



■ *ISS45 Trickle Feed Technical Reference*  
■ *Version 8.1.8.0*



## ISS45 Trickle Feed Technical Reference

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## Trickle Feed Overview

The ISS45 trickle feed of the transaction file (transact.qdx) allows user defined output files to be created from the current transaction file at timed intervals throughout the day and as part of the EOD process. These files can be either in XML, Ascii or RemaXml format and contain only the transactions and their specific fields as defined to the trickle feed mechanism.

All Trickle Feed parameters and the extracts that determine the contents of the output files will be held in an XML file named c:\pcmaster\tf\_param.xml. As defined in this file, transactions will be converted to the selected format and copied to a file located on the local computer (during EOD and/or at a designated time interval).

Trickle feed generated files will include only transactions that belong to complete tickets, or transactions between tickets. A partial ticket will not be converted and an error will be written to c:\pcmaster\log\tf.log.

For control, a Trickle Feed log (c:\pcmaster\log\tf.log) will be updated continuously (with successful writes or errors).

There are different output formats depending on setup or type of file. The name of the output files are as follows:

- EOD file:
  - TREODYYYYMMDD.DAT for Ascii files
  - TREODYYYYMMDD.XML for XML files
  - YYYYMMDD is the working day date
    - Example: TREOD20120123.XML
  
- Online files:
  - TRPERYYYYMMDDSNNN.DAT for Ascii files
  - TRPERYYYYMMDDSNNN.XML for XML files
  - YYYYMMDD is the working day date, S is serial number (A – Z) NNN – sequence number of file (1 – 999).
    - Example: TRPER20120123A003.DAT, TRPER20120123A001.XML

To assist with verifying the completeness of a full day's transaction file, a file may be created during the End-Of-Day process and include all the transactions for the finished working day. This will aid head-office systems to validate that the whole file has arrived and that a recovery process is not required.

The retailer is responsible for performing the housekeeping of the Trickle Feed files.

## Tf\_param.xml File

When the services start, the Tf\_param.xml file (located in the \PCMASTER folder) is searched. The XML file is the key for the Trickle Feed process. If there is no XML file, or if the **TFinSystem** parameter is set to 0, the Trickle Feed process will not run and the information will be written in the c:\pcmaster\log\tf.log. In the XML the parameters and file contents to be output will be defined as elements.

The parameters can be changed in the XML file or through notepad or another text editor.

The instructions for the conversion and file layout are defined as elements, each with its own attributes. The transactions converted will be based on the data-dictionary stored in the XML file, which define the opcodes to extract and the layout for each opcode.

### System Parameters

The system parameter defines how the system works.

```
<TF_Param>
  <SystemParamters>
    <TFInSystem>1</TFInSystem>
    <OutPutFilePath>c:\Pcmaster\Tmp\<</OutPutFilePath>
    <LoopTime>5</LoopTime>
    <Delimiter>,</Delimiter>
    <ConvertType>Xml</ConvertType>
    <CreateEODFile>1</CreateEODFile>
    <CreateOnlineFiles>0</CreateOnlineFiles>
    <NoOfBytesForOutputFiles>0</NoOfBytesForOutputFiles>
  </SystemParamters>
```

Element	Explanation
TFInSystem	Tells if Trickle Feed is enabled within the system or not. Valid values in this element are 1 (enabled) or 0 (disabled).
OutPutFilePath	Sets the path in which the files created will be saved. Can only be a local folder.
LoopTime	Indicates the number of minutes between file generation.
Delimiter	Enables the user to choose the delimiter for the Ascii file. Can have values between 1 and 256 (Ascii characters). The delimiter can be more than one character. If the delimiter is found in a string field, it

Element	Explanation
	will be replaced by a space. Example: the delimiter used is a comma (',' ) and there is a field that includes a customer name, where a comma divides the first and last names. In this case the comma inside that string will be replaced by a space "Smith, John" will be changed to "Smith John".
ConvertType	Indicates the format of the output file; Ascii or XML. Valid values in this element are Xml, Ascii or RemaXml.
CreateEODFile	If its value is 0 then the EOD file will not be created. Valid values in this element are 0 (disabled) or 1 (enabled).
CreateOnlineFiles	Create online files. Valid values in this element are 0 or 1. If the element value is 1 than online files will be created.
NoOfBytesForOutputFiles	Max size of output file. 0 means no limit to the size of the output file.

### Transaction Header

The transaction header defines which op codes will be translated.

```

<TransactionsHeaders>
  <TransactionHeader>
    <Number>1</Number>
    <TrsOpcode>1</TrsOpcode>
    <TrsSubOpcode1>0</TrsSubOpcode1>
    <TrsSubOpcode2>0</TrsSubOpcode2>
    <SubOpcode1Flg>0</SubOpcode1Flg>
    <SubOpcode2Flg>0</SubOpcode2Flg>
    <XmlElementName>PluSale</XmlElementName>
    <Description>Sale Plu Transaction</Description>
    <IgnoreTransaction>0</IgnoreTransaction>
  </TransactionHeader>

```

Element	Explanation
Number	Sequence number that represents the transaction.
TrsOpcode	Transaction opcode to convert. It is 10 base and not Hex value.
TrsSubOpcode1	Transaction sub opcode to convert. It is 10 base and not Hex value.
TrsSubOpcode2	Transaction sub sub opcode to convert. It is 10 base and not Hex value.
SubOpcode1Flg	Allows the option to include the TrsSubOpcode1 as part of the conversion.
SubOpcode2Flg	Allows the option to include the TrsSubOpcode2 as part of the conversion.
XmlElementName	Element name of this transaction.
Description	Description of this transaction.
IgnoreTransaction	Ignores the conversion of this transaction. Valid values in this element are 0 (disabled) or 1 (enabled).

### Transaction Fields

The transaction fields define which fields within the opcode will be translated.

```

<TransactionsFields>
  <TransactionField>
    <Number>1</Number>
    <FieldOrder>5</FieldOrder>
    <ConvertType>3</ConvertType>
    <TrsFieldOffset>0</TrsFieldOffset>
    <TrsFieldLength>1</TrsFieldLength>
    <BitsFieldOffset>0</BitsFieldOffset>
    <XmlAttributeName>Opcode</XmlAttributeName>
    <Description>Transaction opcode</Description>
    <IgnoreField>0</IgnoreField>
  </TransactionField>

```

Element	Explanation
Number	Sequence number that represents the transaction.
FieldOrder	The order of the field in the Ascii \ XML output.
ConvertType	The field type (long, short..). See the convert types table below.
TrsFieldOffset	The offset of the field in the transaction.
TrsFieldLength	The length of the field in the transaction. If it contains a bit is is the number of bits within the field.
BitsFieldOffset	The offset of the bit within the byte.
XmlAttributeName	The attribute name that will represent the field in the XML output.
Description	Field description.
IgnoreField	Ignore the conversion of this field. Valid values in this element are 0 (disabled) or 1 (enabled).

## Convert Type Table

Value	Convert Type	Remarks
1	Bits to Ascii.	Need to give offset in the byte (values 0 – 7) and the bit number (values 1 – 8).
2	Char to Ascii	
3	Uchar to Ascii	
4	Short to Ascii	
5	Ushort to Ascii	
6	Long to Ascii	
7	Ulong to Ascii	
8	Char[6] to Ascii	
9	Int64 to Ascii	
10	String to Ascii	Need to give field length.
11	Pak date to YYYY-MM-DD	
12	Pak time to HH:MM:SS	
13	Bcd to string	Need to give field length.
14	Add the unique number of date	Used to add an unique working date number. There is no need to define an offset because the data is not taken from the transaction. This field is defined as a tail record.
15	Add store – number untill four digits with leading zeroes.	
16	Add working date	Given either through command line or system

## Tail Field

Since the transaction tail fields are valid for all transactions, they only need to be configured once. The configuration is like any other transaction field.

```
<TailFields>
  <TailField>
    <FieldOrder>1</FieldOrder>
    <ConvertType>5</ConvertType>
    <TrsFieldOffset>48</TrsFieldOffset>
    <TrsFieldLength>2</TrsFieldLength>
    <BitsFieldOffset>0</BitsFieldOffset>
    <XmlAttributeName>TicketNumber</XmlAttributeName>
    <Description>Ticket Number</Description>
    <IgnoreField>0</IgnoreField>
  </TailField>
```

## Modes for TF Server

The following TF Server modes are either set in a batch file (for example, "TFServer /EOD") or can be enabled when TFServer runs from a command line.

/zero	Resets all pointers within the CMOS file. This is enabled by default in the \PCMASTER\ e-of-day.bat file.
/EOD	Runs on transaction file and creates file for entire day. This is enabled by default in the \PCMASTER\ e-of-day.bat file but must be used in conjunction with the <CreateEODFile>1</CreateEODFile> setting in the Tf_param.xml file.
/service	Every x minutes (defined by Loop Time) information is extracted from the temp file and put in the output file. This command is launched from the SRVSTART.bat and e-of-day.bat files.
/reprocess	Able to run anywhere, but requires a command line The goal of this mode is to reprocess a full TLOG on any PC for support and debug purposes. See the parameters listed below.

## Reprocess Mode

The goal of this mode is to reprocess the full TLOG on any PC for support and debug purposes. The command – line is:

```
Tfserver /REPROCESS OUTPUTFILEPATH=c:\pcmaster\tmp\Transact.xml  
INPUTFILEPATH=c:\pcmaster\bak\transact.qdx TV=1 UNIQUE=11  
WORKINGDATE=01/01/2012 STORENUMBER=1234
```

OUTPUTFILEPATH	Path and name of the output file.
INPUTFILEPATH	Path and name of the TLOG file that will be converted.
TV	TV number of the working day of the TLOG. Used to calculate the trading date identifier. If the trading date identifier is not used, any value between 0 and 15 can be used.
UNIQUE	Trading date identifier of the working day of the TLOG. If Trading date identifier is not used any value greater than 15.
WORKINGDATE	Working day of the TLOG
STORENUMBER	Store number

## Trading Date Identifier

Since the transaction version number is restarted every 16 days (0 – 15), a non-resettable number is used to identify a day's transaction.

The trading date identifier is kept in the CMOS file (ISS45's file that saves critical information like pointers and flags) and is increased by one every End-of-Day.

The trading date identifier is fully synchronized with the TV number. A validation process is performed every End-of-Day to check that the TV number matches the trading date identifier.

The trading date identifier appears only in the converted output files (trperCCYYMMDDSNNN.dat and treodCCYYMMDD.dat.) according to the definitions in the XML file: the number is in the header of the file and as part of the TAIL in all the transactions.

## Living Naturally Loyalty

The Trickle Feed mechanism is able to create an export file during end-of-day processing containing transaction data for the Living Naturally Loyalty host system.

When enabled, a custom TF\_PARAM.XML file is created during end-of-day and a hook application (LNTlogRef.exe) reformats the XML file into the (Living Naturally Loyalty Genius) XML format.

**Note:**

```
The LNHUK.bat file is a hook batch file used to call the LNTlogRef application. The C:\PCMASTER\e-of-day.bat file must be modified to add a call to the LNHUK.bat file during end-of-day processing.
Add the following lines (in bold) to the e-of-day.bat file (below the preceding section listed):
.*****
.
echo Call to TFServer to run its EOD process | pcmlog32 /macro2
TFServer /EOD
cls
txtfile #e-of-day.bat #21 #TFSRVEOD #8
:TFSRVEOD
.*****
.
rem Living Naturally export
.*****
.
echo Call LNHUK.bat to run its EOD process | pcmlog32 /macro2
if exist LNHUK.BAT call LNHUK.BAT
cls
txtfile #e-of-day.bat #21 #LNHUK #8
:LNHUK
.*****
.
```

**Note:**

The LNTlogRef.exe.config file is used as a configuration file for the LNTlogRef.exe application.

The LNTlogRef.exe application creates the tran.xml file and places it in C:\PCMASTER \ LIVINGNATURALLY folder. For archiving and future reprocessing (if needed), the Trickle Feed extract file (**TREODyyyymmdd.xml**) is moved to the C:\ PCMASTER \ LIVINGNATURALLY \ History folder and the tran.xml is copied to C:\ PCMASTER \ LIVINGNATURALLY \ History folder (and renamed using the **tran.xmlyyyymmdd** convention).

The LG Transaction Data XML File format has the following header and detail layout:

**XML Root Node <GroupHeader/>**

<b>Field</b>	<b>Use</b>	<b>Notes</b>
DataFile	Required	Value = "TRAN"
AdapterVer	Required	Version of the adapter
ConfigVer	Required	Version of the XML Schema

### XML Child Node <TransactionHeader/>

Field	Use	Notes
TransactionDT	Required	[YYYY-MM-DDThh:mm:ss] Date and time of transaction.
StoreNum	Required	Identify store where the transaction took place.
TerminalNum	Required	Identify terminal where the transaction took place.
Currency	Required	3 character ISO Currency Code.
CardID	Required	Loyalty card number (14 digit Code 128 Barcode)
MemberNum	Optional	Additional Key used for systems without a CardID relationship between transactions and customers
ReceiptNum	Required	Unique number assigned by the POS system for this transaction.
PaymentType	Optional	Code indicating how the customer paid (cash/check/ credit card/on account/etc)
TotalRetailDols	Required	Total Dollars Before Total Tax Dollars
TotalTaxDols	Required	Tax Dollars Only.
TotalUnits	Required	Number of units purchased
TotalLines	Required	Number of transactional entries on receipt

### XML Child Node <TransactionDetail/>

Field	Use	Notes
ProductCode	Required	Unique ID for product. Must be value scanned by POS system. Must also be value that relates to the Product data.
UPC	Required	Universal product code
SKU	Optional	Stock Keeping Unit
ItemDescription	Optional	Product Description
ItemCategory	Optional	Product Category
Quantity	Required	Number of Units Purchased
Cost	Optional	Last cost (Wholesale)
Retail	Optional	Normal retail price per each
ExtRetail	Required	Quantity X Retail







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