

COMARCH

CRM & MARKETING

Comarch Airline Suite

IT that enhances airline economics

www.crm4travel.com

Comarch Airline Suite

IT that enhances airline economics

In the **highly competitive airline industry**, a proper IT strategy is a prerequisite to achieve profitable operations. Comarch has designed and developed IT products that handle CRM initiatives, manage digital document flow as well as improve the digital infrastructure of various types of air carriers. Visit crm4travel.com and learn more about solutions for airlines

The Comarch logo, consisting of the word "COMARCH" in a bold, blue, sans-serif font, positioned in the bottom right corner of the advertisement. The background of the entire advertisement is a high-angle view from an airplane window, showing the wing and tail of the aircraft in the foreground, with several other commercial jets flying in the distance against a bright blue sky filled with white clouds.

IT that enhances airline economics

The processes of deregulation and liberalization of international air transport are changing the nature of the airline industry. Passengers migrating between competing carriers are becoming more frequent than previously observed. Comarch has designed and developed software that powers CRM & MARKETING strategy of air carriers, from enhancing FFPs, through Business Intelligence works and client segmentation, ending on online communication through WWW and mobile applications. This package of group of products consists of 6 applications that can be freely integrated with each other.

Hundreds of documents of air carriers that are being moved across departments and between business partners each day require proper management and flow control. Comarch ENTERPRISE CONTENT MANAGEMENT is a dedicated tool for the effective management of processes and associated documents of various type. With the help of this efficient BPM module for process designing and execution, the time required for different business activities can be reduced from days to minutes – with all KPIs monitored by a BI tool. Learn more in the chapter Comarch ECM.

However, marketing initiatives need to be supported by effective communication through every channel, both in terms of the internal flow of messages as well as the external ones. Within the CONTACT CENTER & IT NETWORKS group of solutions, Comarch offers products and services that enable interactive, multichannel communication with airline clients, guarantees smooth implementation and management of WiFi networks, guard WAN security and unify's all communications.

In addition, Comarch offers the airline industry complex services that manage servers, databases and storage systems. A carrier's IT environment can be adapted to the changing environment by properly integrating work. Provisioning a high availability of IT systems as well as data archiving and backup are also offered. More information can be found in the IT OUTSOURING & INTEGRATION section.

An aerial night view of a city skyline, likely New York City, featuring numerous illuminated skyscrapers and a prominent antenna tower. The city lights are reflected in the dark sky, and the overall scene is vibrant and dynamic.

AIR TRANSPORT IS A MAJOR CONTRIBUTOR TO ECONOMIC GROWTH

Over 35% of the world trade by value is carried by air, which is a reliable tool in helping countries participate in the global economy. In addition, airlines through the direct and indirect effects generate over 11 million jobs at airlines, airports and their suppliers along the chain. The catalytic effect of air transport brings investment and innovation to hundreds of regions of the developing countries. The four effects are estimated to generate over 30 mln jobs worldwide.*

* Source: ATAG.

Contents

CRM & MARKETING

Comarch Loyalty Management for Airlines	6
Comarch Corporate Flyer	7
Comarch Smart Analytics	7
Comarch Campaign Management	8
Comarch Smart Portal for Airlines	8
Comarch Travel Assistant for Airlines	9

ENTERPRISE CONTENT MANAGEMENT

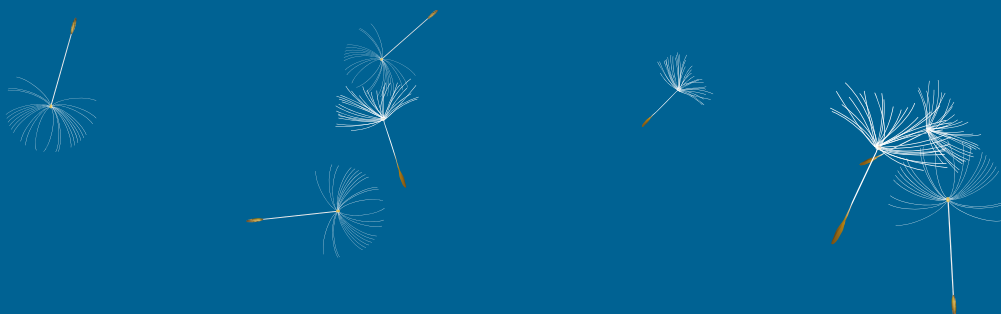
Comarch ECM	11
-------------	----

CONTACT CENTER & IT NETWORKS

Comarch Interactive Suite	13
Comarch Support & Maintenance	14
Comarch WAN Security	14
Comarch Unified Communications	15

IT OUTSOURCING & INTEGRATION

Comarch Managed Services	16
Comarch Systems Integration	17
Comarch Business Continuity	18



Comarch Loyalty Management for Airlines

Comarch Loyalty Management for Airlines is an IT application that powers Frequent Flyer Programs. This modular solution allows smooth running of all kinds of loyalty programs, for any type of airline; be it legacy, regional, low cost or hybrid carrier. The system represents a three-layer architecture and consists of 6 modules. It is offered as both an enterprise-class solution and in the Software as a Service (SaaS) model, thus meeting all business and commercial requirements of airline clients.

PRODUCT OVERVIEW

- ▶ **The Business Administration** component involves straightforward tools for the management and administration of an FFP.
- ▶ **The Business to Partner** module has been designed in order to meet the needs of the program's multi-partner environment and to provide both airline and non-airline program partners with relevant data and tools for program parameterization through a B2P portal.
- ▶ **The Data Hub** component assures smooth exchange of data with program partners and other third-party counterparts.
- ▶ **The Contact Center** module offers servicing program members via a variety of channels.
- ▶ **The Customer Web Portal** was especially designed for FFP members and provides airline clients with online account management where passengers can check their account balance and history of transactions, order rewards (discounts, tickets, upgrades and others) and view current promotions.
- ▶ **The Mobile Application** was developed with special attention paid to the informative requirements of program members that use smartphones and tablets.



BENEFITS

- ✔ The product offers every single feature requested by legacy network carriers gathered in multilateral airline alliances, as well as every single functionality requested by low-cost carriers
- ✔ The Mobile Application module expands the functional area of an airline's mobile app with FFP membership management features
- ✔ Intuitive management of program membership with points calculator and loyalty widget
- ✔ On-board redemption (cabin purchase), points auctions and lotteries
- ✔ Knowledge base management & smart user help in the Contact Center
- ✔ ... and many, many other functionalities covered by the Product Roadmap



Comarch Corporate Flyer

Comarch Corporate Flyer enables to launch of a B2B loyalty scheme for hi-yield corporate travelers. It allows to accrue points to a corporate account for all business travel with an airline independent of an employee's membership in the airline's FFP. Points or miles granted can be redeemed for awards to any person that is designated by the account owner. The program runs independently from an airline's FFP thus rewarding an airline's most valuable customers to an even greater extent.

The solution brings together all of Comarch's best knowledge and experience in serving airline FFPs. It can power any additional marketing initiative for corporate flyers in parallel to an airline's FFP. The Business Administration module allows for the management of the program's business rules. Access to member's profile remains available for selected operators within the Contact Center module.

The Customer Web Portal is a Web portal dedicated to program members. In addition, the system offers creation accounts of different types with a different set of attributes for each of them.

The product can be a stand-alone application or be a module of Comarch Loyalty Management for Airlines.

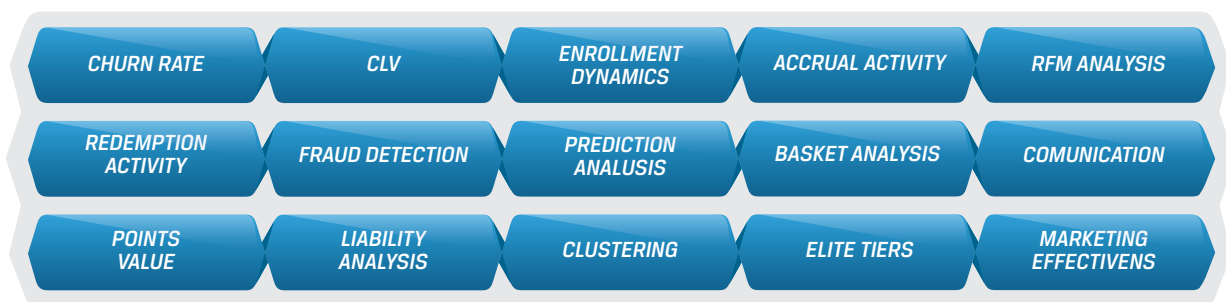


Comarch Smart Analytics

Having gathered information, it's time to prepare analysis. The multiplicity of information sources requires a reliable Business Intelligence solution. Comarch Smart Analytics is the product that processes information from various sources and prepares reports that affect managerial decisions. Link it to your FFP or to a corporate website and enjoy reports that shape the future of an airline's business.

Comarch Smart Analytics is an analytical application specialized in marketing data analysis. Data is downloaded from many sources to one location, then cleaned, linked and transformed. The goal of such processing is to present information through the use of business language.

In addition, CSA differs from relational technology because it views data as multidimensional cubes, which has proven to be particularly well suited for data analyses. The product can be augmented with an airline's FFP, an official website or campaign management tool.



Comarch Campaign Management

The airline business belongs to one of the most challenging industries in the world. The final result of this competition also depends on the effectiveness of marketing campaigns. They need to be issued to a precisely targeted audience at the proper time. Comarch Campaign Management is a response to these challenges and needs. This customer-oriented marketing solution supports the creation and management of marketing campaigns.

The system optimizes the preparation process, simplifies campaign management, automates its execution and enables studying its results. It allows personalized

multi-channel communication with a large number of passengers while reducing marketing costs. The set of processes is presented in the diagram below.

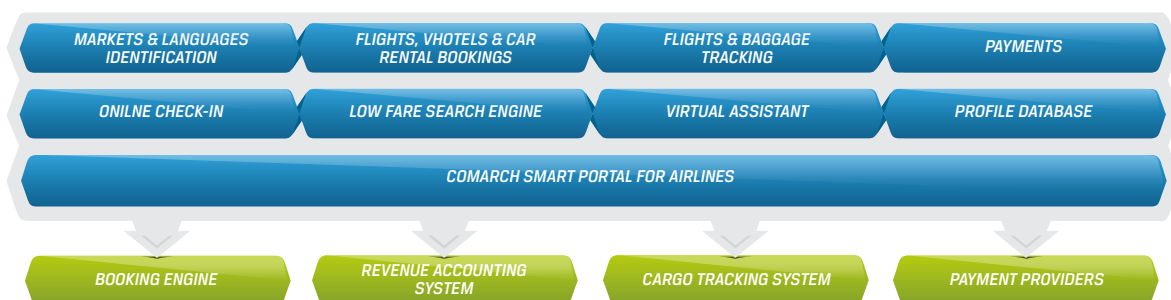


Comarch Smart Portal for Airlines

Modern websites of air carriers constitute more than just multimodal centers of information. They offer reservation capabilities for flights, hotel stays, car rentals or cruise line voyages within the integrated value chain of the travel process. Comarch Smart Portal for Airlines is a Web portal which possesses all the features required by both hub&spoke as well as low-cost carriers.

The product consists of a variety of functional areas that can be combined freely with each other. Apart from standard functionalities covering the acquisition of information and the booking of flights, the solution offers a low-fare search engine that attracts price-sensitive customers.

Cargo tracking features allow instant insight into the flow of goods. The Virtual Assistant helps infrequent travelers deal with all booking and check-in related processes. In addition, the portal enables the administration of departure lounges and collection of feedback.



Comarch Travel Assistant for Airlines

Comarch Travel Assistant for Airlines is a mobile application developed with special attention paid to the informative requirements of airline passengers. Equipped with enriched functionalities, it offers complex customer handling. Advanced promotional campaigns can also broadcast videos and animations. Welcome to a mobile marketplace powered by mobile technology!

PRODUCT OVERVIEW

The product allows to access information on all stages of the travel process. Now flight passengers can view their detailed flight schedule, book a ticket, get acquainted with promotions and manage their reservations. At an airport an application user is notified of changes to gate numbers and traffic disruptions, search for dining or shopping options at

an Airport City or relax with games and other entertainment content. Having arrived at a destination airport, information on baggage tracking is displayed on the mobile screen. Additionally, the application can deliver information on airport access from a city center, enable full management of an FFP account or be a virtual guide in the visited city.

COMARCH TRAVEL ASSISTANT FOR AIRLINES - FUNCTIONAL AREAS



BENEFITS

- ✓ The application offers smooth management of every process related to air travel, starting from search of flights, through ticket purchase, mobile check-in, ending on feedback generation and FFP membership management
- ✓ Mobile check-in saves up time of the passengers who do not need to queue for check-in desks
- ✓ Functionality „Notifications“ allows to distribute personalized communication on further travel segments though decreasing the likelihood of a passenger's delay for a flight
- ✓ The mobile application is a unique and innovative communication channel which delivers service information straight to the client's hands in any place with access to the Internet
- ✓ Airlines can source additional revenues from broadcasting commercials and featuring paid advertisements
- ✓ ... and many, many more functionalities provided by the Product Roadmap

A narrow canal in Venice, Italy, with colorful buildings and gondolas. The scene is captured from a low angle, looking down the canal. The buildings are multi-storied with various architectural details, including arched windows and balconies. The water is calm, reflecting the buildings and the sky. Several gondolas are visible, with people inside. The overall atmosphere is peaceful and historic.

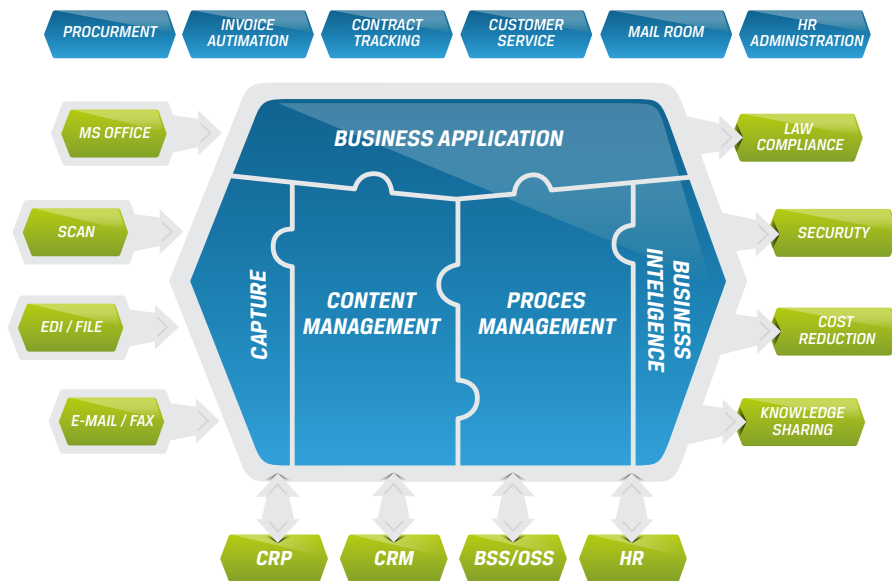
AIR TRANSPORT IS A MAJOR CONTRIBUTOR TO TOURISM DEVELOPMENT

International tourism is expected to continue growing in 2012. Arrivals are expected to reach the historic one billion mark by the end of the year. Tourism is an important sector in poverty alleviation bringing value added directly to the poor in Africa, Latin America, Asia and the Caribbean. By 2019 the sector is forecasted to provide 296 million jobs in the global economy. Over 40% of international tourists travel by air.*

* Source: UNWTO, ATAG.

Comarch ECM

Comarch ECM is an Enterprise Content Management solution that allows to manage the informative capital of air carriers that is covered in both business and aviation documents in a complex manner. This universal tool enables to capture and archive documents, work with documents, secure searching of content as well as support the business processes related to them. Comarch ECM has been implemented in over 1000 clients in Europe, consisting of a variety of industries.



PRODUCT OVERVIEW

The main objective of implementation of such solutions is to increase the efficiency of the company, it's employee's and take control over the chaos of information by optimizing processes.

These effects are particularly visible with implementations in the following areas:

- ▶ Purchase Invoice Management (OCR, cost allocation, workflow of acceptance)
- ▶ Procure-to-pay (purchase procedures, orders, process of acceptance)

- ▶ Contract tracking (control over versions of documents, procedures for approval by various departments)
- ▶ Management and archiving of aviation documents (waybills, AWB, MAWB)
- ▶ Processes of the cockpit and deck personnel briefing with the associated documents
- ▶ Flight planning
- ▶ Management and storage of documents related to membership in alliances and multilateral agreements
- ▶ Human Resources (leaves, delegations, employee's file)
- ▶ ... and in many, many other cases.

KEY FEATURES

- › WORKFLOW, BPM
- › OCR, INDEXING AUTOMATION
- › DOCUMENT MANAGEMENT - DMS
- › BUSINESS INTELLIGENCE
- › ACTIVE DIRECTORY / LDAP INTEGRATION
- › QUICK, FULLTEXT AND MULTI-INDEX SEARCH
- › MS OFFICE INTEGRATION
- › ACCESS THROUGH WWW, DESKTOP AND MOBILE CLIENT

BUSINESS BENEFITES

- › QUICK AND SECURE ACCESS TO INFORMATION
- › IMPROVEMENT OF BUSINESS PROCESS QUALITY
- › DOCUMENT PROCESSING AND WORKFLOW REGARDLESS OF LOCALIZATION
- › LEGAL COMPLIANCE
- › INTEGRATION OF RELEVANT DOCUMENTS AND INFORMATION INTO BUSINESS PROCESSES
- › FULL VIEW INTO PROCESSES THANKS TO BUSINESS INTELLIGENCE



AIR TRANSPORT DELIVERS EMERGENCY AND HUMANITARIAN AID RELIEF

Air transport is often the only means of transportation to geographically remote areas. It delivers emergency and humanitarian aid relief anywhere on Earth, both to tourists lost in mountains at severe weather and to children in lowland regions torn apart by military conflicts. Reliability and speed of air movement makes airplanes the dominant mode of transport in delivery of organs for transplantation and medical supplies. *

* Source: ATAG.

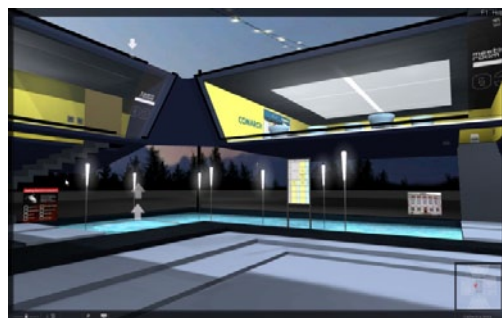
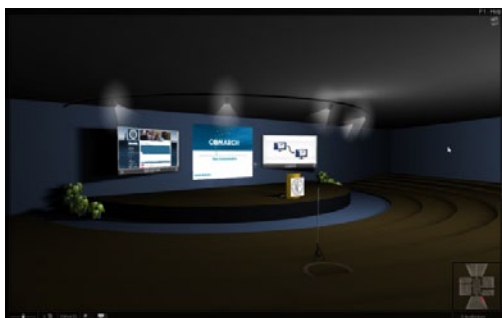
Comarch Interactive Suite

Comarch Interactive Suite is an interactive communication platform that powers multichannel communication between airlines and their passengers. The CIS package is a perfect form of communication especially in the case of Generation Y passengers and allows for quicker and more effective communication with the use of modern channels than the traditional ones. Welcome to the world of WEB 2.0!

PRODUCT OVERVIEW

Functional blocks cover:

- ▶ **Video IVR** - the module powers communication with the use of a 3G phone. Due to video connection, communication is easier and more secure than in the case of a traditional phone call. No need to use a special application or upgrade a Web browser. An user can establish a video connection where he can use an interactive menu which is more effective than classic IVR. While waiting for a connection with the Contact Center operator, clients can be view promotional films or other carefully selected multimedia content.
- ▶ **Telepresence** - a platform for video teleconferences in the B2B relations. Telepresence is the new technology that is replacing classic videoconferences. Due to hires monitors and cameras as well as a surround sound system – system users can almost feel the presence of the corresponding party. Realism of conversations is guaranteed by keeping eye contact, use of gestures, changes in voice tonation – its just as if fellow conference membes were in the same room, not thousands miles away.
- ▶ **Web.Alive** - a platform that uses the Unreal Tournment graphical engine. This solution is dedicated to enthusiasts of FPP games and allows for interactive communication with other gamers. Platform users can generate their own virtual world, which can be located in existing buildings or in a futuristic, breathtaking forms. In addition, meetings of platform users in virtual reality are made possible thanks to fully-controllable avatars that can greet each other, clap their hands or share files just as simple as it is done in the real world.
- ▶ **VideWeb** - the platform enables video communication without the necessity of installing dedicated software – a traditional camera and Web browser is enough. A Java applet is used and communication continues via SIP protocol.



Comarch's rooms in Web.Alive

Comarch Support and Maintenance

This fast and reliable data transmission network is your opportunity to gain a competitive advantage. IT Infrastructure, including data network transmission, is the basis of your business activities, from data transmission, voice calls, video service, as well as granting every employee access to necessary applications regardless of time and place.

Comarch Support & Maintenance is a solution focused on providing support and maintenance after warranty service at the highest level. This is a solution which ensures that your IT Infrastructure runs at the speed of your business.

With unlimited available technical support according to SLA parameters, our customers obtain a quick solution to all of their product related issues.

BENEFITS

- ✓ Technical support for new and already used equipment
- ✓ One contract for various levels of support
- ✓ One point of contact for support continuity
- ✓ Speed of response – a service based on SLA level
- ✓ Reduce operating costs while increasing efficiency
- ✓ High clarity and quality on a clearly defined range service



Comarch WAN Security

Because Comarch cares for the safety and comfort of a used data network, it offers its customers Comarch WAN Security (CWS). This is a package of additional security services for WAN transmission. CWS can be used for both the existing network infrastructure, as well as a new one. The possibility to integrate solutions and supplement products with our own components, frequently carried out at the request of individual customers, is one of our trademarks.

With the Comarch WAN Security package we offer comprehensive solutions that allow to use the corporate network and protect corporate information in a safe manner.

The package includes the following products:

- ▶ Comprehensive protection of corporate data network;
- ▶ a group of products permitting safe usage of Internet resources: firewalls and intrusion detection systems (IPS), protection of e-mail servers (antivirus, anti-spam systems), Web page access control;
- ▶ manage a security policy in a company.

Comarch Unified Communications

Comarch Unified Communications is a new approach to business communication. Time matters and time is money. In the modern business world effective communication is a factor that guarantees business continuity.

Comarch Unified Communications allows for integrate with all communication channels like: e-mail, phone calls, voice post or video connections into one surface. In result, system users can exchange information in real time regardless of the place they are actually at and the communication

channel they are using. Comarch Unified Communications offers more fluent management of information and boosts the effectiveness of business processes. Furthermore, the solution results in a full use of an airline's resources, both tangible and intangible ones.



Comarch Managed Services

Comarch Managed Services consists of continuous administrative services that are handled by Comarch professionals remotely from the office or directly at the customer premises. The services primarily apply to advanced server systems, database and storage systems which are critical installations in an airline's IT Infrastructure. Comarch's certified engineers provide services which include the highest SLA parameters. In addition, we manage the hardware and virtual platforms as well as the operating systems.

PRODUCT OVERVIEW

Operating systems administration

The service offering server management and administration involves taking over the responsibilities of the administrator of the server infrastructure in the customer's environments.

The scope of services is determined individually with the customer and may include permanent cooperation (administration and supervision of servers) or occasional services (installation, reinstallation, update, audits). Comarch is able to take full responsibility for managing a customer's system platform providing remote management and administration of operating systems and monitoring services 24 hours a day, 7 days a week, 365 days a year.

Data Bases administration

- ▶ Installation and configuration of databases on Linux, Windows, AIX, HP-UX, Solaris, both as single instances and advanced configurations like Data Guard and Real Application Clusters.
- ▶ Installation and configuration of databases in HA clusters: Red Hat Cluster Suite, Veritas Cluster HA, HACMP, Oracle, Solaris Cluster, etc.
- ▶ Daily administration (troubleshooting, tuning / optimization, installation of patches, elimination of errors).
- ▶ Remote, proactive monitoring of database systems and 24x7 alerts handling.
- ▶ Monitoring of performance and guaranteed quick response to production outages.
- ▶ Migration between different versions of any of the supported configurations and between any hardware platforms.
- ▶ Preparation of a backup strategy fully adjusted to the customer's requirements and preparation of data recovery strategies.

Virtual platforms administration

The scope of services include implementing a wide range of virtualization solutions such as VMware ESX, Parallels Virtuozzo, Oracle VM, Citrix Xen, Microsoft Hyper-V. Comarch offers full support of the whole process of implementation and the migration of existing physical environments to the virtualization platform. We help customers diagnose, manage and resolve problems related to a virtual environment regardless of its vendor. We have experience and comprehensive technical knowledge of the market's most popular virtualization environments.

BENEFITS

- ✔ Access to highly skilled technical services
- ✔ Improved quality of service
- ✔ 24x7 pro-active monitoring and management
- ✔ Resources allocated to strategic projects instead of day to day management



Comarch Systems Integration

The Comarch Systems Integration product group comprises of a number of services, whose purpose is to adapt the customer's IT environment to their new business and technical requirements. Comarch supports its customers beginning from the phase of analysis and design of the new IT platform, through the delivery of appropriate equipment and software, up to the implementation and maintenance phase. We're talking both about the launch of new systems on new platforms, extending the functionality via software upgrades (e.g. by upgrading the database or backup system version) and also migration between systems, system consolidation or virtualization of physical environments currently used by the customer.

PRODUCT OVERVIEW

IT platforms analysis and design

Comarch offers consultancy services in choosing the hardware and system platform and mediation during purchase (the possibility of obtaining attractive discounts). Thanks to this service the customer receives a complete and adequately sized hardware and system platform for his needs. We can also help with the integration of new and existing IT solutions in the customer's environment. Within the offered services are also designing high-availability solutions.

Physical environments virtualization

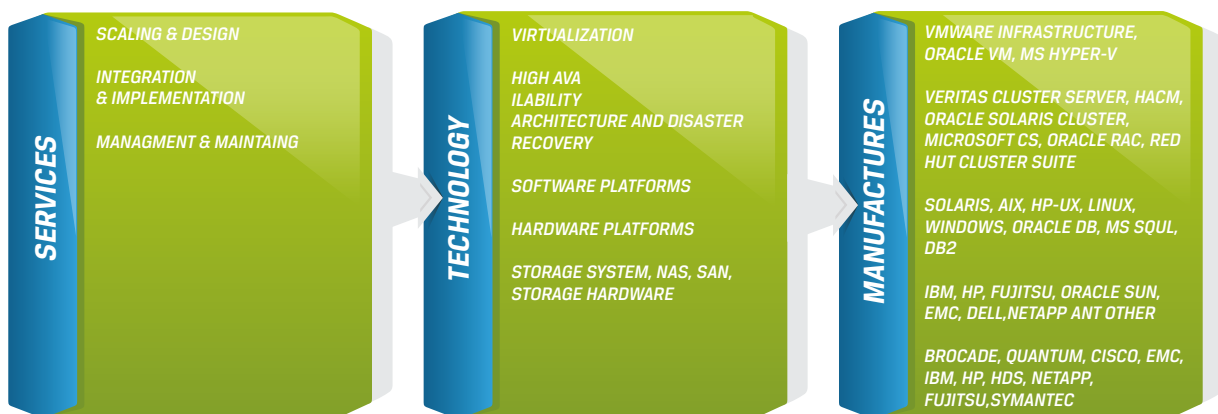
Comarch carries out server virtualization services of a customer's existing physical server environments. The technology provides a higher level of resources utilization without compromising the safety or reducing the systems availability. Virtualization significantly reduces IT infrastructure costs and the costs associated with the management of this infrastructure. A big benefit of this solution is that flexibility and the level of service is higher which makes it easier to perform implementation and to react faster to changes in the business. The main advantage of using the virtualization technology is also the increase in the flexibility of servers due to moving virtual machines between physical servers without disrupting the users access to resources and services.

Implementation and migration services

The service carries out comprehensive implementation of the system, beginning from hardware procurement, preparation of the installation plan through installation and configuration of devices, ending on post-installation documentation creation. If integration with the existing environment is needed then first analysis is carried out later the project is prepared and then installation and configuration is executed in accordance with the customer's requirements. In the end post-installation documentation is prepared.

Hardware and software delivery

Comarch offers a wide range of IT hardware and software and adapts it to the specific needs and requirements of the customer. The offer includes: desktops, notebooks, monitors, printers, servers, routers, switches, disk arrays, tape libraries, firewalls, system software, antivirus software and other specialized software (e.g. virtualization software). Comarch is a partner of many large worldwide manufacturers and vendors of IT hardware and software. We also perform very specialized custom hardware orders for customers. There is also always a possibility to obtain substantive and professional support and maintenance for the purchased equipment.



Comarch Business Continuity

The Comarch Business Continuity product group consist of two products that are dedicated to providing high availability to systems components, minimizing the possible effects of a accident and a quick recovery process to the state before the failure. This high availability solution is a service designed for those customers where even the slightest critical system failure can result in huge loss. Such customers are willing to invest in equipment and software solutions in order to prevent a single point of failure in a system's component which might cause a business application to be unavailability. The backup and data archiving service is dedicated to companies which are aware of the validity of the data that is stored and processed in their information systems. Comarch designs and implements a data backup and archiving system appropriate to the customer's environment size and can also administer it after implementation.

PRODUCT OVERVIEW

Data backup and archiving

Thanks to the professional backup system we can reduce the time spent on data protection and the time needed for data recovery. Comarch adjusts backup and data archiving solutions to the customer needs. We use the solutions of such manufacturers as: Symantec (NetBackup, BackupExec), IBM (Tivoli Storage Manager) and EMC (NetWorker), which allows for great flexibility in the construction of a complex adjusted backup and data archiving service in terms of both hardware and the software.

High availability solutions

The main reason for applying High Availability solutions is the need to ensure continuous access to business-critical applications and data. This is achieved through the use of a cluster of solutions that minimize downtime caused by system failure. High Availability services offered by Comarch include both design and implementation of performance, as well as reliable and mixed clusters. Reliable cluster solutions are designed in such a way as to minimize the downtime of the customer's critical services. This is achieved mainly by eliminating the single point of system failure (SPOF) and continuously monitoring its processes.

BENEFITS

- ✔ Protection of shareholder value
- ✔ Improved quality of service
- ✔ Reduced exposure to risk
- ✔ Significantly reduced loses
- ✔ Protection of an airline's brand and reputation



Comarch Airline Suite

IT that enhances airline economics

**This is where the competitive
advantage of your airline begins**



Worldwide offices

Albania	Russia
Austria	Slovakia
Belgium	Switzerland
Canada	Ukraine
China	United States of
Finland	America
France	Vietnam
Luxembourg	United Arab
Germany	Emirates
Netherlands	
Panama	

Offices in Poland

Krakow – Headqurter | Bielsko-Biała | Gdańsk |
Katowice | Lublin | Łódź | Poznań | Warszawa |
Wrocław

COMARCH

www.crm4travel.com

Comarch is a leading Central European IT business solutions provider specializing in forging business relationships that maximize customer profitability while optimizing business and operational processes. Comarch's primary advantage lies in the vast domain of knowledge accumulated in and applied to our software products. These products incorporate highly sophisticated IT solutions for businesses in all vertical sectors. Comarch has a multinational network of offices employing over 3500 highly-experienced IT specialists in Europe, the Middle East and the Americas.

Comarch Spółka Akcyjna with its registered seat in Krakow at Aleja Jana Pawła II 39A, entered in the National Court Register kept by the District Court for Krakow-Śródmieście in Krakow, the 11th Commercial Division of the National Court Register under no. KRS 000057567. The share capital amounts to 8.051.637,00 PLN. The share capital was fully paid. NIP 677-00-65-406

Copyright © Comarch 2012. All Rights Reserved. No part of this document may be reproduced in any form without the prior written consent of Comarch. Comarch reserves the right to revise this document and to make changes in the content from time to time without notice. Comarch may make improvements and/or changes to the product(s) and/or programs described in this document any time. The trademarks and service marks of Comarch are the exclusive property of Comarch, and may not be used without permission. All other marks are the property of their respective owners.