



Web API Specifications for the TRACE Corporate and Agency Debt File Downloads

Version 4.10

June 29, 2020

Revision History

Version/Date	Changes Made
Version 1.0/November 17, 2011	<ul style="list-style-type: none"> Original version of specification
Version 2.0/December 2, 2011	<ul style="list-style-type: none"> File availability - Clarification on historical file availability stated as one rolling year Date examples in query string changed to reflect actual historical file availability
Version 3.0/January 23, 2012	<ul style="list-style-type: none"> DEBT_TYPE_CD changed to eight byte maximum length DSMTN_FL changed to one byte maximum length Participant Daily List - list_dt format changed to MMDDYYYY format Participant Daily List - effective_dt format changed to MMDDYYYY format Participant Daily List - cd_description values changed to: Participant Addition Participant Deletion Participant Change
	Corporate Bonds/ELN and Agency Debt Closing Report Files <ul style="list-style-type: none"> Include Church Bonds (CHRC) as sub product type
Version 4.0 (In production July 30, 2012)	<ul style="list-style-type: none"> Include a Daily List Timestamp in all Daily List events
Version 4.1/February 1, 2013	<ul style="list-style-type: none"> Changed TRAQS references to TRACE Modified Closing Report descriptions: Today's High Price changed to High Price Today's High Yield changed to High Yield Today's Low Price changed to Low Price Today's Low Yield changed to Low Yield Today's Closing Price changed to Closing Price Today's Closing Yield changed to Closing Yield
Version 4.2/April 25, 2014 (In production June 30, 2014)	<ul style="list-style-type: none"> Added 144A and New 144A Indicator in Corporate and Agency Debt Daily List format Added CLOSCORPELN 144A Closing Report summary query for Corporate Bonds/ELN's classified as 144A securities Added 144A Market Aggregate files
Version 4.3/January 23, 2015 (In production March 2, 2015)	<ul style="list-style-type: none"> DEBT_TYPE_CD field in Corporate and Agency Issue Master File to consist of a combination of the seniority and instrument types and text description.

Version 4.4/April 22, 2015 (In production June 1, 2015)	<ul style="list-style-type: none"> • Added US Agreements File
Version 4.5/June 8, 2015 (In production November 2, 2015)	<ul style="list-style-type: none"> • Added Market Sentiment File queries and data content layout formats • Restated first Market Breadth queries to be named “Market Breadth Market Close” and stated these will be available at 5:30 p.m. ET • Added 6:45 End of Day Market Breadth file queries
Version 4.6/November 16, 2016	<ul style="list-style-type: none"> • Added Seniority Type Codes 1LN, 2LN
Version 4.7/December 15, 2016	<ul style="list-style-type: none"> • Add Convertible Flag to Security Master and Daily List • Remove Fitch Rating heading and data from Most Active Media Print file • Include statement regarding changes to values and descriptions in the Appendices
Version 4.8/May 18, 2017	<ul style="list-style-type: none"> • Added Seniority Type Code SBN
Version 4.9/October 22, 2018	<ul style="list-style-type: none"> • Current day Indices no longer available after October 31, 2018.
<u>Version 4.10/June 29, 2020</u>	<ul style="list-style-type: none"> • <u>Updated Debt Type Code description</u> • <u>Redefined Appendix 1 Debt Type Code and affiliated description and added new values to the table</u>

Introduction

The FINRA TRACE Reporting and Quotation Service is a system developed which consolidates the various fixed income and equity reporting facilities FINRA currently maintains (e.g., TRACE, ADF, OTC Equity Reporting, etc...) into a single platform. The secure web interface offers member firms enhanced reporting and data retrieval functionality.

The Download site for Corporate and Agency Debt supports clients via a Web Application Programming Interface (API) to download security master files, daily lists, and market aggregate information.

This document pertains specifically to Corporate and Agency Debt reference data. This document outlines the parameters and values for each available Corporate and Agency Debt file. The data in each of these files is current as of the time of download.

Access to the file domain

Corporate and Agency Debt file downloads use the NASDAQ Web Security Framework (NWSF) for authentication (proper client authorization for access to particular files must be in place). In order to access the site and download files, a user needs to present a valid NWSF account/password and client certificate with access to the application.

The data contained in these files are maintained by FINRA Operations. For questions concerning the data, or to subscribe to receive these files, please contact FINRA Operations at (866) 776-0800 or FINRAOperations@finra.org. For technical questions or issues accessing the files, please contact FINRA Product Management at (866) 899-2107 or FINRAProductManagement@finra.org.

Data is compiled from multiple sources, including but not limited to Refinitiv, S&P, Moody's, and Black Knight Technologies.

Protocol

FINRA's API download site provides access to files using standard HTTP Secure (https) protocol. It is a combination of the Hypertext Transfer protocol and the TLS protocol to provide encrypted communications and secure identification. The URL <https://download.finratraqs.org> is the domain where the files reside. In order to access file reference data users should refer to the query strings detailed in this specification. Examples of actual download query strings are available in later sections of this specification.

File availability – all times are approximate

***Indicates user must include a date in the query; historical information can be accessed on a rolling date basis up to one year from the date the files were published via the API.**

File	When Available
Corporate and Agency Master	Real time starting at 7:00 a.m. ET and throughout the day until 8:00 p.m. ET
Daily List	Real time starting at 8:00 a.m. ET and throughout the day until 8:00 p.m. ET
Daily List Delta	Real time starting at 8:00 a.m. ET and throughout the day until 8:00 p.m. ET
Participant	Real time starting at 8:00 a.m. ET and throughout the day until 8:00 p.m. ET
US Agreements	Real time starting at 8:00 a.m. ET and throughout the day until 8:00 p.m. ET
Daily List Participant	Real time starting at 8:00 a.m. ET and throughout the day until 8:00 pm. ET
Market Breadth*	Market Close Report at 5:30 p.m. End of day report at 6:45 p.m. ET
Most Actives*	End of day report at 5:30 p.m. ET

Indices*	End of day report at 5:30 p.m. ET
Index Components*	End of day report at 5:30 p.m. ET
Leading and Lagging*	End of day report at 5:30 p.m. ET
Top 10 Most Active Indices*	End of day report at 5:30 p.m. ET
Closing Report*	End of day report at 5:30 p.m. ET
Market Sentiment*	End of day report at 7:00 p.m. ET;

NOTE: Users may attempt to access the files on non-business days; however, due to server maintenance which occurs on weekends and other non-business days it is possible the user will not have immediate success in access the data during these days.

URL Parameters

Parameter	Parameter Options
action	<p>DOWNLOAD - provide the complete file. DELTA – provide the changes since the last time the user downloaded the file.</p> <p>Delta files are supported for Security Daily List and Participant Daily List but not for the Security Master, Participant List, US Agreements, or the end of day Market Aggregate or Market Sentiment files.</p>
Facility	TRACE
File	<p>CAMASTER – Security Master File for Corporate and Agency Debt DAILYLISTCA – Security Daily List for Corporate and Agency Debt PARTICIPANT – Participant List (current participants with active authorizations for the specified facility) PDAILYLIST – Participant Daily List (additions/deletions/changes to the Participant List of the specified facility) CAUSA – Corporate and Agency US Agreements CORPBONDSBR – Corporate Bond Market Breadth Market Close AGCYBONDSBR - Agency Bond Market Breadth Market Close CORP144ABONDSBR – Corporate Bond 144A Market Breadth Market Close CORPBONDSBREOD – Corporate Bond Market Breadth End of Day AGCYBONDSBREOD - Agency Bond Market Breadth End of Day CORP144ABONDSBREOD – Corporate Bond 144A Market Breadth End of Day CORPBONDSMS – Corporate Bond Market Sentiment AGCYBONDSMS - Agency Bond Market Sentiment</p>

Parameter	Parameter Options
	<p>CORP144ABONDSMS – Corporate Bond 144A Market Sentiment MAINVGR – Most Active Investment Grade (Media) MAINVGR144A – Most Active Investment Grade 144A (Media) MAHIYLD – Most Active High Yield (Media) MAHIYLD144A – Most Active High Yield 144A (Media) MACVT – Most Active Convertible (Media) MACVT144A – Most Active Convertible 144A (Media) MAINVGRPRT – Most Active Investment Grade (Print Media) MAINVGRPRT144A – Most Active Investment Grade 144A (Print Media) MAHIYLDPRT – Most Active High Yield (Print Media) MAHIYLDPRT144A – Most Active High Yield 144A (Print Media) MACVTPRT – Most Active Convertible (Print Media) MACVTPRT144A – Most Active Convertible 144A (Print Media) STATSINVGR – Indices Investment Grade STATSHIYLD – Indices High Yield COMPINVGR – Index Components Investment Grade COMPHIYLD – Index Components High Yield MOVINVGR – Leading and Lagging Movers Investment Grade MOVHIYLD - Leading and Lagging Movers High Yield MOSTINVGR – 10 Most Active Index Bonds Investment Grade MOSTHIYLD – 10 Most Active Index Bonds High Yield CLOSCORPELN – Closing Report for Corporate Bonds and ELN’s CLOSAGCY – Closing Report for Agency Bonds 144A and Non-144A CLOSCORPELN144A – Closing Report for Corporate Bonds and ELN’s that are classified as 144A securities</p>
day	A date, for example: 6/1/2011. Date is used for Daily List requests and <u>all of the end of day files</u> such as the Market Aggregates and Closing Reports. If no date is specified on a <u>daily list</u> request then the current day is assumed.

File	Query Parameters
Corporate and Agency Master	action= DOWNLOAD &file=CAMASTER&facility=TRACE
CORP Security Daily List	action=DOWNLOAD&file=DAILYLISTCA&facility=TRACE
CORP Security Daily List delta (See note 1)	action=DELTA&file=DAILYLISTCA&facility=TRACE
CORP Security Daily List for a specific day	action=DOWNLOAD&file=DAILYLISTCA&facility=TRACE&day=5/16/2012

File	Query Parameters
TRACE Participant List	action=DOWNLOAD&file=PARTICIPANT&facility=TRACE
TRACE Participant Daily List	action=DOWNLOAD&file=PDAILYLIST&facility=TRACE
TRACE Participant Daily List delta (see note 1)	action=DELTA&file=PDAILYLIST&facility=TRACE
TRACE Corporate and Agency US Agreements	action=DOWNLOAD&file=CAUSA&facility=TRACE

Market Breadth Corporate Market Close	action=DOWNLOAD&file=CORPBONDSBR&facility=TRACE&day=02/10/2012
Market Breadth Corporate End of Day	action=DOWNLOAD&file=CORPBONDSBREOD&facility=TRACE&day=02/10/2012
Market Breadth Agency Market Close	action=DOWNLOAD&file=AGCYBONDSBR&facility=TRACE&day=02/10/2012
Market Breadth Agency End of Day	action=DOWNLOAD&file=AGCYBONDSBREOD&facility=TRACE&day=02/10/2012
Market Breadth 144A Market Close	action=DOWNLOAD&file=CORP144ABONDSBR&facility=TRACE&day=02/10/2012
Market Breadth 144A End of Day	action=DOWNLOAD&file=CORP144ABONDSBREOD&facility=TRACE&day=02/10/2012
Market Sentiment Corporate	action=DOWNLOAD&file=CORPBONDSMS&facility=TRACE&day=05/11/2015
Market Sentiment Agency	action=DOWNLOAD&file=AGCYBONDSMS&facility=TRACE&day=05/11/2015
Market Sentiment 144A	action=DOWNLOAD&file=CORP144ABONDSMS&facility=TRACE&day=05/11/2015
Most Active Media Investment Grade	action=DOWNLOAD&file=MAINVGR&facility=TRACE&day=02/10/2012
Most Active Media Investment Grade 144A	action=DOWNLOAD&file=MAINVGR144A&facility=TRACE&day=02/10/2012
Most Active Media High Yield	action=DOWNLOAD&file=MAHIYLD&facility=TRACE&day=02/10/2012
Most Active Media High Yield 144A	action=DOWNLOAD&file=MAHIYLD144A&facility=TRACE&day=02/10/2012
Most Active Media Convertibles	action=DOWNLOAD&file=MACVT&facility=TRACE&day=02/10/2012
Most Active Media Convertibles 144A	action=DOWNLOAD&file=MACVT144A&facility=TRACE&day=02/10/2012
Most Active Print Media Investment Grade	action=DOWNLOAD&file=MAINVGRPRT&facility=TRACE&day=02/10/2012
Most Active Print Media Investment Grade 144A	action=DOWNLOAD&file=MAINVGRPRT144A&facility=TRACE&day=02/10/2012
Most Active Print Media High Yield	action=DOWNLOAD&file=MAHIYLDPRT&facility=TRACE&day=02/10/2012
Most Active Print Media High Yield 144A	action=DOWNLOAD&file=MAHIYLDPRT144A&facility=TRACE&day=02/10/2012
Most Active Print Media Convertibles	action=DOWNLOAD&file=MACVTPRT&facility=TRACE&day=02/10/2012
Most Active Print Media Convertibles 144A	action=DOWNLOAD&file=MACVTPRT144A&facility=TRACE&day=02/10/2012

Indices Investment Grade	action=DOWNLOAD&file=STATSINVGR&facility=TRACE&day=02/10/2012
Indices High Yield	action=DOWNLOAD&file=STATSHIYLD&facility=TRACE&day=02/10/2012
Index Components Investment Grade	action=DOWNLOAD&file=COMPINVGR&facility=TRACE&day=02/10/2012
Index Components High Yield	action=DOWNLOAD&file=COMPHIYLD&facility=TRACE&day=02/10/2012

Leading and Lagging Movers - Investment Grade	action=DOWNLOAD&file=MOVINVGR&facility=TRACE&day=02/10/2012
Leading and Lagging Movers - High Yield	action=DOWNLOAD&file=MOVHIYLD&facility=TRACE&day=02/10/2012
10 Most Active Index Bonds Investment Grade	action=DOWNLOAD&file=MOSTINVGR&facility=TRACE&day=02/10/2012
10 Most Active Index Bonds High Yield	action=DOWNLOAD&file=MOSTHIYLD&facility=TRACE&day=02/10/2012
Closing Report Corporate Bonds and ELN's	action=DOWNLOAD&file=CLOSCORPELN&facility=TRACE&day=02/10/2012
Closing Report Agencies	action=DOWNLOAD&file=CLOSAGCY&facility=TRACE&day=02/10/2012
Closing Report Corporate Bonds and ELN's classified as 144A securities	action=DOWNLOAD&file=CLOSCORPELN144A&facility=TRACE&day=02/10/2012

NOTE: All requests are categorized and recorded. When a DELTA request is made, the time of the previous request is used to determine the items that appear in the DELTA results. The time used for the previous request is the time of request minus five minutes. This ensures that no updates are missed but it can mean items from a previous request may appear in the next DELTA request. Systems should be coded with this in mind.

File Definitions - All files are pipe delimited
Corporate and Agency Debt Security Master Files

Field Name (Header)	Description	Comments	Maximum Length
SYM_CD	FINRA assigned Symbol		14
CUSIP_ID	CUSIP	This field will be blank for firms that do not have a CUSIP license in place.	9
BSYM_ID	Bloomberg Symbol		12
SUB_PRDCT_TYPE	Sub-Product Type Code	Valid values are: CORP AGCY ELN CHRC	5
DEBT_TYPE_CD	Debt Type Code	The Debt Type Code and affiliated description will be a combination of the <u>Seniority/Bond Type (formerly Seniority Type) and Instrument/Security Seniority Type Codes and Instrument Type Codes</u> as listed in Appendix 1. Note: This field can include hyphenation between characters.	8
ISSUER_NM	Issuer Name		80
SCRTY_DS	Security Description		80
CPN_RT	Coupon Rate	Decimal format	27 (19 after decimal)
CPN_TYPE_CD	Coupon Type Code	<i>Please see Appendix 2 for a list of Coupon Type Code / Descriptions</i>	10
TRD_RPT_EFCTV_DT	Trade Report Effective Date	YYYYMMDD format.	
MTRTY_DT	Maturity Date	YYYYMMDD format.	
GRADE	Grade	H – High Yield; I – Investment Grade	1
RESERVED2	Filler	Blank field - reserved for future use.	
IND_144A	144A Indicator	Y = Indicates a 144A security N = Not a 144A security	1

Field Name (Header)	Description	Comments	Maximum Length
DISSEM	Trade Report Disseminator Indicator	Y = Indicates trade reports will be disseminated N= Indicates trade reports will not be disseminated	1
CNVRB_FL	Convertible Flag	Y/N	1

Corporate and Agency Debt Daily List (for Securities)

Field Name (Header)	Description	Comments	Maximum Length
DAILY_LIST_DT	Daily List Date	YYYYMMDD format.	
DAILY_LIST_TIME	Daily List Time	HH:MM:SS	
DAILY_LIST_EVENT_CD	Daily List Event Type	Valid values are: SA <i>Security Add</i> SD <i>Security Delete</i> SC <i>Security Change</i>	2
DAILY_LIST_RSN_CD	Daily List Reason	Reason for the addition, deletion or change. This field may be blank. <i>Please see Appendix 3 for a list of Daily List Reason Codes / Descriptions</i>	5
CMMNT_TX	Event Comment	Free form text field entered by FINRA Operations. May be blank.	30
EFCTV_DT	Effective Date	Reflects effective date for the event affected in the record.	
PROD_TYPE	Product Type	Constant "CA".	
SYM_CD	FINRA Symbol		14
CUSIP		This field will be blank for firms that do not have a CUSIP license in place.	9
BSYM_ID	Bloomberg Symbol		12
SCRTY_DS	Security Description		250
ISSUER_NM	Issuer Name		255
CPN_RT	Coupon Rate	Decimal format	27 (19 after decimal)
MTRTY_DT	Maturity Date	YYYYMMDD format.	

Field Name (Header)	Description	Comments	Maximum Length
IND_144A	144A Indicator	Y = Indicates a 144A security N = Not a 144A security	1
DSMTN_FL	Dissemination Flag		1
SUBPROD_TYPE	Sub-Product Type	Valid values are: CORP AGCY ELN CHRC Note: Changes to Sub-Product values will be administered by a Delete then Add Daily List event.	5
TRD_RPT_EFCTV_DT	Trade Report Effective Date	YYYYMMDD format. Will be blank on Delete Event Types.	
CNVRB_FL	Convertible Flag	Y/N	1
NEW_SYM_CD	New Symbol	Applicable to Change Event Types only. Will be blank on Add and Delete Events.	14
NEW_CUSIP	New CUSIP	Applicable to Change Event Types only. Will be blank on Add and Delete Events.	9
NEW_BSYM_ID	New Bloomberg Symbol	Applicable to Change Event Types only. Will be blank on Add and Delete Events.	12
NEW_SCRTY_DS	New Security Description	Applicable to Change Event Types only. Will be blank on Add and Delete Events.	250
NEW_ISSUER_NM	New Issuer	Applicable to Change Event Types only. Will be blank on Add and Delete Events.	255
NEW_CPN_RT	New Coupon Rate	Applicable to Change Event Types only. Will be blank on Add and Delete Events.	27 (19 after decimal)
NEW_MTRTY_DT	New Maturity Date	Applicable to Change Event Types only. Will	

Field Name (Header)	Description	Comments	Maximum Length
		be blank on Add and Delete Events.	
NEW_IND_144A	New 144A Indicator	Y = Indicates a 144A security N = Not a 144A security	1
NEW_DSMTN_FL	New Dissemination Flag	Applicable to Change Event Types only. Will be blank on Add and Delete Events.	1
NEW_SUBPROD_TYPE	New Sub Product Type	Applicable to Change Event Types only. Will be blank on Add and Delete Events.	5
NEW_TRD_RPT_EFCTV_DT	New Trade Report Effective Date	Applicable to Change Event Types only. Will be blank on Add and Delete Events.	
NEW_CNVRB_FL	New Convertible Flag	Y/N	1

TRACE Participant List

Field Name (Header)	Description	Comments	Maximum Length
mpid	Market Participant Identifier	FINRA identifier assigned to the participant	6
dba_nm	Firm Name		64

TRACE Participant Daily List

Field Name (Header)	Description	Comments	Maximum Length
list_dt	Daily List Date	MMDDYYYY format	
effective_dt	Effective Date	MMDDYYYY format	
cd_description	Event Type	Valid values are: Participant Addition Participant Deletion Participant Change	
old_mpid	Market Participant Identifier		6
old_dba	Firm Name		64
new_mpid	New Market Participant Identifier		6
new_dba	New Firm Name		64

Field Name (Header)	Description	Comments	Maximum Length
rf_cd	Reporting Facility	Value will always be TRACE	

Market Breadth Files

Field Name (Header)	Description	Comments	Maximum Length
Value	Type of Bond	- All; Inv Grade; High Yield; Convertible	
Securities Traded	Total number of securities that traded for the day		10
Advances	The total number of issues where the closing price for that day is higher than the prior closing price		10
Declines	The total number of issues where the closing price for that day is lower than the prior closing price		10
Unchanged	The total number of issues where the closing price for that day remains the same as the prior closing price		10
52 week high	The total number of issues where the closing price for that day is higher than a prior closing price within the past 52 business weeks (on a rolling basis)		10
52 week low	The total number of issues where the closing price for that day is lower than a prior closing price within the past 52 business weeks (on a rolling basis)		10
Dollar Volume	Represents the current day's total traded par value (in millions)		10

Market Sentiment Files

Field Name (Header)	Description	Comments	Maximum Length
Value	Type of Bond and Statistic Category	Each Type of Bond (All Types, Inv Grade, High Yield, Convertible; Church; ELN, Fannie Mae, Freddie Mac, etc... will be displayed with statistical category of "Total Transactions", "Total Issues Traded", "Total Volume". Example: Inv Grade Total Transactions; Inv Grade Total Issues Traded; Inv Grade Total Volume: Inv Grade	
All Issues			
Customer Buy			
Customer Sell			
Affiliate Buy			
Affiliate Sell			
Inter-Dealer			

Most Active Files – Media Data Version – Top 10

Field Name (Header)	Description	Comments	Maximum Length
Symbol	Current TRACE bond symbol		14
CUSIP_ID	CUSIP of the bond		9
High Price	Highest traded price for the current day in the issue		12
Low Price	Lowest traded price for the current day in the issue		12
Last Price	The current day's closing price in the issue		12
Change	The difference in the current day's closing price versus the prior closing price. N/A indicates no change in price		20
Yield	The weighted average yield of the bond. "C" indicates yield is unavailable because of the issue's call criteria		14

Most Active Files – Media Print Version – Top 50

Field Name (Header)	Description	Comments	Maximum Length
Issuer Name	Issuer of the bond		80
Symbol	Current TRACE bond symbol		14
Coupon Rate	Current coupon rate of the bond		27
Maturity Date	Maturity date (month and year) of the bond		YYYYMMDD
Moody's/S&P	A bond's rating		
High Price	Highest traded price for the current day in the issue		12
Low Price	Lowest traded price for the current day in the issue		12
Last Price	The current day's closing price in the issue		12
Change	The difference in the current day's closing price versus the prior closing price. N/A indicates no change in price		20
Yield	The weighted average yield of the bond. "C" indicates yield is unavailable because of the issue's call criteria		14

Overall Index Values Indices Files:

Note: As of November 1, 2018, the daily Indices are no longer produced. Historical data will continue to be provided. Data from 2/4/2011 through 10/31/2018 is available for query.

Field Name (Header)	Description	Comments	Maximum Length
Stat	Index Statistic	TR = Total Return PR = Price YL = Yield OA = OAS AS = AAS VO = Volume	50

Field Name (Header)	Description	Comments	Maximum Length
Value	Current Statistical Figure		10
Change	Delta from previous day		10

Index Components Files

Note: As of November 1, 2018, the daily Indices are no longer produced. Historical data will continue to be provided. Data from 2/4/2011 through 10/31/2018 is available for query.

Field Name (Header)	Description	Comments	Maximum Length
Symbol	FINRA assigned Symbol		14
CUSIP	CUSIP	This field will be blank for firms that do not have a CUSIP license in place	9
VWAP Price of Bond	Volume Weighted Average Price of the bond		10
Delta Price of Bond	Represents the change in bond price from the previous day		10
Bond Yield			14
Delta Yield			14
Bond % Weight in Index			10

Leading and Lagging Movers Report Files

Note: As of November 1, 2018, the daily Indices are no longer produced. Historical data will continue to be provided. Data from 2/4/2011 through 10/31/2018 is available for query.

Field Name (Header)	Description	Comments	Maximum Length
Symbol	FINRA assigned Symbol		14
CUSIP	CUSIP	This field will be blank for firms that do not have a CUSIP license in place	9
VWAP price of Bond	Volume Weighted Average Price of the bond		10
Delta Price of Bond	Represents the change in bond price from the previous day		10

Top 10 Most Active Index Bonds Report Files

Note: As of November 1, 2018, the daily Indices are no longer produced. Historical data will continue to be provided. Data from 2/4/2011 through 10/31/2018 is available for query.

Field Name (Header)	Description	Comments	Maximum Length
Index Type			30
Symbol	FINRA assigned Symbol		14
CUSIP	CUSIP	This field will be blank for firms that do not have a CUSIP license in place	9
Rank			2

Corporate Bonds/ELN, Agency Debt, and Corporate Bonds/ELN's classified as 144A securities Closing Report Files

Field Name (Header)	Description	Comments	Maximum Length
SYM_CD	FINRA assigned Symbol		14
CUSIP_ID	CUSIP	This field will be blank for firms that do not have a CUSIP license in place	9
WI	When Issued	Yes or No	
BSYM_ID	Bloomberg Symbol		12
SUB_PRODUCT		CORP ELN AGCY CHRC	5
HIGH_PRICE	High Price		10
HIGH_YLD	High Yield	Includes a field for the sign. The sign field can be blank or “_”	14
LOW_PRICE	Low Price		10
LOW_YLD	Low Yield	Includes a field for the sign; the sign field can be blank or “_”	14
CLOSING_PRICE	Close Price		10
CLOSING_YLD	Close Yield	Includes a field for the sign; the sign field can be blank or “_”	14
TRADE_DATE	Trade Date for the record's prices	Closing price date in mm/dd/yyyy format	

Corporate and Agency US Agreements File

Field Name (Header)	Description	Comments	Maximum Length
MPID	MPID of the Client	FINRA identifier assigned to the participant.	6
AGRMT_EFCTV_DT	Effective Date for the agreement with the client	Format is YYYYMMDDHHMMSS	14
AGRMT_XPRTN_DT	End date for agreement with the client	Format is YYMMDDHHMMSS	12
UNFRM_SRVC_AGRMT_MP_ID	MPID of client with who agreement is based	FINRA identifier assigned to the participant.	6
US_GIVEUP_DROP_FL	Give Up firm receives drop copies of transaction messages	Y or N.	

Example Requests

Example 1 - Get the current TRACE Participant List

This request retrieves the current list of TRACE authorized Participants:

<https://download.finratraqs.org/DownloadHandler.ashx?action=DOWNLOAD&file=PARTICIPANT&facility=TRACE>

Example 2 - Get the TRACE Participant Daily List for 5/16/2011

This request retrieves the list of changes to TRACE authorized Participants published on 5/16/2012 (*note 5/16/2011 is used as an example. Any specific date may be used*):

<https://download.finratraqs.org/DownloadHandler.ashx?action=DOWNLOAD&file=PDAILYLIST&facility=TRACE&day=5/16/2011>

Example 3 - Get today's TRACE Participant Daily List (no day provided)

This request retrieves the current day's cumulative list of changes to TRACE authorized Participants:

<https://download.finratraqs.org/DownloadHandler.ashx?action=DOWNLOAD&file=PDAILYLIST&facility=TRACE>

Example 4 - Get changes to the TRACE Participant Daily List since the last download (no day provided)

This request retrieves the latest list of changes to TRACE authorized Participants since the last user download of the Participant List:

<https://download.finratraqs.org/DownloadHandler.ashx?action=DELTA&file=PDAILYLIST&facility=TRACE>

Example 5 - Get the current Corporate Bond Security Master file

This request retrieves the current list of all Corporate and Agency securities eligible for trade reporting:

<https://download.finratraqs.org/DownloadHandler.ashx?action=DOWNLOAD&file=CAMASTER&facility=TRACE>

Example 6 - Get today's CA Daily List (no day provided)

This request retrieves the current day's cumulative list of changes to all the Corporate and Agency Security Master data.

<https://download.finratraqs.org/DownloadHandler.ashx?action=DOWNLOAD&file=DAILYLISTCA&facility=TRACE>

Example 7 - Get the Market Breadth file

This request retrieves the current list of advanced/declined and unchanged issues for Corporate Bonds.

<https://download.finratraqs.org/DownloadHandler.ashx?action=DOWNLOAD&file=CORPBONDSBR&facility=TRACE&day=02/10/2012>

Example 8 - Get the Most Actives file - Media Version file

This request retrieves the current list of most active investment grade securities sent to the media.

<https://download.finratraqs.org/DownloadHandler.ashx?action=DOWNLOAD&file=MAINVGR&facility=TRACE&day=02/10/2012>

Example 9 - Get the Most Actives file - Print Media Version file

This request retrieves the current list of most active investment grade securities sent to the print media.

<https://download.finratraqs.org/DownloadHandler.ashx?action=DOWNLOAD&file=MAINVGRPRT&facility=TRACE&day=02/10/2012>

Example 10 - Get the Agency Closing Report file

This request retrieves the closing report for agency debt.

<https://download.finratraqs.org/DownloadHandler.ashx?action=DOWNLOAD&file=CLOSAGCY&facility=TRACE&day=02/10/2012>

Data Sample Results

Corporate and Agency Debt Security Master File illustrating the header and footer.

```
SYM_CD|CUSIP_ID|BSYM_ID|SUB_PRDCT_TYPE|DEBT_TYPE_CD|ISSUER_NM|SCRTY_DS|CPN_RT|CPN_TYPE_CD|TRD_RPT
_EFCTV_DT|MTRTY_DT|GRADE|RESERVED2|IND_144A|DISSEM|CNVRB_FL
|761157AA4||AGCY|BND|Resolution Fding|RESFC 8.125
10/15/19|8.125000000000000000|FXPV|20110516|20191015|||N|Y|Y
|761157AB2||AGCY|BND|Resolution Fding|RESFC 8.625
01/15/30|8.625000000000000000|FXPV|20110516|20300115|||N|Y|N
|761157AC0||AGCY|BND|Resolution Fding|RESFC 8.875
04/15/30|8.875000000000000000|FXPV|20110516|20300415|||N|Y|N
10/15/20|9.375000000000000000|FXPV|20110516|20201015|||N|Y|Y
|078167AZ6||CORP|SRDEB|Verizon Pennsylv|VZ 8.350 12/15/30
PUT|8.350000000000000000|FXPV|20110516|20301215|||N|Y|Y
|048825AW3||CORP|DEB|Atlantic Richfld|BP 9.000
04/01/21|9.000000000000000000|FXPV|20110516|20210401|||N|Y|Y
|048825AY9||CORP|DEB|Atlantic Richfld|BP 9.000
05/01/31|9.000000000000000000|FXPV|20110516|20310501|||N|Y|Y
Footer - Count: 00042003, Facility: TRACE, File Created: 20111116111940
```

Corporate and Agency Debt Daily List File illustrating the header and footer.

```
DAILY_LIST_DT|DAILY_LIST_EVENT_CD|DAILY_LIST_RSN_CD|CMMNT_TX|EFCTV_DT|PROD_TYPE|SYM_CD|CUSIP|BSYM
_ID|SCRTY_DS|ISSUER_NM|CPN_RT|MTRTY_DT|DSMTN_FL|SUBPROD_TYPE|TRD_RPT_EFCTV_DT|CNVRB_FL|NEW_SYM_CD
|NEW_CUSIP|NEW_BSYM_ID|NEW_SCRTY_DS|NEW_ISSUER_NM|NEW_CPN_RT|NEW_MTRTY_DT|NEW_DSMTN_FL|NEW_SUBPRO
D_TYPE|NEW_TRD_RPT_EFCTV_DT|NEW_CNVRB_FL|20111102|SA|BLK|Added by
Amit|20111102|CA|LSAKA3666251|00086NA06||This security is added by Amit to test Sub-product
Change AGCY to ABS on 11-2-2011|Lake Sakakawea Green Energy
Corporation|0.115500|20221130|Y|AGCY|20111102|Y|||||20111102|SD|||20111102|CA|LSAKA3666251|0
0086NA06||This security is added by Amit to test Sub-product Change AGCY to ABS on 11-2-
2011|Lake Sakakawea Green Energy
Corporation|0.115500|20221130|Y|AGCY|20111102|Y|||||20111102|SA|||20111102|CA|QUIM3666254|00
100X106||This security is added by Amit to test ABS to AGCY sub-product change on 11-2-
2011|Quimper Wind Green Energy Corporation|0.900000|20331103|N|AGCY|20111101|N|||||
Footer - Count: 00000003, Facility: TRACE, File Created: 20111116111005
```

TRACE Participant Daily List File illustrating the header and footer.

```
list_dt|effective_dt|cd_description|old_mpid|old_dba|new_mpid|new_dba|rf_cd
09/09/2010|09/09/2010|Participant Addition||HRBC|hurleyf test HRBC mppweb|OTCE
09/09/2010|09/09/2010|Participant Addition|ABNE|ABNE TEST|||TRACE
09/09/2010|09/09/2010|Participant Addition|ABNF|ABNF TEST|||TRACE
09/09/2010|09/09/2010|Participant Addition|ABNB|ABN AMRO CLEARING CHICAGO LLC|||TRACE
09/09/2010|09/09/2010|Participant Addition|ABNC|ABNC TEST|||TRACE
...
[snip]
...
09/09/2010|09/09/2010|Participant Deletion|AALC|THRIVENT INVESTMENT MANAGEMENT CO2|||TRACE
Footer - Count: 00000014, Facility:TRACE, File Created: 20100910120732
```

TRACE Participant List File illustrating the header and footer.

```
mpid|dba_nm
AAAA|TEST
ABLE|NATIXIS BLEICHROEDER INC.
ABNA|ABN AMRO SECURITIES (USA) LLC
ABNB|ABN AMRO CLEARING CHICAGO LLC
ABNC|ABNC TEST
ABND|ABND TEST
ABNE|ABNE TEST
ABNG|ABNG TEST
ABPI|PAVEK INVESTMENTS INC.
...
[snip]
...
QUAL|QUAYLE & CO. SECURITIES
ROCK|ROCKWELL GLOBAL CAPITAL LLC
SCHO|SCHOFF & BAXTER, INC.
TMBR|TIMBER HILL LLC
UBSS|UBS SECURITIES LLC
WONG|A B WONG CAPITAL LLC
WTCO|WILLIAMS TRADING LLC
Footer - Count: 00000089, Facility: TRACE, File Created: 20100910121322
```

Appendices

Note, all codes/descriptions in the following appendices are subject to updates as necessary; updates may be made as frequently as on a monthly basis. FINRA reserves the right to update these codes and descriptions without notice. Users are advised to periodically check this specification for these updates to ensure having the most recent data. Documentation version revisions will not be made based on any potential monthly changes to these tables.

Appendix 1 - Debt Type Codes and Descriptions

The Debt Type Code and affiliated description will be a combination of the Seniority/Bond Type and Instrument/Security Type Codes listed below.

Example: Senior Unsecured (Seniority/Bond Type) Note (Instrument/Security Type) will be reflected as S-NT.

Note 1: The Debt Type Code field can include hyphenation between characters.

Note 2: Note, because the updated debt code descriptions may not be available for a number of securities some securities will continue to use legacy debt type codes.

Seniority/ <u>Bond</u> Type Code	Seniority/ <u>Bond</u> Type Description
1RM	First and Refunding Mortgage
JSC	Junior Secured or Junior Subordinated Secured
JSB	Junior Unsecured or Junior Subordinated Unsecured
SSC	Senior Secured
SBS	Senior Subordinated Secured
SBN	Senior Bail-In
BSC	Subordinated Secured
1M	First Mortgage
2M	Second Mortgage
3M	Third Mortgage
1LN	First Lien
2LN	Second Lien
MZ	Mezzanine
RM	General & Refunding Mortgage
SC	Secured
SB	Senior Subordinated Unsecured
UN	Unsecured
M	Mortgage
S	Senior Unsecured
B	Subordinated Unsecured

<u>OTH</u>	<u>Other</u>
------------	--------------

Instrument/Security Type Code	Instrument/Security Type Description
AA	Appropriation Antic Note
ABCP	Asset Backed Commercial Paper
ABS	Asset Backed Security
ABSA	Aircraft Asset Backed Security
LIBS	Life Insurance Backed Security or Insurance Revenue Backed S
ABSR	Railroad Asset Backed Security
ACS	Asset Covered Security (Covered Bond)
BA	Bond Anticipation Note
BAB	Build America Bond
BAS	Bankers Acceptance
BBR	Bankbrieven
BCD	Bono de Banco Central en Dolares pagaderos en Pesos
BCP	Bono de Banco Central en Pesos
BCU	Bono de Banco Central en Unidades de Fomento
BCX	Bono Banco Central En Dolares
BDAG	Agriculture Bond
BIBD	Biman Bond
JTBD	Jute Bond
BLT	Belgian Treasury
BL	Bill
BND	Bond
BNT	Bank Note
BOC	Italian BOC
BONO	Bono del Estado
BOP	Italian BOP
BOR	Italian BOR
BP28	BPAG28
BP91	BPAG91
BREM	BREMS
BSB	Bundesschatzbrief
BUBL	Unverzinsliche Schatzanweisung
BUND	Bundesanleihe
C1	Certificate of Indebtedness
C2	Certificate of Participation
C3	Certificate of Obligation

C9	Other Muni Certificate
CA	Combined Antic
CLUT	Callable Unit
CSEC	Capital Security
CAT	Insurance Linked Security
CD	Certificate of Deposit
CDEB	Spread Quoted Debenture
CDI	Certificate of Deposit - Institutional
CDO	Collateralized Debt Obligation
SCDO	Synthetic Collateralized Debt Obligation
CDR	Certificate of Deposit - Retail
CH	Cedulas Hipotecaria (Covered Bond)
CRCH	Church Bond
CLN	Credit Linked Note
CC	China Corporate Bond
CEB	China Enterprise Bond
CPPB	China Small & Medium Enterprises Private Placement Bond
CTR	Collateral Trust
COLT	Continuously Offered Long Term Security
CPD	Capital Debenture
CT	Cedulas Territorial (Covered Bond)
CTF	Certificate
CR	Custodial Receipt
COV	Covered Bond (Other)
VRDO	Corporate Variable Rate Demand Obligation
DA	Dutch Auction
DEB	Debenture
DPNT	Deposit Note
DPSH	Depository Preferred Share
DGB	Danish Govt Bond
DSNT	Discount Note
DRTH	Depository Receipt (Thailand)
DSL	Dutch State Loan
DT	Dutch Treasury
EC	Embedded Cap
EETC	Enhanced Equipment Trust Certificate
EQTR	Equipment Trust
EQUT	Equity Unit
ES	Embedded Swap
FA	Fund Anticipation Note

FAC	Facility Bond
FIS	Fixed Income Security
OF	Obligation Fonciere (Covered Bond)
FTA	Fondo de Titulizacion de Activos
FTH	Fondo de Titulizacion Hipotecaria
FN	Fundierte Namensschuldverschreibung (covered bond)
FUNG	Strip - Fungible - Interest and/or Principal
FS	Fundierte Schuldverschreibungen (Covered Bond)
FSJ	Fundierte Schuldverschreibung Jumbo (Covered Bond)
GA	Grant Anticipation Note
GAC	Guaranteed Annuity Contract
GDN	Global Depository Note
GNNT	General Term Note
GTS	Gilt Treasury Stock
HNP	Hypotheken-Namenspfandbrief (covered bond)
HPF	Hypothekenpfandbrief Jumbo (Covered Bond)
IGB	Irish Govt Bond
INBD	Income Bond
INNT	Income Note
IB	Infrastructure Bond
INHB	Inhaberschuldverschreibung
INT	Strip - Interest only
JL	Jumbo Landesschatzanweisung
JCB	Junior Covered bond (Denmark)
FJ	Flugzeugpfandbrief Jumbo (Covered Bond)
JLO	Jumbo Landesobligation
SJ	Schiffspfandbrief Jumbo (Covered Bond)
JULK	Julkisyhteisovakuudellinen (Covered Bond)
KO	Kassenobligation
KIIN	Kiinteistovakuudellinen (Covered Bond)
KOB	Kommunalbrief
LA	Loan Antic Note
LW	Landesschatzanweisung
LEBC	Letra del Banco Central
LFTA	Letra Financeira do Tesouro A
LH	Chile LH

LNST	Loan Stock
LOB	Lease Obligation Bond
LPN	Loan Participation Note
LSNT	Lease Note
LTHP	Lettres de Gage hypothecaires (Covered Bond)
LTMB	Lettres de Gage mobilières (Covered Bond)
LTPB	Lettres de Gage publiques (Covered Bond)
LDG	Lettre de Gages (Covered Bond)
MBS	Mortgage Backed Security
BPA	BPA
MXBP	Mexico BPA Semestral
BPAT	BPAT
N1	Construction Loan Note
N2	Collateralized Loan Note
N3	Renewal & Renewable Note
N4	Promissory Note
N9	Other Note
NAME	Namenschuldverschreibung
NTBC	Nota del Banco Central
NPF	Namenspfandbrief (Covered Bond)
NT	Note
OAT	Obligation Assimilable du Tresor
OBG	Obbligazioni Bancaria Garantita (Covered Bond)
ODE	Obligacion del Estado
OH	Obrigacao Hipotecaria (Covered Bond)
ONP	Oeffentlicher Namenspfandbrief (covered bond)
OPA	Offerta Pubblica di Acquisto (Italian FI Takeover Bid)
OPF	Oeffentlicher Pfandbrief Jumbo (Covered Bond)
ORD	Orderschuldverschreibung
OSSB	Obrigacoes sobre o Sector Publico (Covered Bond)
OT	Obrigacao do Tesouro
PI	Commercial Paper
PI	Participation Interest
PTC	Pass Through Certificate
PDEB	Percentage Quoted Debenture
PA	Pfandbrief Anleihe (Covered Bond)

PF	Preferred Stock
FF	Flugzeugpfandbrief (Covered Bond)
H	Hypothekenspfandbrief (Covered Bond)
LO	Landesobligation
OP	Oeffentlicher Pfandbrief (Covered Bond)
S	Schiffspfandbrief (Covered Bond)
PIBS	Permanent Interest Bearing Share
PINT	Strip - Principal and Interest
BMP	Belgian Mortgage Pandbrieven (Covered Bond)
PNT	Equity Participation Note
PP	Participacion Preferente
PRC	Pagare Reajustable del Banco Central
PRIN	Strip - Principal only
STRP	Strip - Principal Only Uplift (Inflation Linked)
PVD	Privatized Debt
TYBD	Tokyo Pro Bond
QSC	Qualified School Construction Bond
RA	Rev Antic Note
R	Realkreditobligation
RFBD	Refund Bond
RLN	Restructured Loan
REAL	Realkreditobligation (Covered bond (Denmark pre-2008))
RZE	Recovery Zone Economic Bond
SO	Sakerstallda Obligation (Covered Bond)
BW	Bundesschatzanweisung
SDO	Saerligt Daekkede Obligation (Covered Bond)
SDRO	Saerligt Daekkede Realkreditobligation (Covered Bond)
SFH	Obligations de Financement de l'Habitat (Covered Bond)
SLIM	Slimbo
SEC	Stock Exchange Certificate
SP	Structured Product
SBP	Strip Bond Package
I1	Islamic Sukuk (Salam)
I2	Islamic Sukuk (Bay' ad Dayn)
I13	Islamic Sukuk (Bay' al 'ina - Buy back)
I3	Islamic Sukuk (Bay' bi thaman ajil (BBA))
I4	Islamic Sukuk (Ijara)

I5	Islamic Sukuk (Istisna')
I6	Islamic Sukuk (Istithmar)
I7	Islamic Sukuk (Mudaraba)
I8	Islamic Sukuk (Murabaha)
I9	Islamic Sukuk (Musharaka)
SUK	Islamic Sukuk (Other)
I10	Islamic Sukuk (Wakala bil istithmar)
SUNT	Surplus Note
SVBD	Savings Bond
I11	Islamic Sukuk (Hybrid)
TA	Tax Antic Note
TCR	Tax Credit
TCU	Unit of a Trust
TGNT	Toggle Note
TKPC	Stock Purchase Contract
TR	Trust
TRA	Treuhand-Anleihe
TCT	Trust Certificate
SPV	Preferred Security (Trust, SPV)
UA	Unknown Antic Type
UT	Unit
I12	Letra de Tesoreria
VCP	Bond - Argentina Valor de Corto Plazo
WRLN	War Loan - United Kingdom
XA	Federal Aid Antic
ZA	Tax And Rev Antic Note
ZAI	Zaito Bond
<u>CBND</u>	<u>Corporate Debt Security</u>
<u>ENT</u>	<u>Equity Linked Note</u>
<u>VBND</u>	<u>Convertible Debt Security</u>
<u>ILS</u>	<u>Index Linked Security</u>
<u>OTH</u>	<u>Other</u>

Appendix 2 - Coupon Type Codes and Descriptions

Coupon Type Code	Coupon Type Description
FXAN	Fixed: Annuity
FXDI	Fixed: Discount
FXMF	Fixed: With Multiple Frequencies of Payment
FXPM	Fixed: Pay only at Maturity
FXPP	Fixed: Partly Paid
FXPV	Fixed: Plain Vanilla Fixed Coupon
FRBF	Floating: Bull/Reverse Floating Rate
FRFF	Floating: Fixed then Floating
FRFX	Floating: Floating then Fixed
FRFZ	Floating: Floating then Zero
FROT	Floating: Floating
FRPM	Floating: Pay at Maturity
FRPV	Floating: Fixed Margin over Index
FRRS	Floating: Floating then Resettable
FRVR	Floating: Floating then Variable
FRZF	Floating: Zero then Floating
FXRS	Fixed: Resettable Coupon
FXRV	Floating: Fixed then Reverse Float
VRFR	Floating: Variable then Float
VRDC	Variable: Deferred Coupon
ZCFX	Strip: Zero then Fixed
ZRFX	Variable: Zero then Fixed
ZRVR	Variable: Zero then Variable
FRSD	Floating: Step Down-Margin over Index
FRSU	Floating: Step Up-Margin over Index
VRGR	Variable: Step Up/Step Down
FXZC	Fixed: Zero Coupon
RGOT	Range: Range
RSFR	Floating: Resettable then Floating
STRP	Strip
TBPD	To Be Priced
<u>CNGT</u>	<u>Contingent</u>
<u>OTH</u>	<u>Other</u>

Appendix 3 - Daily List Update Reason Codes and Descriptions

Update Reason Code	Update Reason Description
<i>blank</i>	<i>No reason given</i>
MOT	Moved from OTCE
DNY	Delisted from NYSE
DAX	Delisted from AMEX
DAR	Delisted from ARCA
DNQ	Delisted from NASDAQ
DEX	Delisted from Exchange
ISV	Ineligible – Sovereign
ICD	Ineligible – CD
ICR	Ineligible – Currency
IMM	Ineligible – Money Market
ITR	Ineligible – Treasury
IAI	Ineligible – Accredited Investor
IRS	Ineligible – Other
BR	Bankruptcy
LIQ	Liquidation
CAL	Called
RED	Redeemed
EXC	Exchanged
CAN	Cancelled
A/M	Acquisition/Merger
MAT	Matured
LNQ	Listed on the NYSE
LAR	Listed on the NYSE ARCA
LAX	Listed on AMEX
LNQ	Listed on NASDAQ
LCB	Listed on CBOE
ROB	Reportable to the OTCBB
RON	Reportable on the OTC NBB
RMS	Reportable to the MSRB
12J	12(j) Registration Revoked by the SEC
RNC	Regulatory Non Compliance
OTH	Other *

*where OTH is used, please refer to the Event Comments field in the file (CMMNT_TX) for additional information.

Programmatic Access example (C#, .NET)

The following is a code excerpt to illustrate how to use the MPP Download site programmatically. If you are going to access the site with an application the first step is to download the NWSF client certificate using your web browser. Install it in the browser then export the certificate from the browser, saving the certificate to a location on the machine as an X905 certificate (.cer).

Example using the CA Security Master:

```
string Action = "DOWNLOAD";
string file = "CAMASTER";
string facility = "TRACE";

string site = "https:// download.finratraqs.org/DownloadHandler.ashx";
string query = string.Format("{0}?action={1}&file={2}&facility={3}", site,
                             Action, file, facility);

// Create request
HttpWebRequest webRequest = WebRequest.Create(query) as HttpWebRequest;

// Get cert and add to request
X509Certificate Cert =
    X509Certificate.CreateFromCertFile("C:\\MPP\\cert\\mpp_cert.cer");

webRequest.ClientCertificates.Add(Cert);
webRequest.Method = "GET";

// Add nwsf user/password to request

NetworkCredential nwCredentials = new NetworkCredential("user", "pwd");
webRequest.Credentials = nwCredentials;

// Make the request
HttpWebResponse Response = (HttpWebResponse)webRequest.GetResponse();

// Fiddle with the header in the response to get the file name

int pos = Response.Headers["Content-Disposition"].IndexOf("TRACE");

string Filename = Response.Headers["Content-Disposition"].Substring(pos);

// Create a file to save it in ..
StreamWriter sw = new StreamWriter("C:\\MPP\\files\\" + Filename, false);

StreamReader sr = new StreamReader(Response.GetResponseStream(),
                                   Encoding.Default);

int cnt;
char [] ReadBuf = new char[1024];

while ((cnt = sr.Read(ReadBuf, 0, 1024)) != 0)
{
    sw.Write(ReadBuf);
}
```