Tech Note 851

Port Considerations for Wonderware Historian

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Introduction

This *Tech Note* outlines some of the port configurations in Historian for remote IDAS, Replication, and Data Acquisition from MDAS.

Application Versions

- Historian Server 10.0

SMC Log Errors

The following error message in the ArchestrA Logger of the Tier-1 Historian computer means that communication with the Tier-2 Historian over TCP port **32568** is not allowed by your network administrator.

```
CHMOWAPP02: GetInterfaceVersion failed: Communication error - System.ServiceModel.EndpointNotFoundException: Could not connect to net.tcp://chmowapp02:32568/Hist. The connection attempt
lasted for a time span of 00:00:20.9960994. TCP error code 10060: A connection attempt failed because the connected party did not properly respond after a period of time, or established connection
failed because connected host has failed to respond 172.19.216.120:32568.  ---> System.Net.Sockets.SocketException: A connection attempt failed because the connected party did not properly respond
after a period of time, or established connection failed because connected host has failed to respond 172.19.216.120:32568
  at System.Net.Sockets.Socket.DoConnect(EndPoint endPointSnapshot, SocketAddress socketAddress)
  at System.Net.Sockets.Socket.Connect(EndPoint remoteEP)
  at System.ServiceModel.Channels.SocketConnectionInitiator.Connect(Uri uri, TimeSpan timeout)
  --- End of inner exception stack trace ---

Server stack trace:
  at System.ServiceModel.Channels.SocketConnectionInitiator.Connect(Uri uri, TimeSpan timeout)
  at System.ServiceModel.Channels.BufferedConnectionInitiator.Connect(Uri uri, TimeSpan timeout)
  at System.ServiceModel.Channels.ConnectionPoolHelper.EstablishConnection(TimeSpan timeout)
  at System.ServiceModel.Channels.ClientFramingDuplexSessionChannel.OnOpen(TimeSpan timeout)
  at System.ServiceModel.Channels.CommunicationObject.Open(TimeSpan timeout)
  at System.ServiceModel.Channels.ServiceChannel.OnOpen(TimeSpan timeout)
  at System.ServiceModel.Channels.CommunicationObject.Open(TimeSpan timeout)
  at System.ServiceModel.Channels.ServiceChannel.CallOpenOnce.System.ServiceModel.Channels.ServiceChannel.ICallOnce.Call(ServiceChannel channel, TimeSpan timeout)
  at System.ServiceModel.Channels.ServiceChannel.CallOnceManager.CallOnce(TimeSpan timeout, CallOnceManager cascade)
  at System.ServiceModel.Channels.ServiceChannel.EnsureOpened(TimeSpan timeout)
  at System.ServiceModel.Channels.ServiceChannel.Call(String action, Boolean oneway, ProxyOperationRuntime operation, Object[] ins, Object[] outs, TimeSpan timeout)
  at System.ServiceModel.Channels.ServiceChannel.Call(String action, Boolean oneway, ProxyOperationRuntime operation, Object[] ins, Object[] outs)
  at System.ServiceModel.Channels.ServiceChannelProxy.InvokeService(IMethodCallMessage methodCall, ProxyOperationRuntime operation)
  at System.ServiceModel.Channels.ServiceChannelProxy.Invoke(IMessage message)

Exception rethrown at [0]:
  at System.Runtime.Remoting.Proxies.RealProxy.HandleReturnMessage(IMessage reqMsg, IMessage retMsg)
  at System.Runtime.Remoting.Proxies.RealProxy.PrivateInvoke(MessageData& msgData, Int32 type)
  at HistoryServiceContract.IHistoryServiceContract.GetInterfaceVersion(UInt32& version)
  at CHistoryConnectionWCF.GetInterfaceVersion(CHistoryConnectionWCF* , UInt32* pVersion) [aahMDASCommon.cpp, 2567]
```

FIGURE 1: ERROR MESSAGE FOR COMM FAILURE BETWEEN TIERED HISTORIANS

Ports for Remote IDAS

IDAS uses Named Pipes to communicate with the Historian, and Microsoft file sharing for transmission of store-and-forward history blocks. If a firewall exists between a remote IDAS and the historian computer, the firewall must allow communication using ports from **135** through **139** (TCP/UDP) and port **445** (TCP/UDP).

Ports for Replication

The TCP port is used by the Tier-2 Historian to receive data from the Replication Service on a Tier-1 Historian.

In the TCP Port box, type the TCP port to use for the new replication server. This can be an integer between **1** and **65535**. The default is **32568**. This port number must match the ReplicationTcpPort system parameter value that is specified on the Tier-2 Historian. Be sure that you open this port in Windows Firewall. The port must not conflict with any other ports used by other applications on the Tier-2 historian.

Note: In most cases you should not have to worry about Windows Firewall. The Historian Setup process is designed to take care of opening the ports in the Windows Firewall automatically on the Historian Server machine. It should automatically either open the firewall for the default port, or add the Replication Service to the exclusion list. Problems can occur if the network administrator closes that port in the router/switch or somewhere else (For example when the Tier-2 Historian is in another network).

Data Acquisition from MDAS

The DLL version of MDAS uses DCOM and file shares to send data to the Historian. For both the MDAS and Wonderware Historian computers, make sure that DCOM is enabled (not blocked) and that TCP/UDP port **135** is accessible.

The port may not be accessible if:

- DCOM is disabled on either of the computers or
- If there is a Firewall between the two computers that blocks the port.

For information on enabling DCOM communication through a firewall, see your Microsoft Windows operating system documentation.

J. Stella

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For technical support questions, send an e-mail to **wwsupport@invensys.com**.

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