QUALCOMM®
CDMA Technologies

QCWWAN Drivers Build Procedures

(Major Version 1, Minor Version 0)

August 2, 2017

Submit technical questions at:
https://support.cdmatech.com

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1 Introduction

1.1 Purpose

This specification documents the build process for QCWWAN drivers deliverables.

1.2 Revision history

Table 1 Revision history

Version	Date	Description
1.1	Jun 2015	Initial release

2

2 Basic Release Procedures

2.1 Versioning Scheme

- CRM versions are multiples of 1 (ie. 1.00.35, 1.00.36, 1.00.37, 1.00.38…)

2.2 Scheduling release

All CRM releases should be scheduled at least a week before the release date, ideally 2 weeks prior. Schedule the release at:

http://go/tiberium

Table 2 Release Information

WWAN Drivers	WWAN Drivers Description
QUD.WIN.1.1-<100XX-GENERAL>	Tool descriptive name: This will build the full package including drivers and installer

2.3 Release notes

The release notes are updated as part of readme.txt file.

2.4 Perforce changes

All changes needed for a release must be checked in prior to doing a build because the build script gets the latest versions before it builds.

2.5 Build locally

The purpose of building locally is to find errors before running the build request.

From the command line, traverse to the appropriate folder for your client spec, then run the Batch build command. This will run the build script.

2.6 Manually create a label

Within P4 labels, create a copy of an existing label by right clicking on the existing label and selecting “Create/Update label using XXXX as the template”, enter new name, make sure it is unlocked.

Within client view select the files to label, then right click on label and select "Add/Replace files…" Here you can sync the files to a label, changelist or head revision. To create a label for release, do the same as a config file, sync in same order as is listed in the config file lists.

Example:

```
label: QUD_WIN_1.00.36
head_paths: //depot/QMI/win/qcwwan/...
```

1) Sync all `//depot/QMI/win/qcwwan/` files to `QUD_WIN_1.00.36`

2.7 Build using CRM Build Request Tool

This request tool runs our build script on a CRM build server. Follow the instructions in the following sections to build each release.

Once the request has been sent a series of emails are received that indicate the status of the build. When it successfully completes the build path will be part of the emails

3 QUD.WIN.1.1

3.1 Introduction

The QUD.WIN.1.1 is built for two reasons

1. Provide generic build for internal Qualcomm use and select external customers.

This build creates an installer with drivers.

3.2 Build Environment:

1. Visual Studio 2010
2. Perl 5.6
3. Microsoft Windows Driver Kit 8186 (go/wdk)
4. Install Shield 2012

3.3 Build script description

3.3.1 CRM Build Syntax

buildCustomer.bat: This batch file should be used to build drivers package on CRM server

3.3.2 Internal Build Syntax

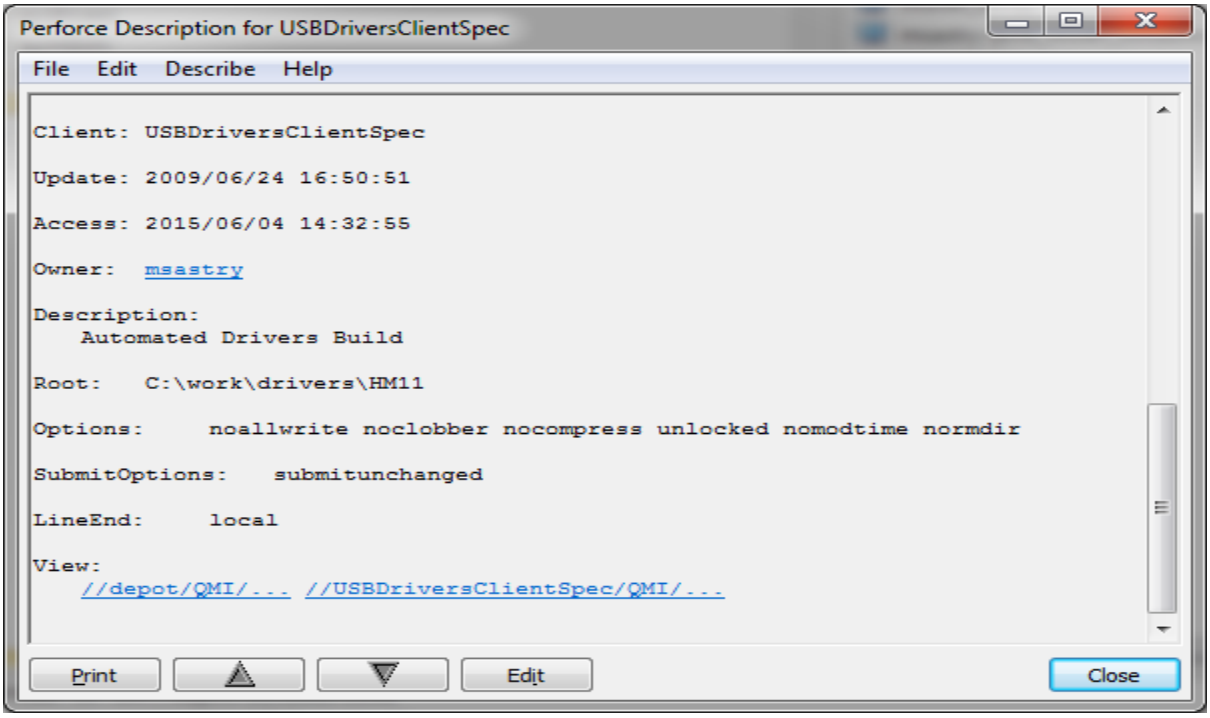
buildCustomerLocal.bat: This batch file should be used for building drivers package on local system.

3.3.3 Perforce

Server: qctp402:1666

Location: //depot/QMI/win/qcwwan

Client Spec:



Lable : QUD_WIN_x.xx.xx (For Ex. QUD_WIN_1.00.36)

3.3.4 Versioning

Please make sure the local copy is synced to the head of the perforce path.

3.3.4.1 Changing version in INF files:

INF files Location: //depot/QMI/win/qcwwan/build/

Files to change: qcfilter.inf, qcmdm.inf, qcnet.inf, qcser.inf, qcwwan.inf, qdbusb.inf

Update the DriverVer <Date,Version>. Update to the next incremental number

3.3.4.2 Folder and File Mappings

qcfilter.inf: Sources are in filter folder, this driver is for QMI communication.

qcser.inf: Sources are in serial folder, information file for Ports (DIAG, SER, NMEA, etc.)

qcmdm.inf: Sources are in serial folder, information file for MODEM (MODEM).

qcnet.inf: Sources are in ndis folder, information file for Network Adapter (Ethernet NDIS 5.1 driver)

qcwawn.inf: Sources are in ndis folder, information file for Network Adapter (WWAN NDIS 6.20 driver)

qdbusb.inf: Sources are in qdss folder, information file for QDSS (QDSS)

3.3.4.3 Changing version in Resource (RC) files:

Filter Driver RC file: //depot/QMI/win/qcwwan/filter/qcfilter.rc -> Open in any editor and update to next version number.

NDIS Driver RC file: //depot/QMI/win/qcwwan/ndis/qcusbnet.rc -> Open in any editor and update to next version number.

Serial Driver RC file: //depot/QMI/win/qcwwan/serial/qcusbser.rc -> Open in any editor and update to next version number.

3.3.4.4 Changing version in Source files:

We have to hard code the version numbers in 2 .c files, this is needed for printing version numbers in the log files:

NDIS Driver: //depot/QMI/win/qcwwan/transport/usb/usbpnp.c -> Search for “Driver Version” and change the version number.

Serial Driver: //depot/QMI/win/qcwwan/serial/qcpnp.c -> Search for “Driver Version” and change the version number.

3.3.4.5 Changing version in Installer:

File: //depot/QMI/win/qcwwan/installer/QualcommDriverInsatll.ism -> Search for “ProductVersion” and update the version number to the next installer version.

File: //depot/QMI/win/qcwwan/installer/QualcommDriverInstall/String1033.txt -> Search for “PRODUCT_VERSION” and update the version number to the next installer version.

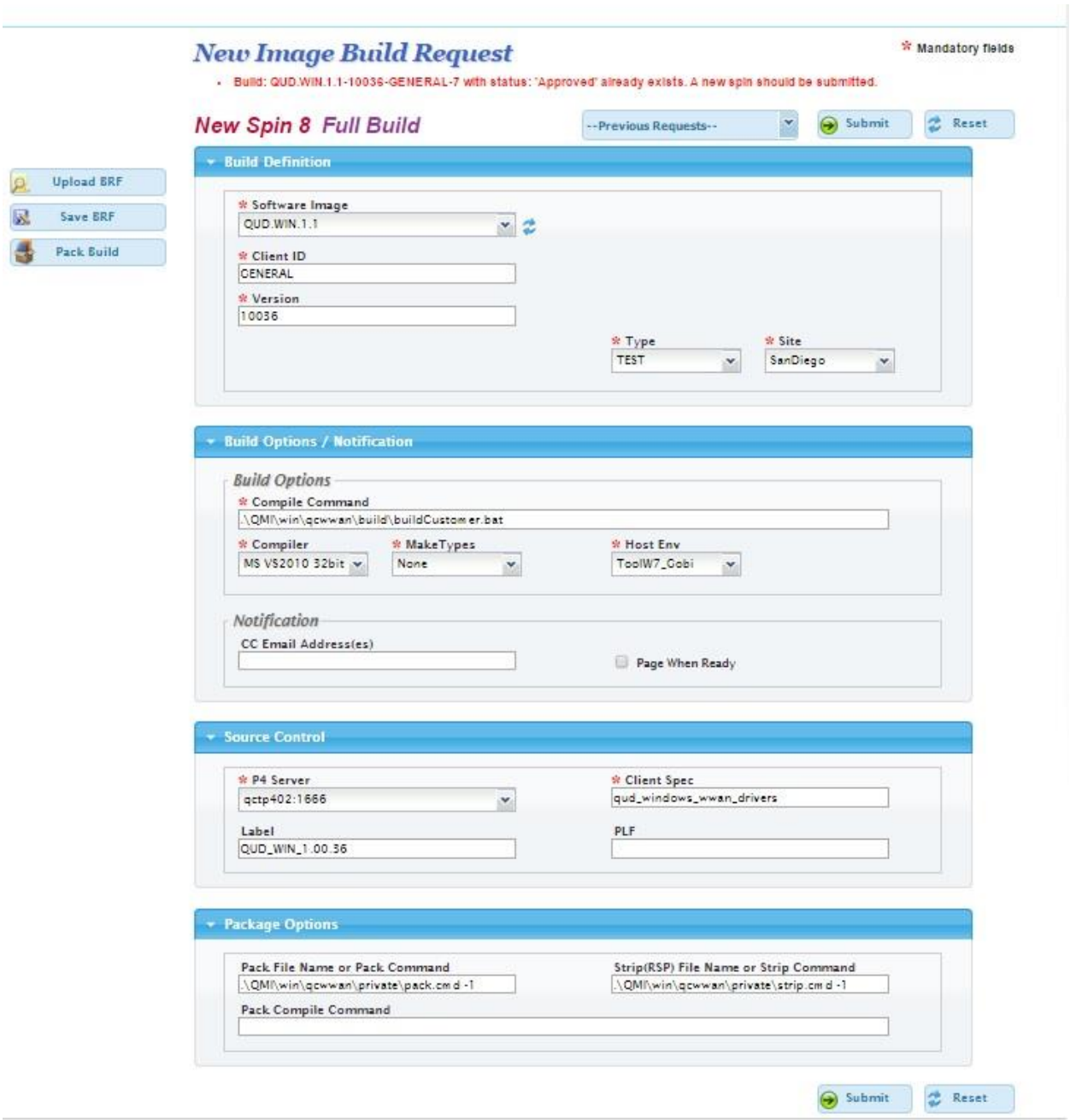
3.3.5 Readme Update

The readme.txt is in the following path //depot/QMI/win/qcwwan/installer/. Please update the readme.txt with the changes for this release

3.4 CRM Build Request

Please update the files and check-in the files to the perforce and update the LABEL QUD_WIN_1.00.XX with all the files. And submit the build request using go/tiberuim.

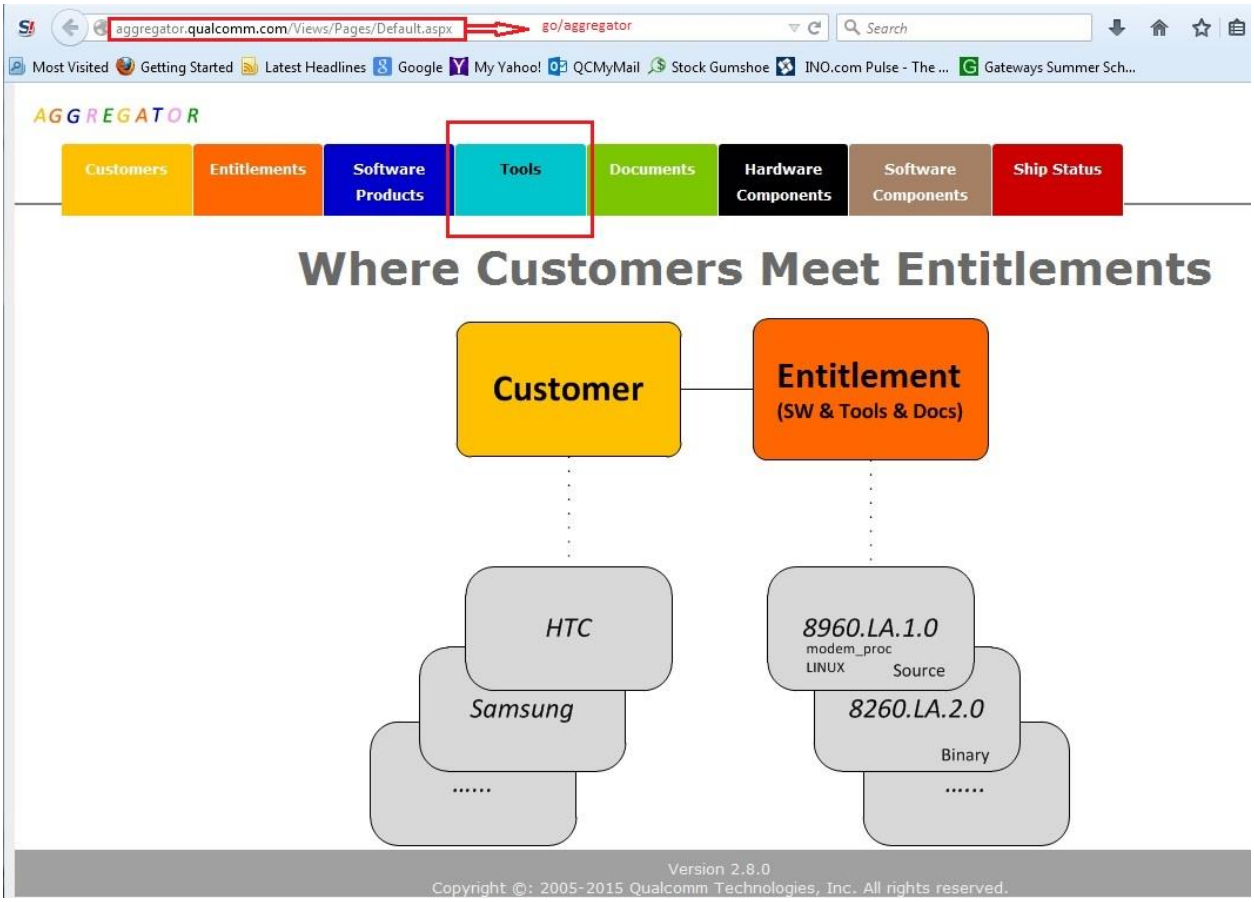
Following is the screen shot of the build request:


New Image Build Request
* Mandatory fields
Build: QUD.WIN.1.1-10036-GENERAL-7 with status: 'Approved' already exists. A new spin should be submitted.
New Spin 8 Full Build
--Previous Requests--
Submit
Reset
Upload BRF
Save BRF
Pack Build
Build Definition
* Software Image
QUD.WIN.1.1
* Client ID
GENERAL
* Version
10036
* Type
TEST
* Site
SanDiego
Build Options / Notification
Build Options
* Compile Command
.\QMI\win\qcwwan\build\buildCustomer.bat
* Compiler
MS VS2010 32bit
* MakeTypes
None
* Host Env
Tool\W7_Gobi
Notification
CC Email Address(es)
Page When Ready
Source Control
* P4 Server
qctp402:1666
* Client Spec
qud_windows_wwan_drivers
Label
QUD_WIN_1.00.36
PLF
Package Options
Pack File Name or Pack Command
.\QMI\win\qcwwan\private\pack.cmd -1
Strip(RSP) File Name or Strip Command
.\QMI\win\qcwwan\private\strip.cmd -1
Pack Compile Command
Submit
Reset

3.5 Publishing

Subject: Prepare Build for distribution: Build QUD.WIN.1.1-10036-GENERAL-7

Whenever you are ready, please click on the link to make this build ready for distribution:
http://tiberium.qualcomm.com:80/BS?ID=QUD.WIN.1.1-10036-GENERAL-7
NOTE: Please do not click the above link if you are not owner of this build.


aggregator.qualcomm.com/Views/Pages/Default.aspx
go/aggregator
Search
Most Visited
Getting Started
Latest Headlines
Google
My Yahoo!
QCMyMail
Stock Gumshoe
INO.com Pulse - The ...
Gateways Summer Sch...
AGGREGATOR
Customers
Entitlements
Software Products
Tools
Documents
Hardware Components
Software Components
Ship Status
Where Customers Meet Entitlements
Customer
Entitlement
(SW & Tools & Docs)
HTC
Samsung
.....
8960.LA.1.0
modem_proc
LINUX
Source
8260.LA.2.0
Binary
.....
Version 2.8.0
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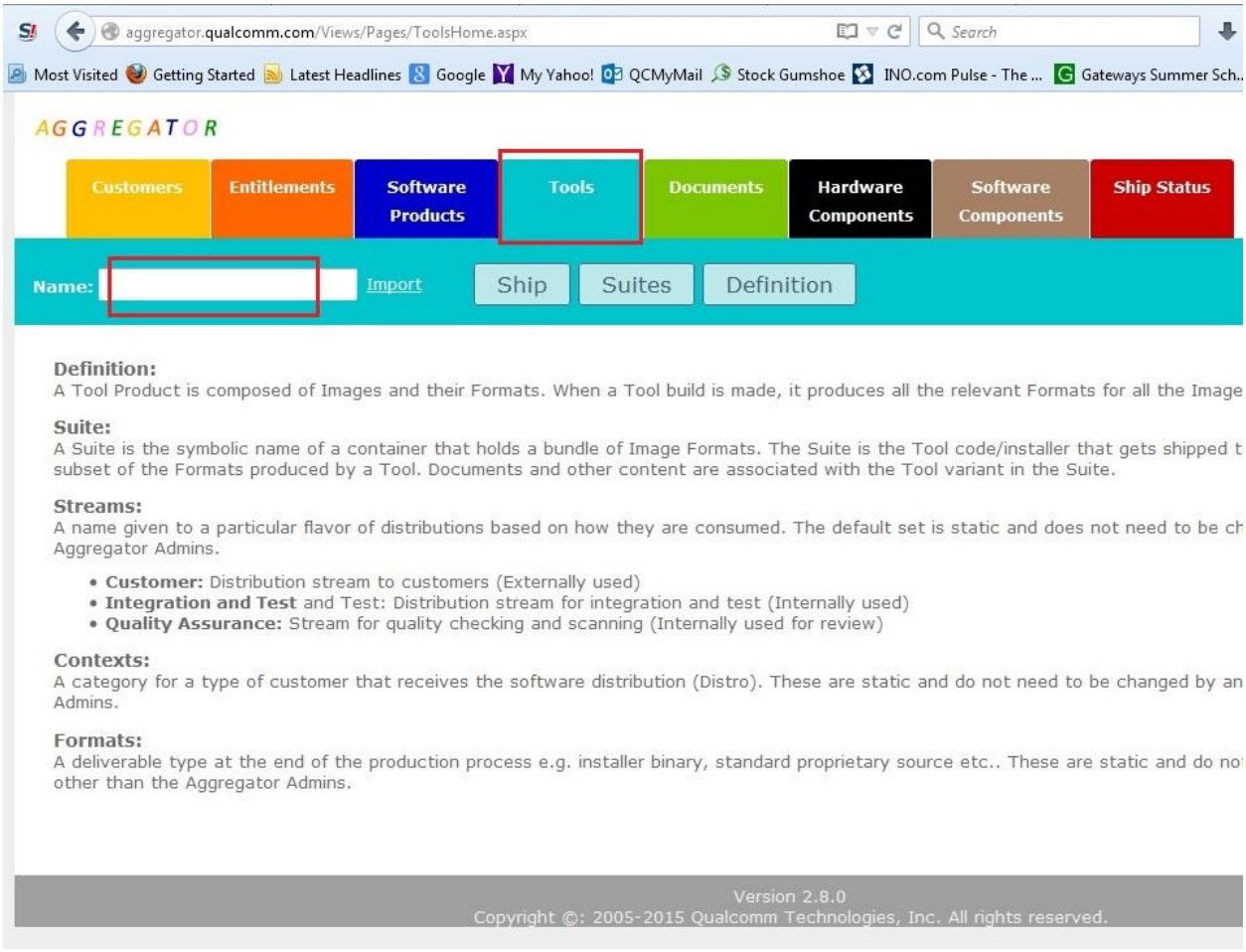
1


aggregator.qualcomm.com/Views/Pages/ToolsHome.aspx
Search
Most Visited
Getting Started
Latest Headlines
Google
My Yahoo!
QCMyMail
Stock Gumshoe
INO.com Pulse - The ...
Gateways Summer Sch...
AGGREGATOR
Customers
Entitlements
Software Products
Tools
Documents
Hardware Components
Software Components
Ship Status
Name:
Import
Ship
Suites
Definition
Definition:
A Tool Product is composed of Images and their Formats. When a Tool build is made, it produces all the relevant Formats for all the Image
Suite:
A Suite is the symbolic name of a container that holds a bundle of Image Formats. The Suite is the Tool code/installer that gets shipped t
subset of the Formats produced by a Tool. Documents and other content are associated with the Tool variant in the Suite.
Streams:
A name given to a particular flavor of distributions based on how they are consumed. The default set is static and does not need to be ch
Aggregator Admins.
Customer: Distribution stream to customers (Externally used)
Integration and Test and Test: Distribution stream for integration and test (Internally used)
Quality Assurance: Stream for quality checking and scanning (Internally used for review)
Contexts:
A category for a type of customer that receives the software distribution (Distro). These are static and do not need to be changed by an
Admins.
Formats:
A deliverable type at the end of the production process e.g. installer binary, standard proprietary source etc.. These are static and do no
other than the Aggregator Admins.
Version 2.8.0
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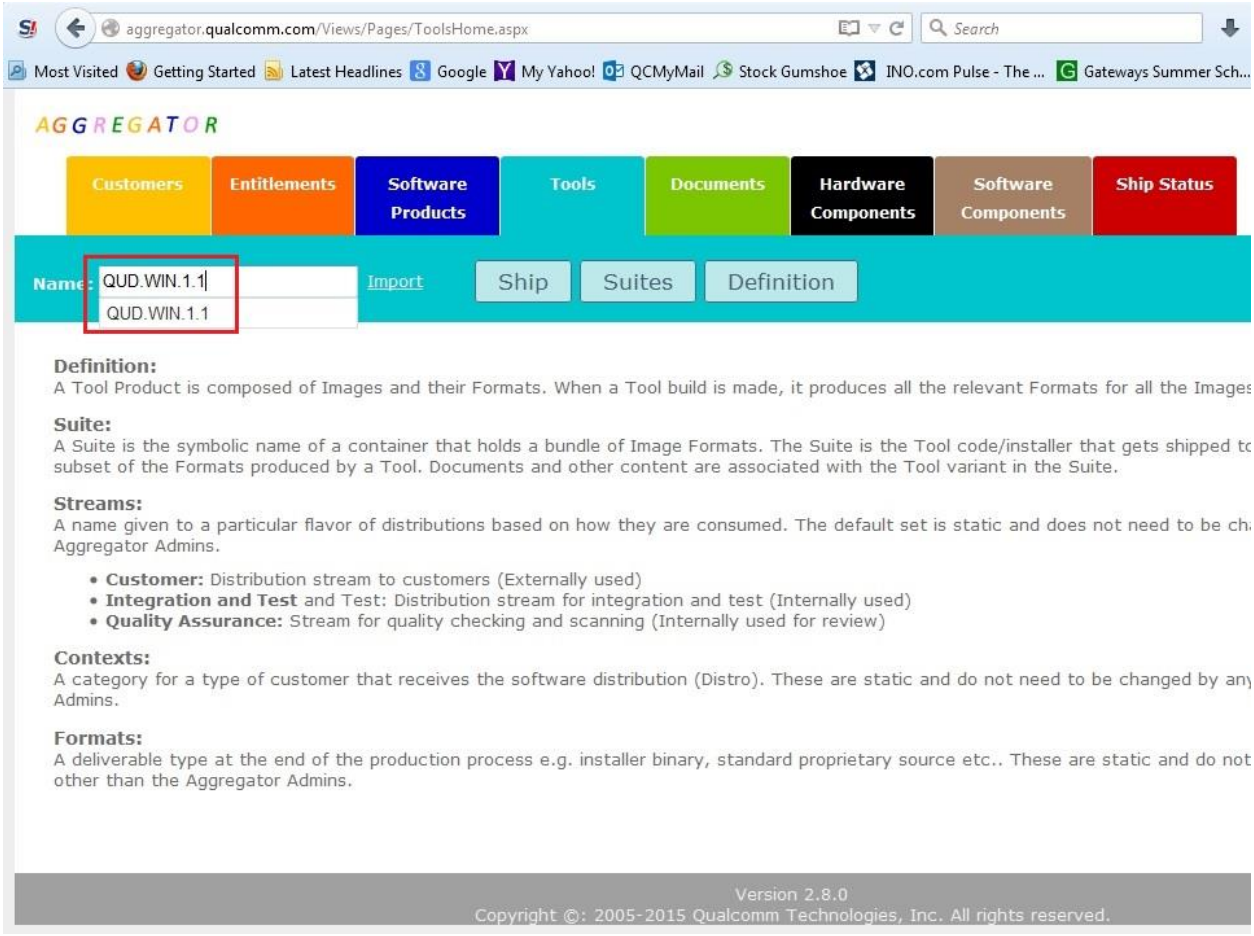
1


aggregator.qualcomm.com/Views/Pages/ToolsHome.aspx
Search
Most Visited
Getting Started
Latest Headlines
Google
My Yahoo!
QCMyMail
Stock Gumshoe
INO.com Pulse - The ...
Gateways Summer Sch...
AGGREGATOR
Customers
Entitlements
Software Products
Tools
Documents
Hardware Components
Software Components
Ship Status
Name:
QUD.WIN.1.1
QUD.WIN.1.1
Import
Ship
Suites
Definition
Definition:
A Tool Product is composed of Images and their Formats. When a Tool build is made, it produces all the relevant Formats for all the Images
Suite:
A Suite is the symbolic name of a container that holds a bundle of Image Formats. The Suite is the Tool code/installer that gets shipped to
subset of the Formats produced by a Tool. Documents and other content are associated with the Tool variant in the Suite.
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Contexts:
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Admins.
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other than the Aggregator Admins.
Version 2.8.0
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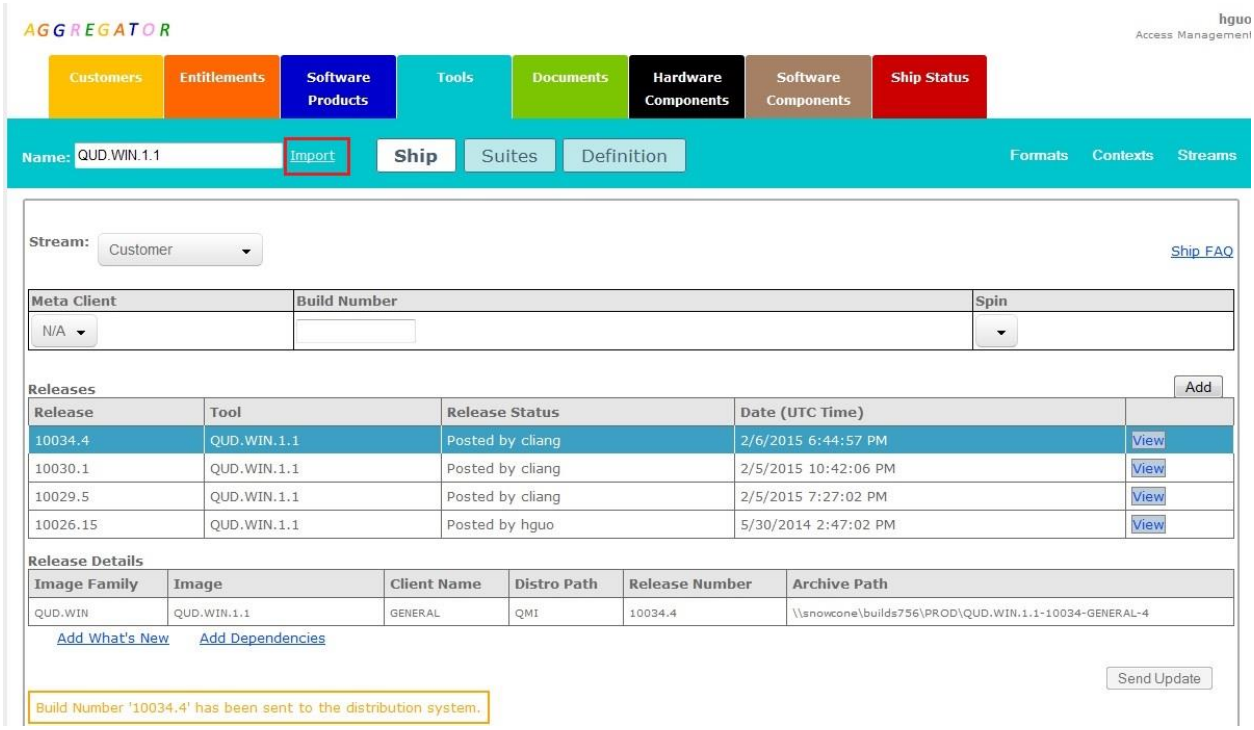
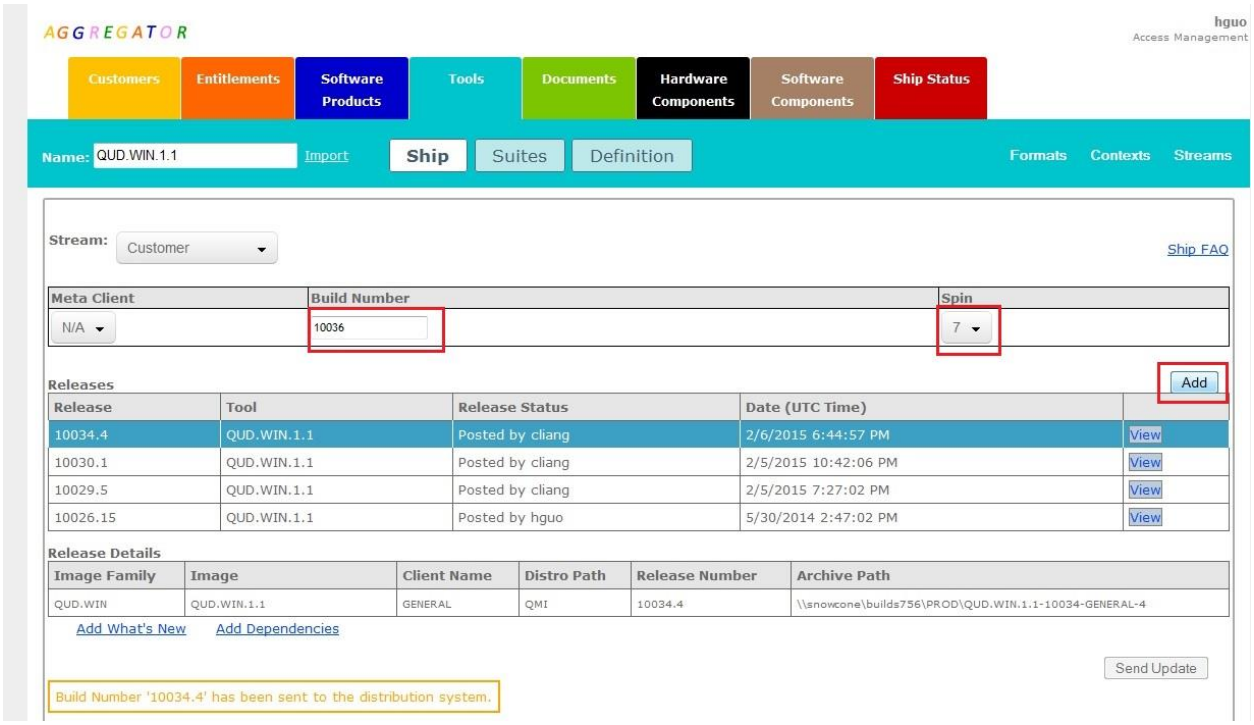
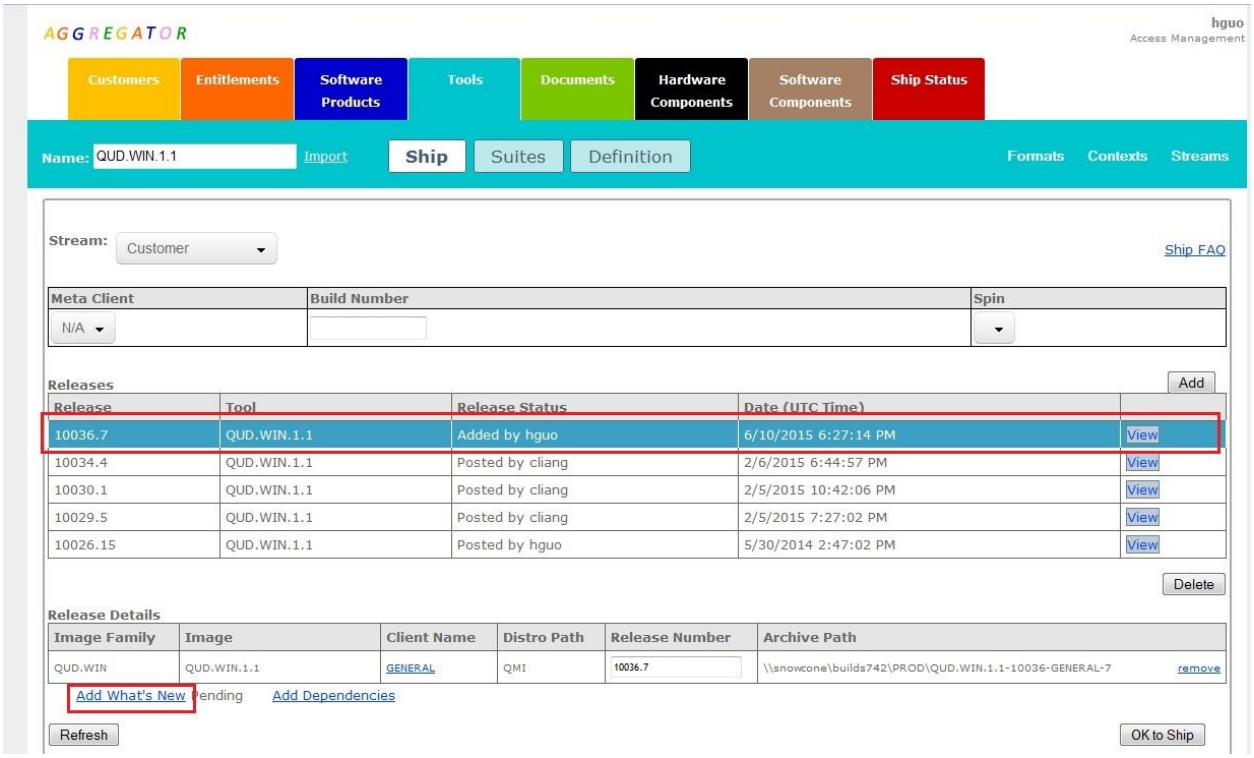
1


AGGREGATOR
hguo
Access Management
Customers
Entitlements
Software Products
Tools
Documents
Hardware Components
Software Components
Ship Status
Name: QUD.WIN.1.1
Import
Ship
Suites
Definition
Formats
Contexts
Streams
Stream: Customer
Ship FAQ
Meta Client
Build Number
Spin
N/A
Releases
Add
Release
Tool
Release Status
Date (UTC Time)
10034.4 QUD.WIN.1.1 Posted by cliang 2/6/2015 6:44:57 PM View
10030.1 QUD.WIN.1.1 Posted by cliang 2/5/2015 10:42:06 PM View
10029.5 QUD.WIN.1.1 Posted by cliang 2/5/2015 7:27:02 PM View
10026.15 QUD.WIN.1.1 Posted by hguo 5/30/2014 2:47:02 PM View
Release Details
Image Family
Image
Client Name
Distro Path
Release Number
Archive Path
QUD.WIN QUD.WIN.1.1 GENERAL QMI 10034.4 \\snowcone\builds756\PROD\QUD.WIN.1.1-10034-GENERAL-4
Add What's New
Add Dependencies
Send Update
Build Number '10034.4' has been sent to the distribution system.

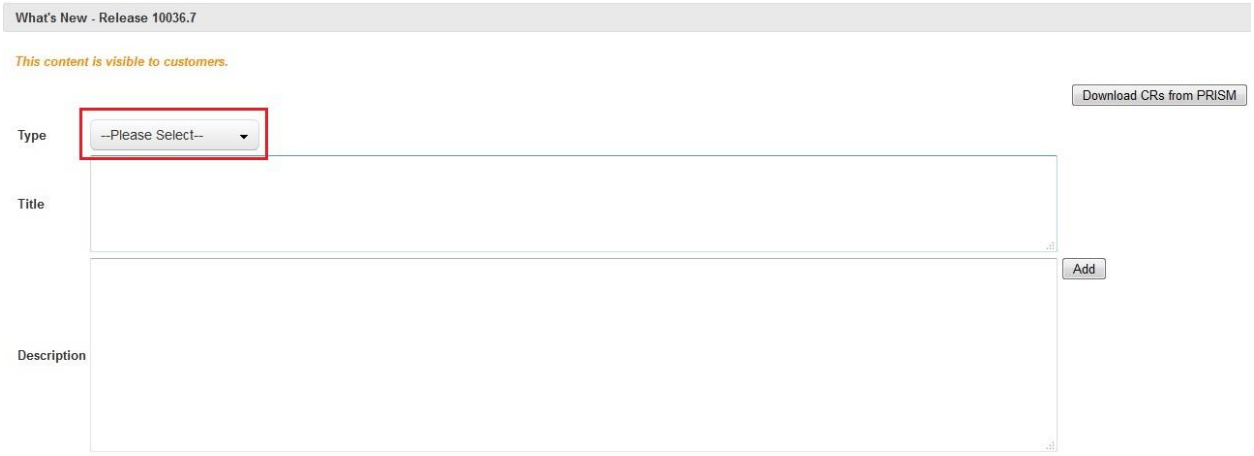
2


AGGREGATOR
hguo
Access Management
Customers
Entitlements
Software Products
Tools
Documents
Hardware Components
Software Components
Ship Status
Name: QUD.WIN.1.1
Import
Ship
Suites
Definition
Formats
Contexts
Streams
Stream: Customer
Ship FAQ
Meta Client
Build Number
Spin
N/A
10036
7
Releases
Add
Release
Tool
Release Status
Date (UTC Time)
10034.4
QUD.WIN.1.1
Posted by cliang
2/6/2015 6:44:57 PM
View
10030.1
QUD.WIN.1.1
Posted by cliang
2/5/2015 10:42:06 PM
View
10029.5
QUD.WIN.1.1
Posted by cliang
2/5/2015 7:27:02 PM
View
10026.15
QUD.WIN.1.1
Posted by hguo
5/30/2014 2:47:02 PM
View
Release Details
Image Family
Image
Client Name
Distro Path
Release Number
Archive Path
QUD.WIN
QUD.WIN.1.1
GENERAL
QMI
10034.4
\\snowcone\builds756\PROD\QUD.WIN.1.1-10034-GENERAL-4
Add What's New
Add Dependencies
Send Update
Build Number '10034.4' has been sent to the distribution system.

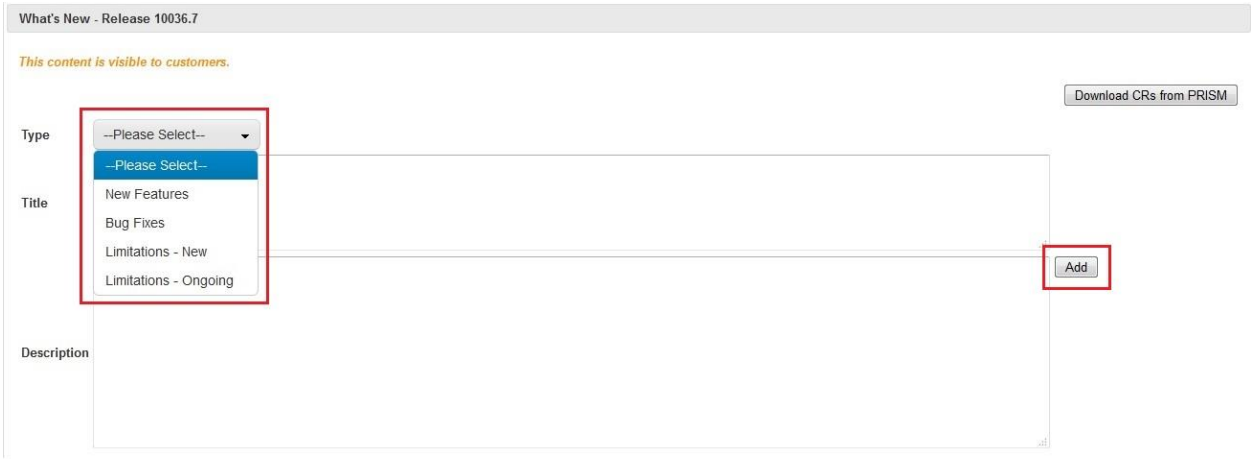
1


AGGREGATOR
hguo
Access Management
Customers
Entitlements
Software Products
Tools
Documents
Hardware Components
Software Components
Ship Status
Name: QUD.WIN.1.1
Import
Ship
Suites
Definition
Formats
Contexts
Streams
Stream: Customer
Ship FAQ
Meta Client
Build Number
Spin
N/A
Releases
Add
Release
Tool
Release Status
Date (UTC Time)
10036.7
QUD.WIN.1.1
Added by hguo
6/10/2015 6:27:14 PM
View
10034.4
QUD.WIN.1.1
Posted by cliang
2/6/2015 6:44:57 PM
View
10030.1
QUD.WIN.1.1
Posted by cliang
2/5/2015 10:42:06 PM
View
10029.5
QUD.WIN.1.1
Posted by cliang
2/5/2015 7:27:02 PM
View
10026.15
QUD.WIN.1.1
Posted by hguo
5/30/2014 2:47:02 PM
View
Delete
Release Details
Image Family
Image
Client Name
Distro Path
Release Number
Archive Path
QUD.WIN
QUD.WIN.1.1
GENERAL
QMI
10036.7
\\snowcone\builds742\PROD\QUD.WIN.1.1-10036-GENERAL-7
remove
Add What's New
Pending
Add Dependencies
Refresh
OK to Ship

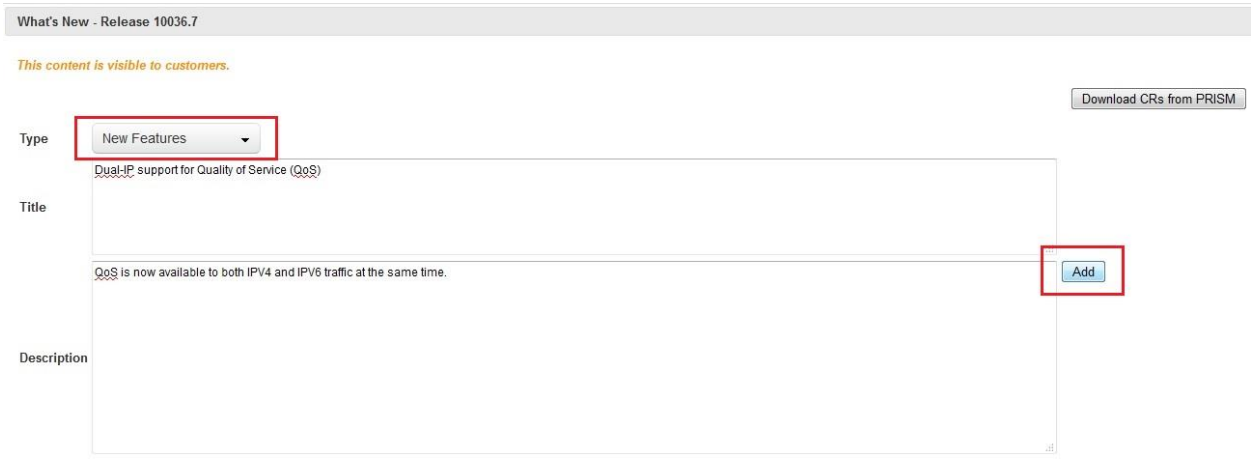
2


What's New - Release 10036.7
This content is visible to customers.
Download CRs from PRISM
Type
--Please Select--
Title
Add
Description

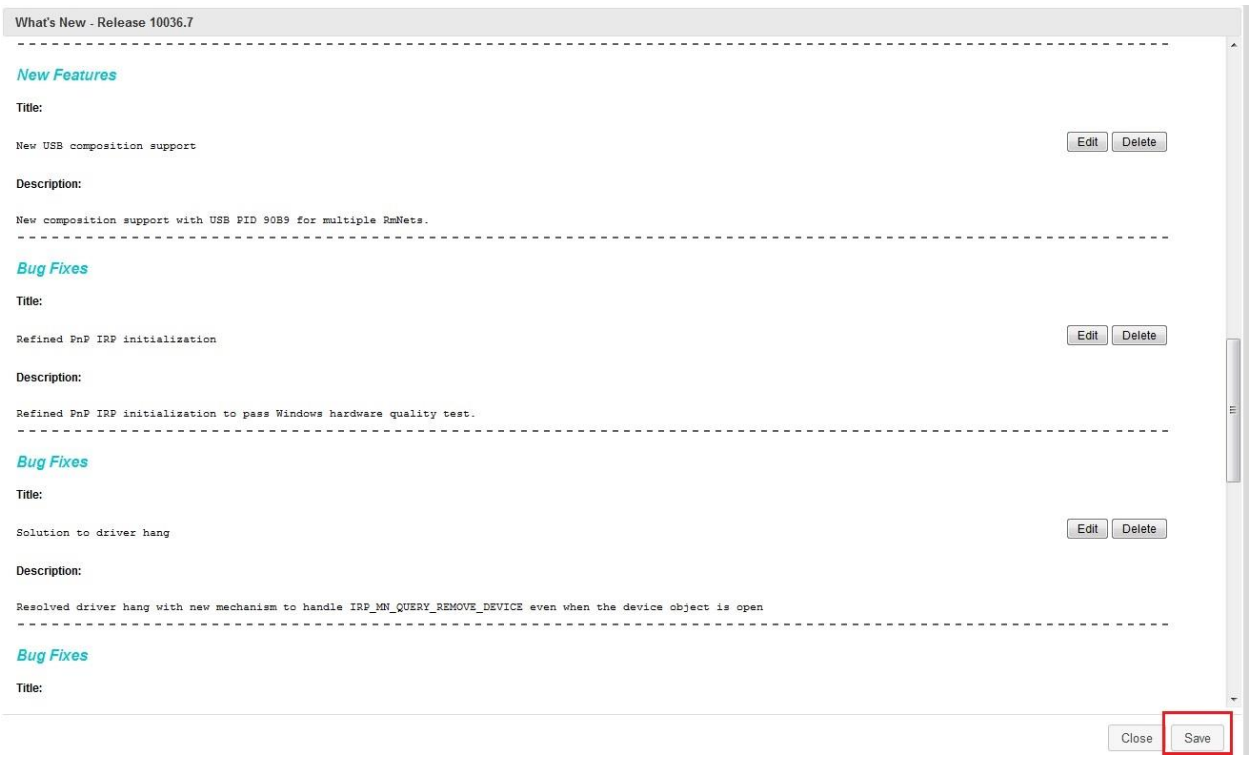
1


What's New - Release 10036.7
This content is visible to customers.
Download CRs from PRISM
Type
--Please Select--
--Please Select--
New Features
Bug Fixes
Limitations - New
Limitations - Ongoing
Title
Add
Description

2

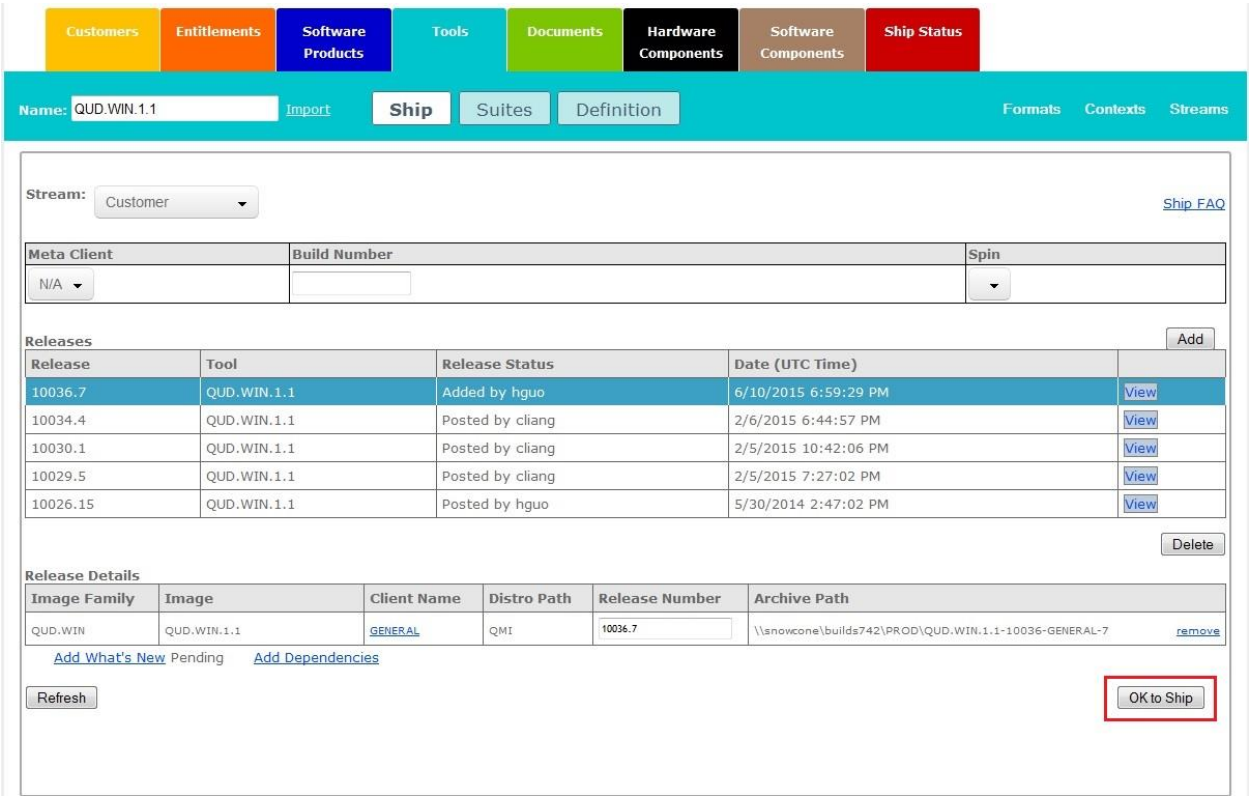

What's New - Release 10036.7
This content is visible to customers.
Download CRs from PRISM
Type
New Features
Dual-IP support for Quality of Service (QoS)
Title
QoS is now available to both IPV4 and IPV6 traffic at the same time.
Add
Description

3


What's New - Release 10036.7
New Features
Title:
New USB composition support
Edit
Delete
Description:
New composition support with USB PID 90B9 for multiple RmNets.
Bug Fixes
Title:
Refined PnP IRP initialization
Edit
Delete
Description:
Refined PnP IRP initialization to pass Windows hardware quality test.
Bug Fixes
Title:
Solution to driver hang
Edit
Delete
Description:
Resolved driver hang with new mechanism to handle IRP_MN_QUERY_REMOVE_DEVICE even when the device object is open
Bug Fixes
Title:
Close
Save

1

2


Customers
Entitlements
Software Products
Tools
Documents
Hardware Components
Software Components
Ship Status
Name: QUD.WIN.1.1
Import
Ship
Suites
Definition
Formats
Contexts
Streams
Stream: Customer
Ship FAQ
Meta Client
Build Number
Spin
N/A
Releases
Add
Release
Tool
Release Status
Date (UTC Time)
10036.7 QUD.WIN.1.1 Added by hguo 6/10/2015 6:59:29 PM View
10034.4 QUD.WIN.1.1 Posted by cliang 2/6/2015 6:44:57 PM View
10030.1 QUD.WIN.1.1 Posted by cliang 2/5/2015 10:42:06 PM View
10029.5 QUD.WIN.1.1 Posted by cliang 2/5/2015 7:27:02 PM View
10026.15 QUD.WIN.1.1 Posted by hguo 5/30/2014 2:47:02 PM View
Delete
Release Details
Image Family
Image
Client Name
Distro Path
Release Number
Archive Path
QUD.WIN
QUD.WIN.1.1
GENERAL
QMI
10036.7
\\snowcone\builds742\PROD\QUD.WIN.1.1-10036-GENERAL-7
remove
Add What's New Pending
Add Dependencies
Refresh
OK to Ship

3

3.6 Notes

We always use ToolW7_Gobi as Tool Env for building the tiberium build and this internally uses the QCTCRMBLD10 as the CRM build server. There is one issue with the build, the user aswbldsv should be logged into the server before submitting the build. Please refer to the JIRA ticket https://jira-quic.qualcomm.com/jira/browse/QSOHELP-43578. If the build fails please reopen the ticket.