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# CICS Tools
## Hands-On Workshop

## CICS Performance Analyzer V2.1
## Results Lab

# Assigned Userid: CICSTxx

## CICS Performance Analyzer V2.1 – Workshop

## *Session Objectives*

Using CICS PA and IA you identified candidate applications to be made threadsafe. Then using CICS CM, you modified requisite resource definitions. Now lets see what the performance impact of changing the programs associated with the TXD* transactions to threadsafe.

This short workshop will use CICS Performance Analyzer (PA) to show the impact to CICS performance when applications are made threadsafe. It is very similar to exercise #5 from the earlier CICS PA workshop.

It is expected that the user of this document as a nominal amount of experience with TSO/ISPF.

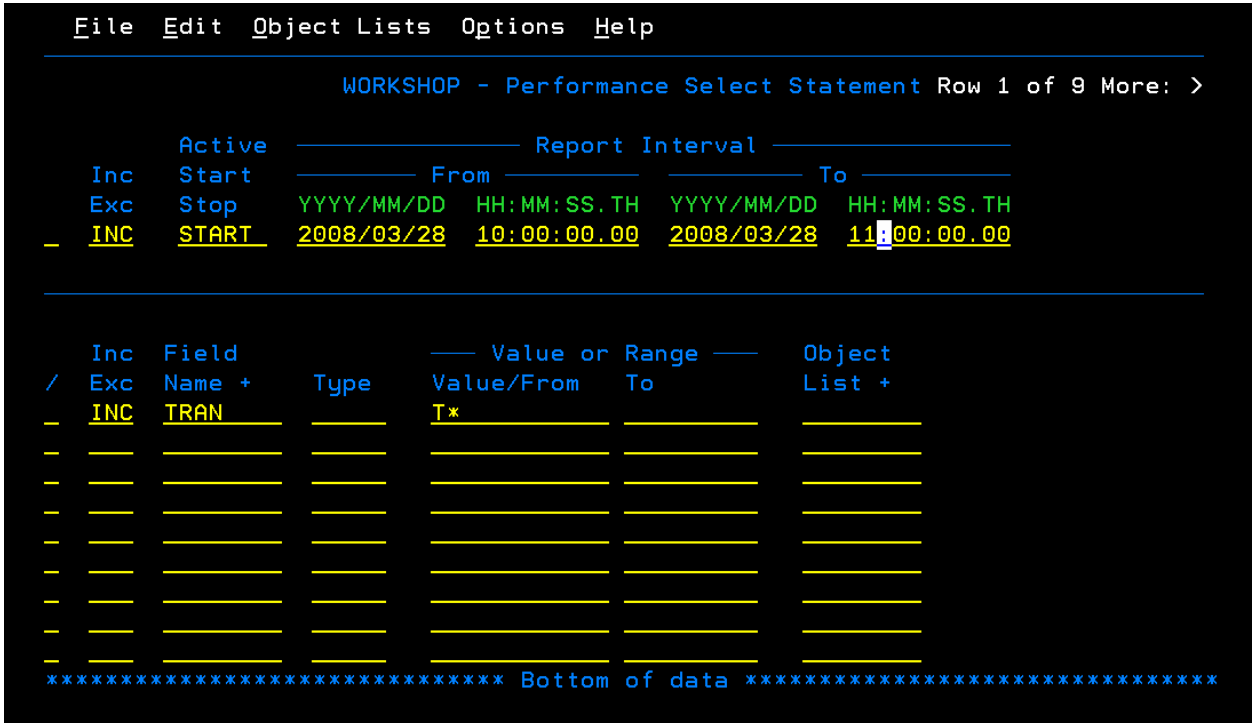
For detailed information regarding CICS Performance Analyzer, please reference the CICS Performance Analyzer User's Guide. This document can be found on the WEB at: http://www.elink.ibmlink.ibm.com/publications/servlet/pbi.wss?CTY=US&FNC=SRX&PBL=SC34-6799

Specifically, review **Chapter 7. Guided Tour: Report Sets reporting.** The exercises in this course are modeled from what is covered in the guided tour.

***Exercise – TCB List Report with threadsafe tasks***

During this exercise we will reuse the setup that we did in exercise #5 to build the TCB3LST list report.

- ☐ Select option 2 from the CICS PA Primary Option Menu
- ☐ Select your WORKSHOP Report Set.
- ☐ Type an **S** in the line action field next to the List option under Performance Reports and press ENTER to select LIST reports.
- ☐ Type an S in the line action field next to the List report created during exercise #5 of the original CICS PA workshop.
- ☐ Press ENTER to select the report
- ☐ Type an S in the line action field next under Selection Criteria and press ENTER to show the active selection criteria
- ☐ Type an S in the line action field next to the criteria and press ENTER to expand the view.
- ☐ Change values in the Report Interval section of the panel to have a **From** time of **10:00:00.00**, and **To** time of **11:00:00.00** as shown below.




☐ Press PF3 4 times to return to the Report Set panel.

☐ Type RUN in the line action field to the left of the LIST report option and press ENTER to bring up the Run Report Set panel.

☐ Activate the 'Edit JCL before submit' option by placing the cursor in the **Edit JCL before submit** action field and entering a **/**, and pressing ENTER.

- You are now presented with the JCL and command language for the job that you are about to submit.

☐ Type SUBMIT (or SUB) on the command line, and press ENTER to submit the job.

☐ Place the cursor on the top line of the screen and press PF2 to split the screen.

☐ Enter **13.14** on the commands line and press ENTER. This will take you to the SDSF primary option menu.

☐ One the Command line, type **PREFIX CICSTxx***, where CICSTXX is the id assigned to you for this class. and press ENTER.
- This will limit the scope of the displayed jobs to the ones starting with your TSO id.

☐ Type **H** on the command input line and press ENTER to go to the Held output queue

☐ Type **?** next to your jobname and press ENTER.

☐ Place the cursor in the NP column in the row next to the ddname LIST0001, type S, and press ENTER.

☐ Use PF11 to scroll to the right to display the fields beyond 80 bytes. Use PF10 to scroll back to the left.

☐ Use PF8 to scroll down the report, and PF7 to scroll back up.

☐ Compare the values in DSCHMDLY(Dispatch Delay) and KY8 DISPatch COUNT in this run of the TCB3LST report to the values from the report you created in exercise #5 from the original CICS PA workshop. Also note the changes in CPU usage and response times.

☐ You should be able to see the significant benefit to making this application threadsafe.

☐ To see an even more dramatic comparison of non-threadsafe performance to threadsafe performance, go to the optional Transaction Profiling exercise from the original CICS PA workshop.

The next two pages have copies of the TCB Usage and Delay reports for both the Threadsafe tasks and Non-Threadsafe tasks. You can compare these to the reports you created.

## Non Thread Safe Tasks

V2R1M0 CICS Performance Analyzer
Performance List

LIST0001 Printed at 12:17:33 5/21/2008 Data from 07:09:38 3/28/2008 APPLID CICSACB6 Page 1
CICS TCB Usage and Delays (V3) - Detail

| Tran | Userid | TaskNo | Stop Time | User CPU Time | Response Time | TCBAtach | DSTCBHWM | DSCHMDLY Count | DSTCBMWT Count | MAXSTDLY Count | MAXXTDLY Count | KY8 Disp Count | KY9 Disp Count |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TXD0 | DNET409 | 78 | 07:09:38.039 | .0024 | .9163 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 |
| TXDA | DNET409 | 79 | 07:09:39.053 | .2298 | 1.0153 | 1 | 1 | 108 | 0 | 0 | 0 | 52 | 0 |
| TXDB | DNET409 | 110 | 07:09:39.505 | .2277 | 1.4667 | 1 | 1 | 104 | 0 | 0 | 0 | 52 | 0 |
| TXDC | DNET409 | 111 | 07:09:39.515 | .2275 | 1.4765 | 1 | 1 | 104 | 0 | 0 | 0 | 52 | 0 |
| TXDD | DNET409 | 112 | 07:09:39.958 | .2268 | 1.9190 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDE | DNET409 | 113 | 07:09:39.968 | .2266 | 1.9290 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDA | DNET409 | 114 | 07:09:40.414 | .2266 | 2.3748 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDB | DNET409 | 115 | 07:09:40.433 | .2265 | 2.3939 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDC | DNET409 | 116 | 07:09:40.867 | .2266 | 2.8285 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDD | DNET409 | 117 | 07:09:40.882 | .2263 | 2.8428 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDE | DNET409 | 118 | 07:09:41.328 | .2265 | 3.2889 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDA | DNET409 | 119 | 07:09:41.342 | .2265 | 3.3033 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDB | DNET409 | 120 | 07:09:41.782 | .2265 | 3.7432 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDC | DNET409 | 121 | 07:09:41.801 | .2264 | 3.7618 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDD | DNET409 | 122 | 07:09:42.245 | .2266 | 4.2066 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDE | DNET409 | 123 | 07:09:42.265 | .2265 | 4.2257 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDA | DNET409 | 124 | 07:09:42.696 | .2267 | 4.6574 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDB | DNET409 | 125 | 07:09:42.724 | .2266 | 4.6848 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDC | DNET409 | 126 | 07:09:43.163 | .2265 | 5.1240 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDD | DNET409 | 127 | 07:09:43.182 | .2265 | 5.1430 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDE | DNET409 | 128 | 07:09:43.625 | .2266 | 5.5865 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDA | DNET409 | 109 | 07:09:43.645 | .2264 | 5.6059 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDE | DNET409 | 108 | 07:09:44.086 | .2265 | 6.0472 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDD | DNET409 | 107 | 07:09:44.100 | .2263 | 6.0617 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDC | DNET409 | 106 | 07:09:44.546 | .2266 | 6.5076 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDB | DNET409 | 105 | 07:09:44.556 | .2265 | 6.5176 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDA | DNET409 | 104 | 07:09:45.003 | .2265 | 6.9649 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDE | DNET409 | 103 | 07:09:45.014 | .2264 | 6.9750 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDD | DNET409 | 102 | 07:09:45.465 | .2265 | 7.4264 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDC | DNET409 | 101 | 07:09:45.476 | .2264 | 7.4375 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDB | DNET409 | 100 | 07:09:45.925 | .2264 | 7.8861 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDA | DNET409 | 99 | 07:09:45.930 | .2264 | 7.8913 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDE | DNET409 | 98 | 07:09:46.378 | .2269 | 8.3393 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDD | DNET409 | 97 | 07:09:46.392 | .2266 | 8.3538 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDC | DNET409 | 96 | 07:09:46.835 | .2266 | 8.7964 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDB | DNET409 | 95 | 07:09:46.849 | .2264 | 8.8109 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDA | DNET409 | 94 | 07:09:47.297 | .2266 | 9.2583 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDE | DNET409 | 93 | 07:09:47.306 | .2265 | 9.2680 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDD | DNET409 | 92 | 07:09:47.763 | .2266 | 9.7245 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDC | DNET409 | 91 | 07:09:47.773 | .2265 | 9.7343 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDB | DNET409 | 90 | 07:09:48.204 | .2266 | 10.1657 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDA | DNET409 | 89 | 07:09:48.241 | .2265 | 10.2031 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDE | DNET409 | 88 | 07:09:48.650 | .2266 | 10.6119 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDD | DNET409 | 87 | 07:09:48.705 | .2264 | 10.6671 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDC | DNET409 | 86 | 07:09:49.108 | .2266 | 11.0696 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDB | DNET409 | 85 | 07:09:49.150 | .2265 | 11.1118 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDA | DNET409 | 84 | 07:09:49.572 | .2266 | 11.5340 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDE | DNET409 | 83 | 07:09:49.604 | .2267 | 11.5659 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDD | DNET409 | 82 | 07:09:49.614 | .2269 | 11.5757 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDC | DNET409 | 81 | 07:09:49.628 | .2267 | 11.5899 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |
| TXDB | DNET409 | 80 | 07:09:49.827 | .2269 | 11.7887 | 1 | 1 | 104 | 0 | 0 | 0 | 53 | 0 |

## Thread Safe Tasks

V2R1M0 CICS Performance Analyzer
Performance List

LIST0001 Printed at 11:38:16 5/21/2008 Data from 10:12:20 3/28/2008 APPLID CICSACB6 Page 1
CICS TCB Usage and Delays (V3) - Detail

| Tran | Userid | TaskNo | Stop Time | User CPU Time | Response Time | TCBAtach | DSTCBHWM | DSCHMDLY Count | DSTCBMWT Count | MAXSTDLY Count | MAXXTDLY Count | KY8 Disp Count | KY9 Disp Count |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| TXD0 | DNET409 | 143 | 10:12:20.127 | .0025 | .0073 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| TXDA | DNET409 | 144 | 10:12:20.399 | .2285 | .2734 | 0 | 1 | 18 | 0 | 0 | 0 | 7 | 0 |
| TXDD | DNET409 | 192 | 10:12:20.405 | .2264 | .2786 | 1 | 1 | 14 | 0 | 0 | 0 | 7 | 0 |
| TXDE | DNET409 | 193 | 10:12:20.414 | .2262 | .2871 | 1 | 1 | 14 | 0 | 0 | 0 | 7 | 0 |
| TXDC | DNET409 | 191 | 10:12:20.637 | .2262 | .5097 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDB | DNET409 | 190 | 10:12:20.643 | .2260 | .5165 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDA | DNET409 | 189 | 10:12:20.651 | .2260 | .5240 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDE | DNET409 | 188 | 10:12:20.872 | .2263 | .7453 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDD | DNET409 | 187 | 10:12:20.880 | .2261 | .7530 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDC | DNET409 | 186 | 10:12:20.889 | .2262 | .7625 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDB | DNET409 | 185 | 10:12:21.122 | .2262 | .9949 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDE | DNET409 | 183 | 10:12:21.127 | .2260 | 1.0004 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDA | DNET409 | 184 | 10:12:21.133 | .2260 | 1.0066 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDD | DNET409 | 182 | 10:12:21.359 | .2260 | 1.2319 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDB | DNET409 | 145 | 10:12:21.364 | .2259 | 1.2385 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDC | DNET409 | 146 | 10:12:21.372 | .2259 | 1.2462 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDD | DNET409 | 147 | 10:12:21.592 | .2260 | 1.4664 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDE | DNET409 | 148 | 10:12:21.601 | .2259 | 1.4753 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDA | DNET409 | 149 | 10:12:21.612 | .2259 | 1.4859 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDB | DNET409 | 150 | 10:12:21.830 | .2260 | 1.7038 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDC | DNET409 | 151 | 10:12:21.837 | .2259 | 1.7111 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDD | DNET409 | 152 | 10:12:21.843 | .2259 | 1.7169 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDE | DNET409 | 153 | 10:12:22.066 | .2263 | 1.9402 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDA | DNET409 | 154 | 10:12:22.072 | .2260 | 1.9463 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDB | DNET409 | 155 | 10:12:22.078 | .2260 | 1.9521 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDC | DNET409 | 156 | 10:12:22.303 | .2260 | 2.1769 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDD | DNET409 | 157 | 10:12:22.309 | .2259 | 2.1831 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDE | DNET409 | 158 | 10:12:22.317 | .2259 | 2.1904 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDA | DNET409 | 159 | 10:12:22.538 | .2261 | 2.4115 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDB | DNET409 | 160 | 10:12:22.546 | .2260 | 2.4194 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDC | DNET409 | 161 | 10:12:22.553 | .2260 | 2.4271 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDD | DNET409 | 162 | 10:12:22.775 | .2262 | 2.6485 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDE | DNET409 | 163 | 10:12:22.781 | .2259 | 2.6546 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDA | DNET409 | 164 | 10:12:22.788 | .2259 | 2.6620 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDB | DNET409 | 165 | 10:12:23.012 | .2261 | 2.8854 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDC | DNET409 | 166 | 10:12:23.018 | .2259 | 2.8920 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDD | DNET409 | 167 | 10:12:23.027 | .2258 | 2.9011 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDE | DNET409 | 168 | 10:12:23.248 | .2261 | 3.1213 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDA | DNET409 | 169 | 10:12:23.254 | .2259 | 3.1272 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDB | DNET409 | 170 | 10:12:23.261 | .2259 | 3.1344 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDC | DNET409 | 171 | 10:12:23.484 | .2262 | 3.3573 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDD | DNET409 | 172 | 10:12:23.489 | .2261 | 3.3631 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDE | DNET409 | 173 | 10:12:23.497 | .2260 | 3.3710 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDA | DNET409 | 174 | 10:12:23.720 | .2261 | 3.5932 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDB | DNET409 | 175 | 10:12:23.728 | .2259 | 3.6015 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDC | DNET409 | 176 | 10:12:23.734 | .2260 | 3.6075 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDD | DNET409 | 177 | 10:12:23.956 | .2260 | 3.8293 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDE | DNET409 | 178 | 10:12:23.963 | .2260 | 3.8363 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDA | DNET409 | 179 | 10:12:23.969 | .2261 | 3.8426 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDB | DNET409 | 180 | 10:12:24.192 | .2264 | 4.0654 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |
| TXDC | DNET409 | 181 | 10:12:24.198 | .2262 | 4.0712 | 1 | 1 | 14 | 0 | 0 | 0 | 8 | 0 |