

COMARCH

COMARCH POWER CLOUD

MANAGED SERVICES AND SUPPORT LEVELS

COMARCH **ICT**

1. Managed Services

The Comarch POWER Cloud offers flexible, reliable managed services for IBM POWER systems, which include installation, administration and maintenance measures for a highly scalable IT infrastructure. Below you will find a description of the services relevant to this offer and the options for service level agreements.

1.1 Description of the services

ID and designation	Description
MONITORING	<p>Basic SLA:</p> <ul style="list-style-type: none"> • ASP storage usage monitoring • Monitoring of native IBM i subsystems • CPU usage monitoring • 24/7 automated alerting client about events • 24/7 access to ticketing system (up to 5 named user accounts s, up to 10 tickets/month) <p>Advanced SLA:</p> <ul style="list-style-type: none"> • All tasks from basic SLA are covered in Advanced SLA • Monitoring of problems occurring on system level • Monitoring of client specific subsystems and jobs • Monitoring QSYSOPR and QSYSMSG Queues for subsystems and OS jobs related messages
MNGD-OS (Operating System Support)	<p>Basic SLA:</p> <ul style="list-style-type: none"> • System Performance operations (Shared Pool Configuration, Performance data configuration, etc.) • Licensed programs installation/uninstallation • Printers Configuration (Create/Modify/Delete, Based on output Queue) • Subsystem Configuration (Create/Modify/Delete) • Basic Network Settings (TCP Configuration, Host Servers, Services Configuration) • 24/7 access to ticketing system (up to 5 named user accounts s, up to 10 tickets/month)

	<p>Advanced SLA:</p> <ul style="list-style-type: none"> • All tasks from basic SLA are covered in Advanced SLA • System security (Q Audit Journal Configuration, Digital Certificate Manager, SSL Configuration, Security System Value Settings) • Documentation updates and Maintenance • Detection and correction of software problems • Advanced System Performance operations
<p>MNGD-MON-TUN (Advanced Performance Monitoring & Tuning)</p>	<p>Basic SLA:</p> <ul style="list-style-type: none"> • Monitoring of the platform performance and system tuning • Monitoring und optimisation of user jobs related issues (changing the jobs priorities, adding resources etc.).
<p>MNGD-DRC (Disaster-Recovery Services)</p>	<p>Advanced SLA:</p> <ul style="list-style-type: none"> • DRC service offers replication of the indicated logical partition to a backup location. This replication means a 1 to 1 copy of the indicated logical partition to the DRC location • This service requires the booking of additional infrastructure in the backup location (not included in the price) • Definition of the expected RPO and RTO for critical business components in emergency situations • Determine the capacity of the Disaster Recovery Center (DRC) compared to the primary data center and in terms of processing application data and meeting business requirements • Development of the DRC implementation plan • Installation of the DRC hardware components • Failover tests (depending on the agreement, once a year) <ul style="list-style-type: none"> ○ Disaster recovery partial test ○ Disaster recovery parallel test ○ Disaster recovery test with complete switchover • Checking the disaster recovery process
<p>MNGD-BACKUP (Management of data backups)</p>	<ul style="list-style-type: none"> • As part of a due diligence phase at the beginning of the project, the backup strategy is selected within the selected backup option in consultation with the customer • All customer-specific data is protected by regular backups on tape via the Comarch Backup

	<ul style="list-style-type: none"> The backup processes are monitored 24/7
MNGD-SEC-ADV-VS (Vulnerability Scanning)	Activities related to Vulnerability Scanning process which outcome is a report showing current vulnerabilities on the system (detected during the scans). Vulnerability scanning is performed on a monthly basis.

2. Service Levels

The Service Level Agreements (SLAs) ensure that Comarch defines and implements the agreed project and operating services in the best possible way. The measurement methods for the defined service level objectives must be transparent, mutually agreed and reliable. Unless otherwise specified, the achievement of all service levels is measured monthly. The description of SL categories is necessary to define adequate service levels and target values. Not only the availabilities, but also additional services e.g. the service times defined.

SLA Categories

The following service level categories are offered:

SL Category	Description
BASIC	<ul style="list-style-type: none"> This category is recommended for services that do not require 24x7 support and for which downtime has little or no business impact. Maintenance times can be planned in the evening and / or on weekends. Support requests: phone and email. Dedicated project manager for the implementation phase.
ADVANCED	<ul style="list-style-type: none"> This category is used for business-critical services in which every downtime has a significant business impact. In addition, appropriate response and solution times based on comprehensive monitoring and a proactive approach to avoiding errors are required. A maximum of 4 planned maintenance windows per year are possible on weekends. Support requests: phone and email. Dedicated project manager for the implementation phase. Dedicated service manager for the entire contract period.

	<ul style="list-style-type: none"> Prerequisite: Services in this category must be implemented on the basis of highly available hardware and software configurations that provide the necessary redundancies.
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Priority levels

The following priority levels are defined:

Priority level	Description
Level 1 (very high):	Failure of central operating components or network systems (e.g. servers, network connections, Internet), due to which the system (possibly all nodes of the highly available cluster) is not available.
Level 2 (high):	Failure of central operating components or network systems (e.g. servers, network connections, Internet) where the system is still available but the performance is impaired.
Level 3 (normal):	All other failures or incidents that do not affect the normal workflow (e.g. failures that only affect hosted test applications or redundancy of the environment is impaired).

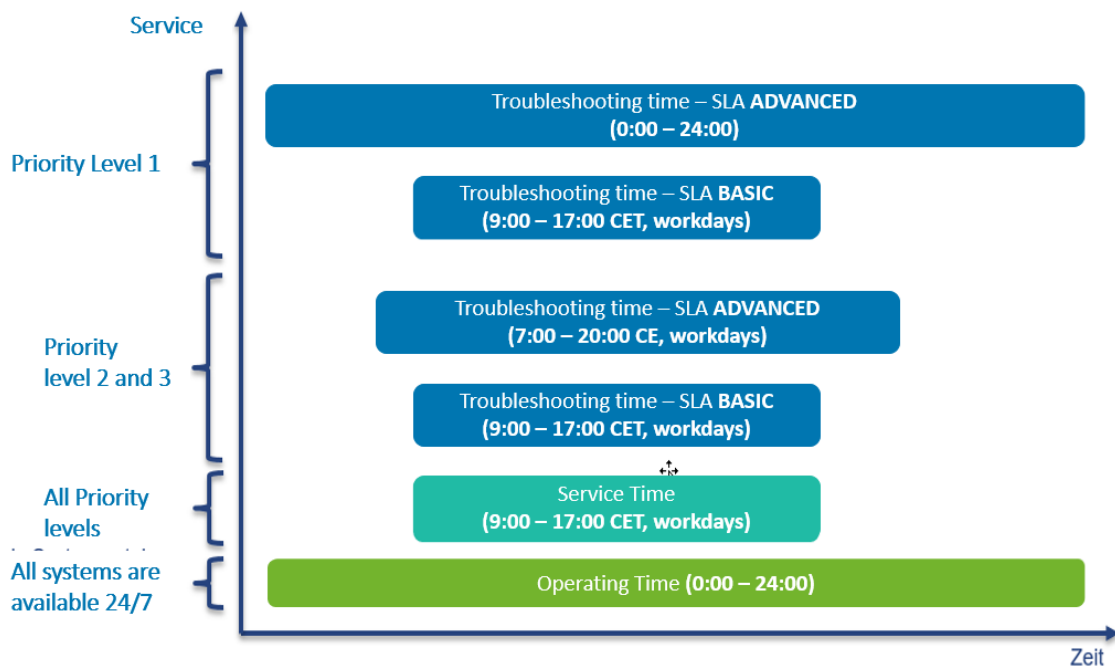
Service Level Objectives

The table below presents the SLA parameters, grouped by 3 categories.

Service Level Parameter	SLA-Categories	
	BASIC	ADVANCED
Operating Time	7x24h	7x24h
System availability per month (priority level 1)	95%	99,4%
Response time + interim report	Prio 1: 60 Minutes Prio 2: 2 hours Prio 3: 4 Hours	Prio 1: 30 Minutes Prio 2: 60 Minutes Prio 3: 2 Hours
Maximum recovery time (RTO)	Prio 1: 12 Hours Prio 2: 18 Hours Prio 3: 24 Hours	Prio 1: 4 Hours Prio 2: 8 Hours Prio 3: 24 Hours
Troubleshooting time (priority level 1)	5*8 09:00 – 17:00 CET Mo – Fr	7*24 0:00 – 24:00 CET

Troubleshooting time (priority levels 2 and 3)	5*8 09:00 – 17:00 CET Mo – Fr	5*13 07:00 – 20:00 CET Mo – Fr
Service time (processing of service and change requests)	5*8 09:00 – 17:00 CET Mo – Fr	5*8 09:00 – 17:00 CET Mo – Fr

The following figure shows the troubleshooting times and the service and operating time depending on the defined priority levels. The troubleshooting time is directly related to the underlying system availability.



Workdays are Monday through Friday with the exception of nationwide public holidays.