

# AppAgile

## Service Specifications

### 1 Introduction

With AppAgile, Telekom shall provide its customer with a "Platform as a Service" with the following platform variants for the duration of the agreement:

- "AppAgile PaaS vCloud"
- "AppAgile PaaS Bare Metal Cloud"<sup>1</sup>
- "AppAgile PaaS Azure Hybrid"
- "AppAgile PaaS Open Telekom Cloud (OTC)"

(hereinafter referred to as "platform variants"). Telekom shall provide the infrastructure components and operating systems required for this.

AppAgile contains virtual infrastructure and virtual network components within a virtual data center. AppAgile includes platform services, which are based on the virtual infrastructure. The AppAgile platform (hereinafter referred to as the "platform") allows the creation, management, and orchestration of workloads in Docker containers. Depending on the platform variant, AppAgile is available in the Shared, Flex, and Committed editions (see Appendix 1 for the features of each platform variant per AppAgile edition).

#### 1.1.1 Shared edition

Customers of the AppAgile Shared edition receive logically separated areas within a shared virtual data center. Flexible addition and removal of PCUs is possible (Platform Container Units, i.e., virtual units used as a basis for billing the platform service). When the Shared edition is used, the customer can start with one PCU or with whatever quantity of PCUs the customer wishes to select. Billing is on a time and materials basis; see the Price Sheet for details. With the Shared edition, the available number of PCUs is variable, taking into account the available resources, therefore an SLA cannot be guaranteed. The Managed Service option is not offered. The Shared edition is particularly suited to small development environments.

#### 1.1.2 Flex edition

Customers of the AppAgile Flex edition receive a dedicated platform instance each, in a separate virtual data center. It is possible to add and remove PCUs flexibly. When the Flex edition is used, the customer starts with whatever quantity of PCUs it wishes to select, but at least with the specified minimum volume for the platform variant. Billing is on a time and materials basis; see the Price Sheet for details. An SLA can be guaranteed for the Flex edition (see "Availability" section and "Response times and recovery times" section below). The Flex edition is particularly suited to development/test/live environments.

#### 1.1.3 Committed edition

Customers of the AppAgile Committed edition receive a dedicated platform instance each, in a separate virtual data center. When the Committed edition is used, the customer defines a binding minimum volume of platform services over the fixed term/minimum provision period, but at least the specified minimum volume for the platform variant. If the Committed edition is selected, a price discount shall be given depending on the volume accepted. See the Price Sheet for details. An SLA can be guaranteed for the Committed edition (see "Availability" section and "Response times and recovery times" section below). The Committed edition is particularly suited to development/test/live environments.

AppAgile enables Telekom to assume professional operation of workloads as a managed service (see Managed Services) where the Flex and Committed editions are selected. This service is offered as an additional option.

### 2 Services provided by Telekom

The services shall be provided initially following transmission of the initial access information via an encrypted e-mail.

The transfer point for all services shall be the transfer point from the customer's own instance of the AppAgile platform to the Internet (if the Flex and Committed editions are selected), or the transfer point from the shared instance to the Internet (if the Shared edition is selected). The Internet connection shall end at the relevant firewall.

#### Infrastructure services

With AppAgile, Telekom shall provide a virtual infrastructure that has an integrated Internet connection. The infrastructure shall be provided in an environment with physical and logical security levels, which shall be hosted exclusively in data centers with tier 3+ availability.

The infrastructure services shall comprise:

- A virtual data center with tier 3+ classification
- Volatile data storage with "Normal" storage category. The data storage shall be situated within a data center location with the computing capacities used by the customer

<sup>1</sup> Platform variant not yet offered (product launch planned in 2018)

- An Internet connection for AppAgile workloads from the cloud. This service shall comprise an Internet connection with a defined or variable bandwidth that is encrypted (SSL) and protected by multiple security levels, with independent security technologies as well as firewalls. Virtual private networks (VPN) and specific bandwidths shall be included or optional depending on the platform variant (see Appendix 1)
- Two externally accessible IP addresses, static or dynamic depending on the platform variant (see Appendix 1)
- Virtual network and security services including load balancer, firewalls, and routing
- Network virtualization for separating customer landscapes

The customer may specify its own domain for the AppAgile instance provided. If it does not do so, Telekom shall allocate a domain to the customer.

### Platform services

The AppAgile platform shall include the automated and managed services of the AppAgile core system with the following services:

- A dedicated instance of AppAgile for the customer's workloads (Flex and Committed editions). With the Shared edition, the workloads shall be logically separated on a shared instance of the platform
- The platform service usable by the customer shall be defined by PCUs (Platform Container Units). One PCU shall correspond to 1 vCPU, 1 GB RAM, 2 GB HDD (not persistent). See the Price Sheet for more details
- A management portal, through which platform users may be created, managed, and deleted as administrators or developers
- A self-service portal for use and control of the platform
- Flexible adjustment of the consumption of vCPU, RAM, and data storage by the customer's workloads. Consumption shall be recorded to the nearest hour as PCUh. Calculation of a PCUh is described in the Price Sheet
- Access to a repository with middleware and database products approved for use on the platform (see Appendix 2 to these Service Specifications). The products shall be provided as Docker images and may be used by the customer as a workload in Docker containers, at the customer's discretion
- Horizontal scaling through the creation or deletion of additional instances by suitable workloads. The platform shall adapt the required computing and storage capacities dynamically
- Monitoring of platform availability by measuring the accessibility of accesses as well as the status of all running containers

The following optional services may be ordered for an additional charge:

- The customer may transfer designated components from the above-mentioned repository to Telekom's operating responsibility (see Managed Services). The applicable charges for this are specified in the Price Sheet
- The customer shall receive support for an automated build process for the customer's application from an application-specific repository. This service may be ordered optionally as a consulting service
- Support for the definition of company-specific application landscapes in the form of quick-starts. The customer may combine different components using these quick-starts. This service may be ordered optionally as a consulting service

### Disaster recovery, backup, and restore

AppAgile is designed for production of tier 3+ workloads. For this reason, disaster recovery functions shall not be included in standard orders. The data centers shall be equipped with fully redundant components at all levels, which meet high availability requirements.

- AppAgile shall provide an automatic backup of the system data.
- Application data shall not be backed up. This functionality may be ordered as an optional extra depending on the platform variant (see "Optional services" below).
- Recovery of backed up data shall be carried out at the customer's request, by consultation with the support team.

### Operating times

- Operating time (uptime) refers to the period of time in which the services are available. Operating times shall be 24/7 as standard (CET).
- Attended operation time (AOT) refers to the period in which technical support is accessible, and in which incidents that may affect system availability are processed. Flex and Committed edition customers may select AOT as AOT OFFICE TIME or AOT FULL TIME; the charges for this vary (see Price Sheet).
- Attended operation times for OFFICE TIME shall be from 8:00 am to 6:00 pm, Monday through Friday, excluding national holidays (CET).
- The attended operation time for FULL TIME shall be 24/7.

### Availability

- The minimum availability for the Flex and Committed editions shall be 99.5 percent for the respective platform variant, as an annual average. If the customer need 99,9 percent availability, the option "Premium (99,9%)" has to be ordered.
- There shall be no minimum availability for the Shared edition. However, Telekom shall endeavor to keep service restrictions of the Shared edition to a minimum.

- Availability shall be calculated on the basis of the actual availability in relation to the AOT. Periods of non-availability due to planned maintenance and emergency changes that are actually carried out shall not be deemed downtimes.
- The actual availability shall be measured by the accessibility of the master and router nodes of the platform instance as well as the uptime of all Docker containers.

### Support

- The service desk shall be the customer's single point of contact for all incidents and service requests. Further measures shall be initiated and managed from here.
- Receipt of a ticket shall be confirmed by e-mail. The customer shall be updated about the ticket's status at Telekom's discretion and depending on how critical the incident is.
- Service desk services shall be provided in German as standard.
- All times shall be specified in Central European Time (CET).

### Maintenance

- Maintenance work shall be carried out on a regular basis in order to ensure functionality and to integrate new technologies.
- Telekom will install available and security relevant patches and hotfixes promptly. New versions or releases of software will be tested and installed by their own discretion. Telekom reserves the right, not to install new updates or releases.
- Maintenance work which could impair the availability of the cloud service shall be announced to the customer at the beginning of maintenance planning. Standard maintenance windows shall not be included as unplanned downtimes when calculating the availability.

### Fault classes

	Definition	Example
Priority 1 (critical)	<p>Interruption to business with substantial impact, particularly extensive commercial impact:</p> <p>The service is completely interrupted.</p>	An incident causes a total failure of a WebShop and, consequently, loss of sales.
Priority 2 (serious)	<p>Downtimes or partial downtimes with an influence on the customer's business or with process obstructions.</p> <p>A key function feature has failed or is significantly limited and neutralization as quickly as possible is necessary.</p>	<p>An incident causes the non-accessibility of individual microservices or a web application.</p> <p>There is a serious operating restriction.</p>
Priority 3 (minor)	<p>Moderate or slight impact on or disruption to use:</p> <p>IT problem, other service, or other function feature is disrupted. Key features continue to be available.</p> <p>Incident without availability restriction.</p>	<p>An incident causes a minor operating restriction.</p> <p>"Cosmetic fault" with no impact on functionality.</p> <p>Layout and/or design faults.</p>

### Response times and recovery times

Period from time of error reporting to initial response and then recovery.

	Critical	Serious	Minor
Initial response	≤ 15 minutes	≤ 4 hours	≤ next working day
Recovery	≤ 4 hours	≤ next working day	≤ 3 working days

There shall be no response or recovery time for the Shared edition. However, Telekom shall endeavor to keep service restrictions of the Shared edition to a minimum.

## 3 Optional services

Telekom shall provide the following optional services, which need to be ordered separately, for an additional charge. These services can be ordered either through activation in the self-service portal or through a change request to the support team.

### Additional platform services

Additional platform services, e.g., booking a virtual server, secure mail, and secure file transfer, can be provided for the Flex and Committed editions. These optional platform services shall be installed on additional servers outside the platform but within the customer's virtual infrastructure. Details of the service shall be agreed with the customer. Charges are specified in the Price Sheet.

### Additional infrastructure services

The customer may order additional, persistent data storage, if required, via the support team or, depending on the platform variant, via the order portal. The customer may choose between different storage categories depending on the platform variant (see Appendix 1).

The additional optional data storage ordered shall be situated at the same data center location as the other computing capacities used by the customer.

All storage categories may be ordered with a backup, which shall be mirrored redundantly on a second or, depending on the platform variant, third data storage medium.

The data created by the backup on the secondary data storage medium shall not reduce the available data storage that has been ordered by the customer. The automated backup shall be generated regularly at midnight (12:00 a.m. +/- 15 minutes) local time at the data center location. The backup shall be retained for 35 days. The backups may only be accessed by Telekom (see Appendix 1).

Additional VPN tunnels may be ordered by the customer depending on the platform variant (see Appendix 1 and Price Sheet).

Bandwidth required by the customer shall be billed separately by GB (see Appendix 1 and Price Sheet).

### Managed Services for middleware or database products

The customer may commission Telekom to manage the middleware or database products specified in Appendix 2 if it selects the Flex or Committed edition. If Managed Services are ordered, Telekom shall manage all products within a project, i.e., partial product management within a project shall not be possible.

A prerequisite for the Managed Service is that the Docker images must be certified for operation by Telekom and must not have been modified by the customer, or certification must have been granted by means of a chargeable, optional individual test of the Docker images.

Administration rights for middleware products operated by Telekom as a Managed Service shall be intended exclusively for Telekom.

If the platform is to automatically scale a middleware product, this may be ordered as an optional service when the Managed Service is commissioned.

The Managed Service shall include the following Telekom services:

#### ADMINISTRATION

- Administration of operational system parameters
- Changes to existing configurations and technical parameters of the middleware instance on request (change request)
- If necessary, configuration and adjustment of the load balancing as a function of the middleware instance
- Recording and administration of error lists, analysis of the error lists, and rotation of lists
- Implementation of the Deutsche Telekom Group's security policies
- Cleansing of logs, check logs, and temporary files of the middleware instances
- Monitoring and, if necessary, renewal of SSL certificates (not procurement)
- Starting and stopping of the application in line with the agreed procedures
- Administration of the integrated file system and the IP network of the middleware instances

#### USER ADMINISTRATION

- Technical user administration (max. 5) at middleware level (user, groups)

#### INCIDENT MANAGEMENT

- Fault clearance measures during the attended operation time (AOT)
- Provision of error lists for analysis upon request (in the event of an error)
- Report on system-related middleware errors to the responsible contact of the customer
- Contact shall be made with the manufacturer and its support service (e.g., escalation to 3rd level support, provision of error lists to 3rd level support)

#### CHANGE MANAGEMENT

- Implementation of changes during the agreed service hours, if applicable by arrangement for a charge

#### PATCH MANAGEMENT

- Installation of available and security-relevant patches and hotfixes after testing by Telekom. If the tests fail, Telekom reserves the right not to install a patch or hotfix
- Information to the customer regarding the use of more recent software versions from the manufacturer

#### BACKUP AND RECOVERY

- Weekly full backup of the middleware instances, including log files and application data at file system level

- Daily differential backup of the middleware instances, including log files and application data at file system level
- Backups shall be deleted after 7 or 30 days, depending on the platform variant. See Annex 1 for details
- Recovery of backed up data shall be carried out at the customer's request, by consultation with the support team
- The data storage required for the backup must be ordered separately as an optional service

#### MONITORING

- Monitoring of the middleware instances regarding system-relevant events

#### Other optional services

The customer may order the services specified below separately; they are not included in Telekom's standard services. All corresponding services by Telekom shall be billed on a time and materials basis in accordance with the Price Sheet.

#### EXTENSION OF REPORTING

- The generation of customer-specific reports from a specified number of indicators, for measuring the use of the middleware products and the infrastructure with hourly resolution.

#### ALTERNATIVE DATA CENTER CONNECTION

- Several options are available for connecting the customer networks to the Telekom data centers, depending on the platform variant. The customer may select various connection options for the platform variants described; see Annex 1.

#### ONBOARDING (SUPPORT FOR ENTRY-LEVEL USE OF APPAGILE)

- By arrangement, Telekom shall give the customer support from an expert for entry-level use of AppAgile. Advice shall be given by telephone or via the Internet.
- In connection with the performance of these services, Telekom shall assume no responsibility for any specific result.
- Support for the provision of additional middleware products, which are not currently offered on the platform.

#### DATABASE PLANNING AND INSTALLATION

- Ascertainment of installation and operating complexity.
- Design planning in accordance with the customer's requirements.
- Calculation of resources for the operating phase in accordance with the customer's requirements and the technical prerequisites of the software manufacturer.
- Configuration of the database.
- Downtime test for a Premium solution.

#### DATABASE OPERATION

- Periodic reporting of storage capacity and performance.
- Advice for planning and implementation of disaster recovery measures with the aid of the platform.

## 4 The customer's duties to cooperate

The customer shall perform the following duties to cooperate in particular, free of charge:

- Following receipt of the initial access data, the customer must assign its own, secure password. Only then shall access to the platform be activated. Transfer of the password to third parties is prohibited.
- The customer must have Internet access as a prerequisite for receiving and using the services. The customer shall ensure that an appropriate network connection (MPLS, IP VPN or another secure network service) is available between its data center and the service transfer point.
- The customer shall provide Telekom with all required information for network connection.
- The customer shall provide the required hardware and software for use of the cloud services at its end (e.g., PC, notebooks, Internet browsers). This shall not be included in Telekom's service.
- To the extent that Telekom is not explicitly obligated to provide software licenses or subscriptions, all other licenses or subscriptions shall be provided by the customer.
- The customer shall also ensure that all data saved in the cloud service is free of viruses, malware, and other harmful software and does not infringe the rights of third parties or violate applicable law (e.g., storage of hatred-inciting content).
- The customer shall have sole ownership of the data and shall be responsible for handling and deleting data. Recovery of deleted data shall not be part of the standard operating services. The customer shall be responsible for backing up its own application data.

- If the customer uses Backup Integrated Storage, it must ensure that the data stored there is in a consistent state at the time of the automatic backup, in order to obtain usable backups.
- The customer shall back up its own application data before the end of the agreement.
- When using the automatic build process with integration in running operation, the customer must provide its application in accordance with the requirements of Telekom.
- The customer must also adhere to all laws and regulations that apply to its use of the platform services. The customer shall be responsible for implementing and maintaining data protection and security measures for components that the customer provides or controls (e.g., in a virtual machine or application of the customer), as well as for ascertaining whether the platform services are suitable for storing and processing information that is subject to specific laws or regulations, e.g., sector-specific special regulations.

#### IF A DATABASE IS OPERATED BY TELEKOM

- Release of the database, ready for operation, by the customer before inclusion in the Managed Service by Telekom.
- Provision of the required software and licenses as well as all required documents.
- Description of the framework conditions for the planned database operation, e.g., in cases of optional request for Telekom to provide planning and installation services.
- Release of the installed database in cases of optional planning and installation.

## 5 Third-party rights

By concluding an agreement, the customer shall accept the conditions of use of Red Hat Limited available under the following link: [www.redhat.com/licenses](http://www.redhat.com/licenses), or if Microsoft Azure services are included, the conditions of use of Microsoft [azure.microsoft.com/de-de/support/legal/](http://azure.microsoft.com/de-de/support/legal/).

## 6 Fixed term/minimum provision period and end of the service

The fixed term (minimum provision period) for AppAgile Shared and Flex editions shall be one month. The term shall start upon communication of the initial access information or upon provision ready for use. Thereafter, the agreement shall be concluded for an indefinite term. The agreement may be terminated by Telekom or the customer with a notice period of two weeks, in each case to the end of a calendar month; the written form must be used.

The fixed term (minimum provision period) for the AppAgile Committed edition shall be twelve months. The term shall start upon communication of the initial access information or upon provision ready for use. The agreement may be terminated by Telekom or the customer at the end of the fixed term with a notice period of six weeks; the written form must be used. If the agreement is not terminated, the fixed term (minimum provision period) shall be extended automatically by a further 12 months, unless one of the parties terminates the agreement before the end of the respective fixed term with six weeks' notice. This shall also apply to all further automatic extensions.

Following the end of the agreement, all data storage media used by the customer shall be released. Telekom shall then gradually overwrite the released storage capacity. Therefore, in its own interests, the customer must choose the termination date such that the customer has sufficient time to collect the data. Telekom has no obligation to retain the customer's data after the agreement ends.

Furthermore, the application data and personal data (administrative data) used or generated in the process of providing the service shall be deleted by Telekom or shall no longer be used.

The customer shall be responsible for ensuring compliance with statutory retention periods that affect the customer.

## 7 Changes to these Service Specifications and the Appendices

These Service Specifications for AppAgile products shall be subject to ongoing amendment and revision because the technical conditions are developing continuously due in particular to technical innovations. For this reason, the following provision applies to changes to the Service Specifications:

If the Service Specifications are amended by Telekom, the customer shall be given an updated version of the Service Specifications (e-mail shall suffice). These shall apply as soon as the customer receives them. If the customer does not agree with the updated Service Specifications, it may terminate the agreement in compliance with the agreed notice periods and fixed terms/minimum terms. The previous version of the Service Specifications shall continue to apply until the termination takes effect. If, within six weeks of receiving the amended Service Specifications, the customer does not terminate the agreement in writing due to changes to the Service Specifications, the changes to the Service Specifications shall become part of the agreement when received by the customer. Telekom shall make specific reference to this consequence in the change notification.

## 8 Glossary

Term/ abbreviation	Description
BIS	Backup Integrated Storage
CPU	Central Processing Unit
Docker	Open source software for isolation of virtual operating systems in containers, see <a href="http://www.docker.com">www.docker.com</a>
DR	Disaster Recovery
FW	Firewall
GB	Gigabyte
IaaS	Infrastructure as a Service
IP	Internet Protocol
IP VPN	Internet Protocol – Virtual Private Network
MPLS	Multiprotocol Label Switching (network connection)
PCU	Platform Container Unit, 10,000 tpmC
Persistent data storage	The independent data storage addressable by a container. This is retained even after deletion of a container.
Project	A self-contained namespace on the platform, within a customer instance.
RAM	Random Access Memory
DC	Data Center
SLA	Service Level Agreement
SSL	Secure Socket Layer
tpmC	Unit of measurement from the TPC-C Benchmark – <a href="http://www.tpc.org">http://www.tpc.org</a>
vApp	Virtual application in the vCloud environment (consists of one or multiple VMs)
vCPU	Virtual CPU in the vCloud environment
vDC	Virtual data center in the vCloud environment
VLAN	Virtual local network in the vCloud environment
VM	Virtual Machine
Volatile data storage	Data storage assigned to a container, which is deleted and overwritten at the time of deletion of the container.
VPN	Virtual Private Network

Disclaimer: This document is a convenience translation of the German original. In case of discrepancy between the English and German versions, the German version shall prevail.

# Appendix 1

## Features of the individual AppAgile PaaS platform variants

This document describes the individual AppAgile PaaS variants and their features. This Appendix 1 is part of the Service Specifications and shall form part of the agreement if an agreement is concluded.

### Variants and features

Variants	Private cloud		Public cloud	
	vCloud	Bare Metal Cloud <sup>2</sup>	Azure Hybrid	Open Telekom Cloud (OTC)
Shared Edition	X		-	-
Flex Edition	X		X	X
Committed Edition	X		X	X
X ... available / O ... optional / - ... not available				
<b>Features</b>				
<b>Infrastructure services included</b>				
Redundant Internet connection	X		X	X
Two external IP addresses accessible by the customer	X		X	X
Dynamic IP address	-		X	-
Static IP address	X		-	X
Defined bandwidth per connection (2 MBIT/s)	X		-	-
Variable bandwidth per connection (up to 200 MBIT/s)*	-		X	-
Variable bandwidth per connection (up to 300 MBIT/s)*	-		-	X
VPN tunnel for connection to customer's own network	X		O	O
<b>Platform services included</b>				
Daily backup – 35-day retention period	X		X	X
<b>Availability</b>				
Availability for Shared edition (best effort – no minimum availability)	X		-	-
Availability for Flex and Committed edition – Standard (99.5%)	X		X	X
Availability for Flex and Committed edition – Premium (99,9%)	-		X	X
X ... available / O ... optional / - ... not available				

<sup>2</sup> Platform variant not yet offered (product launch planned in 2018)  
T-Systems International GmbH



## Optional infrastructure services

### Persistent storage

vCloud - Entry data storage (designed for approx. 25 IOPS/100 GB)	0	-	-
vCloud - Normal data storage (designed for approx. 400 IOPS/100 GB)	0	-	-
vCloud - High data storage (designed for approx. 400 IOPS/100 GB, synchronously mirrored to another location. Access to this mirrored data storage is switched by Telekom for all customers at the same time in the event of DR.)	0	-	-
Azure - Normal data storage (designed for approx. 500 IOPS/disc; locally redundant storage (LRS), 3x mirrored in separate fault domains and upgrade domains, but in the same data center)	-	0	-
Azure - High data storage (designed for approx. 500 IOPS/disc; geo redundant storage (GRS), 6x mirrored across two regions – DR)	-	0	-
Azure - Ultra High data storage (512-1024GB; ca. 2.300-5.000 IOPS/Disc, 150-250 MB/sec)	-	0	-
OTC - Normal data storage (SATA Disc; up to 1.000 IOPS; up to 40 MB/s; reaction time: 10-15 ms)	-	-	0
OTC - High data storage (SAS Disc; up to 3.000 IOPS; up to 120 MB/s; reaction time: 6-10 ms)	-	-	0
OTC - Ultra High data storage (SSD Disk; up to 20.000 IOPS; up to 320 MB/s; reaction time: 1-3 ms)	-	-	0

### Backup for persistent storage

vCloud – Backup Integrated Storage (BIS): All storage categories can also be ordered as Backup Integrated Storage (BIS). In addition to data storage, BIS also includes a data backup to secondary data storage. Telekom automatically generates a backup of the primary data storage in secondary data storage on a daily basis.	0	-	-
Daily backup – 35-day retention period	0	-	-
Extendable retention period +/- 1 day	0	-	-
Azure – backup for data storage: A backup can be ordered for all storage categories. This includes 6x redundant data storage, mirrored in separate fault domains and upgrade domains and two data centers (DR).	-	0	-
Daily backup – 35-day retention period	-	0	-
Extendable retention period +/- 1 day	-	0	-
OTC – backup for data storage: A backup can be ordered for all storage categories.	-	-	0
Daily backup – 35-day retention period	-	-	0
Extendable retention period +/- 1 day	-	-	0

### Network and connection

Additional IP address (dynamic)	0	0	-
Additional IP address (static)	0	0	0

Additional bandwidth	0	0	0
Additional VPN tunnel	0	0	0
<b>Alternative data center connection</b>			
MPLS coupling (data center backbone service point of the network)	0	-	0
Dedicated line (e.g., DDV or Ethernet connection)	0	-	-
DC backbone connection	0	-	-

X... available / O ... optional / - ... not available

## Appendix 2

# AppAgile PaaS Managed Services product catalog

If Managed Services are ordered, Telekom shall provide support for database and middleware services. A specific product catalog ("Docker Repository") shall apply for this. The support shall be provided for a specific middleware version in accordance with the manufacturer's specifications. If the manufacturer's support for a version expires, Telekom shall terminate the services for this version with reasonable advance notice.

The Docker Repository, i.e., the product catalog, shall be extended and updated on an ongoing basis. The latest version of the Docker Repository shall apply. The latest Docker Repository is available here <http://appagile.io/paas/docker-repository/>.

**By ordering the respective Managed Service, the customer shall expressly accept the license conditions of the relevant license holder for the ordered product, as specified in the License column in the Docker Repository. The license conditions can also be viewed via the above link.**

This Appendix 2 and the specifications in the Docker Repository are part of the Service Specifications and shall form part of the agreement if an agreement is concluded.