

EXPAND smERP

Implementation Methodologies & Deployment Architectures



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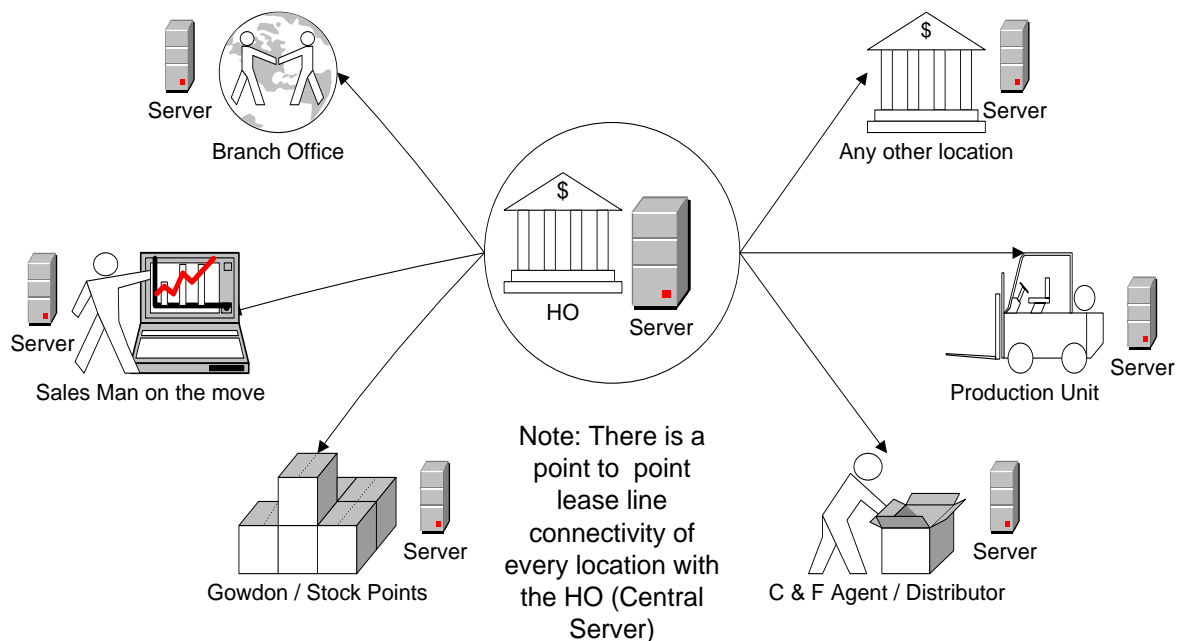
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Option 1: N-tier Architecture with dedicated connectivity

Description:

This is the traditional way of implementing an ERP solution with dedicated point-to-point lease line connectivity at every location. The central server will host the application while other locations will connect to the central sever with dedicated connectivity. In this mechanism the client has to bear the hardware and connectivity costs but gets a highly secured private network of his own. Following is the sample deployment architecture with advantages and disadvantages of the same:-

Option 1: N-tier Architecture with dedicated connectivity



Advantages of Option 1:

1. Highly secured private network is formed with dedicated lease lines.
2. With dedicated lease lines, connectivity between various locations is very fast. Transactional performance of ERP application is high depending on the bandwidth procured. Bandwidth can range from 64KBps to 2 MBps and can even go higher.
3. eDominer reduces the deployment, maintenance and up gradation cost drastically as the application is installed and runs from a central server. No client software required.
4. Full control over the data.

Disadvantages of Option 1:

1. Hardware costs increases. Apart from central server, client has to invest in purchasing server for every location which will be connected to dedicated lease lines.
2. Connectivity costs increases as dedicated lease lines has to be installed at every location. This invites for both one time and recurring costs. Recurring costs depend on the bandwidth procured. Higher the bandwidth, more the cost.
3. Complete implementation has to be done by the ERP vendor and the Lease line service provider.

Notes for Option 1:

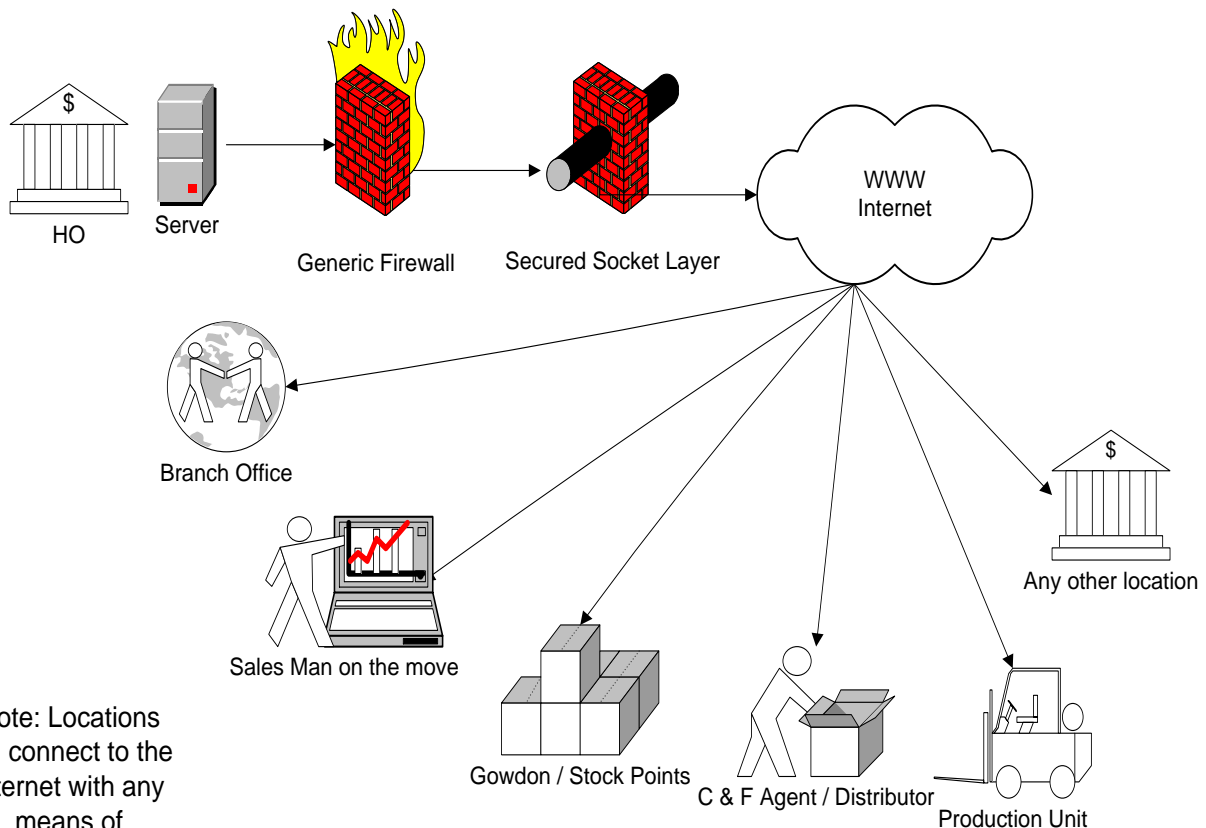
1. Central Server can be placed anywhere depending on the clients' requirements and transactional traffic.
2. Security mechanisms like Anti-Virus, Spy Wares, Firewalls, Tunneling, and Secured Socket Layers can be implemented irrespective of the implementation methodology and deployment architecture.
3. Server on every location is optional. This depends on how many nodes are running on that particular location. For example, if a particular location like Gowdon has only one computer, it can act as server also.
4. Nodes will be connected to their local servers at their respective location. (Nodes are not shown in the diagram)
5. Locations can also connect to the central server through dial-up in case the lease line connectivity is down.
6. ERP implementation can be done with customization or without customization in a packaged manner.
7. Configuration of central server will be higher than servers at other locations.

Option 2: Web hosting model with central server deployment at client’s premises

Description:

This is a very cost effective way of implementing an ERP solution. Only web based ERP products can fit into this model. eDominer ERP is a web based ERP solution and jells well with this implementation strategy. In this model, the central server will host the application. The central server will be connected to the World Wide Web through an Internet lease line. The other locations will connect to the internet through any means of internet connectivity and access the ERP application. Internet connectivity mediums can be broad band, ISDN or dial-up. In this mechanism the client does not have to invest in servers at every location and costly connectivity solution like lease lines. Following is the sample deployment architecture with advantages and disadvantages of the same: -

Option 2: Web Hosting Model with central server deployment at client’s premises



Note: Locations will connect to the internet with any means of connectivity.

Advantages of Option 2:

1. Very cost effective as the client need not invest in servers at every location and costly connectivity solution like lease lines.
2. A number of connectivity options are available at very reasonable costs. Client can install multiple connectivity solutions for back up purpose. For example, 2 broad band connectivity can be installed, in case one is down, the other is up and running.
3. eDominator reduces the deployment, maintenance and up gradation cost drastically as the application is installed and runs from a central server. No client software required.

Disadvantages of Option 2:

1. Public network (Internet) will be used to connect locations.
2. Broad band reliability required for real time operations.

Notes for Option 2:

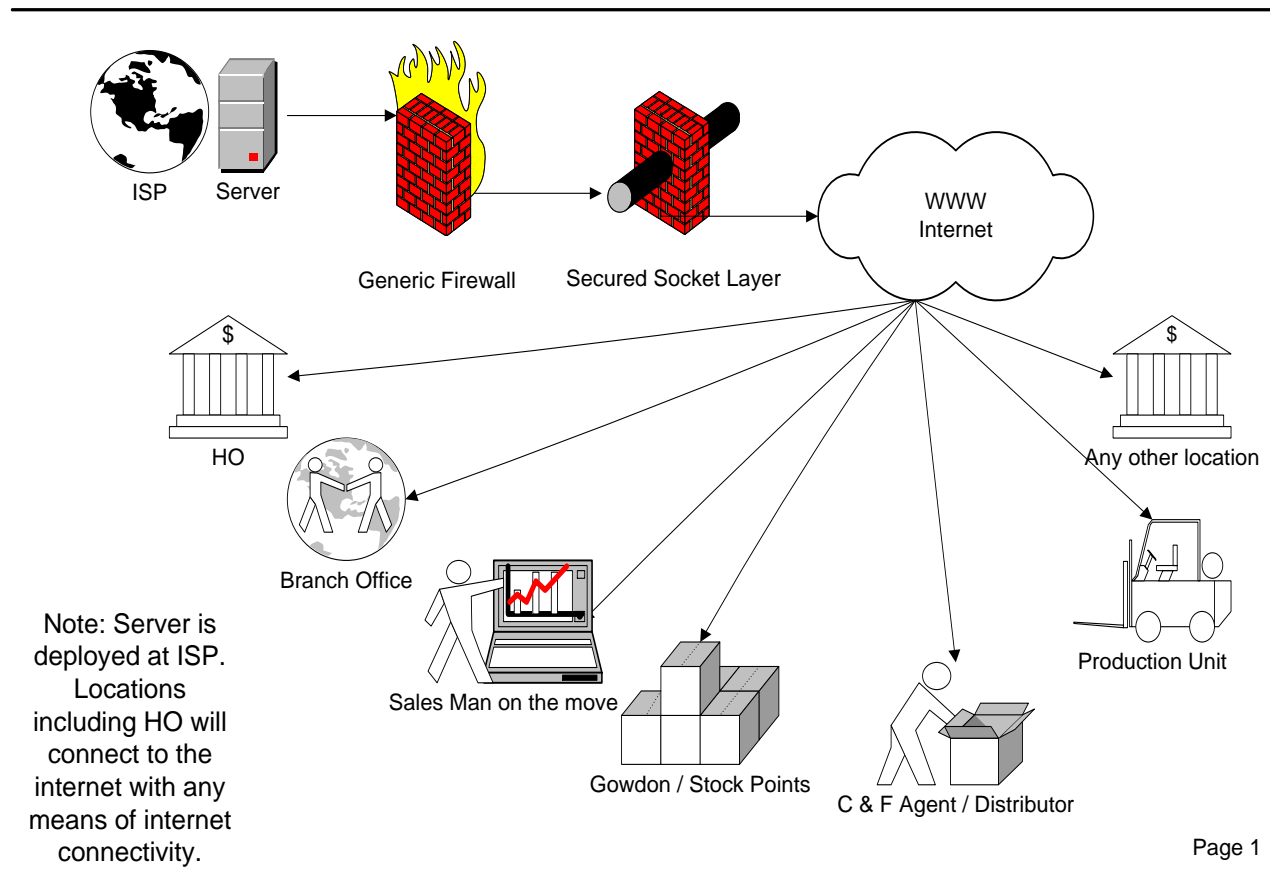
1. Security mechanisms like Anti-Virus, Spy Wares, Firewalls, Tunneling, and Secured Socket Layers can be implemented irrespective of the implementation methodology and deployment architecture.
2. Server on every location is optional and in some cases will not be required. This depends on how many nodes are running on that particular location. For example, if a particular location like Gowdon has only one computer, it can act as server also.
3. Nodes will be connected to their local servers at their respective location, if available or directly to the internet. (Nodes are not shown in the diagram)
4. Locations can also connect to the central server through dial-up in case the internet connectivity is down.
5. ERP implementation can be done with customization or without customization in a packaged manner.

Option 3: Web hosting model with central server deployment at ISP

Description:

The only difference here in comparison to Option 2 is that the central server is now hosted with the ISP or the External Hosting Provider. Client need not invest in Internet lease line for hosting the central server like Option 2. Existing secured infrastructure of the ISP or EHP can be used. Following is the sample deployment architecture with advantages and disadvantages of the same:-

Option 3: Web Hosting Model with central server deployment at ISP



Advantages of Option 3:

1. Client need not invest in any lease line costs at all as the server will be hosted with the ISP or EHP.
2. Very cost effective as the client need not invest in servers at every location and costly connectivity solution like lease lines.
3. A number of connectivity options are available at very reasonable costs. Client can install multiple connectivity solutions for back up purpose. For example, 2 broad band connectivity can be installed, in case one is down, the other is up and running.
4. eDominator reduces the deployment, maintenance and up gradation cost drastically as the application is installed and runs from a central server. No client software required.
5. An existing, highly secured infrastructure is available with the ISP or EHP.

Disadvantages of Option 3:

1. Public network (Internet) will be used to connect locations.
2. Broad band reliability required for real time operations.
3. Business data will be with the ISP or EHP resulting in losing some degree of control over the data.
4. Dial Up Server option not available now as the server is deployed with ISP or EHP.

Notes:

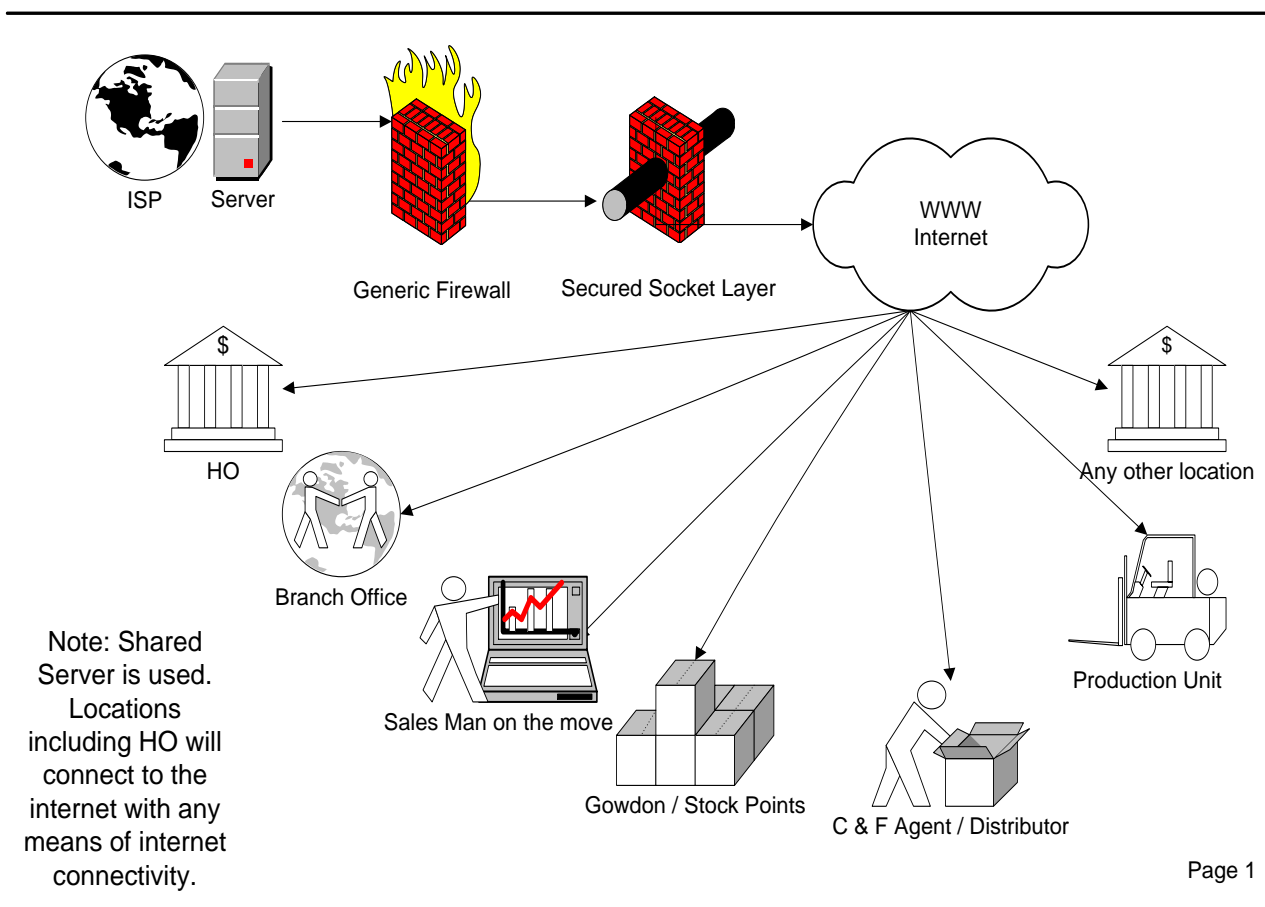
1. Security mechanisms like Anti-Virus, Spy Wares, Firewalls, Tunneling, and Secured Socket Layers can be implemented irrespective of the implementation methodology and deployment architecture.
2. Server on every location is optional and in some cases will not be required. This depends on how many nodes are running on that particular location. For example, if a particular location like Gowdon has only one computer, it can act as server also.
3. Nodes will be connected to their local servers at their respective location, if available or directly to the internet. (Nodes are not shown in the diagram)
4. ERP implementation can be done with customization or without customization in a packaged manner.

Option 4: Shared Hosting Model with External Hosting Provider. No Dedicated Server.

Description:

The only difference here in comparison to Option 3 is that there is no central server now. This is a shared hosting concept where a server is used or shared by multiple clients. Following is the sample deployment architecture with advantages and disadvantages of the same:-

Option 4: Shared Hosting Model with External Hosting Provider. No Dedicated Server.



Advantages of Option 4:

1. Client need not invest in any lease line costs at all as the server will be hosted with the ISP or EHP.
2. Very cost effective as the client need not invest in servers at every location and costly connectivity solution like lease lines.
3. A number of connectivity options are available at very reasonable costs. Client can install multiple connectivity solutions for back up purpose. For example, 2 broad band connectivity can be installed, in case one is down, the other is up and running.
4. eDominator reduces the deployment, maintenance and up gradation cost drastically as the application is installed and runs from a central server. No client software required.
5. An existing, highly secured infrastructure is available with the ISP or EHP.

Disadvantages of Option 4:

1. Public network (Internet) will be used to connect locations.
2. Broad band reliability required for real time operations.
3. Business data will be with the ISP or EHP resulting in losing some degree of control over the data.
4. Dial Up Server option not available now as the server is deployed with ISP or EHP.
5. Shared hosting. No dedicated server. A single server will be shared by multiple clients.

Notes:

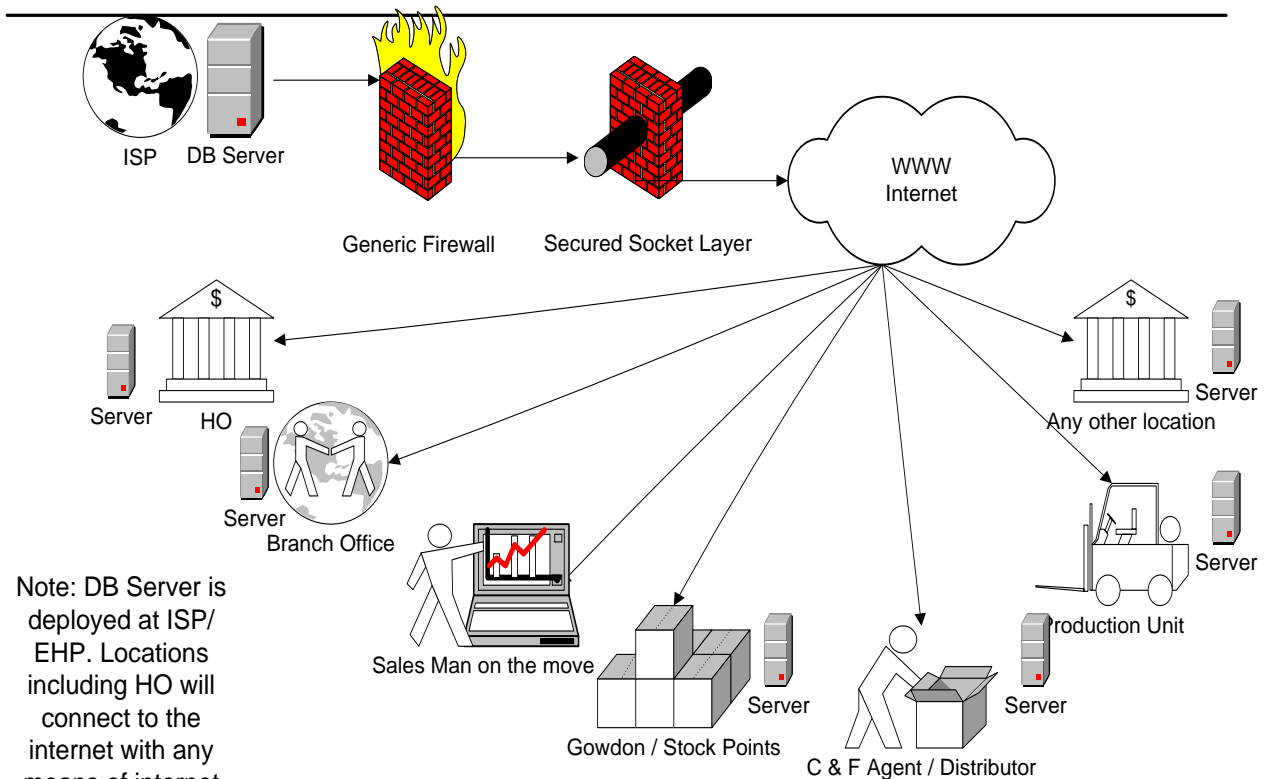
1. Security mechanisms like Anti-Virus, Spy Wares, Firewalls, Tunneling, and Secured Socket Layers can be implemented irrespective of the implementation methodology and deployment architecture.
2. Server on every location is optional and in some cases will not be required. This depends on how many nodes are running on that particular location. For example, if a particular location like Gowdon has only one computer, it can act as server also.
3. Nodes will be connected to their local servers at their respective location, if available or directly to the internet. (Nodes are not shown in the diagram)
4. ERP implementation can be done with customization or without customization in a packaged manner.

Option 5: Database Server can be hosted online with ISP or EHP or shared hosting with application server residing at every location.

Description:

The only difference here in comparison to Option 2 to 4 is that the central server is split into application server and database server. The database server is hosted online with ISP or EHP or shared hosting and the application server resides at every location. The application server may connect to the database server through any means of internet connectivity. Internet connectivity mediums can be broad band, ISDN or dial-up. Following is the sample deployment architecture with advantages and disadvantages of the same:-

Option 5: Database Server can be hosted online with ISP or EHP or shared hosting with application server residing at every location.



Note: DB Server is deployed at ISP/ EHP. Locations including HO will connect to the internet with any means of internet connectivity.

1. Client need not invest in any lease line costs at all as the database server will be hosted with the ISP or EHP and the application server may connect through any means of internet connectivity.
2. Performance will increase tremendously as the application servers will be local.
3. A number of connectivity options are available at very reasonable costs. Client can install multiple connectivity solutions for back up purpose. For example, 2 broad band connectivity can be installed, in case one is down, the other is up and running.
4. An existing, highly secured infrastructure is available with the ISP or EHP.

Disadvantages of Option 4:

1. Public network (Internet) will be used to connect locations.
2. Broad band reliability required for real time operations.
3. Business data will be with the ISP or EHP resulting in losing some degree of control over the data.
4. Dial Up Server option not available now as the server is deployed with ISP or EHP.
5. The client has to invest in servers at every location. The maintenance cost will increase marginally.

Notes:

1. Security mechanisms like Anti-Virus, Spy Wares, Firewalls, Tunneling, and Secured Socket Layers can be implemented irrespective of the implementation methodology and deployment architecture.
2. Server on every location is optional and in some cases will not be required. This depends on how many nodes are running on that particular location. For example, if a particular location like Gowdon has only one computer, it can act as server also.
3. Nodes will be connected to their local servers at their respective location, if available or directly to the internet. (Nodes are not shown in the diagram)
4. ERP implementation can be done with customization or without customization in a packaged manner.

Comparison Chart

Considerations	Option 1	Option 2	Option 3	Option 4	
Central Server requirement	Yes	Yes	Yes	No	Yes (DB & App server)
Deployment of central server	Own premises	Own premises	ISP or EHP	ISP or EHP	ISP and Local
Connectivity Options	Lease Line for every location including HO	Lease Line for HO, Broad band for other locations	Broad band for all locations	Broad band for all locations	Broad band for all locations
Cost of Hardware	More	Less	Less	Least	More
Connectivity costs	High	Less	Least	Least	Least
Implementation cost	Variable	Variable	Variable	Variable	Variable
Security	Highest	High	High	High	High
Reliability	Equal	Equal	Equal	Equal	Equal
Performance	Best	Very Good	Very Good	Good	Very Good
Control over Enterprise Data	Maximum	Maximum	Minimum	Minimum	Minimum
Support	Best	Best	Best	Best	Best
Deployment &, Maintenance cost	Low	Very Low	Very Low	Very Low	Very Low
Implementation time	More	Less	Less	Less	More
Security options	All	All	All	All	All
Packaged or Customized ERP	Any	Any	Any	Any	Any
Exposure to World Wide Web	No	Yes	Yes	Yes	Yes
Back up connectivity options	Dial up Server	Dial up Server	Dial Up Internet	Dial Up Internet	Dial Up Internet
Secured Infrastructure of ISP or EHP	NA	NA	Yes	Yes	Yes
Server at every location	Optional	Optional	Optional	Optional	Yes
Shared Hosting	No	No	No	Yes	Optional
Dedicated Server	Yes	Yes	Yes	No	Optional

Implementation Stages for customized ERP:

- Project Initiation
- ▼
- To-Be system analysis and finalization (SRS & GA)
- ▼
- Design of the customization required (C & D)
- ▼
- Configuration strategies
- ▼
- User Acceptance Testing
- ▼
- Implementation, testing & configuration
- ▼
- Administrator Level Training (Train the trainer program)
- ▼
- End-user training (User level & Functional level)
- ▼
- Go-Live
- ▼
- Post Go-Live support

Implementation Stages for Packaged ERP:

- Project Initiation
- ▼
- Configuration
- ▼
- Administrator Level Training (Train the trainer program)
- ▼
- End-user training (User level & Functional level)
- ▼
- Go-Live
- ▼
- Post Go-Live support

Note1: Please refer “Customized ERP versus Packaged ERP” for more details.

Note2: Please get in touch with a ‘Client Technology Specialist’ at eDominer Systems for the best deployment architecture for your enterprise.