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How "Flooding" your Niagara® Ax deployment using eNode™ IV in "Flood Mode" might save money

There can be situations when you need to connect widely dispersed field devices to a Jace®. These devices may be distributed widely over for example a campus, office block or other facility. This most often means that you have to deploy more Jace hardware than the application or integration needs just to make this physical connectivity possible. See Fig 1. This in turn creates significant extra cost.

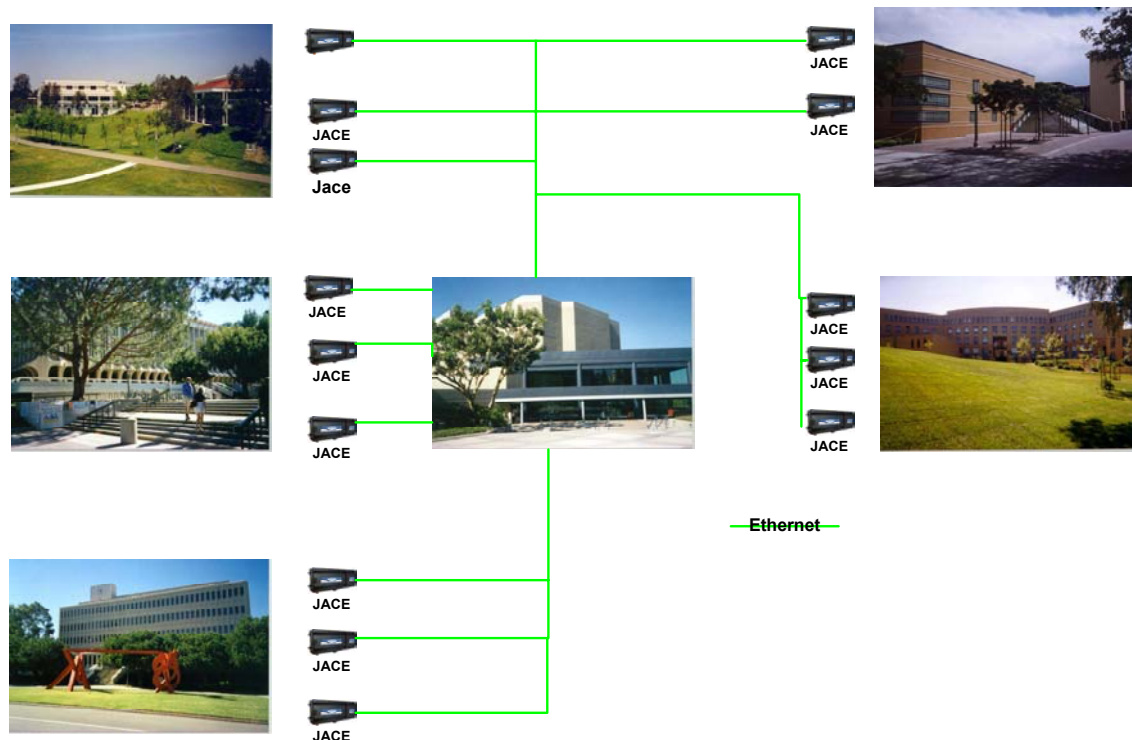


Fig 1 Example Campus Tridium Jace® Configuration

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One way to manage the extra cost this might create, whilst delivering all the benefits of a Niagara based solution, is to extend the Jace's physical network reach using eNode™IV Lon/IP 852 and Lon/WiFi 852 routers in Flood Mode via the Lon interface on the Jace. Connecting these devices to the Jace's existing Lon interface immediately and simply allows you to utilise existing Ethernet infrastructure whether wire or wireless without the Jace even being aware that the eNode™IV's exist. See Fig 2.

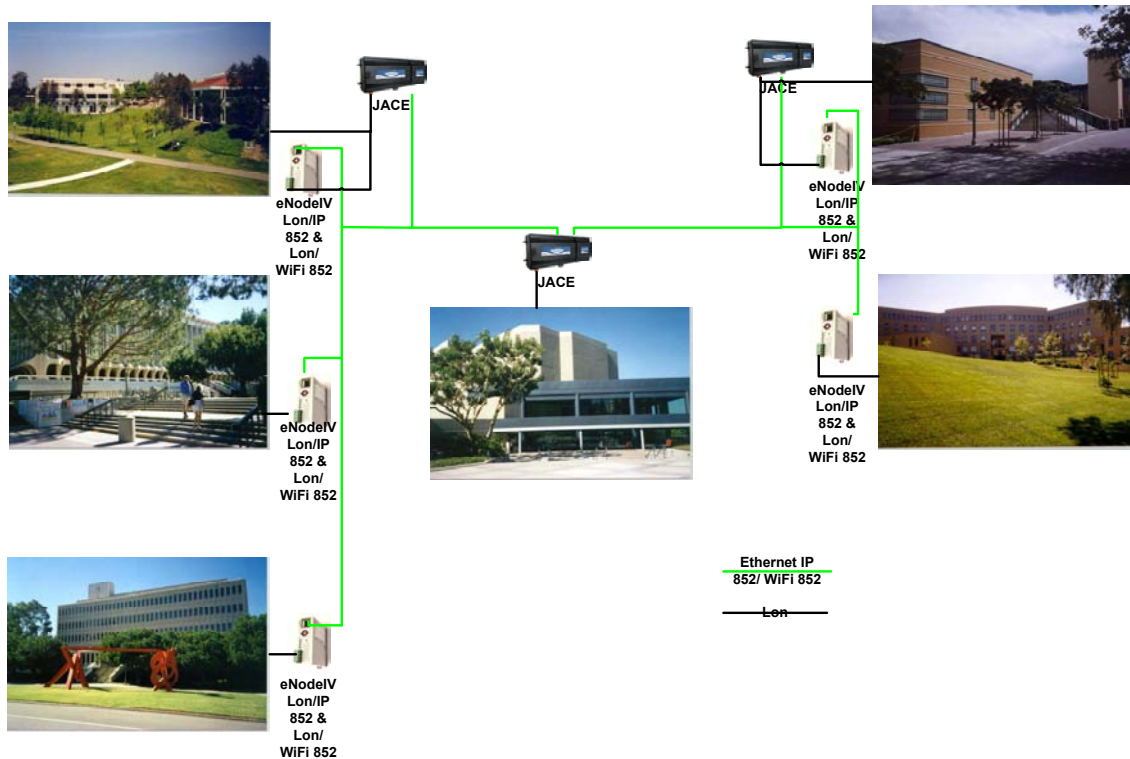


Fig 2, Example Campus Deployment using Tridium's Jace® and eNode™IV™ Lon/IP and Lon/WiFi Routers in Flood Mode

Each eNode™IV Lon/IP 852 or Lon/WiFi 852 device used in this way and for this reason can help you significantly reduce your total Niagara deployment costs*.



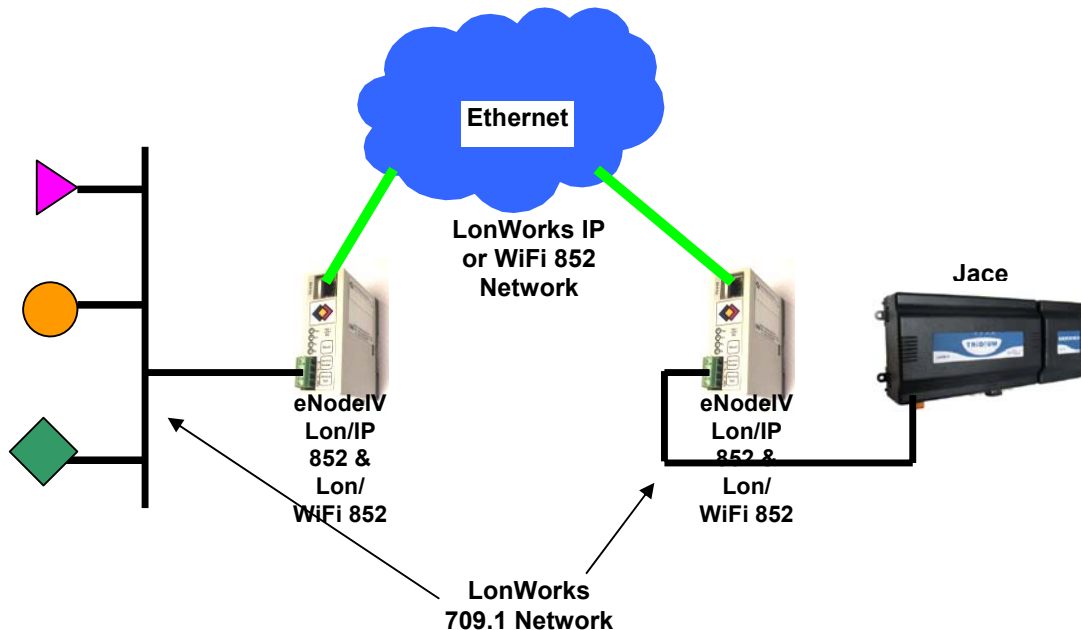
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Selecting Flood mode is achieved via the eNode™IV's web configuration page and when selected it will cause the router to forward all packets including network management packets (except those that fail CRC). No other filtering is done. In Flood mode the router is completely transparent to the 709.1 channel. This enables tunnelling over IP of 709.1 networks. Flood type can only be configured in manual mode but this means no setting up necessary with either a Lon network management tool or through Niagara. Any 709.1 networks connected to eNode™IV IP 852 routers in Flood Mode become one large virtual subnet. In contrast with Configured and Repeater modes, Flood mode makes two eNode™IV IP 852 routers appear as essentially a physical layer repeater with two major exceptions:

- 1) Packets with CRC errors are discarded.
- 2) Unlike a good physical layer repeater, the eNode™IV can be saturated.

When in Flood Mode, 709.1 network management tools will not be able to communicate with the eNode™IV IP 852 router. The router is completely transparent to all 709.1 devices.



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The eNode™IV's in Flood mode can operate in one to one or one to many configurations.

Clearly careful thought needs to be given to the network architecture in determining the optimum mix of Jaces and eNode™IV's to achieve expected overall network performance. The eNode™IV's can themselves handle some 700 packets per second on the Lon/IP side but of course until there is a viable Lon/IP interface to the Jace you are reliant on the existing Jace Lon 78Kbps FTT10 interface. Nevertheless this still leaves plenty of opportunity, already field proven, to utilise these eNode™IV Lon/IP 852 products and reduce overall system cost.

For more information on how the eNode™IV can help you please visit our website or contact us directly, see below:

Note: * Based upon published List prices valid at date of publication of this document.

eNode is the trade mark of Control Network Solutions Ltd, Lon/IP 852/WiFi 852 and Ethernet infrastructure products family, Jace and Niagara are registered trade marks of Tridium Inc, Lon and LonWorks are registered trade marks of Echelon Corp all other trade marks recognised as belonging to their respective owners.