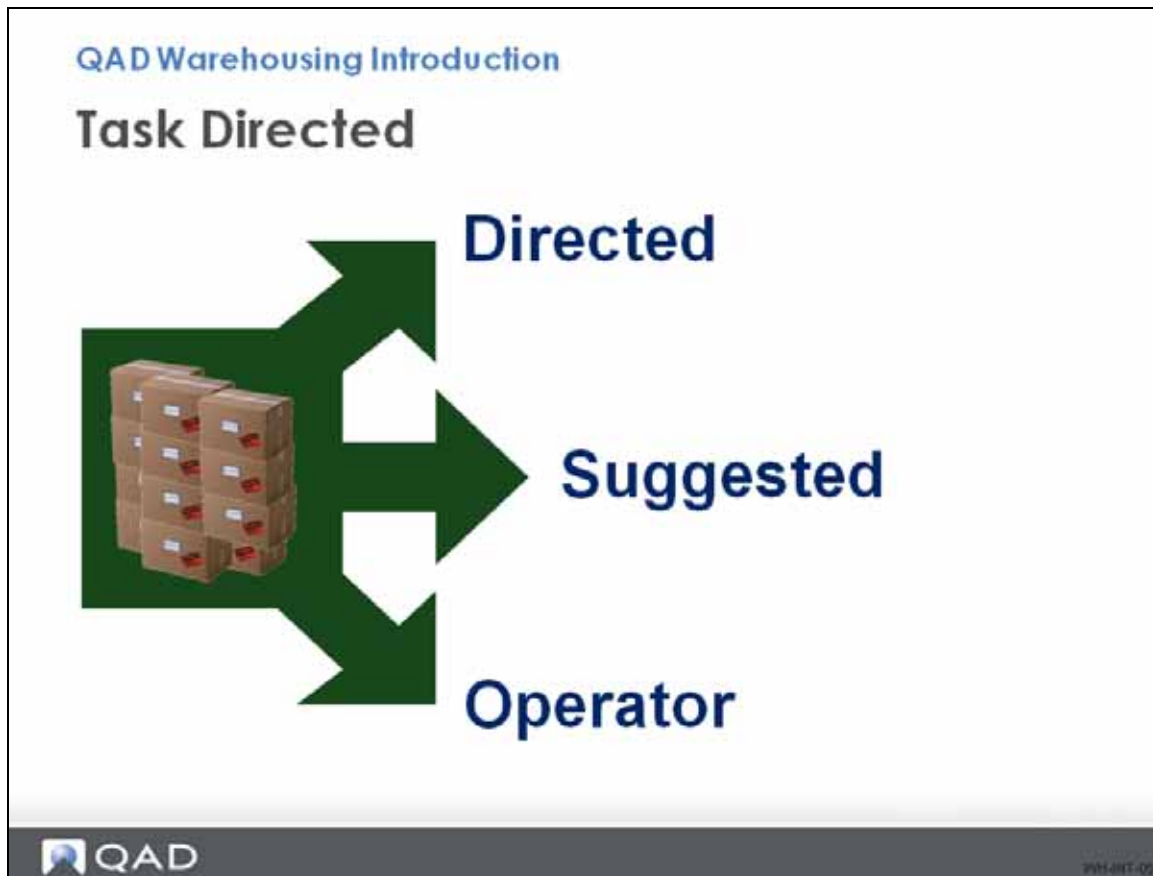


When a task (transaction) is generated, QAD Warehousing looks at multiple variables to determine when the task is executed. For example, the system can determine the best user to assign the task based on proximity or tasks can be assigned based on task age, or how long the task has been in the queue.

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.

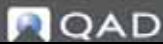
As a general rule, a two-phase operation is a much safer way of ensuring precision in inventory management. Single-phase operations should only be used in special circumstances.

QAD Warehousing Optimizes Space

QAD Warehousing Introduction

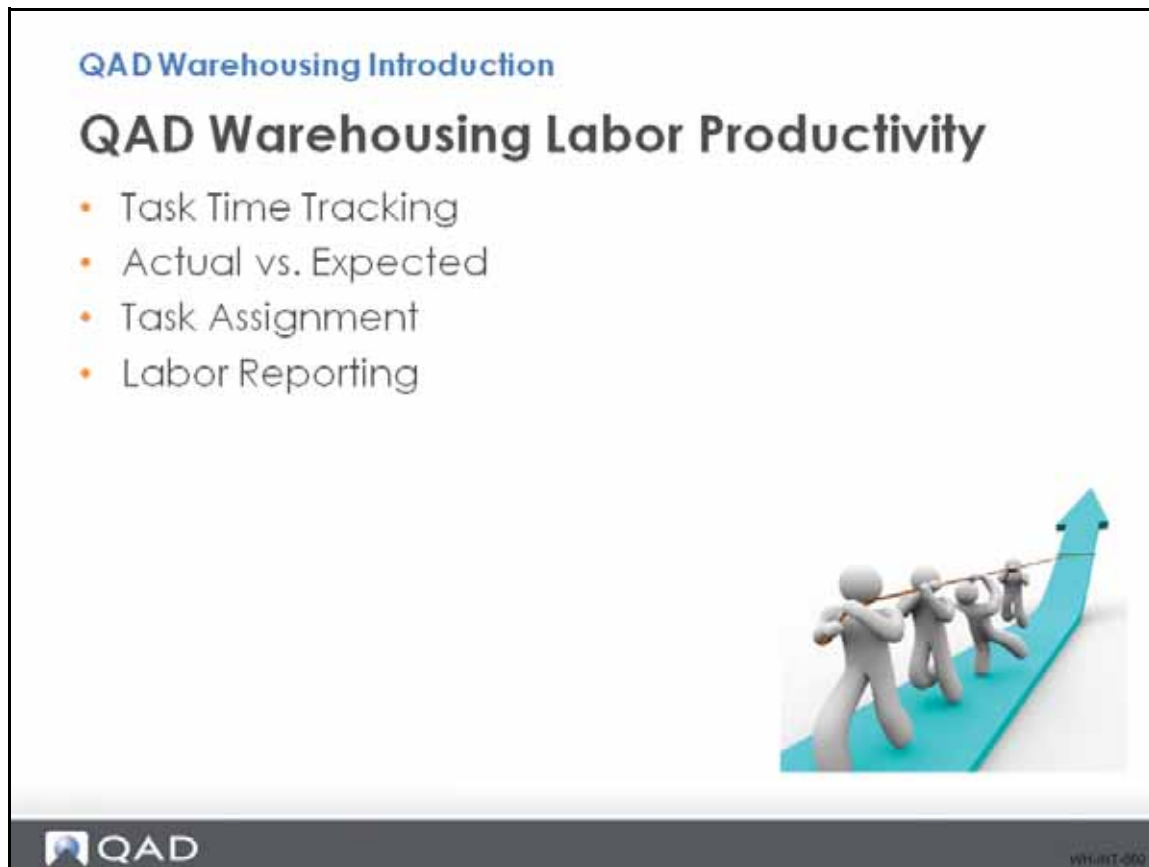
QAD Warehousing Optimizes Space

- Load Tracking
- Directed Activities
- Merging Rules
- Reserve Storage and Forward Pick
- Varied Location Sizes
- Slotting



QAD Warehousing provides several functions that help you optimize space within the warehouse.

QAD Warehousing - Labor Productivity



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

QAD Setup

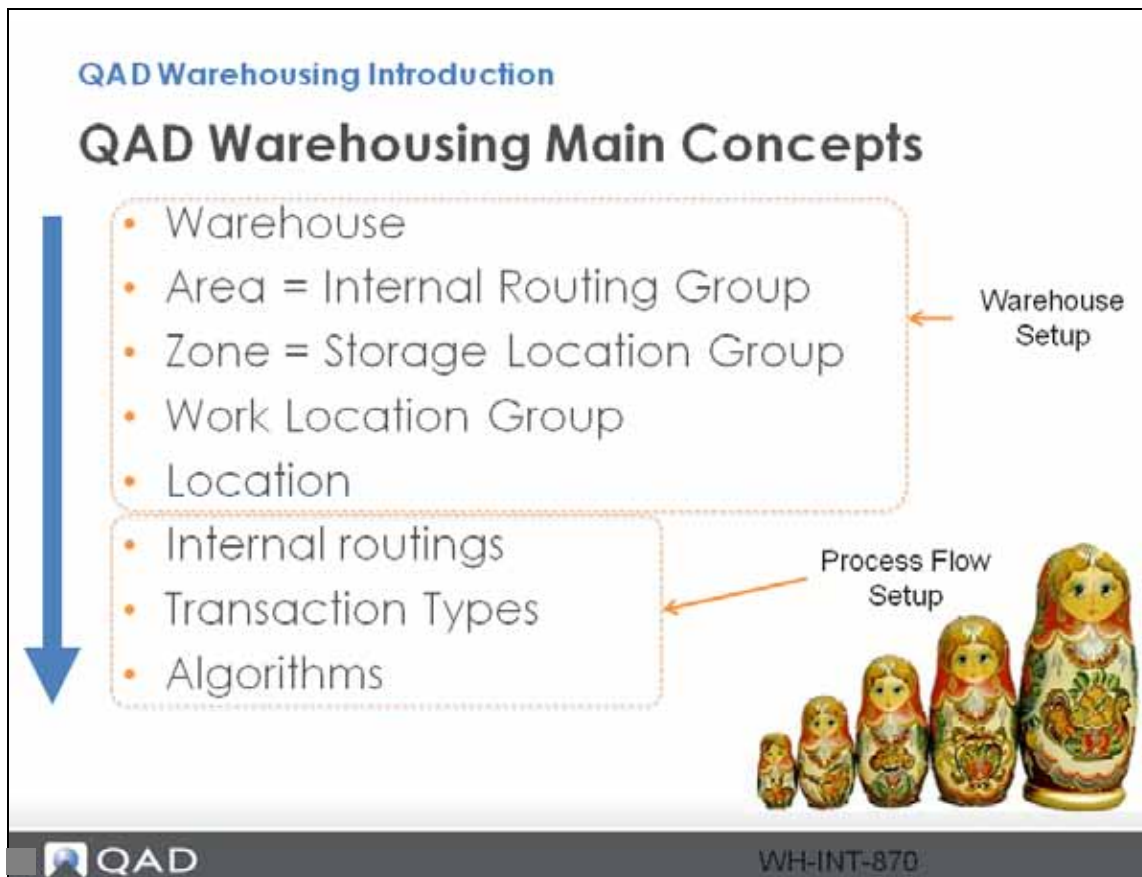


**QAD Warehousing
Setup**

 QAD

VM146T-001

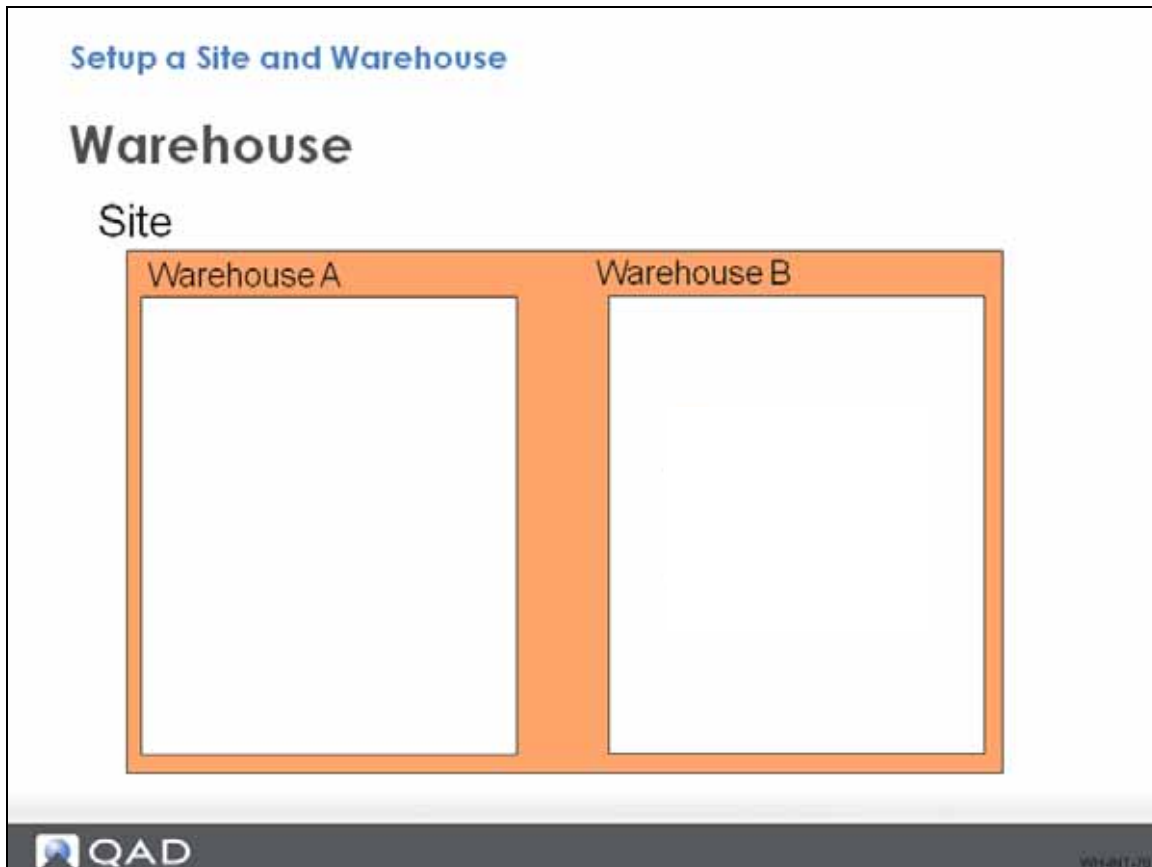
QAD Warehousing Main Concepts



QAD Warehousing main concepts can be broken into the setup of two major areas:

- Warehouse setup: Includes setup of areas, zones, work location groups, and locations.
- Process flow setup: Includes setup of internal routings (pathways), transaction types, and algorithms (rules).

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 Your Environment

Exercise

Setup Your Training Environment

- training.success6.qad.com
 - StudentID = _____
 - PW = qadtrain
 - Organization = classroom training
- Using Warehouse Maintenance Find the following for Site = 10-301, Warehouse = 01
 - [Warehouse] description = _____
 - Reference Sequence ID: = _____
 - Packaging Sequence ID: = _____

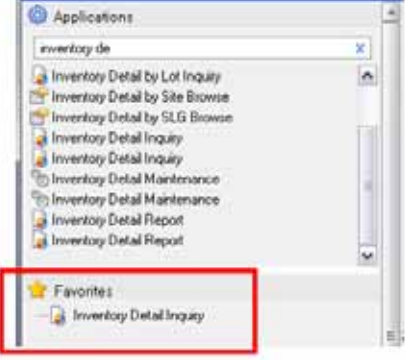


Refer to the Preface of this training guide for information on setting up the training environment. Once you follow the instructions in the Preface and successfully log in to the training environment, start Warehouse Maintenance (4.1.1) and supply the information for the graphic above.

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.

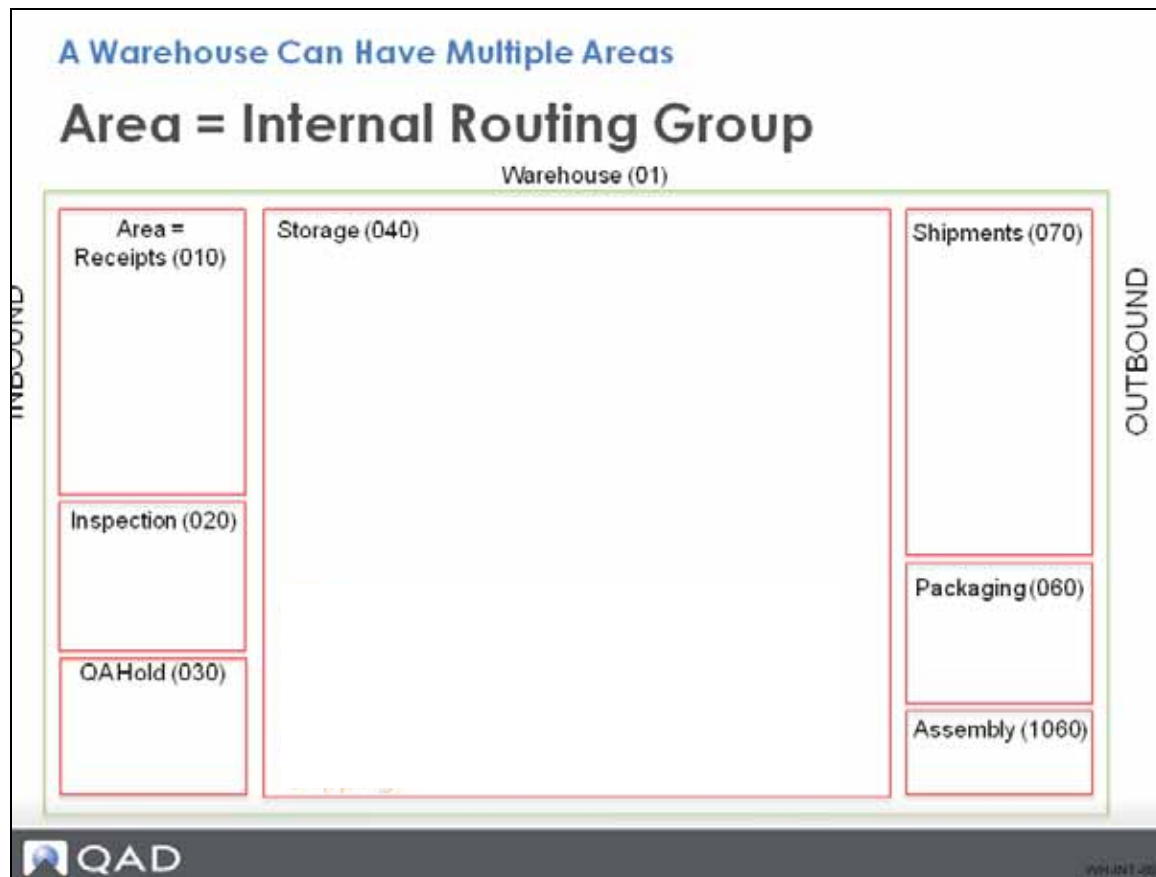
You can practice setting up Inventory Details Inquiry and enter the data in the table above.

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.

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.

Exercise - What Areas are Set Up in the Warehouse?

Exercise

What Areas are setup in the warehouse?

IRG	Description	Functional Status

 QAD

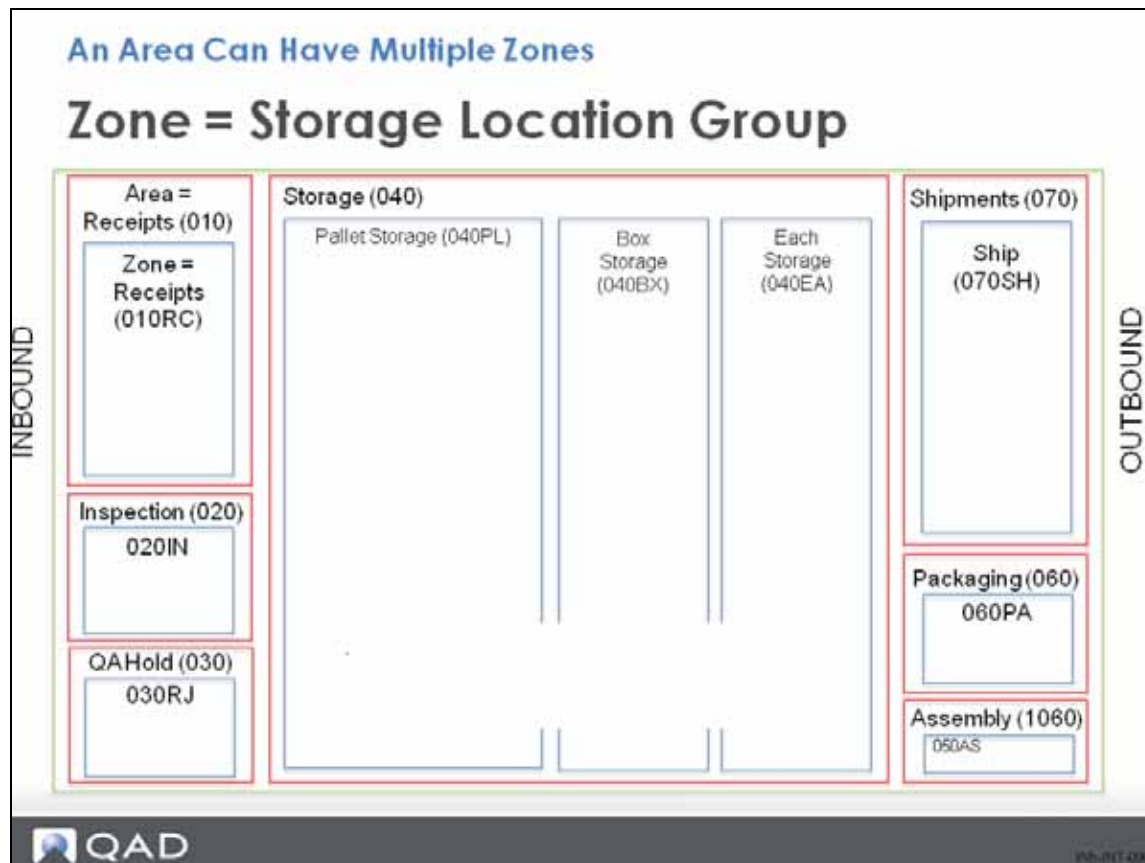
Before configuring Areas, understand the warehouse layout and process flows and document the information. This helps with setup.

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.

An Area Can Have Multiple Zones



Did You Know

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

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.

Exercise - Which Zones are Set Up in the Warehouse?

Exercise

Which Zones are setup in the warehouse?

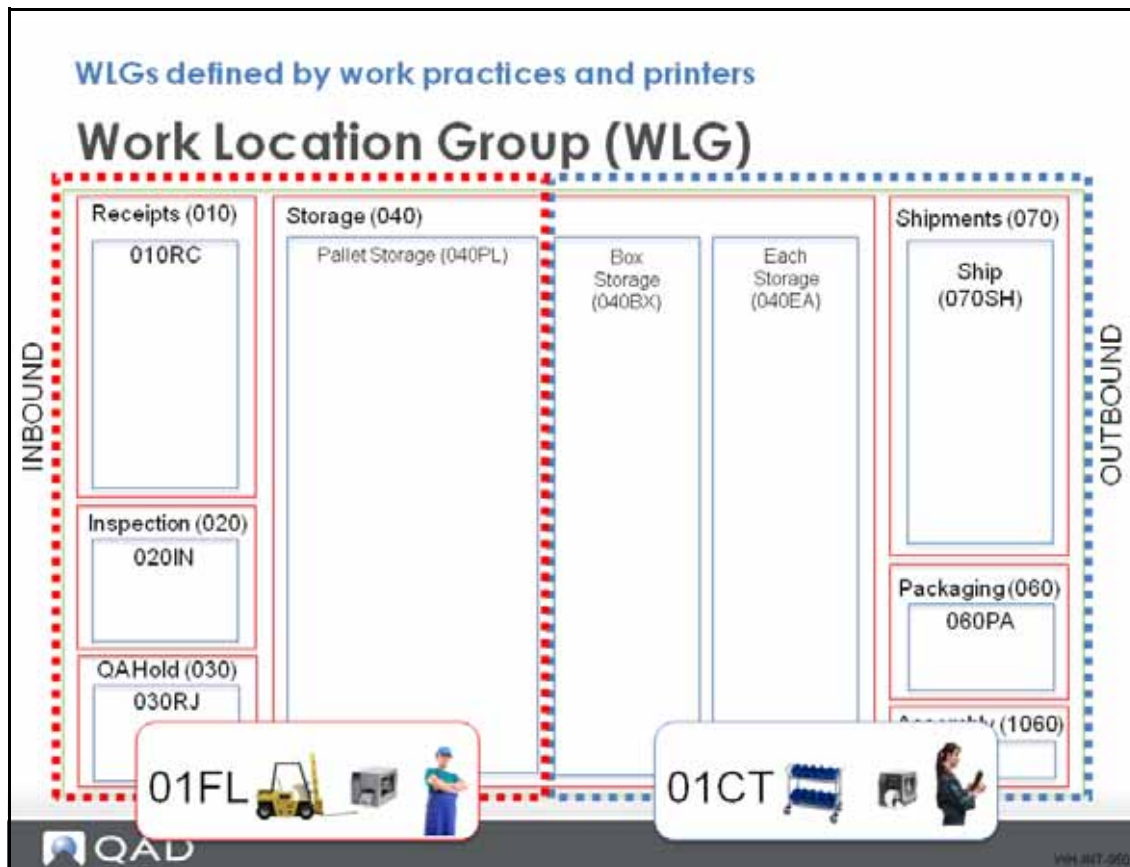
SLG	Description	IRG

 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.

WLGs Defined by Work Practices and Printers



Did You Know

The parameters for a WLG are procedural while a zone is physical.

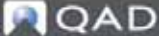
Exercise - Which Work Locations are Set Up?

Exercise

Which Work Locations are setup?

WLG	Description

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

W0101T-500

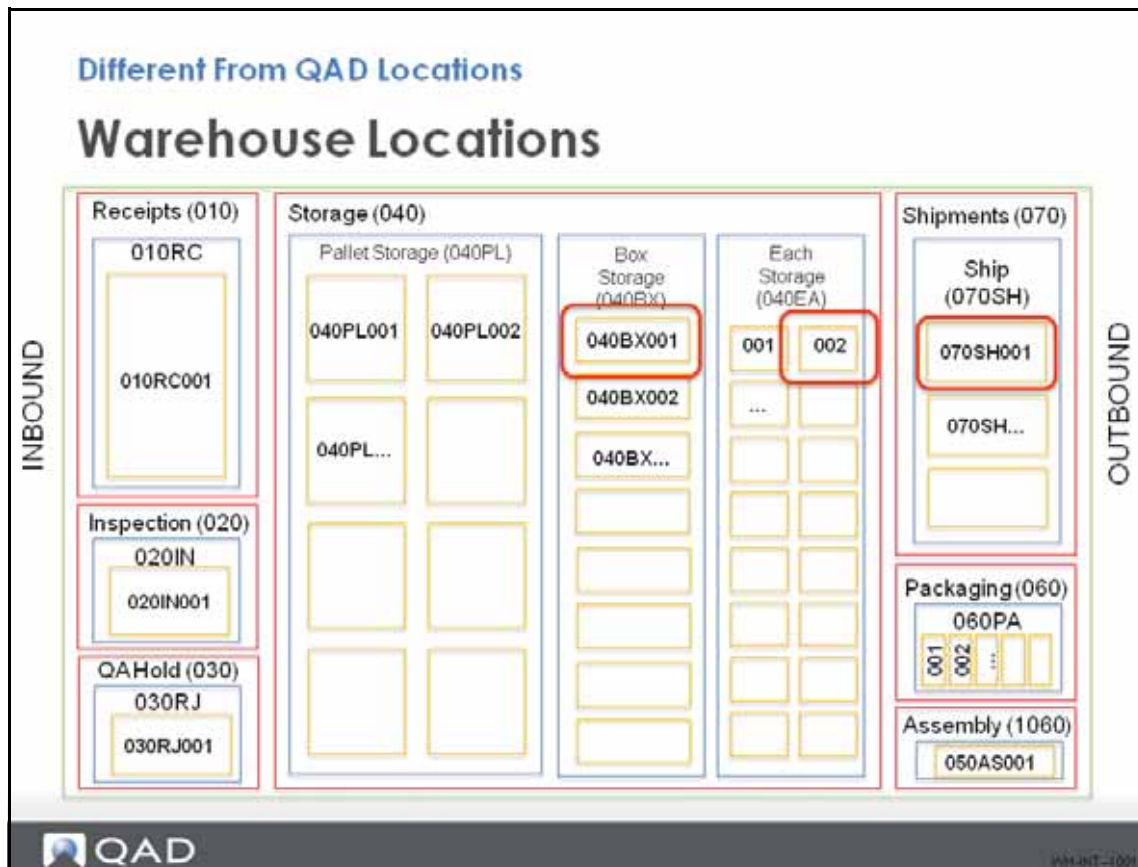
Use Work Location Group Maintenance to determine which work locations are set up in the warehouse.

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

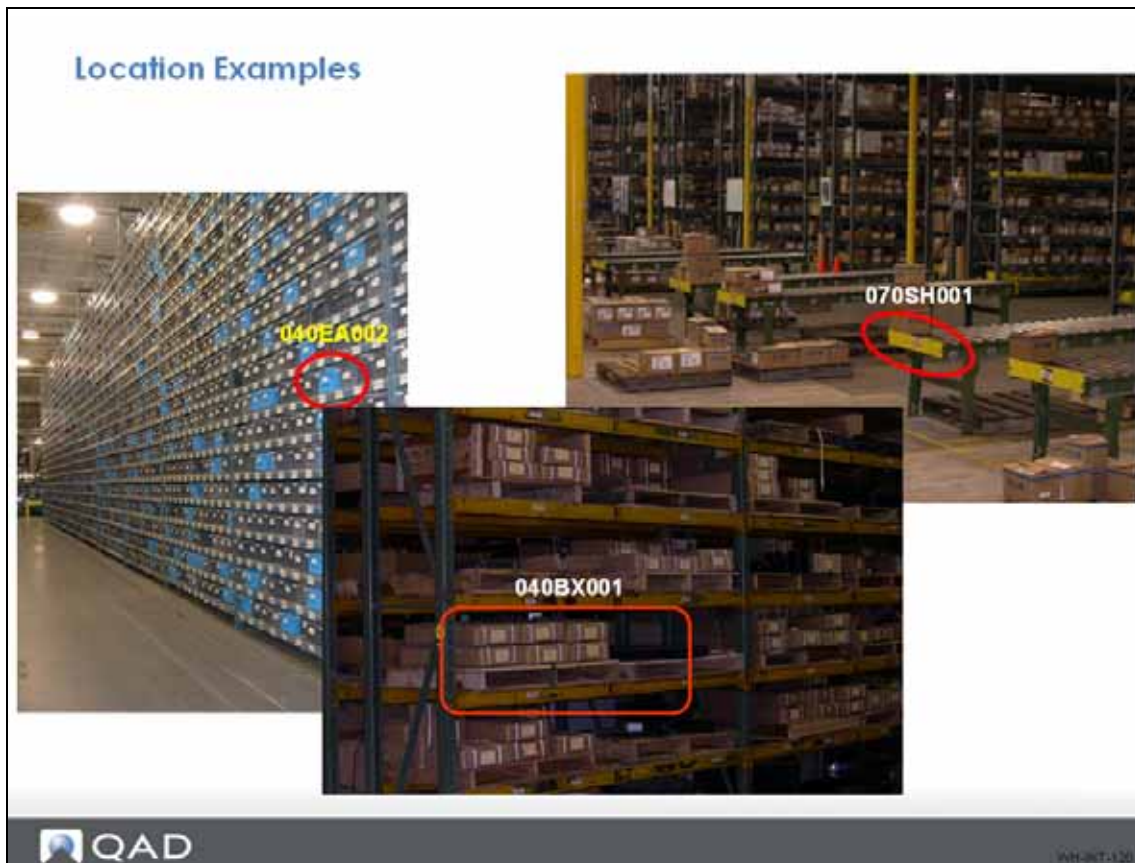
- 01CT Carts
- 01FL Forklift

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.

Warehouse Locations - Different from QAD Locations



Location Examples



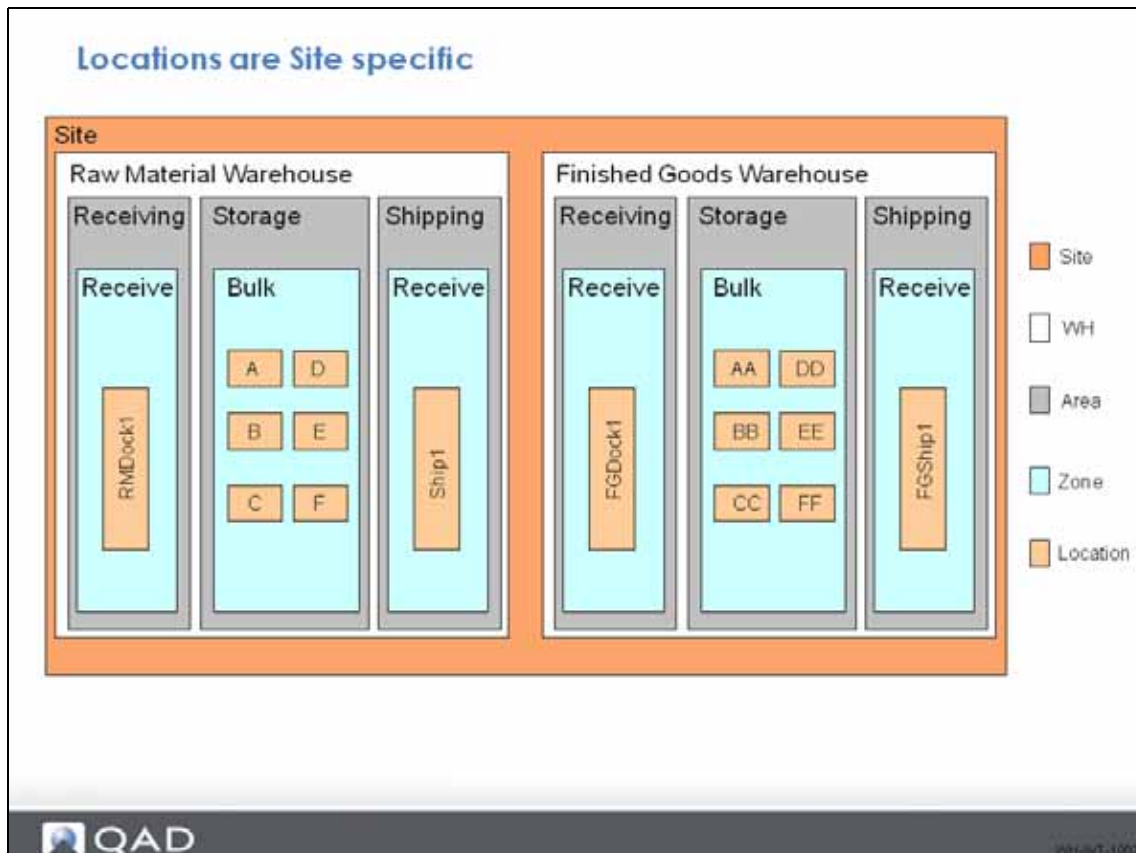
The rule here is that there should be a location wherever product is staged or stored.

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).

Did You Know

An Area can have multiple zones but a zone can be associated to only one area.

Locations are Site Specific

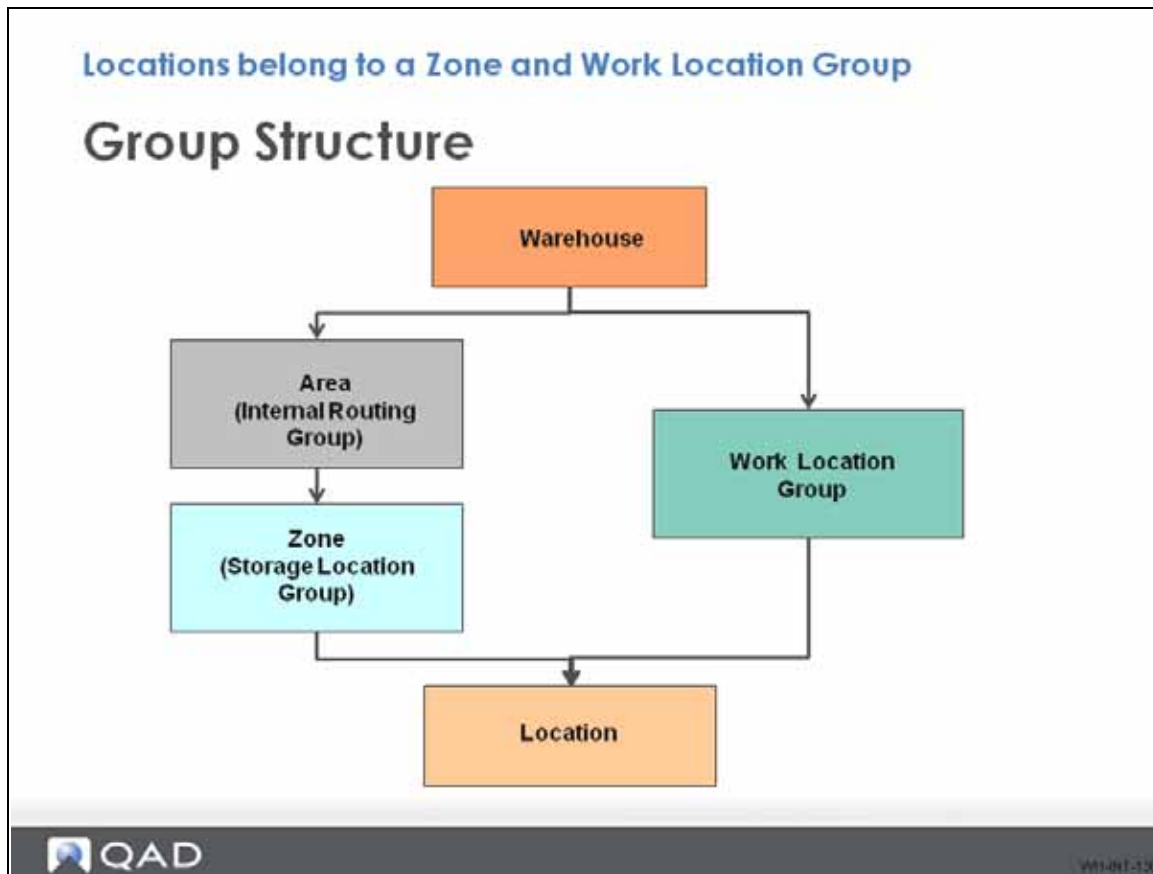


Did You Know

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.

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.

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?

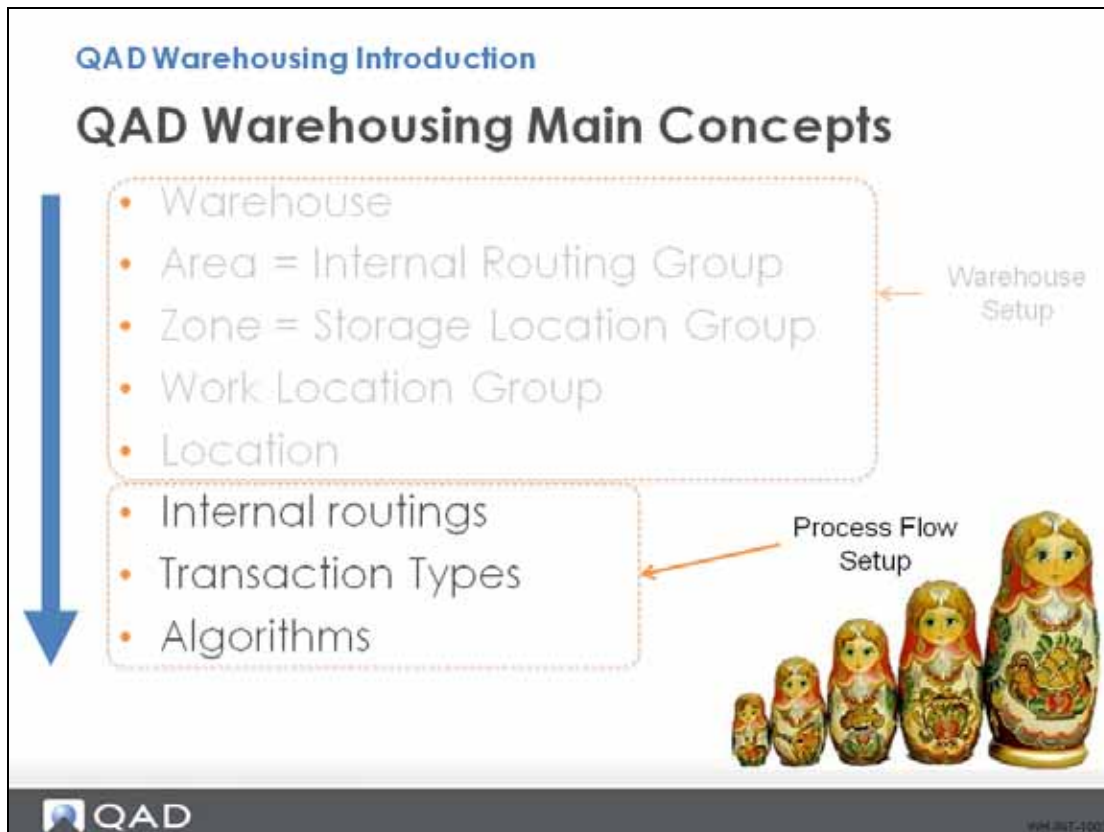
Using Warehouse Location Browse, the line for location 040EA020 shows 16.0 in the Percent Full column.

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.

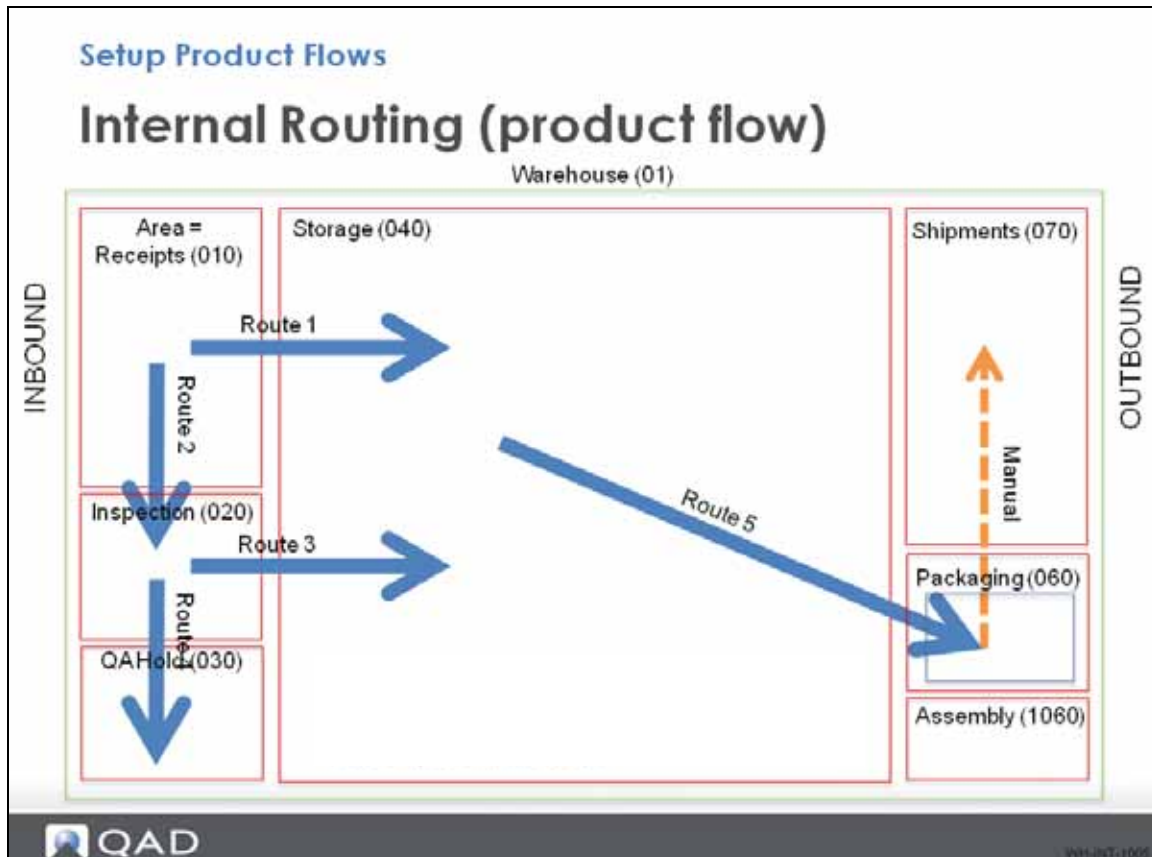
Clicking through to the final frame, the item number shows UM is EA and Quantity is 500. Because there is no item number listed, this is a generic capacity for all items.

Main Concepts - Process Flow Setup



The topics that follow discuss setup for the process flow portion of the main concepts.

Internal Routing (Product Flows)

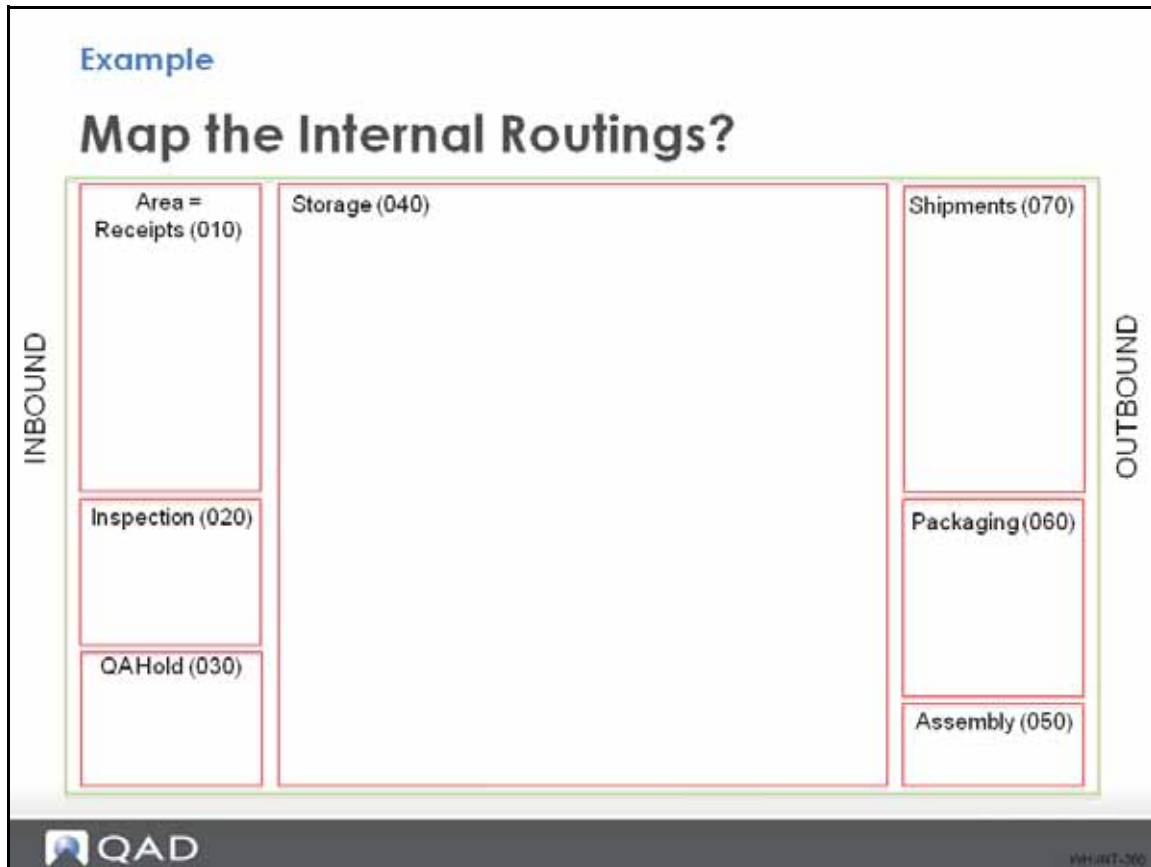


An Internal Routing is the path or flow material follows when being transferred from one area to another. Typically, routing has two steps, starting in one area and ending in another; however, there are exceptions where a routing stays within the same area or moves between multiple areas (with multiple stops). You review these special circumstances later.

When there is not a routing, the system does not direct product, but you can still manually move materials to another area. For example, when reviewing the above flows in comparison to the QMI warehouse, product movement from Packaging to Shipments is a manual move and does not require a defined route.

Getting product in (Receiving) and out (Shipping) is not Routing dependent and is done using QAD core functions.

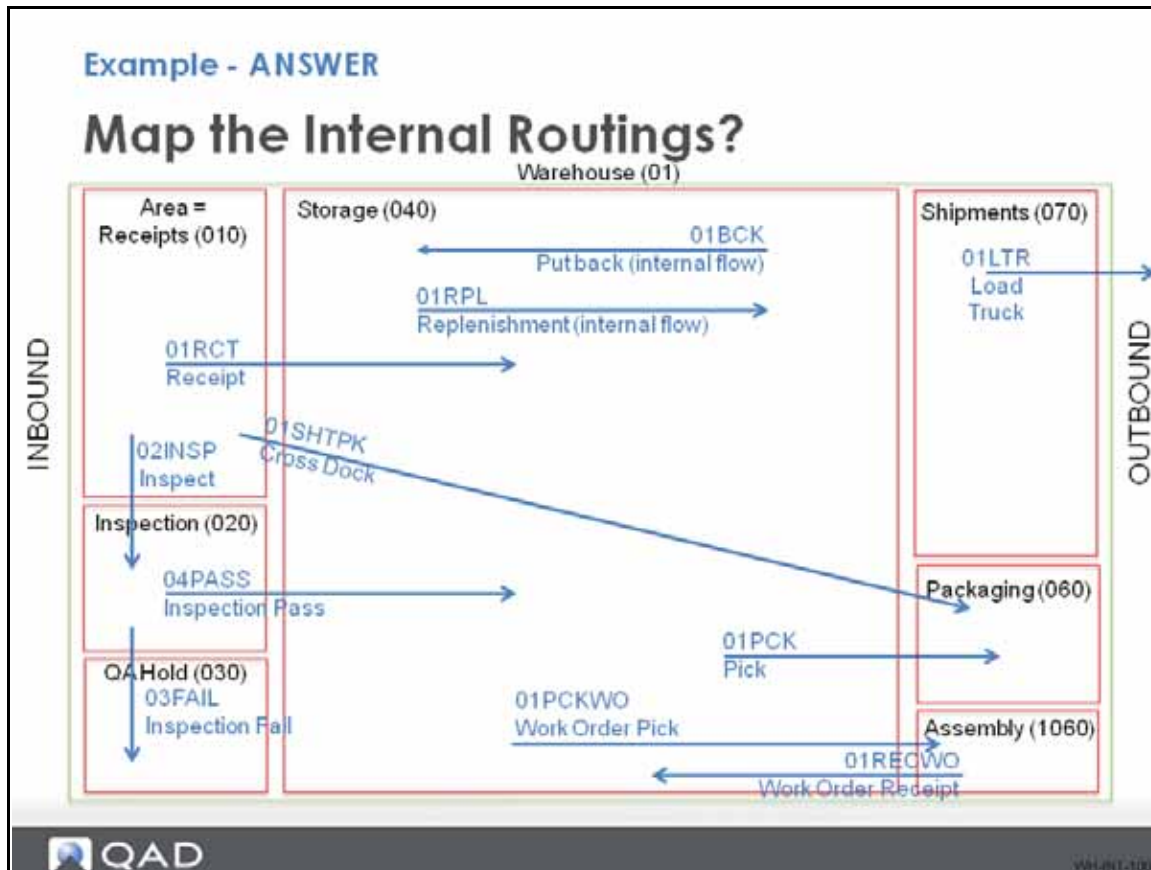
Example - Map the Internal Routings?



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 - Map the Internal Routings -Answer



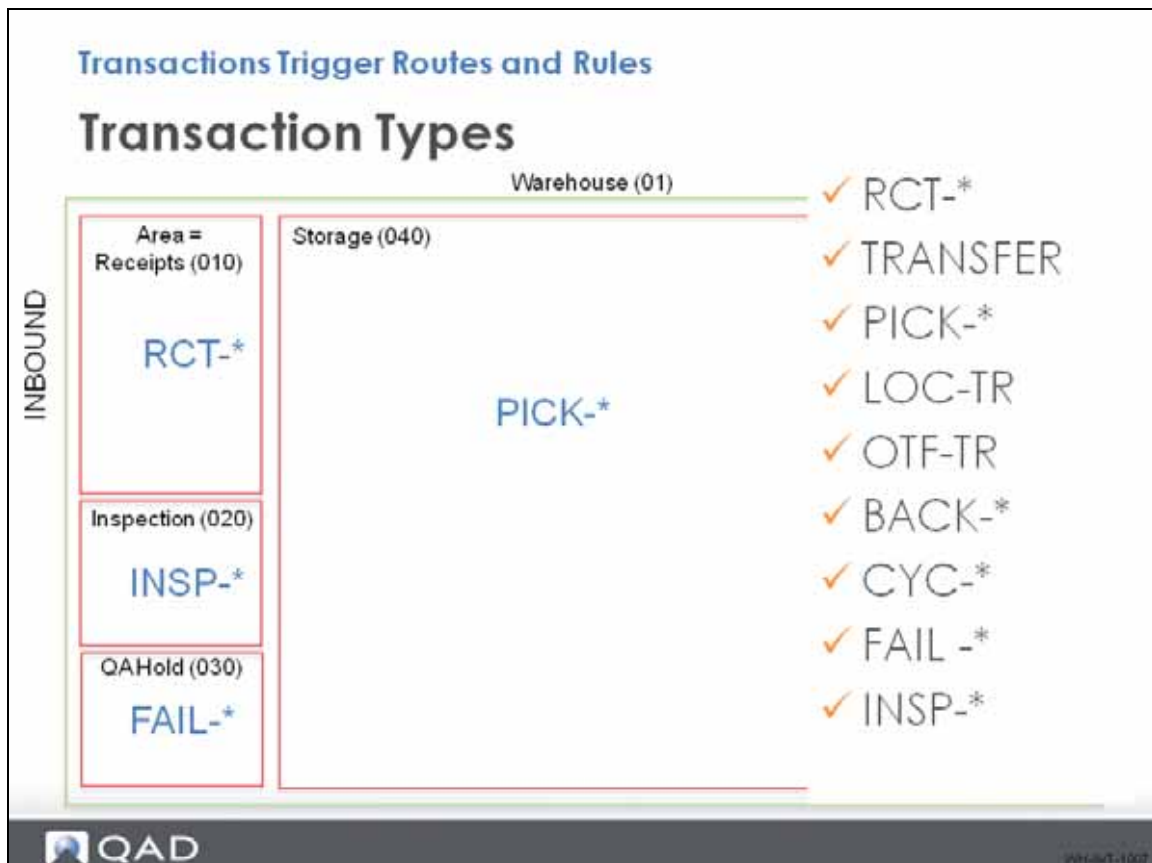
The lines in blue depict the internal routings mapped to the various areas.

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

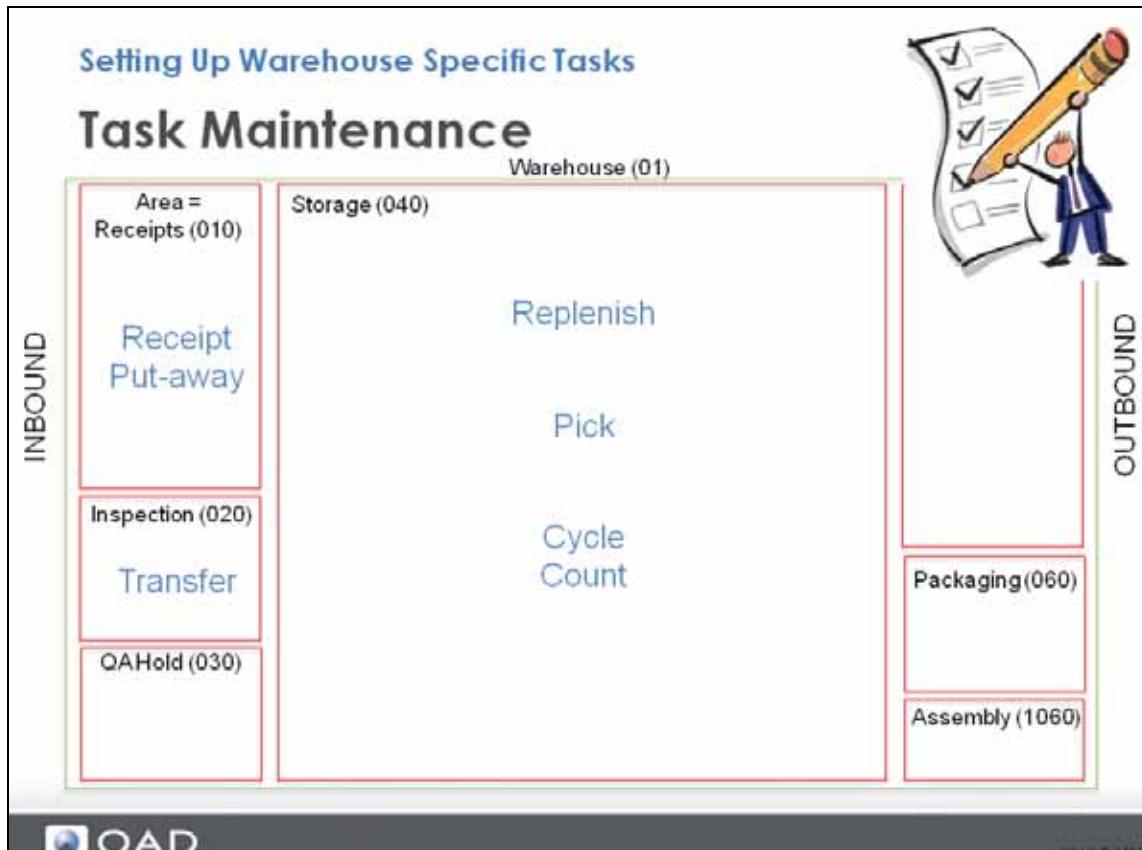
Transaction Types



Did You Know

QAD Warehousing uses the standard QAD core transaction types.

Setting Up Warehouse Specific Tasks



Use Task Maintenance (4.11.1.1) to create and update the tasks performed in a warehouse.

Exercise - Which Tasks are Setup for Warehouse 01?

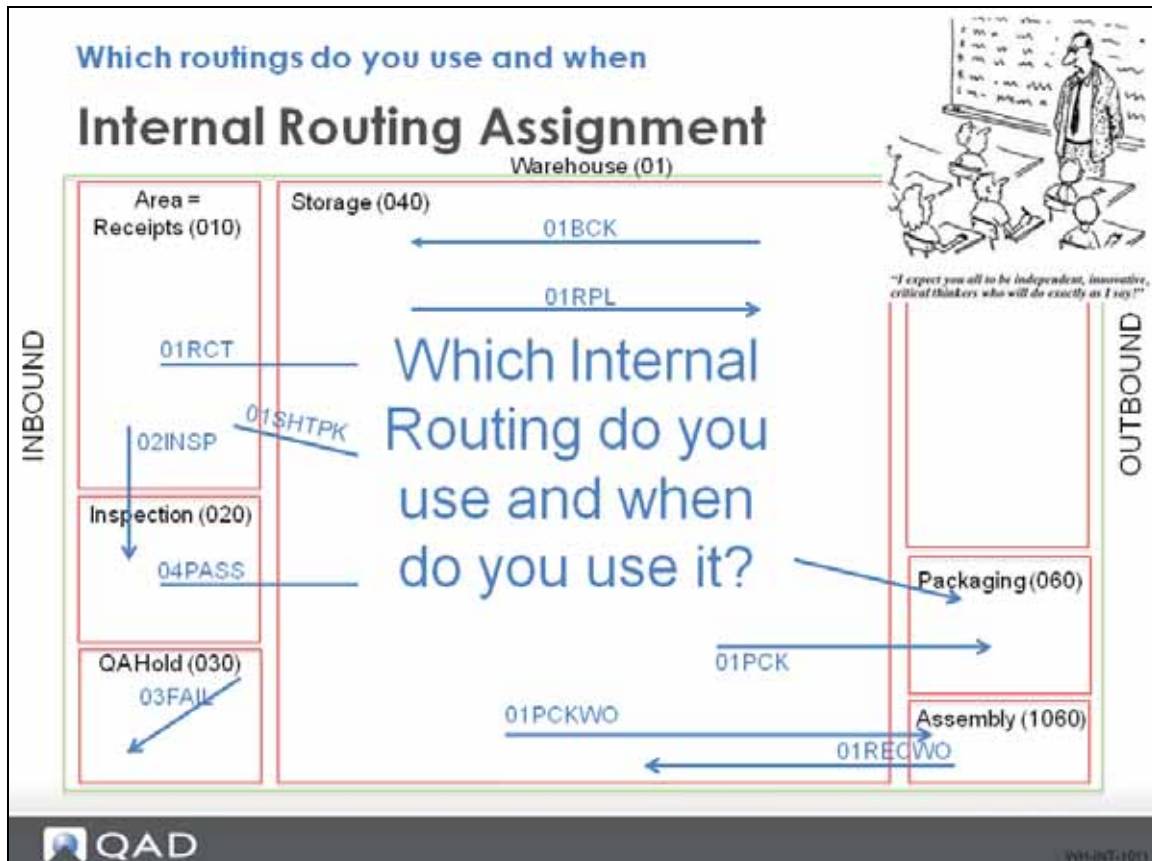
Exercise

What Tasks are Setup for Warehouse 01?

Task	Description

Use Task Browse

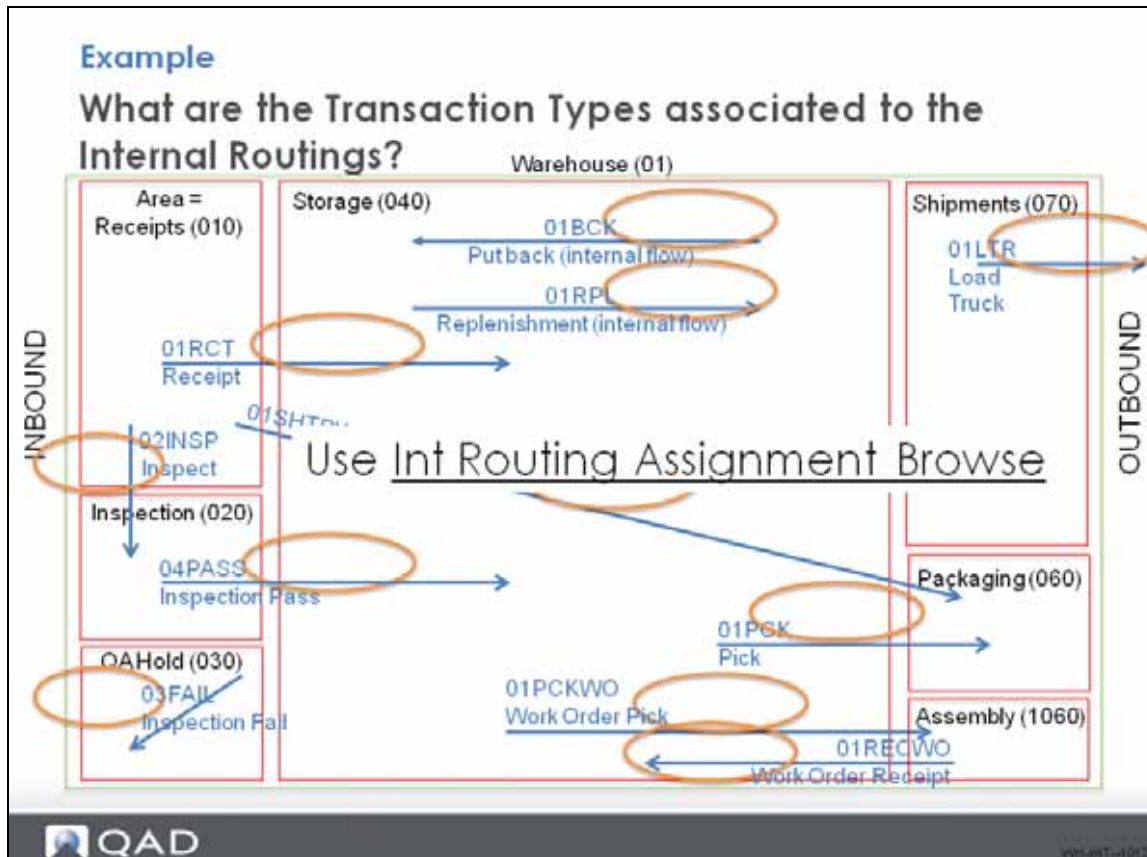
Which Routings Do You Use and When?



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.

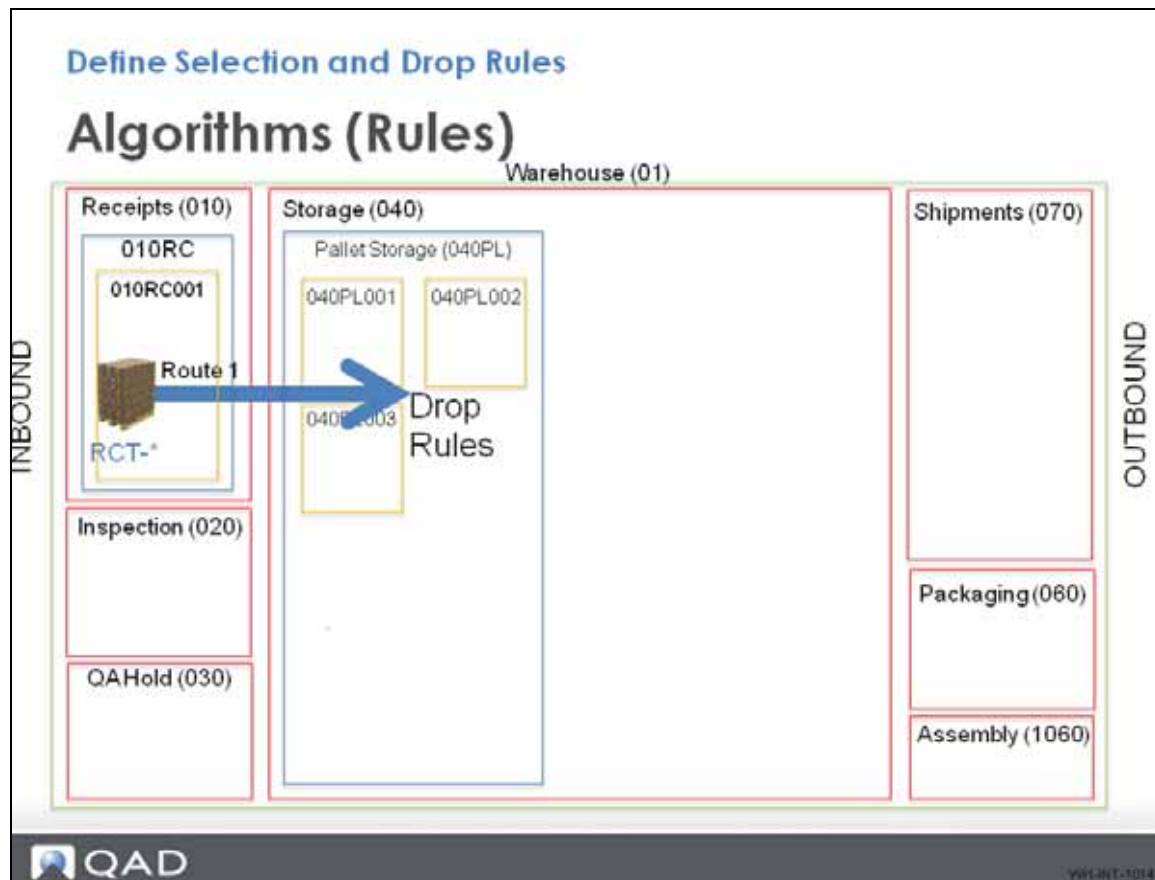
What are the Transaction Types Associated to the IRs?



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?

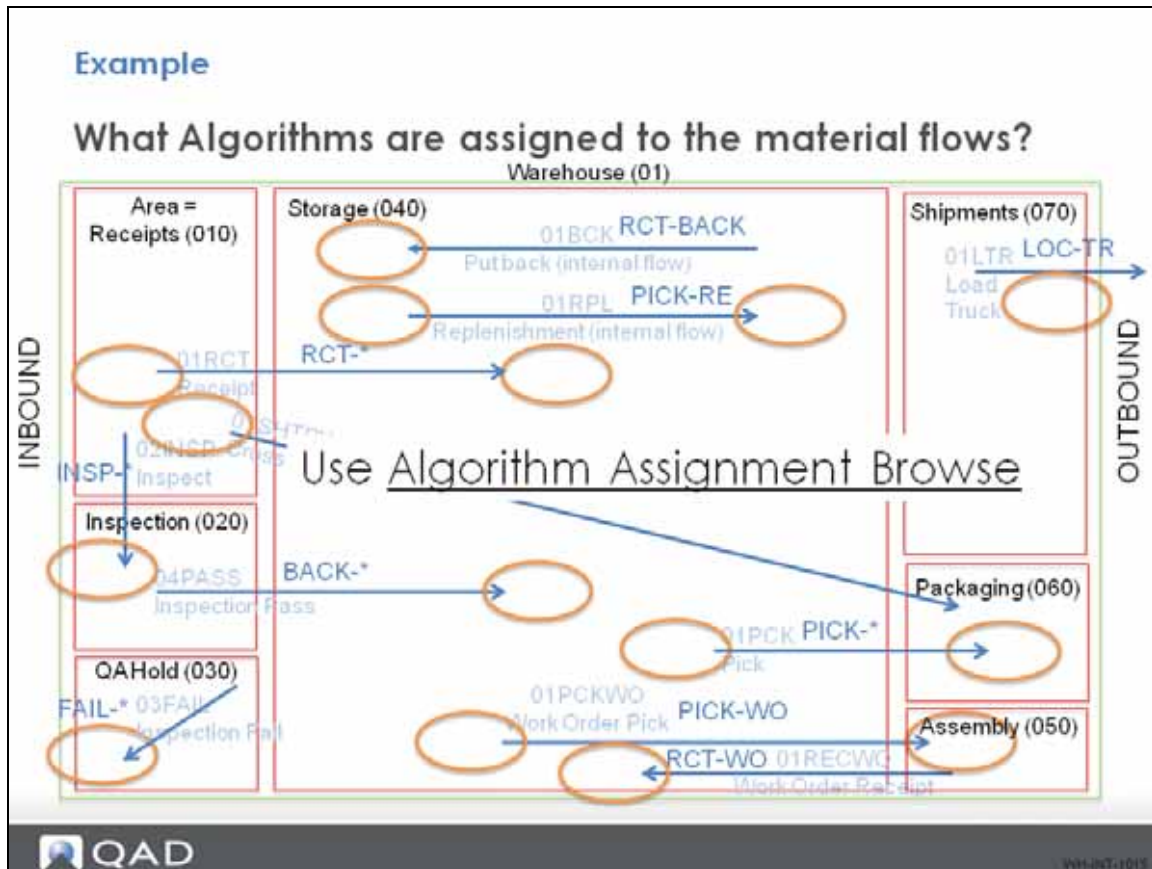
Define Selection and Drop Rules



Did You Know

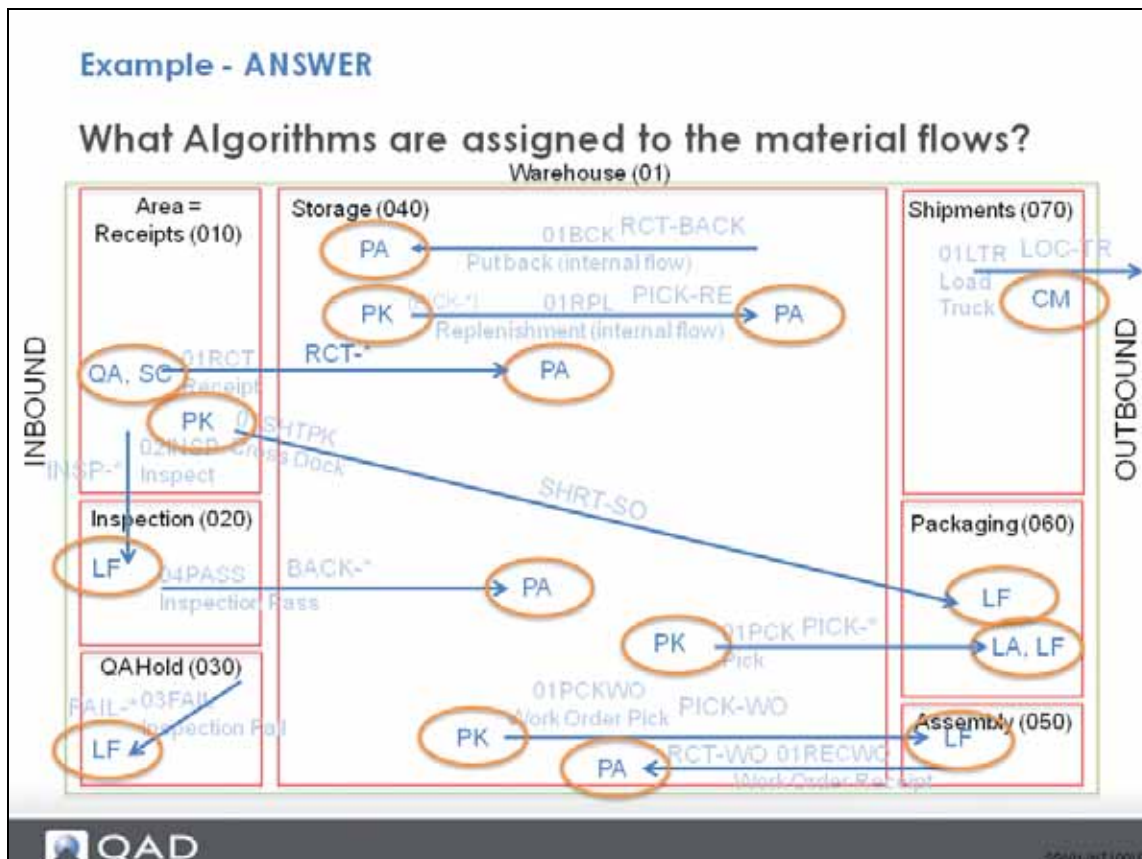
Use algorithms to link a specified sequence of rules to each transaction type or combination of transaction type, site, warehouse, item, and address.

Example - Which Algorithms are Assigned to Flows?



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

Example - Which Algorithms are Assigned - Answer



What are the General Receiving Put-Away Rules

Exercise

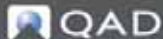
What are the general receiving Put-away rules?

Assigned Algorithms

Seq	Algo	Description

Use Algorithm Assignment Maintenance

- Algorithm Type = PA
- Transaction Type = RCT-*
- Site = 10-301
- Warehouse = 01

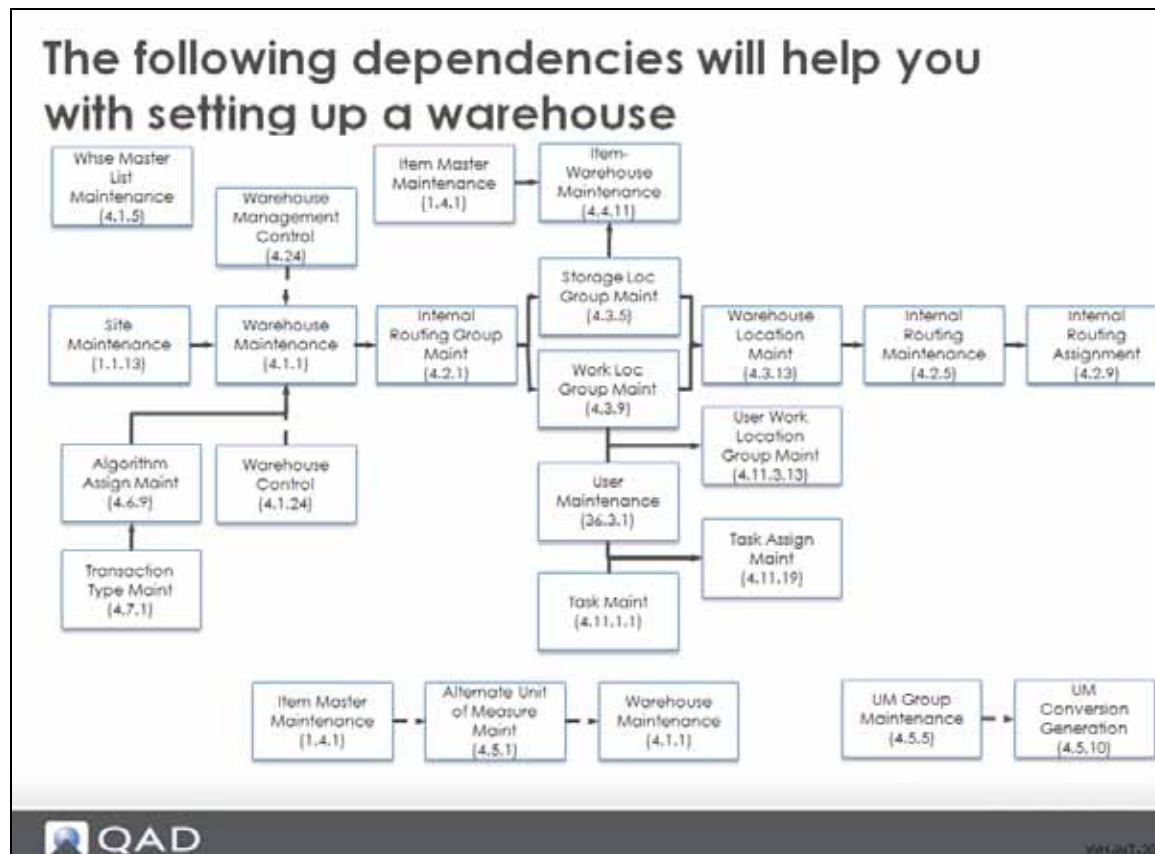


Y0101T-1010

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 Warehousing has configurable putaway rules that help you determine which location is best for product put-away.

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

Enable QAD Warehousing

Warehouse Management Control

Active: ☒

Template Optimizer:

Inventory History: ☒

Reference Uniqueness Level:

Verbosity Level:

Cycle Count Reason:

Create Date: 8/20/2010 QMI User

Modified Date: 3/10/2011 Demo User

Activate
Warehousing
Functionality

QAD

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.

Many Control Features are Managed in a Warehouse

Many control features are managed in Warehouse Maintenance

Warehouse Maintenance

Site: 10301
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: ☐ Cmt:

QAD Location Data

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

QAD

WH-INT-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: ☒

System Code: RF

Two Phase: ☒

Keep From Status: ☒

Task: TRANSFER

Priority: 10

Increment: 1

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	

You can assign the default task used in the warehouse.

WH-INT-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.

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

QAD WH-INT-013

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.

Control Scan Parameters

Control Scan Parameters

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

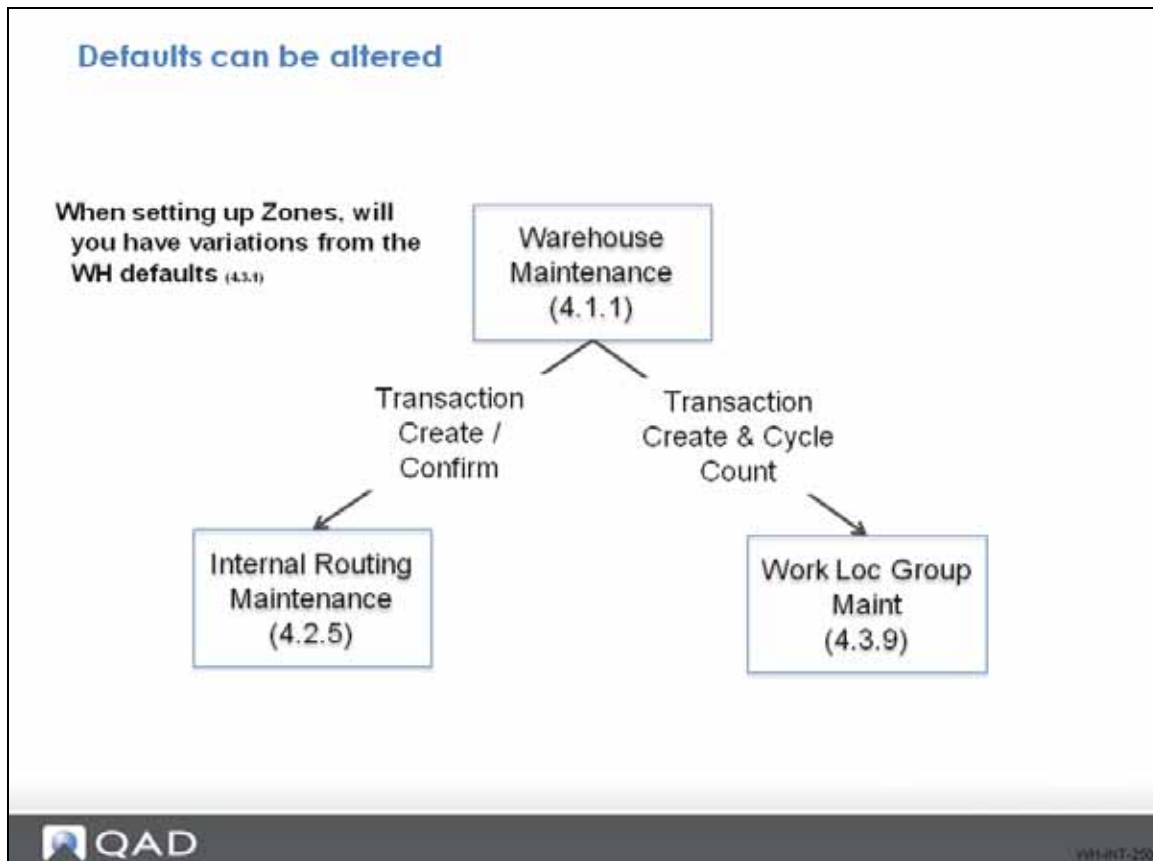
From Location Option: 0	To Location Option: 0
From Item Option: 0	To Item Option: 0
From Lot/Serial Option: 0	To Lot/Serial Option: 0
From Reference Option: 0	To Reference Option: 0
Allow Quantity Increase: ☐	Alternative UM Option: 0
Allow Quantity Decrease: ☒	Allow Task Switching: ☐
Quantity Change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

QAD

Do You Know

You can define when users can change scan parameters and the warning users receive when a change is made.

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.

Exercise Aid

Exercise Aid

Create a layout/drawing of your Exercise warehouse to record names, flows, etc.

WH-INT-2020

Exercise - Set Up Warehouses

Exercise

Set Up a Warehouse

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: A
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 Item: ☐
Single Lot/Reference: ☐
Capacity: 0.0 UM



WM-MT-220

Did You Know

You can configure the frequency and need for scanning at the warehouse maintenance level. Too much scanning reduces productivity, too few scans reduces accuracy.

Exercise

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

Field	Data to Enter
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.

Setting Up Areas

Setting up Areas

Internal Routing Group Maint

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 WH-INT-2601

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

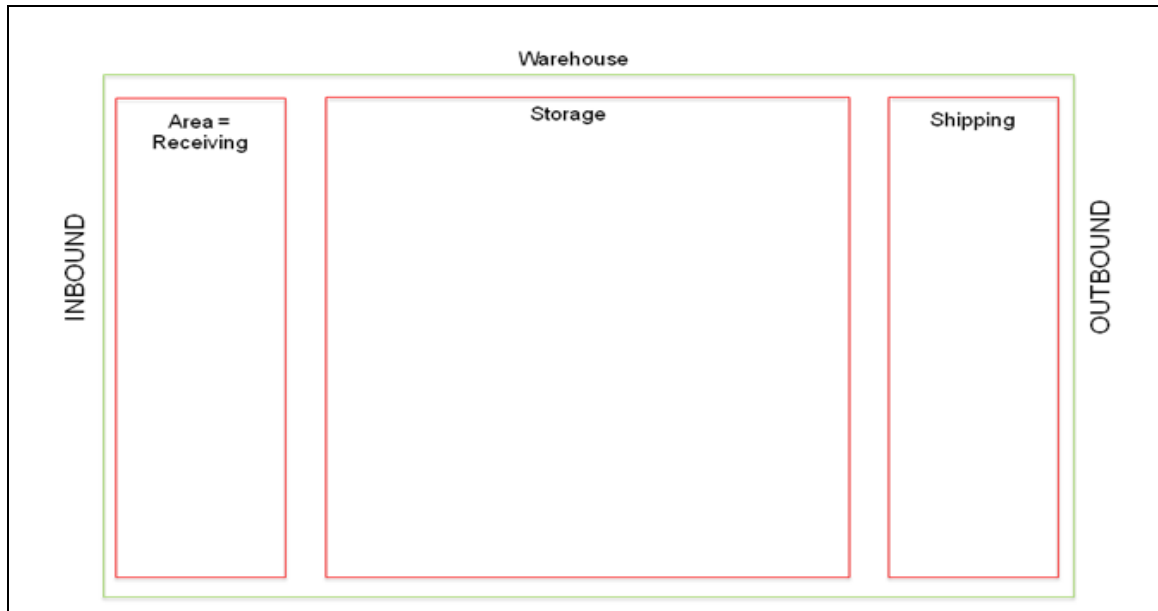
- Functional internal routing group: Use the LF algorithm
- Non-functional internal routing group: Use the PA and PK algorithm
- Zones can be configured to restrict product receipts and issues

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 - 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	IRG	Description	Functional
10-301			Receiving	Y
10-301			Storage	N
10-301			Shipping	Y

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 Count:
Opportunity Count Frequency:
Check Digits:
Cycle Count Status Option:

Picking Multiple UM:

Exclude from Picking: ☒
Picking Level:
Flow Pick:

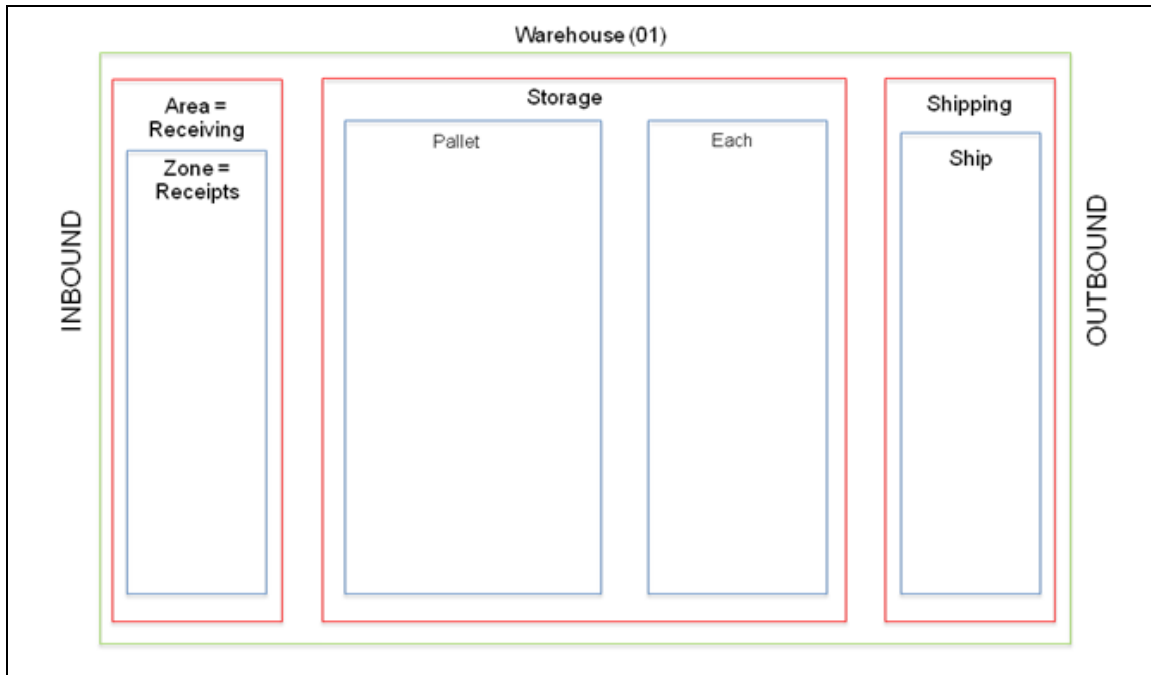
Detail Overflow Group:
Capacity Check when OTF: ☐
Optimized Storage: ☐
Allow Mixed Status Codes: ☐
Acquisition UM:
Recount UM:

QAD

Did You Know

You can block SLGs (zones) from picking, based on their picking level in warehouse setup.

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:

Site	Warehouse	SLG	Description (optional)	IRG
10-301			Receiving	
10-301			Pallet Storage	
10-301			Each Storage	
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	--	--	--	--

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 are error message. Click Back to save changes

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

A work location group is procedural, while a zone is physical.

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	A	
10-301			Cart picking	A	
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.

Set Up Locations

Setup 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	---

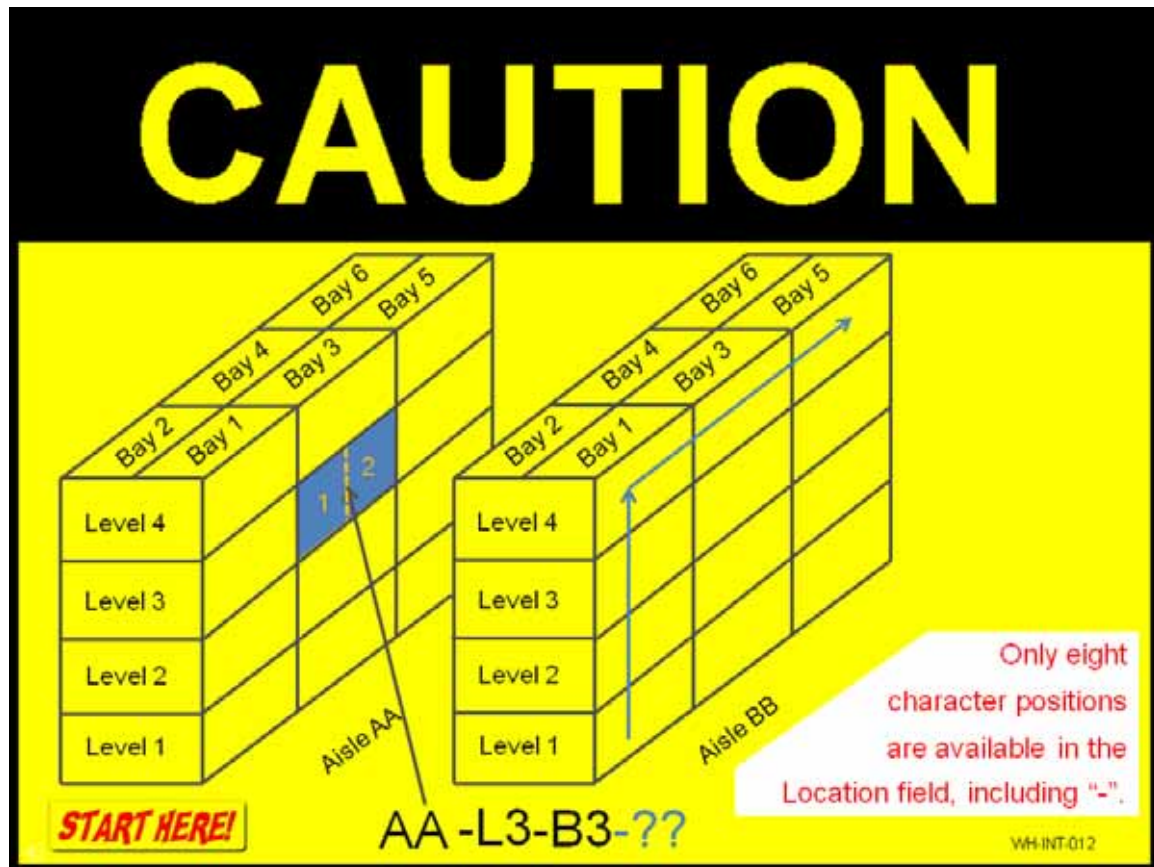
Additional Warehousing Fields

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	R
Quantity	R
Height	O
Length	O
Width	O

 WH-INT-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

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: ☐

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.

Did You Know

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

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	4.0000	1	2	2

Item Number: UM: Quantity: 4.0000 Height: 1 Length: 2 Width: 2

- Reserve pallet locations PL001 – PL004 have capacity 4 pallets
- When full, put-away will look for the next available location
- This info used to calculate Percent Full on the previous frame
- Location Dimensional Data is for reference only

Location Dimensional Data

Height:	1.00
Length:	2.00
Width:	2.00
Dimensional Unit of Measure: M	
Percent Full:	75.00

QAD V90-INT-1030

Manage Location Capacities (Continued)

Manage location capacities

Warehouse Location Maintenance

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

Item Number	UM	Quantity	Height	Length	Width
	PL	4.0000	1	2	2

Item Number	UM	Quantity	Height	Length	Width
	PL	4.0000	1	2	2

• A UM and Quantity combination is required for each location. Locations without a UM/Quantity combination will not be selected for put-away.



QAD

WMJNT-1036

During setup, you need to define some capacity parameters for each location. When specific capacity metrics are not known, you can enter a generic number to at least have the location considered during put-away; however, when the quantity is larger than the actual capacity, the system repeatedly directs the item to a full location. Alternatively, when the quantity is less than the actual capacity, the location remains under utilized.

You can also use this field strategically; for example, when you do want to put the location on hold, delete the UM/Quantity combination even when inventory is in the location.

Also note that the system still considers locations with existing inventory but no UM/Quantity capacity for pick and replenishment inventory movements.

Hold Maintenance should also restrict inventory movements to or from a location but currently, Hold Maintenance on a location only restricts inventory from being picked not from being put-away.

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 Same Type Locations

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

Minimum Value:
 Maximum Value:
 Increment: 1

QAD

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 Do you wish to continue?

Yes No

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

Location Data

From Loc: PLT0001 To Loc: PLT0999

Locations created: 999

Search (1)

Location starts at PLT Search Clear All

Viewing 1 - 100 of 1002 Records per page: 100

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 V14.0 (10/20)

Locations Setup - Implementation Alert

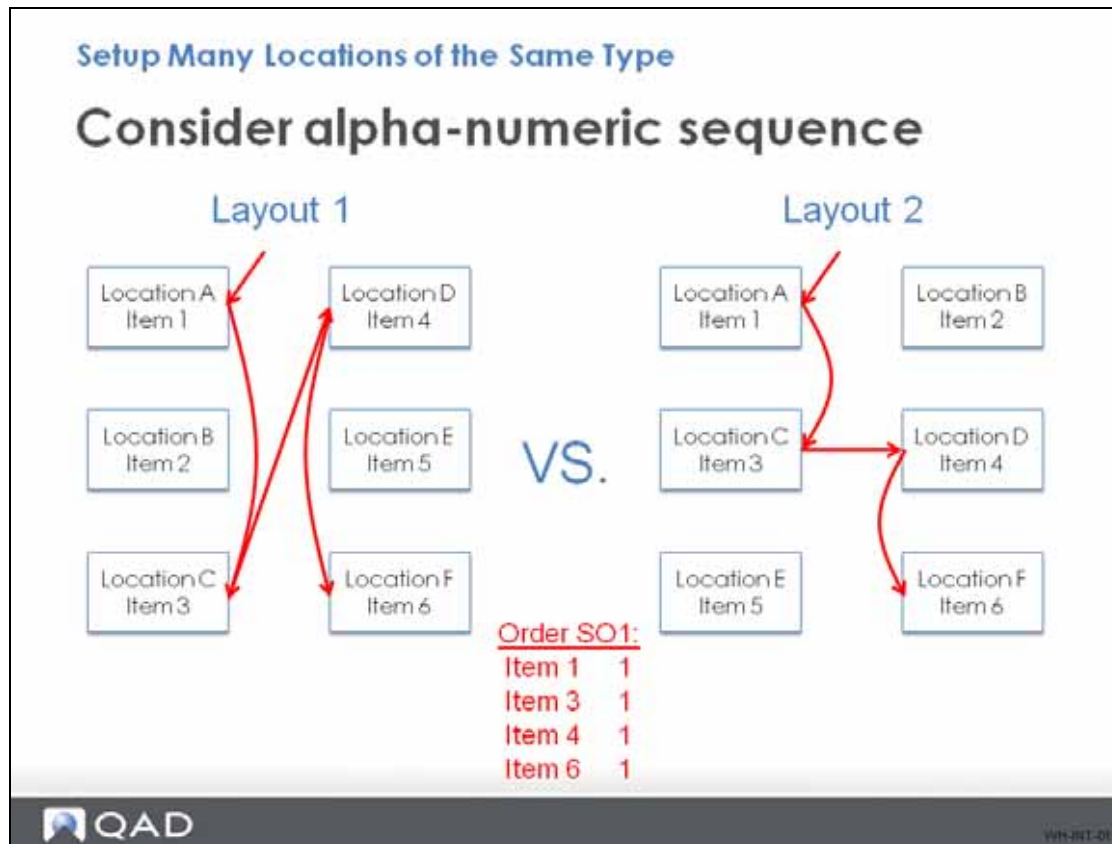
Implementation Alert

The standard pick path routing is driven by location address alphanumeric 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 - 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.

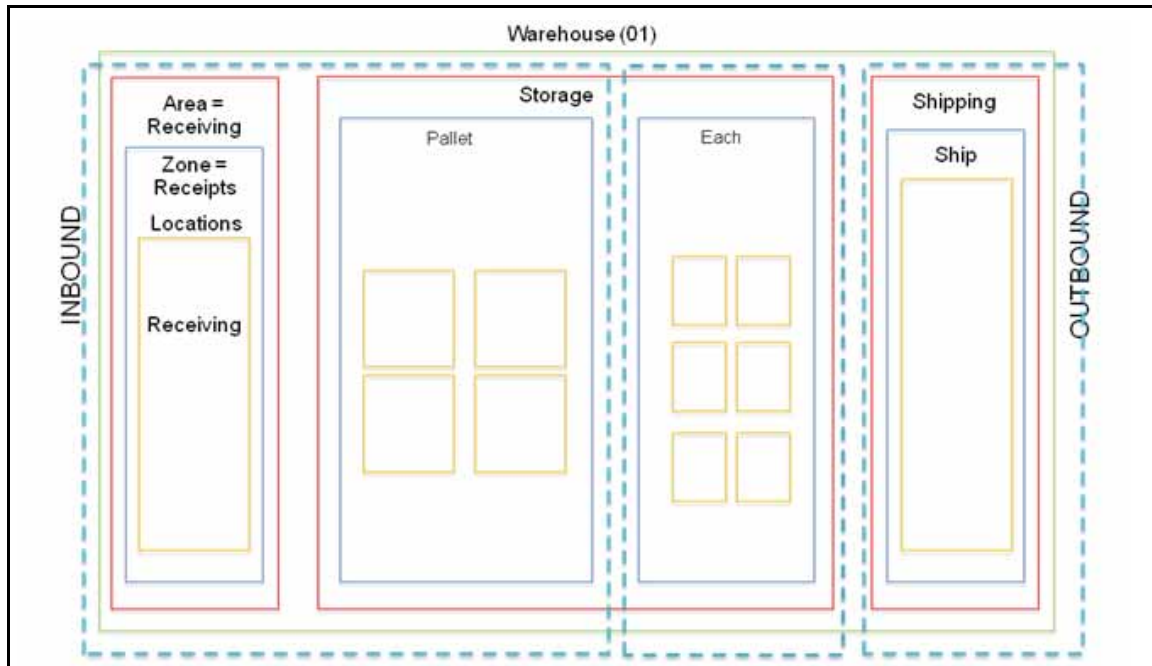
Use the following to help set up locations.

- 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

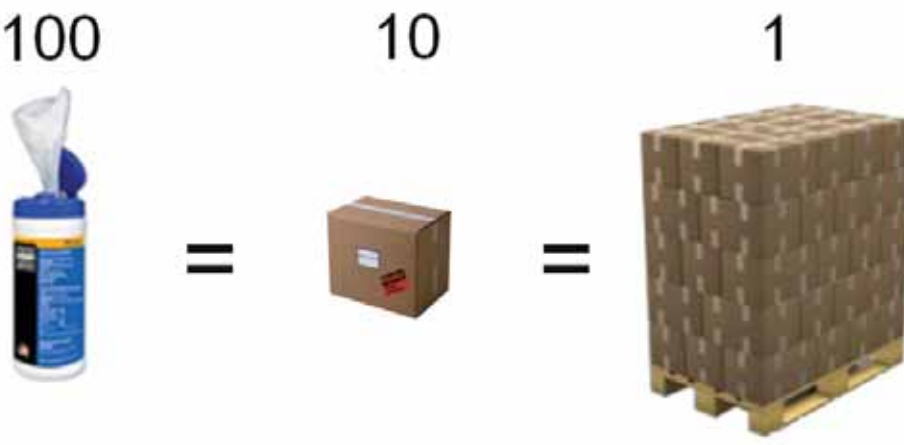


QMI Units of Measure

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 single bottle of disinfectant. In the center, the number '10' is above a single cardboard box. On the right, the number '1' is above a full pallet stacked with boxes. Two equals signs (=) are placed between the bottle and the box, and between the box and the pallet, indicating that 100 bottles are equivalent to 10 boxes, which are 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

Storing Type: Storing by Base UM

Print ID:

ID Quantity:

Allow Split: ☒

Item Number:

Ship Type:

Round Inspected Qty:

Conversion Rules

New Unit of Measure:

Change Action:

 QAD

Y01 INT 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



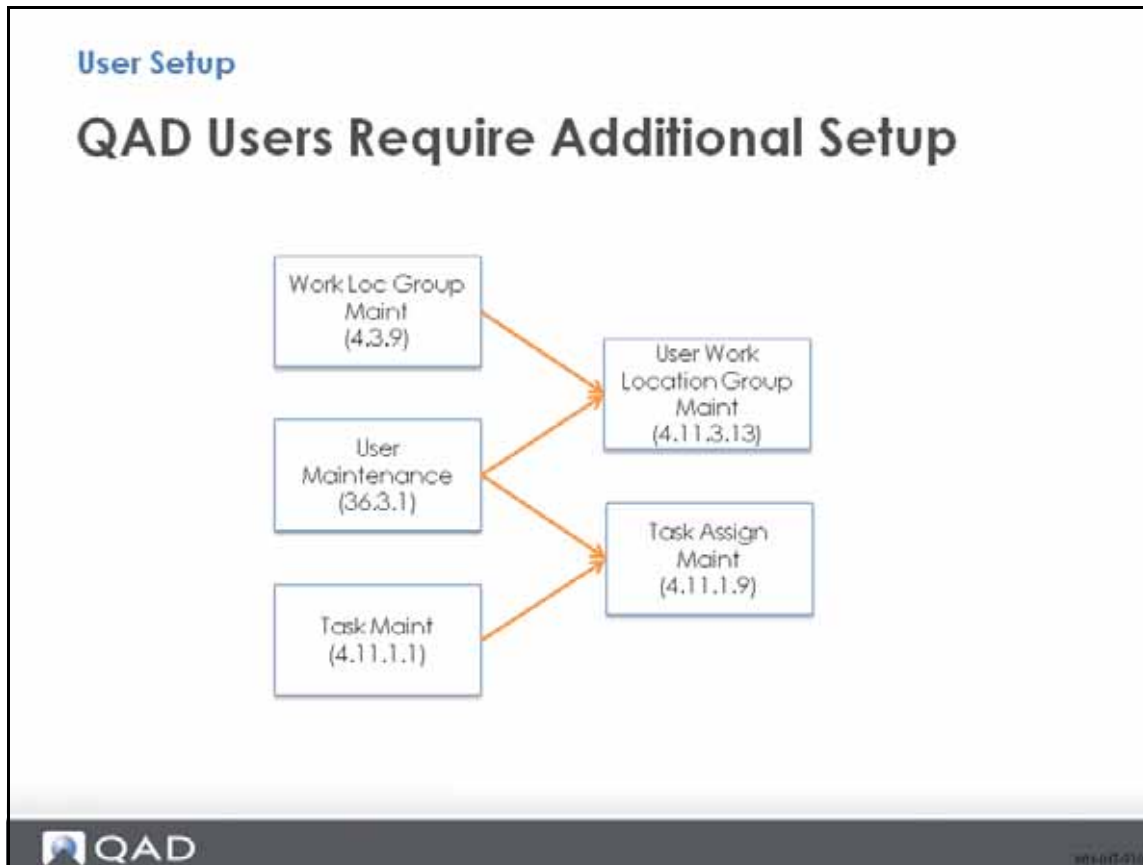
 QAD

© 2011 QAD, Inc.

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.

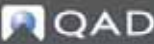
Setting up users in the warehouse requires user to first be set up in QAD core.

Implementation Consideration - Define User Parameters

Implementation Consideration

Define User Parameters

Data	Key	User 1	User2	User3	...
Name	36.3.1	Cart Pick	Fork Truck	Super	
User ID	36.3.1	UserA	UserB	UserCRB	
Password	36.3.1	qad	qad	qad	
Language	36.3.1				
Country Code	36.3.1				
User Type	36.3.1				
Access Loc	36.3.1				
Enabled Reason	36.3.1				
Products	36.3.1				
Domain Code	36.3.4	(A)			
Entity	36.3.4	(B)			
Role	36.3.6.6	(C)			
Work Location Group	4.11.3.13	01CT	01FL	01FL/01CT	
Task Assignment	4.11.1.9				
RF User?					

 WM10NT-201

Use the table below when considering user parameters:

(A) USA	USA-01	(B) 10C)RPCONS		
	US-A	10USACO		
	US-B			
	US-C	(C) USERA	Superuser	10USA
	US-D			11CAN
10USA	10USACO			12MEX
11CAN	11CANCO			20FRA
12MEX				21NL
20FRA				22UK
21NL				30CHN
22UK	22UKCO			31AUS
30CHN				
31AUS	31AUSCO			

Assign the User to a Work Location Group

Manages workers and work sections

Assign Users to Work Location Groups

Processes Work Location Group Maintena. X

Go To Actions Copy Print Preview

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

Description: Forklift

Confirmed at Source: ☒

Priority: 10

Increment: 1

Task: TRANSFER

System Code: RIF

System Flavor: B

Allow Task Switching: ☐

Two Phase: ☒

Keep From Status: ☒

Device:

Processes User Work Location Group Mai. X

Go To Actions Copy Print Preview Attach

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: ☒

Use External: ☒

UserB

Create work sections then assign users to the sections.

QAD W4012012

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.

Assign Tasks to Users

Assign Task Types to Users

Task Assignment Maintenance

User ID: UserB		RF User B			
Queue 1					
1	TRANSFER	Auto			
2	PICK	Auto			

QAD

VM-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.

Exercise - What Task Types are Available to QMI?

Exercise

What task types are available to QMI?

Use Task Assignment Maintenance

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

QAD

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.

Bonus Question

Bonus Question

Will user QMI receive any tasks? _____

Why?

Hint: See [User Work Location Group Browse](#)



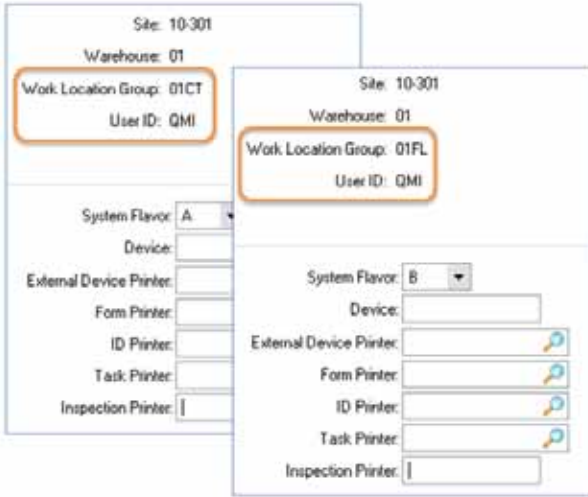
WH-INT-1022

Bonus Question

Bonus Question - Answer

Will user QMI receive any tasks? NO

Why? QMI is not assigned to a Work Location Group.

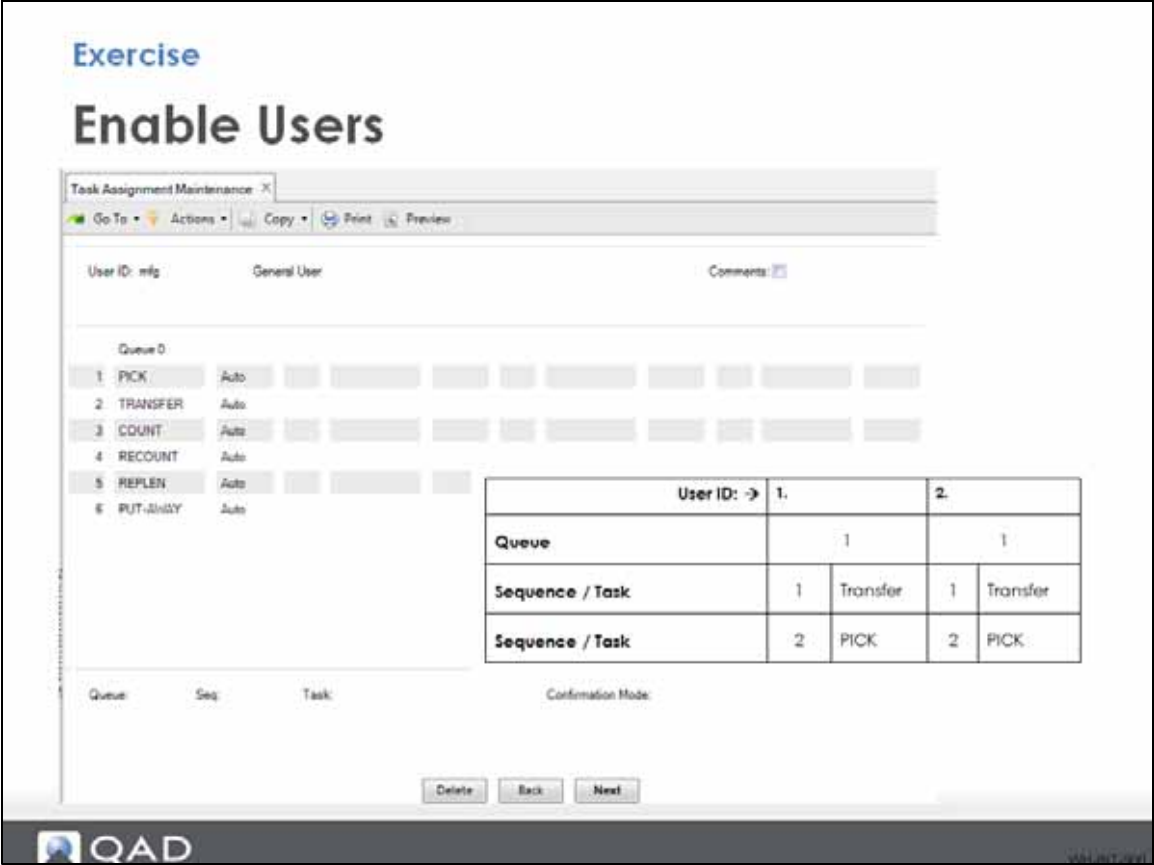


Make QMI a super user able to receive any task for any process by assigning them to all Work Location Groups.

QAD

Make QMI a super user able to receive any task for any process by assigning them to all Work Location Groups.

Exercise - Enable Users



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 ID =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.

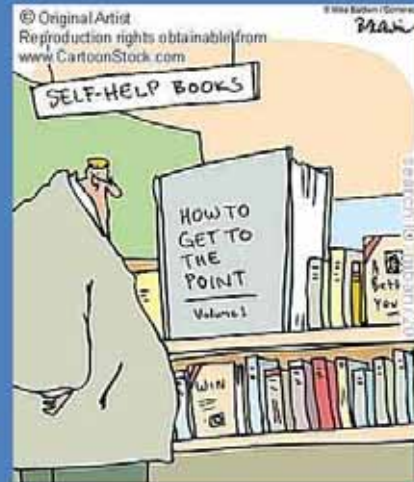
Implementation Consideration

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.



WELINT-1027

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?"

96  QAD

WH-KIT-1020

Set Verbosity level to Zero to Go Live

Set Verbosity Level to 0 for Go Live

Go
Live = 

QAD V04-INT-1029

Simulation - What is Available**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

Example: Simulate Put-Away

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: 10-101		Item Number:	
Warehouse:		Lot/Serial:	
Location:		Reference:	
Warehouse: 01		Warehouse: 1	
Item	Status	Qty	
Location Lot	Ref	On Hand	
040PL001 03120	Y-Y-N EA	100	1
040PL002 03120	PL000082 PL	100	
040PL003 03120	Y-Y-N EA	100	
040PL004 03120	PL000083 PL	100	
040PL005 03121	Y-Y-N EA	100	
040PL006 03121	PL000084 PL	100	
040PL007 03121	Y-Y-N EA	100	
040PL008 03121	PL000085 PL	100	
040PL009 03121	Y-Y-N EA	100	
040PL010 03121	PL000086 PL	100	
040PL011 03121	Y-Y-N EA	100	
040PL012 03121	PL000087 PL	100	
040PL013 03121	Y-Y-N EA	100	
040PL014 03121	PL000088 PL	100	
040PL015 03121	Y-Y-N EA	100	
040PL016 03121	PL000089 PL	100	

Example: Simulate Receipt

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:		

90  QAD WH-INT-1043

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

QAD VME-DIT-1044

Example: Review Verbosity Report

Example: Review Verbosity Report

Verbosity Report

4

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

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: 10-301

Warehouse: Location:

Warehouse: 01 Warehouse 1

Item Location	Lot	Status Ref	Qty UM	On Hand	In	Expect 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 V941NT-1585

Implementation Hint

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: 03130
Warehouse: Location: Lot/Serial: Reference: Display Disp No

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

Bonus Coverage: LPN Creations

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: 00000000 Logistics UM Tolerance: 0.00%
Lot and Base UM Order:

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 VWH-INT-1050

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

Within QAD Warehousing, license plate numbers are called *references*. You can set up the reference sequence IDs in Warehouse Maintenance in the General Data frame.

Bonus Coverage: LPN Creations (continued)

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	AmRef01			1	Database sequence 01

Sequence: 1

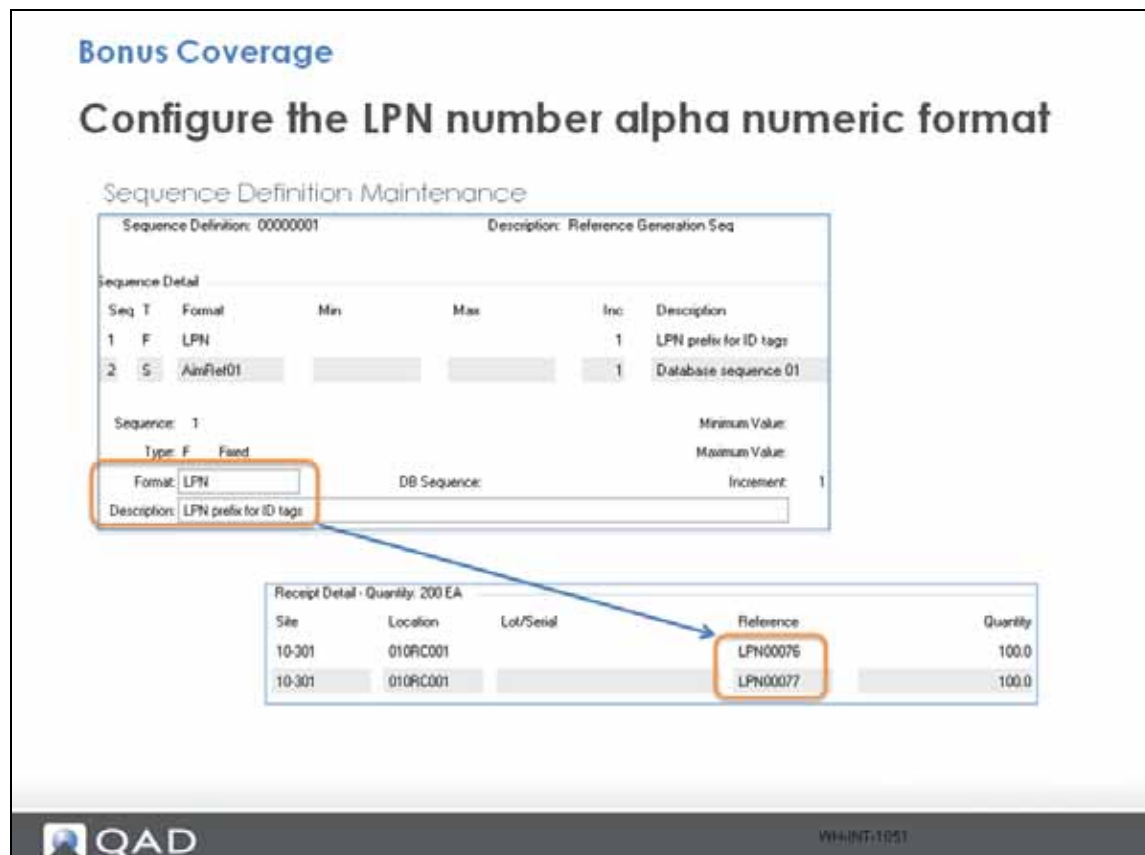
Type: F Fand

Format: LPN DB Sequence: Increment: 1

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



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:

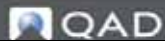
Field	Data to Enter
Sequence Definition	00000001
Sequence	1
Type	F
Format	LPN (or make your own)
Description (optional)	LPN prefix for loads

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

Questions

- 1 QAD Warehousing is a _____ management system that _____ processes in the warehouse on a real-time, ongoing basis.
- 2 Name the five space segregations 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

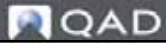
Notes

Chapter 2

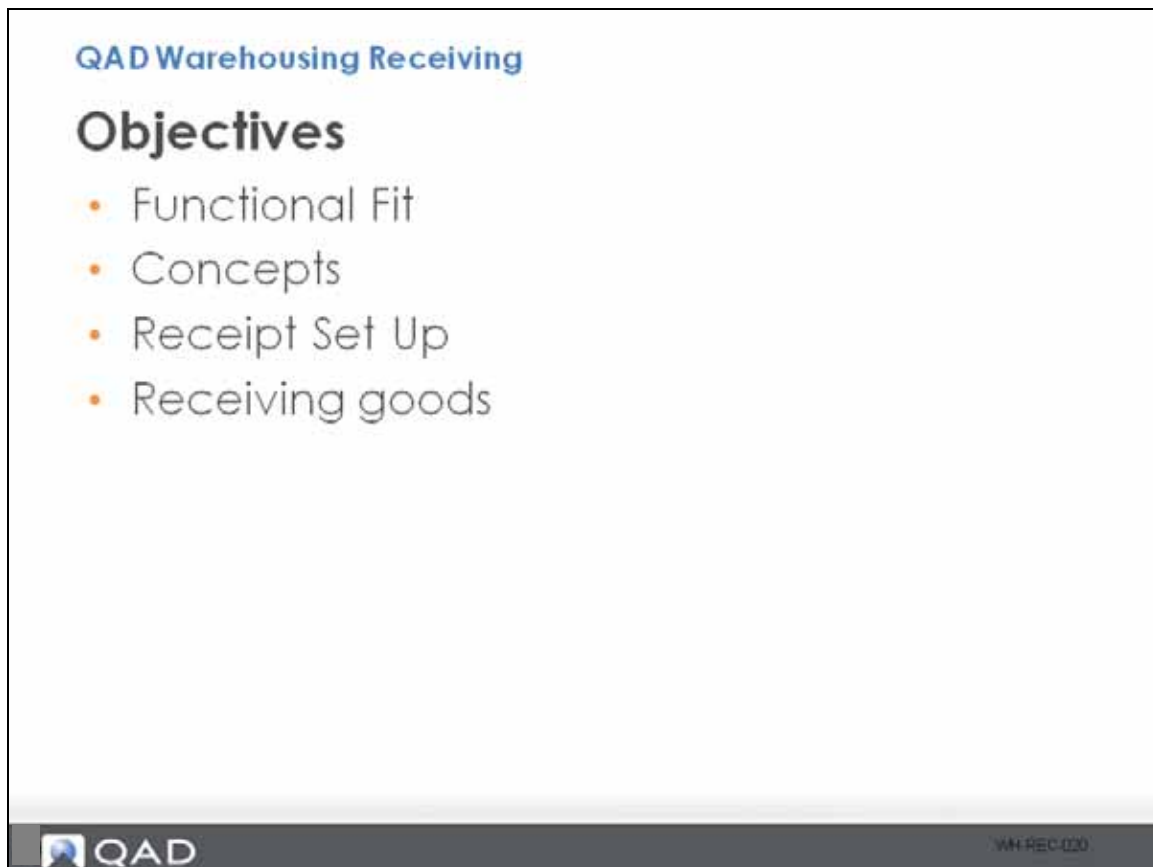
Receiving

Overview

QAD Warehousing Receiving



QAD Warehousing Receiving Objectives



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.

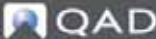
Receipt Types

RF Receiving

Available in WMS not in AIM



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

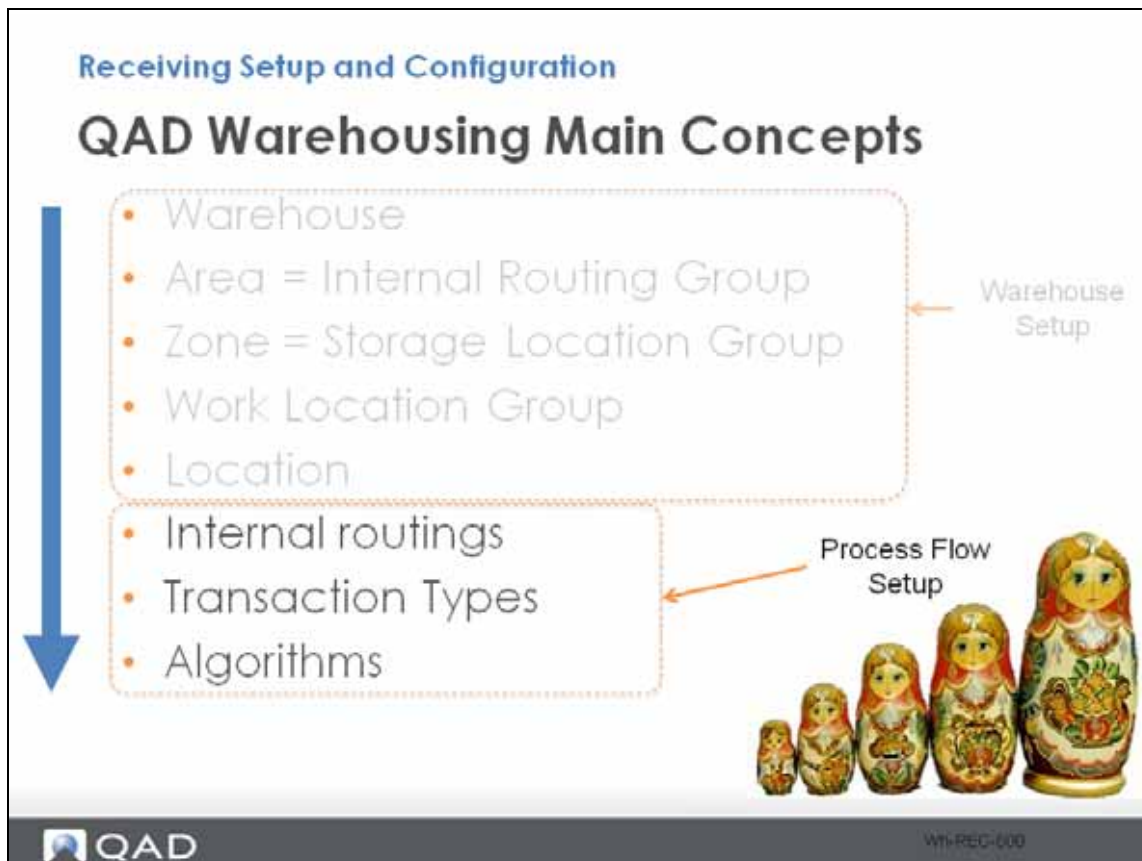

WH-REC-041

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).

QAD Warehousing Main Concepts



Main concepts for QAD Warehousing are based on the organization of the warehouse into segregated areas. In addition, for process flow within the warehouse, main concepts focus on internal routings, transaction types and algorithms.

Exercise - Receive - Navigate

Receive 200ea item 03210 in WH 01

Receipts - Unplanned (3.9)

Item Number: 03210 Lot/Serial Control UM: EA

Description: 10001 vapo 1

Disinfectant

Quantity: 200.0 2 Site: 10-301

Unit of Measure: EA Location: 010RC001

Comm Receipt Detail - Quantity: 200 EA

Site	Location	Lot/Serial	Reference	Quantity
10-301	010RC001		PL000248	100.0
10-301	010RC001		PL000249	100.0

Line: 0

Sales/Job:

Address:

Remark:

Effective Date: 8/3/2012

Site	Location	Lot/Serial	Reference	Quantity
10-301	010RC001		PL000248	100.0

5 Back Next

QAD WH-REC-601

Receiving uses standard QAD core functionality and screens.

The following topics present screen navigation hints when you are not familiar with processing a receipt.

- 1 .Enter the item and quantity.
- 2 Confirm that the site (10-301) and location (your receiving location) are correct.
- 3 Click Next.
Two frames display the receipt load information.
- 4 Click Back to navigate to the first frame.

Exercise - Receive - Navigate (Continued)

Receive 200ea item 03210 in WH 01

Click <Back> again to navigate back to the main receiving frame

Item Number: 03210
Description: 1000 wipes
Disinfectant
Quantity: 200.0
Unit of Measure: EA

Lot/Serial Control: UM: EA
Site: 10-301
Location: 010RC001

Receipt Detail - Quantity: 200 EA

Site	Location	Lot/Serial	Reference	Quantity
10-301	010RC001		PL000248	100.0
10-301	010RC001		PL000249	100.0

Line: 0
Sales/Job:
Address:
Remark:
Effective Date: 8/3/2012

Site	Location	Lot/Serial	Reference	Quantity
10-301	010RC001		PL000248	100.0

Back

Next

Click Back again to navigate back to the main receiving frame.

Exercise - Receive - Navigate (Continued)

Receive 200ea item 03210 in WH 01

Item Number: 03210		Lot/Serial Control:	UM: EA
Description: 1000 wipes			
Disinfectant			
Quantity:	200.0	Site: 10-301	
Unit of Measure: EA		Location: 010RC001	
Conversion:	1.0000	Lot/Serial:	
		Difference:	
Unit Cost:	2.00	Multi Entry: ☒	
Order:		Total Qty:	200.0
Line: 0		Total Cost:	400.00
Sales/Job:			
Address:			
Remarks:			
Effective Date: 8/3/2012			
Debit Account:			
Credit Account: 6610	Mech: ADM	Purchases-Project	

Is all information correct

4
Yes
No

Back
Next

QAD
WH-REC-604

- 1 Respond to the prompt to display item and lot/serial detail with No.
Note The prompt does not display when receiving only one pallet.
- 2 Leave the Shipper field blank.
- 3 Click Next.
- 4 Respond to the prompt that verifies that all information correct with Yes.
 The receipt is complete

Exercise - Receive - Navigate (Continued)

Receive an item not setup in the warehouse

Receipts - Unplanned (3.9)

Item Number: 03110	Lot/Serial Control: L	UM: EA
Description: Pump, Medical		
Disinfectant		
Quantity: 100.0		
Unit of Measure: EA		
Conversion: 1.0000		
Unit Cost: 2.00		
Order: 0		
Line: 0		
Sales/Job:		
Address:		
Remarks:		
Effective Date: 8/3/2012		
Debit Account:		
Credit Account: 6610	Mech	ADM
		Purchases-Project

Site: 10-300
 Location: 010
 Lot/Serial: I
 Reference:
 Multi Entry: ☒
 Total Qty:
 Total Cost:

QAD

WH-REC-605

Next, you receive an item that is not assigned to and setup in the warehouse.

In the example above, you receive 100 of item 03110 using Receipts-Unplanned (3.9). The first thing to notice is that you need to change the Site and Location fields to match QMI data, so, enter:

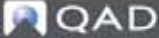
- Site 10-301
- Location 010RC001.

Exercise - Receive - Navigate (Continued)

Receive an item not setup in the warehouse

Receipts - Unplanned (3.9)

Item Number: 03110	Lot/Serial Control: L	UM: EA
Description: Pump, Medical		
Disinfectant		
Quantity: 100.0		
Unit of Measure: EA	Site: 10-300	
Conversion: 1.0000	Location: 010	
	Lot/Serial: 123	
	Reference:	
	Multi Entry:	
Unit Cost:	Total Qty:	
Order:	Total Cost:	

 QAD WH-REC-608

Next, you receive an item that is not assigned to and setup in the warehouse. In the example, you receive 100 of item 03110 using Receipts-Unplanned.

This item is setup for lot/serial, so you need to enter a lot/serial number. Also, notice that you need to change the site and location to the QMI data, so enter:

- Site 10-30
- Location 010RC00.

Exercise - Receive - Navigate (Continued)

Inventory is received, but nothing happens

Receipts - Unplanned (3.9)

Item Number: 03110
 Description: Pump, Medical
 Disinfectant
 Quantity: 100.0
 Unit of Measure: EA
 Conversion: 1.0000

Lot/Serial Control: L UM: EA
 Site: 10-301
 Location: 010RC001
 Lot/Serial: 123
 Reference:
 Multi Entry: ☐
 Total Qty: 100.0
 Total Cost: 0.00

1

Error

X

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

OK

2

Inventory Detail Inquiry

Site: 10-301
 Warehouse: 01
 Location:

Item Number: 03110
 Lot/Serial: 123
 Reference:

Displ
Disp N

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

Item is received but not putaway or assigned an LPN

WH-REC-607

Using navigation techniques introduced in the previous exercise, click Next, Next, Next, (three times) and Yes.

You receive the error, No destination location could be found.

Review Inventory Detail Inquiry. The program displays that the system received the item into the receiving location, but the item is NOT routed for put-away.

Implementation Consideration

Implementation Consideration

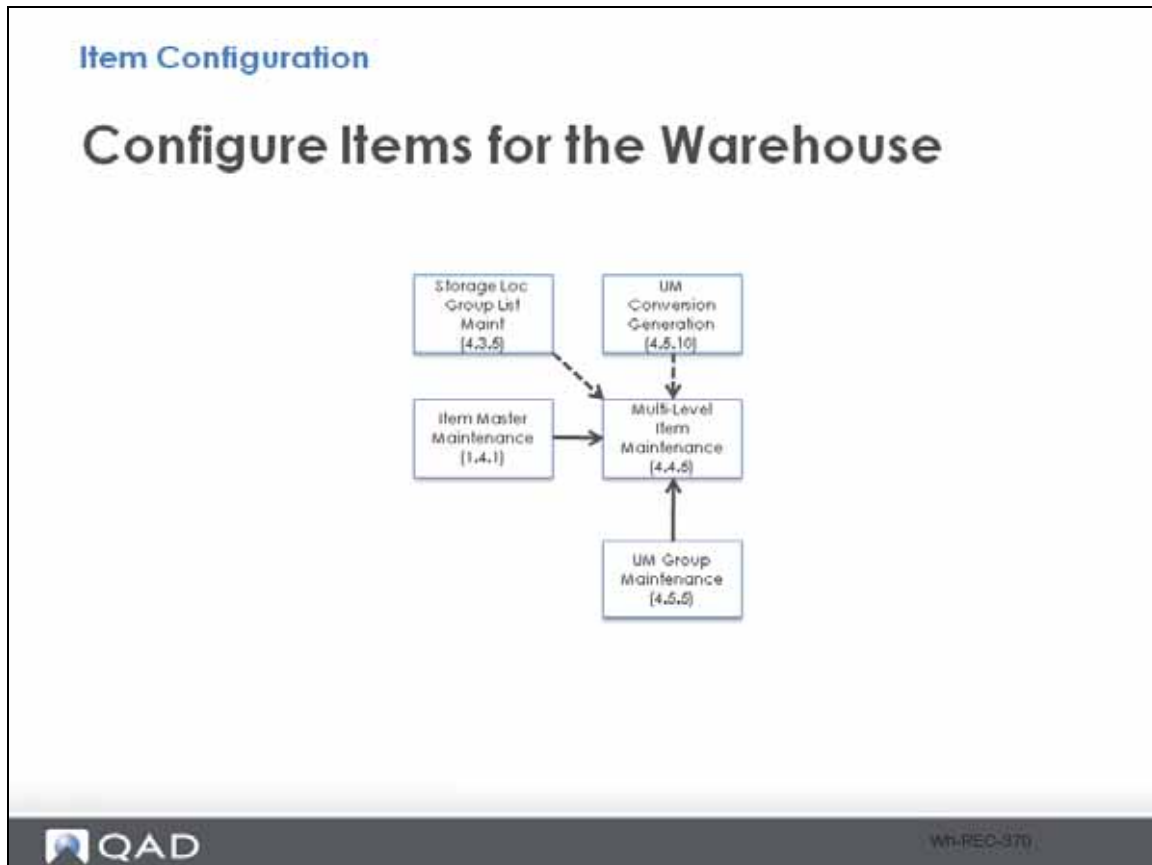
All items need to be setup in Multi-Level Item Maintenance.

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 Configuration



Did You Know

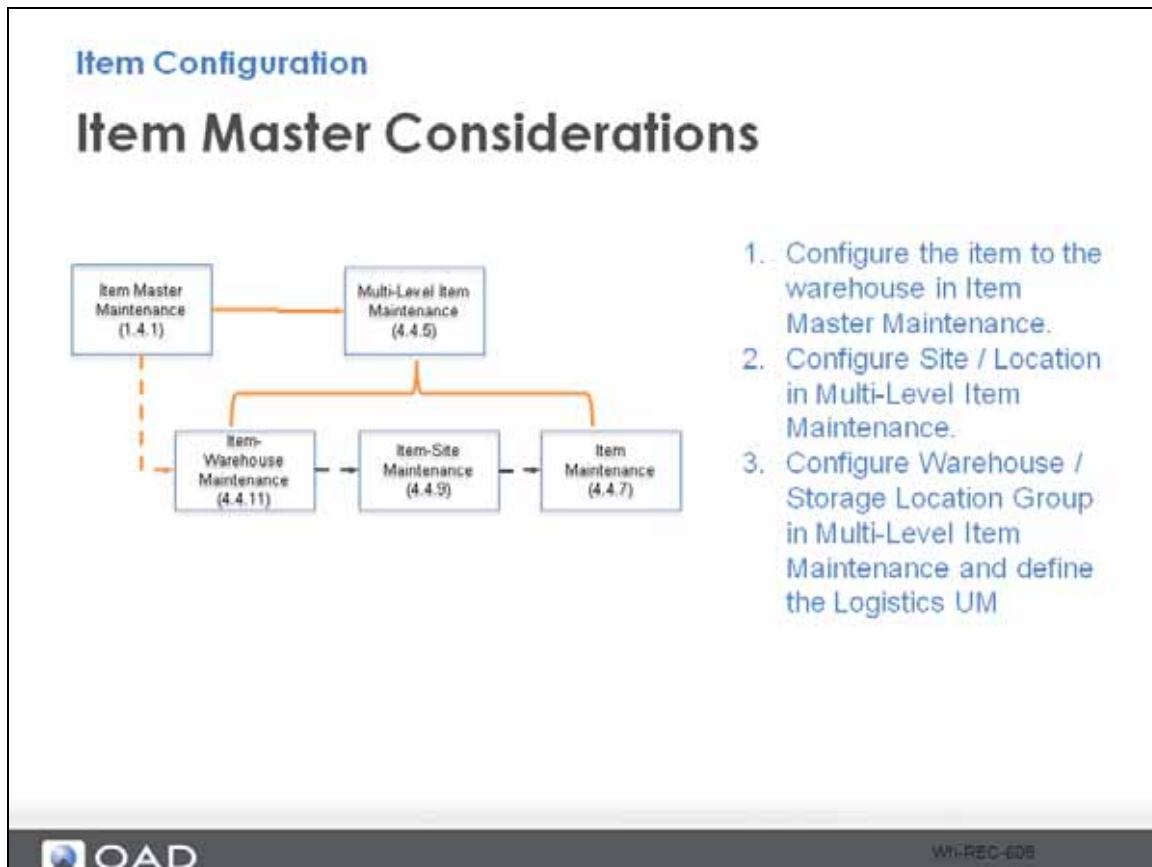
Items must first exist in QAD Core. QAD Warehousing has more specific item characteristics managed at the warehouse level.

You set up the storage location group in Storage Location Group Maintenance.

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, you set up the storage location group, then 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 Master Considerations



In the graphic above, you:

- Configure the item to the warehouse in Item Master Maintenance.
- Configure site and location in Multi-Level Item Maintenance.
- Configure the warehouse and storage location group in Multi-Level Item Maintenance and define the Logistics UM.

Did You Know

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

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: 8

Lot/Serial Control:

Site: 10-301

Location: 01

Location Type:

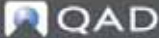
Auto Lot Numbers: ☐

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.

 QAD

WHREC-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

UM: EA

Site: 10-301

Unscented Disinfectant

Pump

Distribution Site 1

Site Data and Default Warehouse Data

Location: 010RC001

Warehouse Item Type:

Replenishment Type:

Popularity:

Default Kanban Quantity:

Singl

Iss

OPC

Kanban F

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.


WT-REC-372

Next, you configure the site/location 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.

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

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:

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

QAD WM-REC-373

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

Exercise - Item Setup

QMI Exercise – Item Setup

Add item 03110 to the warehouse

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

 WH-REC-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.

Exercise - Item Setup (Continued)

QMI Exercise – Item Setup

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:

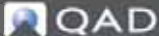
Single PA Trans:
 Issue Method:
 Print ID:
 ID Qty:
 OPC Threshold: 0.0

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

WM-RBE-326

Did You Know

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

Exercise - Item Setup (Continued)

QMI Exercise – Item Setup

Receiving Triggers

Receipts - Unplanned (3.9)

Item Number: 03110 Lot/Serial Control UM: EA

Description: Pump, Medical

Disinfectant

Quantity: 100.0

Unit of Measure: EA

Conversions: 1.0000

1 Site: 10-301 Location: 010RC001 Lot/Serial

2 Receipt Detail - Quantity: 100 EA

Site	Location	Lot/Serial	Reference	Quantity
10-301	010RC001		PL000250	100.0

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

Inventory Detail Inquiry

Site: 10-301 Item Number: 03110 Warehouse: 01 Lot/Serial: Location: Reference:

Location	Status	Qty	Qty	Expect	Expect	Display
Lot/Serial	Ref	UM	On Hand	In	Out	Disp
010RC001	Y-Y-N	EA	100			100
010RC001	PL000250	PL				
010RC001	Y-Y-N	EA	100			
040PL002	Y-Y-N	EA				100
040PL002	PL000250	PL				

22 QAD WH-REC-327

- 1 When you configure the item and set it up in the warehouse, the system automatically assigns the correct site and location, and a lot/serial number is not required.
- 2 When the receipt is processed, the system assigns an LPN.
- 3 Viewing Inventory Detail Inquiry, you can see that put-away rules are triggered creating a move task into storage.

Implementation Consideration

Implementation Consideration

Not all items are created equal.

You can setup multiple item quantity configurations using Unit of Measure Groups.

WH-REC-609

Create New UM Groups

UM Groups

Create New Unit of Measure 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	


WH-REC-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.

UM Groups Help During Implementation

UM Groups

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

WHREC-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.

Assign New UM Group to Item

UM Groups

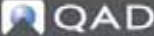
Assign the new UM Group to the Item

Multi-Level 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.

Run UM Conversion Generation

UM Groups

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: ☒

- Leaving all fields blank will run conversions for all UM Groups
- Be sure to check all 3 boxes at bottom

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

WM-FEC-460

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.

Exercise- Add a New UM Group

QMI Exercise – Add a new UM Group

Create new Unit of Measure 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



Exercise- Add a New UM Group (Continued)

QMI Exercise – Add a new UM Group

Receive 1000 each...what is different?

Order: WMSP05		Supplier: 1051002		Status:	Packing Slip:				
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	03 Receipt Detail - Site: 10-301 Quantity: 1000 EA								
	Location	Lot/Serial	Ref	Supplier Lot	Quantity				
	010RC001		PL004440		1,000.0				

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

Inventory Detail Inquiry									
QAD									
Site: 10-301		Item Number: 03110		Display		Disp Non-			
Warehouse:		Lot/Serial:		Reference:		On			
Location:		Warehouse: 01		Warehouse 1					
Location	Status	Qty	Qty	Expect	Expect	De			
Lot/Serial	Ref	UM	On Hand	In	Out	Al			
010RC001	Y-Y-N	EA	1000				1000		
040PL003	Y-Y-N	EA					1000		
	PL004440	PL							
	PL004440	PL							

Exercise - Add More Items and Create UM Groups

Exercise

Add More Items and Create UM Groups

03240:
Lubricant 4 liter tub



x 4



x 10




WARE-101

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.

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

When done properly, the system creates three pallets with 40 each.

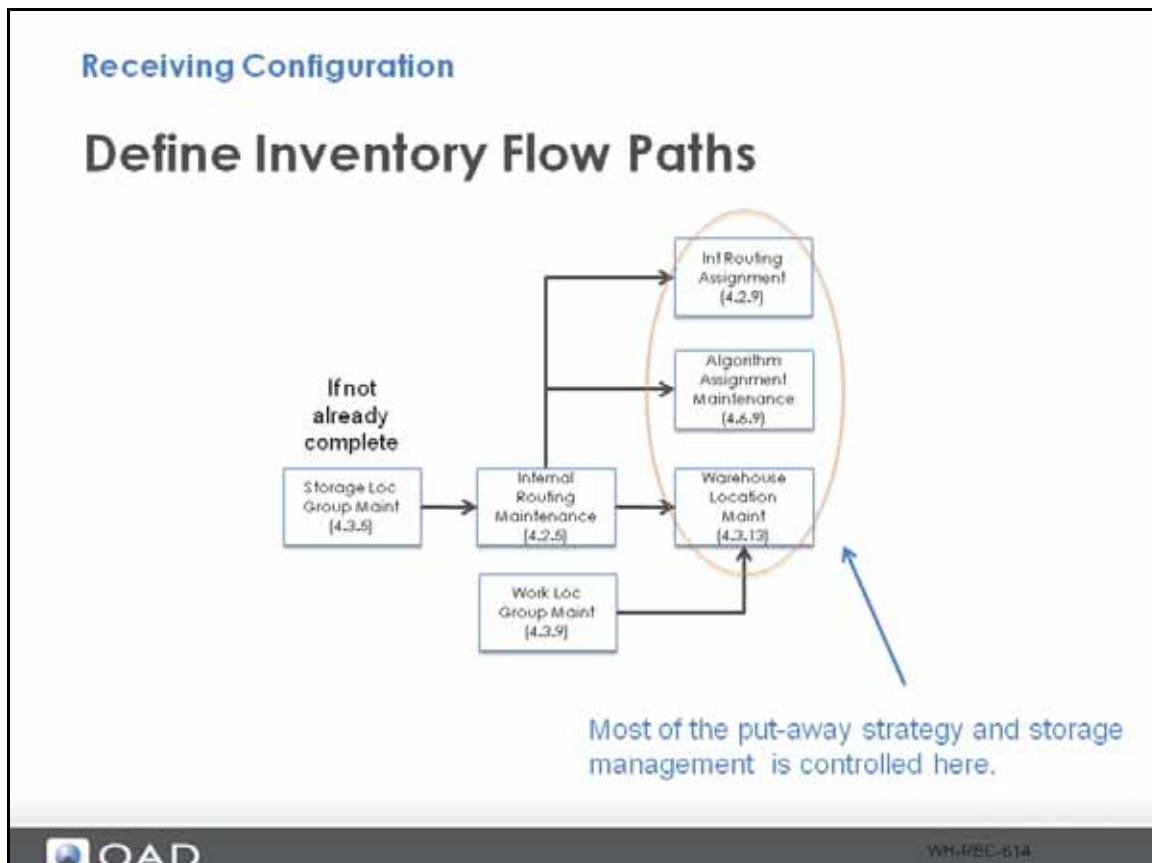
6 Use Movement Confirmation Workbench to complete all moves.

Question: What is the warehouse space utilization? (Use Location Full% Report.)

Relative full = 18.75%

Absolute full = 33.33%

Define Inventory Flow Paths



Did You Know

Internal routings (IRs) control the flow of inventory between AREAS.

Define Routes

Define routes

Internal Routing Maintenance

Site: 10-301
 Description: Receipts
 Sequence: 10

Warehouse: 01
 Internal Routing Group: 010

Internal Routing: 01RCT

Site: 10-301
 Description: Receipts
 Sequence: 20

Warehouse: 01
 Internal Routing Group: 040

Internal Routing: 01RCT

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

WH-REC-016

Did You Know

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

Auto, Manual, or Timed Processing

Auto, Manual or Timed Processing

Internal Routing Maintenance

Miscellaneous Options:

Mode: **Manual** 1

New Unit of Measure: 3

Clear Shortages: ☐

Create Shipper: ☐

Check Inspection: ☐

WILL RETURN

2

Engine Activation
Loc: 010RC001
Chk:
un
03210
Ref: PL000247
Cancel: No
Eng process compl

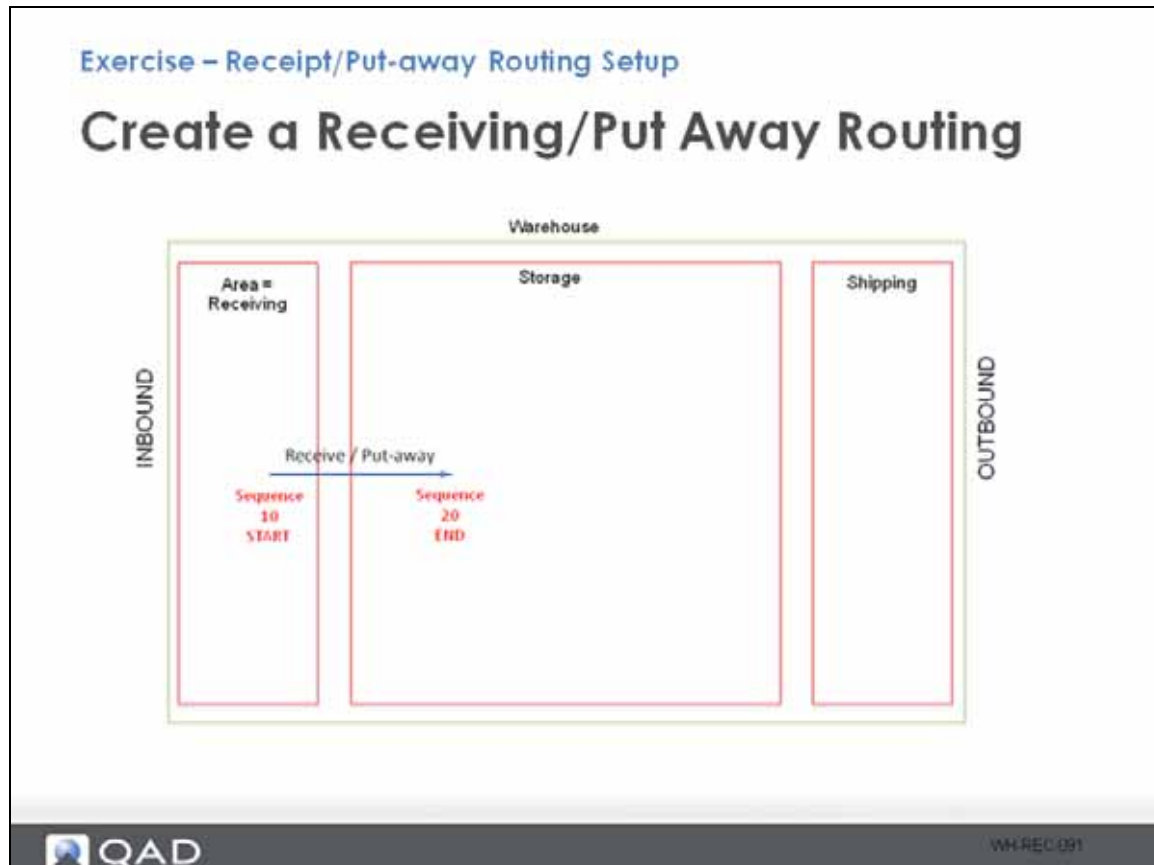
QAD

WH-REC-617

Did You Know

There are three types of engine processing that can be applied to Internal Routings, Auto, Manual and Timed.

Exercise - Set up an Internal Routing



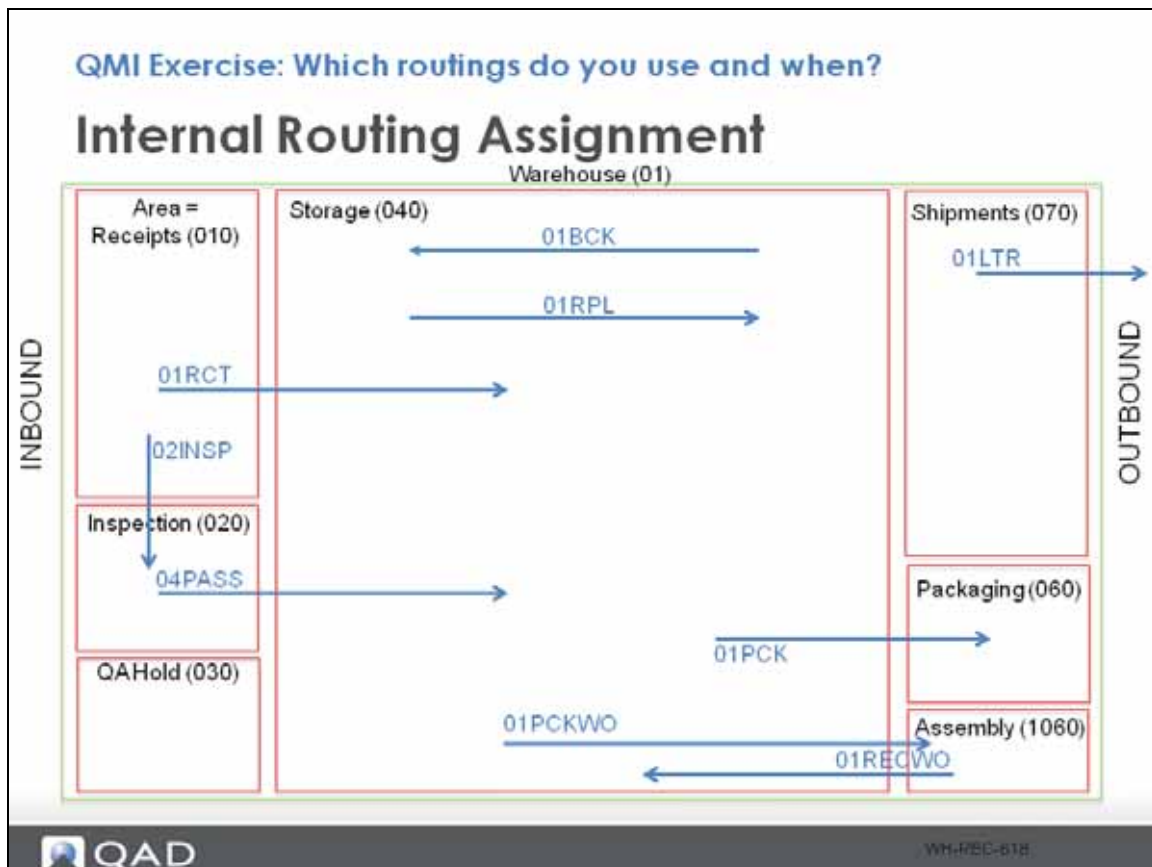
All product is received and moved direct to storage.

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		

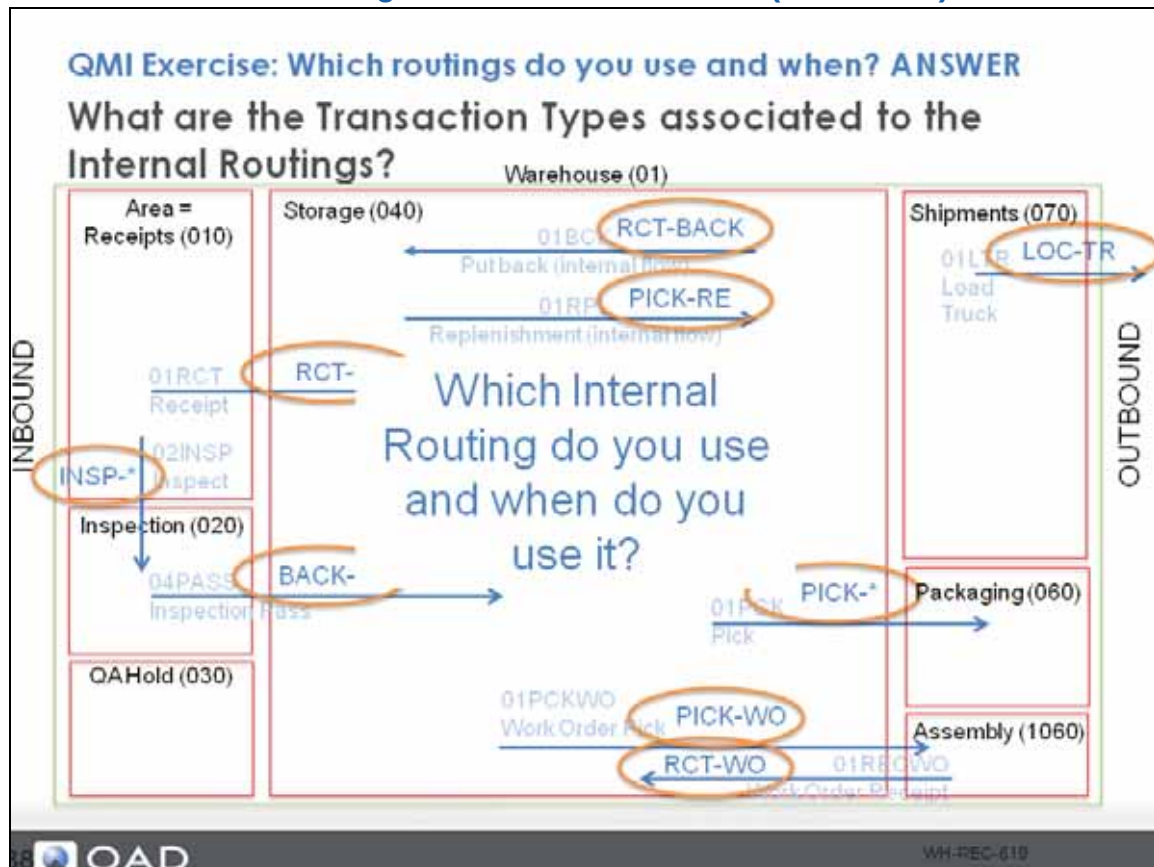
Note The default engine processing is set to Auto in the Internal Routing Maintenance Miscellaneous Options frame. Auto engine processing enables a real-time automated warehouse by automatically generating work tasks when triggers occur. When set to Auto, the system automatically creates put-away tasks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

Exercise - Which Routings Do You Use and When



Use Internal Routing Assignment to assign an internal routing to a transaction type.

Exercise - Which Routings Do You Use and When (Continued)



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.

Exercise - Which Routings Do You Use and When (Continued)

Which routings do you use and when

Internal Routing Assignment

The screenshot shows the 'Internal Routing Assignment' form in QAD. The form contains the following fields and values:

- Transaction Type: RCT-*
- Site: 10-301
- Warehouse: 01
- Item Number: (empty)
- Warehouse Item Type: (dropdown menu)
- Address: (empty)
- Custom: ☐
- Internal Routing: 01RCT
- Custom Program: (empty)

Three numbered callouts explain the routing logic:

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

QAD WH-REC-620

When this transaction type is created, and associated with the site, warehouse, item, item type, and address, the material flow is initiated.

Exercise - Set up an Internal Routing Assignment

Exercise – Assign a Transaction to the Routing

Receiving/Put-Away Routing Assignment

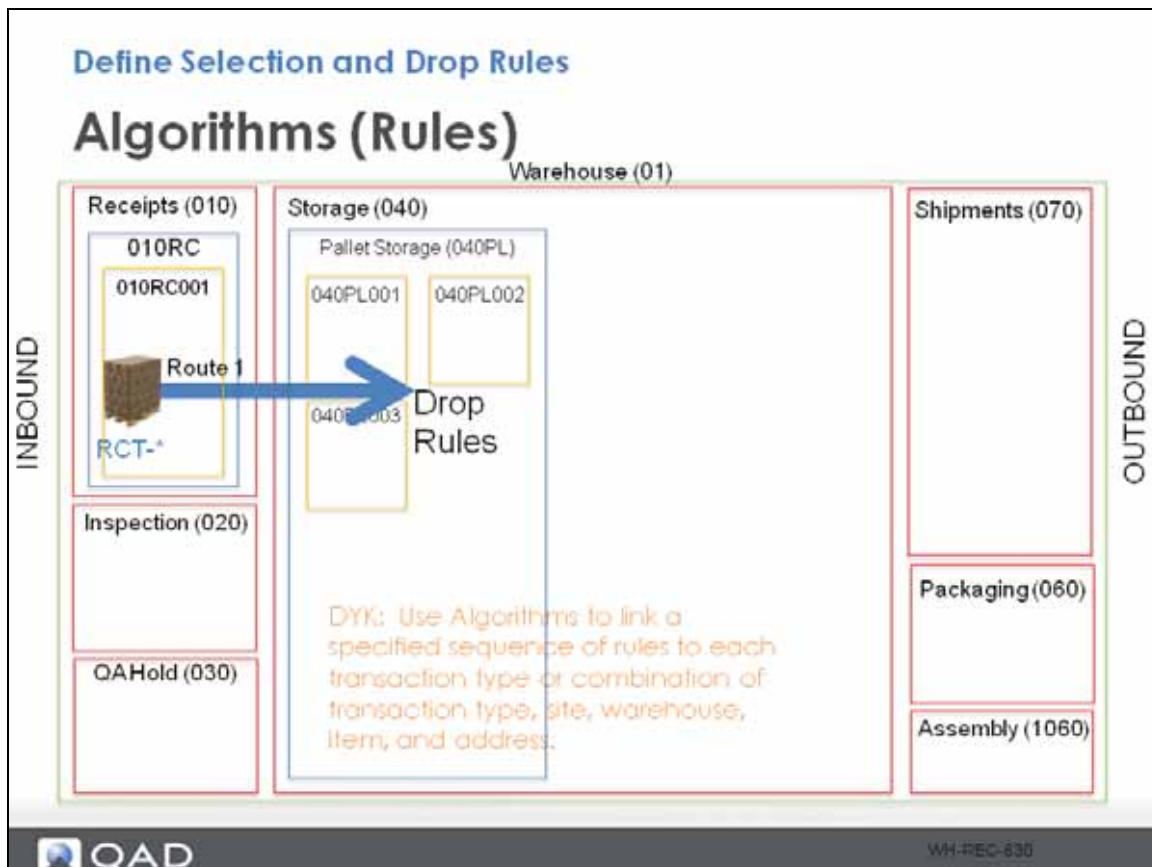
Transaction Type	rct-*
Site	10-301
Warehouse	
Internal Routing	

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	

Algorithms (Rules)



Algorithms help companies manage inventory control and space utilization by addressing specific operating scenarios. For example, Algorithms determine which inventory to select for a move or pick, and which location will be used to drop (in this example, put-away) a unit load.

Did You Know

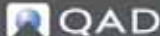
Use algorithms to link a specified sequence of rules to each transaction type or combination of transaction type, site, warehouse, item, and address.

Algorithms - 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

WM-FEC-632

Did You Know

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

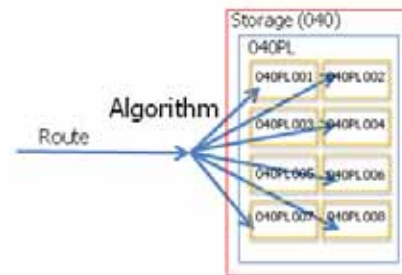
An Algorithm is a processing program that takes into account particular conditions before attempting to complete an inventory move.

Algorithms- Rule Categories are Available for Put-Away

What Rule Categories 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



Algorithms- Rule Categories are Available for Put-Away (Continued)

Which rules to use and when

Algorithm Assignment Maintenance

Algorithm Type: PA Transaction Type: RCT-*

Site: 10-301 Warehouse: 01

Item Number: Warehouse Item Type: Custom: ☐

Address:

Assigned Algorithms

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

Sequence: 10 Algorithm: 3

Description: S.L. - Merge with item

Sequence here is different than sequence for Internal Routing.

 QAD

WH-RBC-634

The sequence in the slide above is different than the sequence for an internal routing.

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 two 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

WH-REC-170

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

Example - Receive Two Pallets (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

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

Example - Receive Two Pallets (Continued)

Example: **TEST = SUCCESS**



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
010RC001	03210	Y-Y-N EA	100	
010RC001	03210	PL000243 PL	100	100
040EA020	90091	Y-Y-N EA	80	
040PL001	03210	PL000032 PL	100	
040PL001	03210	Y-Y-N EA	100	
040PL001	03210	PL000241 PL	100	
040PL001	03210	Y-Y-N EA	100	
040PL001	03210	PL000242 PL	100	
040PL001	03210	Y-Y-N EA	100	
040PL002	03210	PL000243 PL	100	
040PL002	03210	Y-Y-N EA	100	
040PL002	03210	PL000244 PL	100	

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 optimize location utilization.

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 WM-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

 QAD

WM-REC-001

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.

Exercise - Define Put-Away Rules

Exercise – Define Put-Away Rules

Using Algorithms to Define Rules

The screenshot displays the 'Define Put-Away Rules' exercise in the QAD Warehouse Management System. The interface is divided into two main sections: a configuration form on the left and a warehouse layout diagram on the right.

Configuration Form:

- Algorithm Type:** PA
- Site:** 10-301
- Item Number:**
- Address:**
- Transaction Type:** RCT-*
- Warehouse:** 01
- Warehouse Item Type:**
- Customs:** ☐

Assigned Algorithms:

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

Warehouse Layout Diagram:

The diagram illustrates the warehouse layout with three main areas: **Area = Receiving**, **Storage**, and **Shipping**. The **Storage** area is further divided into **Pallet** and **Where to?** sections. Arrows indicate the flow of goods from **Receiving** to **Storage** and from **Storage** to **Shipping**. The **Where to?** section is highlighted, indicating the focus of the exercise.

QAD WH REC 111

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?

Exercise - Receive Items

Exercise

Receive Items

Receipts - Unplanned

Go To Actions Copy Print Preview Attach

Item Number: 03210 Lot/Serial Control: UM: EA

Description: Desinfectant 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-000

- 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? _____.

For screen navigation hints, refer to “Exercise - Receive - Navigate” on page 126 in this chapter.

- 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.

Bonus Coverage: Three-Step Sequence

Bonus Coverage: Three-Step Sequence

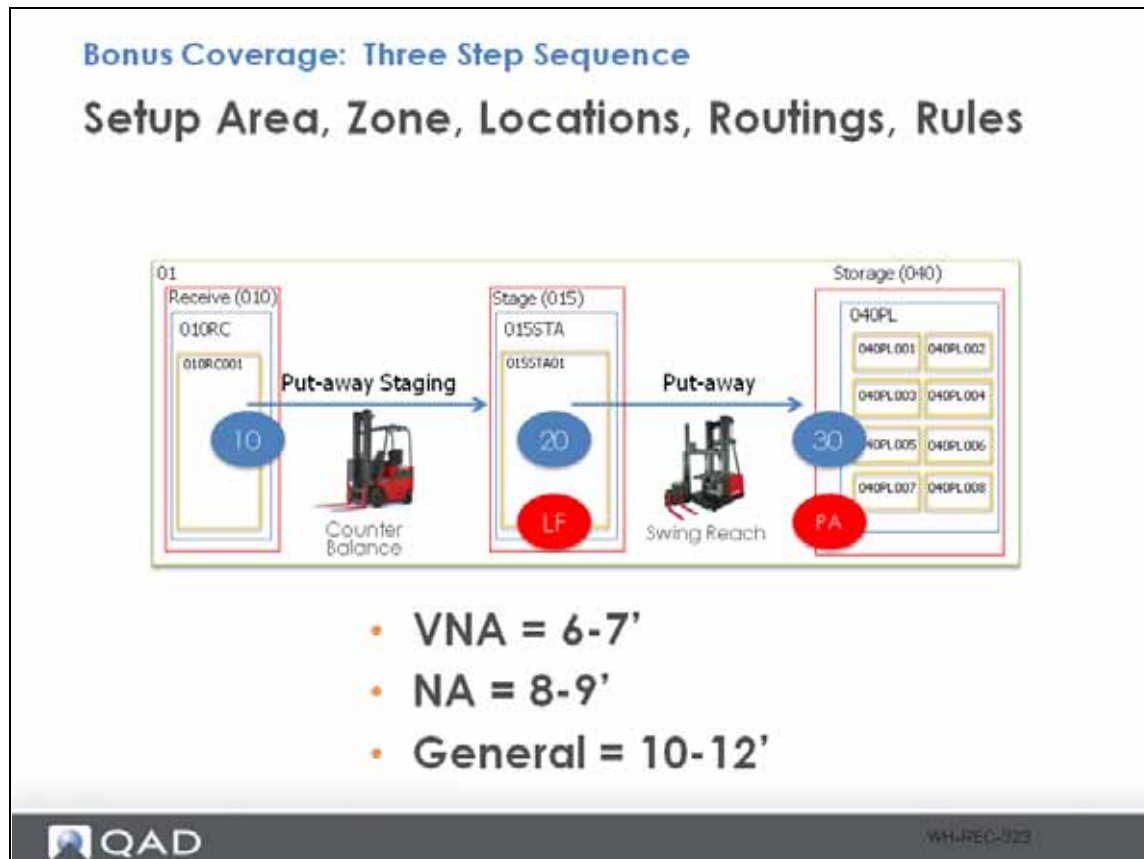
A three-step routing represents two transactions and can help when moving product to a staging location.

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

QAD WARE 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: Three Step Sequence 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]:

 WHREC-924

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.

Bonus Coverage - 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:
Popularity:
Storage Type:
Warehouse Location Type:
Travel Sequence:
Dedicated: ☐

Picking Type:
Preferred UM:
Opportunity Count Frequency: 0
Last Opportunity Count:
Stage (In): Put Stag
Stage (Out):

 QAD WH-REC-324

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 - Not all Locations are Created Equal

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

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:

Stage (In):

QAD

WH-REC-120

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.

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

Popularity Code

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

WH-REC-130

Did You Know

Popularity codes can be assigned at the item, location or site levels.

Location Popularity

Location Popularity

Keep Popular Product Close

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

Shipping & Receiving

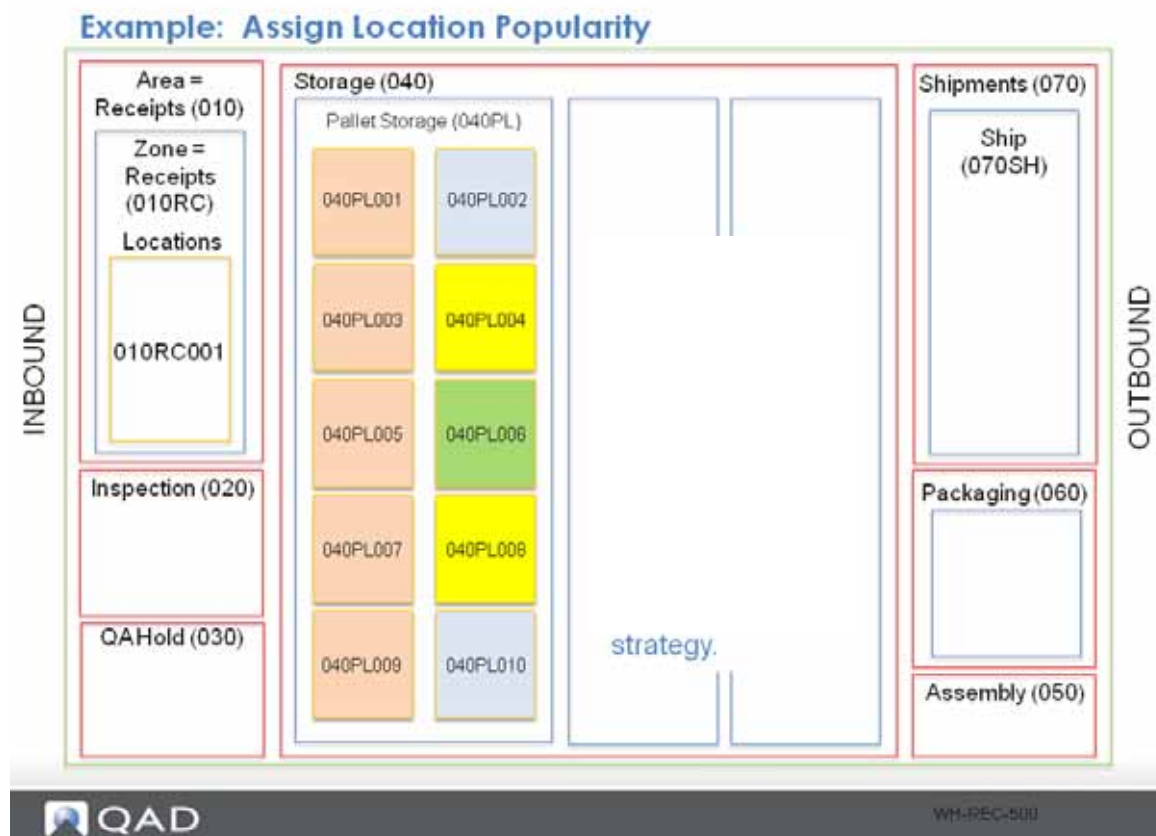
 QAD

WM-REC-410

Did You Know

Locations can be categorized by popularity to support slotting strategies.

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 Location Popularity

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 Dist:

Popularity: AAA

Storage Type:

Warehouse Location Type:

Travel Sequence: 0

Dedicated: ☐

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

Opport:

Est opportunity count:

Stage (In):

Stage (Out):

QAD WH-REC-510

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

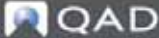
Algorithm Assignment Maintenance

Algorithm Type: PA	Transaction Type: RCT-*
Site: 10-301	Warehouse: 01
Item Number:	Warehouse Item Type:
Address:	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-020

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

65  QAD WH-REC-520

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

QAD

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	

Location capacity = 100 EA = 1 Pallet

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
 Warehouse: Lot/Serial: Display W
 Location: Reference: Disp Non-W
 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	Y-Y-N	EA	100			100
040PL004	Y-Y-N	EA		100		
040PL006	Y-Y-N	EA	100			
040PL008	Y-Y-N	EA		100		

Location capacity = 100 EA = 1 Pallet

67 QAD WH-REC-050

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.

Location Popularity Ranking and Put Away Selection

Location Popularity Ranking and Put-away Selection

Location	002	004	006	008	010
Popularity	1	A	12	0	8
Assignment	2	4	3	1	5
Popularity	AA	A1	A	A1A	1A
Assignment	5	3	2	4	1
Popularity	88	AA	A	8	AAA
Assignment	5	2	1	4	3
Popularity	1051	100	0	151	1001
Assignment	4	2	1	5	3
Popularity	0001	01	1	001	0
Assignment	2	4	5	3	1
Popularity	0000	00	0	000	00000
Assignment	4	2	1	3	5
Popularity	2	100	0	1001	00000001
Assignment	5	3	1	4	2
Popularity	1000	10	1	101	10001
Assignment	3	2	1	5	4
Popularity	1000	100	0	500	10000
Assignment	3	2	1	5	4
Popularity	100	10	0	15	2
Assignment	3	2	1	4	5
Popularity	100	10	0	15	01
Assignment	4	3	1	5	2
Popularity	100	01	1	001	0
Assignment	5	3	4	2	1
Popularity	40	20	10	30	50
Assignment	4	2	1	3	5

Popularity Rules:

1. Numeric is higher than alpha
2. 0 is the highest priority number
3. You can use alpha/numeric combinations
4. A is higher than AA which is higher than AAA...
5. 1001 is less than 151 - popularity rank goes position by position

Popularity Rules

- 1 Numeric is higher than alpha.
- 2 Zero (0) is the highest priority number.
- 3 You can use alpha/numeric combinations.
- 4 A is higher than AA which is higher than AAA.
- 5 1001 is less than 151 - popularity rank goes position by position.

Bonus: Cross-Docking

Bonus Coverage

Cross Docking Support

Occasionally there could be an open (outbound) order for an item being received. In this situation it might be more efficient to move the received item direct to shipping (cross docked) to satisfy the order requirements.

In QAD Warehousing this applies to back ordered items only.



WH-REC-700

Cross-Docking - Cross-Dock Setup

Bonus Coverage – Cross Dock Setup

Cross Docking Support

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: ☒

Transaction Type: SHRT-SO
Site: 10-301
Warehouse: 01
Item Number:
Warehouse Item Type:
Address:
Custom:
Internal Routing: 01SHTPK
Custom Program:

Algorithm Type: SC
Assigned Algorithms:
Seq Algo Description
10 2 Sales Order Clearance by Due Date by Priority

Algorithm Type: PK
Assigned Algorithms:
Seq Algo Description
10 1 Pick by Location

Algorithm Type: LF
Assigned Algorithms:
Seq Algo Description
10 3 Merge with same order
20 1 First Location in First Storage Location Group

Transaction Type: RCT-*
Transaction Type: SHRT-*
Transaction Type: SHRT-SO

Transaction Type: PICK-SO
Description: Sales Order Pick
Picking and Shortage Clearance Details:
Control Over Pick at SLG: ☒
Over Pick: ☒
Shortage Definition: 3
Shortage Quantity Definition: 2
Shortage Action: 2
Shortage Window: 2

QAD WHREC710

- 1 Modify Sequence 20 of the receiving internal routing to check for a shortage (clear shortages).
- 2 Create an internal routing from receiving to packaging.
- 3 Assign the SHRT-SO transaction type to the new internal routing.
- 4 Assign SC algorithm type 2 to the RCT-* transaction type.
- 5 Assign PK algorithm type 1 to SHRT-* transaction type.
- 6 Assign LF algorithm type 3, 1 to transaction type SHRT-SO.
- 7 Modify the PICK-SO transaction type.

Cross-Docking: Cross-Dock Setup (continued)

Bonus Coverage – Cross Dock Setup

Cross Docking Support

1. Release a sales order for an item with zero inventory on hand
 - Assume 03210 = 0 on hand
2. Receive the back ordered item
 - 03210 = 200 ea
3. Process the Cross Dock movement and put-away as required



WH-REC-720

To setup a cross dock:

- 1 Setup a sales order for an item with not enough inventory in stock.
- 2 Release the sales order.
- 3 Pick the sales order.
- 4 Receive more of the back ordered item.
- 5 Partial will go to shipping for merge with the open order.
- 6 The remaining will be routed to put-away.

Cross-Docking: Cross-Dock Setup (Continued)

Bonus Coverage – Cross Dock Setup

Cross Docking Support



Inventory Detail Inquiry

Site: 10-301 Item Number: 03210 Display Whse Loc
Warehouse: 01 Lot/Serial: Disp Non-Whse Loc
Location: Reference: Output: I

Location Lot/Serial	Status Ref	Qty UM On Hand	Qty Alloc	Expect In	Expect Out	Detail Alloc
010RC001	Y-Y-N PL000244	EA PL	100			100
010RC001	Y-Y-N PL000245	EA PL	100			100
040PL001	Y-Y-N PL000245	EA PL		100		
060PA001	Y-Y-N PL000244	EA PL		100		

 WH.REC.730

Exercise - Cross-Docking

Exercise

Cross-Docking

- Cross-Dock Setup
- Cross-Dock Execution


WH-REC-BBQ

Cross Dock Setup

- 1 Modify the existing receiving routing using Internal Routing Maintenance
 - a Site = 10-301
 - b Warehouse = _____
 - c Internal Routing = _____
 - d Seq = 20
 - e Next 2x (check Clear Shortages box).

- 2 Create a new routing using Internal Routing Maintenance

Field	Start	End
Site		10-301
Warehouse		
Internal Routing		
Description		X-Dock
Sequence	10	20

Field	Start	End
IRG		
	(receiving)	(shipping)

3 Assign a transaction type to the new routing using Int Routing Assignment Maint

Transaction Type	SHRT-SO
Site	10-301
Warehouse	
Internal Routing	

4 Assign shortage clearance rules for receiving using Algorithm Assignment Maintenance

Algorithm Type		SC
Transaction Type		rct-*
Site		10-301
Warehouse		
Sequence	10	---
Algorithm	2	---

5 Assign pick rules for the shortage transaction using Algorithm Assignment Maintenance

Algorithm Type		PK
Transaction Type		SHRT-*
Site		10-301
Warehouse		
Sequence	10	---
Algorithm	1	---

6 Assign a location find rule for shortage clearance using Algorithm Assignment Maintenance

Algorithm Type		LF
Transaction Type		SHRT-SO
Site		10-301
Warehouse		
Sequence	10	20
Algorithm	3	1

7 Change shortage pick rules using Transaction Type Maintenance

- Transaction Type = PICK-SO
- Shortage Definition = 3
- Shortage Quantity Definition = 2
- Shortage Action = 2
- Shortage Window = 2

Cross Dock Execution

- 1 Setup a sales order for an item with not enough inventory in stock.
Example Release an order for inventory with zero on hand.
- 2 Release the sales order.
- 3 Receive the back ordered item.
- 4 Partial will go to shipping for merge with the open order.
- 5 The remaining will be routed to put-away (if more than the sales order quantity is received).

Key Learning Points

QAD Warehousing Receiving

Key Learning Points

- Items need to be setup in the warehouse
- Try to find common categories for item
Unit of Measure
- Put-away rules drive storage best practices
- Supports fully automated, partial or manual operations
- Location Popularity category can help manage slotting

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

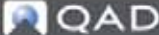
Functional Fit: What We Don't Do So Well

What we don't do so well

Functional Fit: Replenishment

Functionality	Fit	Notes
Supports all basic and advanced replenishment strategies.		

Legend
 Partial
 None

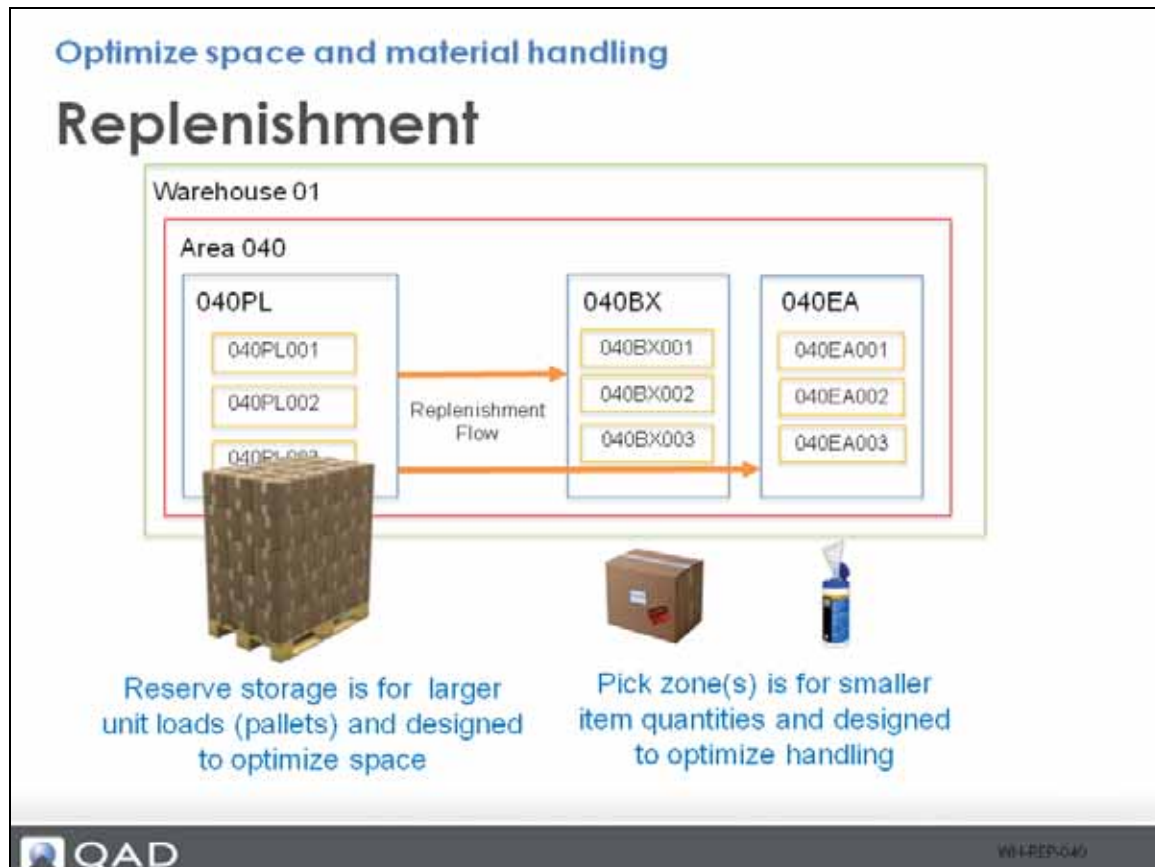
 QAD WH-REP-030

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



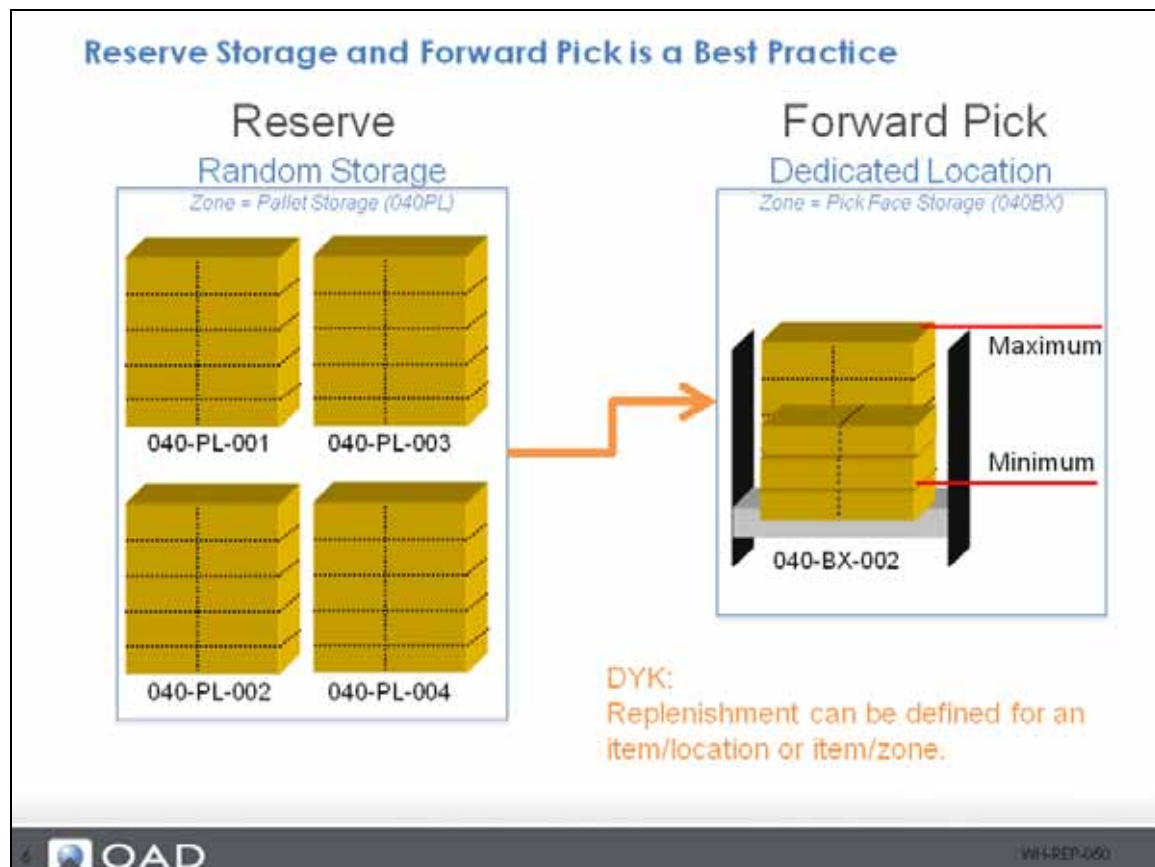
Define the types of items and the quantities that can be stored in the replenishment, or forward-pick locations typically. Picking functions look in these locations first before searching the rest of the warehouse for available inventory.

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%', 'Single PA Trans' set to 'D40PL', 'Issue Method' set to 'D40PL', 'Print ID' set to 'D40PL', 'ID Quantity' set to '0', 'OPC Threshold' set to '0.0', 'Logistics UM' set to 'PL', 'Palet Max Height' set to '0', 'Auto Replenishment %' set to '0.00%', and 'Print Unplanned Issue Tag' set to 'D40PL'.

Auto replenishment requires setting Auto Replenishment flag in two screens.

QAD WAREHOUSING

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.

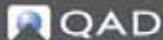
Auto replenishment is set in two places: Warehouse Maintenance and Item-Warehouse Maintenance. You need to set it in both places. If you only set it in one of the two places, replenishment does not work.

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



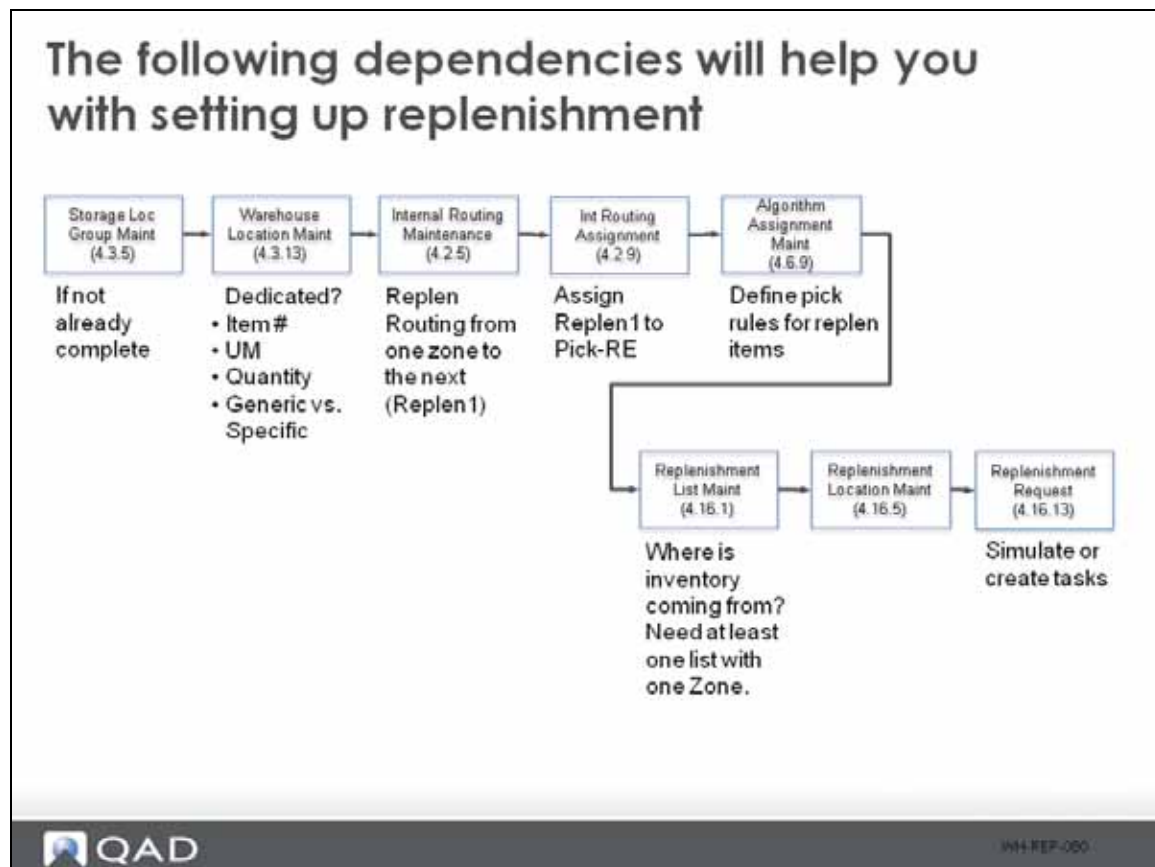
WH:REP:070

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

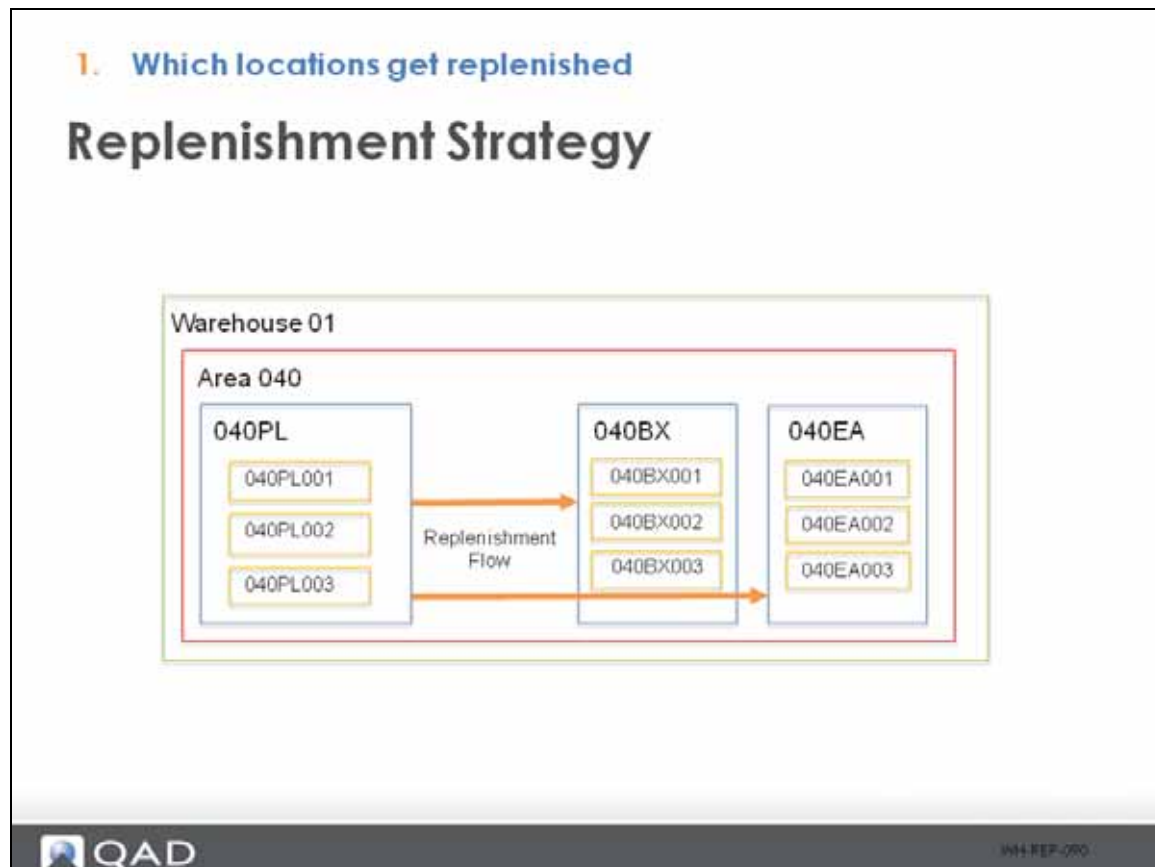


The graphic above shows which programs you use in the setup for replenishment. Under each program, the graphic shows the considerations you need to make when you enter the programs.

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

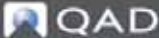
System Code: RF Priority: 10

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:

QAD WH-IRF-110

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 bu 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

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.

In this example, you are setting up a specific location to be replenished with a specific item. This is also known as a dedicated location. You can also setup multiple forward pick locations for the same item. This is common when you want to have more than one location to pick an item and avoid congestion at a single location. Or, some companies use the same item in multiple work centers, and hence, they stock the item in multiple locations. You can still use kanban replenishment for the item even when you have a dedicated replenishment location.

Did You Know

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

Replenish Random Locations in a Zone

4a. Which items and capacities get replenished

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

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

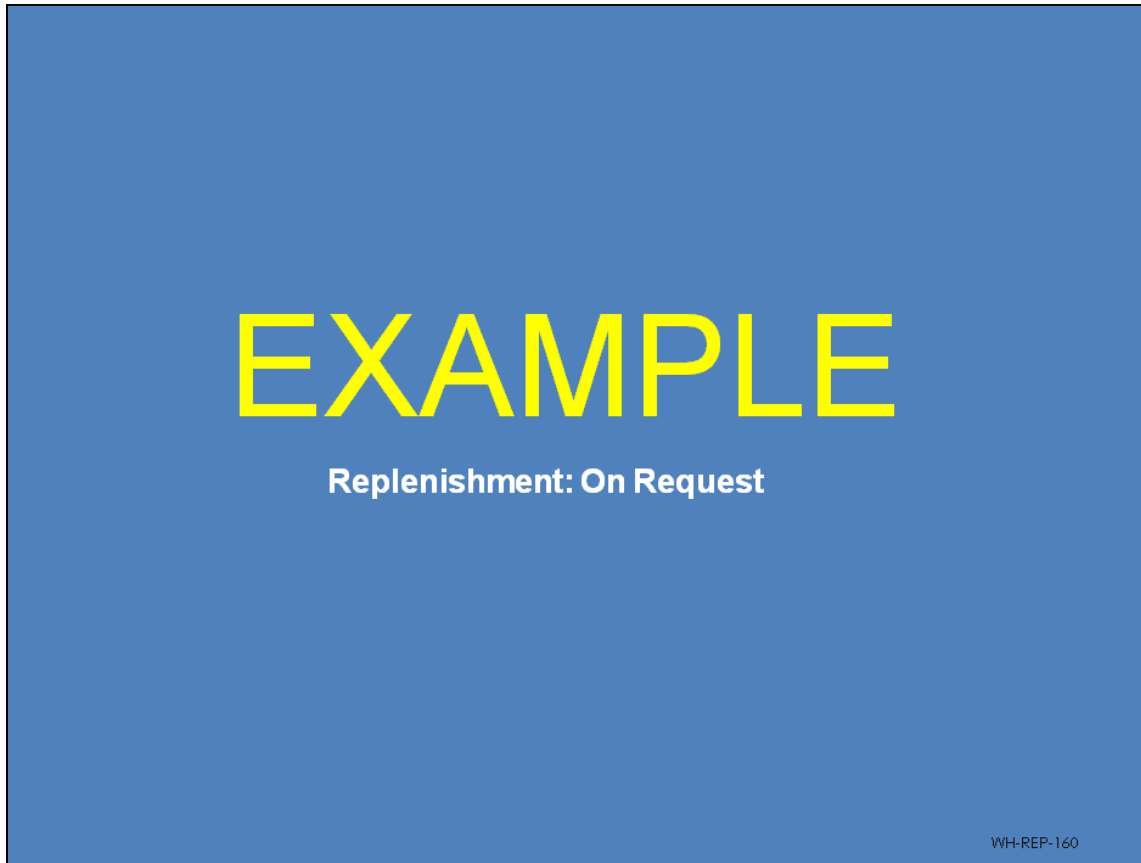
You can setup a Zone replenishment with random vs. dedicated locations.

QAD WH-REP-210

The alternative to a replenishment location is a replenishment zone (SLG). The only difference is in zone replenishment, you are not specifying a location for the item, only that the item must be in any location within the zone. Using zone replenishment will not allow for multiple pick locations within the zone but you could have the same type of location in multiple zones.

If both replenish location and replenish SLG are in use, the replenish Location takes priority; however, best practice is to replenish by location or zone, not both.

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:

 QAD

WH-REP-170

Did You Know

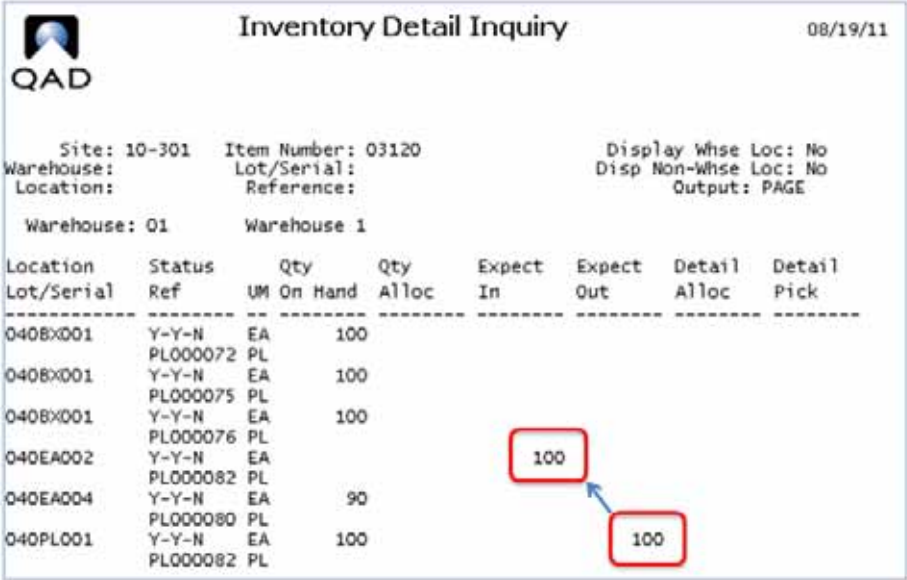
You can simulate replenishment activities or check the Create Transactions box to initiate replenishment transactions.

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

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					
	PL000082	PL					
040EA004	Y-Y-N	EA	90				
	PL000080	PL					
040PL001	Y-Y-N	EA	100				
	PL000082	PL					

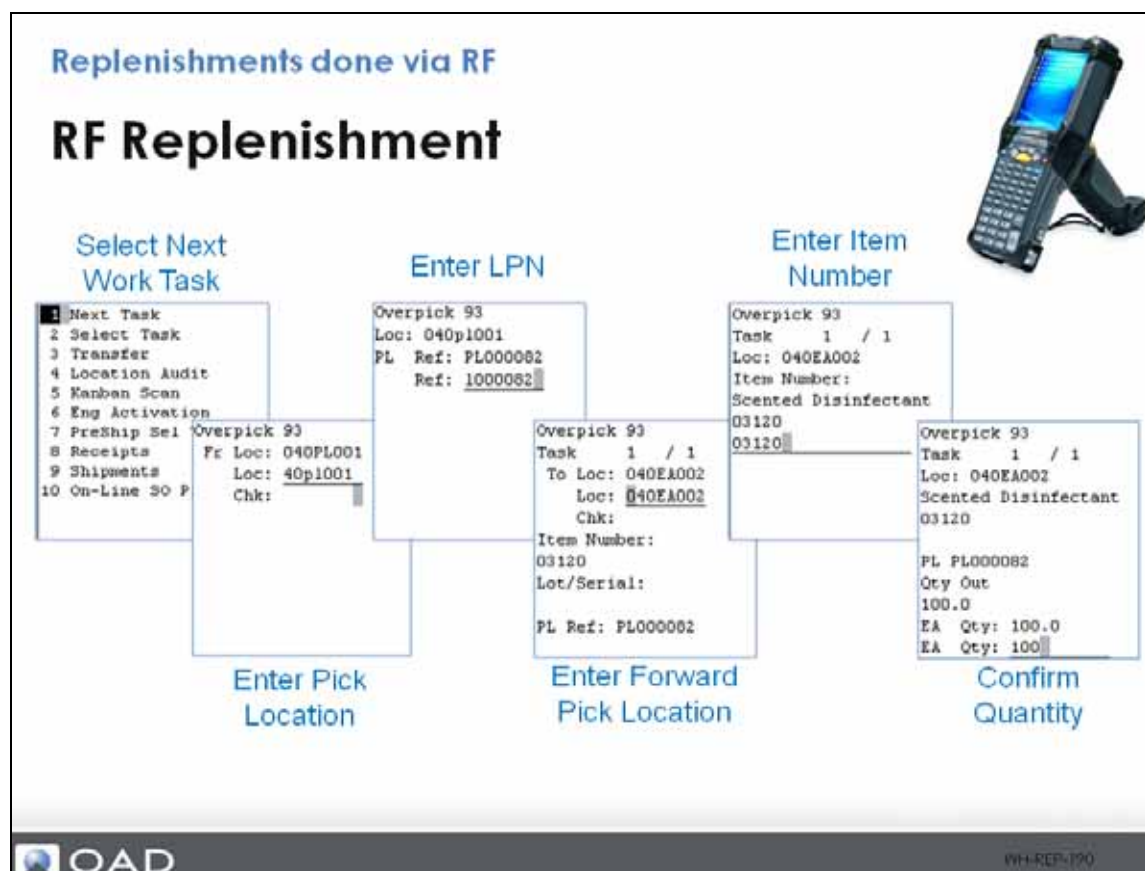
QAD

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 Item Number: 03120 Displ
 Warehouse: Lot/Serial: Disp N
 Location: Reference:

Warehouse: 01 Warehouse 1

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

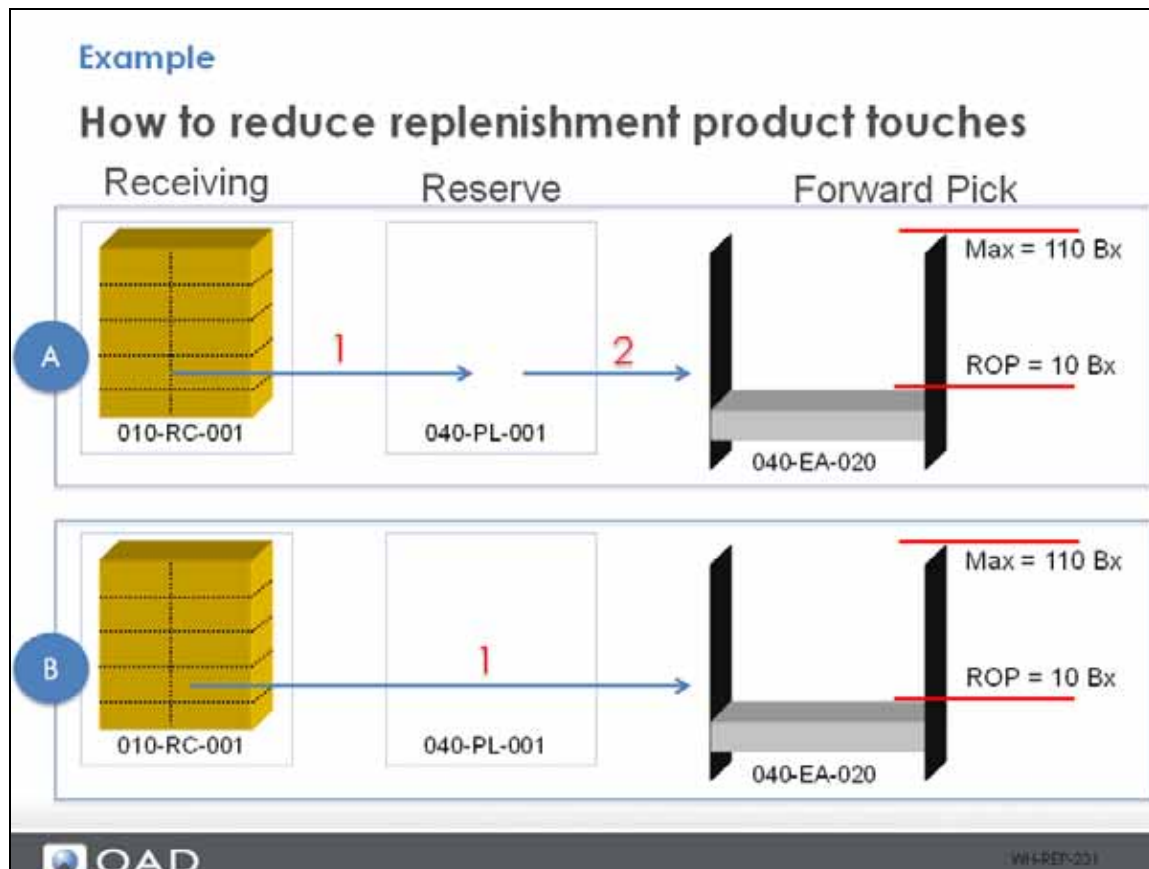
Implementation Consideration

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.

Key Learning Points

QAD Warehousing Replenishment

Key Learning Points

- QAD Warehousing supports all replenishment best practices
- Have a clearly defined replenishment strategy
- Replenishment is an advanced strategy but can significantly improve performance
- You can replenish specific locations or general Zones or use Kanban Replenishment



WHREP-270

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

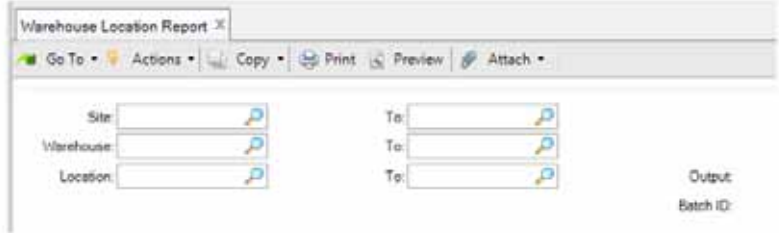
The following topics walk you through a replenishment exercise in which you set up and execute replenishment within the warehouse. You should have completed exercises in the Introduction and the Receiving topics before starting this exercise.

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



QAD WH-REP-202

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

QAD VHM-REP-303

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:

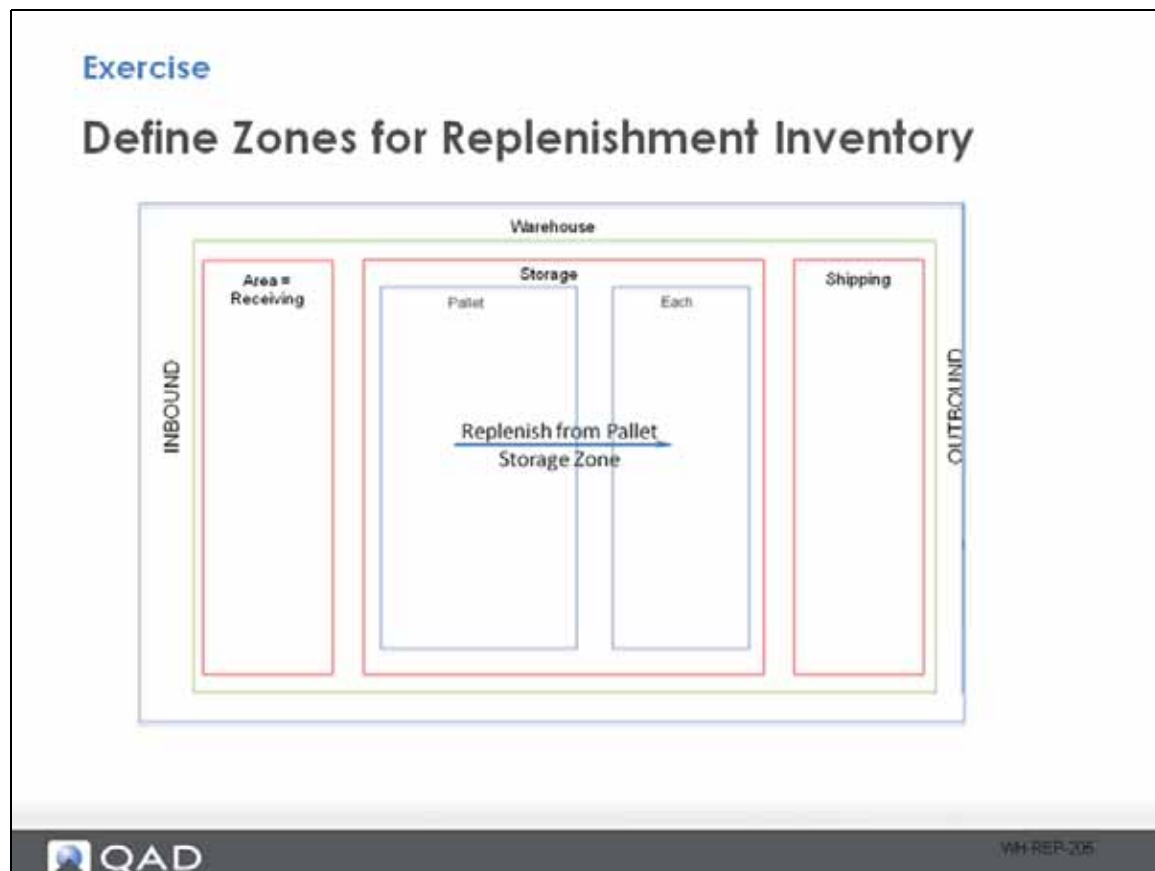
QAD WILREP-004

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.

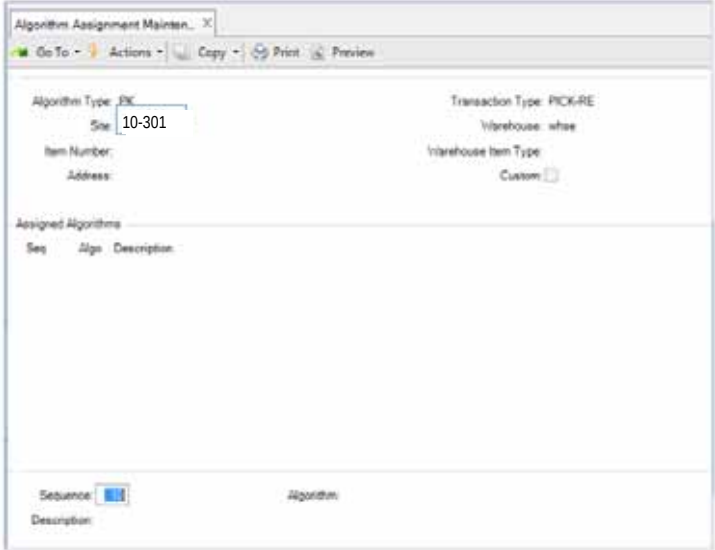
- 1 Use Replenishment List Maintenance to define the zones and priority for replenishment inventory. For QMI, all inventory is replenished from the Pallet storage zone. Use the following table to find the fields for which you enter data. Fill in the details here:

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 Maintenance

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-RE
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 WAREHOUSE

- 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 300

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.

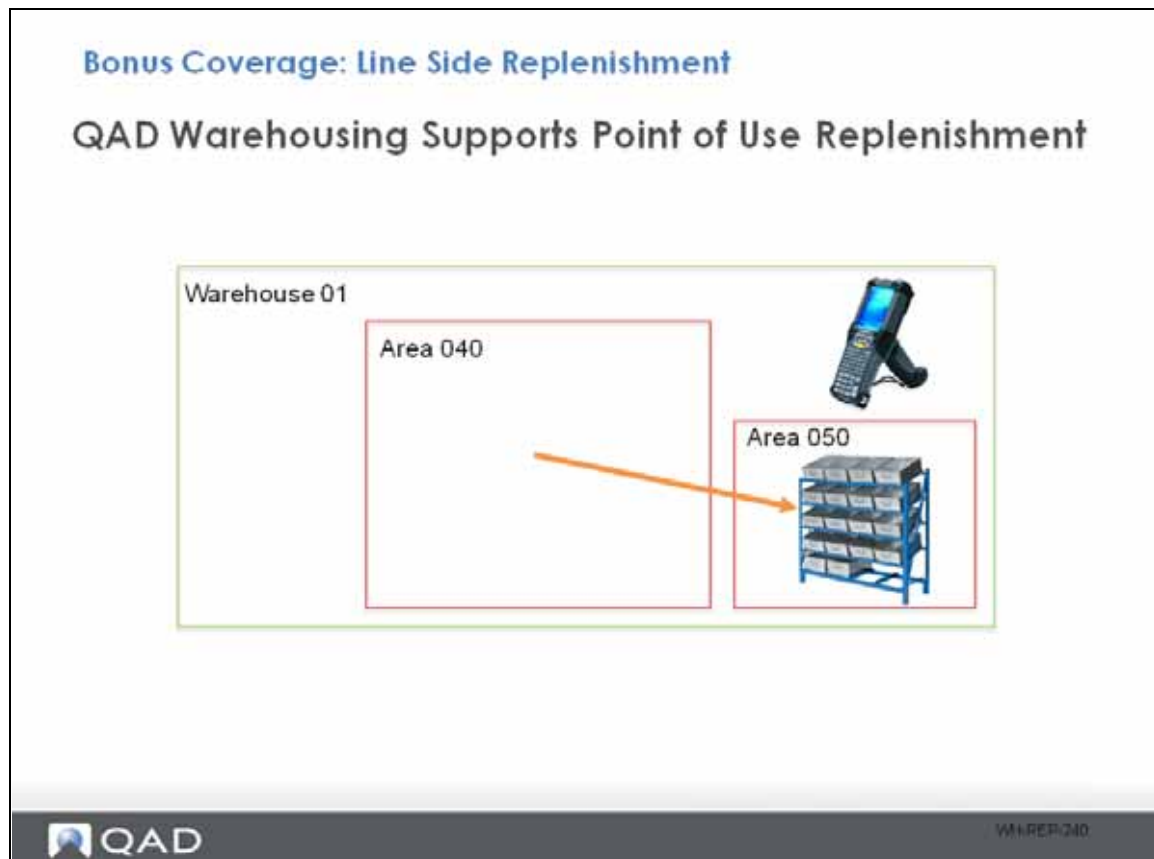
When done correctly, new inventory positions are in the forward pick locations, and inventory is decremented from the reserve pallet storage locations. Fill in the details here:

	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?

Bonus Coverage: Line Slide Replenishment



Many customers use QAD Warehousing to support replenishment of inventory to a manufacturing operation or to a kitting process within the warehouse. Many times, required component inventories are stored at the production line or work center. Getting the inventory from warehouse storage to the production inventory location is commonly called *line-side replenishment*.

When the customer is using work orders, the component inventory is not system issued until the receipt of the end items and a backflush executes. During this process, it is possible to run out of component stock before QAD Warehousing is aware of the inventory requirement.

For these instances, QAD Warehousing lets you generate an inventory replenishment on-demand (manually) using RF Kanban Scan (1.5). Kanban Scan is also available when specific items are not automatically picked by warehouse operators. Kanban Scan is also helpful when an item is used only occasionally during a process, and you do not want to permanently stock inventory in a specific location.

Line Slide Replenishment (Continued)

Bonus Coverage: Line Side Replenishment

QAD Warehousing Supports Point of Use Replenishment

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

Site Data and Default Warehouse Data

Location: 010RC001	Single PA Trans: ☐
Warehouse Item Type:	Issue Method:
Replenishment Type:	Print ID: ID Qty: 0
Popularity:	OPC Threshold: 0.0
Default Kanban Quantity: 0.0	Kanban Replenish: 01RPL001

QAD WM-REP-250

Each item to be replenished using kanban scan requires an assigned replenishment list. Optionally, you can assign a default kanban quantity that the system automatically populates to the RF screen when a kanban scan is requested for the item. When a default kanban quantity is assigned, you can override the kanban quantity when the request generates

Line Slide Replenishment (Continued)

Bonus Coverage: Line Side Replenishment

QAD Warehousing Supports Point of Use Replenishment

Step 1: RF 1.5

Item Number: 03130
 Kanban Quantity: 100 EA
 Destination: 1060
 Repl complete

Step 2: RF 1.1

Transfer 59
 Fr Loc: 040PL008
 Loc: 040PL008
 Chk:

Step 3: RF 1.1

Transfer 59
 Loc: 040PL008
 EA Ref: PL000101
 03130
 Qty: 100.0
 Qty: 100.0

Step 4: RF 1.1

Transfer 59
 To Loc: 1060
 Loc: 1060
 Chk:
 EA Ref: PL000101
 Item Number: 03130
 Lot/Serial:

Step 5: Inventory Detail Inquiry

QAD

Site: 10-301 Item Number: 03130
 Warehouse: 01 Lot/Serial: Reference: Display
 Location:

Location	Status	Qty	Qty	Expect	Expect
Lot/Serial	Ref	UN On Hand	Alloc	In	Out
040PL008	Y-Y-N	EA	100		
040PL008	PL000102	EA	100		
040PL008	Y-Y-N	EA	100		
1060	PL000103	EA	100		
	Y-Y-N	EA	100		
	PL000101				

QAD WAREP-000

Create the replenishment task:

- 1 Using the Kanban Scan menu (RF1.5) enter the item number, quantity and destination location.
- 2 Process the replenishment task.
- 3 Back out of RF1.5 (or process as a different user) and enter the Next Task menu (RF1.1). Confirm the replenishment pick location.
- 4 Confirm the Reference number and quantity.
- 5 Enter the destination (drop) location.
- 6 Review the new inventory positions.

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



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


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.

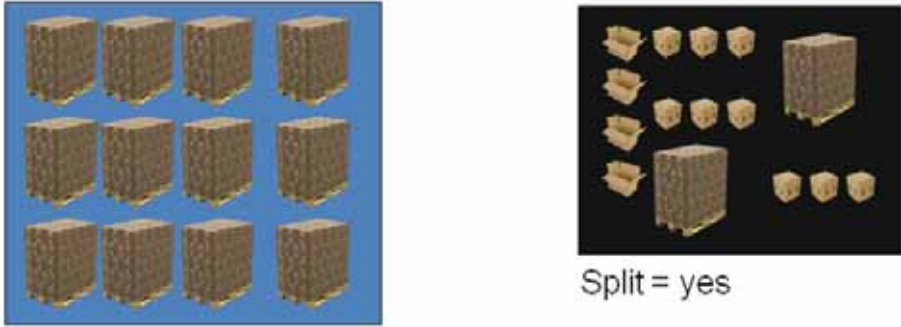
Batch picking lets warehouse staff pick items in a more efficient way. Batch picking reorders the order-picking sequence and tasks so warehouse staff can pick multiple items from multiple orders at various locations throughout the warehouse with a shortened travel sequence. The items are sorted to the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

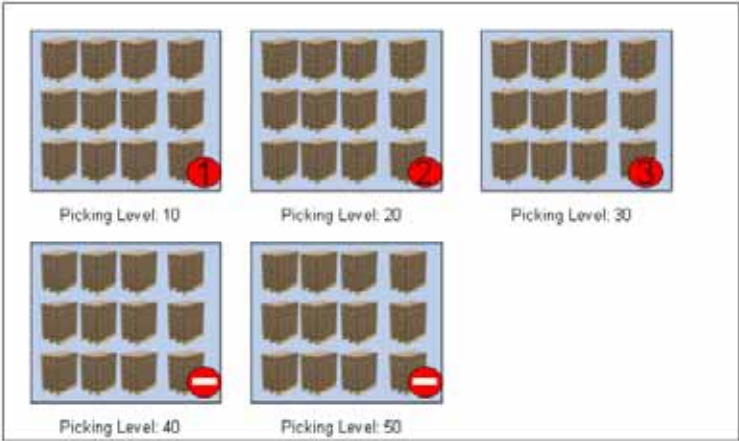
Over pick is used mostly with replenishment.

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: ☒

01

Receive (010)

010RC

010RC001

Storage (040)

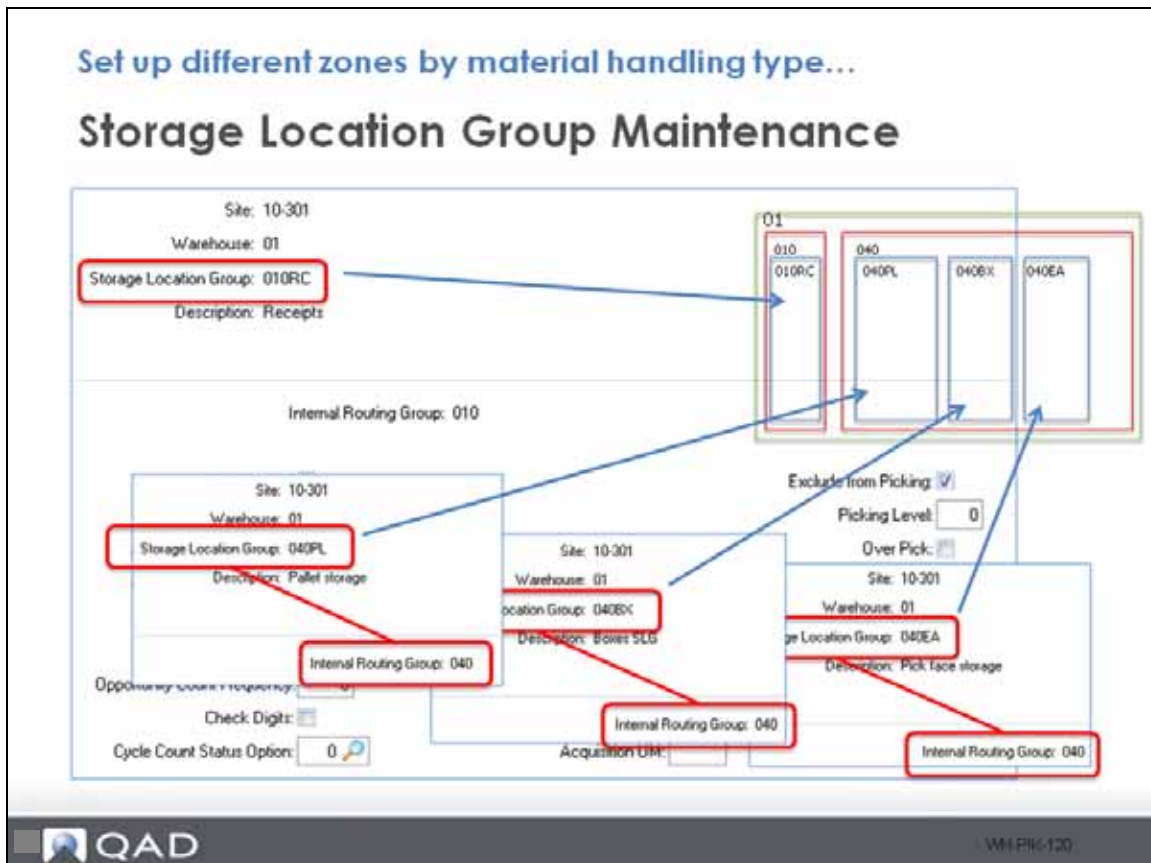


QAD

WHPRK-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

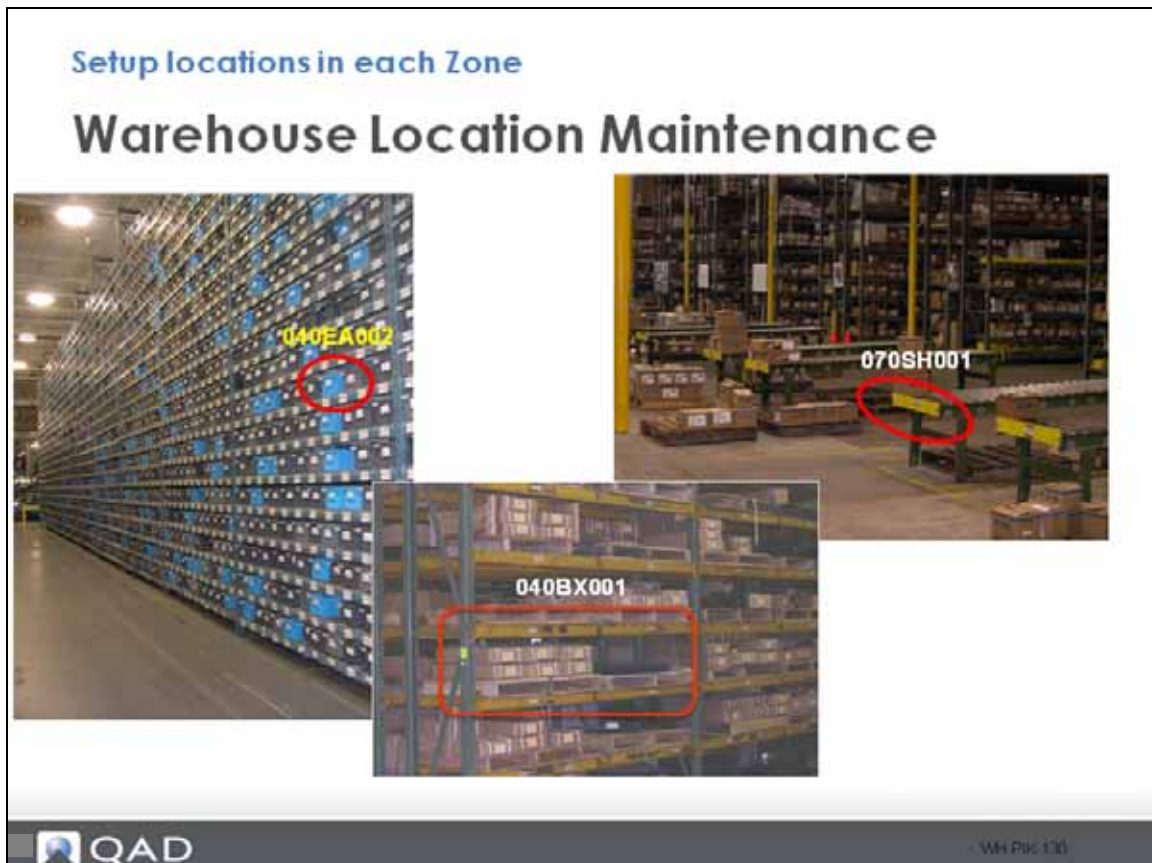
040PL = 10

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: ☐

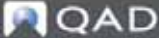
Repick Type:

Flav C Hard/Soft: Hard

Multi-Bin Pick Flavor C Sort: 0

Allow Switch Lot Ref: ☐

Expire Date (Days): 0


WM PICTAD

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

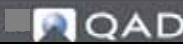
Create a sales order for 126 each, 03120

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

The screenshot shows the QAD Inventory Detail Inquiry screen. The header includes the QAD logo and the title 'Inventory Detail Inquiry'. Below the header, there are fields for Site (10-301), Warehouse (01), Location, Item Number, Lot/Serial, Reference, and Display (Disp Non 0). The main table displays inventory details for three pick zones: 040BX001, 040EA001, and 040PL001. Each zone has a corresponding 'Expect Out' value of 80, 40, and 100 respectively. A callout box with a red arrow points to the 'Expect Out' column, stating 'Notice there is enough inventory in all three pick zones.'

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

Box
Each
Pallet

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	Lot/Serial	Qty	Due
		T Location	Ref	Open UM	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 sections:

- Area = Receipts (010)**: Located on the left side.
- Storage (040)**: The central area, containing:
 - Pallet Storage (040PL)**: A 2x4 grid of pallets. The top-left pallet (040PL001) is dated 17-Jul-11. The bottom-left pallet (040PL003) is dated 14-May-11. The bottom-right pallet (040PL004) is dated 12-Dec-10. A red circle highlights these four pallets.
 - Box Storage (040BX)**: Located to the right of the Pallet Storage.
 - Each Storage (040EA)**: Located to the right of the Box Storage.
- Shipments (070)**: Located on the right side, containing a **Ship (070SH)** area.

The layout is oriented with **INBOUND** on the left and **OUTBOUND** on the right.

Questions:

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 logo and **WMS-PKH-2011** text are visible at the bottom.

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)

INBOUND

Area = Receipts (010)

Storage (040)

Pallet Storage (040PL)

040PL001 040PL002

17-Jul-11

040PL003 040PL004

14-May-11 12-Dec-10

040PL005 040PL006

Box Storage (040BX)

Each Storage (040EA)

Shipments (070)

Ship (070SH)

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

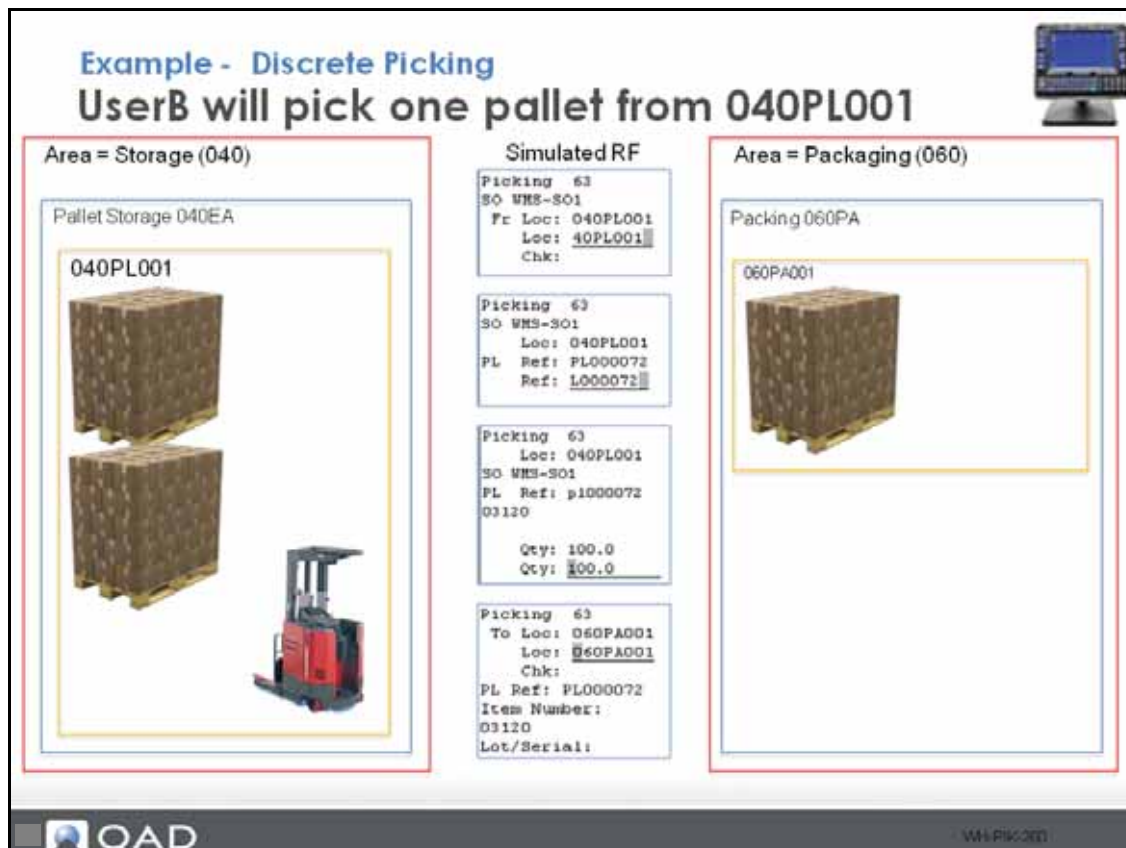
WH-Pick-350

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

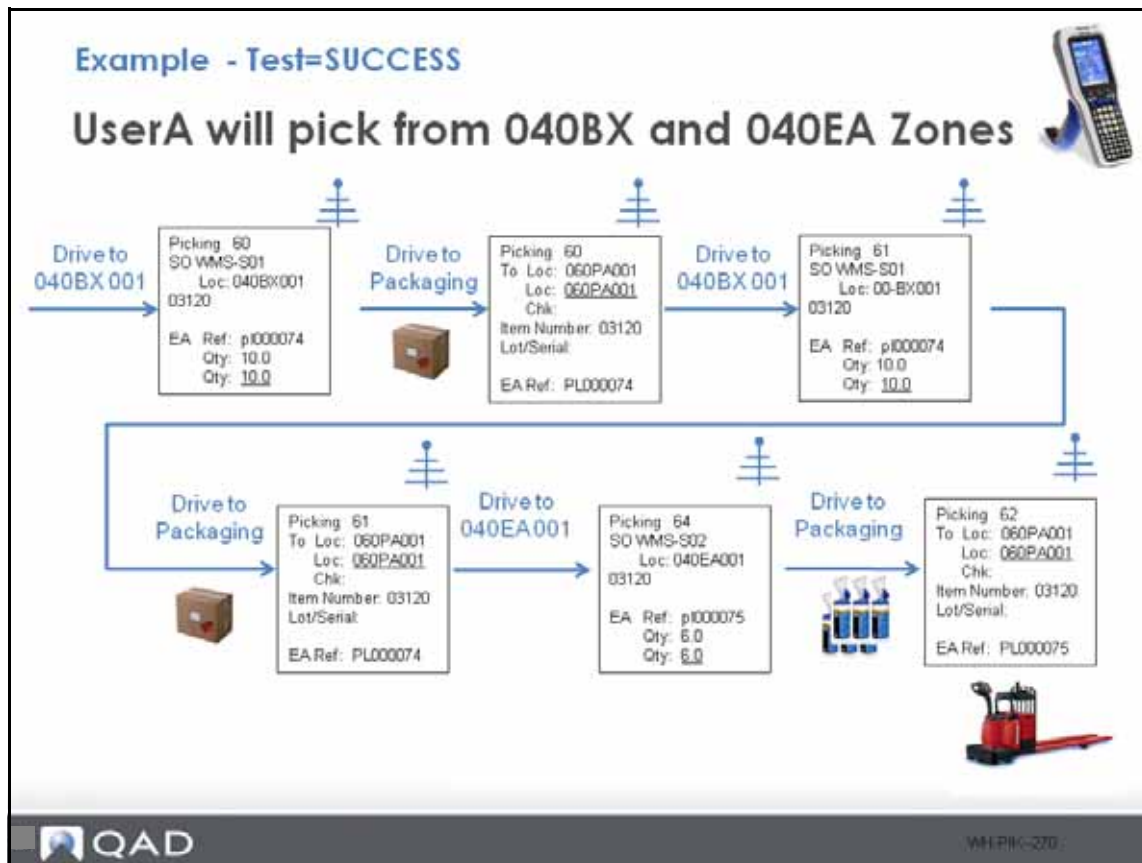
QAD

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.

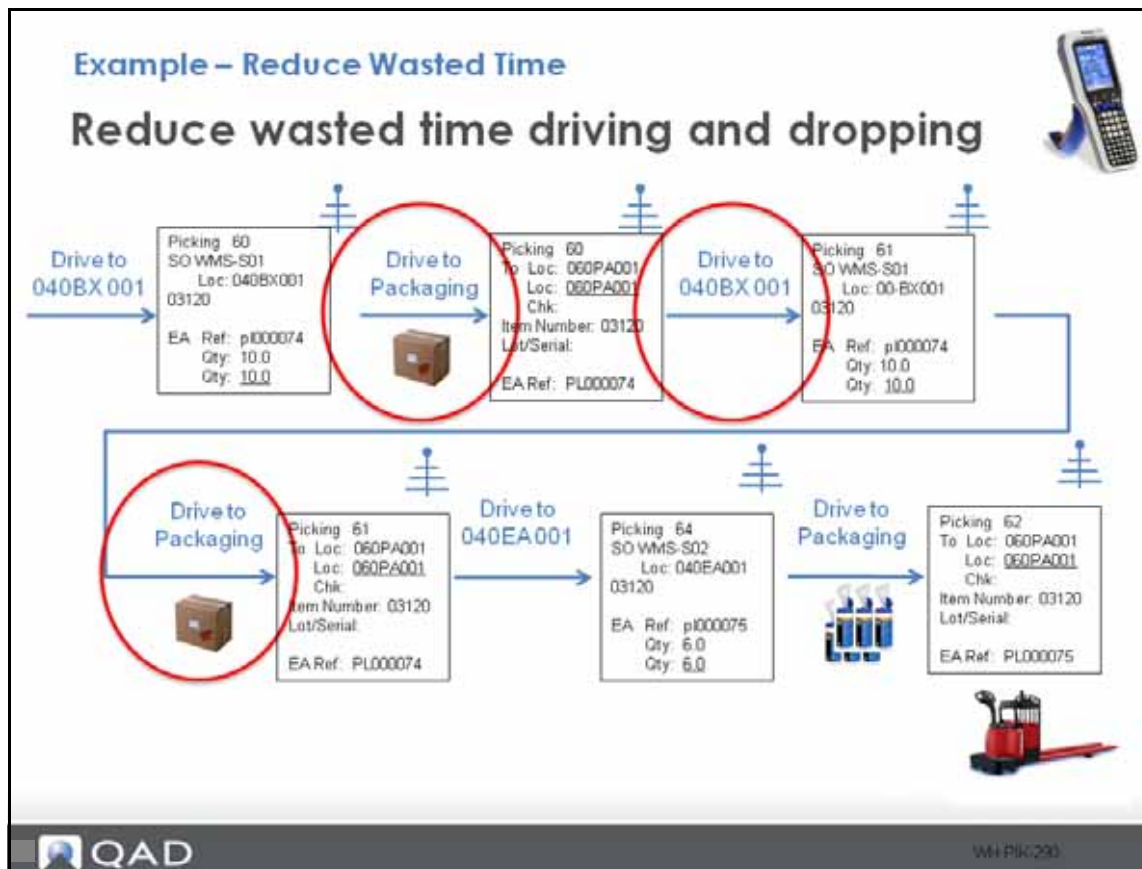
Discrete Picking Learning Points

Discrete Picking

Two Key Learning Points

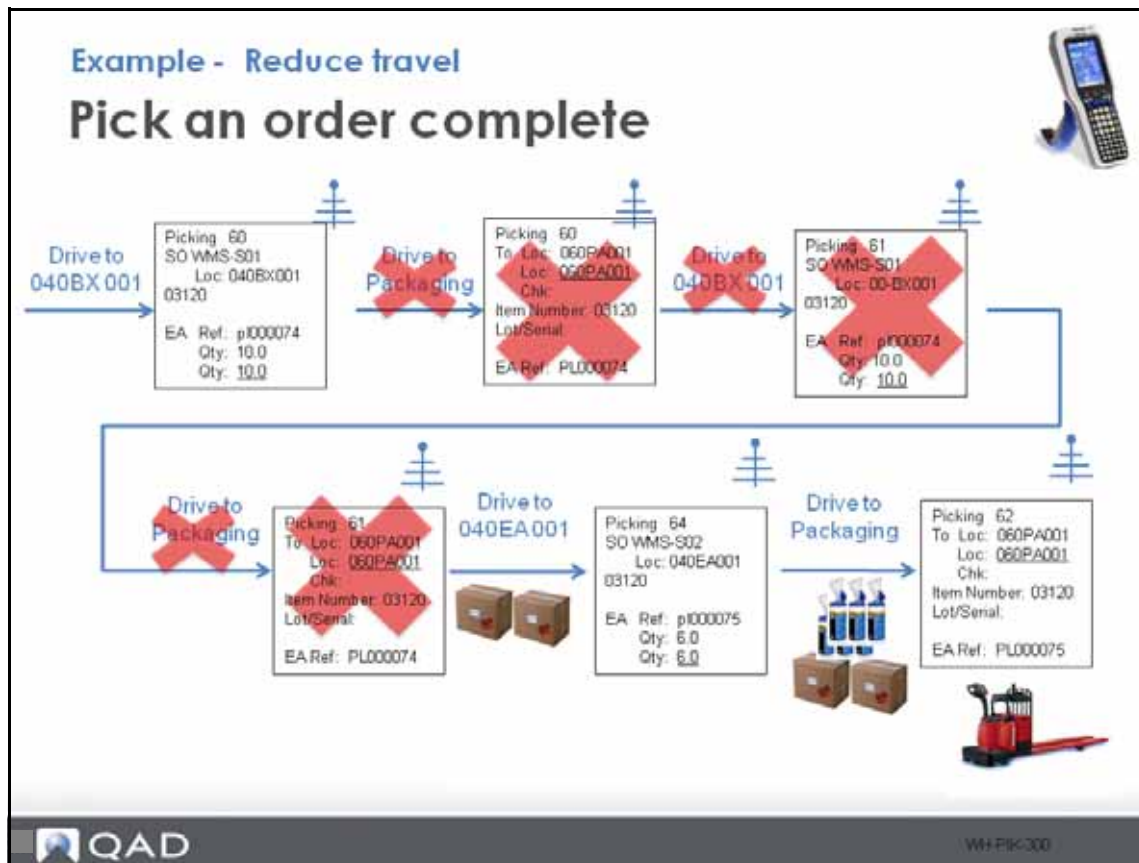
1. QAD Warehousing optimizes picking by the most efficient handling unit of measure
2. The previous box and each pick process can be improved...how?

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.

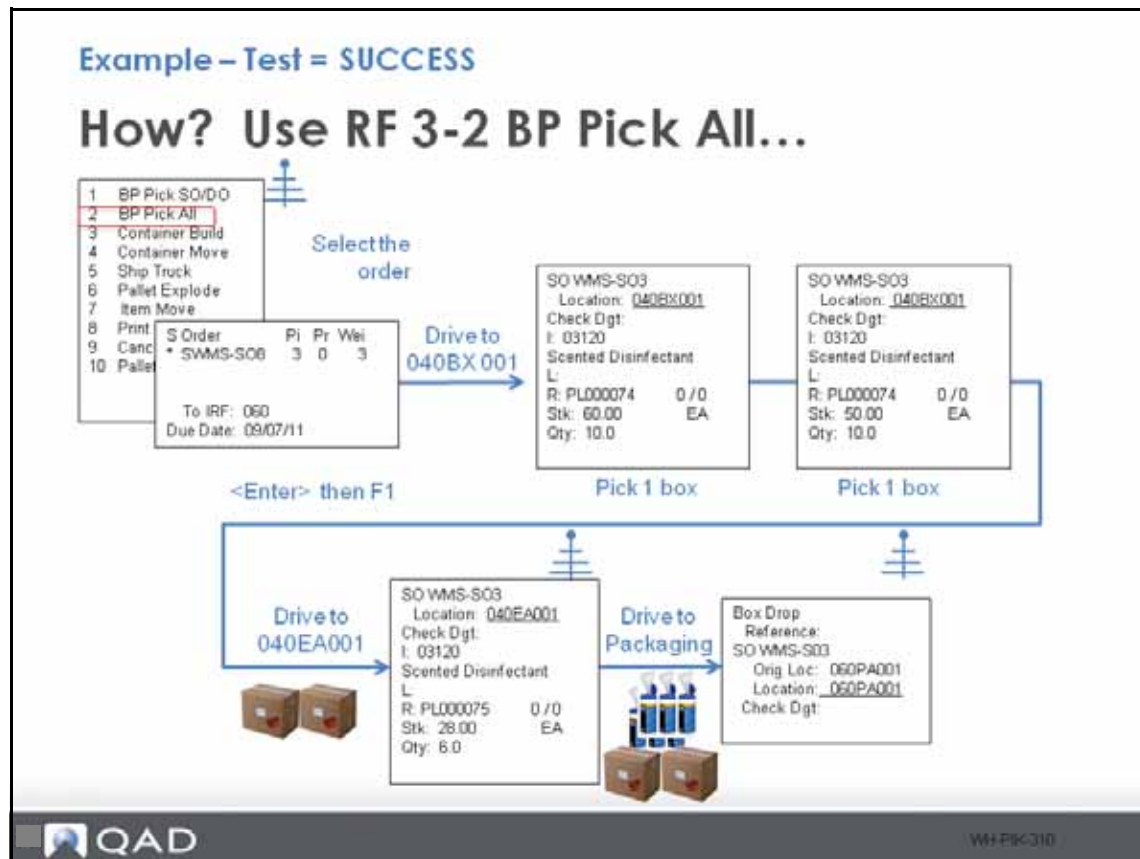
Example - Reduce Travel



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.

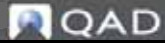
The new process does not require a system configuration change, only a change to the RF function used for picking. UserA would log into RF 3.2 (BP Pick All) and select the one order.

Batch Picking

QAD Warehousing Picking

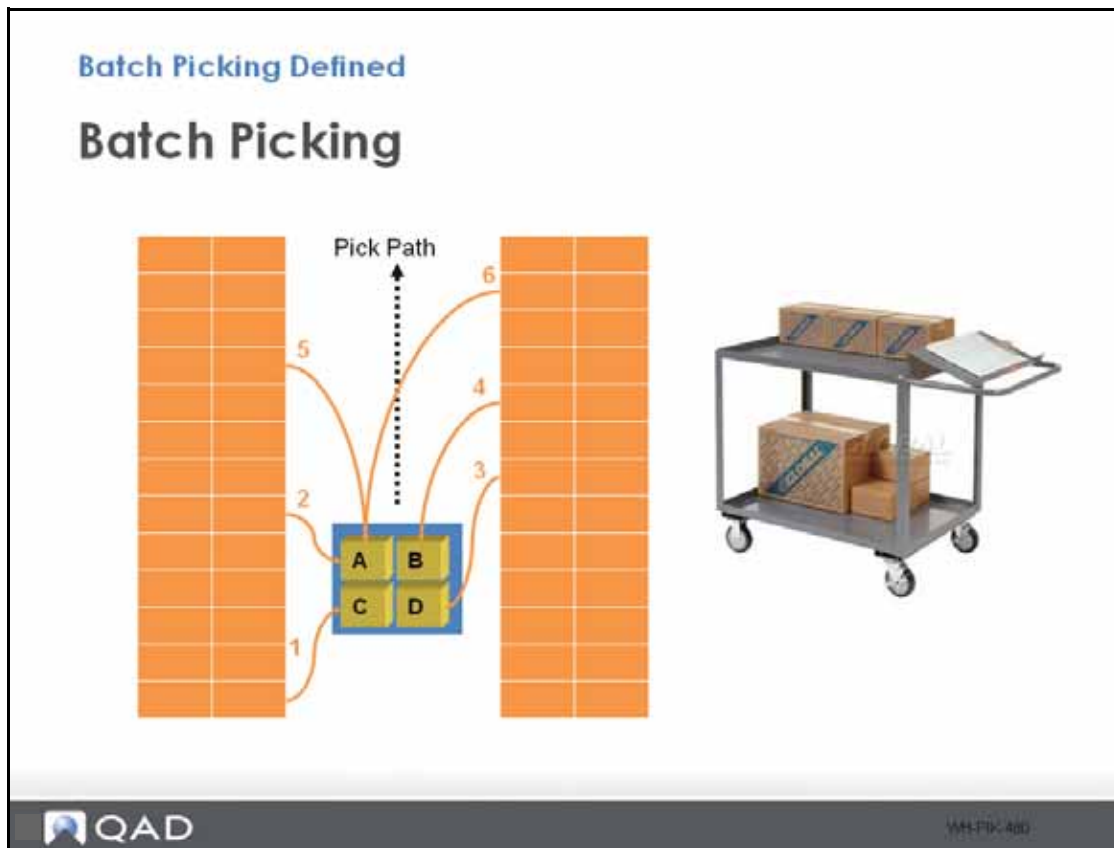


Batch Picking



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 FRI-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

Example: Step 2. Specify users as a location

Warehouse Location Maintenance

The diagram illustrates two examples of specifying users as a location in Warehouse Location Maintenance. Both examples show a hierarchy: Site (10-301) -> Location (UserA or UserB) -> Warehouse (01) -> Storage Location Group (040EA or 040PL) -> Work Location Group (01CT or 01FL).

Example 1:

- Site: 10-301 Distribution Site 1
- Location: UserA
- Location Groupings: Warehouse: 01
- Storage Location Group: 040EA
- Work Location Group: 01CT

Example 2:

- Site: 10-301 Distribution Site 1
- Location: UserB
- Location Groupings: Warehouse: 01
- Storage Location Group: 040PL
- Work Location Group: 01FL

Assigning users as a location allows more granular product tracking.

DYK: Locations can be assigned to a User to track inventory during long pick cycles.

OAD WLP530

Assigning users as a location allows more granular product tracking.

Did You Know

Locations can be assigned to a User to track inventory during long 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-PIC-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-381

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

**To IRG: Dispatch
Due Date: 10/30/09**

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

QAD

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

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: ☒ Include Distribution Orders: ☒ Include Work Orders: ☒ SO/DO Batch Selection: Order Allow Merge Orders: ☐ Close Option: 0 Auto: ☐ Maximum: Maximum Pick: Container: Container Seq: 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 packing location parameters

QAD

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 Options: 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:

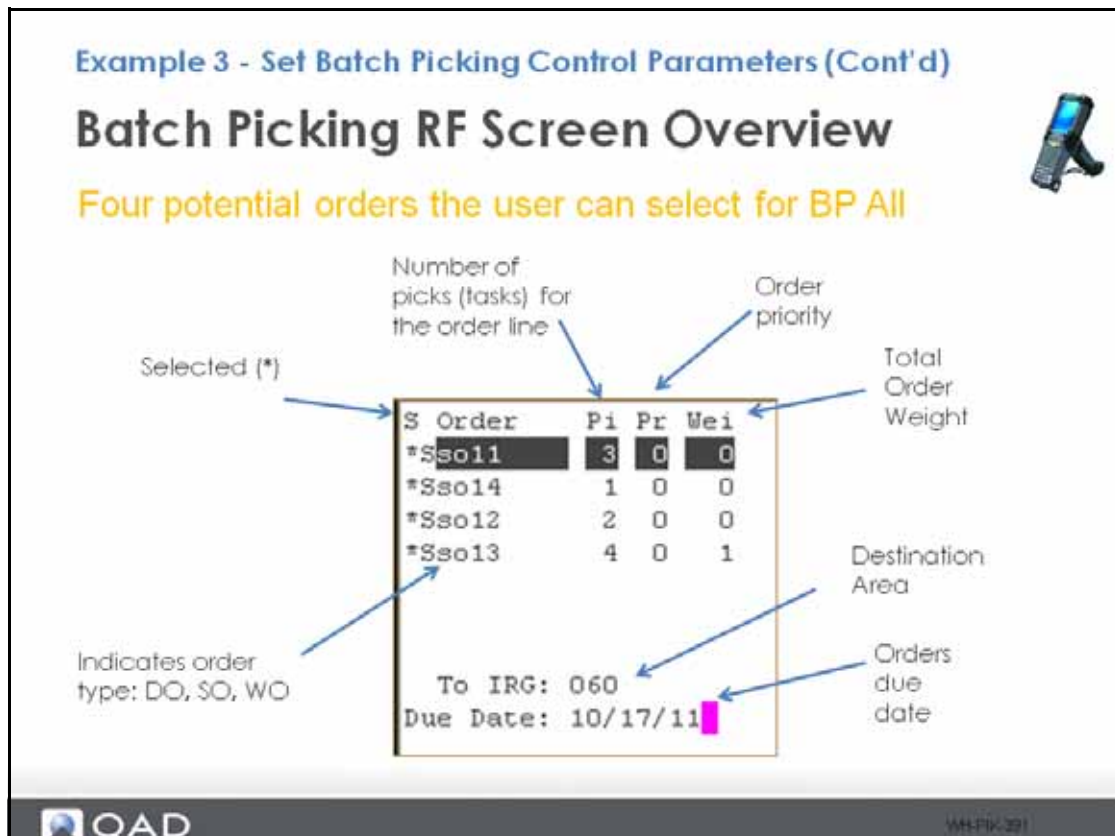
- Specify the default weight
- Specify the user confirmation input: 1/0, Yes/No, Y/N, and so on.

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

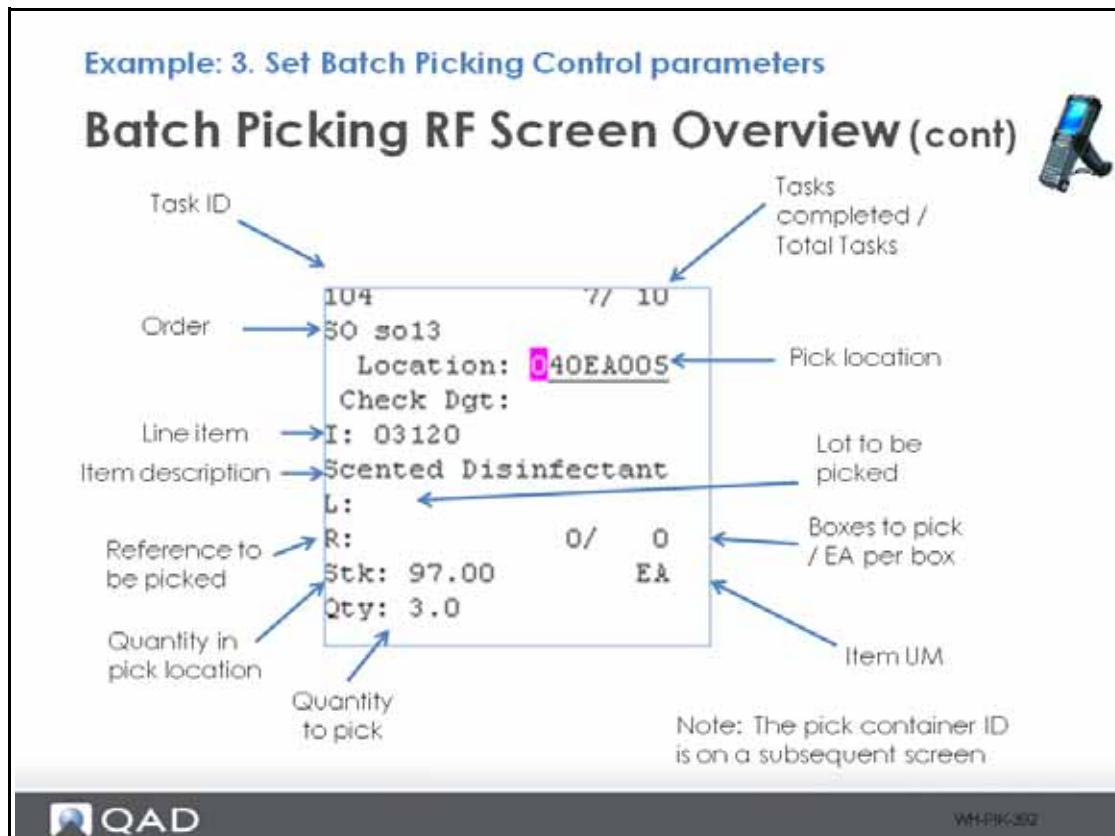
QAD

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)



The diagram shows a handheld RF device displaying the Batch Picking RF Screen. The screen content is as follows:

```

Task ID: 104
Order: 50 so13
Location: 040EA005
Check Dgt:
Line item: I: 03120
Item description: Scented Disinfectant
L:
R: 0/ 0
Stk: 97.00 EA
Qty: 3.0
  
```

Labels and arrows point to the following fields:

- Task ID: 104
- Order: 50 so13
- Location: 040EA005
- Check Dgt:
- Line item: I: 03120
- Item description: Scented Disinfectant
- L:
- R: 0/ 0
- Stk: 97.00
- Qty: 3.0
- EA

Additional labels and arrows point to the following fields:

- Tasks completed / Total Tasks: 77 / 10
- Pick location: 040EA005
- Lot to be picked: 040EA005
- Boxes to pick / EA per box: 0 / 0
- Item UM: EA

Note: The pick container ID is on a subsequent screen

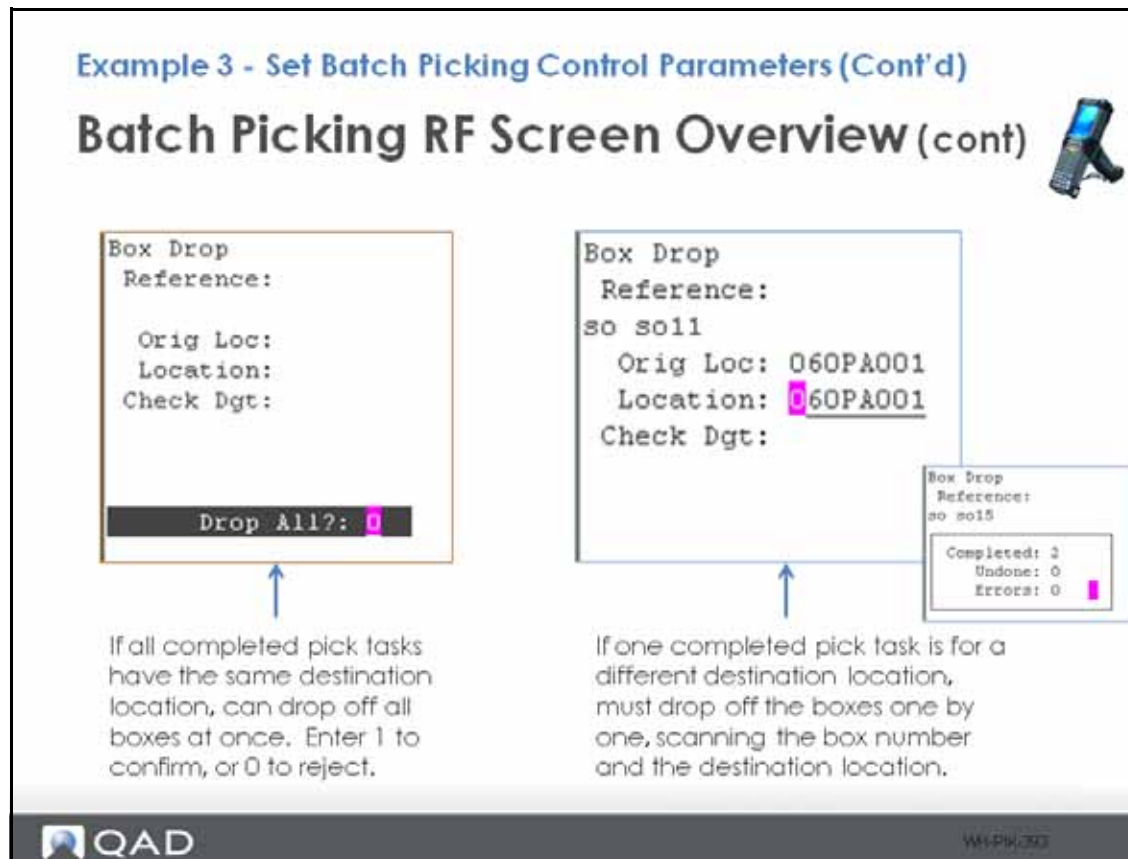
QAD WH-PK-52

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:' and 'Location:' fields, with a 'Drop All?' prompt at the bottom. The right screen shows 'Orig Loc:' and 'Location:' fields, with a 'Drop All?' prompt at the bottom. A small inset screen shows 'Completed: 3', 'Undone: 0', and 'Errors: 0'. Arrows indicate the flow from the main screens 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

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-R	EA	100		8		8
040EA004	03121	Y-V-R	EA	100		6		6
040EA006	03122	Y-V-R	EA	100		6		6
040EA008	03130	Y-V-R	EA	100				
060PA001	03120	Y-V-R	EA			8		8
060PA001	03121	Y-V-R	EA			6		6
060PA001	03122	Y-V-R	EA			6		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.

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

WM-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 menu shows the path: 1 Work, 2 Printing, 3 Picking/Container, 4 Inspection, 5 Inquiries, 6 Read, 7 BP Pick SO/DO, 8 BP Pick All, 9 Container Build, 4 Container Move, 5 Ship Truck, 6 Pallet Explosion, 7 Item Order, 8 Pri, 9 Can, 10 Pal. The 'BP Pick All' option is highlighted. Below the menu, a screen displays 'To IRG: 060'.

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. In the 'w/o Travel Sequence' table, items are grouped by location (WMS1, WMS2, WMS3). In the 'w/ Travel Sequence' table, items are grouped by item number (03120, 03121, 03122) across locations. This results in a more efficient travel sequence for the picker.

Batching reorders pick tasks to minimize trips back and forth to packaging.

QAD WMS PICK-403

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-PICK-01

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-PSK-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-PRM-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

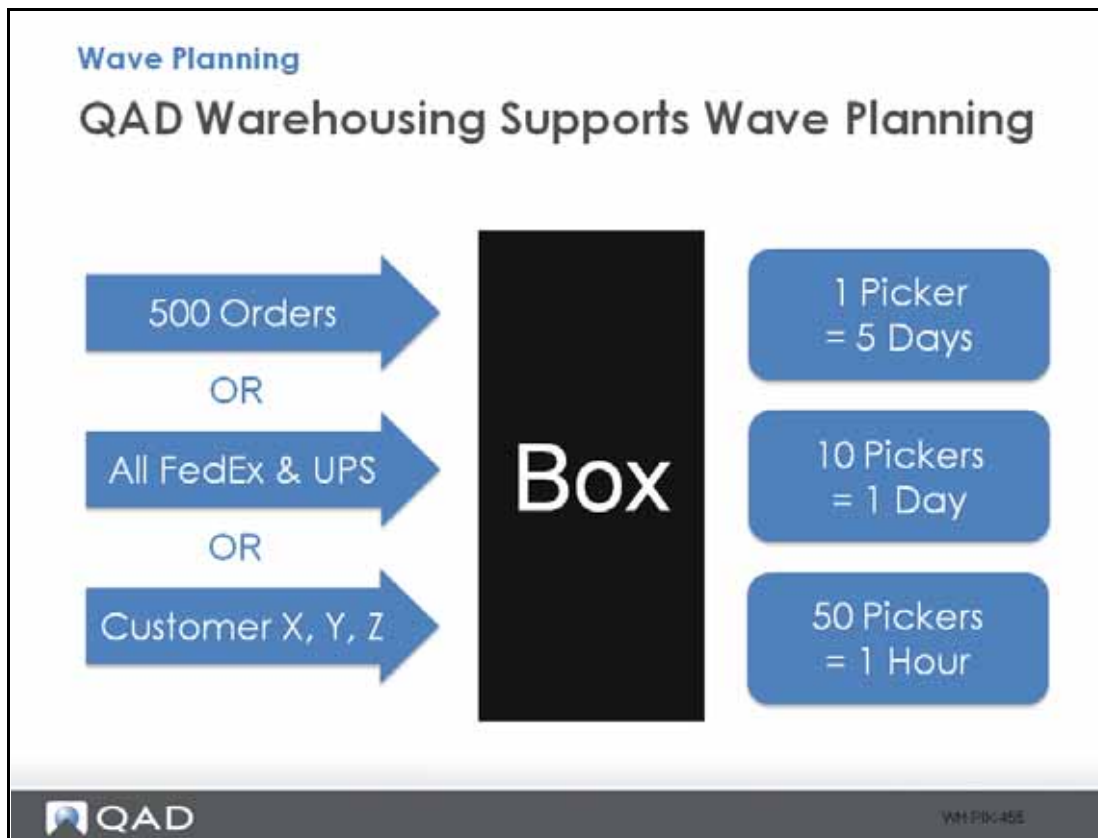
All order lines with the same load ID are combined, if possible, in the same warehouse transaction. The load ID is automatically generated when you select the order line for inclusion in a bulk pick. Multiple bulk pick details can still result from a single load ID.

- 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



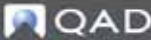
Wave planning involves the same principles as lean distribution; that is, the objective is to plan activities in a warehouse and eliminate inefficiencies. Wave planning lets you create and release a wave --a collection of orders. Wave planning is covered in Advanced topics training guides for QAD Warehousing.

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

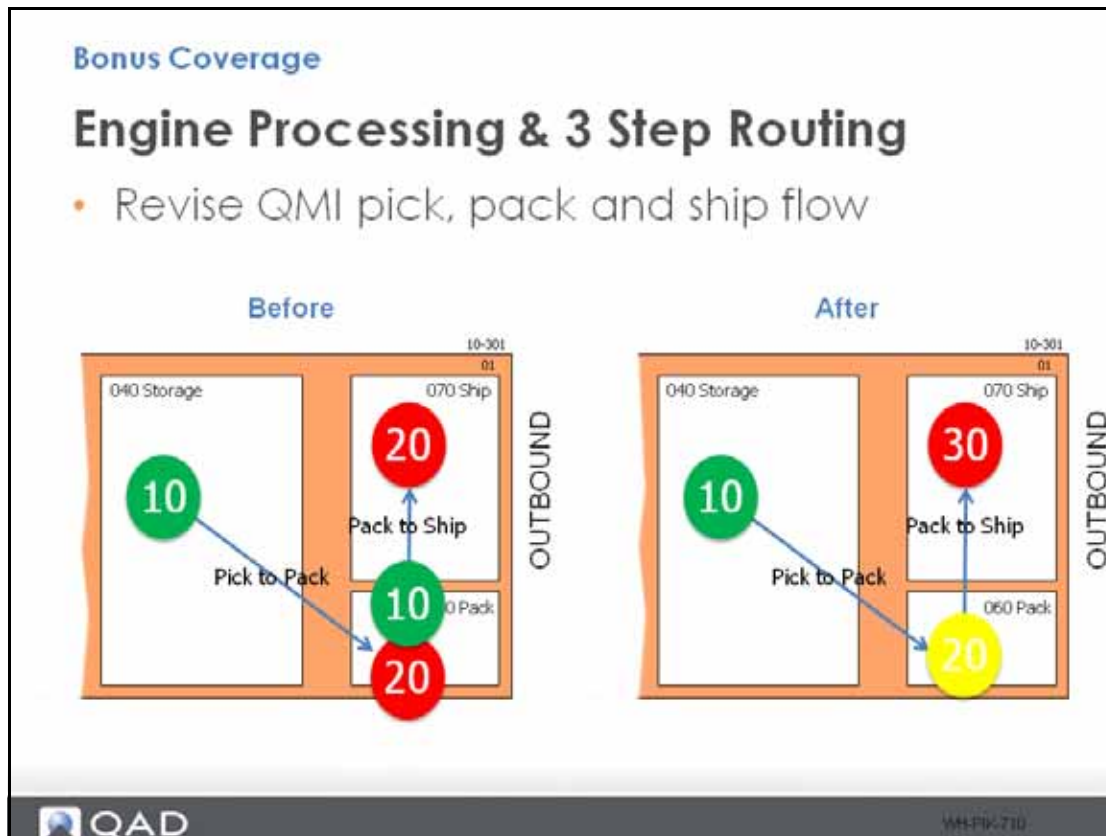
 WH-PIC-200

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.

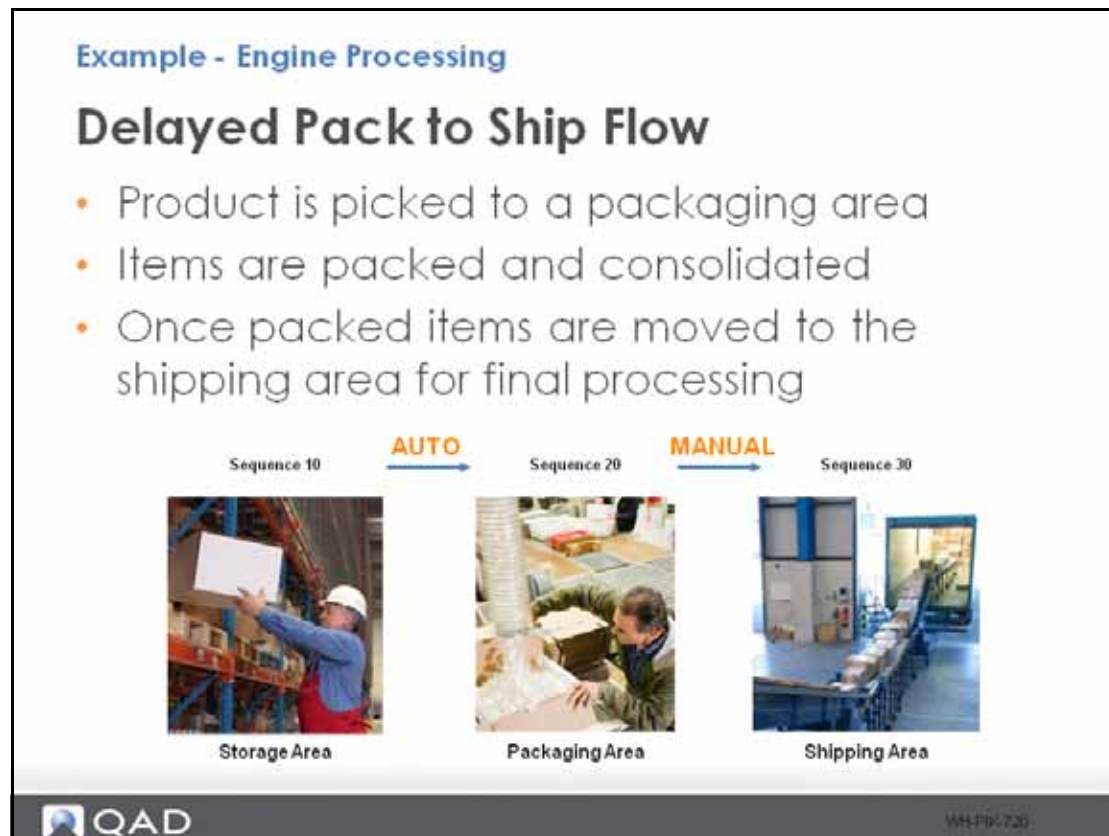
Bonus Coverage - Engine Processing and 3-Step Routing



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



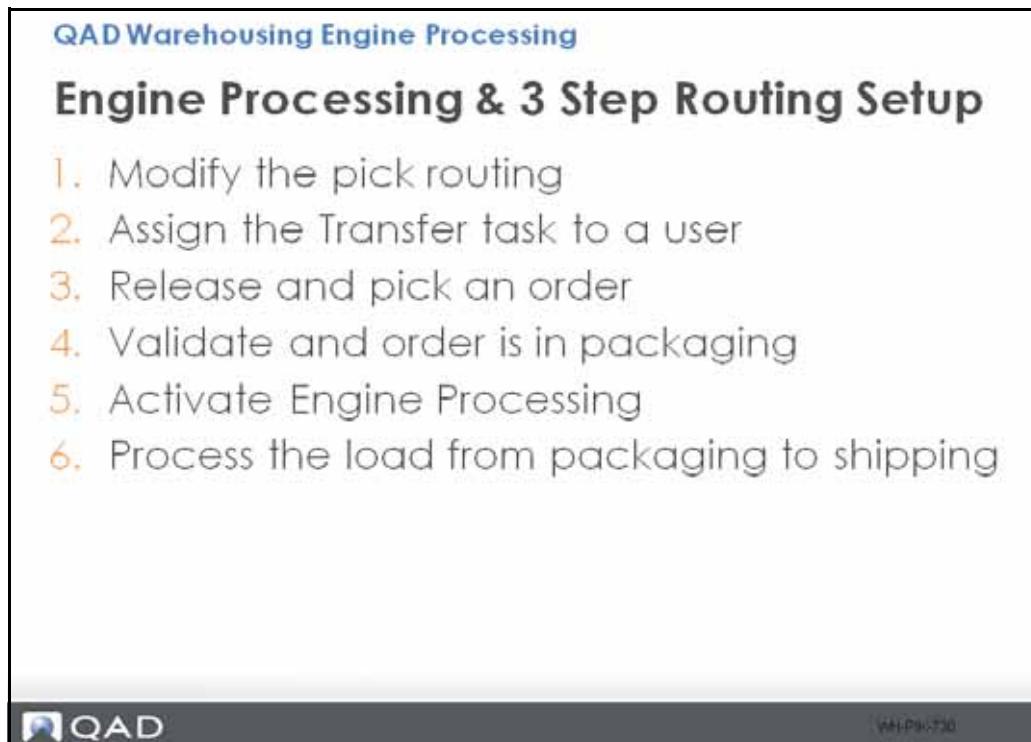
Because the last sequence is manual the move from packaging to shipping does not trigger until a user intervenes to release the task

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:
 - f** Task = TRANSFER
 - g** 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

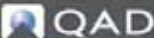
Task Assignment Maintenance

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				3.0 EA	10/31/11
		040EA001	PL000110	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-PK-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 VMEPSC780

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	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	EA	3				3
	PL000110						

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

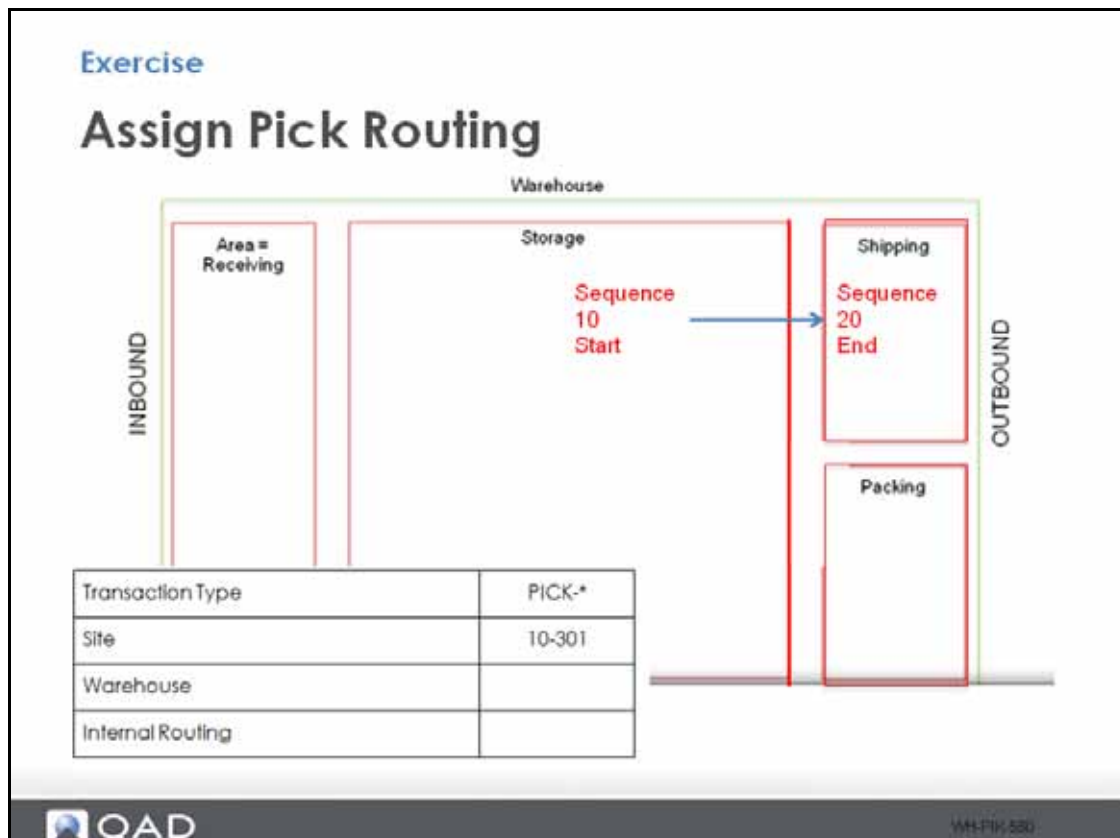
1. Inventory will be picked in the Storage area and moved to Shipping.
2. Create a pick routing using Internal Routing Maintenance.

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
	(Lets you change the pin number.)	

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 Mainten... X

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: 10
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	9

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
Sequence	10	Algorithm

Sequence / Algorithm

Algorithm Type	LF	
Transaction Type	PICK-*	
Site	10-301	
Warehouse		
Sequence / Algorithm	10	1

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

QAD WM-PK-610

- 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	Bulk
Pick one order at a time	Discrete
Easily done with paper pick lists	Discrete
Multiple orders picked to a specific order/carton	Batch
Better for higher order volumes with low lines per order	Batch
The least common way to pick multiple orders at the same time	Bulk

Notes

Chapter 5

Shipping

Overview

QAD Warehousing Shipping

QAD Warehousing

WMS Field Readiness Greenbelt



 QAD

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:

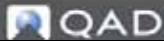
- Indicate truck shipment
- Create a master bill of lading (MBOL)
- View all shippers loaded on the truck for a given truck location

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

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: ☒

Storage Location Group Maint

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: 0
Check Digits: ☐
Cycle Count Status Option: 0

01
070
070SH

OUTBOUND

QAD WH-TR-060

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: **STAGE**

Warehouse Location Type:

Travel Sequence:

Dedicated: ☐

01

070

070SH

070SH001

070SH002

070SH003

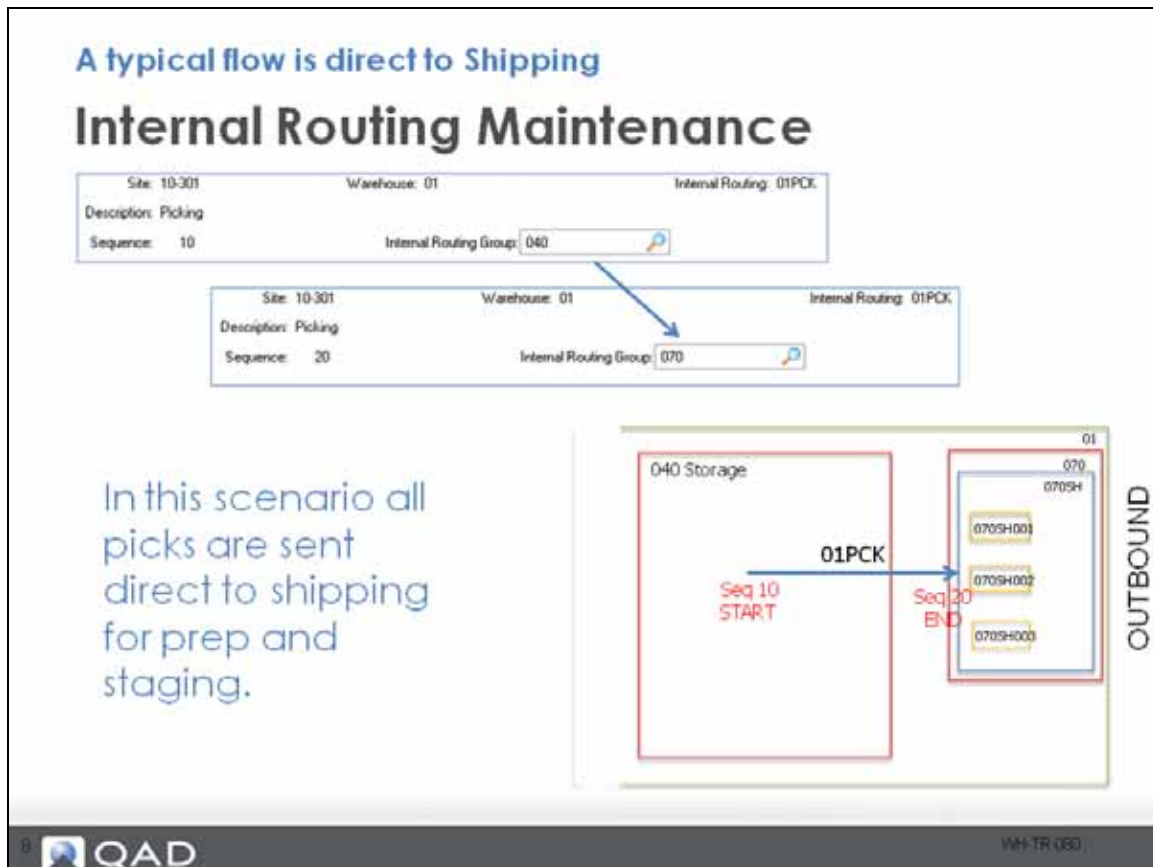
OUTBOUND

7 QAD

WH-TR-070

You create at least one location in the ship zone. Then, you assign Storage Type as truck or stage. The reasons you do this are revealed in later topics under truck ship.

Typical Flow Direct to Shipping



Note When comparing the set up in the graphic above to the QMI warehouse, 01PCK might route to a packaging area for shipment preparation. For simplicity, the routing 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 be occur when loading directly to a truck.

When to Use Pick Routing

When to use the Pick routing

Int Routing Assignment

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-TR-030

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 Transaction Type: PICK-*

Site: 10-301 Warehouse: 01

Item Number: Warehouse Item Type:

Address: 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 the process flow for a shipping transaction. A blue arrow labeled '01PCK' points to a box containing three yellow location codes: '070SH001', '070SH002', and '070SH003'. The box is labeled 'OUTBOUND' on the right side. Above the box, the transaction type '01' is shown, and the location codes are also labeled with '070' and '070SH'.

QAD WH-TR-100

Shipping is a Functional Area so use a generic Location Find algorithm.

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 WLK.

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 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

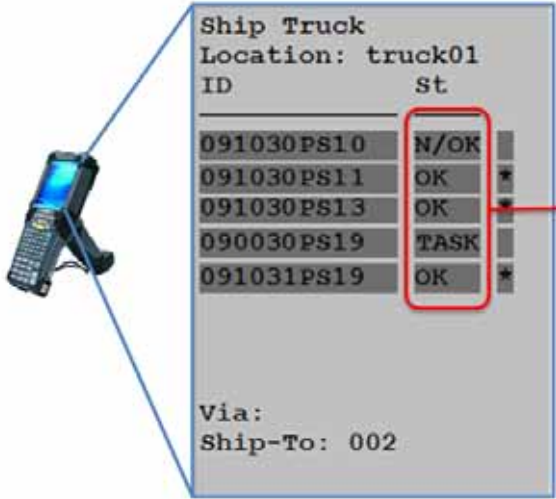
Setting up three new locations (one for each dock door) lets you move ship ready containers or orders to a dock prior to loading onto a truck. Or, the new locations could represent physical trucks and the containers or orders loaded direct to the truck.

Optionally, changing the Storage Type to Stage or Truck of the current shipping locations lets you move containers or orders to other shipping locations.

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



ID	St	
091030PS10	OK	*
091030PS11	OK	*
091030PS13	OK	*
090030PS19	OK	*
091031PS19	OK	*

Via:
Ship-To: 002

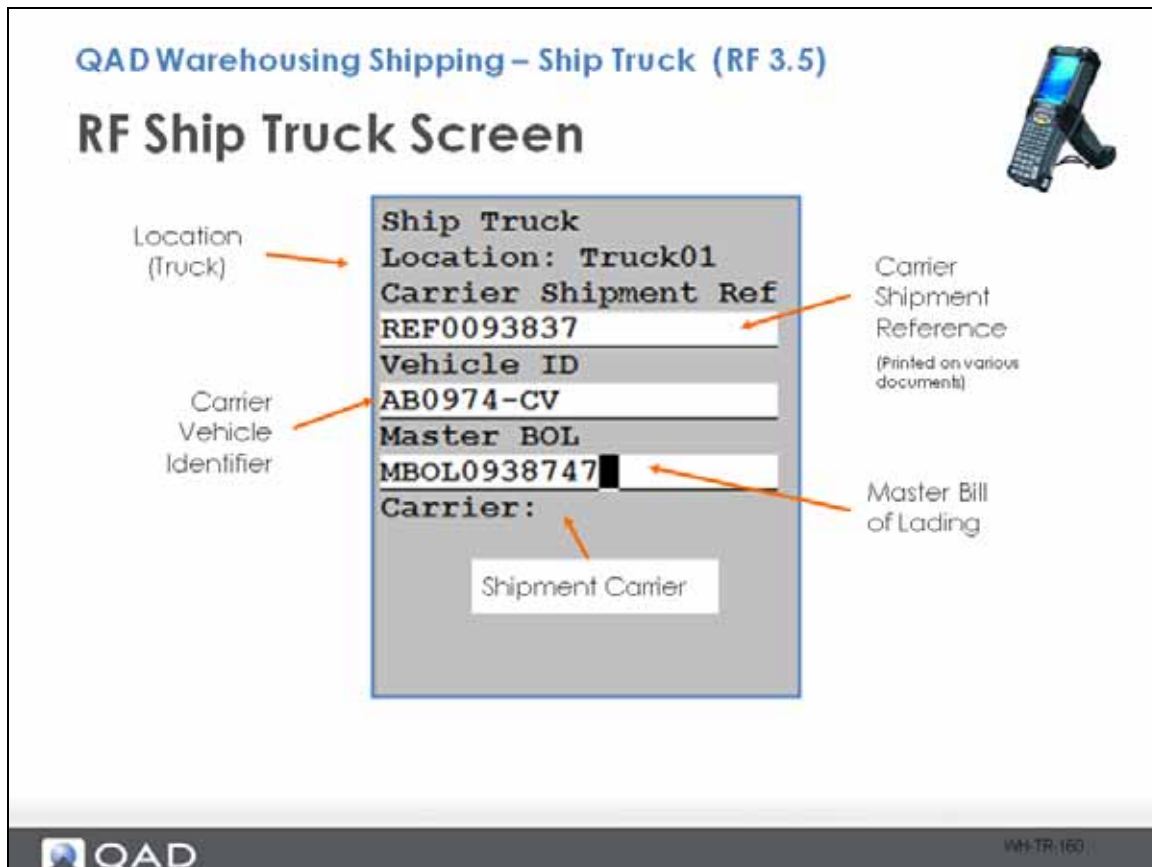
QAD WHT-150

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 shows a handheld RF device in the top right corner. The screen displays a form titled 'Ship Truck' with the following fields and labels:

- Location (Truck)**: Points to the 'Location: Truck01' field.
- Carrier Shipment Reference**: Points to the 'Carrier Shipment Ref REF0093837' field. A note below this field states '(Printed on various documents)'.
- Carrier Vehicle Identifier**: Points to the 'Vehicle ID AB0974-CV' field.
- Master Bill of Lading**: Points to the 'Master BOL MBOL0938747' field.
- Carrier:**: Points to the 'Carrier:' label, which is associated with a 'Shipment Carrier' dropdown menu.

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



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

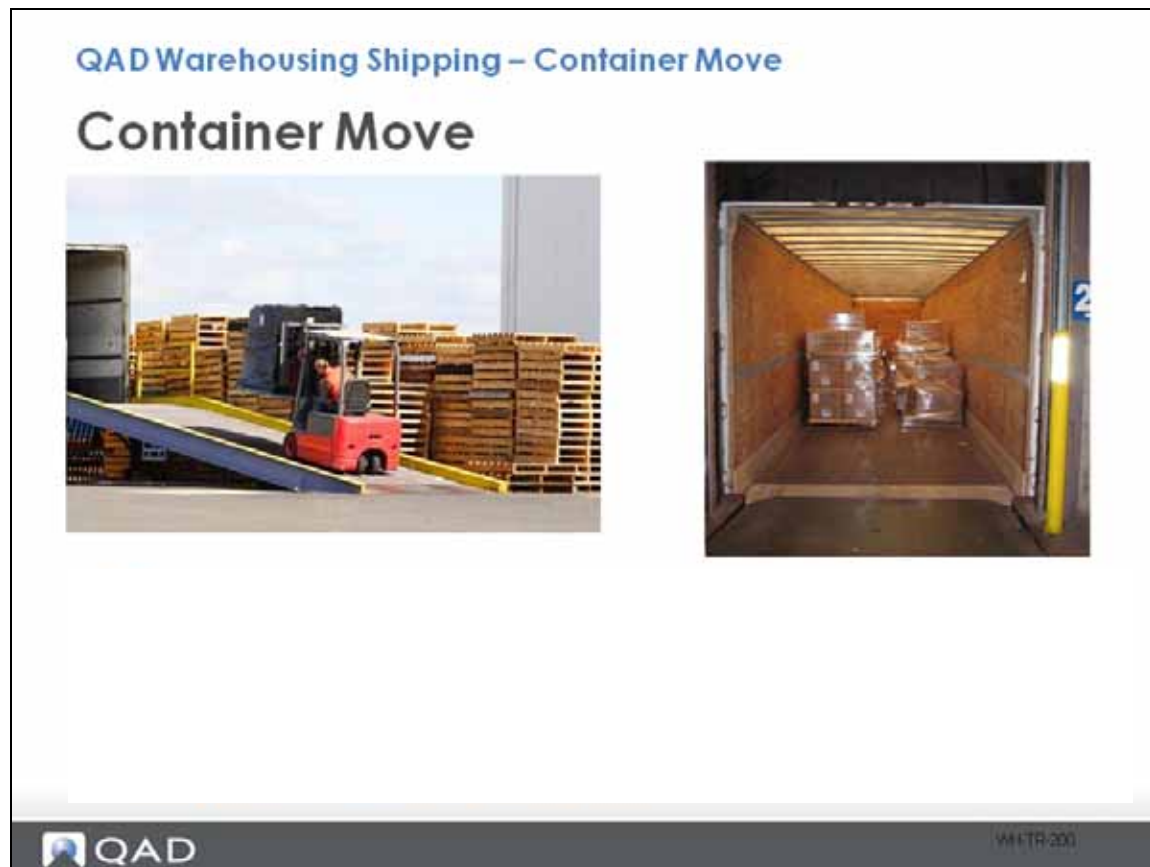
OPTIONAL

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:

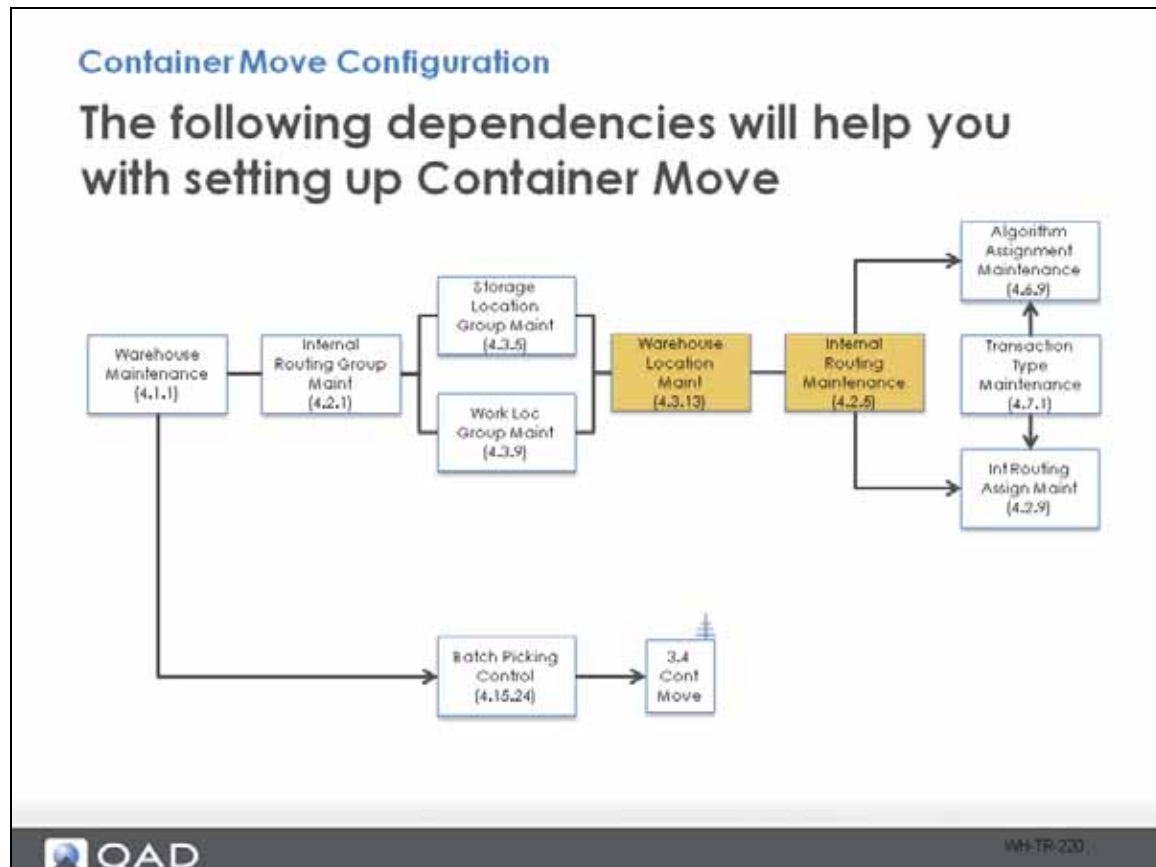
- Container Moves is not available in QAD Core.
- Items are moved to a truck but still require shipping from QAD.
- Can ship the pre-shipper without loading the truck.

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.

01

070

070SH

070SH001

070SH002

070SH003

070TR001

070TR002

070TR003

OUTBOUND

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 could represent physical trucks and the containers or orders 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: ☐

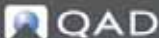
Internal Routing: 01LTR

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

There are 9 Container Move rules.

01LTR

01

070SH

070TR

070SH-001

070TR-001

070SH-002

070TR-002

070SH-003

070TR-003

OUTBOUND

WM-TR-260

QAD

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 causes the system to 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 when they are assigned to a Storage Type set to Stage. Why? You set the To Location Option field in Internal Routing Maintenance to 3.

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

 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

Screen 1: Initial Selection

Site: 10-301 Item Number: Warehouse: 0705H001 Lot/Serial: Reference: Display Whse Loc: No Disp Non-Whse Loc: No 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 PL000243 PL	EA	100			100

Screen 2: Transfer Details

Loc Transfer
Ref: PL000243
Loc: 0705H001
Chk:
S: PS1024110008
Destination
Loc: 070TR001
Chk:
Via: FEDX
Lo:

Screen 3: Confirmation

Site: 10-301 Item Number: Warehouse: 0705H001 Lot/Serial: Reference: Display Whse Loc: No Disp Non-Whse Loc: No Output: PAGE

4.9.13 Inventory Detail Inquiry whic

Site: 10-301 Item Number: Warehouse: 070TR001 Lot/Serial: Reference: Display Whse Loc: No Disp Non-Whse Loc: No 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 PL000243 PL	EA	100			100

QAD VMI-TR 280

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.

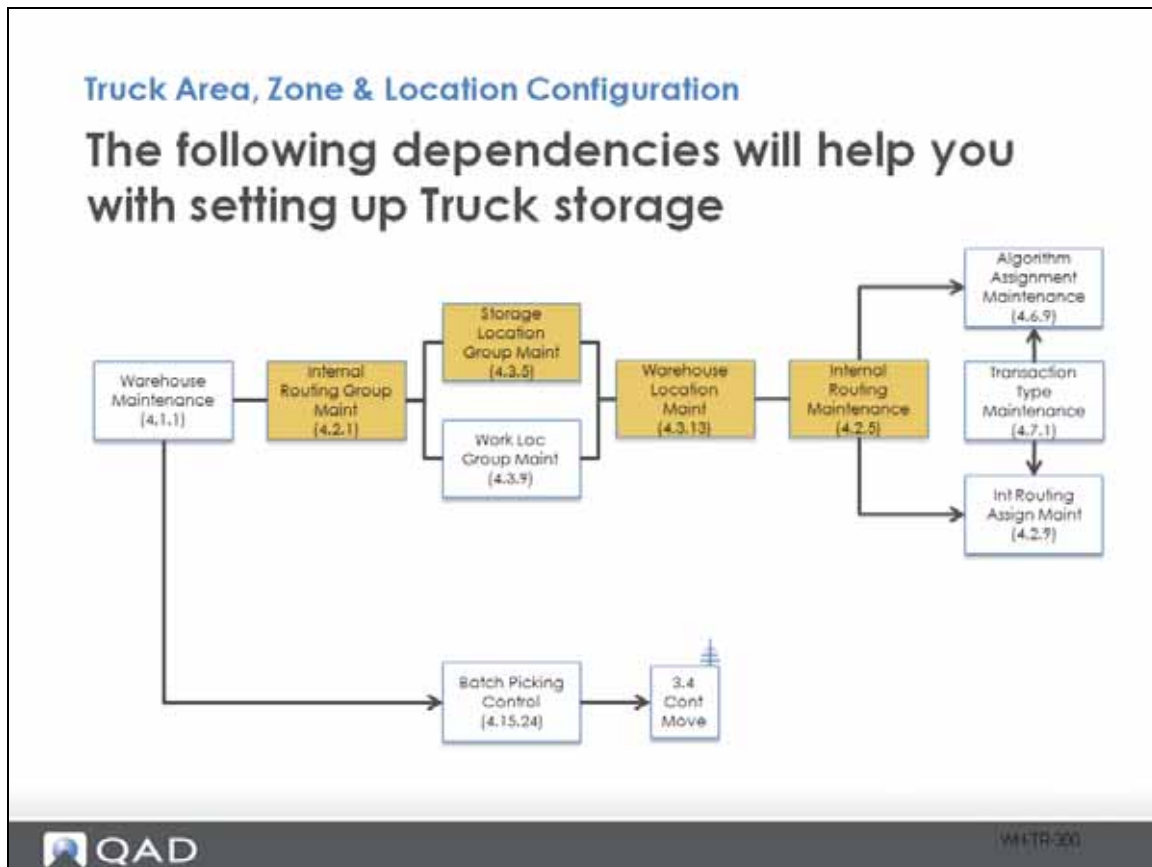
Optional - Trucks as Temporary Storage

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: ☒

DYK:

Specifying an Area, Zone and Location for TRUCK allows you to report on truck capacity and contents using the truck location for storage.

WH-TR-310

In the previous example the Truck locations were in the Shipping Area and Zone. Given the Shipping Area is Functional, we need to create another Trucks Area to be able to report on truck Locations capacity. If detailed truck Location capacity is not relevant, keep the truck locations in the Shipping Area.

Did You Know

Specifying an Area, Zone and Location for Truck lets you 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

Picking Multiple UM:
Detail Overflow Group:
Capacity Check:
Optimize:
Allow Mixed Sta:
Re:
Acquisition UM:

Exclude from Picking: ☐
Picking Level: 0

01
080
080TR

OUTBOUND

QAD WHT-311

Setting a new Trucks are requires and associated 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 Type:

Preferred I:

Opportunity Count Freq:

Last Opportunity Co:

Stage:

Stage (C:

01
000
080TR
080TR001
080TR002
080TR003

OUTBOUND

32
QAD

WH-TR-330

Truck Locations can then be assigned to the truck Zone and the fork lift Work Location Group.

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.

QAD

WHLTR-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 a bracket grouping 'Warehouse: 01', 'Item Number:', and 'Warehouse Item Type:', and one to 'Internal Routing: 01LTR'.

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: 0705H001	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: 0705H001
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 Cmmts: ☐

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



OPTIONAL

Containerization is the process of consolidating packages, pallets and orders prior to shipment and creating a moveable unit load

WH-TR-400

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.

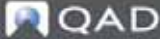
Containerization is available for both sales and distribution orders.

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

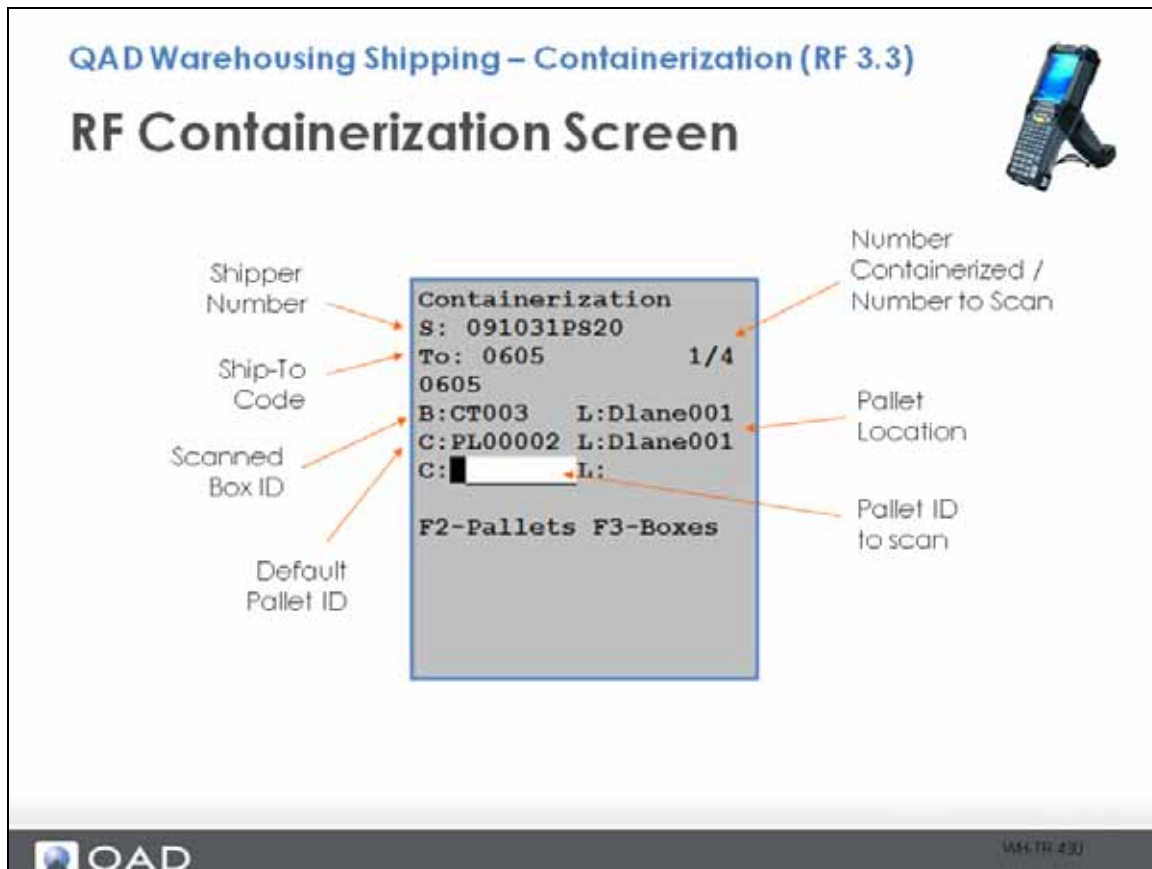
Containerization includes the following steps:

- 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:** L: (blank)

The screen also displays the following options:

- F2-Pallets
- F3-Boxes

The QAD logo is visible in the bottom left corner, and the version number 10.1.1.1.1 is visible 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:

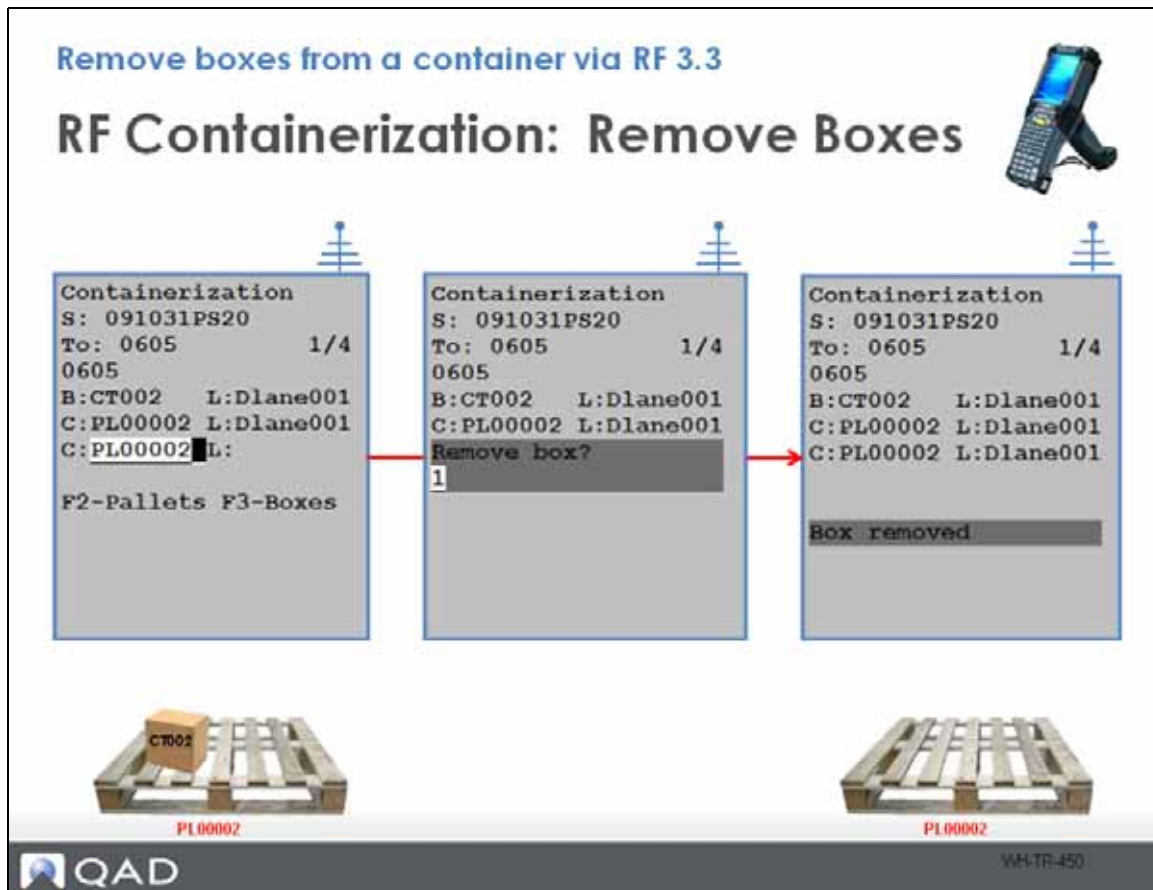
```

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-447

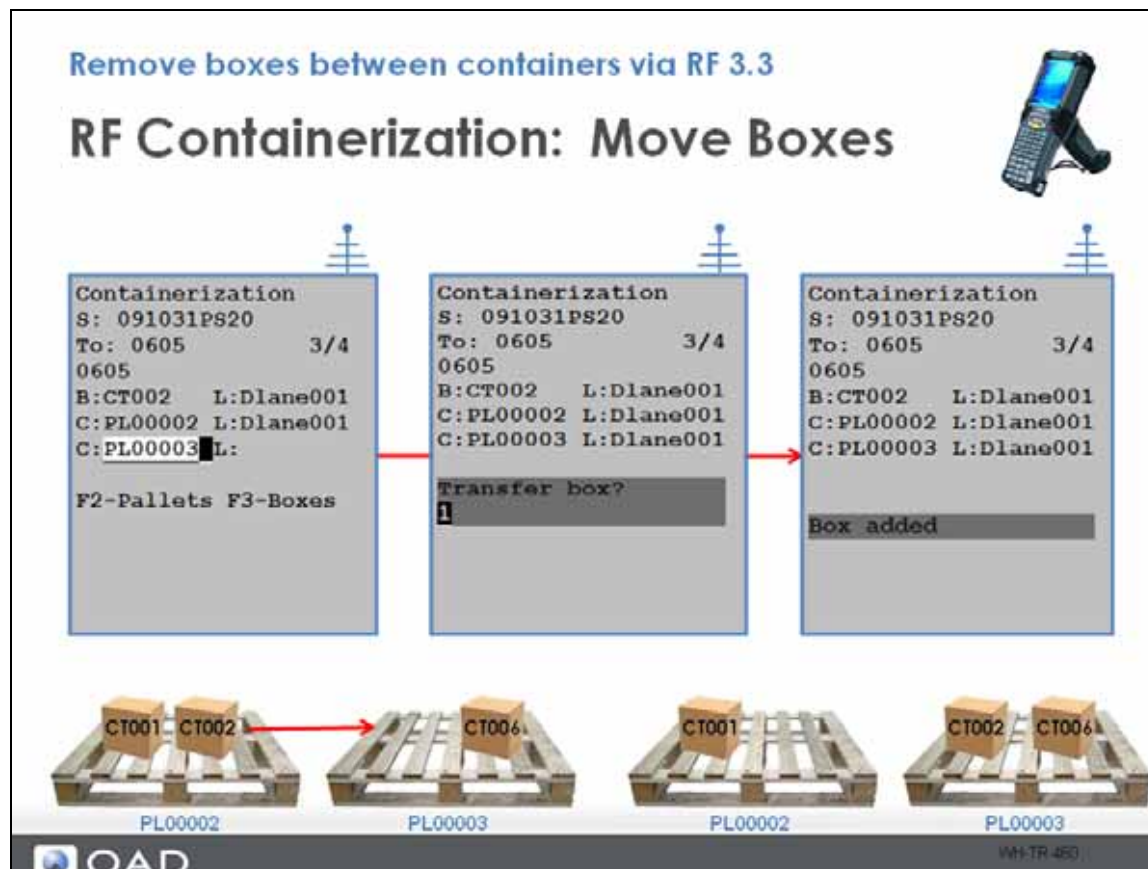
Using the RF you can view the number of boxes already containerized and the remaining boxes to be processed to complete the load.

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

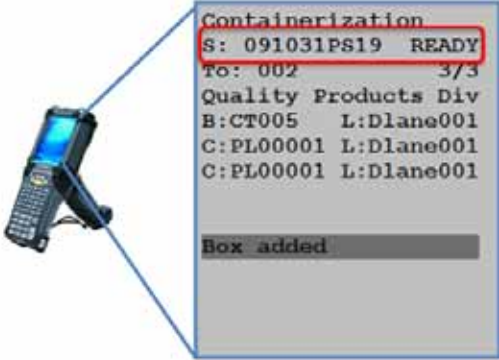


Or, you can move boxes from one pallet to another during load building/containerization.

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 pointing at a screen displaying the following information:

```
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 visible 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:

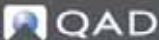
- Merge a pallet into another pallet.
- Transfer a scanned box to a pallet that is in another location on the same shipper.
- Print pallet labels if required.

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

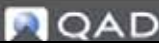
RF Containerization: Customer 002

 **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	Line	To	
Site	Location	Lot/Serial	Order	Ship	
	Customer Ref	Model Year	Ref	Stat	
091031PS19			0	1.0	
.CCT001	Box		0		
us-d3	Dlane001			EA	
..I	D-IT005		5011035	1	6.0
us-d3	Dlane001			EA	
.CCT004	Box		0		
us-d3	Dlane001			EA	
..I	D-IT006		5011035	2	6.0
us-d3	Dlane001			EA	
.CCT005	Box		0		
us-d3	Dlane001			EA	
..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 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

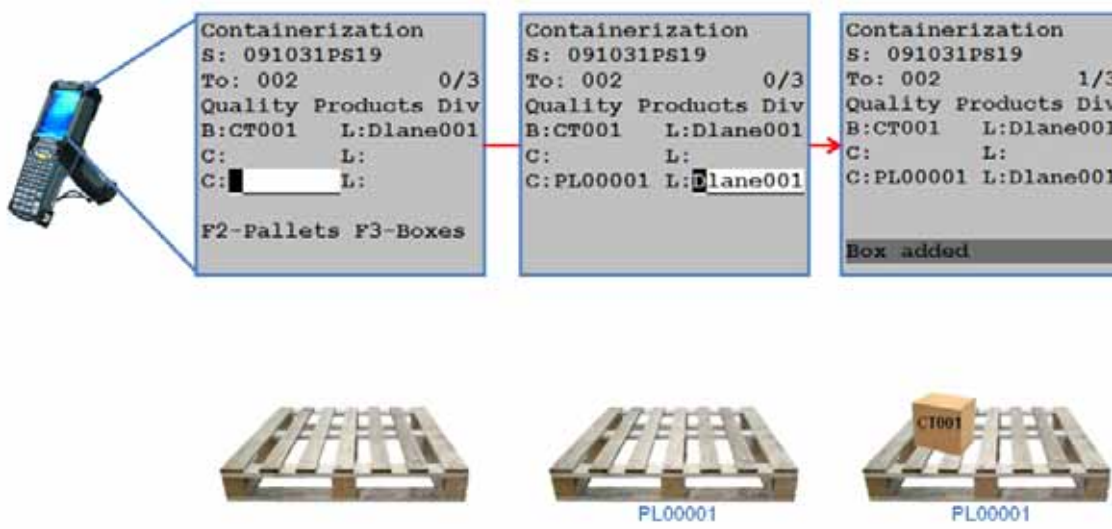
Ship-From ID: us-d3		Pre-Shipper/Shipper: Pre-Shipper		Number: 091031PS20		Output: PAGE	
Ship-To/Dock: 0605		0605		Status:		Inventory Movement Code:	
Master Bill ID:							
ID	Item Number	PO Number	Order	Line	To		
Site	Location	Lot/Serial	Ref	Stat	Ship		
	Customer Ref	Model Year					
091031PS20				0	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



The diagram illustrates the three-step process of building a container using RF 3.3. A handheld RF device is shown on the left, connected to three sequential screens. Red arrows indicate the flow from one screen to the next.

Screen 1 (0/3):

```

Containerization
S: 091031PS19
To: 002          0/3
Quality Products Div
B:CT001   L:Dlane001
C:         L:
C:         L:
F2-Pallets F3-Boxes
  
```

Screen 2 (0/3):

```

Containerization
S: 091031PS19
To: 002          0/3
Quality Products Div
B:CT001   L:Dlane001
C:         L:
C:PL00001 L:Dlane001
  
```

Screen 3 (1/3):

```

Containerization
S: 091031PS19
To: 002          1/3
Quality Products Div
B:CT001   L:Dlane001
C:         L:
C:PL00001 L:Dlane001
Box added
  
```

Below the screens, three pallets are shown:

- An empty pallet.
- A pallet labeled **PL00001**.
- A pallet labeled **PL00001** with a box labeled **CT001** on top.

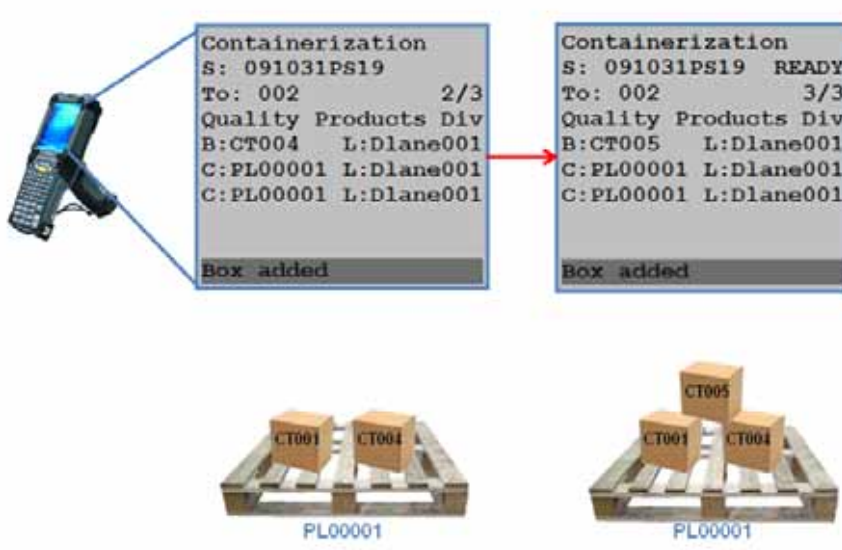
QAD WH-TR 510

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

QAD

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



QAD W4TR-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

 WATR-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

 QAD 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" and "Parcel Manifest Setup & Execute". It lists four steps: 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, and 4. Print pre-shipper/shippers. The slide includes the QAD logo and the code WH-TR-600 in the footer.

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

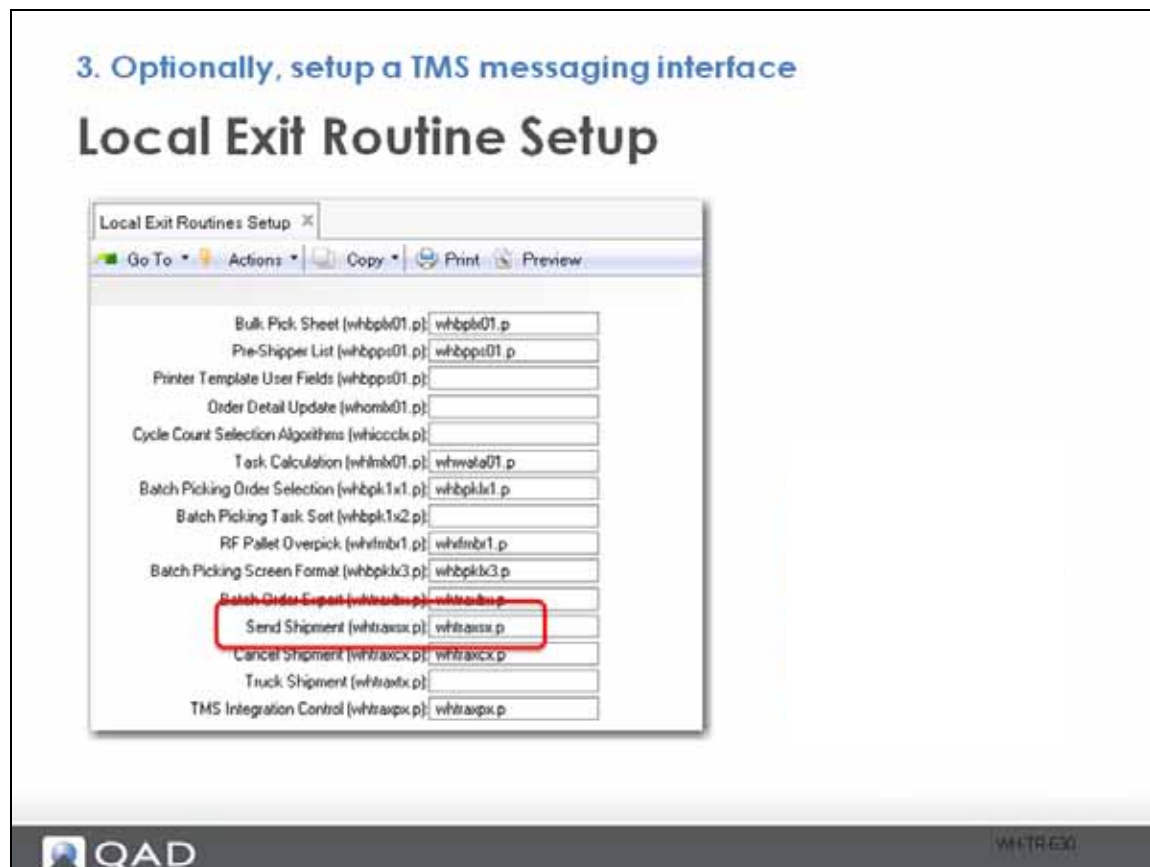
System Flavor:	B	
Device:		
External Device Printer:	printer	
Form Printer:	printer	Use External: ☐
ID Printer:	printer	Use External: ☒
Task Printer:	printer	Use External: ☒
Inspection Printer:		Use External: ☒

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



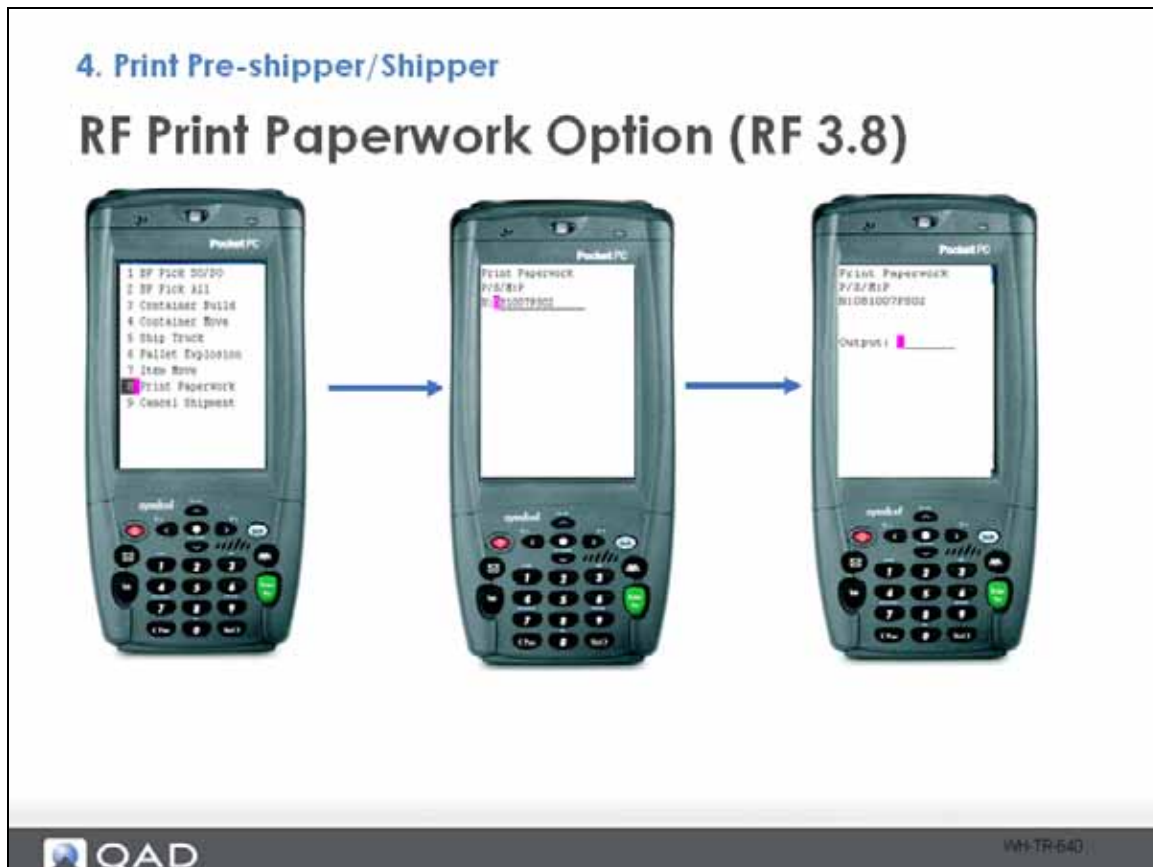
Local Exit Routines are preconfigured or custom programs a company can use to customize processes and/or third party system interfaces without changing core QAD Warehousing code.

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.

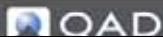
The RF screen prompts the user to print shipping documentation. Printing is done before both container move and truck ship

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:
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 WHLTR-230

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

Sales Order Line

Ln	Item Number	Qty Ordered	UM
1	03210		

Warehouse 1

Item	Status	Qty	Expect	Expect	Detail	Detail	
Lot	Ref	UM	On Hand	In	Out	Alloc	Pick
03210	Y-Y-N	EA	10				10

Inventory Detail Inquiry

Site: 10-101 Item Number: 03210
Warehouse: 070SH001 Lot/Serial: 001
Locations: 070SH001 Reference: 001

4.9.13 Inventory Detail Inquiry

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.

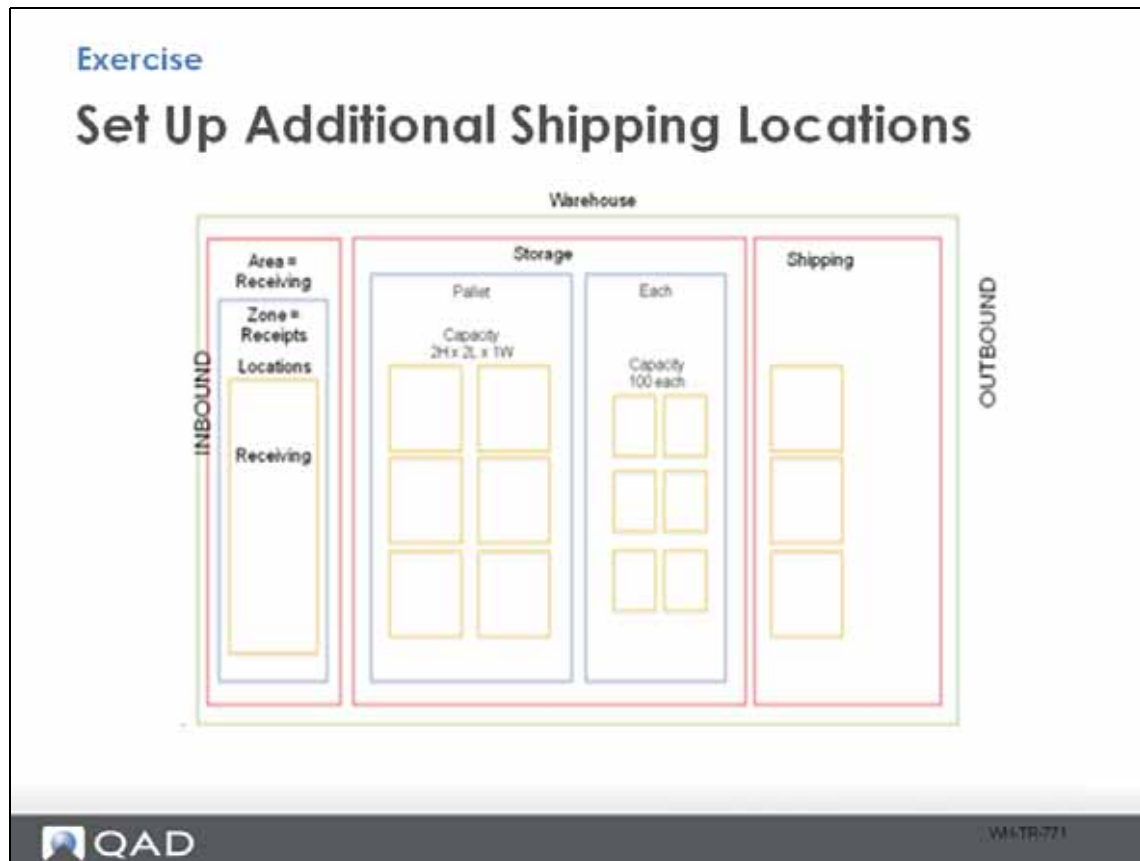
c Confirm the shipment.

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 WMLTR-700

A manual container move on the RF scanner moves the load to another shipping location within the shipping area.

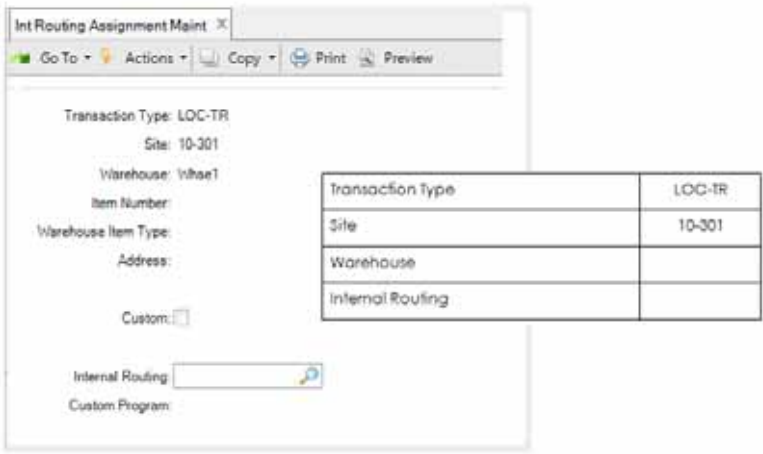
- 4 Setup a one step routing to move the load to a shipping lane using Internal Routing Maintenance.
- 5 Define parameters, and when not provided, note the parameters you enter here:

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



Field	Value
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

The screenshot shows the 'Algorithm Assignment Maintenance' window. It includes fields for Algorithm Type (CM), Transaction Type (LOC-TR), Site (10-301), Warehouse (Whse1), Item Number, Address, and Warehouse Item Type. A table titled 'Assigned Algorithms' lists three sequences: 10, 20, and 30, each with an associated algorithm. A summary table on the right provides a detailed view of these assignments.

Seq	Algo	Description
10		
20		
30		

Algorithm Type	CM	
Transaction Type	LOC-TR	
Site	10-301	
Warehouse		
Sequence / Algorithm	10	14
Sequence / Algorithm	20	12
Sequence / Algorithm	30	11

Sequence: 10 Algorithm:

Description:

QAD WH-TR-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.

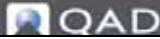
Set Storage Type to Truck.

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, likely a sample. The QAD logo is in the bottom left corner, and the word "WAREHOUSING" is in the bottom right corner.

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

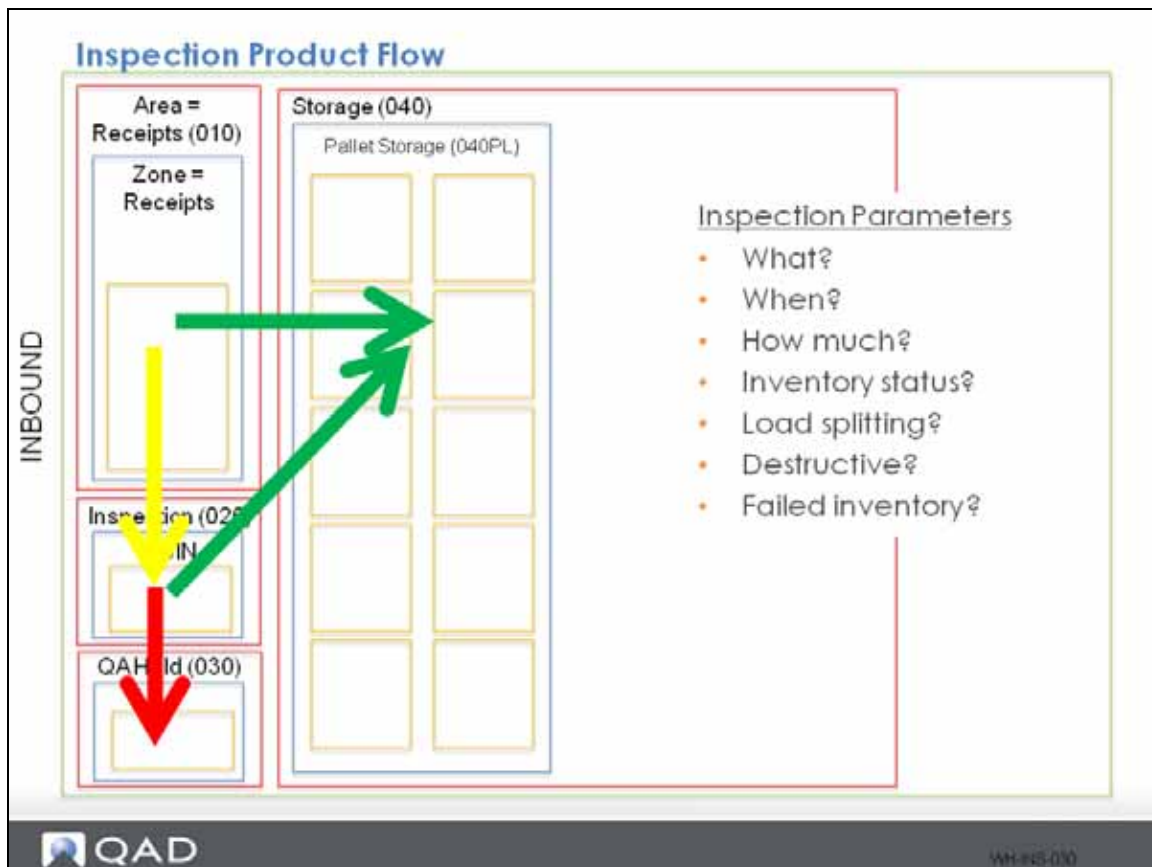
 Partial

 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.

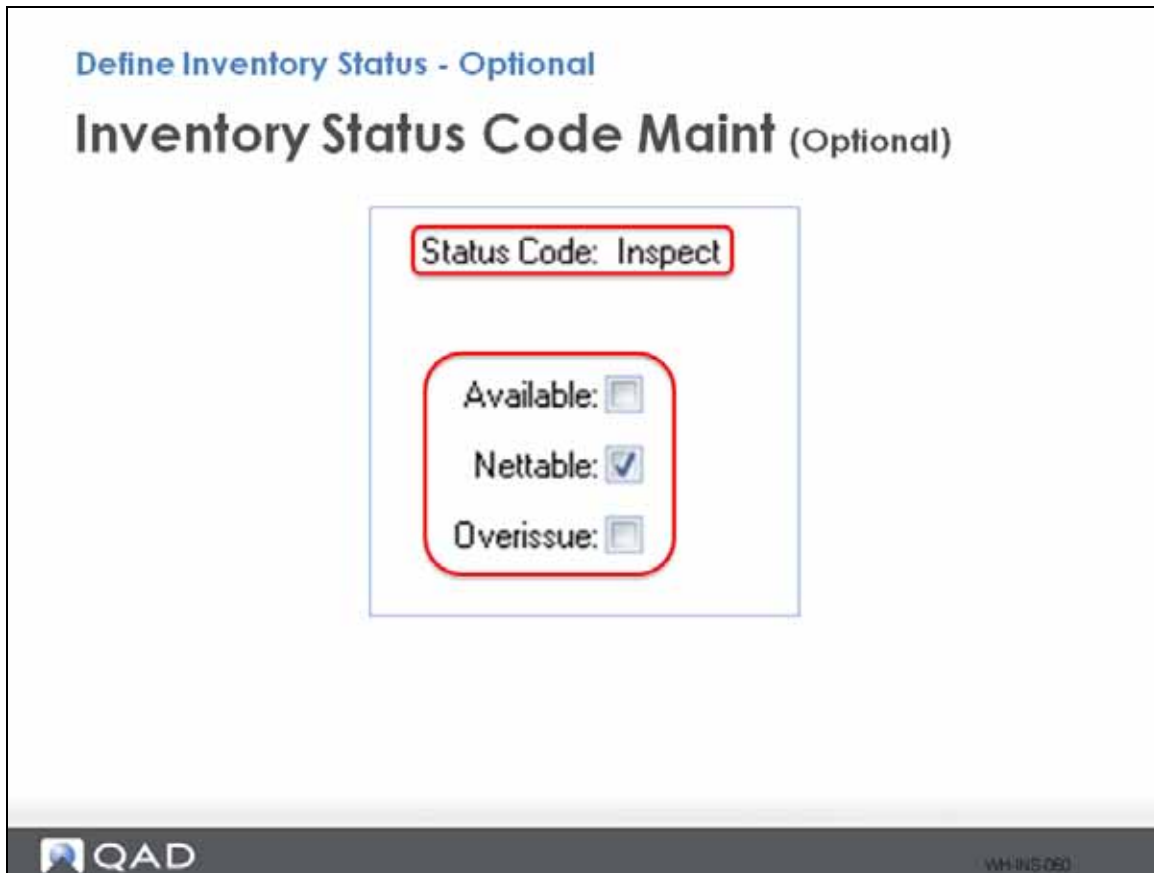
In Internal Routing Maintenance, enable the:

- 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.

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

QA Hold (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

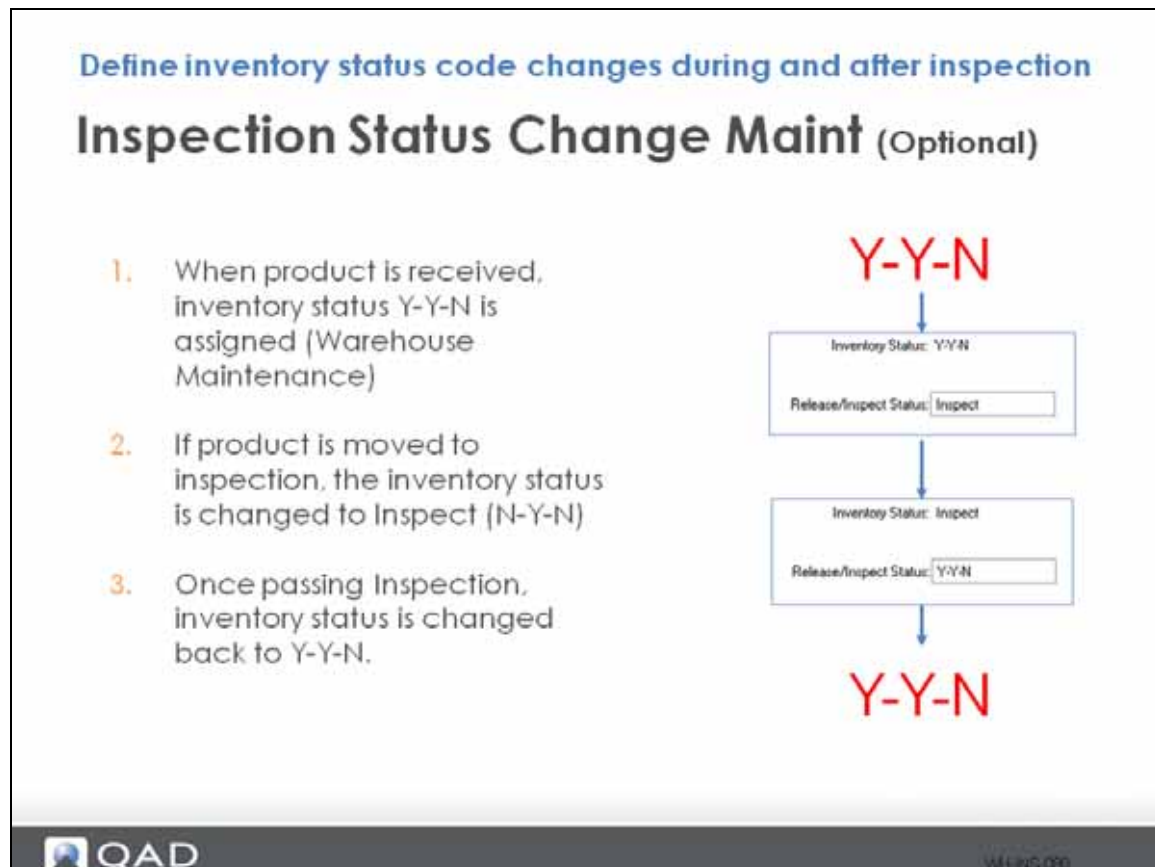
Warehouse: 01

Storage Location Group: 020IN
Work Location Group: 01FL

QAD V14.115.070

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.

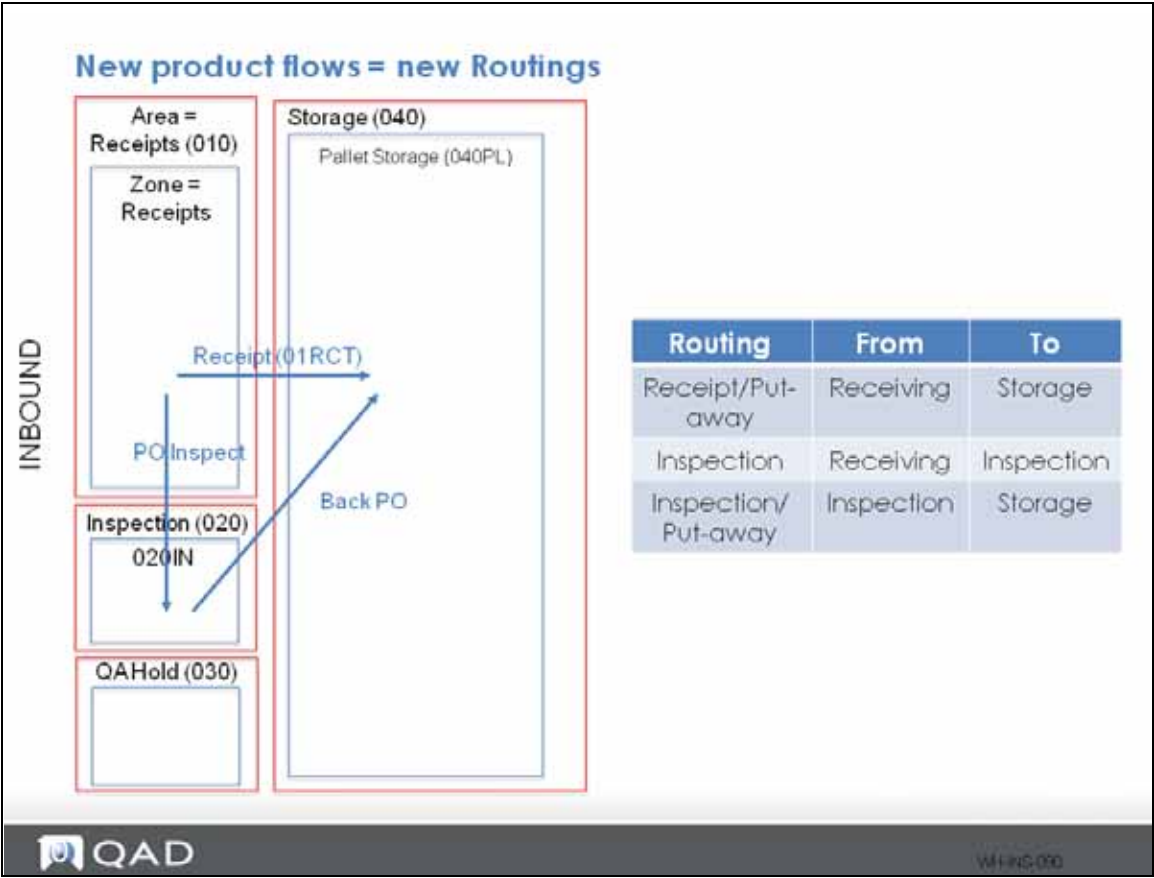
Define Inventory Status Code Changes



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

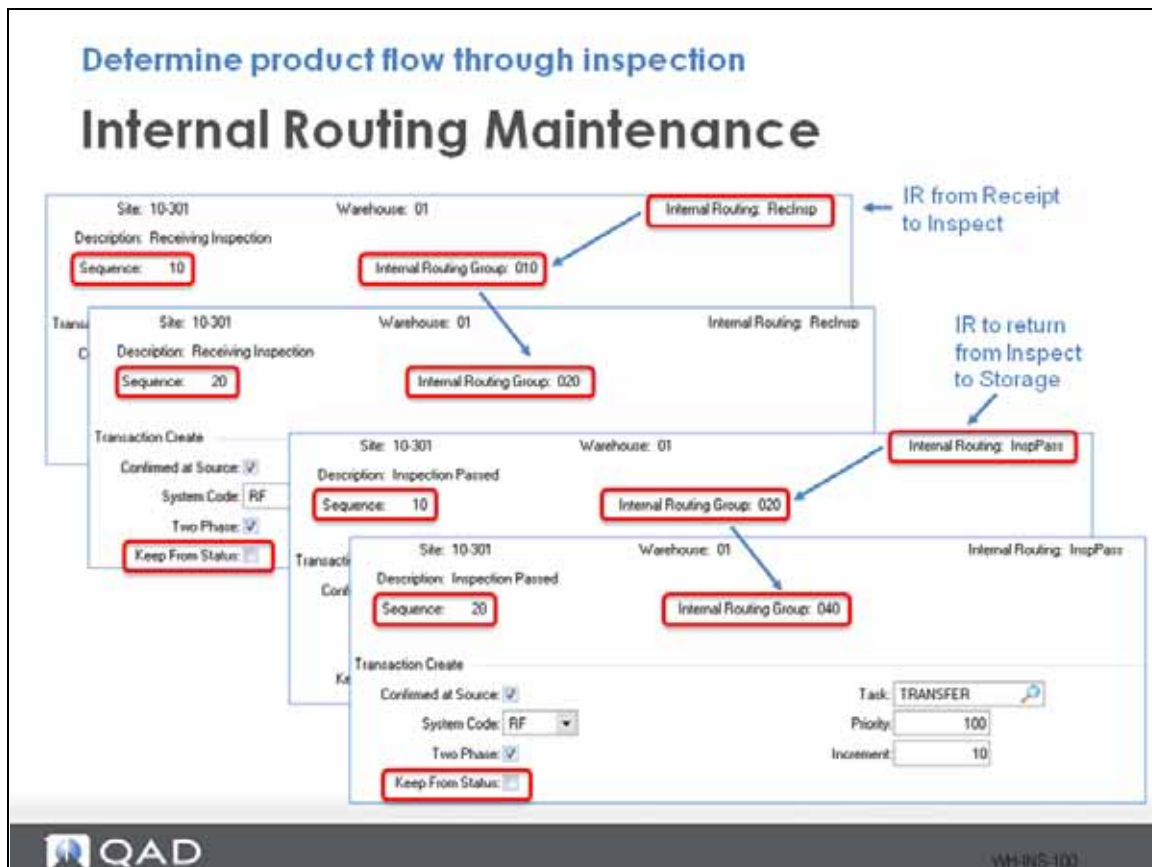


With the addition of an inspection process and area, you need to develop two new potential routings to represent the new product flows:

- 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 New Unit of Measure:

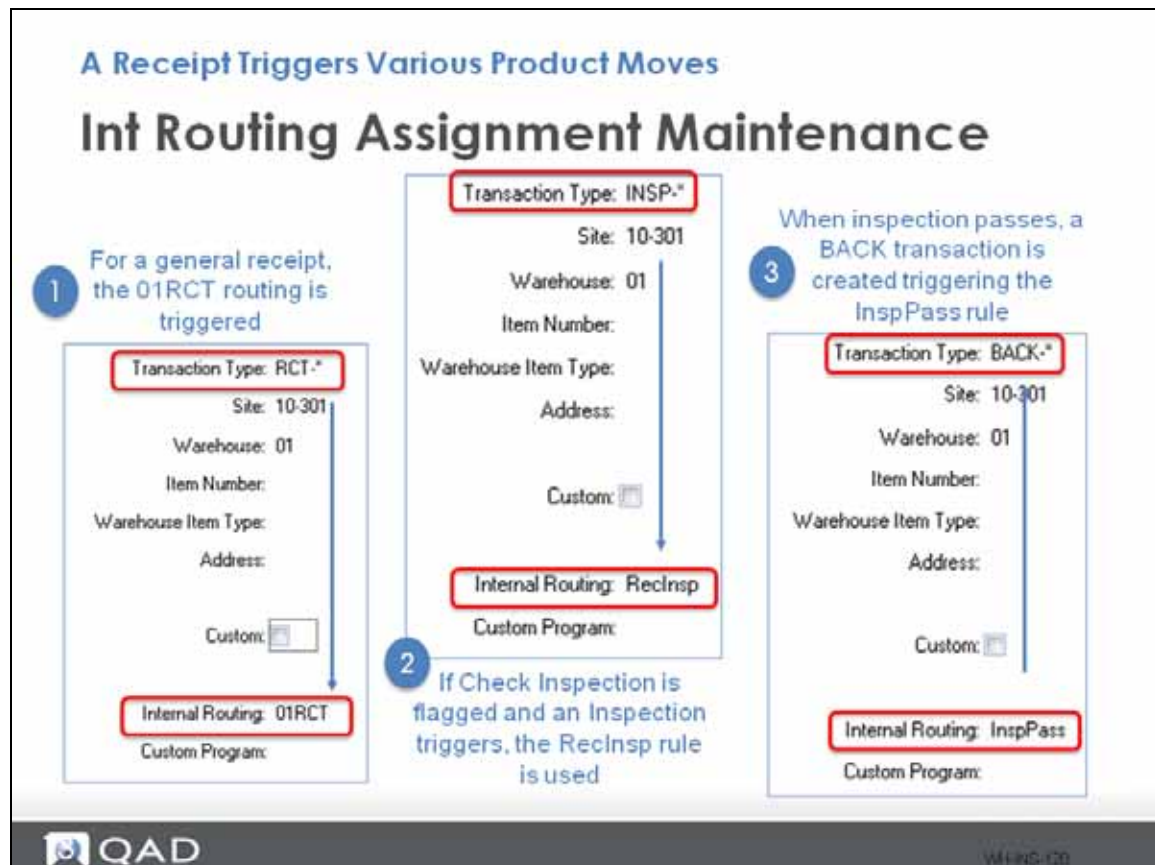
Clear Shortages: ☐ Create Shipper: ☐

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.

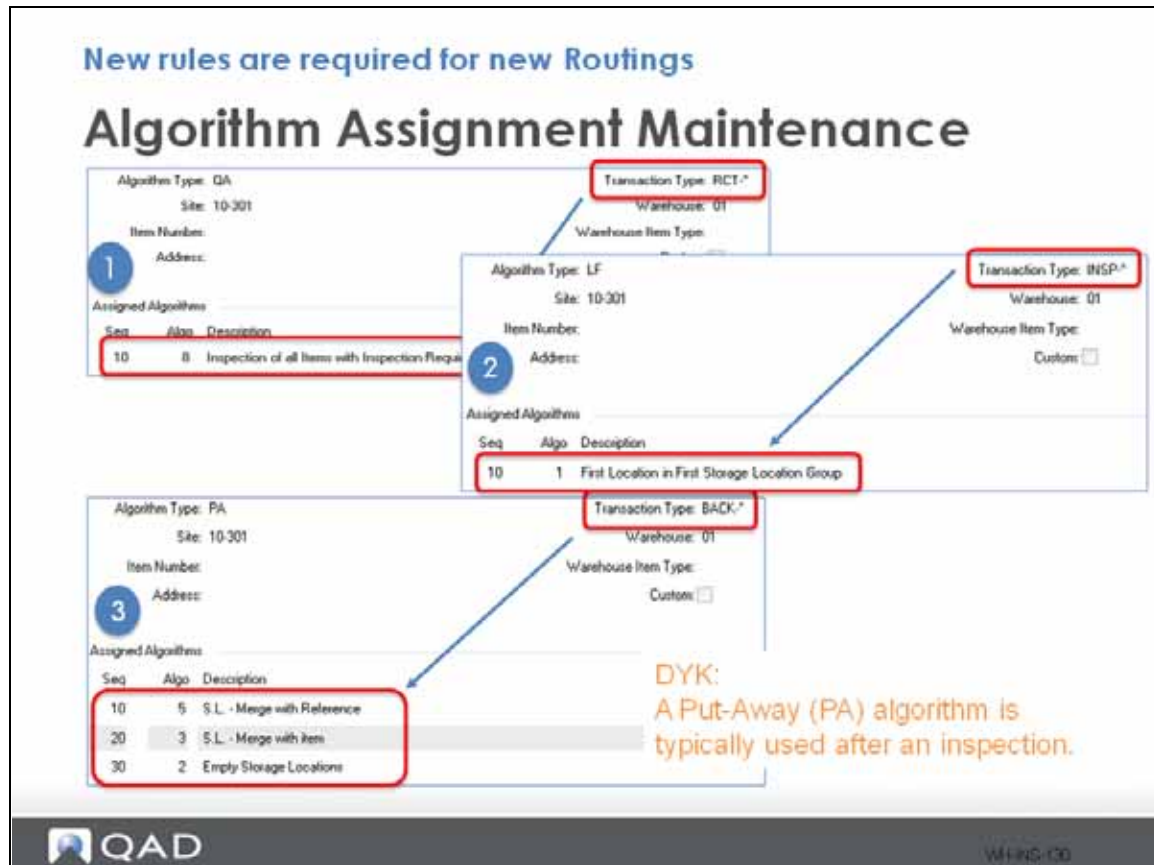
A Receipt Triggers Various Product Moves



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.

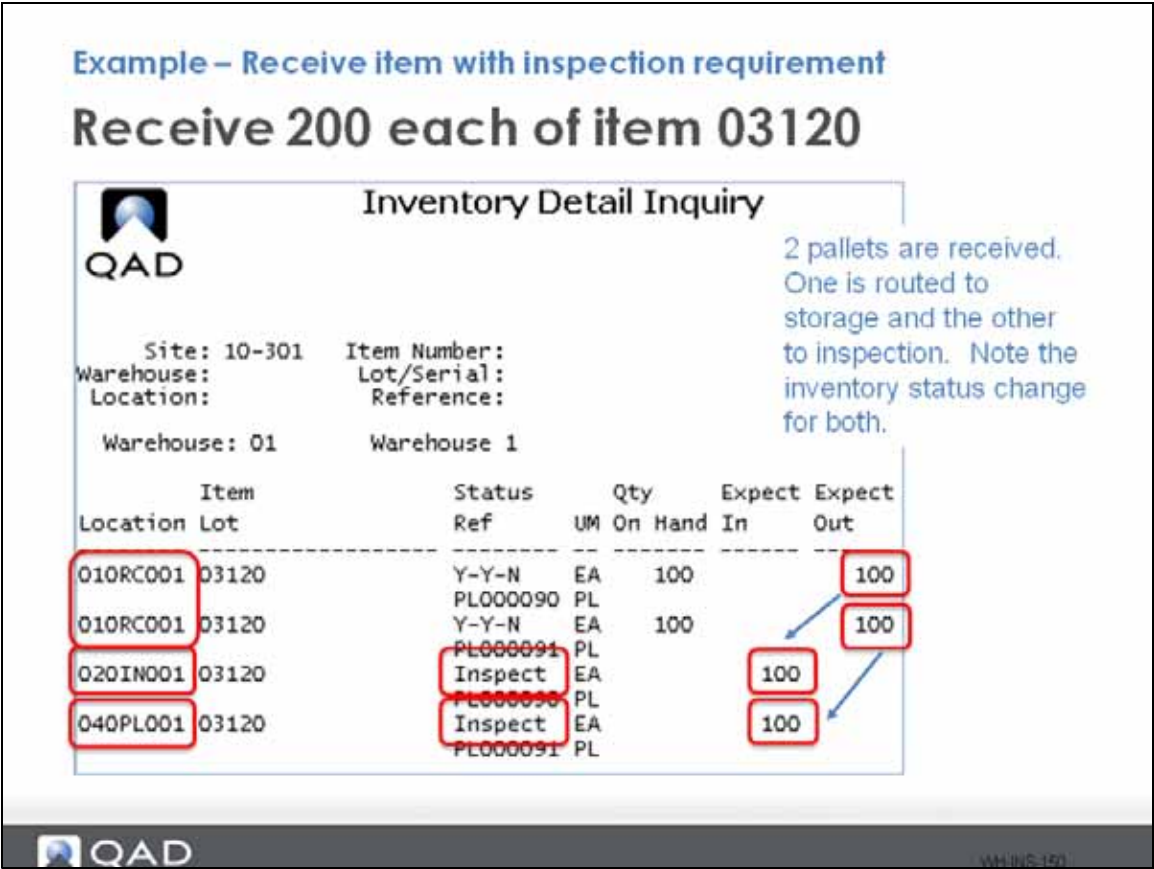
In the graphic above, you setup item 03120 to inspect 100 each whenever the product is received.

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



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:

Default Include: ☐

ID	Item Number	Lot/Serial	Ref	Qty to Insp	Fail	Inc
15	03120		PL000090	100.0000	☐	☐

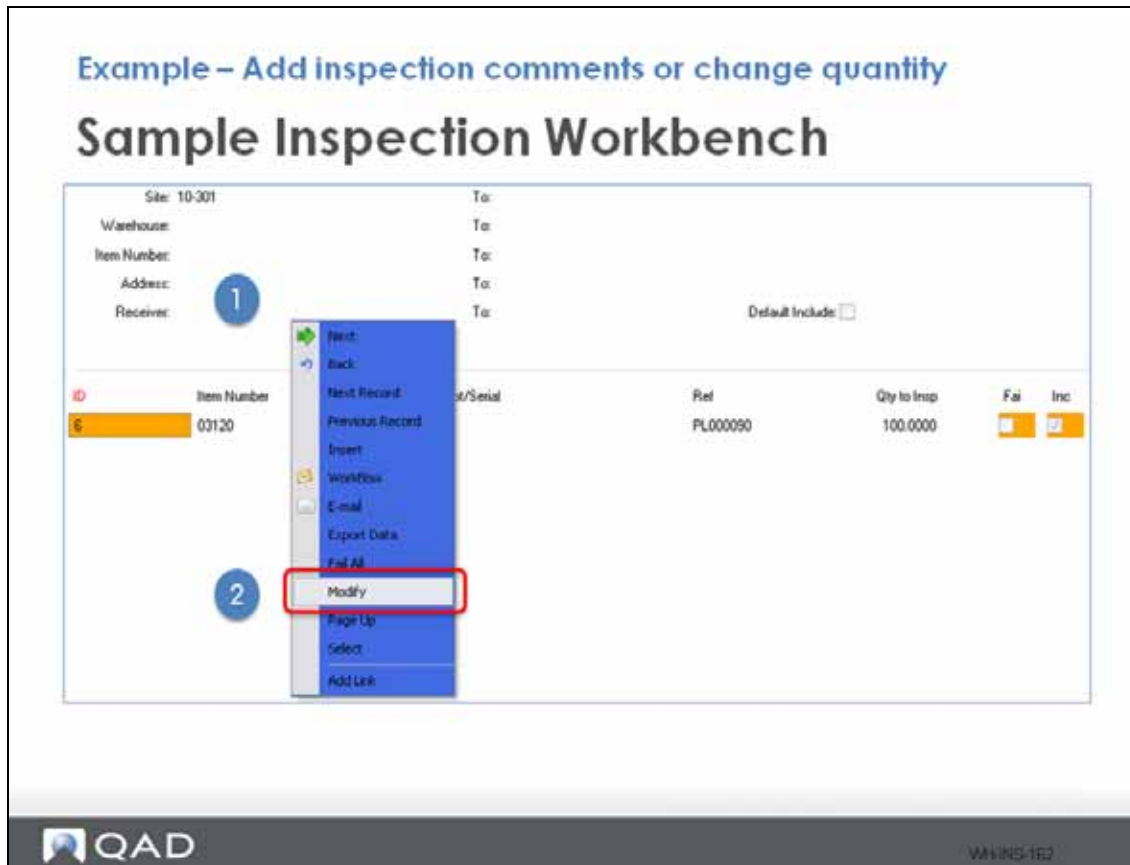
QAD

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 Quantity



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 Quantity (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		Item Number: 03120 Address: Receiver: 2309523 Data Set: unplan Order: Line/ID:	
Sample Quantity: 100 Sample Percent: 0 Create Date: 10/11/2011		Algorithm: 8 Destructive: ☐	
Qty to Insp: 100.0000 Remark: Add a remark		Failed ☐ Reason:	
Create Transactions: ☒ Return Quantity: 100.0000		Is all information correct Yes No	
Back Next			

QAD WIN/INS-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:

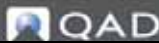
Warehouse 1

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.

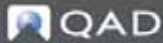
When the inspection results are confirmed, the load is moved from inspection back into storage where is it merged with the same item. The inventory status code is changed to available (Y-Y-N).

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



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

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

Warehouse: 01 Warehouse 1

Location	Item Lot	Status Ref	Qty UM	On Hand	Expect In	Expect Out
010RC001	03120	Y-Y-N PL000092	EA	100		100
020IN001	03120	Inspect PL000092	EA		25	
040PL001	03120	Inspect PL000092	EA		75	

WMS-300

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 WINIS-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

Display
Disp Nor
C

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

Display
Disp Nor
C

Item Location	Lot	Status Ref	Qty UM On Hand	Expect In	Expect Out
040PL001	03120	Y-Y-N PL000092 PL	EA 100		

QAD

WH-INS-230

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-RC-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

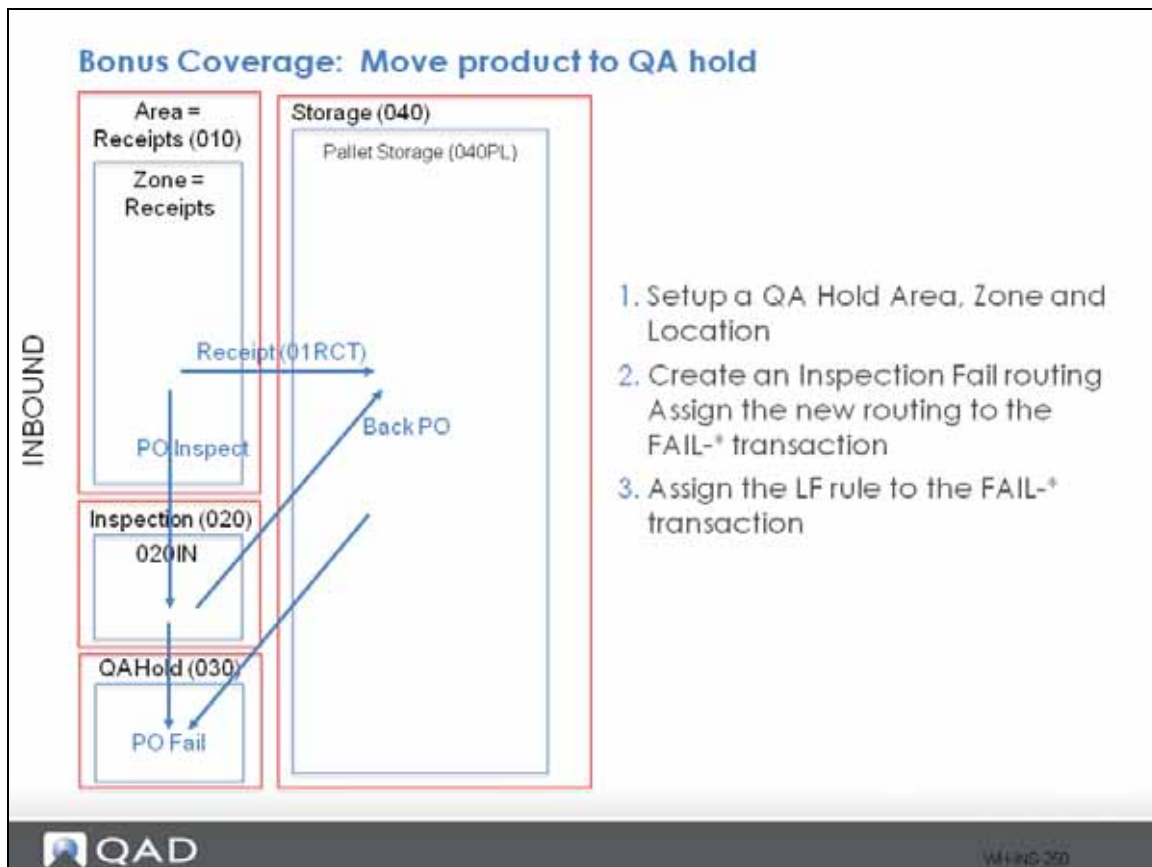
What happens when things don't work out quite the way you planned?



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

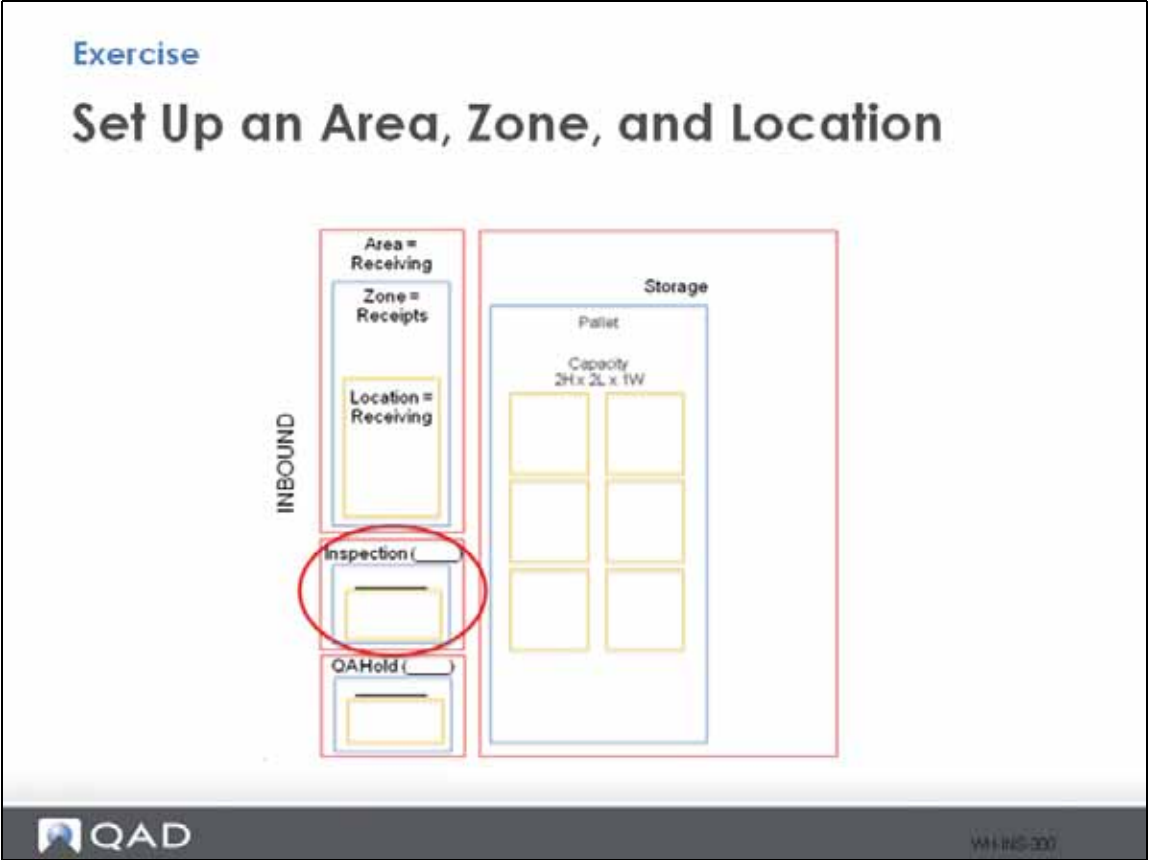


WH-INS-001

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

The diagram illustrates the product flow and inspection process. It is divided into two main sections: 'INBOUND' and 'Storage'. The 'INBOUND' section contains a box for 'Area = Receiving' and 'Zone = Receipts'. Below this box are two smaller boxes: 'Inspection ()' and 'QA Hold ()'. The 'Storage' section contains a box for 'Pallet Storage'. Arrows indicate the flow of products: a blue arrow labeled 'Receipt to Storage' with '10' at the start and '20' at the end; a blue arrow labeled 'Receipt to Inspection' with '10' at the start and '20' at the end; and a blue arrow labeled 'Inspection to Storage' with '20' at the start and '20' at the end.

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 displays parameters for two different algorithm types: LF and PA. The LF rule is configured for transaction type INSP-*, site 10-301, and sequence 10. The PA rule is configured for transaction type BACK-*, site 10-301, and a sequence range from 10 to 30. Both rules are assigned to algorithm 1.

LF Rule Parameters	
Algorithm Type	LF
Transaction Type	INSP-*
Site	10-301
Warehouse	
Sequence	10
Algorithm	1

PA Rule Parameters			
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

The screenshot shows the 'Item-Warehouse Maintenance' window. The 'Item Number' is 1, 'UM' is 2, 'Site' is 'Exam Site', and 'Warehouse' is blank. A table on the right lists the parameters to be defined: Site (10-301), Warehouse (RCT-*), Item (03120), Selective Inspection (Y), and Sample Quantity (100). The 'Inspection Data' section contains fields for Selective Inspection (checkbox), Sample Quantity (0), Inspection Frequency (0), Sample Percent (0), Insp Freq (Days) (0), Destructive (checkbox), and Random Inspection % (0). A red box highlights the 'Selective Inspection' checkbox and the 'Sample Quantity' field.

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:

Fail Inspection Status Code:

QAD

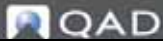
Use Inspection Control to activate warehouse inspections. Enable the Activate field.

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-299

- 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 title "QAD Warehousing Labor Management" in blue, followed by "QAD Warehousing" in large black font, and "Field Readiness Team" in smaller black font. Below the text is a horizontal strip of three images: two people working on a laptop, a close-up of red cables being plugged into a port, and a long aisle in a warehouse with high shelves. At the bottom, the QAD logo is on the left and the tagline "Our Passion. Your Advantage." is on the right.

QAD Warehousing Labor Management

QAD Warehousing

Field Readiness Team



QAD 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

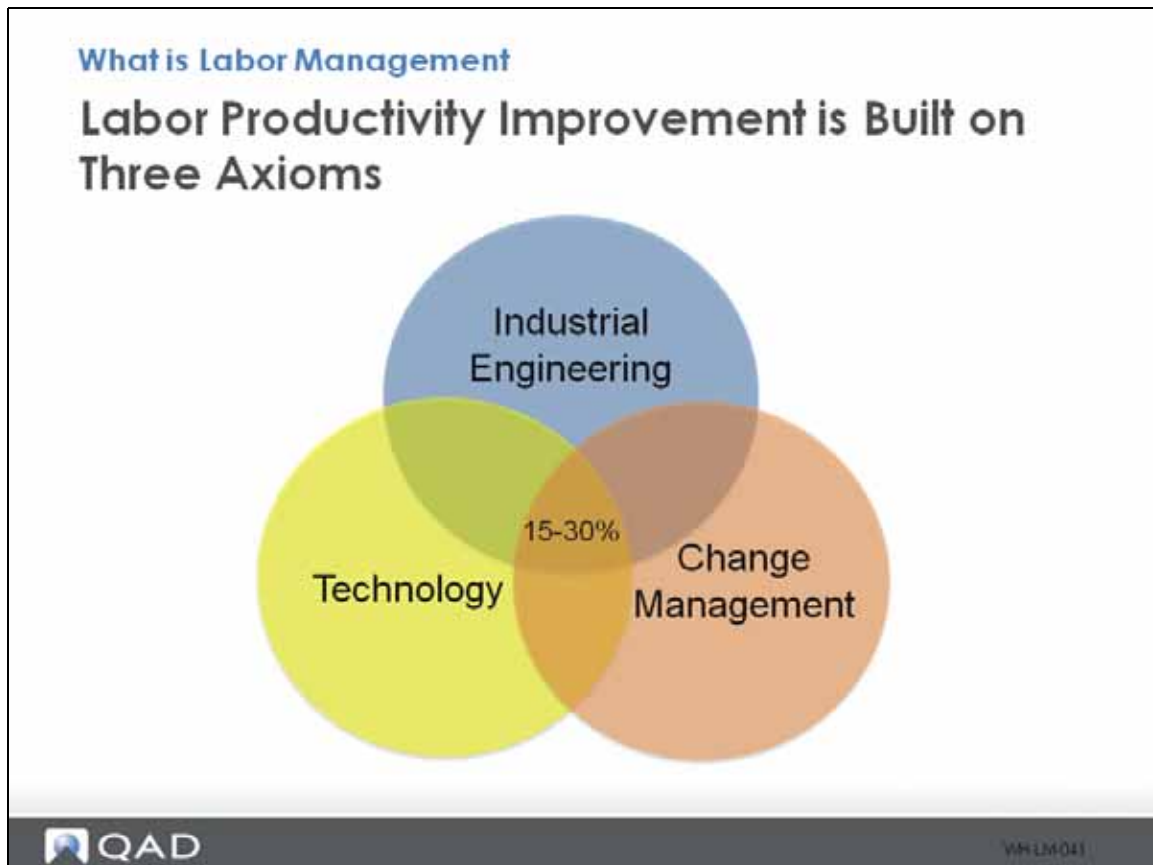
WH-LM-030

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 (continued)

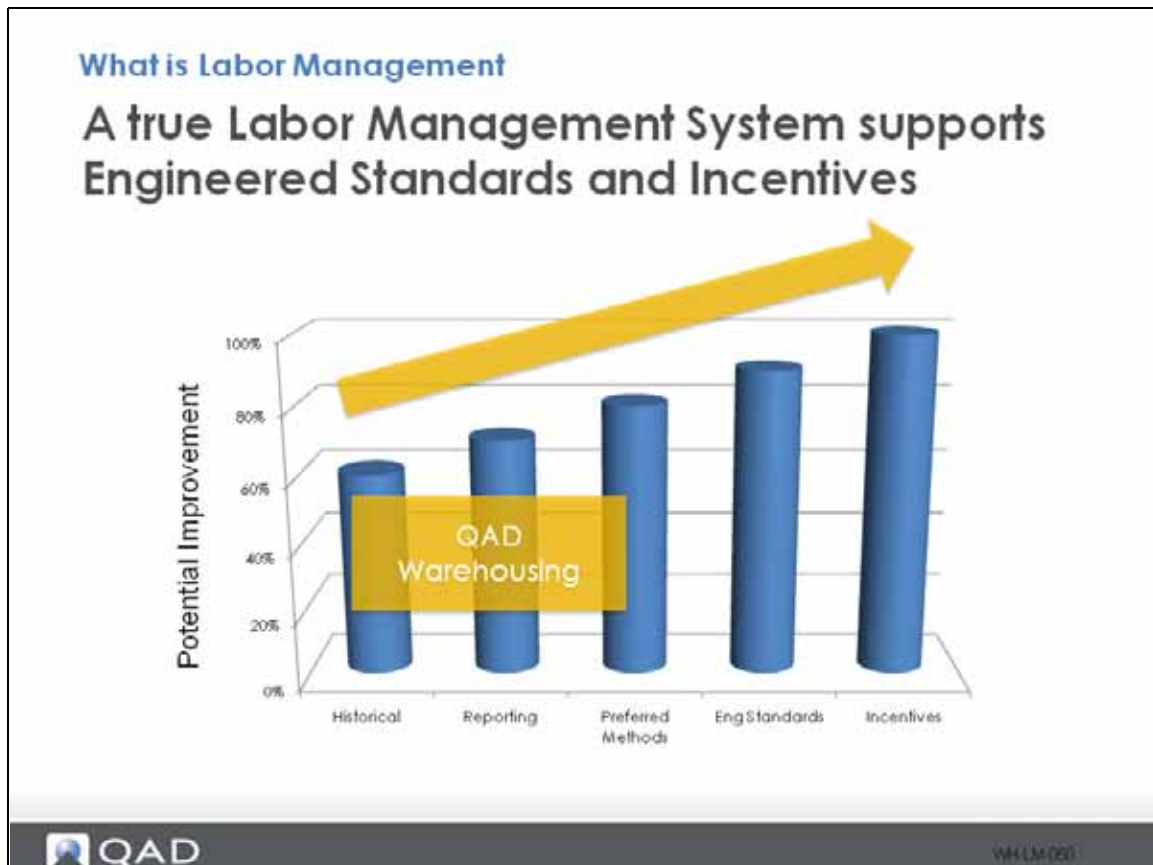


Industrial Engineering: Defines the optimal operating methods and develops appropriate performance standards.

Labor Management System: Enables improved workforce management and compares actual work accomplished with expected standards

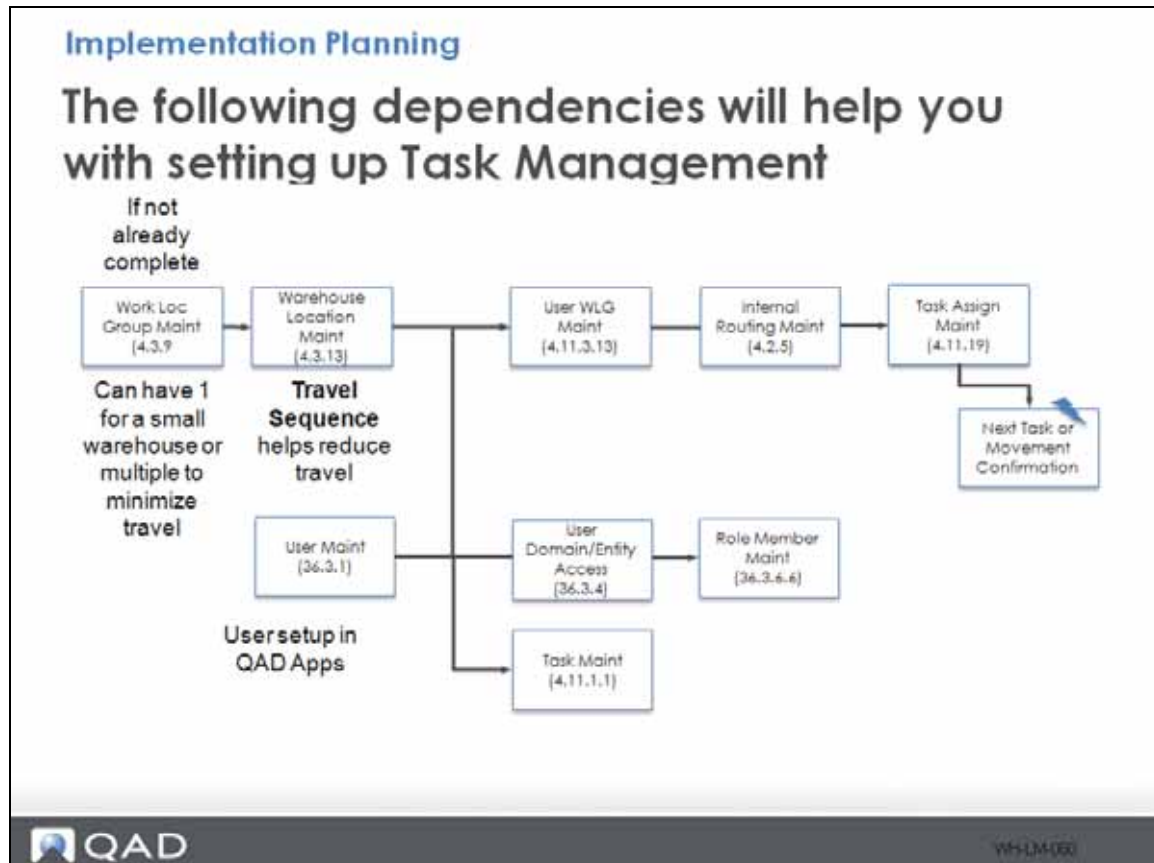
Change Management: Ensures potential gains from productivity improvement initiatives are realized during and after implementation

What is Labor Management? (Continued)



QAD Warehousing provides historical performance reporting and can provide expected work but does not equate to a true Labor Management System; however, the data in QAD Warehousing feed 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.

Labor Management Control

The screenshot shows a software window titled "Activate Labor Management Control". At the top left, the word "Activate" is in blue. The main title "Labor Management Control" is in large, bold black font. Below the title is a settings panel with a red border. Inside this panel, the "Active:" checkbox is checked and is highlighted with a red rectangle. Below it are three checked checkboxes: "Check User Task Assignment:", "Check User/Group Calendars:", and "Check User Travel Sequence:". Below these is an unchecked checkbox labeled "Include Routing Tasks:". At the bottom of the panel are two numeric input fields: "Display Next:" with the value "0" and "Display Tasks for Next:" with the value "0". The QAD logo is in the bottom left corner of the window, and "WHLM(61)" is in the bottom right corner.

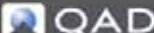
Note Currently, all labor management functionality works whether Labor Management Control is enabled or disabled. This may be a defect or a design flaw. Also, other functionality in Warehousing Labor Management is currently undergoing validation in test.

Implementation Planning - User Parameters

User Setup: Implementation Consideration

Define User Parameters

Data	Key	User 1	User2	User3	...
Name	36.3.1	Cart Pick	Fork Truck	Super	
User ID	36.3.1	UserA	UserB	UserCRB	
Password	36.3.1	qad	qad	qad	
Language	36.3.1				
Country Code	36.3.1				
User Type	36.3.1				
Access Loc	36.3.1				
Enabled Reason	36.3.1				
Products	36.3.1				
Domain Code	36.3.4	(A)			
Entity	36.3.4	(B)			
Role	36.3.6.6	(C)			
Work Location Group	4.11.3.13	01CT	01FL	01FL/01CT	
Task Assignment	4.11.1.9				
RF User?					

 WM LM 070

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

Data Setup

USA	USA-01	(B) 10C)RPCONS		
	US-B			
	US-C	(C) USERA	Superuser	10USA
	US-D			11CAN
10USA	10USACO			12MEX
11CAN	11CANCO			20FRA
12MEX				21NL
20FRA				22UK
21NL				30CHN
22UK	22UKCO			31AUS
30CHN				
31AUS	31AUSCO			

User Setup: Define Work Sections

User Setup: 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

DYK:
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

QAD WHLM-001

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 the User to a Work Location Group

Assign the User to the Work Location Group

User Work Location Group Maintenance

User Work Location Group Mai... X

Go To • Actions • Copy • Print • Preview

Site:

Warehouse:

Work Location Group:

User ID:

System Flavor:

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

System Flavor defines the style and format of Radio Frequency (RF) screens.

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 x

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 LM 110

Use Task Maintenance to create and update the tasks performed in a warehouse.

Assign Task Types 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		

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

QAD WHUM-133

For cross-trained users working in multiple areas, Task Assignment Maintenance helps prioritize when multiple tasks are available. Also, when the task is not in the user's task maintenance queue, the system never assigns the task to the user.

.Did You Know

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

Example - Set Up a New User QMI



In this example, UserB is assigned to the pallet area due to a forklift-handling requirement and UserA to the Boxes area for handling less boxes.

Exercise: Assign User QMI to All Location Groups

Example

Setup a New User QMI

The diagram illustrates the setup of a new user QMI in QAD. It shows two location groups: 'Forklift Handling (01FL)' and 'Pick Cart Handling (01CT)'. UserA is shown picking items from the 'Pick Cart Handling (01CT)' group. UserB is shown receiving, replenishing, and pallet picking items from the 'Forklift Handling (01FL)' group. A 'Super User' is shown with a QMI device, circled in red.

QAD

WM-LM-051

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.

Exercise: Assign User QMI to All Work Location Groups

Exercise: Assign User QMI to all Work Location Groups

Task Assignment Maintenance

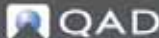
Site: 10-301
Warehouse: 01
Work Location Group: 01FL
User ID: QMI

System Flavor: B
Device:
External Device Printer:
Form Printer:
ID Printer:
Task Printer:
Inspection Printer:

Site: 10-301
Warehouse: 01
Work Location Group: 01CT
User ID: QMI

System Flavor: A
Device:
External Device Printer:
Form Printer:
ID Printer:
Task Printer:
Inspection Printer:

1. QMI must first be setup in QAD Core
2. Assign QMI to all Work Location Groups

 QAD

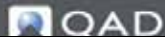
WH-UM-052

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



VOLUME 1

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	Cu
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**

Site: 10-301 Distribution Site 1
 Warehouse: 01 Warehouse 1

Order Priority: 99999999
 Task Priority: **40**

Transaction Priority Boost

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 WHLM170

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: 10301 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 WM-LM-1001

When there are multiple open tasks available for the same User, when you assign a task to a User in this workbench, this task is received next by the user even when the other unassigned tasks have a higher priority.

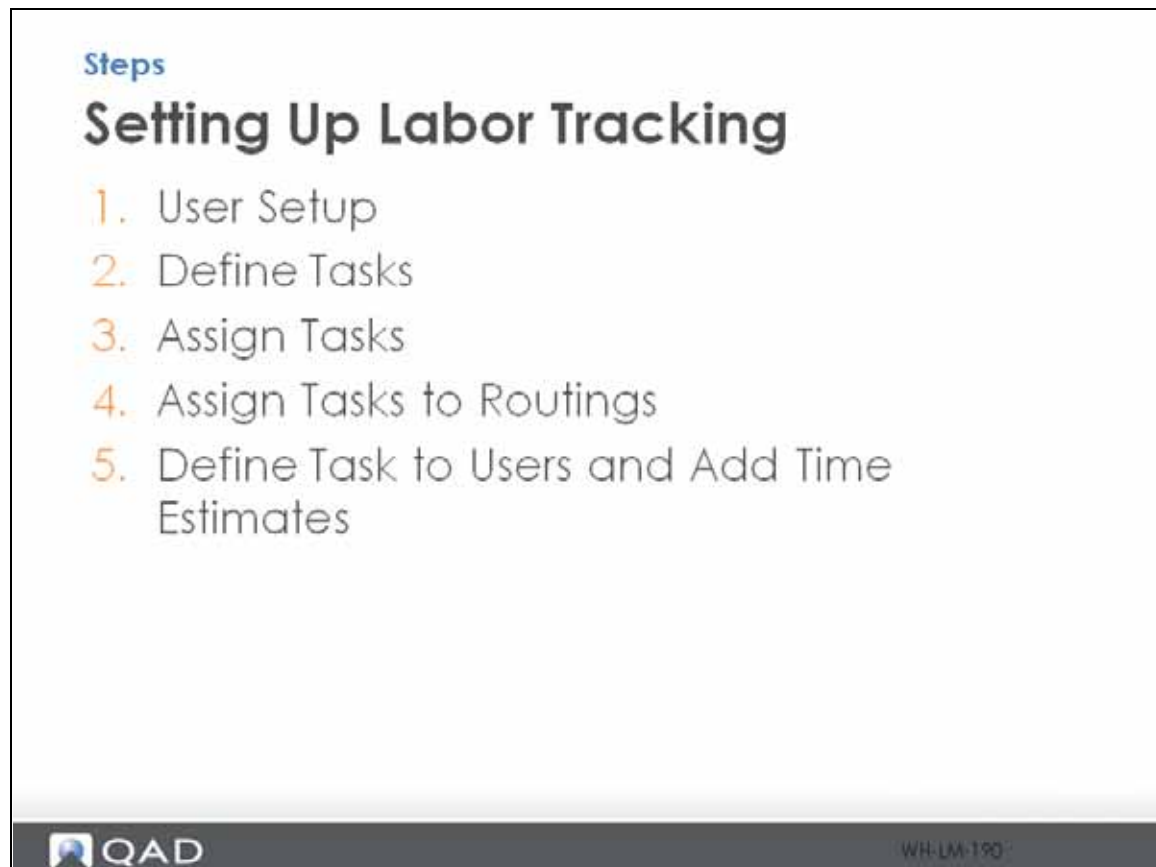
Currently, you can use Labor Management Workbench to assign users to specific tasks; however, the task assignment using Transaction Priority Workbench overrides Labor Management Workbench. Labor Management Workbench does not actually assign tasks. Also, there is no option to change the transaction priority.

Question

How long does it take to perform a task (the standard) and how effectively are operators performing to the standard?

WH-LM-053

Steps: Setting Up Labor Tracking



The screenshot displays a software interface for QAD Warehousing's Labor Management module. At the top, the word "Steps" is written in a small blue font. Below it, the title "Setting Up Labor Tracking" is prominently displayed in a large, bold, black font. A numbered list follows, with each item preceded by an orange number: 1. User Setup, 2. Define Tasks, 3. Assign Tasks, 4. Assign Tasks to Routings, and 5. Define Task to Users and Add Time Estimates. The list is contained within a light gray rectangular box. At the bottom of the screenshot, there is a dark gray footer bar. On the left side of this bar is the QAD logo, and on the right side, the text "WH-LM-190" is visible.

Steps

Setting Up Labor Tracking

1. User Setup
2. Define Tasks
3. Assign Tasks
4. Assign Tasks to Routings
5. Define Task to Users and Add Time Estimates

 QAD WH-LM-190

You can use any of the reporting tools, shown above, within QAD Warehousing's Labor Management module to view labor management data.

Assign Tasks to Routing

Tasks Link to Internal Routings

Internal Routing Maintenance

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

Description: Receipts

Sequence: 20 Internal Routing Group: 040

Transaction Create

Confirmed at Source: ☒

System Code: RF

Two Phase: ☒

Keep From Status: ☒

Task: PUT-AWAY

Priority: 10

Increment: 1

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: 0
Allow Quantity Increase: ☐	Alternative UM Option: 0
Allow Quantity Decrease: ☒	
Quantity Change Option: 0	

QAD WM-UM-120

To help you manage more micro tasks, add PUT-AWAY to the Task in Sequence 20 of the receiving internal routing. This creates a PUT-AWAY task when product is received and directed for put-away into storage.

Define Tasks Best Suited for the User

5. Define tasks best suited for the user(s)

User Warehouse Data Maintenance

User ID: QMI

Description:

Calendar:

Create Date: 8/6/2012

Modified Date: 8/6/2012

Full Pallets Max Skull Load: 0

Scan Lot/Serial: ☐

Scan Reference: ☐

Destination:

Order Sort: 1 1 Order

2 - Customer

Line Sort: 1 1 Line

2 - Item

3 - Quantity

4 - Weight

Task: PUT-AWAY

Transaction Type: RCT-UNP

Internal Routing: 01RCT

Description: Put-away after receipt

Actual Time: 120 Seconds

Old Actual Time: 0

Tasks Confirmed: 0

User	Task	Trans Type	IR
QMI	Pick	PICK-SO	01PCK
QMI	Transfer	PICK-RE	01RPL
QMI	Put-away	RCT-PO	01RCT
QMI	Put-away	RCT-UNP	

QAD WH-UM-062

Define the task times expected for each user using User Warehouse Data Maintenance.

- Enter the User ID
Enter 1 for Order Sort and Line Sort; refer to *User Guide: QAD Warehousing* for more information on these fields.
 - Define the Task, Transaction Type and Internal Routing this user can perform
 - Optionally, assign an estimated time to complete in Actual Time (the standard).
The chart in the lower right represents other task combinations you can assign to the QMI user and other user for a more detailed demonstration of labor tracking.
- Note** Need to determine if this step is necessary. (i.e. will User Warehouse Data Browse populate if this information is not setup?) As of 8/7/12 it appears as long as one Task configuration is setup for the user, all other tasks the user completes will self populate. Why?

Executing Labor Tracking

Steps

Executing Labor Tracking

1. Receive 2 pallets of item 03210
2. Open Labor Management Workbench
 - Observe Task Details
3. Process the Tasks using RF QMI
4. Open User Warehouse Data Browse
 - Observe the Actual Time for the task
5. Run Productivity by User Report
 - Observe User Productivity



WH-LM-083

Executing Labor Tracking (continued)

Steps

Executing Labor Tracking

1 QMI

Receipt: 80
UN
Fr Loc: 010RC001
Loc: 010RC001
Chk:

2

Task Nbr	Task	TT	From Location	To Location	Current	Priority	Est Time
80	PUT AWAY	RCT-UNP	010RC001	040PL004	qmi	10	00:01:19
81	PUT AWAY	RCT-UNP	010RC001	040PL004		10	00:01:23

Actual Time: 12:16:45 Actual Outstanding Tasks: 2
Estimated Total Time: 00:01:23 Estimated Tasks per Minute: 1.45
Estimated Completion Time: 12:18:08 Estimated Outstanding Tasks: 0

4

Search

User ID: starts at: Search Clear All

Viewing 1 - 5 of 5 Records per page: 100

User ID	Task	Trans Type	Int Routing	Description	Actual Time	Old Actual Time	Tasks Confirmed
QMI	PICK	PICK-SO	01PCK	Sales Order Pick	0	0	0
QMI	PUT AWAY	RCT-PO	01RCT	Put-away PO	0	0	0
QMI	PUT AWAY	RCT-UNP	01RCT	Put-away Unplanned	86	90	20
QMI	TRANSFER	PICK-RE	01RPL	Replenishment	0	0	0
UserB	PUT AWAY	RCT-UNP	01RCT		95	95	3

QAD WH-UM-664

When the task (80) is accepted by RF user QMI:

- 1 Labor Management Workbench shows the task assigned to qmi and the Est Time (1.19) to complete the task. The Est Time column is pulled from the data in Task Time Maintenance for the Task combination and automatically updated if Labor Management Control is active. The display also shows the Estimated Completion Time to process the open tasks.
- 2 When the put-away tasks are complete, a review of User Warehouse Data Browse shows the updated Actual Time to complete the most recent put-away task. This field is updated each time the Task combination is complete when Labor Management Control is active. The Old Actual Time column is updated by running Recalculate User Task Times.

Note When Labor Management Control is active, the Actual column in User Warehouse Data Maintenance updates each time a task is complete else it updates only with Recalculate User Task Times. The Old Actual Time updates when you run Recalculate User Task Times.

Executing Labor Tracking (continued)

Steps

Executing Labor Tracking

Productivity by User Report

5

User ID	Task	TT	Internal Routing	Picks Per Hour	Expected Picks Per Hour	Productivity
qmi	PUT-AWAY	RCT-UNP	01RCT	53.22	43.37	122.70%
Total:				53.22	43.37	122.70%

This field updates each time the Task combination is complete.

This field is updated when Task Time Maintenance is updated.

3600" per hour / 83" per task

 QAD

WH-UM-071

This is an example standard productivity report. While the titles of the 5th and 6th columns reference picks, these are measure specific to the Task combination listed on the line, that is, put-away.

Executing Labor Tracking (continued)

Steps

Executing Labor Tracking

Task Time Maintenance

Task: PUT-AWAY
Transaction Type: RCT-UNP
Internal Routing: 01RCT

Description: Put-away Unplanned

Estimated Time: 83 Seconds
Old Estimated Time: 150 Seconds

Task Time Maintenance

Task: PUT-AWAY
Transaction Type: RCT-UNP
Internal Routing: 01RCT

Description: Put-away Unplanned

Estimated Time: 87 Seconds
Old Estimated Time: 83 Seconds

Task Time Update

Task	TT	Internal Routing	Description	Est Time	Old Est Time
PUT-AWAY	RCT-UNP	01RCT	Put-away Unplanned	87	83

QAD W11-UM-072

To change the Est Time column in Labor Management Workbench and Update the Expected Picks Per Hour in Productivity by User Report, change the data in Task Time Maintenance.

You can either manually enter a time in Estimated Time or run Task Time Update. Manually entering a number is used if you developed a specific time based on observations and/or calculations.

Task Time Update brings in the last system recorded time for the task and is an average of the last transactions.

Executing Labor Tracking (continued)

Steps

Executing Labor Tracking

1

Receipt: 02
User: QMI
Fr Loc: 010RC001
Loc: 010RC001
Chk:

2

Task	TT	From Location	To Location	Current	Priority	Est Time
02	PUT-AWAY	RCT-UNP	010RC001	040PL004	qmi	10

Actual Time: 13:08:04 Actual Outstanding Tasks: 1
 Estimated Total Time: 00:01:26 Estimated Tasks per Minute: 0.70
 Estimated Completion Time: 13:09:30 Estimated Outstanding Tasks: 0

3

User ID	Task	TT	Internal Routing	Picks Per Hour	Expected Picks Per Hour	Productivity
qmi	PUT-AWAY	RCT-UNP	01RCT	43.93	41.38	106.16%
Total:				43.93	41.38	106.16%

QAD WH-UM-074

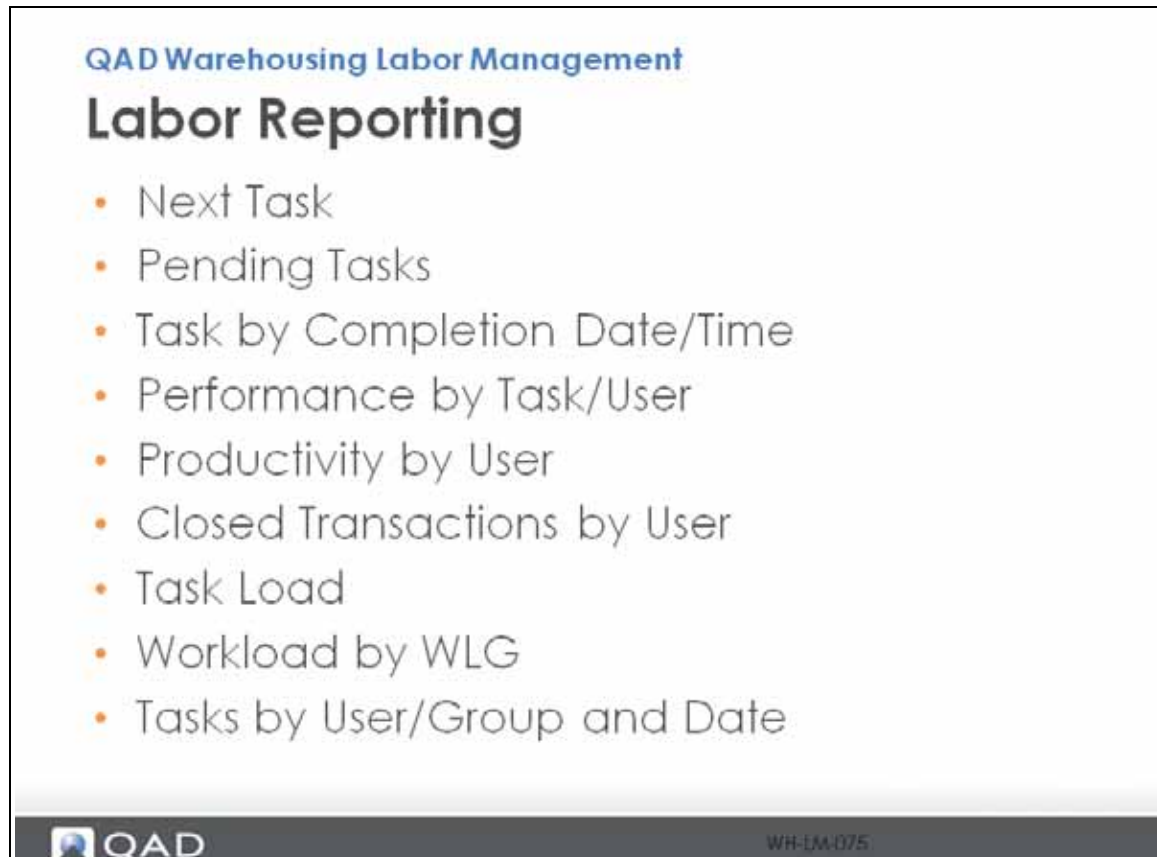
When you receive another pallet of 03210 and the task (82) is accepted by RF user QMI:

- 1 Labor Management Workbench shows the task assigned to qmi and the NEW Est Time (1.26) to complete the task. Note, the Est Time conversions are slightly off—should be 1:27 = 87”

Also note the Expected Picks Per Hour column is updated to reflect the updated Task Time Maintenance: 87 seconds. (3600 seconds per hour / 87 seconds per task = 41.38 tasks per hour). The system only updates the column when you run Task Time update, while the Picks Per Hour column is updated each time a task is complete.

Running Task Time Update updates the Estimated Time in Task Time Maintenance. Be judicious and have a plan/reason for running this update.

Labor Reporting



The screenshot shows a software interface for 'QAD Warehousing Labor Management'. The main heading is 'Labor Reporting'. Below it is a list of reporting options, each preceded by an orange bullet point. At the bottom of the interface is a dark grey bar containing the QAD logo on the left and the text 'WH-LM-075' 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 WH-LM-075

It would be convenient to have the ability to restart productivity tracking metrics at a specific time. For example, at the start or each day of shift.

Key Learning Points

QAD Warehousing Labor Management

Key Learning Points

- QAD Warehousing supports basic labor reporting
- Demo testing continues to validate as-is labor management functionality

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](#)

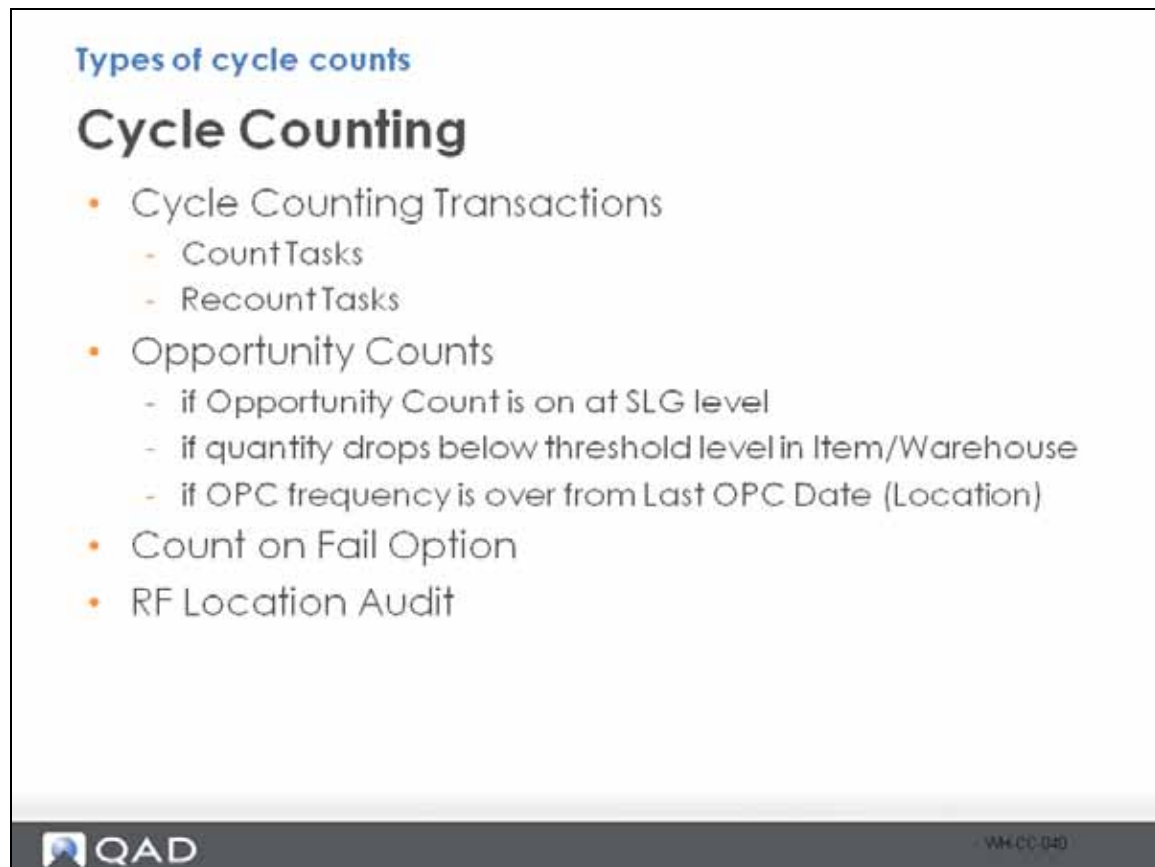
-  Partial
-  None

 QAD

WH-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 left is the QAD logo, and at the bottom right is the text 'WH-CC-040'.

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

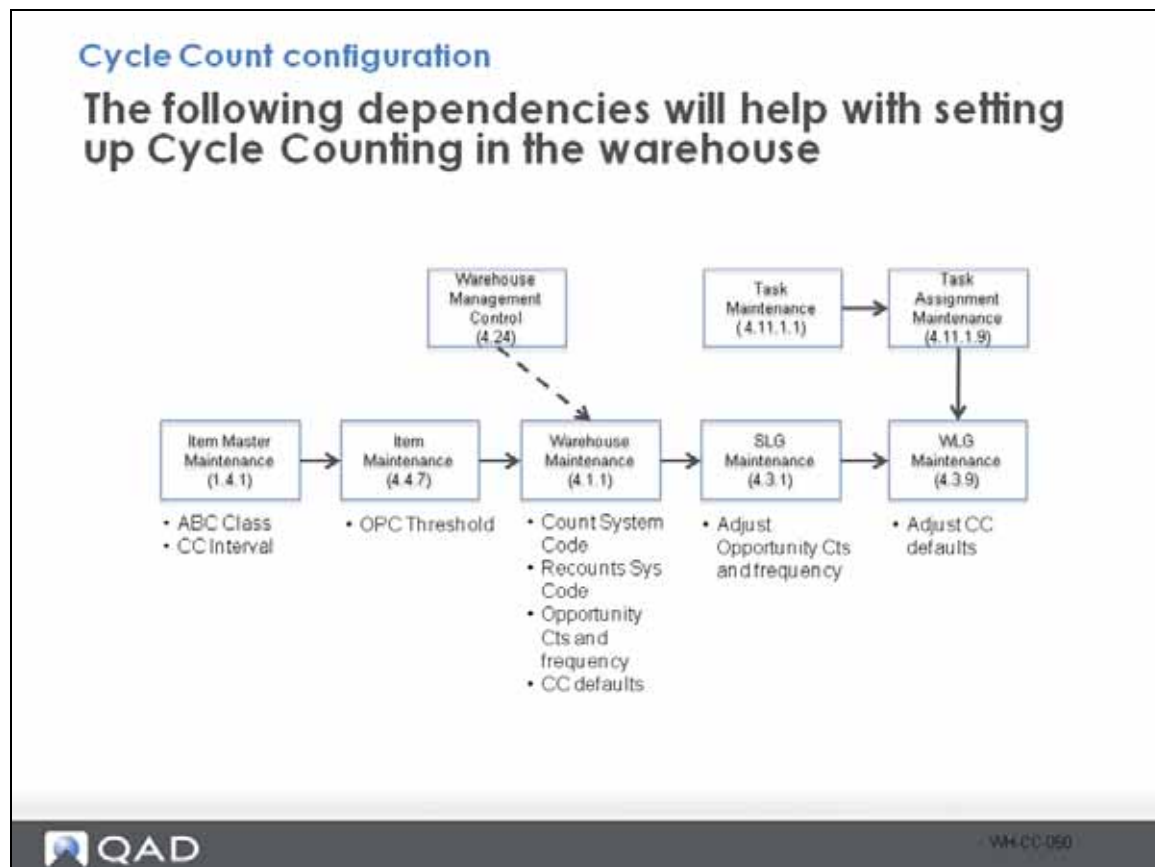
Did You Know

- 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:

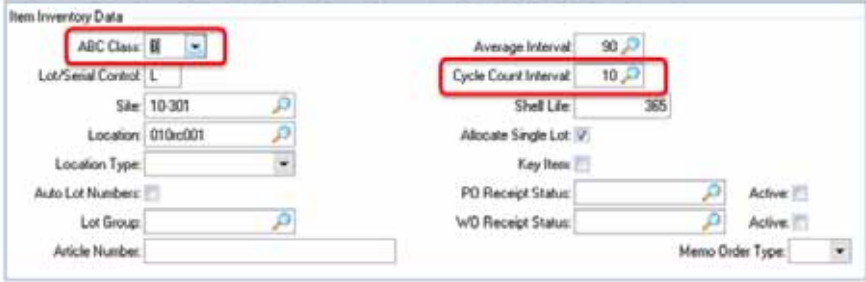
- Generate cycle count transactions/task.
- Classify the value of items to be counted.
- Specify the threshold that triggers an opportunity count during stock movement.
- Specify the RF device for system-created WLG cycle count or recount requests.
- Specify that warehouse staff perform a cycle count 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 is set to 'B' and the 'Cycle Count Interval' is set to '10'. Both fields are highlighted with red boxes. Other visible fields include 'Lot/Serial Control' (L), 'Site' (10-301), 'Location' (010rc001), 'Location Type' (dropdown), 'Auto Lot Numbers' (checkbox), 'Lot Group' (dropdown), 'Article Number' (text field), 'Average Interval' (90), 'Shell Life' (365), 'Allocate Single Lot' (checkbox), 'Key Item' (checkbox), 'PO Receipt Status' (dropdown), 'W/O Receipt Status' (dropdown), 'Active' (checkbox), and 'Memo Order Type' (dropdown).

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 5l Bottle

Item Data

Unit of Measure Group: Shelf Life Offset:
Critical Days:
Barcode 1:
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:
 Acquisition UM:
 Picking Multiple UM: PL

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

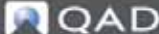
Which users are allowed to do cycle counts?

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.

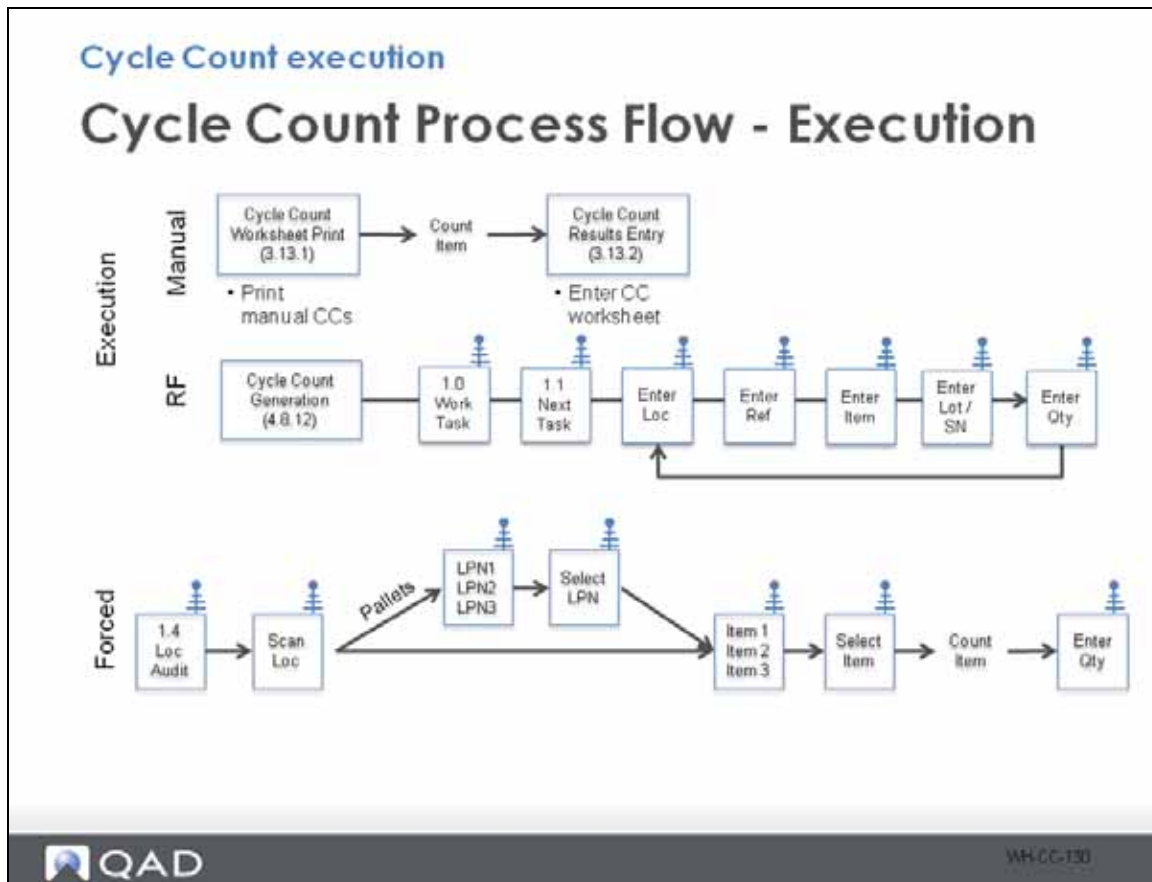
Cycle Count Processing

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	

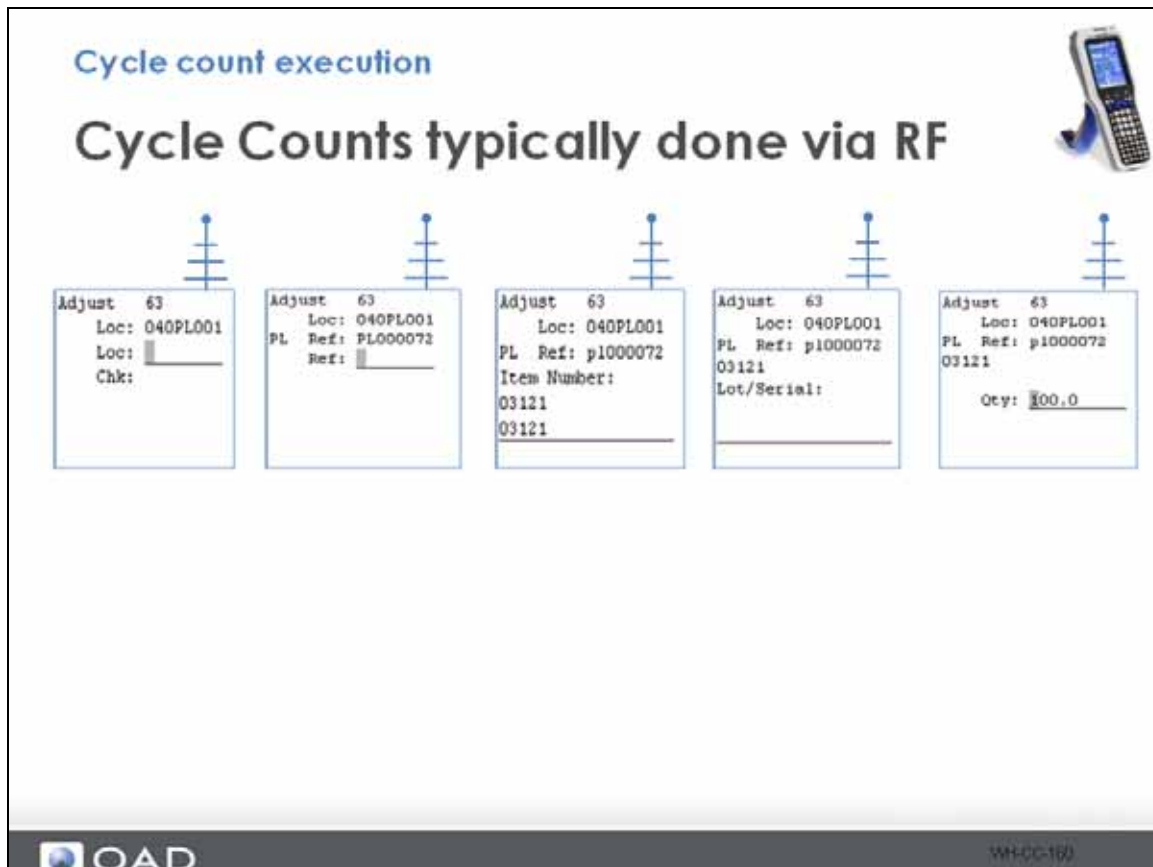
End of Report

 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



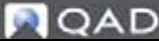
Cycle Count Worksheet Print

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 Pump	B		100.0	EA	()	()	()
D3121	PL000072	10-301	Scented Disinfectant 5l Bottle	B		100.0	EA	()	()	()
D3210	PL000074	10-301	Disinfectant Wipes	A		100.0	EA	()	()	()
90091	PL000032	10-301	Standard Shipping Box	C		80.0	EA	()	()	()



WH-CC-17D

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

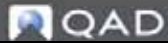
- Opportunity counts
- Occur at pre-defined thresholds
- Reduces number of planned cycle counts
- Saves time
- Must balance with pick labor productivity

Cycle Count White Paper

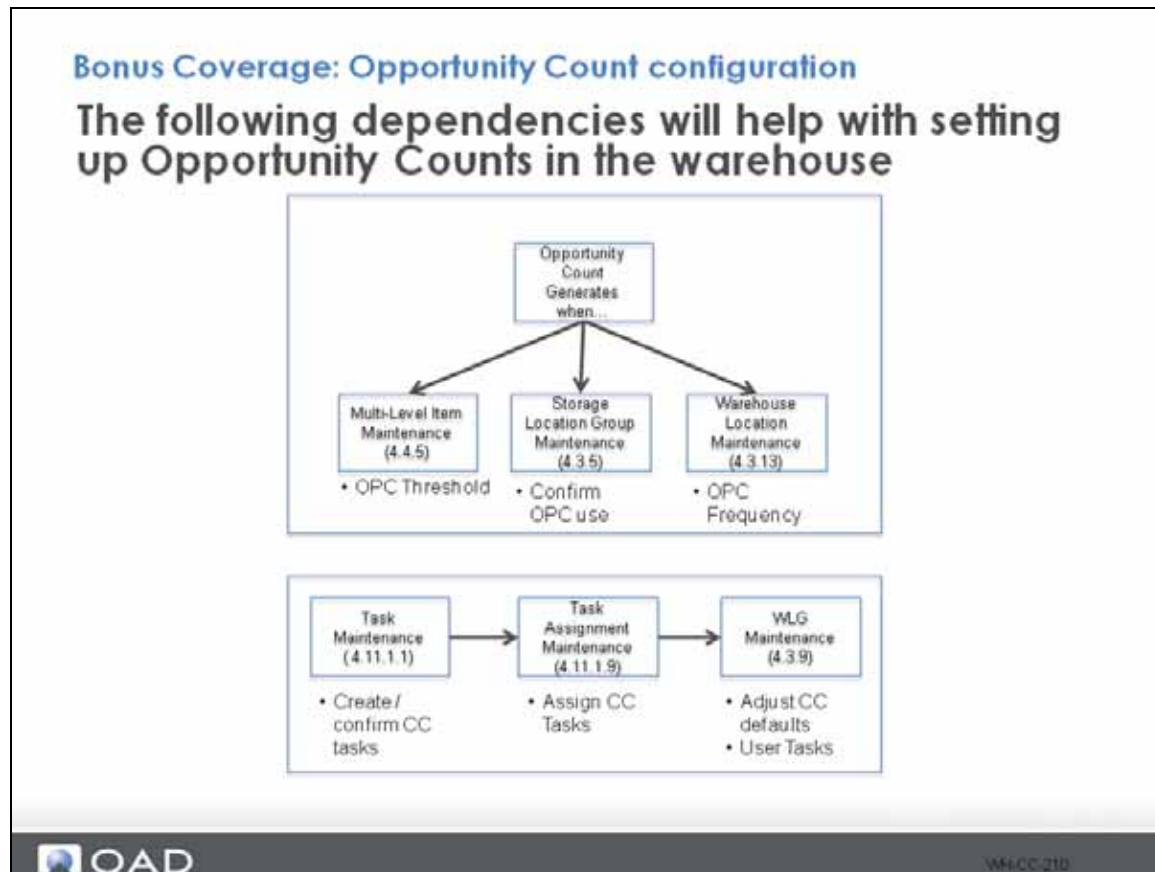
Cycle Count White Paper



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

QAD 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 CO-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-Shipper: 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

Pending pick for 60EA, 03121

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
Qty: 60.0
Qty: 60.0

Picking 59
Opportunity
040EA020
03121
PL000072
0.0
Qty: 60.0

Picking 59
To Loc: 060PA001
Loc: 060PA001
Chk:
Item Number:
03121
Lot/Serial:
EA Ref: PL000072

Picking 60 from the location with 60 triggers an (opportunity) cycle count

QAD

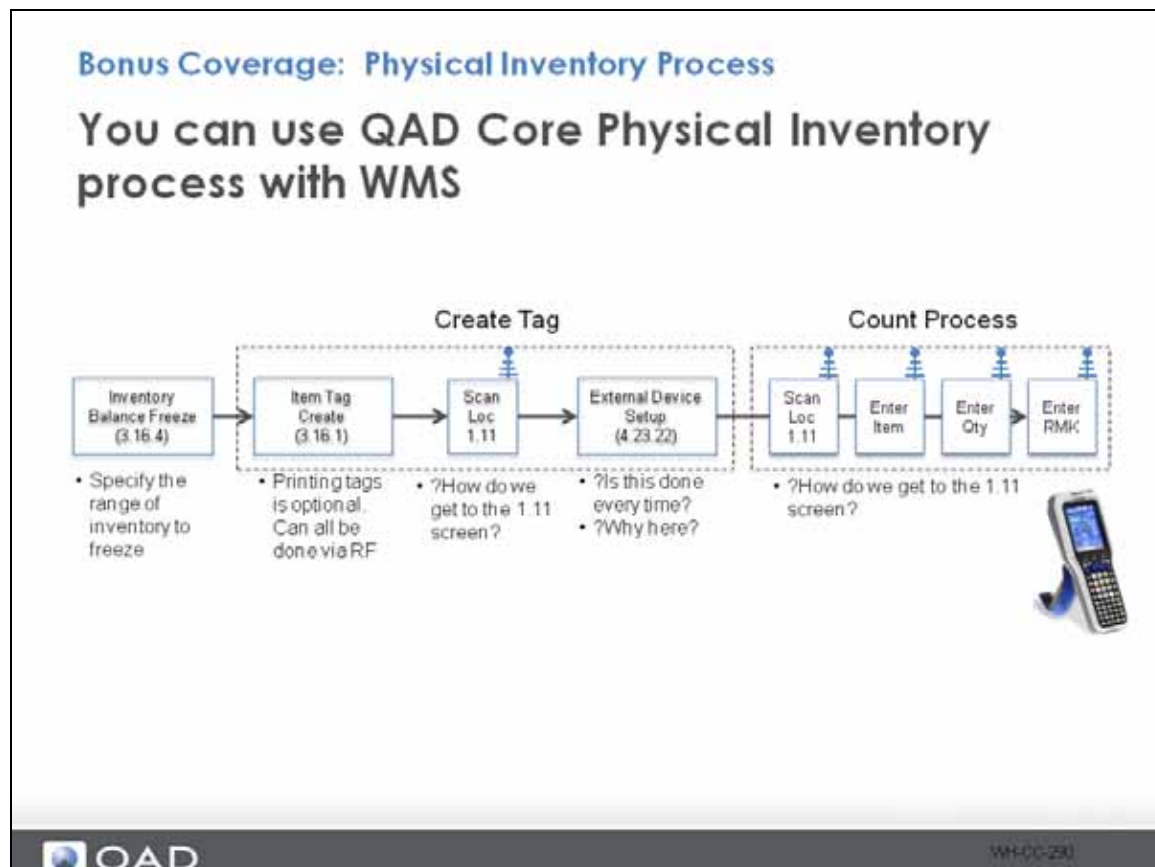
VM CC 290

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

020IN001

QA Hold (030)

030RJ

030RJ001

Storage (040)

Pallet Storage (040PL)

040PL001


040PL002


040PL003


040PL004


040PL005

040PL006

040PL007

040PL008

040PL009

040PL010

Inventory Detail Inquiry

Site: 10-301

Warehouse: 01

Location:

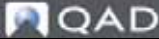
Item Number:

Lot/Serial:

Reference:

Warehouse: 01 Warehouse: 1

Item Location	Lot	Status Ref	Qty UM	On Hand	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			



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:

4.9.13 Inventory Detail Inquiry

2 1.4
Adjustment/Count
Loc: 040PL001
Ref: PL01
I: 03210
Disinfectant Wipes
Lot:
Qty OH: 0.0
Qty Alloc: 0.0
Qty Cnt: 100
Alt UM:

3 Qty OH: 0.0
Qty Alloc: 0.0
Enter alt um

4 AD
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 1.1
Adjust 89
Loc: 040PL001
EA Ref: PL01
03210
Qty: 100

7 No task available
Pausing 10 seconds

8 Site: 10-301 Item Number:
Warehouse: Lot/Serial:
Location: 040PL001 Reference:
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-480

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

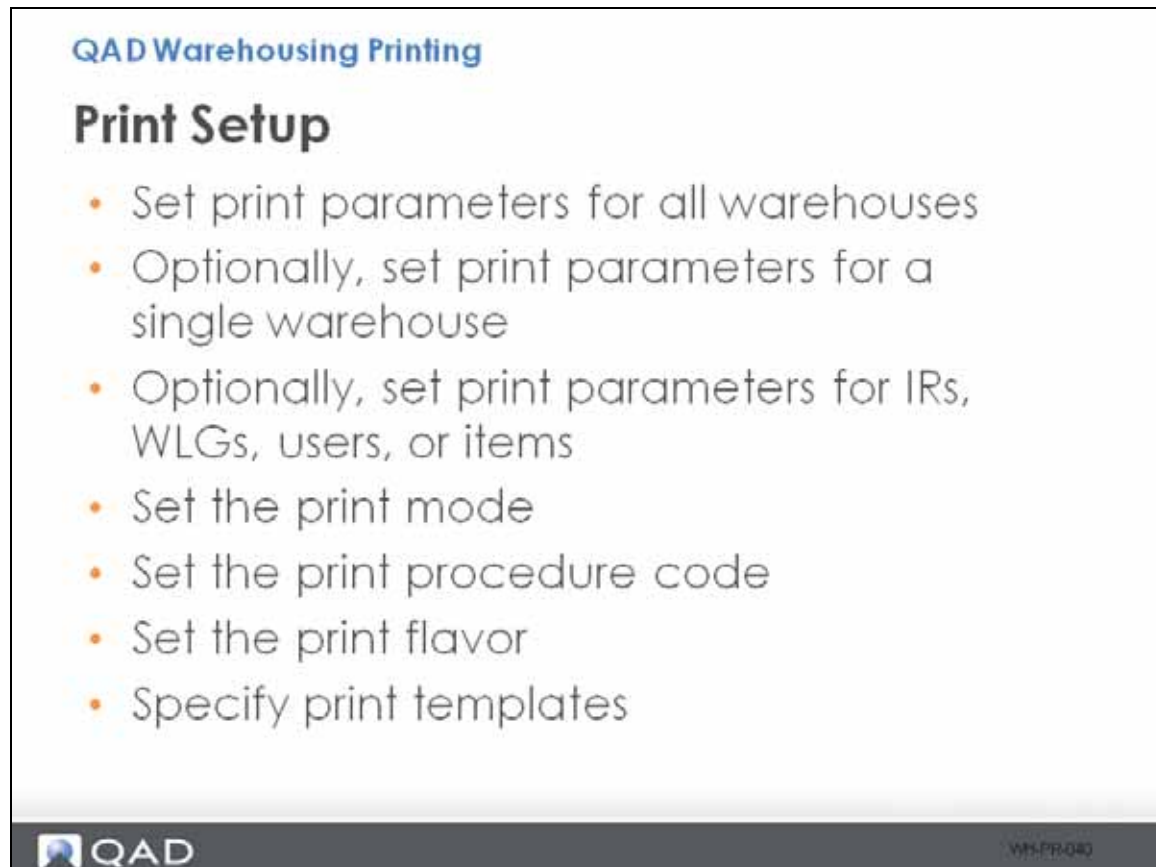


WH-PR-030

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". The slide lists seven bullet points: "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", and "Specify print templates". The slide has a QAD logo in the bottom left and the code "WH-PR-040" in the bottom 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 Confirm: ☐ Lines of Each: Confirm 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: -TRAN- (-TYPE-)
Site: -SITE- -SITES-
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: 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 Confirm: 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:

Form Printing

Form Printer: External Devices
 Device Printer: Lines of Each: 132 Mode (Ext): ☒
 Number Across: Width of Each:

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

The screenshot shows the 'QAD Warehousing Printing' application window. The title bar reads 'QAD Warehousing Printing'. The main title is 'User Work Location Group Maintenance'. Below the title, there is a form with the following fields:

- Site: 10-301
- Warehouse: 01
- Work Location Group: 01CT
- User ID: UserA

Below these fields, there is a section for printer configuration:

- System Flavor: A (dropdown menu)
- Device: (text input field)
- External Device Printer: (text input field with a magnifying glass icon)
- Form Printer: (text input field with a magnifying glass icon)
- ID Printer: (text input field with a magnifying glass icon)
- Task Printer: (text input field with a magnifying glass icon)
- Inspection Printer: (text input field)

To the right of the printer fields, there are four checkboxes, all of which are checked:

- Use External: ☒
- Use External: ☒
- Use External: ☒
- Use External: ☒

The QAD logo is visible in the bottom left corner, and the text 'WH-PR-100' is visible in the bottom right corner.

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