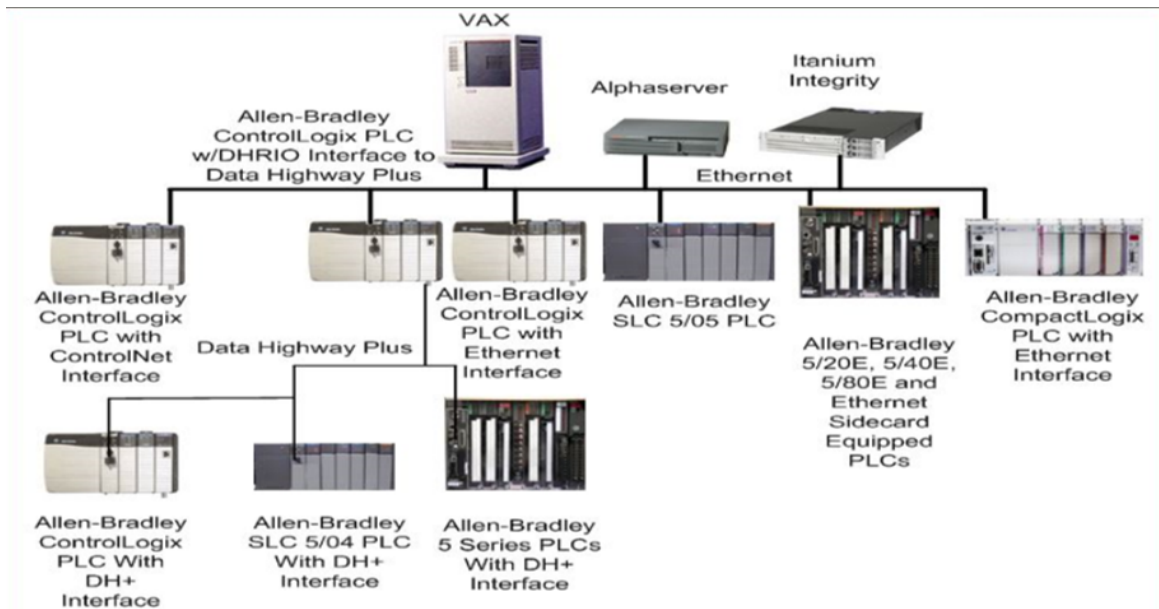# ABNet™

VMS Interface to Allen-Bradley® PLCs

What is ABNet?

ABNet allows direct communication from an Open VMS program to an Allen-Bradley PLCs via direct Ethernet connection or via ControlLogix DHRIO Gateway to Data Highway Plus. Supported Allen-Bradley PLCs include ControlLogix, CompactLogix, PLC 5 and SLC 5. The **ABNet** interface can be called from a user's C or FORTRAN program. **ABNet** follows the Rockwell Interchange for VMS call format so that Interchange can be replaced with **ABNet** by just linking against the **ABNet** libraries. No programming changes or recompile required!

ABNet supports the following DTL Interchange calls (additional calls can be added):

- DTL_C_CONNECT
- DTL_C_DEFINE
- DTL_CHANNEL_STATE
- DTL_CLR_WID
- DTL_CONNECT
- DTL_DEFINE
- DTL_DISCONNECT
- DTL_ERROR
- DTL_ERROR_S
- DTL_READEX
- DTL_READEX_W

- DTL_INIT
- DTL_READ
- DTL_READ_W
- DTL_RECEIVE
- DTL_RECEIVE_W
- DTL_RMW
- DTL_RMW_W
- DTL_SET_MASK
- DTL_SET_WID
- DTL_WRITEEX
- DTL_WRITEEX_W

- DTL_SETOPT
- DTL_TST_MASK
- DTL_TST_WID
- DTL_UNSOL_DEF
- DTL_WAIT
- DTL_WRITE
- DTL_WRITE_W
- DTL_ZERO_MASK
- DTL_UNSOL_GETALL
- DTL_GET_FLT
- DTL_PUT_FLT

Figure 1—Example of an ABNet Interface

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Benefits to ABNet

✓ Up to five times faster than Interchange!

✓ Up to 90% less CPU usage than Interchange!

✓ Supports Allen-Bradley DHRIO to Data Highway Plus to SLC & PLC 5.

✓ Supports direct Ethernet communications to PLC 5/20/40/80E processors,
   SLC 5/05, CompactLogix & ControlLogix PLCs.

✓ Native mode tagname communications to ControlLogix and CompactLogix.

   Example PLC 5 Definition String for PLC 5 (or PLC 5 mapped to Logix):

   N7:1, 10, WORD, MODIFY, 101KA:2, 4, PLC5, 1

   Example Definition String Native-Mode Tagname for Logix Communications:

   TEST_INT:INT, 10, WORD, MODIFY, 101KA:2, 2, LGX, 1

   or:

   TEST.INT[100]:INT, 10, WORD, MODIFY, 101KA:2, 2, LGX, 1

   Supported data types: BOOL, SINT, INT, DINT, REAL, TIMER, COUNTER, USER

✓ Supports VAX VMS, V6.2 and higher, Alpha OpenVMS & Integrity Itanium Open VMS Platforms.

✓ **ABNet** relinks to existing Interchange applications no - recompile required.

✓ **ABNet** is supported software which preserves your software investment
   and provides a platform for future system growth.

✓ **ABMon** provides detailed communications diagnostics including monitoring client & server data
   counters, monitoring of communications queues and the ability to dynamically turn on/off debug/trace.

ABNet Mon - Communications Monitor

✓ Enables monitoring of client and server data structures and counters.

✓ Enables monitoring of communication queues in-memory.

✓ Dynamic editing to reduce the wordiness of log messages via mailbox,
   to the Gateway server, as well as client processes.

✓ Detailed tracing and debugging functionality that shows entry and exit of each and every subroutine.

✓ Simple menu-driven, text-based interface.