ts_print in a few easy steps There are four screens: Entities, Data Items, Date, and Report Format.

TS_PRINT 2.60	Date Report Format and Options
 Entities Entities List/Index List - File Portfolio - File Portfolio - All 	Creating List and Index entities
	Add Entity F1 Delete Entity F2 Clear List F3 Comments F4
SAVE FILE F5	LOAD FILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE F9



ts_print in a few easy steps

Information must be added for each of the four screens to build a *ts_print* request file:

Entities – The security, index, or portfolio for which you wish to extract data.

Data Items – The data you wish to extract for the Entity.

Date – The date range or period of time and the reporting frequency for which you wish to report the Data Items for the Entities.

Report Format – The formatting of your report.



15_PRINT 2.6	
Entities Data	ns Date Report Format and Options
Entidies	Creating List and Index entities
C List - File C Portfolio - I C Portfolio - A	Header PERMNO CUSIP Ticker Company Name User defined No header Filter
	Add Entity F1 Delete Entity F2 Clear List F3 Comments F4

Used to identify the stock/index/portfolio you are interested in.



TS_PRINT 2.60			×
Entities Data Items	Date	Report Format and Options	
Entities	Creatir	ng List and Index entities	
		One Security PERMNO Find	
List/Index		C All Securities Date Range Beginning Date:	
C List - File		Ending Date:	
O Portfolio - File			
O Portfolio - All		O User defined O No header	
		Filter	
		Clear	
	Add	d Entity F1 Delete Entity F2 Clear List F3 Comments F4	
SAVE FILE F5	LOAD	D FILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE F5	

First, you have to find the issue or index...Click on Find.



This screen appears after clicking on Find.

🛠 LOCATE PERMNO	×
Contains Microsoft Locate	
PERMNO COMPANY NAME TICKER CUSIP EX DATE	
	📩 🖲 Company Name
	O PERMNO
	O Ticker
	🔿 Cusip
	ENTITY HEADER
	Company Name 💌
Exchange Codes 1=NYSE 2=AMEX 3=NASDAQ	

Select the desired search criteria.

Note: "Microsoft" corresponds to Company Name - This is the default way of choosing the stock you are interested in.



This screen appears after clicking on Find.

ισοκιτιά

💔 LOCATE PERMN	0						×
Contains 🔹	Microsoft				Loca	te	
PERMNO COMPANY	NAME	TICKER	CUSIP	EX	DATE		
							Company Name
							O PERMNO
							O Ticker
							🔿 Cusip
							I▼ ENTITY HEADER
							Company Name 💽
	Exchange Codes 1	=NYSE 2=AM	IEX 3=NASD/	AQ			
Onco you h	ave enter	d tha	dooiro				nd
Once you have entered the desired company, and J							
search crite	eria, click c	on Loca	ate. I	n tł	nis ca	se we	e are
looking at l	Vierocoft	ith th	dofe		000	h orit	
iookina at i	MICLOSOLL N	/ILN LN®	e dera	ult	searc	ch criu	eria.



PERMNO is CRSP's unique security identifier, tracking the issue over time. PERMNO captures changes like; name changes, distributions, shares changes, delisting data, etc...

Contains PERMNO	Microsoft	TICKER	CUSIP	EX	Locate	×
10107	MICROSOFT CORP	MSFT	59491810	3	19860313-20010731	 Company Name PERMNO Ticker Cusip ENTITY HEADER Company Name
	Exchange Codes	1=NYSE 2=AM	EX 3=NASD/	AQ		



Contains Microsoft Locate PERMNO_COMPANY_NAME TICKED_CUSID_EX_DATE 10107 MICROSOFT_CORP MSFT_59491810 3 19860313-20010731 © Composity Name C PERMNO CUSID_EX 3 19860313-20010731 © Composity Name						
PERMNO_COMPANY NAME TICKED_CUSID FX_DATE 10107 MICROSOFT CORP MSFT 59491810 3 19860313-20010731 © Composity Name						
10107 MICROSOFT CORP MSFT 59491810 3 19860313-20010731 O Compony Name						
○ Ticker						
◯ Cusip						
Composition Name						
company Name						
Exchange Codes TENTSE ZEAWEX 3ENASDAQ						

Double click on the relevant text line that identifies the issue you are interested in.



💔 TS_PRI	INT 2.60			_ _ ×		
Entities	Data Items	Date	Report Format and Options			
Entitie	s	Creatir	g List and Index entities			
	st/Index		One Security PERMNO ID107 ID107	Find		
O Po	ortfolio - File ortfolio - All		Header PERMNO O CUSIP O Ticker O Company Nam O User defined MICROSOFT CORP	18		
	Filter Clear Add Entity F1 Delete Entity F2 Clear List F3					
SAVE	FILE F5	LOAI	OFILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW	V FILE F9		

After returning to the Entities screen, Select Company Name as your Entity header in the Header section, and Then click Add Entity.



💔 TS_PRI	NT 2.60			_ 🗆 🗙		
Entities	Data Items	Date	Report Format and Options			
Entitie	Entities Creating List and Index entities					
C Lis C Lis C Po Po	st/Index st - File ortfolio - File ortfolio - All		One Security PERMNO PERMNO Event Date Event Date: 10107 Find 20010125 Header PERMNO CUSIP Ticker Company Name User defined Filter			
	Clear					
	Add Entity F1 Delete Entity F2 Clear List F3 Comments F4					
LISTIPERMNO 10107/EVDATE 20010125/ENTFORMAT 4						
SAVE	FILE F5	LOA	OFILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE	F9		

Text with the specifications for your request file will appear in the box above.



These are the variables that you are interested in for your stock, index, or portfolio.

These can be daily or monthly

They must be associated the chosen entity type, or else no data can be processed.

e.g. For stocks –closing price For Indices –returns

Note that you can not extract closing price for an index. --The databases do not contain closing prices for indices.

You will need to look at the tables in the back of Chapter 2 of the Utilities Guide if you run into problems here! But you shouldn't! – This is just to tell you what to do if you do have a problem.



1	TS_PRI	INT 2.60	_ 🗆 🗙
	Entities	Data Items Date Report Format and Options	
		Select Data Item Find	
		O Default O SUBNO. O INDNO. O PORTTYPE	
		Change Default Format for Data Item Left Align Left Align Header Data Length 	
		Add Item F1 Delete Item F2 Clear List F3 Add Comment F4	
	SAVE	FILE F5 LOAD FILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE	F9

With Item ID, one variable is chosen at a time and added. With Group ID, data items are already grouped for the user, and are added as a group.

🐒 TS_PRII	NT 2.60	_ 🗆 🗙
Entities	Data Items Date Report Format and Options	1
	Item ID Caldt Find Item description Calendar Date	
	O Default O SUBNO. O PORTTYPE 0	
	Change Default Format for Data Item Field Width 9 Data Type d Header Caldt Data Length 9	
	Add Item F1 Felete Item F2 Clear List F3 Add Comment F4	
SAVE	FILE F5 LOAD FILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE	F9

Use the Find button to select a data item. In this case, we will use daily data, and add itemid pro, which will extract Prices. We will also extract the calendar date, itemid caldt, since we are looking at a relative date range.

🛠 TS_PRINT 2.60	
Entities Data Items Date Report Format and Options	
Item ID Group ID Find	Item description
🔿 Default : 💿 SUENO. 🔿 INDNO. 🤇	PORTTYPE 0
Change Default Format for Data Item Field Width 11.5 Da Header Prc Da	ata Type f C Left Align ata Length 11 C Right Align
Add Item F1 Delete Item F2	Clear List F3 Add Comment F4
ITEMID caldt SUBNO 0 ITEMID prc SUBNO 0	
SAVE FILE F5 LOAD FILE F6 PROCESS FILE	F7 ONLINE HELP F8 VIEW FILE F9

Then use the Add Item button, to add it to the request file. Once you have added an item, it will be visible in the box at the bottom of the screen. For this example, we have added the items Prices, and Calendar Date.



TS_PRI	NT 2.60	_ 🗆 X
Entities	Data Items Date Report Format and Options	
	Calendar Name daily	
	Fixed Date Range 19970101-19971231 Report on Calendar Basis Report on Fiscal Basis	
	dd Date Specification F1 Clear Date Specification F3 Add Comment F4	
SAVF. F	ILE F5 LOAD FILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE	F9

You can output daily data to report annually, quarterly, monthly, weekly, or daily by changing the Calendar Name option. In this example, we will change it from Daily to Quarterly, and change Fixed Date Range to Relative Date Range.

Relative date is used to get data x number of day prior to an event and y number of days after on stocks for an event date associated with the security. Therefore, you can look at output with different dates for each selected Entity. The screen below shows Microsoft with an event date of 20010125 and IBM with an event date of 20010301.

--Event dates are helpful when looking at specific events in history that have affected stock prices or to compare behavior of stocks before and after an event such as a split

Entities	Creating List and Index entities Creating List and Index entities Cone Security Call Security Event Date Event Date Date: Date Date: Dat	Note that the initial date is set on the <u>entities screen</u> when using the relative date option.
C List-File C Portfolio - File C Portfolio - All	Header C PERMNO C CUSIP C Ticker C company Name C User defined INTERNATIONAL BUSIN C No header Filter Clear	You you will need to change
LISTIPERMNO 10107[E LISTIPERMNO 12490]E SAVE FILE F5	Add Entity F1 Delete Entity F2 Clear List F3 Comments F4 VDATE 20010301JENTFORMAT 4 VDATE 20010301JENTFORMAT 4 LOAD FILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE F9	to <u>Event Date Range</u> (default) to <u>Event Date</u> when using a relative date format



For example, 10 days before and after *relative dates* for Microsoft and Amazon

10107	- MICROSOFT	84788	B – AMAZON	
	Prc Caldt	Prc	Caldt	
-10	49.18750 20001215	-10	27.81250 20001116	
-9	47.81250 20001218	-9	27.43750 20001117	
-8	44.81250 20001219	-8	25.81250 20001120	
-7	41.50000 20001220	-7	24.25000 20001121	
-6	43.43750 20001221	-6	25.18750 20001122	
-5	46.43750 20001222	-5	28.93750 20001124	
-4	46.87500 20001226	-4	28.00000 20001127	
-3	46.43750 20001227	-3	25.03125 20001128	
-2	44.56250 20001228	-2	26.93750 20001129	
-1	43 37500 20001229	-1	24.68750 20001130	Note: the relativ
0	43.37500 20010102	0	24.62500 20001201	
1	47.93750 20010103	1	26.56250 20001204	starting date
2	48.43750 20010104	2	25.37500 20001205	differs, since it is
3	49.12500 20010105	3	23.62500 20001206	cot independent
4	48.93750 20010108	4	21.37500 20001207	set independenti
5	51.81250 20010109	5	23.43750 20001208	for each security
6	52.87500 20010110	6	25.31250 20001211	· · · · · · · · · · · · · · · · · · ·
7	55.00000 20010111	7	25.87500 20001212	
8	53.50000 20010112	8	23.75000 20001213	
9	52.56250 20010116	9	22.68750 20001214	
10	52.93750 20010117	10	22.87500 20001215	



TS_PRIN	T 2.60		
Entities	Data Items Da	te Report Format and Options	
		Calendar Name quarterly - Calendar Format YYYYMMDD -	
	 Fixed Da Relative 	Ite Range -10,10 Date Range C Report on Calendar Basis C Report on Fiscal Basis	
	Add Date	Specification F1 Clear Date Specification F3 Add Comment F4	
	1		
SAVE F	ILE F5 L	_OAD FILE F6 PROCESS FILE F7 OF LINE HELP F8 VIEW FI	LE F9

-#,# is the format for the open box above to set a Relative Date Range. The -# represents the number of periods before, # the number after. For this example, we will change it to -5,4.

🐮 TS_PRINT 2.60				
Entities Data Items Date Report Format and Options				
X - AXIS ASSIGNMENT ITEM Y - AXIS ASSIGNMENT DATE Y - AXIS ASSIGNMENT LENTITY Z - AXIS ASSIGNMENT Header V - AXIS ASSIGNMENT Lentity Y - AXIS ASSIGNMENT V - AXIS ASSIGNMENT Lentity Y - AXIS ASSIGNMENT V - AXIS ASSIGNMENT Lentity V - AXIS ASSIGNMENT V - AXIS ASSIGNA V - AXIS ASSIGNMENT				
Output File Name Field Delimiter Row Delimiter Delisting Returns Partial Period Data NOFILL COMPACT Ip\microsoft_samp.out Image: Character Delimiter Buffer Size Image: Delisting Returns Image: Character Delimiter Image: Character Delimiter Image: Delisting Returns Image: Character Delimiter Image: Ch				
Add Options F1 Clear List F3 Add Comment F4				
SAVE FILE F5 LOAD FILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE F9				

Set the order of X-Y-Z Axes above, Type in Output File Name. Spaces are not supported in the name, and you should include the full path here. *ts_print* will not create directories.



TS_PRINT 2.60			
Entities Data Items Date Report Format and Options			
X - AXIS ASSIGNMENT Y - AXIS ASSIGNMENT Z - AXIS ASSIGNMENT ITEM Y O Yes No No N			
Output File Name Field Delimiter Row Delimiter Delisting Returns Partial Period Data NOFILL COMPACT p\microsoft_samp.out Image: Character Delimiter Buffer Size Image: Delisting Returns Partial Period Data NOFILL COMPACT Report Name Character Delimiter Buffer Size Image: Default Missing Image: Character Delimiter No Image: Character Delimiter Image: Character Delimiter </td			
Add Options F1 Clear List F3 Add Comment F4			
SAVE FILE F5 LOAD FILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE F9			

Choose whether data items exclude output that falls outside the range of available data for the Entity. Yes = Exclude missing or non-valid data. No = Output for all dates specified.



TS_PRINT 2.60				
Entities Data Items Date	Report Format and Options			
X - AXIS ASSIGNMENT Header Yes No	Y - AXIS ASSIGNMENT Header DATE Yes No	Z - AXIS ASSIGNM Header Z Ves No	1 O 2 O 3	
Output File Name Field Deli p\microsoft_samp.out Report Name Characte	miter Row Delimiter Delis	efault Missing ustom Missing	NOFILL COMPACT Yes No No No	
Add Cptions F1 Clear List F3 Add Comment F4				
SAVE FILE F5 LOAD	FILE F6 PROCESS FILE	E F7 ONLINE HELP F8	VIEW FILE F9	

These options allow you to delimit columns and rows in the output file. This is useful when creating tables in other programs.



¥ TS_PRINT 2.60			_ 🗆	
Entities Data Items Date	Report Format and Options			
X - AXIS ASSIGNMENT Header Yes No	Y - AXIS ASSIGNMENT DATE • Header • Yes • No	Z - AXIS ASSIGN Header (© Yes () No	IMENT Z Axis Data Flag 1 O 2 O 3	
Output File Name Field Del p\microsoft_samp.out	imiter Row Delimiter Delix r Delimiter Buffer Size C C	sting Returns — Partial Period Data No Default Missing Custom Missing	NOFILL COMPACT Yes No No No No	
Add Options F1 Clear List F3 Add Comment F4 X ITEM,YESJY DATE,YESJZ ENTITY,YES,1 OUTNAME c:\temp\microsoft_samp.out NOFILL				
SAVE FILE F5 I OAD	FILE F6 PROCESS FIL	E F7 ONLINE HELP F8	VIEW FILE F9	

Once you have selected your Report Format criteria, you need to Add Options to the request file. You are now ready to Process or run your request file.



Summary of Request File

You Have Built a Request file with the following specifications.

- Entities You have selected Microsoft, PERMNO 10107, as your company with an event date of 20010125, and Company name as the Entity header.
- Data Items You have selected the Item IDs prc and caldt, which will extract prices, and calendar date respectively.
- Date You have selected a Relative Date of five (5) quarters before the event date and four (4) quarters after, or -5, 4.

Report Format - X-axis=Item, Y-axis=Date, Z=axis=Entity.
NOFILL is set to Yes, and the report is going to be
saved as c:\temp\microsoft_samp.out.



Process File

🐩 TS_PRINT 2.60			_ = ×	
Entities Data Items Date	Report Format and Options			
X- AXIS ASSIGNMENT Header Yes No	Y - AXIS ASSIGNMENT Header DATE Yes No	Z - AXIS ASSIGNT ENTITY Header Yes No	MENT Z Axis Data Flag 1 O 2 O 3	
Output File Name Field Delimiter Row Delimiter Delisting Returns Partial Period Data NOFILL COMPACT p\microsoft_samp.out Image: Character Delimiter Buffer Size Image: Default Missing Image: Character Delimiter Image: Character Delimiter Buffer Size Image: Default Missing Image: Character Delimiter Image: Character Delimiter				
Add Options F1 Clear List F3 Add Comment F4 X ITEM,YES Y DATE,YES Z ENTITY,YES,1 OUTNAME c:\temp\microsoft_samp.out NOFILL NOFILL				
SAVE FILE F5 LOAD	FILE F6 PROCESS FILE	F7 ONLINE HELP F8	VIEW FILE F	

Now click Process File to run the request file you Just built, and then View File to see the output.



Results.....

∜ TS_PRINT 2.60	MICROSOFT CORP
Entities Data Items Date Report Format and Options Entities Creating List and Index entities One Security PERMNO 10107	Caldt Prc -5 19991231 116.75000 -4 20000331 106.25000
C List/Index C List-File C Portfolio - File C Portfolio - All Event Date Event Date: 2001012c Event Dat	-3 20000630 80.00000 -2 20000929 60.31250 -1 20001229 43.37500 0 20010330 54.68750 1 20010629 73.00000 2 20010928 51.17000 3 20011231 66.25000 4 20020329 0.00000
Add Entity F1 Delete Entity F2 Clear List F3 Comments F4 LIST/PERMNO 10107/EVDATE 20010125/ENTFORMAT 4 SAVE FILE F5 LOAD FILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE F9	

Note that the last quarter of data in the output is missing since the current version of the file stops at the end of 2001.



Results.....

Image: Select Data Item Data Item Data Item Caldt Prc Findle Price, End of Period Oroup ID Price, End of Period Oroup ID Price, End of Period Ocentry PD Price, End of Period Ocentry PD Price, End of Period Ocentry PD Operative Subbio Operative Subio 		MICROSOFT CORP
Entities Data Items Date Report Format and Options -5 19991231 116.75000 -4 20000331 106.25000 -3 20000630 80.00000 -2 20000929 60.31250 -1 20010229 43.37500 Change Default Format for Data Item Field Width Field Width 1.5 Data Type Field Width 1.5 Data Type Field Width F2 Clear List F3 Add Comment F4 TEMID caldt[SUBNO 0 Clear List F3 Add Item F2 Clear List F3 Add Comment F4	₩ TS_PRINT 2.60	- Caldt Pro
Select Data llem Image: Default Format for Data llem Image: Default Format for Data ltem Default Format for Data ltem Field Width 11.5 Default Format for Data ltem Default format for Data ltem Field Width 11.5 Default Format for Data ltem Default format for Data ltem Field Width 11.5 Default Format for Data ltem Default format for Data ltem Field Width 11.5 Default Format for Data ltem Default format for Data ltem Field Width 11.5 Default Format for Data ltem Default format for Data ltem Field Width 11.5 Default Format for Data ltem Field Width Time Delate ltem F2 Clear List F3 Add ltem F1 Delete ltem F2 Clear List F3 Add Comment F4 UD020329 0.000000	Entities Data Items Date Report Format and Options	
SAVE FILE F5 LOAD FILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE F9	Select Data Item Item 4°:,puon oroup ID prc Find Price, End of Period Operault Osubno Change Default Format for Data Item Field Width 11.5 Header Prc Dr's Length 11 Add Item F1 Delete Itr.,ii F2 Clear List F3 Add Comment F4 TEMID caldt[SUBNO 0 TEMID prc[SUBNO 0 TEMID prc[SUBNO 0 TEMID prc[SUBNO 0	-5 19991231 116.75000 -4 20000331 106.25000 -3 20000630 80.00000 -2 20000929 60.31250 -1 2001229 43.37500 0 20010330 54.68750 1 20010629 73.00000 2 20010928 51.17000 3 20011231 66.25000 4 20020329 0.00000

Data Items, Calendar Date and Price.



Results.....

★ TS_PRINT 2.60	MICROSOFT CORP
Entities Data Items Date Report Format and Options	
Calendar Name quarterly Calendar Format YYYMMDD Fixed Date Range -5,4	Caldt Prc -5 19991231 116.75000 -4 20000331 106.25000 -3 20000630 80.00000 -2 20000929 60.31250 -1 2001229 43.37500 0 2010330 0.00000 1 20010629 0.00000 2 20010928 0.00000 3 20011231 0.00000 4 0 0.00000
SAVE FILE F5 LOAD FILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE F9	

Relative Date Range Quarterly Data Requested



Results....

MIC	ROSOFT CORP
1 TS_PRINT 2.60	Caldt Prc
Entities Data Items Date Report Format and Options X - AXIS AS 3IGNMENT Y - MIS ASSIGNMENT Y - MIS ASSIGNMENT Z - AXIS ASSIGNMENT Header Yes Yes Yes No Yes No Yes No Partial Period Data No Yes No Partial Period Data No Pres No Pres No No No </td <td>19991231 116.75000 20000331 106.25000 20000630 80.00000 20000929 60.31250 20001229 43.37500 20010330 54.68750 20010629 73.00000 20010928 51.17000 20011231 66.25000 20020329 0.00000</td>	19991231 116.75000 20000331 106.25000 20000630 80.00000 20000929 60.31250 20001229 43.37500 20010330 54.68750 20010629 73.00000 20010928 51.17000 20011231 66.25000 20020329 0.00000
X ITEM,YESJY DATE,YESJZ ENTITY,YES,1 OUTNAME c:\temp\microsoft_samp.out NOFILL SAVE FILE F5 LOAD FILE F6 PROCESS FILE F7 ONLINE HELP F8 VIEW FILE F9	

Report format, X=Item, Y=Date and Z=Entity.



You should be all set to get started using ts_print now!

