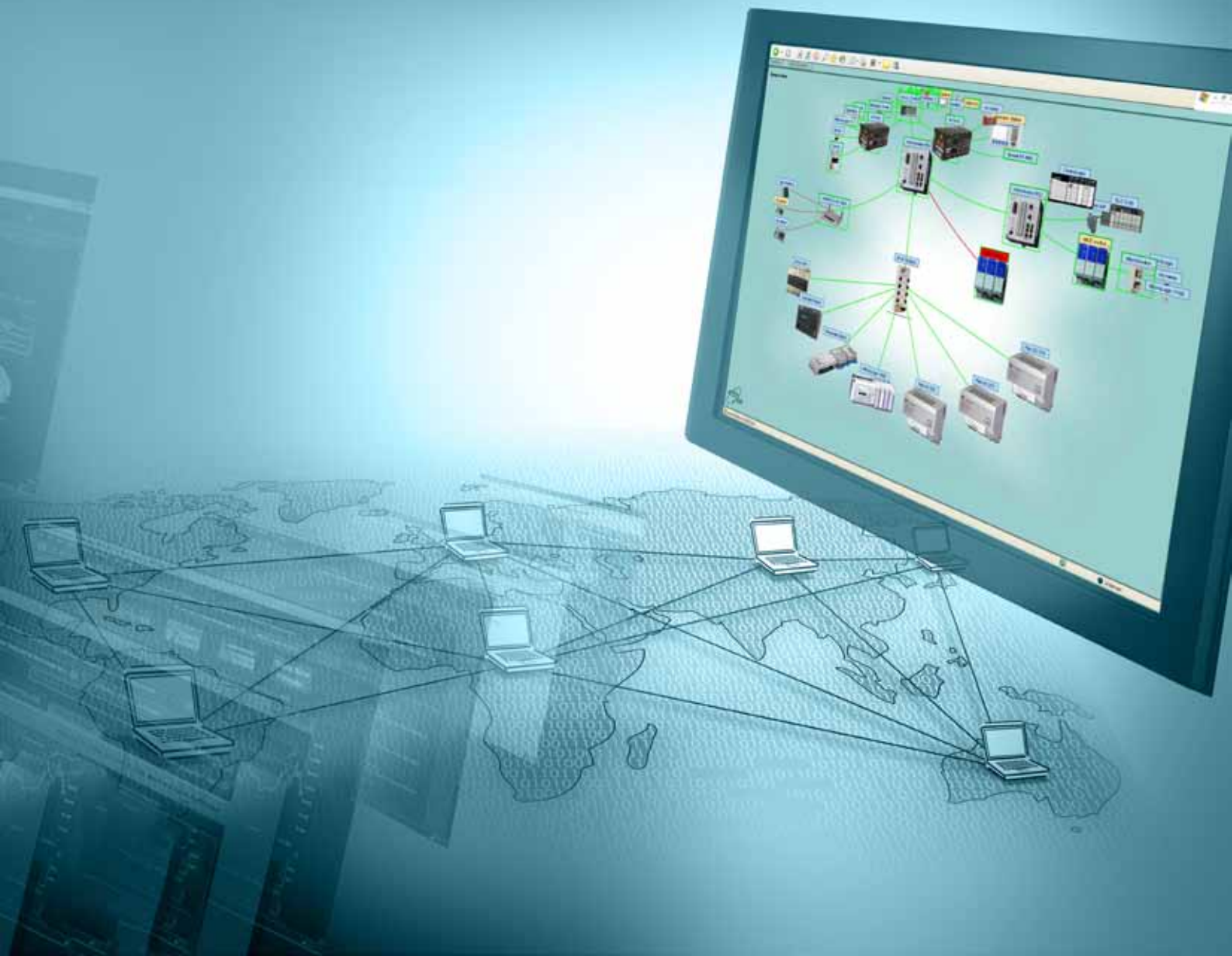# IntraVUE
ETHERNET DIAGNOSIS

IntraVUE
Providing value for automation applications

IntraVUE is a complete solution for the deployment and support of industrial devices communicating over Ethernet. The software provides a live animated view of all the devices and records the issues that occur in these Ethernet networks. The software provides control Engineers and Technicians the ability to simplify the tasks of deploying and supporting Industrial equipment communicating over Ethernet.
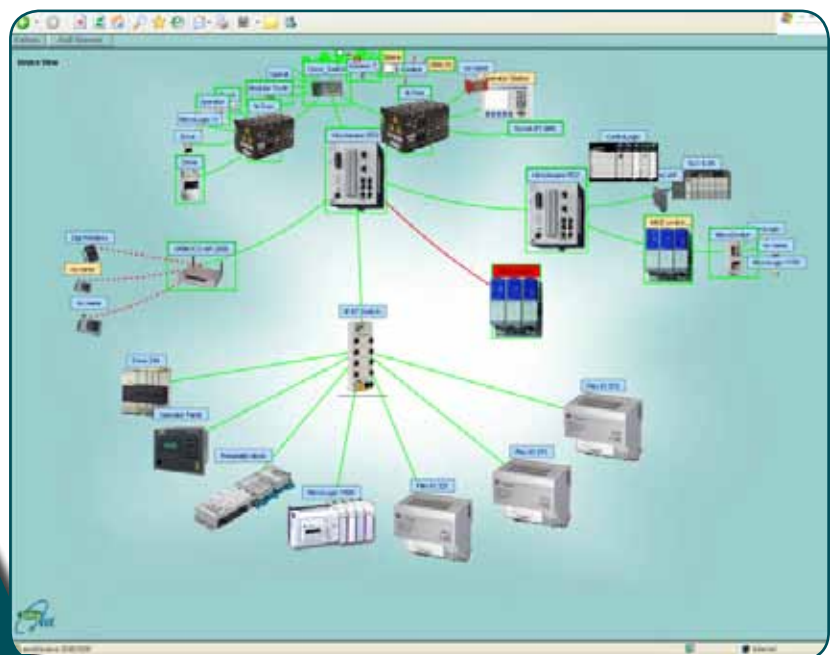
The key advantage of IntraVUE software and Network Vision support is we are vendor neutral and focused on Industrial Ethernet. We have lived in the Automation environment and are supporting hundreds of installations. We understand the subtle differences as well as how to train local resources to be self sufficient. What may be a first time occurrence at your location, may be an infrequent but common problem found in other applications. Our experience will mean quicker resolutions to sometimes difficult problems. We are not afraid to identify a faulty switch or connected device. We also work with most hardware vendors in an attempt to help them improve their product performance and compatibility. IntraVUE is being used in over 2,500 networks worldwide from small Bakeries to large Automotive facilities. This solution is cost effective for Networks with as few as 30 devices. With many deployment options, IntraVUE can fit into most End User or OEM applications.

Deployment Support

As Industrial devices are added, moved or replaced, it can be difficult for local resources to know there location or status. The ability to view a newly added device and details of the devices such as the vendor, model, and Firmware version will help simplify deployment and reduce the need to request assistance from network specialists. IntraVUE provide an accurate assessment of the connected devices and their interconnections that can be easily used by local maintenance technicians. This can be accomplished by two methods:

1. Overview of your Network

2. Generating a spreadsheet of all your devices and connections

Automation networks are susceptible to subtle disturbances due to the real time nature of the applications, as well as the timing requirements of the connected equipment. Environmentally created problems, as well as "cause and effect" actions can create intermittent disturbances that will be hard to detect by conventional networking tools. Other issues may be caused by the addition of new devices on the network. IntraVUE provides a method to easily identify these issues so they can be resolved by local resources.

Key features and the variety of issues identified by IntraVUE

- Identifying new devices being added to a network
- Identifying a Device failure
- Locating a Duplicate IP Address
- Capturing a Broadcast or Multicast Storm
- Intermittent Connection problems
- Devices accidentally moved

Key features and the variety of issues identified by IntraVUE

- **Foreign computers momentarily linking to the network**
- **Large File transfers between devices**
- **Bad RSTP, Ring Switches, or accidental cable loops**
- **Resetting Switch**
- **Overloaded or misbehaving devices**
- **EtherNet/IP Version management**

IntraVUE's ability to sense and store problems on the network provides the greatest value. IntraVUE has helped quickly identify many common problems in automation networks.

Device Management

With many different devices being connected over time, it can be challenging to keep track of all the devices, their locations, and the version level. Using paper reports that have been prepared at an earlier time may not accurately represent the current network as devices can be added, replaced, or moved making static documents obsolete very quickly.
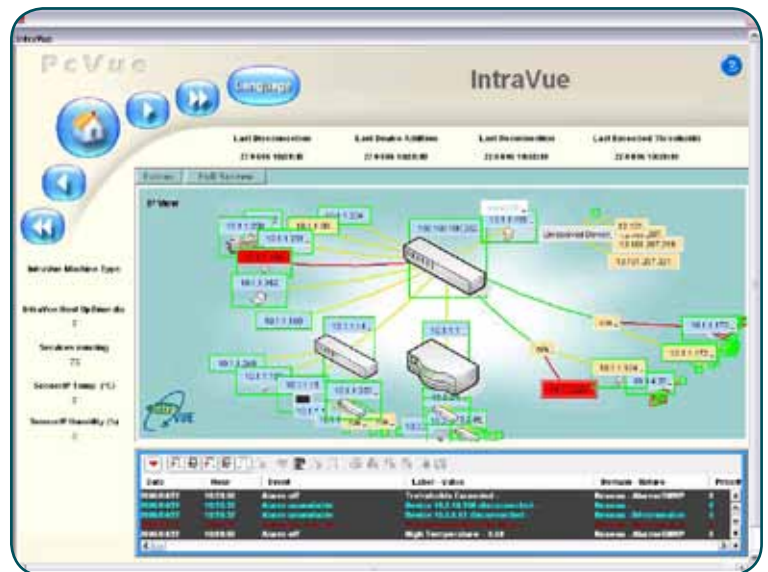
IntraVUE provides an accurate and dynamic means of managing all of the connected devices on your network. Networks with hundreds of devices are now easily managed by two methods.

1. Dynamic View with flexible search

2. On demand Spreadsheet Document

IntraVUE system is able to generate a spreadsheet with the current listing of all devices on the network. This provides a single CSV file that can be opened in Excel and sorted and organized in a variety of ways. The spreadsheet contains all the data in the search feature and also lists the connection details. The spreadsheet reflects the actual condition and version changes made to the devices. It can be used to document any activity providing before and after details that can be saved.

IntraVUE Dashboard

The IntraVUE Dashboard provide more experienced users with a way to associate the data collected in ways to help better review complex issues. It allows greater

association of the devices with the switches as well as the inter relationships of the networks. The Dashboard is used by Control engineers and Manufacturing IT people.

IntraVUE Supervisor

The IntraVUE Supervisor is used in large installations where many distributed IntraVUE systems are deployed. This can be in either a single large installation or a central support group supporting many different plants. The Supervisor monitors not only the health of the networks but also of the IntraVUE systems. It provides the ability of a single individual to oversee hundreds of IntraVUE systems and potentially thousands of networks easily.

I hope that this document provides good insight into the full capabilities of the powerful and scalable diagnostic tool.

IntraVUE Appliance

The IntraVUE Appliance is a complete Hardware/Software solution extending the range of IntraVUE and allowing any current software application running on Windows to move to a Linux environment. The Appliance provides greater simplicity and eliminates the potential for OS updates or other programs changes which can sometimes interfere with the operations of IntraVUE.

The appliance extends the IntraVUE software covering applications up to 1024 IP addresses. It is a fully self-contained and supported appliance that can be managed remotely.

The Appliance has two Ethernet Ports to provide connection to isolated networks or link non-routable networks where IP ranges are duplicated.

The unit does not require a fan and with it low power consumption (30 watts) makes it practical and less expensive than conventional PCs. High efficiency and an operating voltage of 12V (DC) means less heat generation. Optional wide range 12 to 32 VDC power is available. Wall and DIN rail mounting provides several options for Industrial applications.

The Appliance can be added to an existing IntraVUE application as an upgrade. You can transfer your license into the Hardware and it will be shipped with the existing Product key. You can also purchase a fully integrated system for new installations.

Basic Diagnostic Reports

This has been referenced in the above as a way to provide analytical results based on our methodology. There will be a variety of reports to match the intention of the user. Visit www.pcvuesolutions.com for more details.

• Maintenance reports will provide analysis of the issues occurring on the network

• Configuration Reports will help with the configuration of the IntraVUE system

Automation networks contain many devices from several different manufactures. This diversity coupled with the ages of some of the equipment will mean at some point devices will start to have problems. One method to determine if a device is starting to have problems is a delay in the ping response time. By measuring the response time continually IntraVUE can have a means to determine if there are any relative issues that may be represented as a change in normal response times.

By selecting all devices in a graph you can use it to see if an event has caused a group of devices to experience an increase in response time. This can help identify what devices were affected.

PcVue Solutions
by ARC Informatique

Your Independent
Global SCADA provider

ISO 9001 and ISO 14000 certified.