



# SOA Enabling Software Products at Micros Systems

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- 
- 1. About Micros ...**
  - 2. An Example of Customers Large Enterprise IT Infrastructure**
  - 3. About SOA ...**
  - 4. SOA Enabling Architecture of Micros Hotel Products**
  - 5. Attributes of COTS Software Products**
  - 6. Addressing the SOA aspect within the SDLC at Micros**

# About Micros...



# About Micros...



144 countries & territories

4,000+ employees

Software Products Used by:

>200,000 restaurants

>15,000 hotels



# What Do We Do?



# Some of our customers...

THE PENINSULA

HOTELS

STEIGENBERGER  
HOTEL GROUP

TAJ  
Hotels Resorts  
and Palaces



PAN PACIFIC  
Hotels and Resorts



WEST COAST HOTELS®



Hilton

HYATT



FOUR SEASONS  
*Hotels and Resorts*

HOTEL  
INTER-CONTINENTAL

STARWOOD®  
HOTELS & RESORTS WORLDWIDE, INC.



WYNDHAM  
HOTELS & RESORTS®

Kempinski

HOTELS RESORTS

SHANGRI-LA  
HOTELS and RESORTS

Marriott®



Dusit  
HOTELS & RESORTS



BANYAN TREE



THISTLE HOTELS

ĀMAN  
RESORTS

MGM MIRAGE®

micros®

# An example of a Large Enterprise IT Infrastructure

InterContinental Hotels Group | Select Hotel - Windows Internet Explorer

http://www.ichotelsgroup.com/h/d/6c/1/en/hotelsearchresults?\_re

File Edit View Favorites Tools Help

InterContinental Hotels Group | Select Hotel

## Reservation Desk

Select: Preferences | Hotel | Room Rate | Guest Information | Conf

### Search Summary

Orlando, FL, United States  
Travel Dates: Not Specified  
Room Requirements: Not Specified

Add City To Favorites

Chat Online with an Agent

### Modify Search Results

Only show hotels with these amenities:

- Indoor Pool
- Beach Access (within 5 miles)
- Pets Allowed
- Outdoor Pool
- Breakfast Included
- High Speed Internet Access
- Laundry Facilities
- Airport Shuttle
- Kids Eat Free

### Search Results for Orlando, FL, United States.

Search Radius: 100 MI

#### Hotels on Map

Map Satellite H

#### Hotel List



# Hotel Room Inventory Accessed Via Multiple Channels

Hotel

GTM TRAVEL GROUP

HOTELZON

WWW.HOTELZON.COM



Expedia

Holiday Club HVO

WORLDRES.com

Booking US

NRC

BOKA

hotel.de

einfach günstiger buchen

Tablet hotels



FLAIRVIEW TRAVEL

Svergigasan

Flygtorget

ORBITZ

AOS Hotelnet



HOTEL RESERVATION SERVICE



FlyNordic

Finland SUOMI

oboqo



FLAIRVIEW TRAVEL

World of TUI  
Pegasus SOLUTIONS



Web



Phone



Face to Face



# EXAMPLE: Simple Guest Check In Process needs to interoperate with many different systems

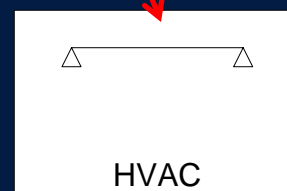
OPERA PMS [Version 5.0, Service Pack 5.0.01.03]    ODH - Opera Demo Hotel, Small    03/04/0...

Window    OPERA PMS [Version 5.0, Service Pack 5...

First Name	<input type="text"/>	CRS No/TA Rec Loc	<input type="text"/>	<input type="text"/>
Corp. No.	<input type="text"/>	Conf/Cxl No.	<input type="text"/>	<input type="text"/>
Block	<input type="text"/>	Mem. Type / No.	<input type="text"/>	<input type="text"/>
Arrival From	03/04/06	Arrival To	03/04/06	<input type="text"/>
IATA No.	<input type="text"/>	Party	<input type="text"/>	<input type="text"/>
Postal Code	<input type="text"/>	Communication	<input type="text"/>	<input type="text"/>
Property	ODH	<input type="checkbox"/>	All Properties	

Room	Room Type	Arrival	Departure	Rms	Prs	Status	Group/Company
ER, ELISA	DLX	03/04/06	03/19/06	1	1/0	COMPANY	DOZER INC.
1	9003 PM	03/04/06	03/05/06	1	1/0	6PM	

Walk In  
Check In  
Cancel



# Why SOA?

Increased  
Asset Reuse

**ROI**

Increased  
Business  
Agility

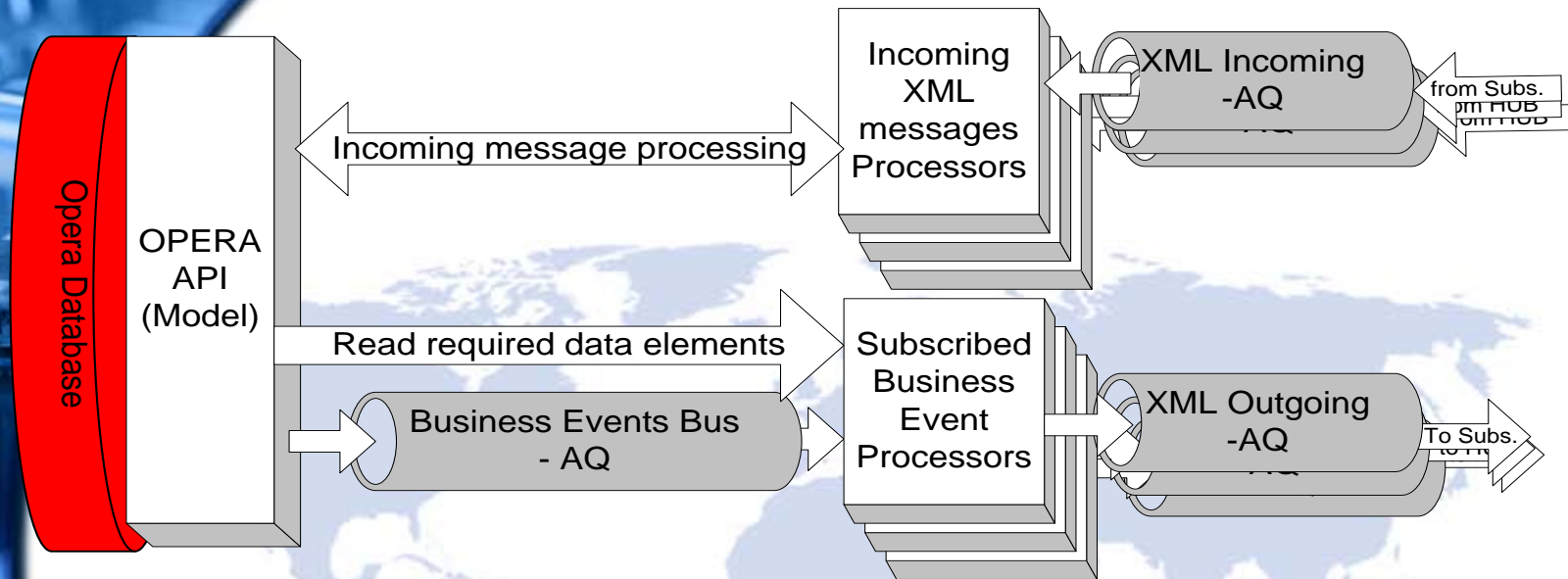
Reduced  
Cost Of  
Integration

# Opera - Supported Integration Types with SOA Environments

1. OXI (Opera eXchange Interface) services for integration via Asynchronous exchange of messages from Business Event Bus
2. OWS (Opera Web Services) for synchronous (conversational) integration
3. Portal Integration – Launching Opera UI via URL query line.



# SOA - Integration with OXI Services



1. Built in Business Event Bus. Fully configurable via Application UI.
2. Provided Software Development Kit with examples for using the OXI infrastructure
3. Support infrastructure in place to provide support and certification for integration projects

# SOA - Integration with OWS (Opera Web Services)

The screenshot displays a complex web-based interface for hotel management. It is divided into several sections:

- Account Information:** Details for 'Pepsi Cola' at 123 Peachtree Street, Atlanta, GA. Includes contact info like phone (827-874-8888) and website (www.pepsi.com).
- Blocks:** A table listing reservations with columns for Start Date, End Date, Status, Block Name, Rooms, Pickup, and Property. It shows 'Last Block' and 'Current and Future Blocks'.
- Activities:** A table listing activities with columns for Date, Type, Own, and Purpose. It includes 'Current and Future Activities'.
- Production Graph:** A 3D bar chart showing 'ACTUAL' and 'POTENTIAL' room nights. Below it is a 'Production YTD' table.
- Contact Information:** Details for 'Mlle Angel Hatch', including position (Dir. Of International Promotions) and contact info.
- Staff List:** A table listing staff members with columns for Name, City, Position, and Department.

The screenshot shows a Windows Internet Explorer browser window displaying a WSDL document. The address bar shows the URL: <http://webservicemicros.com/ows/5.1/ResvAdvanced.wsdl>. The main content area displays the following XML Schema definitions:

```
<wsdl:definitions xmlns:xs="http://www.w3.org/2001/XMLSchema"
  xmlns:soap="http://schemas.xmlsoap.org/wsdl/soap/"
  xmlns:tns="http://webservicemicros.com/ows/5.1/ResvAdvanced.wsdl"
  xmlns:core="http://webservicemicros.com/og/4.3/Core/"
  xmlns:wsdl="http://schemas.xmlsoap.org/wsdl/"
  xmlns:ns="http://webservicemicros.com/og/4.3/HotelCommon/"
  xmlns:ns1="http://schemas.xmlsoap.org/soap/envelope/"
  xmlns:ns2="http://webservicemicros.com/og/4.3/Common/"
```

**VIEW**

**CONTROLLER**

**Web Services Gateway**

**MODEL**

1. Software Development Kit with examples for using the Opera Web Services.
2. Support infrastructure in place to provide support and certification for integration projects

# SOA - Integration – Example of OWS utilization

Hotel Reservations: Luxury Hotel Reservations by Fairmont Resort Hotels - Windows Internet Explorer

http://www.fairmont.com/

File Edit View Favorites Tools Help

Hotel Reservations: Luxury Hotel Reservations by Fai...

FRANÇAIS DEUTSCH 日本語 ESPAÑOL

HOME | DESTINATIONS | PACKAGES | MEETINGS | WEDDINGS | REAL ESTATE | FAIRMONT PRESIDENT'S CLUB | GIFT CARDS | SEARCH

GOLF » SKI » SPA »

**Explore DESTINATIONS**

**Experience WINTER PACKAGES**

**Only One Way Winter Rates**

**Only One Way Winter Rates**

**Only One Way Winter Rates**

**Check Availability** | **Sign In**

Hotel Only  Air/Car/Hotel

More Information »

Destination: Chicago

**The Fairmont Chicago**

Arrival Date: 18 Apr 2007

Departure Date: 19 Apr 2007

Adults: 1 Children: 0

Room:  Non-Smoking  Smoking

Bed Type: King Or Queen

Rate Type: Best Available Rate

Promotional Code\*

IATA Code

\* if applicable

http://www.fairmont.com/washington/Index.htm?DisplayType=Popup

Internet 100%



# Micro OPERA – Example of Integration Into An Enterprise Portal with SSO

**myfairmont**

Myfairmont Applications Locations Departments Standards Mail My Profile Help

Dave Blancard - Corporate Office Friday, April 11, 2008  
[Customize your home page >>](#)

**Property Manager Snapshot**  
 RYH on 4/11/2008 @ 4/11/2008 11:14 Refresh

		Guests			Rooms		
		Ind	Gp/Blk	Total	Ind	Gp/Blk	Total
Arrival	Expected	353	150	503	199	115	314
	Actual	10	11	21	7	9	16
Departure	Expected	159	264	423	129	203	332
	Actual	387	305	692	337	203	540
In-house	Stayover	309	387	696	199	231	430
	Total	319	398	717	206	240	446
Today's Projection		672	548	1220	405	358	763

**Property Manager Availability**  
 Property: RYH Month: Apr, 2008 Legend

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 446 9...	2 354 9...	3 261 12...	4 292 11	5 611 11
6 750 14...	7 438 9	8 500 9...	9 152 9...	10 25 9...	11 528 14	12 624 14...
13 549 14...	14 2 9...	15 -30 1...	16 -69 1...	17 115 9...	18 448 14...	19 884 14
20 620 14...	21 149 8...	22 212 7...	23 543 9	24 821 12...	25 900 14...	26 709 6
27 810 13...	28 559 9...	29 332 5...	30 321 9...			

**Helpdesk Support Suite**  
[Launch >](#)

**serviceplus**  
 Quick Links  
[Expense Manager](#)  
[Code of Ethics](#)  
[Privacy of Employee Information](#)  
[Savvy Hotelier](#)  
[Brand To Life](#)  
[Leonardo](#)

**Mail**  
 Your most recent messages as of 4/11/2008 11:14:07 AM are displayed below. To check for new messages here. To view your **Inbox**, [click here](#).

**Subject**  
 Screenshot favor  
 RE: Missing Function room maps.  
 RE: Missing Room Mappings for DAL  
 RE: Missing Room Mappings for DAL  
 RE: Property Distribution Workgroup - General WG teleconference - April 21st  
 RE: Migration Update  
 Dear Sender,  
 RE: Missing Room Mappings for DAL

**ProfilePlus**  
 FPC Number:   
 Login Name:   
 Guest Name:   
 Last:   
 First:   
 Email Address:   
[FPC Daily Arrival Report](#)

**Group Block Search**  
 Hotel: ACA   
 Company:   
 Company (internal) ID is   
 From:  (dd-mmm-yyyy)  
 To:  (dd-mmm-yyyy)  
 Block Code:   
 Rate Code:

Received  
 2008-04-11 11:11:59

**Details - Microsoft Internet Explorer**  
 Hotel Availability - Detail  
 Hotel: The Fairmont Royal York (RYH)  
 Date: Thursday, April 10, 2008  
 House-Level Restrictions: **CLOSED OUT**  
 Rate Levels: L.O.S. Rate Level Occupancy %: 98.2%  
 1 9  
 2 9

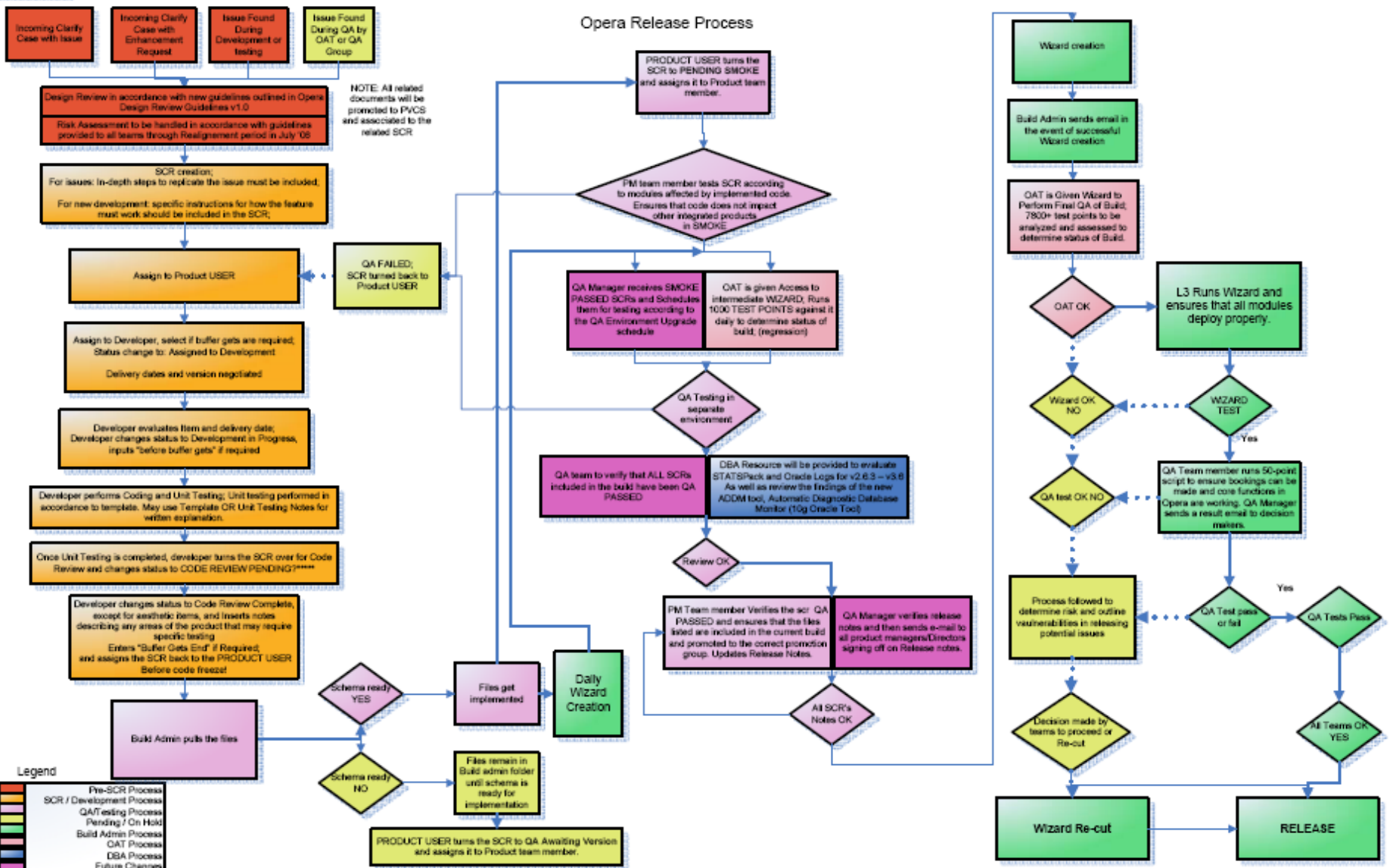
Room Type	Room Description	Total Rooms	000 Rooms	OverSell Limit	Sold Rooms	Available Rooms	Restrictions
<b>ALL ROOMS (The House)</b>							
<b>Moderate (MOD) Subtotal</b>		<b>70</b>	<b>2</b>	<b>85</b>	<b>68</b>	<b>15</b>	
SQN	Moderate Queen NS	54	0	59	54	5	
SQS	Moderate Queen SK	16	2	26	14	10	
<b>Fairmont Room (FMT) Subtotal</b>		<b>1036</b>	<b>65</b>	<b>1131</b>	<b>972</b>	<b>94</b>	
<b>Deluxe (DLX) Subtotal</b>		<b>98</b>	<b>1</b>	<b>98</b>	<b>99</b>	<b>-2</b>	
DKN	Deluxe King NS	21	0	21	21	0	
DKS	Deluxe King SK	2	0	2	2	0	
DQN	Deluxe Queen NS	6	0	6	6	0	
DDN	Deluxe Dbl / Dbl NS	51	0	51	53	-2	
DDS	Deluxe Dbl / Dbl SK	18	1	18	17	0	
<b>Signature (SIG) Subtotal</b>		<b>21</b>	<b>0</b>	<b>21</b>	<b>21</b>	<b>0</b>	
<b>Fairmont Gold (GLD) Subtotal</b>		<b>84</b>	<b>1</b>	<b>84</b>	<b>83</b>	<b>0</b>	
<b>Suite (STE) Subtotal</b>		<b>67</b>	<b>3</b>	<b>67</b>	<b>63</b>	<b>1</b>	
<b>ALL ROOMS (The House)</b>		<b>1376</b>	<b>72</b>	<b>1403</b>	<b>1306</b>	<b>25</b>	

# Attributes of the COTS Software Products

- 1. There Must Be a Market for It (Somebody Is Willing to Pay for It)**
- 2. It Has to Work**
- 3. It Needs to be Distributable (Sell and Deliver)**
- 4. It Needs to be Supportable**
- 5. Making 2,3 and 4 Needs to be Profitable Business**

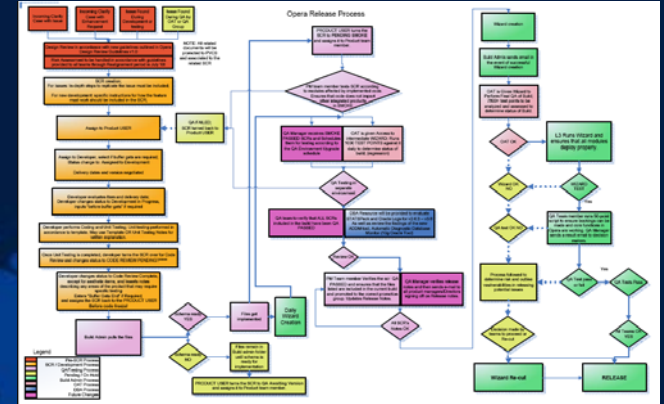
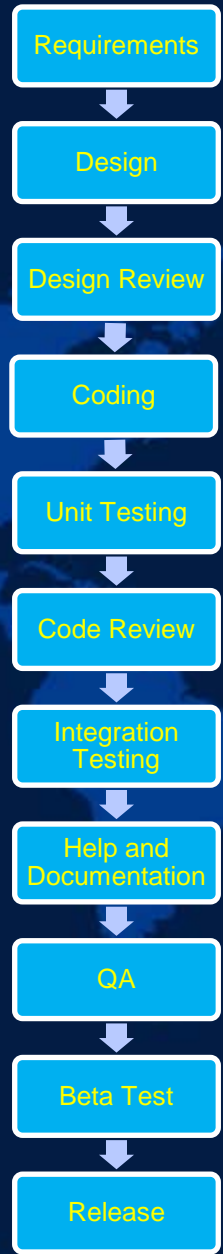
**✓ SOA Support In COTS Must Have All Attributes Above**

# Addressing the SOA aspect within the SDLC at Micros





# Addressing the SOA aspect within the SDLC at Micros





**Questions**

**&**

**Answers**

**micros<sup>®</sup>**