



ExpressSuite

High Level Technical Overview

Greg you have 8 shopping carts awaiting approval.

| Shopping Cart Approval Queue export to excel » | | | | | | |
|--|-------------|-----------------------------|--------|----------|----------|-------------|
| My Queue | | | | | | |
| Cart No. | Created By | Created On | Status | Priority | Currency | Total Value |
| 6500005734 | PMANAGER_NW | Monday, September 27, 2010 | NEW | NORMAL | USD | 51,120.00 |
| 6500005733 | PMANAGER_NW | Monday, September 27, 2010 | NEW | NORMAL | USD | 12,840.00 |
| 6500005732 | PMANAGER_NW | Monday, September 27, 2010 | NEW | NORMAL | USD | 13,485.00 |
| 6500005717 | PMANAGER_NW | Tuesday, September 14, 2010 | NEW | NORMAL | USD | 32,125.00 |
| 6500005716 | PMANAGER_NW | Tuesday, September 14, 2010 | NEW | NORMAL | USD | 373,650.00 |

| | |
|-------------|--|
| Date Issued | 29 th September 2010 |
| Version No. | 0.1 |
| Status | <input checked="" type="checkbox"/> Draft <input type="checkbox"/> Approved |
| Prepared By | Greg Donaldson Solution Architect 10seconds Software Pty Limited (36 136 811 357) http://www.10secondsSoftware.com |

Table of Contents

| | |
|--------------------------------------|-----------|
| TABLE OF CONTENTS | 0 |
| PURPOSE | 1 |
| SOLUTION OVERVIEW | 1 |
| CONCEPTUAL ARCHITECTURE | 3 |
| ARCHITECTURE OPTIONS | 5 |
| SYSTEM REQUIREMENTS | 8 |
| INTERACTION DIAGRAM | 9 |
| SECURITY | 10 |
| SAP AUTHENTICATION | 10 |
| SAP AUTHORISATION | 10 |
| DATABASE | 10 |
| ADDITIONAL INFORMATION | 11 |



PURPOSE

The purpose of this document is to provide a high level technical overview of 10seconds Software's ExpressSuite approval solutions.

ExpressSuite includes the following solutions:

- ExpressPO – SAP purchase order approval.
- ExpressPR – SAP purchase requisition approval.
- ExpressRelease – SAP logistics invoice release.
- ExpressSC – SAP SRM shopping cart approval.

The intended audience for this document is the 10 Seconds team, partners, stakeholders and potential clients.

SOLUTION OVERVIEW

ExpressSuite solutions deliver key SAP approval functionality to users via the desktop browser and mobile devices. Each solution has a deep knowledge of the underlying SAP process and provides rich detailed content to managers so they can make a quick and informed decision.

Key Functional Points:

| # | Item | Details |
|---|---|---|
| 1 | Simple Approval Process | Two mouse clicks to complete the approval via your mobile phone or desktop browser. |
| 2 | Notify users via email of items that require their approval | Monitor each user's approval queue and send notifications when new items are added. |
| 3 | Send periodic email of approval queue. | Periodic summary email (daily, weekly, monthly) sent to each user highlighting their approval queue. |
| 4 | Simple user setup | Straight forward setup process for each user to register. Alternatively, this can be performed centrally by an administrator. |
| 5 | Enhanced user experience | Rich user experience - quicker, easier and more intuitive. |
| 6 | Details item information. | Displays key information to assist a user's approval decision. |

Key Non Functional Points:

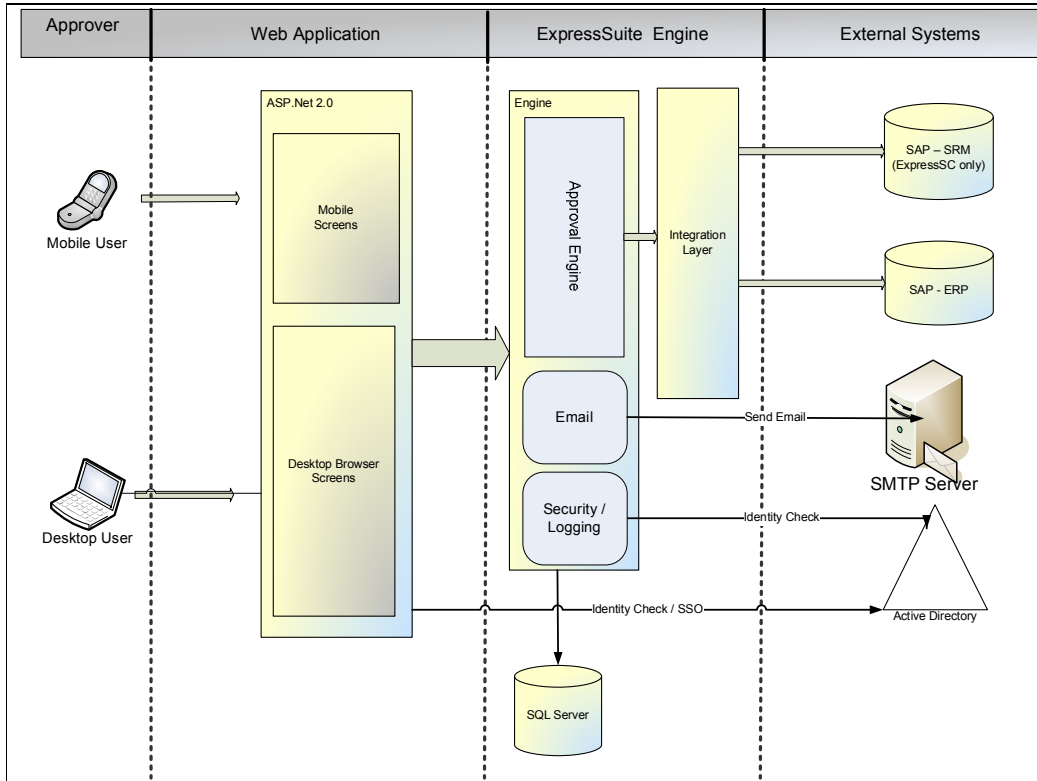
| # | Item | Details |
|---|-------------------------------|--|
| 1 | Support modern browser types. | Firefox, Safari, Internet Explorer 6.0 or greater. |



| | | |
|---|---|--|
| 2 | Support popular mobile devices web browsers | Currently targeting Blackberry, iPhone and Windows smart phone. Other devices can be targeted if required. |
| 3 | Support main SAP authentication methods | SAP Logon Ticket, X.509 Certificate, User name and password and dedicated service account. |
| 4 | Simple installation process | A straight forward installation process that takes minutes. |
| 5 | SAP Integration | Integrates to SAP with SAP's standard integration tool - SAP .Net Connector. |
| 6 | Security | Securely integrates with SAP and other external systems. |
| 7 | Future-proofed | The technology, communication channels, security etc is future proofed and upgradeable. |



CONCEPTUAL ARCHITECTURE



Key Components

| # | Screen | Details |
|---|--------------------|---|
| 1 | Web Application | Standard Microsoft ASP.Net 2.0 web application which serves up content to either desktop browsers or mobile devices. SSO Authentication is via Active Directory. |
| 2 | Approval Engine | Core engine which has deep knowledge of SAP. Key responsibilities are: <ul style="list-style-type: none"> Managing each user's approval queues Approval or rejection functionality Orchestrating email notifications and summaries |
| 3 | Email | Communicates with SMTP server and submits emails. |
| 4 | Security / Logging | <ul style="list-style-type: none"> Authentication to SAP – user name and password/Kerberos/SAP Logon ticket/ X.509 Certificate. |

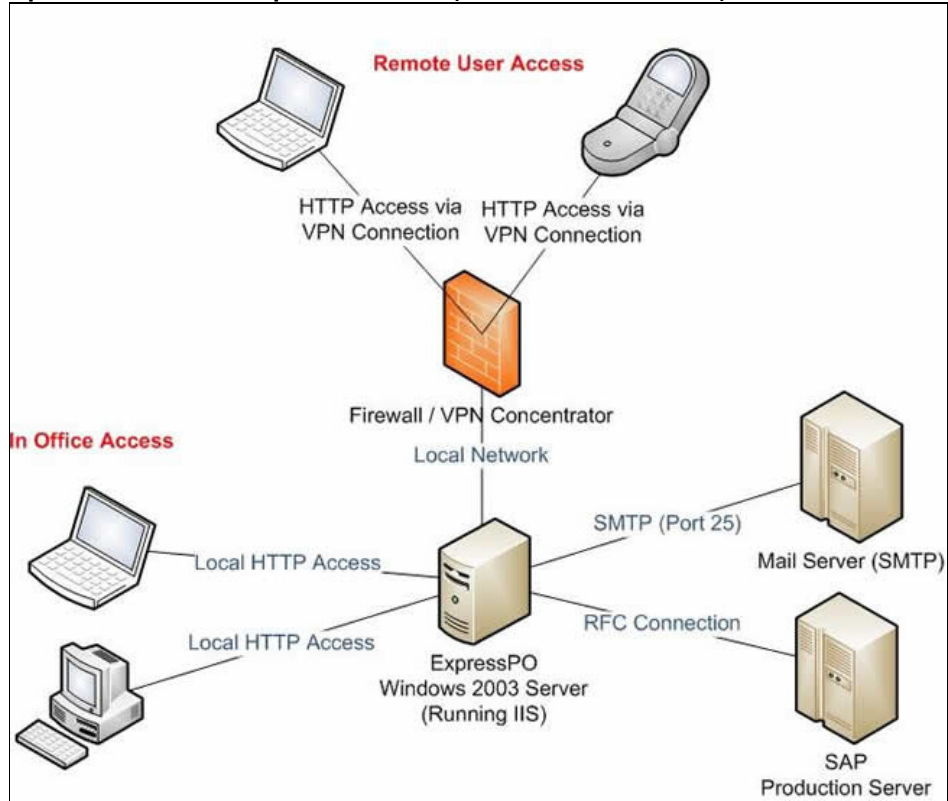


| | | |
|---|-------------------|--|
| | | <ul style="list-style-type: none">• System Logging• Approval & Rejection Log |
| 5 | SQL Server | Used to store the following: <ul style="list-style-type: none">• User settings• System Logging• SAP Connection Settings• Email/SMTP Settings• Approval Log |
| 6 | Integration Layer | SAP .Net Connector provided from SAP . Transport is via RFC or web services. |
| 7 | SAP | Integrates to SAP ERP system and SAP SRM System (ExpressSC). |
| 8 | SMTP Server | Integrates to SMTP Server |
| 9 | Active Directory | Integrates to Active Directory |

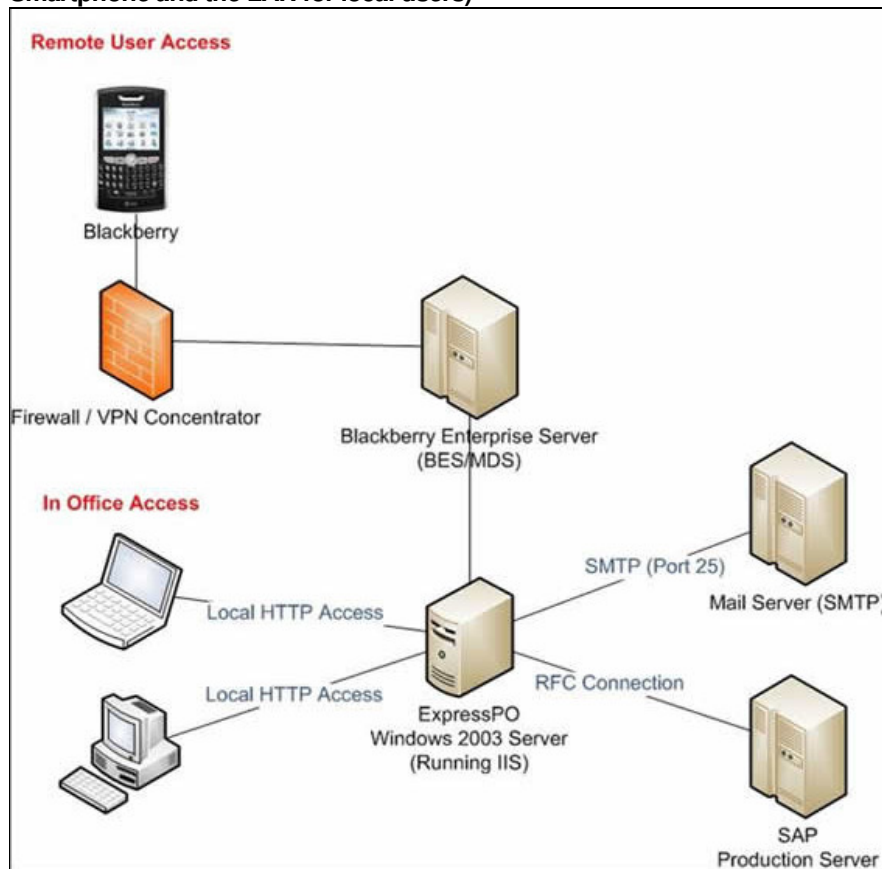
ARCHITECTURE OPTIONS

Several options are available in regards to where to deploy the ExpressSuite solutions in your organization. Below we have highlighted three options that may be considered.

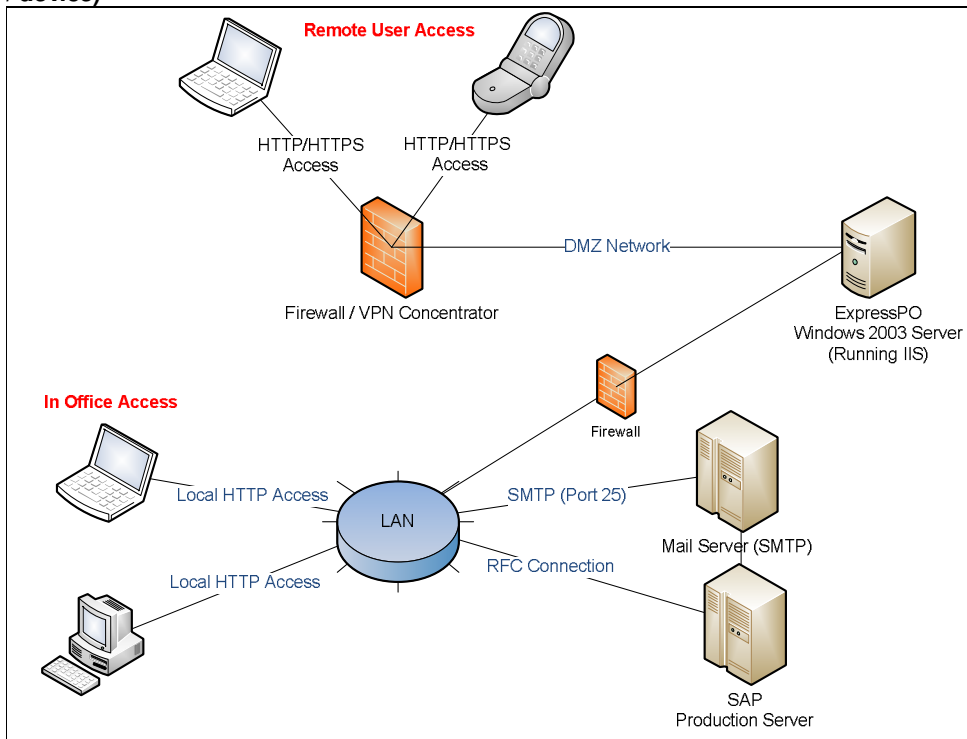
Option one – within corporate network (remote access via VPN)



Option Two - via MDS for BlackBerry (uses MDS via BES to connect BlackBerry Smartphone and the LAN for local users)



Option Three - server in DMZ with Port 80/443 (no VPN required, access from any computer / device)





SYSTEM REQUIREMENTS

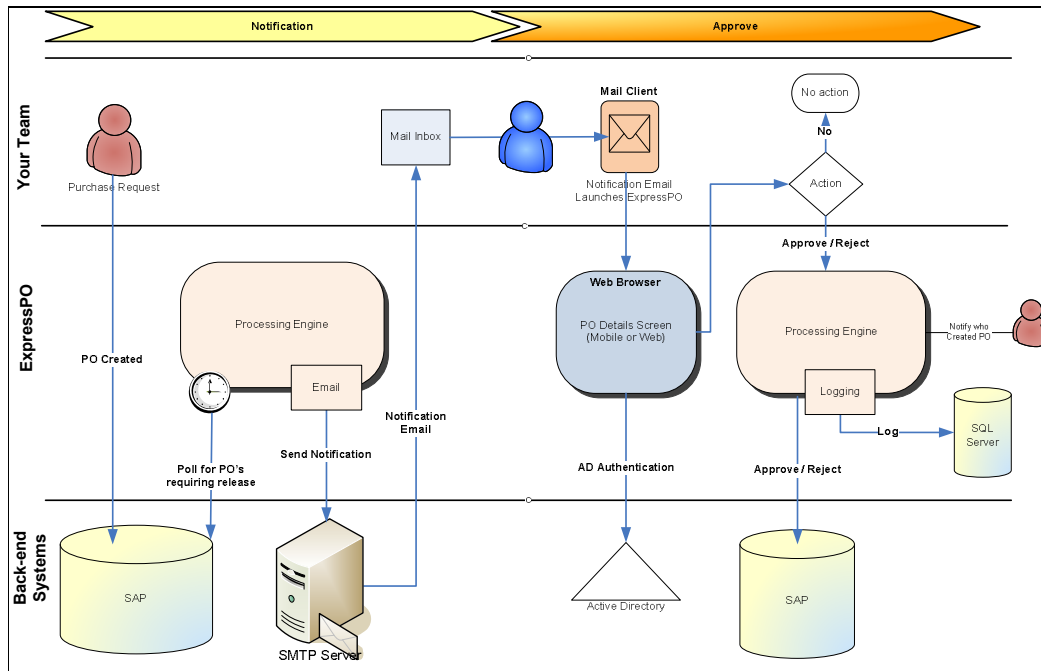
| # | Area | Requirements |
|---|-------------------------|--|
| 1 | ExpressSuite | <ul style="list-style-type: none">• IIS 6.0 or greater• Microsoft .Net Framework 2.0 or greater• SQL Server 2000 or greater (the free version of SQL Server - SQL Server Express is also supported)• Minimum 50mb file space• Minimum 500mb database size• Recommend Windows 2003 Server or higher. |
| 2 | Minimum SAP ERP Version | Compatible with all SAP versions from 4.0B |
| 3 | Minimum SAP SRM Version | SAP SRM 4.0 or higher. (only applicable for ExpressSC) |
| 4 | Mail Server | Any modern email server that supports SMTP. Port is configurable. |

Performance testing has been undertaken on a virtual Windows 2003 server with 512mb of RAM running all four solutions simultaneously with approx 100 users per system. Under these tests both CPU and memory remained low.



INTERACTION DIAGRAM

The following is a high level interaction diagram example for ExpressPO. Other products have a similar interaction process.



1. Periodically the approval/processing engine will interrogate SAP to check whether a user's approval queue has any new items. If so, an email notification is generated.
2. An email request will be routed to the SMTP server to send to the user.
3. A user will receive the email notification containing high level information of the purchase order requiring approval.
4. From the email notification a link will launch the ExpressPO approval screen (mobile or browser depending on where it was launched from). This approval screen will contain all the key detailed information required to make a decision.
5. The user will be able to approve or reject the purchase order.
6. On approval or rejection, ExpressPO will request the appropriate action directly within SAP. Authorisations checks will be evaluated internally within SAP to ensure the user have the appropriate rights to complete the action.
7. If successful, an approval/rejection log entry will be created within ExpressPO.



SECURITY

SAP Authentication

ExpressSuite solutions support SAP's standard authentication methods.

| # | Method | Details |
|---|------------------------|--|
| 1 | User name and password | SAP standard user name and password authentication. |
| 2 | SAP Logon Ticket | SAP Logon Tickets are the flexible central authentication token used in the SAP world and can be used for SSO to all SAP products in the back end. Wikipedia on SAP Logon Tickets - http://en.wikipedia.org/wiki/SAP_Logon_Ticket |
| 3 | X509 Certificate | Certificate based authentication. |
| 4 | Service Account | ExpressSuite solutions can be run against a dedicated SAP account. |

SAP Authorisation

Authorisation or the rules on who can approve or reject each item remains in SAP. Authorisation is checked real-time in SAP and no SAP authorisation logic resides in our solutions.

Database

The database is used to store the following:

| # | Area | Requirements |
|---|----------------|---|
| 1 | User Profile | <ul style="list-style-type: none">• Name• Email Address• Applicable Release strategies/Filters. |
| 2 | SAP Connection | <ul style="list-style-type: none">• SAP connection setting• Dedicated SAP account credentials.<ul style="list-style-type: none">◦ Note: password is encrypted. |
| 3 | SMTP Server | <ul style="list-style-type: none">• SMTP settings. |
| 4 | Logging | <ul style="list-style-type: none">• System Logging• Approval/Rejection logging. |

Note: No sensitive SAP information is ever stored in the database. It is all maintained real-time in memory on the web server.



ADDITIONAL INFORMATION

For any additional information please contact –
greg.donaldson@10secondsSoftware.com or jack.cornford@10secondsSoftware.com