



iTRAX – Release Notes – 1.5

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Document Control

Issue Control

Issue	Date	Changes Made
1.0		Updated Highway changes between 1.4.0 and 1.5
1.1		Updated iTRAX changes between 1.4.0 and 1.5
1.2		Added some late developments/fixes.

Cross Reference

Change Summary

Nr.	Description	Date	By whom
1.0	Initial Document	Mar 29	Peter Evans
1.1	Added iTRAX Changes	Mar 31	Peter Evans
1.2	Added some late developments/fixes	April 5	Peter Evans

Contents

Document Control.....	3
Contents	4
Introduction.....	5
Highway Enhancements.....	6
General Stability	6
General Fixes/Enhancements.....	6
HTTP Input	8
WebServices Input.....	9
WebSphere MQ Endpoint.....	9
AS/400 DataQueue Endpoint.....	9
FTP Endpoint	10
Folder Endpoint	11
E-Mail Endpoint.....	11
JMS Endpoint.....	11
HTTP Endpoint.....	12
Highway Database	12
Synchronous Messaging Flow	12
Custom Plug-in Logic	14
iTRAX Enhancements	15
General Improvements.....	15
Desktop Shipping.....	17
EOD	21
Void/Reprint	21
Compliance	21
Inquiries	24
Test Pages	25
Property Page.....	27
Logo Utility.....	28
Installer Enhancements	29
Minor Improvements	29
JBoss	30
TRAXi3 Start.....	30

Introduction

This document contains information on the changes between TRAXi3 iTRAX 1.4.0 and TRAXi3 iTRAX 1.5.

Highway Enhancements

General Stability

- A number of memory leaks have been corrected. 500,000 messages have been posted to Highway, added to a JMS queue, which were consumed by cTRAX and a reply message returned to a JMS queue which is consumed by Highway and returned to as the response to the HTTP post. Memory usage by the “java.exe” throughout this test remained stable at around 180MB.
- The JMS, FTP and Folder readers have been modified so that if a network failure occurs the reader will re-connect automatically to the resource when it becomes available again. The time between retries grows exponentially or can be set, e.g. 60 seconds, then 2 minutes, then try every 10 minutes using the Highway Setting “READER_RETRY_INTERVAL”.
- When Highway is started and the JMS, FTP or Folder reader cannot connect to the physical queue then the reader will continue to try to connect until successful. The time between retries grows exponentially.
- Corrected a threading issue with the JMS reader.
- The method used to count messages in a folder has been improved. Previously when a large number of messages resided in a folder, e.g. an archive folder, Highway required a large amount of CPU to count the files. This has been fixed.
- Highway now employs a new logging engine. This is an ongoing improvement to provide better log information from Highway.

General Fixes/Enhancements

- A problem with the filename used when an acknowledgement message is written to a folder has been corrected. The acknowledgement filename is now constructed using the setting “ACKNOWLEDGE_FILE_PREFIX”. This value is prefixed to the original filename of the message being acknowledged if available.
- A “Delete All” link has been added to list panels. This is primarily intended for the quick deletion of multiple records in the “Event Log” table as well as clearing all messages for a particular endpoint.
- Issue with Highway loading image not showing when iTRAX is not deployed with Highway has been corrected.

HTTP Input

The functionality which allows one to post messages into Highway has changed.

- The URL:
“`http://[host]:[port]/HighwayConsole/HttpReader`”
has been replaced with:
“`http://[host]:[port]/highway/http/SubmitMessage`”

This URL performs the same task of allowing a message be posted to an endpoint in Highway. The old URL is still supported.
- The URL:
“`http://[host]:[port]/highway/http/SubmitMessageAuth`”
has been introduced. This URL allows one to post messages to Highway using web container authorization.
- The URL:
“`https://[host]:[SSL port]/highway/http/SubmitMessageAuthSecure`”
has been introduced. This URL allows one to post messages to Highway using web container authorization and HTTPS encryption.
- The Highway Setting “`DISABLE_SUBMITMESSAGE`” allows one to disable the “`SubmitMessage`” URL allowing one only to post messages using container authentication.
- The Highway Setting “`DISABLE_SUBMITMESSAGEAUTH`” allows one to disable the “`SubmitMessageAuth`” URL. This along with the previous setting means one can configure Highway to only allow messages be post messages using container authentication over SSL.
- All three HTTP inputs now accept GET and POST submissions.
- The default user id and password needed to access the `SubmitMessageAuth` and `SubmitMessageAuthSecure` URLs has changed. This is now “`admin/admin`”. This information can be maintained by examining the files in:
“`[iTRAX Root]\jboss\server\default\conf\props`”.
- Posts received with no `HighwayMessage` and `HighwayEndpointId` parameters are now rejected.
- Responses to posts into Highway has been improved. “`<H1>Message Accepted by Highway</H1>`” has been replaced with an XML response detailing the received parameters. A new Highway setting “`DISABLE_MESSAGEINPUT_ECHO`” can be to disable message echoing back to the sender when processing asynchronous messages.

WebServices Input

- Highway now exposes a SOAP RPC service which allows messages to be added to a Highway endpoint:

“http://[host]:[port]/highway/soap/rpc/SubmitMessage”

This can be disabled by setting the Highway Setting “DISABLE_SOAP_RPC_SERVICE” to no.

There is support for encryption using SSL:

“https://[host]:[SSL port]/highway/soap/SubmitMessageRPC”

The WSDL can be viewed using:

“http://[host]:[port]/highway/soap/SubmitMessageRPC?wsdl”

- Highway now exposes a message based SOAP service:

“http://[host]:[port]/highway/soap/SubmitMessage”

This can be disabled by setting the Highway Setting “DISABLE_SOAP_MSG_SERVICE” to no.

There is support for encryption using SSL:

“https://[host]:[https_port]/highway/soap/SubmitMessage”

The WSDL can be viewed using:

“http://[host]:[port]/highway/soap/SubmitMessage?wsdl”

WebSphere MQ Endpoint

A WebSphere MQ Adapter has been developed. It has basic functions that can be used to support synchronous, asynchronous P2P messaging, and asynchronous group messages P2P messaging.

More information on setting up such an Endpoint can be found in the How To technical document:

[“*How to configure a WebSphere MQ endpoint*”](#)

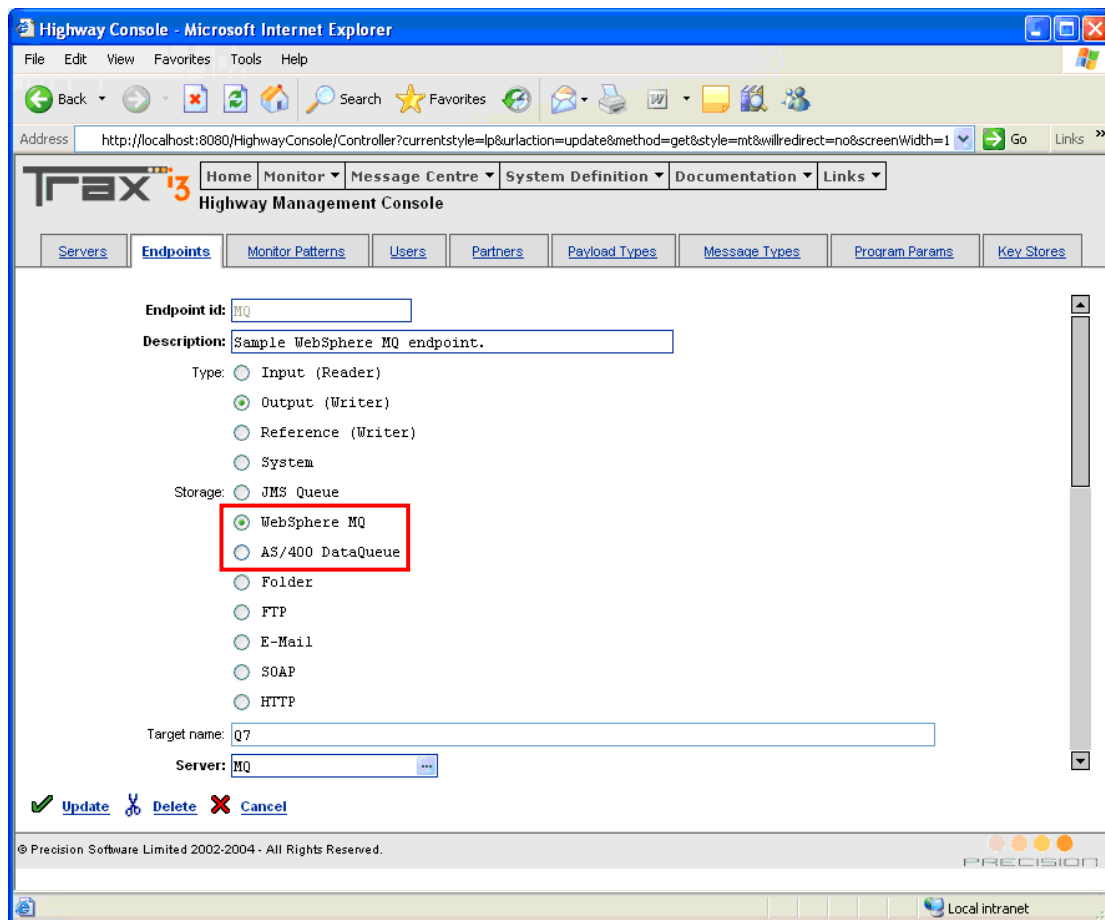
AS/400 DataQueue Endpoint

An AS/400 DataQueue Adapter has been developed. It has basic functions that can be used to support synchronous or asynchronous Point to Point (P2P) messaging with a “KeyedDataQueue” on the AS/400. It also support asynchronous P2P messaging with a “DataQueue” on the AS/400.

The maximum number of bytes per data queue entry is 64512.

More information on setting up such an Endpoint can be found in the How To technical document:

[“How to configure AS400 DataQueue endpoint”](#)



FTP Endpoint

- FTP Error Handling has been improved. Certain errors returned from the FTP server can now be ignored using the server property “ignore.errorcodes”.
- The FTP Writer can now be configured to not check if a file on the FTP server has changed since it was retrieved. To disable the second GET after a file has been retrieved set the server property “file.size.changed.pause” to “0”.
- The FTP Reader can now be configured to ignore sub-directories in the scan folder. This causes a problem for Highway when connected to certain FTP servers. The server property “check.folder.ignore” should be set to “yes” if sub-directories are to be ignored.
- The FTP Reader and Writer now support binary files.

Folder Endpoint

- The Folder Reader and Writer now support binary files.
- The Folder Writer can now be configured to write a Highway message in XML. This way the properties as well as the payload are visible in the files contents. This can be configured by setting the endpoint property “xml.output” to “xml”.

E-Mail Endpoint

- The Mail Reader can now be configured so that it generates a message by combining the subject and the body of an e-mail. The “payload.source” server property should be set to “SUBJECT+BODY”.
- The Mail Writer now preserves the filename when adding an attachment to a new mail message.
- The Mail Reader now supports binary attachment files. A How To document describing how to get Highway to read an inbox and use e-mail attachments as a message payload is available:
[*“How to set up e-mail to folder binary file transfer in Highway”*](#)

JMS Endpoint

- JMS Messages can now be persisted in Oracle or MS SQL Server databases. These commercial databases provide a more stable platform for Highway compared to the embedded HSQL database.
- The JMS Reader can now count the messages on a queue that is persisted in an Oracle or MS SQL database.

For more information refer to the technical How To document:

[*“How To Setup JBossMQ on MSSQL or ORACLE”*](#)

- A fix was made to how Highway counts messages on the REPLY queue. Previously the number of messages on the reply queue would always be shown as zero.
- Property beginning with “JMSX” are treated as a special properties and not copied over to any new messages created by the JMS writer.

HTTP Endpoint

- A problem with HTTP Writer when configured not to use SLL has been corrected.
- The “content.type” server property used by the HTTP Writer can now be set to a blank string. This forces the HTTP Writer to use the default “Content-type” in the HTTP header.
- A issue with the HTTP Writer has been corrected. Previously the writer would fail to write the message if no “http.parameters” was specified as a property on the server record.
- A How To document is available on How to set up a HTTP Writer: [*“How to setup a HTTP writer”*](#)

Highway Database

- The Highway database schema was modified so that names used in tables and fields is compatible with MS SQL Server or Oracle. The Highway database can now be migrated to these commercial database platforms.

Existing Highway databases can be upgraded to this new schema using a upgrade SQL script. This script alters the affected tables and fields.

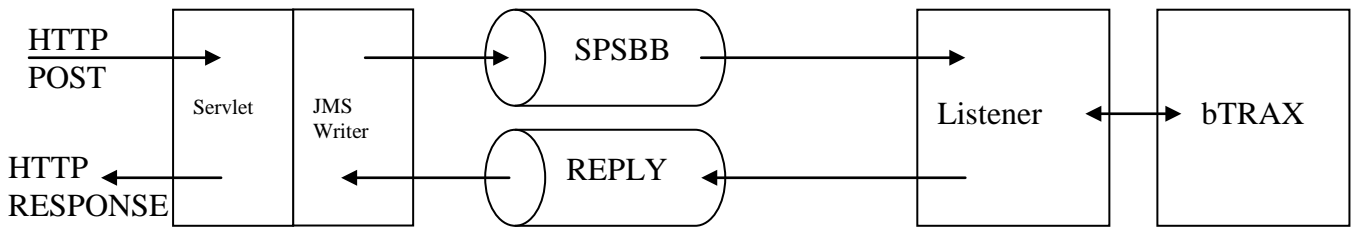
- Certain fields have been lengthened as they were found to be too short for certain configurations.

```
MESSAGERULE.MESSAGEID is now 25 (was 20)
SERVER.USERNAME is now 30 (was 20)
SERVER.HOSTNAME is now 80 (was 40)
MESSAGE.MESSAGEID is now 25 (was 20)
ENDPOINT.DEFAULTMESSAGEID is now 25 (was 20)
ENDPOINT.TARGET is now 80 (was 60)
ENDPOINT.ACKID is now 25 (was 20)
```

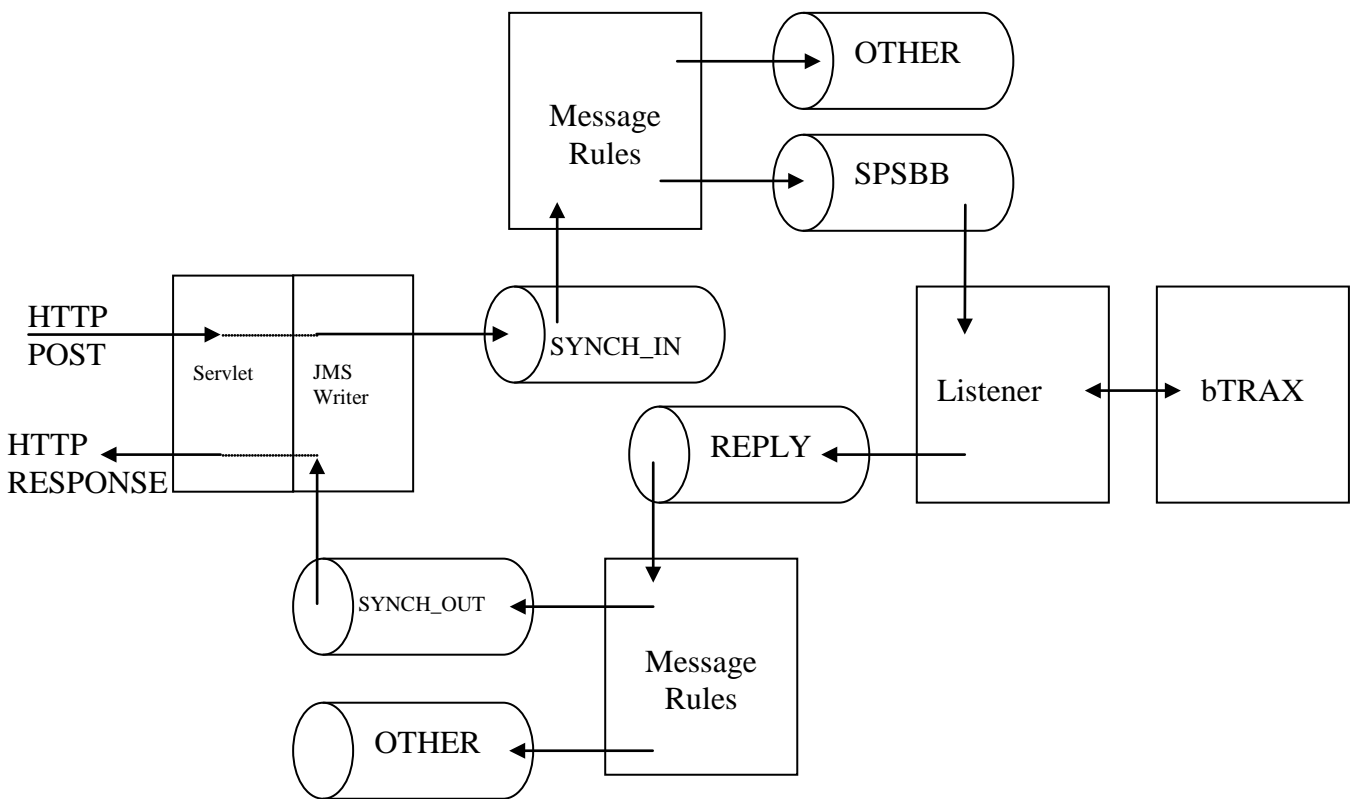
Synchronous Messaging Flow

A new configuration for the flow of synchronous messages through Highway has been introduced. Previously the synchronous flow of a message involved no more than two endpoints, one to store the message on the way over to TRAXi3 and another to store the reply message for the return path.

A typical SPS black box usage of Highway is shown below:



This can now be configured as follows:



This allows messages to be consumed by more than one process both on the input and reply paths.

Messages from the listener by default will have a message id equal to the input message id plus the suffix “_REPLY”. If the input message id is blank then the reply message id will be “CTRAX_REPLY” or “ITRAX_REPLY” depending on the listener used.

Note: This requires the #A08 cTRAX listener. This program is not installed by the iTRAX/Highway Installer.

By default Highway will continue to support the old configuration. For the new configuration to work you need to:

- Set the Highway Setting “JMS_LISTEN_REPLY_ENDPOINT” to “SYNCH_OUT”. The Default is “REPLY”.

- Start a JMS Reader on the REPLY endpoint so messages written to the REPLY queue by the listener processes are moved to the “SYNCH_OUT” queue.

Custom Plug-in Logic

Highway can be used to plug some custom Java logic into cTRAX. cTRAX has no easy way to call Java code. Highway can be used to bridge this problem. cTRAX posts a request to Highway and Highway executes the Java code. A reply is returned in the HTTP response.

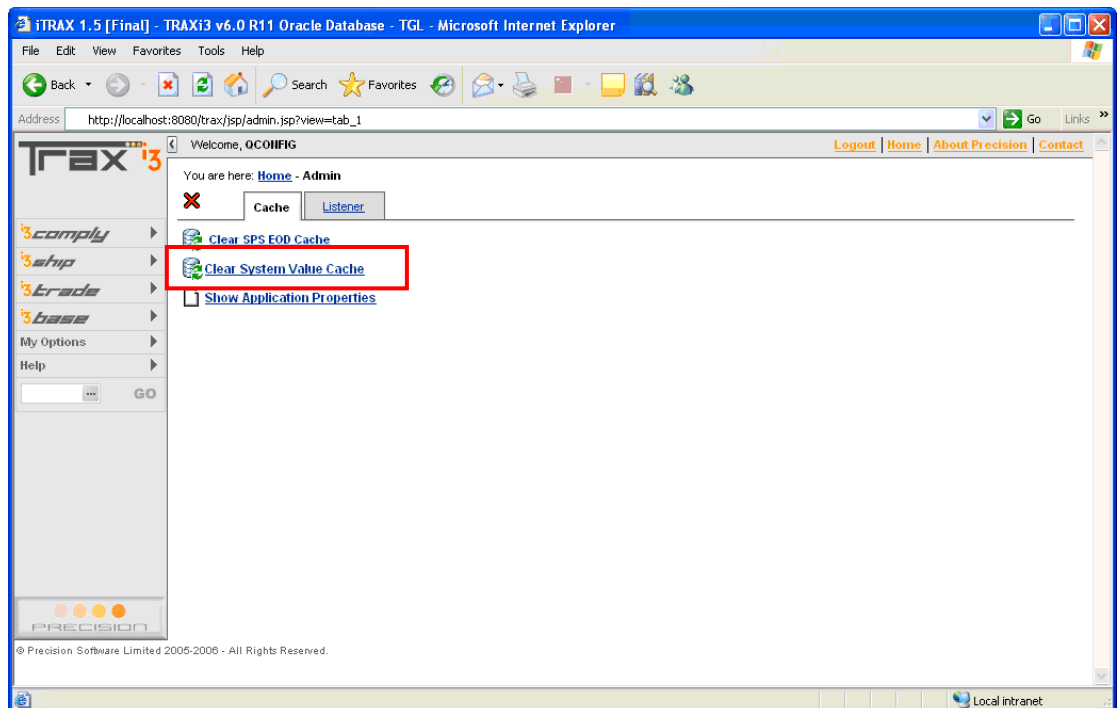
More information is provided in the How To:

[*“How to use Highway to call custom java plugin code”*](#)

iTRAX Enhancements

General Improvements

- System values are now cached.
When system values are maintained from within iTRAX they will also be maintained.
When system values are maintained from cTRAX one will need to clear the iTRAX cache manually. This is done by restarting JBoss or selecting the clear system value cache on the admin page.



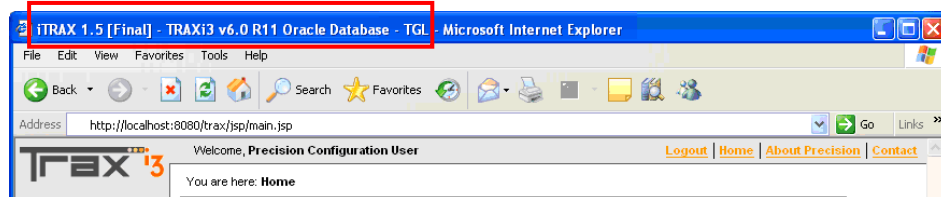
To access the Admin page run the quick path option “ADMIN”.

- All HTML pages have a default encoding of UTF-8. This allows Internet Explorer to automatically display Eastern European characters.
- Messages sent to Highway now include the "TRAXUser" element where applicable. Records updated by cTRAX will use this information to stamp the iTRAX user as the modifying user.
- iTRAX Listener administration page had a problem with the “increase” and “decrease” links. This has been fixed.
- iTRAX Listener can now support synchronous as well as asynchronous messaging.

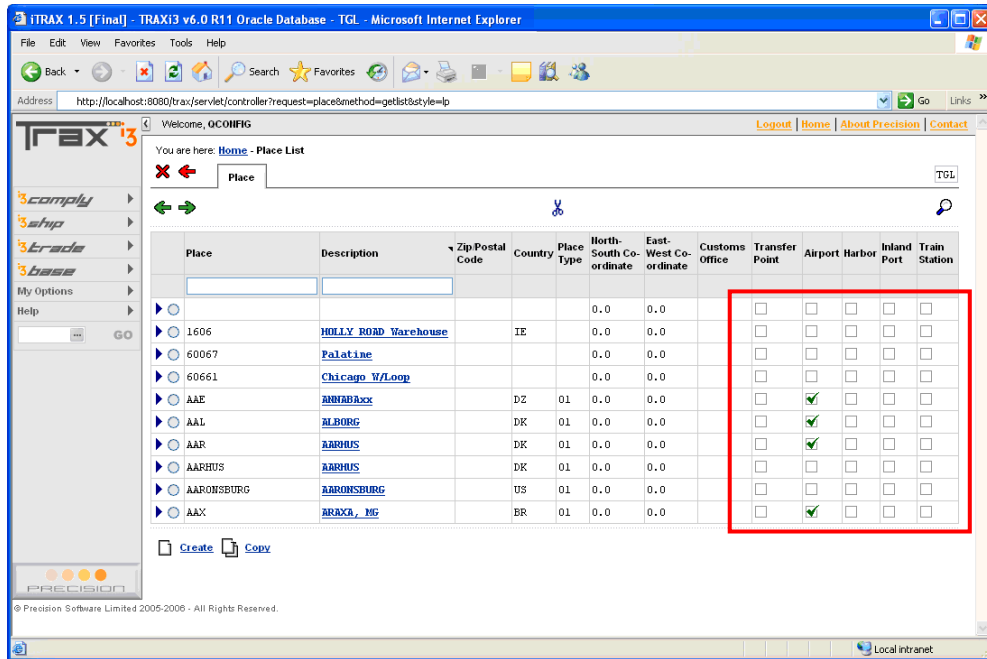
- Fixed issue with the “trax.url.onlogin” property. When this was set, iTRAX would not always direct to the page detailed with this property.
- When “trax.url.login.secure” is set to no then the web filter is no longer used. This means multiple URLs can be used to connect to iTRAX.
- A threading issue was corrected with the main iTRAX controller. Display errors could occur if a large number of concurrent users were using iTRAX.
- The XSL style sheets used to display some iTRAX pages are now cached, improving performance and scalability.
- When the login method is “demo” the user is still required to enter a user id.
- Fixed an issue when locale documents were not displaying at all.
- Each type of message sent to bTRAX from iTRAX now has a distinct message id defined by the following iTRAX properties:

```
trax.highway.doc_prt.messageid=DOC_PRT
trax.highway.doc_pdf.messageid=DOC_PDF
trax.highway.sps_rate.messageid=SPS_RATE
trax.highway.sps_ship.messageid=SPS_SHIP
trax.highway.sps_void.messageid=SPS_VOID
trax.highway.sps_reprint.messageid=SPS_REPRINT
trax.highway.sps_payment.messageid=SPS_PAYMENT
trax.highway.sps_eod.messageid=SPS_EOD
```

- Fixed an issue which made the login method “progress” unusable in 1.4.0.
- Quick Rate Shop is now just called “Rate Shop”.
- Minor change to i3Base menu structure.
- Properties in the trax.properties files now have trailing spaces trimmed.
- Login page now remembers the entered password when the client is changed. Previously the page would refresh when the client was changed and the password field would be cleared.
- Version and login client are now shown in the browser title.



- Boolean values are displayed as check boxes on list panels.



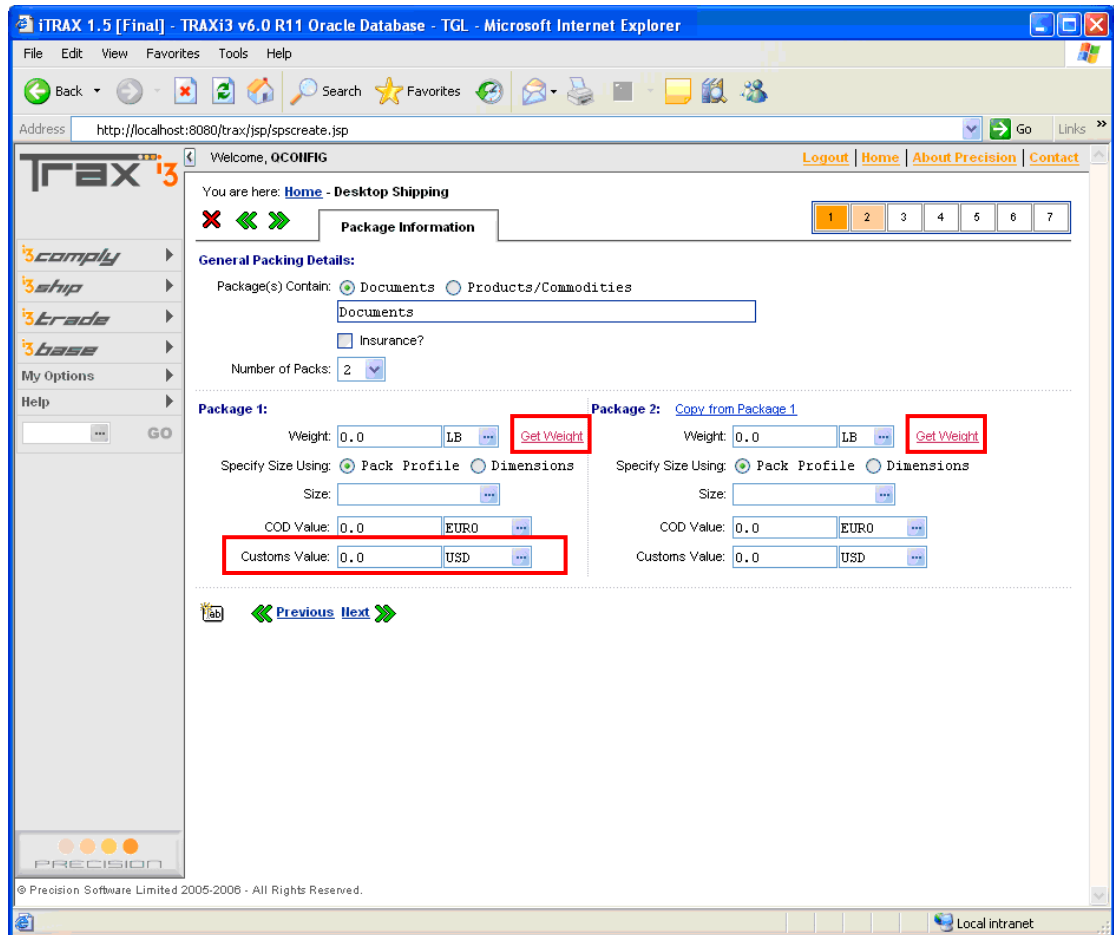
Desktop Shipping

- Insurance can now be set to always default to true. This is controlled by setting the new trax property: “trax.sps.desktop.defaultinsurance” to “yes”.

- Default currency values are now picked up from the system value:

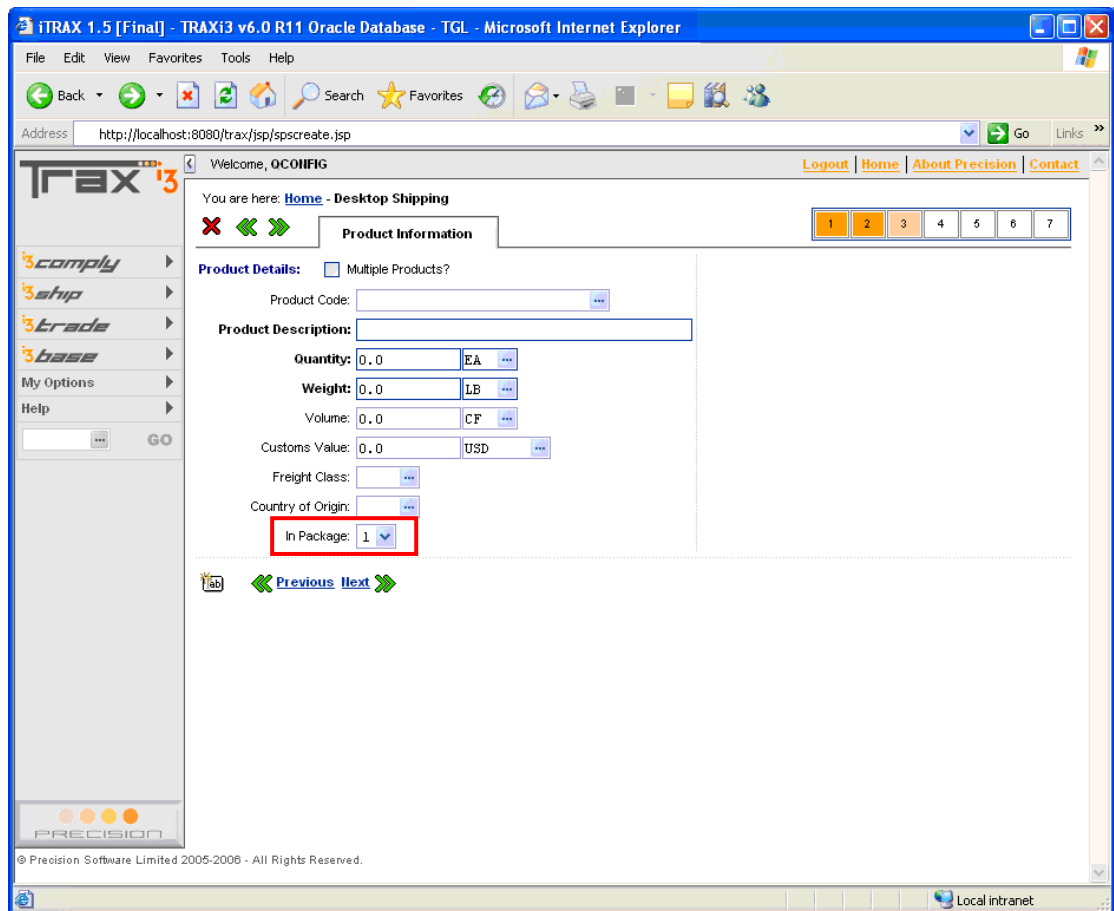
Category	Key	Default	Information
SPS	UOM - DEFAULT CURRENCY	USD	A valid currency code.

- The default payment method on step 6 will be COD Amount or COD Ship Cost is a COD amount has been entered on Step 2.
- The “Once Off Delivery” option now works with an MS SQL database.
- The “Once Off Delivery” option was found to use some of the Ship From information rather than Ship To information when creating a new partner record. This has been corrected.
- The main iTRAX page now allows one to change client, locale, and packing location details.
- The applet used on Step 2 has been re-worked. The “Get Weight” option is now a hyperlink which when selected calls an applet. This has the advantage of only requiring one applet on the page. The How To document has been updated with a “Step 4”:
[“How to Setup iTRAX Scale Applet”](#)

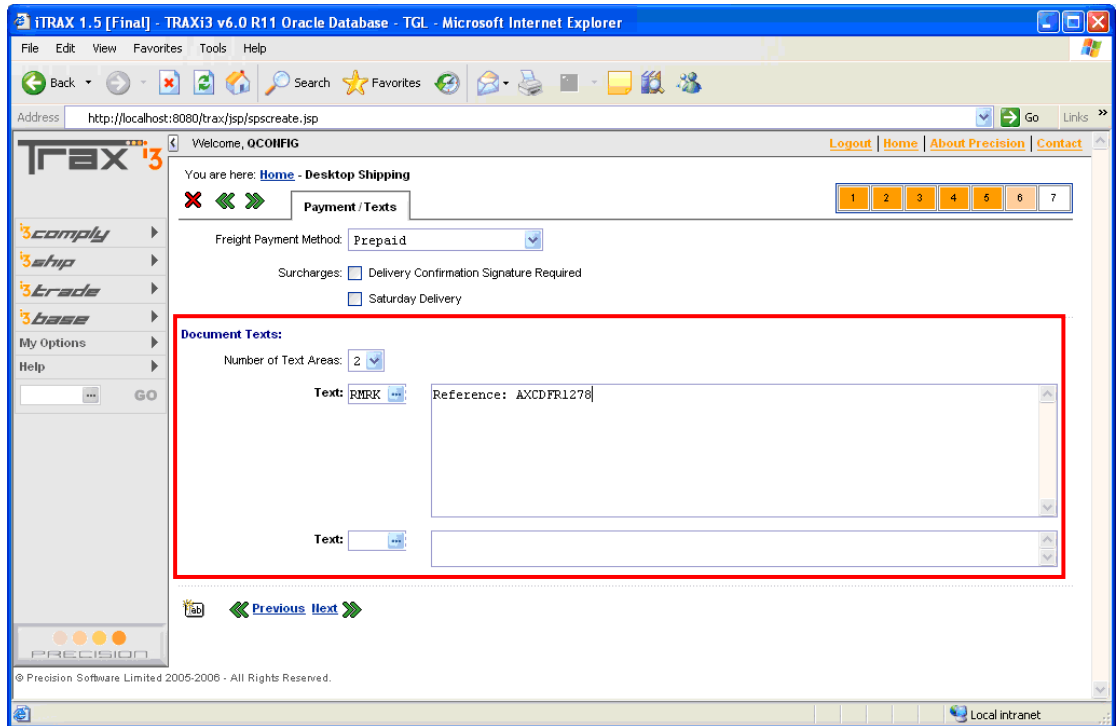


- The “Customs Value” field is now at a Pack Level. Previously this was at a general packing level.
- The steps 2 and 3 have been modified so the page does not display hidden areas initially and then hide them when the page has downloaded. This problem occurs when the connection between the client and server is slow.
- When the user selected a different currency code for the ‘Customs Value’ currency field, it was not returned. This has been fixed.
- Support for multiple packs has been improved:
Previously when there were multiple packs, iTRAX sends an XML message to SPSBB which resulted in only one item being created which was associated with the first pack. The second pack was empty. This has been fixed.

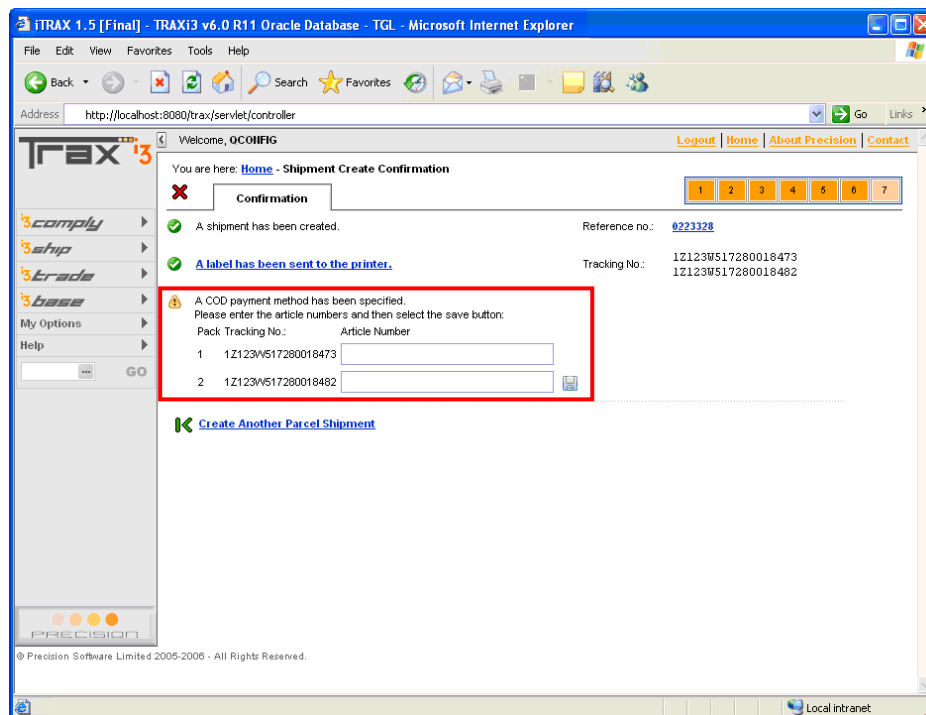
When specify products there was no was of associating a product with a pack. This is now possible. It is assumed that each product entered fits entirely into a pack.



- Validation and defaulting on Step 3 has been improved.
- The maximum number of packs and products that can be specified for a single shipment is now configurable using the iTRAX properties:
 - `trax.sps.desktop.maxpacksallowed`
 - `trax.sps.desktop.maxproductsallowed`
- The item quantity and UOM for documents and unspecified items is now set to 1 EA. Previously no item quantity was specified in the XML sent to bTRAX.
- On step 4, when “Show all options” was selected a “WITHINANY” error occurred. This has been fixed.
- On step 6 it is now possible to enter shipment text information. If a document is configured to be created or printed as part of the shipment creation then these texts can be used to add additional text information to the document.



- An article number can now be entered on step 7 when the payment method is COD Amount or COD Ship Cost:



The article number logic can be disabled by setting the iTRAX property “trax.sps.desktop.showcodarticleupdate” to “no”.

- The Thirdparty party account number is now sent in the XML to bTRAX. The Third party address is now set to that of the Ship To in the XML sent to bTRAX.

- Multiple errors are now shown on step 7. Previously only the last error returned from bTRAX was displayed.

EOD

- No possible to configure the following attributed in the “Process” element of the XML sent to SPSBB using the following iTRAX properties:

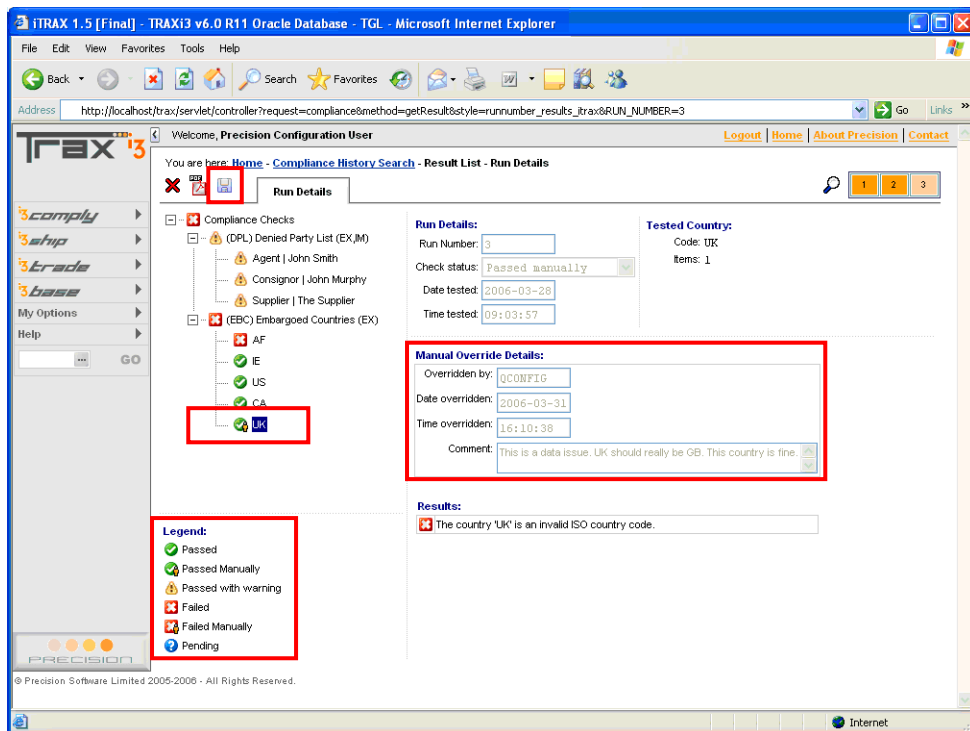
```
trax.sps.eod.confirm=Always  
trax.sps.eod.printfilereturned=1  
trax.sps.eod.shipmentsreturned=1  
trax.sps.eod.trackingreturned=1
```

Void/Reprint

- Fixed an issue with the label reprint page which was preventing labels to be reprinted at a Shipment level.
- Fixed an issue with reprinting labels at a package level. The correct package number (additional reference) is now used.

Compliance

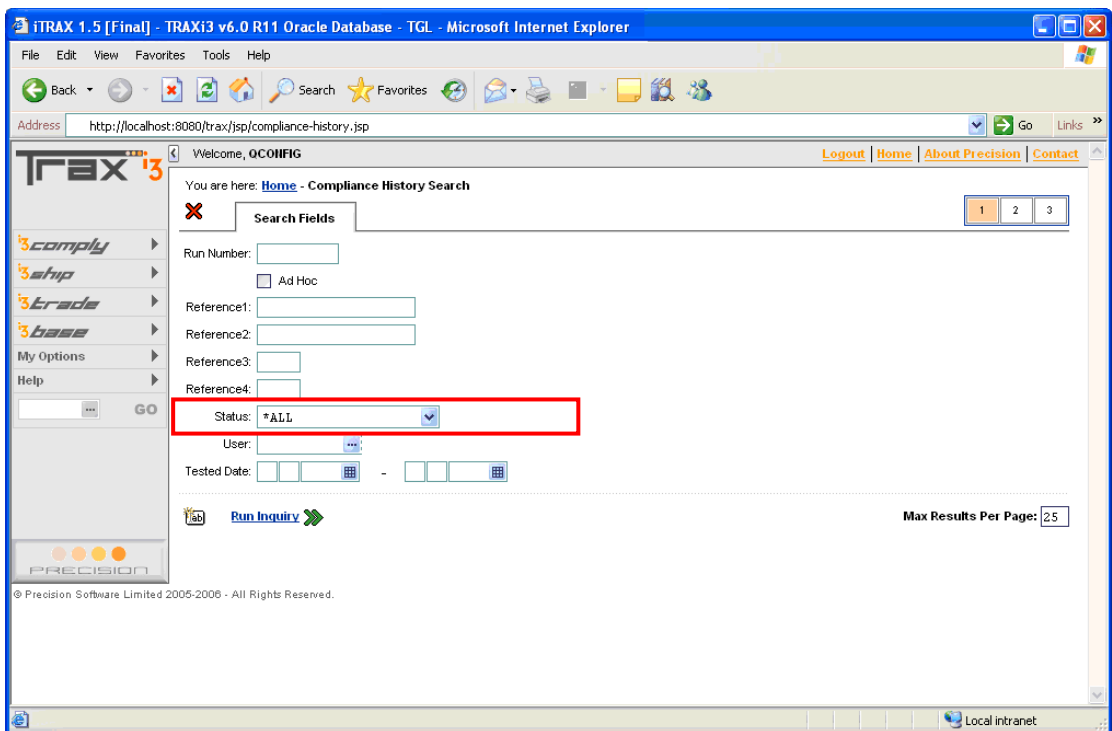
- Can now manually override compliance check results and save the compliance override details in the compliance history.



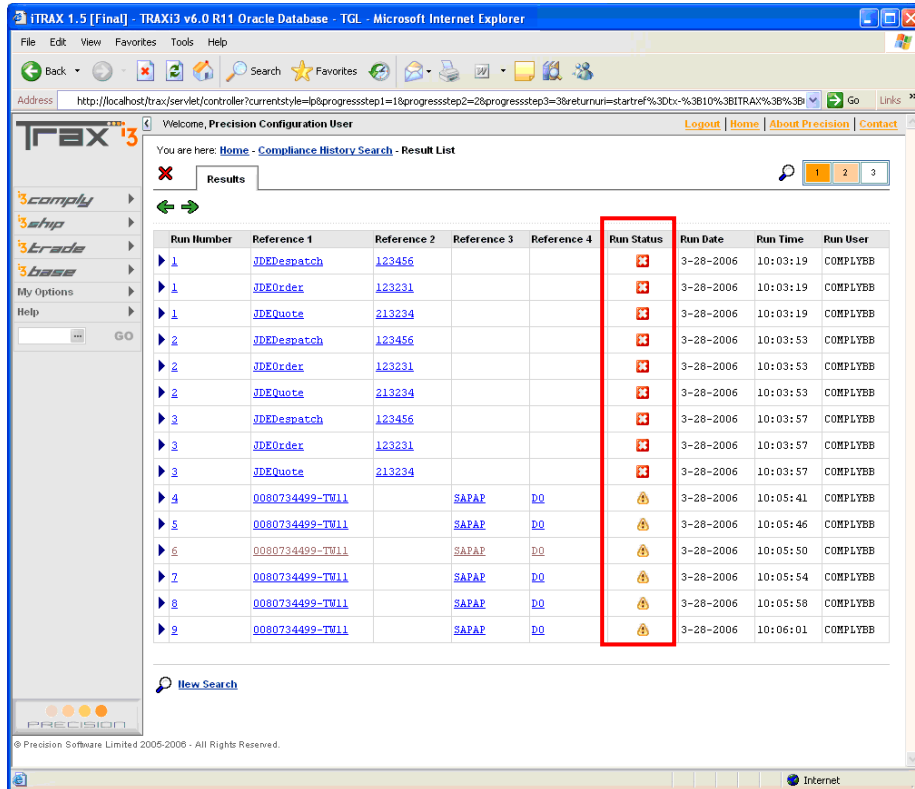
- Remember previous DPL check result for a partner, until the partner details or the DPL content changes.
- When manually overriding a DPL check for a partner, allow one to save the returned matches, and use them in future DPL checks of the same partner.
- The results page shows reference information when the 'Compliance checks' node has been selected.
- bTRAX will now validate XML compliance request messages against a specified external XSD schema. This is controlled by the iTRAX property "trax.compliance.request.validation.schema". By default the installed will set this equals to:

```
"file:///[[iTRAX Root]]/data/xsd/compliance/ProcessComplianceRequest.xsd"
```
- The compliance engine will now verify the XML compliance request messages are well-formed. If there is a problem it will notify, by email, the specified recipient(s) detailed in the iTRAX property "trax.compliance.request.validation.notify".
i.e. `compliance.request.validation.notify=Recipient #1
<recipient1@company.com>, Recipient #2 <recipient2@company.com>, ...`
- Minor fix to the compliance PDF result report. The date, time and user now display rather than the run number being displayed next to these labels.
- Minor change to compliance result page. If the partner tested has no partner type associated with it then the leading '|' character is no longer displayed.

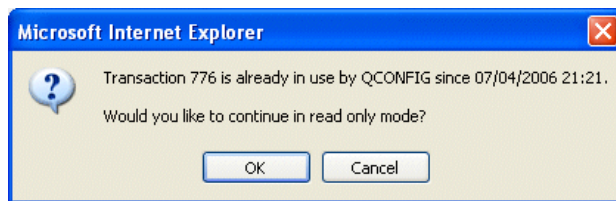
- Fix issue where an embargoed country flagged as "Warning only" was returning with Passed status.
- A new "Pending" status has been introduced.
- Incorrect wording in the Result Summary section of the DPL results. "Address not tested." Now says "No matches found against Address."
- An issue where if remember me is true (`trax.login.rememberme=yes`) and the compliance result link is selected from a mail message a null pointer error results. This has been corrected.
- The compliance results screen drop-down (which allows the ability to manually pass/fail results) will now appear insensitive if the user who is logged into TRAXi3 is a non-eco user, or if the check has an "ITRAX-ADHOC" reference.
- The ability to search based on the compliance status is now possible.



- The status of the compliance run is now visible on the history results list page.



- Hyperlinks have been added to the reference data displayed on the compliance history results page.
- The order of the columns on the compliance history results can now be configured.
- When a run that is already being viewed by another user an alert will be displayed on the compliance history results page:



Inquiries

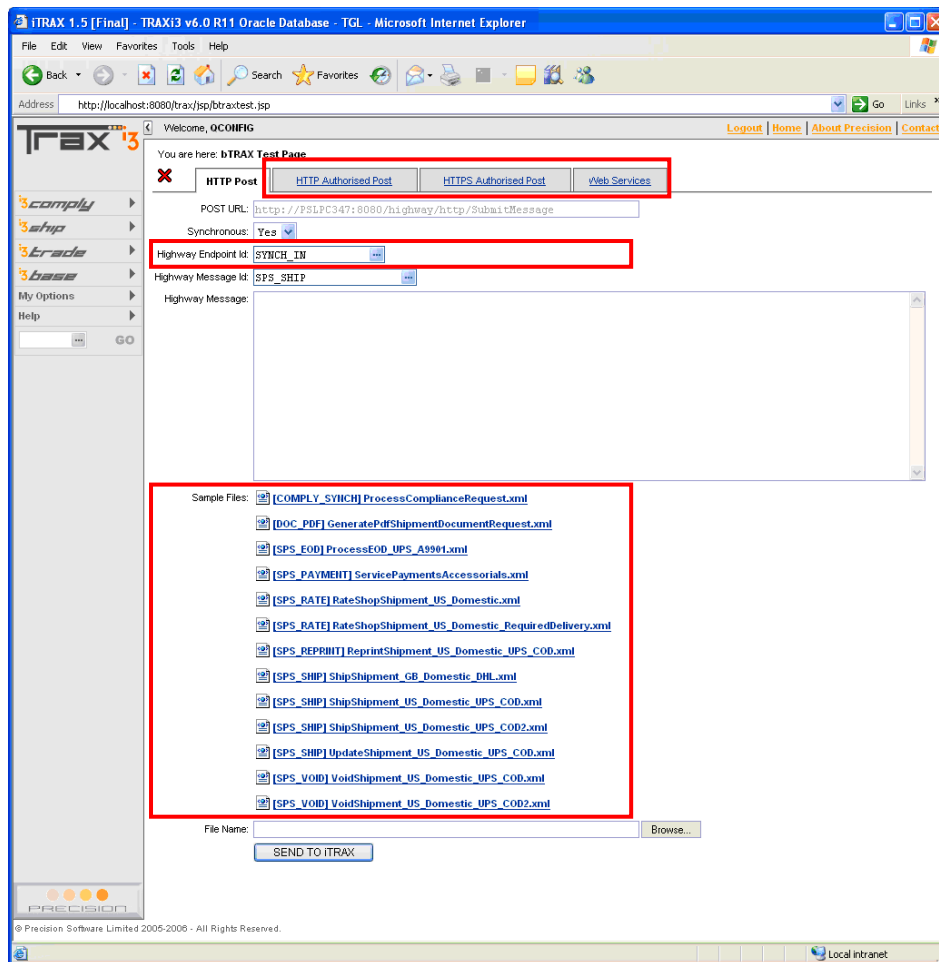
- Fixed a problem with inquiring over the “UserDefinedField05” shipment field. This failed when the query was run over an Oracle or MS SQL database.
- Fixed a problem with querying the document on a Shipment. The query failed when run over an AS/400 database.

- The list of documents that support printing and previewing are now defined using both the document code and document type. Previously the document code was only used:

```
trax.inquiry.pdfpreview=01:27A,01:AAD1,...
trax.inquiry.print=01:27A,01:AAD1,...
```

Test Pages

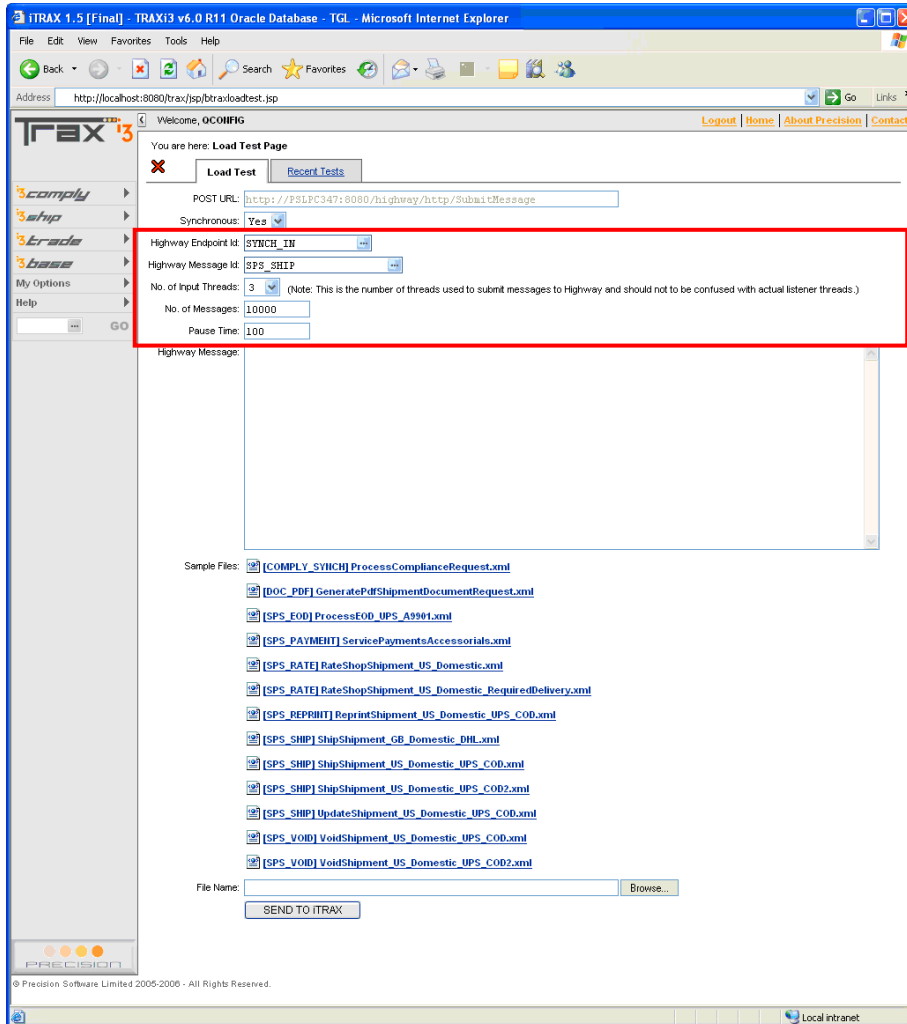
The Black Box test page has been replaced with a bTRAX test page (btraxtest.jsp). This page extends the functionality of the old test page.



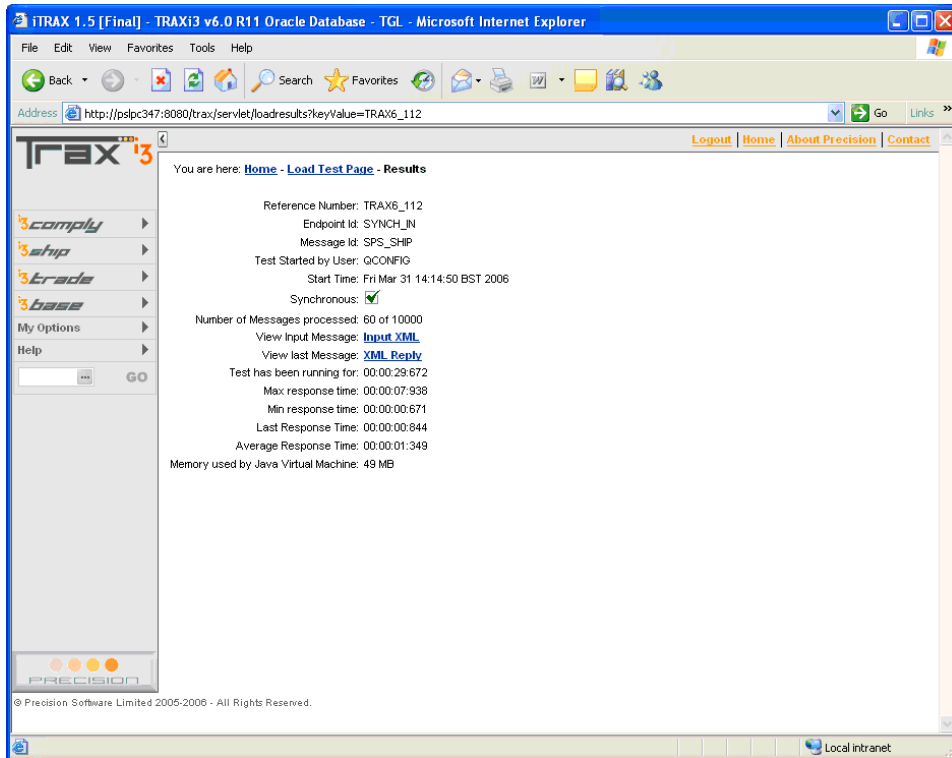
- One can now specify the message id. This is important if using rules to move messages from the endpoint “SYNCH_IN” to the endpoint that bTRAX is consuming messages.
- One can now select from a list of sample messages. The message id is defaulted with the information contained in the [] of the message filename. Files by default are retrieved from “[iTRAX Root]\data\sample”.

- As well as performing a basic HTTP Post, it is now also possible to perform a HTTP Post using the web containers authorization, SSL with the web containers authorization and the message based SOAP service.

The bTRAX test page is now complimented with a bTRAX load test page. This page allows one to submit a message to Highway many times.

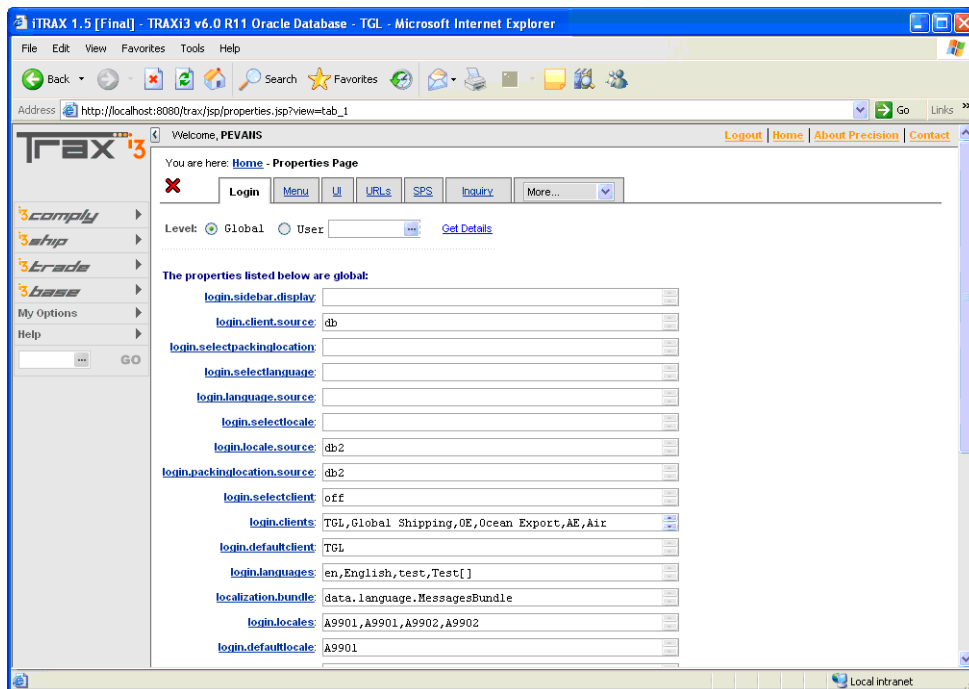


- When a test has been submitted the results can be examined as the test is running. A sample results page is shown below:



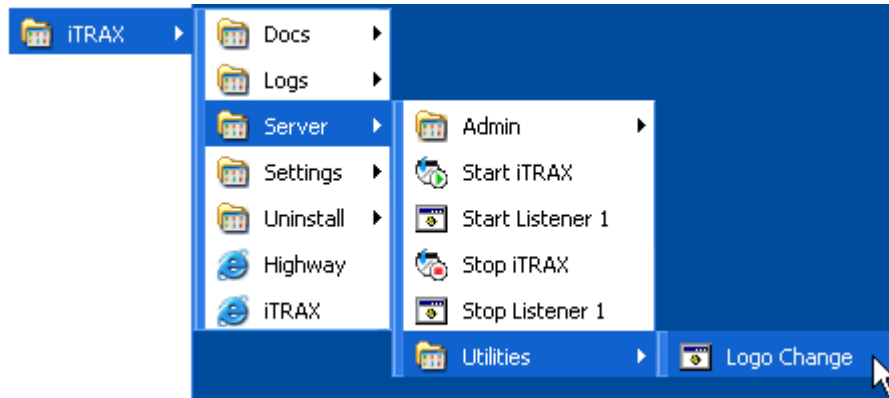
Property Page

A new property page is now available that details the application properties used by iTRAX. This page currently only displays the property values. Help on the properties is also available by selecting the property label.



Logo Utility

- A new utility is now available that allows one to easily change the logo used by iTRAX.

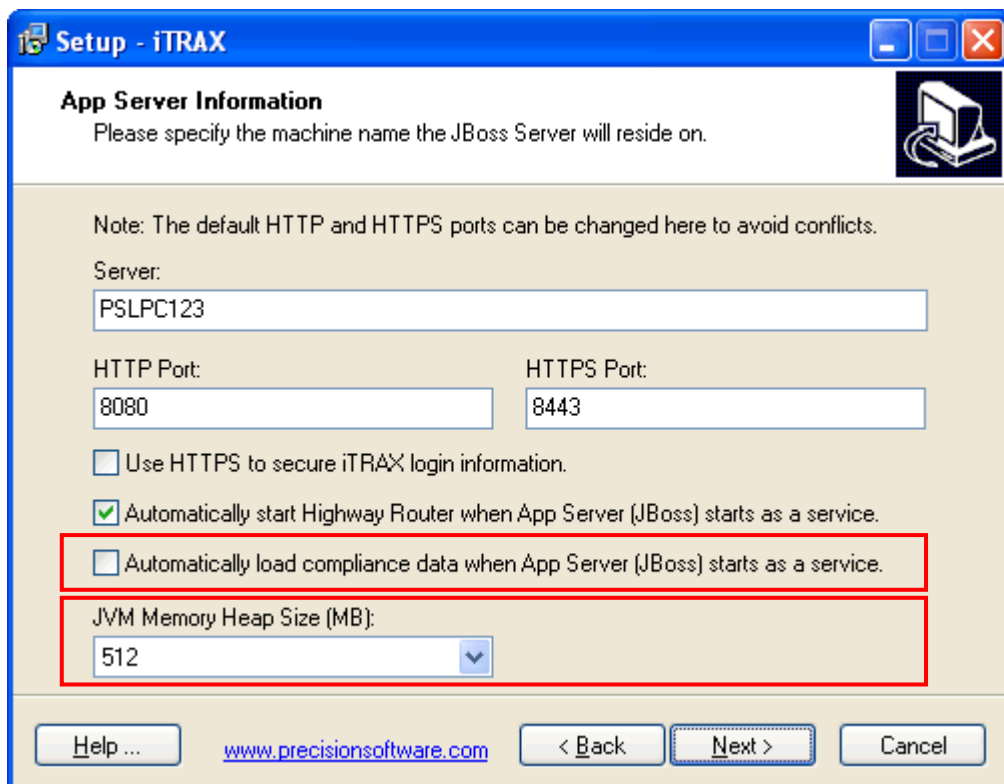


This utility asks a few questions, after which it automatically updates the “itrax.ear” file and “trax.properties” files. More information on using this utility can be found in: [“How to change the iTRAX logo”](#)

Installer Enhancements

Minor Improvements

- The “shutdown.bat” file no longer has a pause statement at the end. This caused problems with shutting down JBoss when run as a Windows service.
- Progress Directory Default is now picked up from “DLC” environment variable.
- The drive used when specifying the location of the Progress software is now the default drive used for location of “trax.ini” and database schema files.
- The JBoss JVM memory heap size can now be specified as part of the install. While 512MB is the recommended heap size, a lower or higher heap size can be specified depending on the intended use of iTRAX and Highway and resources available on the server.
- By default the “Automatically load compliance data when ...” check box is no longer selected. If using iTRAX compliance functionality you should select this checkbox during the install.



- When the “Automatically load compliance data when ...” checkbox is selected the installed will automatically assume you want an iTRAX listener to consume compliance messages and configure the trax.properties file

accordingly. If this checkbox is not selected then the iTRAX listener will not start automatically when JBoss starts.

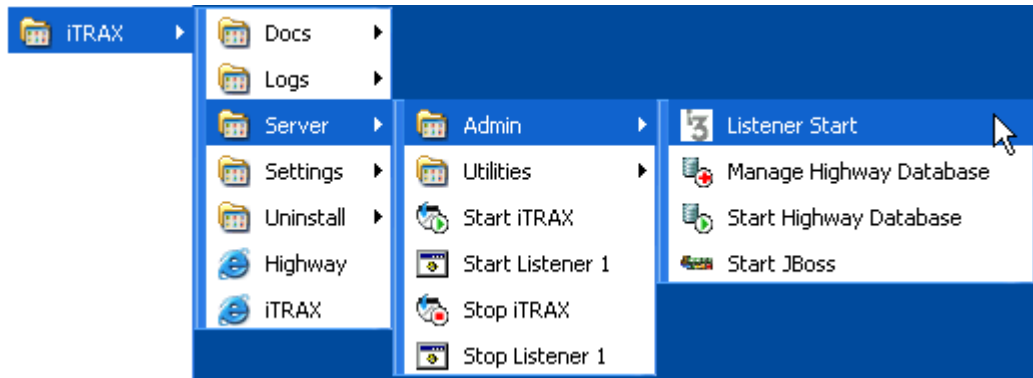
- The latest JDBC drivers for Oracle, MS SQL Server and the AS/400 are included. “classes12.zip” has been replaced with “ojdbc14.jar”. “msbase.jar”, “mssqlserver.jar” and “msutil.jar” have been replaced with “sqljdbc.jar”.
- Compliance and SPS XSD files are now installed in:
“[iTRAX Root]\data\xsd”.
- The “mail.jar” file has been updated. This is needed for Highway to better support e-mails with attachments.
- Installer now includes updated Web Packing Module. The packing.properties file is now modified by the installed with database, machine name and port information.

JBoss

- JBoss 4.0.3 SP1 [Default] is now installed. Previously the [All] component was installed. The default set of components provides a more lightweight JBoss without compromising iTRAX or Highway functionality.
- The wrapper program used to manage the JBoss process when run as a Windows service has changed.
The configuration file “WrapperJBossService.conf” now details how to run JBoss as a service. “run.bat” is no longer used to start JBoss as a Windows service.
The wrapper provides more control over JVM restarts if a trigger condition fires and log files generated.
- The JMX Console password has changed. To access the JBoss JMX Console “admin/admin” can be used. This information can be maintained by examining the files in:
“[iTRAX Root]\jboss\server\default\conf\props”.

TRAXi3 Start

- TRAXi3Start is now installed. This contains shortcuts to the cTRAX Listener programs.



If five cTRAX listeners have been specified at install time then running the “Listener Start” menu item will launch TRAXi3 Start, listing five shortcuts the starting these processes in the foreground.

