N-Trace message generation examples v 0.1: The following cases are created to help illustrate the type of N-trace message generated for different scenarios using the RISCnable of trace V N-trace Specification Version 1.0 nter debug mode xit/Leave Debug mode Disable Trace eriodic Event rigger Event Case 1: Enable and Disable debug while tracing ΙD D EN trTeInstTracing Hart Status Message FN ProgramTraceSync¹ SYNC Trace Enable Debug Mode Entry ED ProgTraceCorrelation (PCM) EVCODE Debug mode Exit ProgTraceCorrelation (PCM) Disable Trace Case 2: Enable trace while in debug ED LD trTeInstTracing Message SYNC Type **EVCODE** ProgramTraceSyn Debug mode Exit ProgTraceCorrelation (PCM) **EVCODE** Disable Trace Case 3: Disable Trace while in debug trTeInstTracing EN Message SYNC Type Trace Enable Debug Mode Entry FN ProgramTraceSync SYNC ProgTraceCorrelation D ProgTraceCorrelation (PCM) Disable Trace Case 4: SYNC TRIGGER EVENT (External or Internal) trTeInstTracing T (SYNC TRIGGER) FD ΙD Hart Status Message SYNC Type FN ProgramTraceSync¹ SYNC Trace Enable ED ProgTraceCorrelation (PCM) EVCODE Debug Mode Entry ProgramTraceSyn ndirectBranchHistSync OF ndirectBranchSync OR YNC ProgramTraceSync Case 5: Enable and disable while in debug mode trTeInstTracing Hart Status 1essage SYNC Type EVCODE Debug Mode Entry Disable Trace Case 6: Periodic Case trTeInstTracing Hart Status Message SYNC Type EN ProgramTraceSync¹ SYNC Trace Enable ndirectBranchHistSync OR Periodic 2 SYNC ndirectBranchSync Synchronization **FVCODE** Disable Trace OR Message SYNC Type EN ProgramTraceSync SYNC Trace Enable DirectBranchSync OR Periodic After ndirectBranchHistSync OR SYNC 2 Synchronization³ ndirectBranchSync

Superscript notes:

 $^{^{\}mathbf{1}}\,\mathsf{ProgramTraceSync}\,\mathsf{message}\,\mathsf{may}\,\mathsf{be}\,\mathsf{replaced}\,\mathsf{with}\,\mathsf{DirectBranchSync},\,\mathsf{IndirectBranchHistSync},\,\mathsf{Indir$

² ProgramTraceSync message may be generated for a SYNC trigger event, however, ICNT or history information will be lost. It is recommended to use the IndirectBranchHistSync or IndirectBranchSync message with SYNC=6 (Trace Event) to ensure no trace data is lost.

 $^{^{\}rm 3}\,{\rm Next}$ available Branch message upgraded to Branch with SYNC