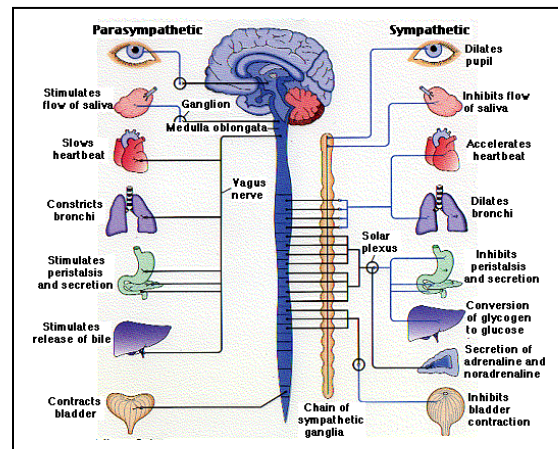
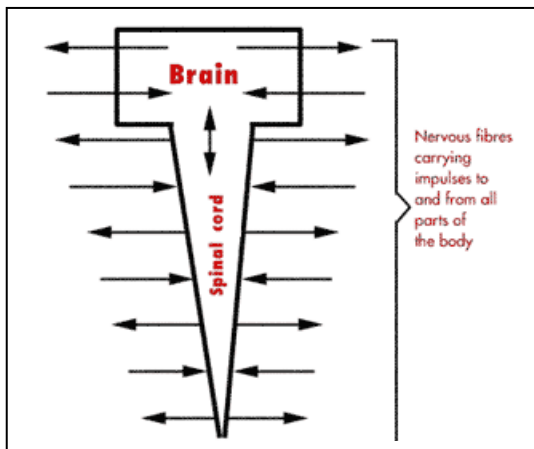


Banyan Anything™ Framework Enterprise Central Nervous System

Most Enterprises have applications built for specific purposes like Accounting, Planning, Warehouse Management, Human Resource Management etc. These applications have over period of time served their purpose really well but in the new interconnected world of commerce with ever changing technological challenges and compliance issues there is a need for a controlling Central Nervous System in most enterprises.

The Central Nervous System in humans is a hub that controls and connects the various organs of the body to each other. These organs can possibly work on their own but for the human body to work efficiently and effectively there is the need for a central governing process and interconnectivity. The Central Nervous system does this by being able to connect any part of the body to any other part of the body and it manages this for multiple processes like sleeping, eating, playing, walking, reading and many more.



The Central Nervous System in the human body acts like an information highway with various on ramps and off ramps for the different parts of the body. It also acts as an early warning system for the human body if anything is wrong with a particular part and remedial healing action can also be initiated remotely. In case a particular part of the body is affected, other parts of the body begin to work harder to take up the slack.

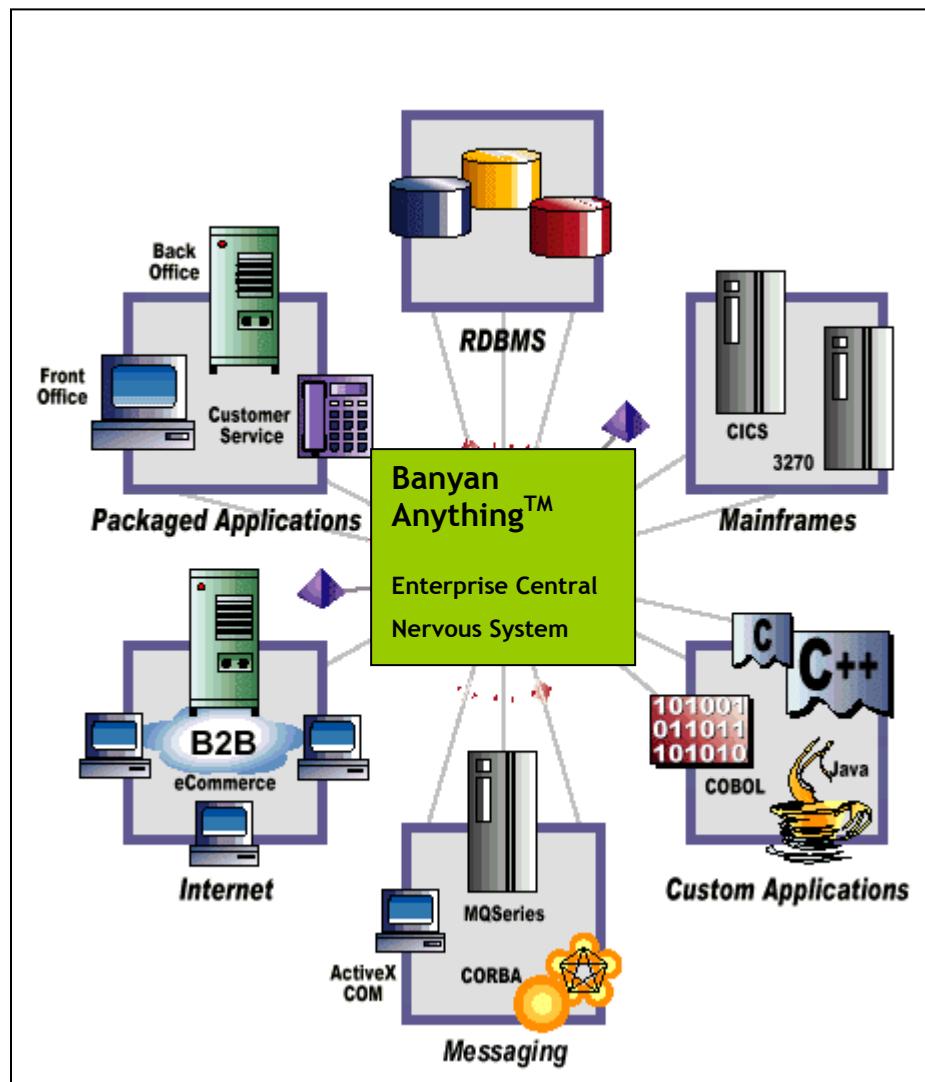


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What is an Enterprise Central Nervous System?

An Enterprise Central Nervous System (ECNS) is similar to the Central Nervous System in human beings. The ECNS provides the information highway to connect disparate different systems in an enterprise. ECNS are usually platform independent and hence can connect legacy systems on AS400 to Mainframe applications or Mobile devices to a DB2 database on Linux. This ability to connect multiple systems provides the ECNS with a central role in enterprise architecture.



As seen in the figure above, an ECNS could work with disparate applications and there could be newer applications connected to it everyday. Within the



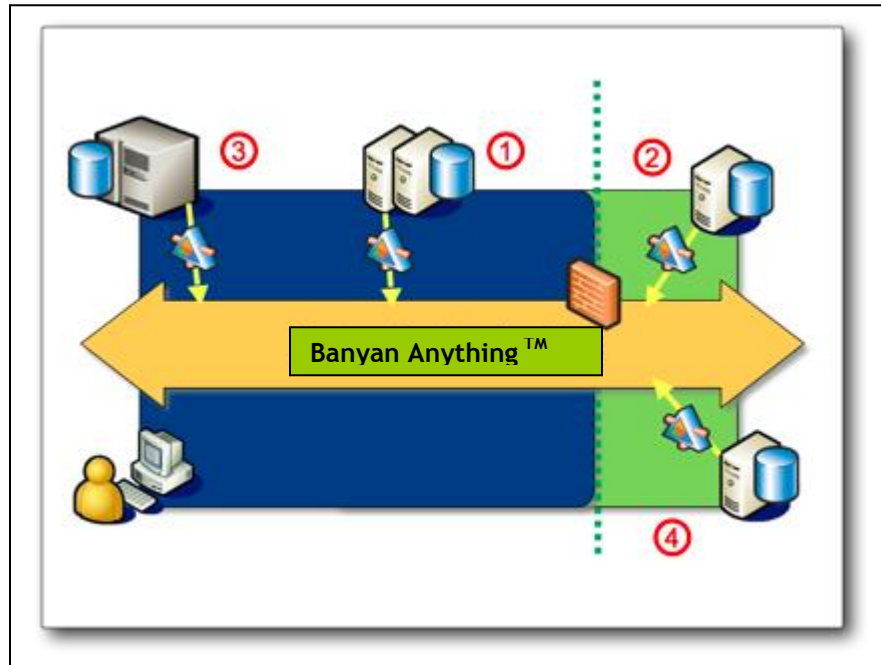
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ECNS there are libraries of business processes that it can manage and all of it could be customised to meet specific customer requirements.

Applications developed on the Enterprise Central Nervous System

Now that we have established the need and benefit of an ECNS the questions in many peoples minds is “What about brand new applications- Can’t we build them on the grid itself? The answer to that is yes, we can and we should build applications as close to the ECNS as possible.



In the example above there are 4 tasks that have to be executed to enable an order acknowledgement process.

1. Check customer information on mobile device
2. Check product information in Inventory Management system on AS400
3. Reserve product in Inventory Management system on Mainframe system
4. Acknowledge order - send an Order Acknowledgement back to supplier via EDI

The four tasks have been identified as unique business processes. Each task can be built as a Web Service and exposed to the ECNS. In this case, the mainline code would be responsible for consuming each Web Service and ensuring the processes were integrated into the complete order entry function. Adding the credit check requires your mainline to consume an additional Web Service and ensure it is integrated into the complete order entry function. Your business relationship with a credit bureau allows you to leverage their IT organization



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and consume the Web Service that they have exposed to the web. Which language they use, which server they use, which middleware they use, are all complexities that are no longer decisions you have to make.

The next question is obvious - what happens when that credit bureau is unable to supply that service to our company? Your company establishes a relationship with a new credit bureau, and they supply you with a Web Service of their choosing. Your change is as easy as pointing to a new URL, and again, your decisions do not include the questions of which language to use, which server to use, or which middleware to use.

ECNS and benefits of a Service Oriented Integrated Language Environment

Look closely at ECNS, and some of the advantages of moving to a Service-Oriented Architecture seem familiar.

Language independence

Applying the right-tool-for-the-right job principle is taken to new heights. Writing a Web Service means leveraging whatever IT skills are relevant. J2EE applications can communicate seamlessly with .NET applications.

Modularization

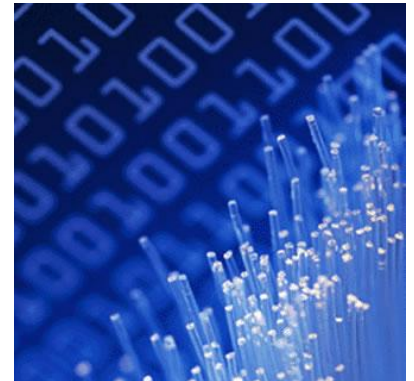
Using modern programming techniques such as modularization will lay a foundation inside your IT organization for the adoption of ECNS

Reusability

Again, having adopted an ILE approach to modularization, reuse of code with the introduction of Web Services becomes an inherent part of your IT organization.

Improved maintainability

With the ability to leverage multiple tools, multiple programming skills and even the IT organizations of your business partners, suppliers and customers, maintenance will be a much diminished task with an SOA environment.



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What kind of applications can be built on ECNS?

Any kind of applications can be built on the ECNS. However large Enterprise applications like an ERP system would not be recommended to be built on an ECNS as these applications are already self sufficient and only for processes where they would need to interact with other applications would they need to plug into the ECNS.

However the applications that lend themselves best to being actually built on the ECNS itself are applications that have one of the following features.

1) Disparate platform interaction

Applications that have to have interactions across platforms e.g. mobile device, AS400, Linux or Mainframe interaction to complete a single process.

2) New Technology Integration

Integrating technological advances like Bar-Coding, RFID, Mobile Devices, GPS and similar technologies would also be a great opportunity to build an application on the ECNS.

3) Multiple Location

Providing application support at multiple locations at time is usually quite cumbersome with legacy applications. To provide application support at multiple locations especially in locations that could probably not be on the same LAN or WAN as the central location, ECNS based applications would be the most appropriate as they could be built quickly and rolled out without much effort.



4) B2B Connectivity

Integrating technological advances like Bar-Coding, RFID, Mobile Devices, GPS and similar technologies would also be a great opportunity to build an application on the ECNS.

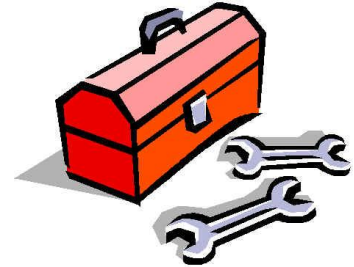


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ECNS based Application Stack

An ECNS based application stack like the Banyan Application™ Stack which builds on the Banyan Anything™ Framework has pre built applications built by multiple vendors that have been certified for multiple processes. However if there is a custom process at a company or if there is a modification to be made to the process, the Application Stack tool kit provided will enable quick application development capabilities.



With the Banyan Application™ Stack and the tool kit, companies should be able to create applications with specific requirements very quickly and quickly integrate it into the ECNS.

Pre Built Functions provided by the Banyan Application™ Stack

- **True Anything to Anything connectivity**
 - Mobile Device Compatible
 - RFID and BarCode Printer Compatible
 - Multiple Operating system compatible - AS400, Linux, Unix, Windows
- **Business Intelligence/ Analytics**
 - Dashboarding Capabilities
 - Shrink Wrapped Reporting
 - Custom reporting capabilities
 - Analytics capabilities
- **Enterprise Application Integration/ BPM**
 - BPM software compatible - Savvion, IBM, Pega etc.
 - MQ Series and WebServices support
- **B2B Integration**
 - EDI Compatible - ANSI X12 & EDIFACT
 - Rosetta Net Compatible
 - XML, eXML compatible
 - E2Open, Covisint connectivity
- **SAAS (Software as a service) Option**
 - Low Capital Costs
 - Reduced Obsolescence Risk
 - 99.99 % Guaranteed uptime



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ECNS based Applications Deliver Value to the Enterprise

In conclusion an ECNS as well as ECNS based applications like the Banyan Application™ Stack create tremendous value due to their inherent ability to connect disparate systems and to be able to create an application layer that is independent of the legacy applications. So if any of the underlying legacy applications were to change there would be no change to the ECNS application layer except that the connectivity option will have to reflect the new application that was dropped into the grid.



With the advent of WebServices and multiple vendors offering web services based application processes, the power of the ECNS and ECNS based application would grow tremendously.

It would be not be difficult to envision a company with no in-house application or only a few ECNS based applications and most of the processing being done by webservice providers.

The age of the ECNS and ECNS based applications is here and is real.

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