

Kubernetes Cluster	Management of many containers	DESY	Yes			Yes			Yes				Yes	Yes		Yes			6	12	AWI: Around end of 2020, AWI could offer services as well	
	Rancher	Provisioning of docker infrastructures, meta management of container managers	FZJ	Yes		Yes				Yes			Yes						4	10	AWI: Around end of 2020, AWI could offer services as well	
	GPU compute Service	General computing resources	indifferent'	Yes		Yes							Yes	Yes					4		DZNE: The DZNE may offer this service in 1-2 years	
	GPU compute Service		FZJ			Yes			Yes		Yes								4	14	FZJ: GPU cluster is funded through HDF, mainly for specific use cases (HPC, earth system research, neuroscience and biology) but partly available for HIFIS as well	
	GPU compute Service		HZDR						Yes										1	11		
	GPU compute Service		DESY						Yes										1	11		
	GPU Community Service	HICORE (HAICU, HIP)	indifferent'	Yes															1			
	GPU compute Community Service (nuclear physics)		KIT, FZJ																	2	9	FZJ: Resource allocation will be done by HAICU KIT: Hardware resources for KI community e.g. HAICU (UseCases) => Provision via access procedure => AAI linkage: will be provided via Unity and DFN AAI (HIP does not fit in here)
	GPU compute Community Service (Health)					Yes								Yes						0	7	
	GPU compute Community Service (Energy & Information)	Community computing	GSI																	1	8	
		DKFZ											Yes						1	8		
		KIT											Yes						1	8	KIT: see above > "OpenStack" (part for HIFIS just as for "bwCloud"), also in UC2 (see above)	
Analytic machines		indifferent'												Yes					1			
HeAT Library Server	HeAT Library Server	OpenStack/Storage/HAF Helmholtz Analytics Framework, Helmholtz Analytics Toolkit	indifferent'	Yes		Yes			Yes				Yes						4			
	HeAT Library Server		FZJ							Yes									1	6	FZJ: Library available on HPC, GPU and OpenStack clusters; an analytics service needs to be developed	
	Communityservice	HEAT-Github	GSI						Yes										0	6	KIT: this is probably about the OpenStack component Heat? (see: https://wiki.openstack.org/wiki/Heat) GSI: Wrong Institute entered? KIT or FZJ maybe? > Comment LS: No, GSI was named here in the first round of the service survey	
	AWI Marketplace		AWI	YES		Yes	Yes												3	4		
	Binder Repositories	Collections of Jupyter NBs		Yes		Yes	Yes			Yes									3	4		
Helmholtz hosted Webserver	Webserver hosting; off-premise, with trusted hosting		Yes		Yes	Yes		Yes		Yes	Yes	Yes					Yes	8	8			
Virtual Desktop Infrastructure	Virtual Desktop Service		indifferent'						Yes										1			
	Virtual Desktop Service	RDP etc. over Webrowsers	UFZ																0	1	UFZ: problem with Microsoft licensing - UFZ as service provider with reservation	
	Virtual Desktop Service	Basis Apache guacamole	FZJ							Yes									1	2		
Database as a Service		indifferent'			YES			Yes										2				
	MySQL and Postgres									Yes			Yes						2	4		
Community/ Science Services																						
Software Development Services	GitLab, GitLab-CI		indifferent'						Yes							Yes			2			
	GitHub		Microsoft	Yes		Yes				Yes					Yes	Yes			4	6		
	GitLab, GitLab-CI		indifferent'	Yes		Yes					Yes	Yes	Yes	Yes	Yes	Yes		Yes	9		HIMGU: Include hosting for runners, with potential for self-hosting. Needs to be visible to public (not only VPN etc) DZNE: The DZNE runs a GitLab instance and may offer this service later to other HGF users. HZG: https://docs.gitlab.com/ee/ci/runners/	
	GitLab, GitLab-CI	Software-code online, collaborative coding, Versioning, commenting	HZDR		Yes			Yes											2	13		
	GitLab, GitLab-CI		KIT					Yes											1	12	KIT: SCC department as service provider	
	GitLab, GitLab-CI		FZJ					Yes											1	12		
	GitLab, GitLab-CI		GEOMAR					Yes												1	12	
Jira + Confluence	Commercial product, widely used (SWDev, Documents, Knowledge-base, Ticketing, ...)	Atlassian	Yes		Yes	Yes				Yes	Yes							5	7	HIMGU: Confluence yes, Jira no. Integration with GitLab by default UFZ as USER: Yes		
Software Catalog System	Application Catalogue, Solution Search	indifferent'	Yes		Yes			Yes						Yes	Yes			5				
		DLR			Yes						Yes	Yes					Yes	4	9	DLR: work out in HIFIS Software services, then operate via HIFIS Cloud UFZ as USER: Yes		
Build service & package repository	docker hub etc.							Yes										1	1	HZB: discussed within survey I?		
Application specific contact		indifferent'	Yes					Yes					Yes		Yes			4				

repository (incl. Wiki/Chat)	Helmholtz Contact Exchange	Who for what knowledgebase																		0	4	AWI: may be?
	Stack Overflow Team (local)		HZDR																	0	4	AWI: may be?
Sensor Management Service			indifferent			Yes														1	1	UFZ as USER: Yes
	Ocean and climate Sensor Management	Management of Sensors, possibly globally distributed	AWI				Yes							Yes						2	3	
	Geo Sensor Management		GFZ				Yes													1	2	GFZ: cannot offer services in the same way as cloud providers can do on the free market - but only where it makes sense - primarily for the research field Earth & environment
Sample Management			indifferent															Yes		1	1	
	IGSN Service (Geo Science)	International GeoSample No.	GFZ			Yes	Yes							Yes						3	4	GFZ: cannot offer services in the same way as cloud providers can do on the free market - but only where it makes sense - primarily for the research field Earth & environment UFZ as USER: Yes
	ISPYB (Photon Science)		ESRF	Yes					Yes											2	3	
	Cell samples (Biology)																	Yes		1	2	
Electronic Laboratory Journal (LIMS)			indifferent			Yes			Yes					Yes	Yes					6	6	HZB: like ESRF implementation UFZ as USER: Yes
	OpenBIS		HZDR	Yes																1	7	
	mediawiki		HZDR	Yes																1	7	
	Medusa		GFZ				Yes													1	7	GFZ: cannot offer services in the same way as cloud providers can do on the free market - but only where it makes sense - primarily for the research field Earth & environment
	elabEIM		FZJ																	0	6	HZB: ?
	New HMGU System	Invitation of tenders	HMGU																	0	6	
	LabFolder			Yes		Yes	Yes				Yes									4	10	DZNE: DZNE is running a LabFolder instance
	Confluence		DESY			Yes				Yes										2	8	
DOI Minting Service			indifferent						Yes					Yes		Yes	Yes			4	4	AWI: (publication of SW) HZB: incl. Handle minting?; what is the central approach?
	service to acquire DOI	DOI Website	GFZ			Yes	Yes										Yes			3	7	GFZ: cannot offer services in the same way as cloud providers can do on the free market - but only where it makes sense - primarily for the research field Earth & environment UFZ as USER: Yes
R-Studio, R-Shiny, R-Project			indifferent			Yes														1	1	HZB: really no interest group @ hzb? → Photovoltaic? UFZ as USER: Yes
	R-Studio, R-Shiny, R-Project		indifferent'	Yes		Yes				Yes	Yes	Yes	Yes							6	6	
	R-Studio, R-Shiny, R-Project	Math software	HMGU																	0	7	
	R-Studio, R-Shiny, R-Project		DKFZ																	0	7	
	R-Studio, R-Shiny, R-Project		(HZG)																	0	3	
	R-Studio, R-Shiny, R-Project		AWI																	0	7	AWI: through AWI Marketplace
Apache Spark Cluster	Data Analytics Services					Yes														1	1	
JupyterHub Service			indifferent			Yes			Yes					Yes	Yes		Yes	Yes		6	6	UFZ as USER: Yes
	JupyterHub Service		indifferent'	Yes		Yes				Yes	Yes	Yes								5	5	AWI: can be provided through AWI Marketplace in future (AWI currently works on network segmentation to delimit users and groups) KIT: no KIT announcement in first service survey round
	JupyterHub Service	Frontend interface for programming, "code in Documents" and applications	HZDR				Yes													1	12	
	JupyterHub Service		DKFZ				Yes													1	12	
	JupyterHub Service		DESY				Yes													1	12	
	JupyterHub Service		HMGU				Yes													1	12	
	JupyterHub Service		FZJ																	0	11	FZJ: offers JupyterHub on non-HPC (Cloud) resources
	JupyterHub Notebooks on HPC		indifferent'			Yes			Yes											3	3	
	JupyterHub Notebooks on HPC		FZJ						Yes					Yes			Yes			3	12	FZJ: not only on HPC, but on Cloud resources as well KIT: works with bwUniCluster (UC2), linkage will be in operation by the end of march (see above > "Singularity", HAICU => AAI linkage: see above
	JupyterHub Notebooks on HPC		KIT																	0	9	
	JupyterLab	Devel. Envir. for Jupyter NB		Yes		Yes				Yes		Yes					Yes			5	11	

Central Geodata platform		GFZ																								1	GFZ: GFZ could serve specific map and geo data services (to be clarified) > this service is about to be set up. It is set up primarily for GFZ users but will probably become an application for centers working in the research field Earth & Environment. The intensity of use cannot yet be estimated. As the GFZ has not received any resources for the setup of HIFIS Cloud services they are not able to make any firm commitment, especially with regards to the uncertainty of usage in a medium to longterm timeframe.		
Data Repository with DOI Service	Rodare	Based on Invenio	indifferent						Yes																	6			
	GFZ Data Services		GFZ	Yes					Yes											Yes						3	9		
	Zenodo	Based on Invenio	CERN	Yes		Yes	Yes													Yes						4	10	GFZ: cannot offer services in the same way as cloud providers can do on the free market - but only where it makes sense - primarily for the research field Earth & environment UFZ as USER: Yes	
	B2SHARE (Invenio)		FZJ	Yes			Yes			Yes																3	9	AWI: could be interesting in the context of EU projects FZJ: B2SHARE is based on Invenio as well	
	PANGAEA		AWI + MARUM																							0	6	AWI: provides PANGAEA	
	ICAT		HZB																							0	6	HZB: ?	
Data Management Plan			indifferent	Yes			Yes			Yes																8			
	RDMO	Web based RD organizer					Yes																			1	9	UFZ as USER: Yes, is RDMO the right tool?	
	HGF EaE Specific DMP Tool		GFZ																									8	pilot/testcase for research field Earth&Environment already > > this service is set up primarily for GFZ users but will probably become an application for centers working in the research field Earth & Environment. The intensity of use cannot yet be estimated. As the GFZ has not received any resources for the setup of HIFIS Cloud services they are not able to make any firm commitment, especially with regards to the uncertainty of usage in a medium to longterm timeframe.
Study Conduction Service (observational studies)																										0	0	GFZ: Explanation needed	
Workflow Platform			indifferent																	Yes	Yes					2			
	Galaxy Web Server	Insenitive biometric data platform (bioinformatics)	MDC									Yes														1	3		
	Eugene	Genome finder pipeline (bioinf.)																								0	2		
	Geneious	Bioinformatic workflows																								0	2		
Ocean Data View Software			indifferent																							0			
	ODV		AWI				Yes																			2	2		
OpenStreetMap Services																										0			
	OSM Nominatim (Geocoder/Reverse Geocoder)		FZJ																							0	0	FZJ: The general OSM services have limitation in e.g. # of requests per day coming from one IP adress; the services at FZJ could be made available to Helmholtz centres without these limitations	
	OSM Overpass (OSM map data)		FZJ																							0	0		
	OSM Tileserver (Webserver for)		FZJ																							0	0		
Collaboration Services																													
Sync&Share			indifferent						Yes											Yes	Yes	Yes	Yes	Yes		5		AWI: could be interesting in the context of EU projects	
	B2DROP	Currently without Office	FZJ							Yes										Yes						2	7		
Sync&Share with Cloud Office			indifferent	Yes	Yes	Yes	Yes			Yes										Yes	Yes	Yes	Yes	Yes		9		UFZ as USER: Yes	
	Nextcloud (OnlyOffice)		HZB	Yes								Yes														1	15		
	Nextcloud (OnlyOffice)		HZDR	Yes								Yes														1	15		
	Nextcloud (OnlyOffice)		DESY						Yes																	1	15		
	bwSync&share (NextCloud)		KIT	Yes			Yes																					AWI: KIT offers Nextcloud + OnlyOffice like HZB, HZDR, and DESY... KIT: idea: provide a separate Nextcloud instance in parallel with bwS&S (free community edition) for HGF centers (=> later: federation with bwS&S?) => AAI linkage: AAI linkage via DFN AAI already possible (e.g. bwDM, DFN Cloud)	
	Nextcloud with Collabora						Yes													Yes						2	11		
	Schieblo (sync&share NRW)		NRW				Yes					Yes		Yes												3	12		
Cloud Writing/Citing			indifferent							Yes										Yes				Yes		4			
	ShareLaTex		indifferent'	Yes		Yes	Yes							Yes	Yes	Yes					Yes	Yes	Yes			8		UFZ as USER: Yes	

	ShareLaTeX	LaTeX Community platform	Overleaf																		0	12		
	ShareLaTeX			HZDR																		1	13	
	ShareLaTeX			FZJ				Yes					Yes									2	14	
	ShareLaTeX			KIT				Yes														1	13	KIT: (only KIT internal: Overleaf)
	Authorea	On-click DOI publishing	Authorea			Yes															1	5		
Event Management			indifferent			Yes		Yes						Yes			Yes				5		UFZ as USER: Yes	
		Indico	indifferent'	Yes		Yes		Yes		Yes		Yes			Yes						7			
		Indico		DESY						Yes											1	13		
		Indico	Event & conference Management	GEOMAR																	0	13		
		Indico		KFF																	0	13		
	EasyChair	Conference Management	ESA			Yes														1	6			
Sandstorm Microcontainer			indifferent								Yes										1			
	Sandstorm	Web based Microservices	HMGU																		0	1		
Discussion Channel, Chat			indifferent	Yes			Yes		Yes							Yes	Yes	Yes			7			
		Slack	Slack			Yes			Yes					Yes	Yes	Yes					3	10		
		Mattermost		indifferent'			Yes												Yes		6			
		Mattermost		HZDR						Yes											1	14		
		Mattermost		KIT					Yes	Yes											2	15		
		Jabber XMPP		indifferent'			Yes	Yes													2		UFZ as USER: Yes, UFZ has Jabber installation	
		Jabber XMPP		HZDR																	0	9		
		Jabber XMPP		KIT						Yes											1	10		
		Jabber XMPP		FZJ																	0	9		
		Rocket.Chat		FZJ			Yes	Yes						Yes	Yes	Yes					5	12		
	Rocket.Chat		GWDC				Yes													1	8	DKFZ: dedicated user registration required!		
	Matrix (protocol)	Bridges to IRC, Slack, Jabber...				Yes												Yes		2	9			
Voice Chat			indifferent			Yes										Yes	Yes				3			
		Jabber eJabberDaemon		indifferent'					Yes												1			
		Jabber eJabberDaemon		KIT																	0	4	KIT: ?	
		Lync Federation	Microsoft Lync Communities							Yes											1	4		
	Chat over IMAP																			0	3			
Voting			indifferent			Yes			Yes											2		UFZ as USER: Yes		
	Electronic Voting									Yes										1	3			
Online Survey Service			indifferent				Yes		Yes					Yes		Yes	Yes				6			
		LimeSurvey		indifferent'	Yes		Yes				Yes	Yes	Yes				Yes				6		UFZ as USER: Yes	
		LimeSurvey		HMGU					Yes												1	13		
		LimeSurvey		DKFZ					Yes												1	13		
		Polls (NextCloud)			Yes													Yes			2	8		
	RedCap																			0	6			
Project Management with Wiki			indifferent		Yes		Yes			Yes					Yes	Yes	Yes	Yes	Yes		7			
		Redmine		indifferent'	Yes			Yes						Yes							3			
		Redmine		HZDR																	0	10		
		Redmine		KIT					Yes												1	11		
		Redmine		FZJ							Yes										1	11		
		Redmine		HMGU																	0	10		
		Sheila																			0	7		
		OnlyOffice Project																			0	7		
		OpenProject		HZB	Yes					Yes				Yes							3	10		
		JIRA/Trello/Confluence		Atlassian	Yes		Yes		Yes		Yes								Yes		6	13	UFZ as USER: Yes	
	DECK (Nextcloud)																			0	7			
Ticketing Tool, Issue tracker			indifferent			Yes	Yes			Yes				Yes		Yes	Yes				6			
		Request Tracker		DESY					Yes												1	7		
		Redmine		indifferent'	Yes																1			
		Redmine		HZDR																	0	2		
		Redmine		FZJ							Yes										1	8		
		Efecte (commercial, ITSM)		HMGU																	0	6		
		JIRA		Atlassian	Yes	Yes					Yes							Yes			4	10		
		OTRS		indifferent'	Yes	Yes															2		DZNE: The DZNE uses an instance hosted by OTRS	
		OTRS		KIT																	0	8		
		OTRS		FZJ (KiX)							Yes										1	9		
	Zammad		HZDR	Yes																1	9			
Mailing list tool			indifferent				Yes		Yes				Yes		Yes	Yes					6			
		MailMan		FZJ						Yes	Yes							Yes			3	9		
		Sympa		indifferent'	Yes		Yes														2			
		Sympa		DESY						Yes											2	10		
		Sympa		KIT								Yes									1	9	KIT: only KIT internal mailing list server (s. next line)	
	Sympa		DFN-KIT																	0	8	KIT: DFN-List server is operated at KIT since 2004		

Project Websites	Confluence	indifferent							Yes			Yes						4
	WordPress	HZDR	Yes			Yes					Yes	Yes						2
																		6
Recruitment Management		indifferent				Yes			Yes			Yes						4
	CandiBase	Contebis											Yes					0
Process Management/ Workflow Engine / Web-Templates	Process Management/ Workflow	indifferent				Yes			Yes					Yes				3
	EMAS	DESY																0
	Lucom Interaction Platform	HZDR	Yes												Yes			2
SW-Package - Catalog?								Yes								Yes	1	
Proposal System		indifferent							Yes									1
	Gate	HZB	Yes															1
	Door	DESY							Yes									1
e-Learning / Instruction		indifferent	Yes		Yes	Yes	Yes		Yes					Yes	Yes			7
	ILIAS	HMGU																0
	Moodle	DKFZ						Yes				Yes						2
	OpenOLAT																	0
	Eplas																	0
Chemicals Administration	GESKAT	HZDR	Yes			Yes			Yes			Yes		Yes				4
	BIDS (external development)	HMGU																0
Tele-Webconferencing worldwide without registration		indifferent				Yes	Yes		Yes			Yes	Yes		Yes			6
	Zoom	Zoom							Yes		Yes	Yes						3
	DFNconf	DFN	Yes	Yes	Yes			Yes			Yes			Yes	Yes	Yes	7	
	jitsi meet	rendez-vous.renater.fr									Yes							1
Literature Management		indifferent				Yes						Yes	Yes					3
	Zotero								Yes		Yes	Yes						3
	Endnote (Cloud)	indifferent'	Yes		Yes		Yes				Yes	Yes			Yes	Yes	7	
	Endnote online	web of science																0
	Endnote (Cloud)	HMGU																0
Room reservation system (incl. resource management)		indifferent				Yes			Yes				Yes					3
	OpenIRIS	FMI (Basel)									Yes							1
Publishing Repository		indifferent				Yes			Yes									2
	Invenio		Yes															1
Cloud CAD System		indifferent	Yes			Yes			Yes				Yes					4
	onshape	PTC																0
	simscale	Simscale																0
Norm Database	Usually solved via Library licenses	Beuth Verlag							Yes		Yes	Yes					3	
Other Services																		
Continous Improvement Proposal System			Yes						Yes		Yes	Yes						4
Document Management System							Yes		Yes				Yes			Yes		4
Email/Calendar/Contacts	Entire hosting of mail server	indifferent'				Yes			Yes					Yes				2
	Entire hosting of mail server	DESY							Yes									1
	Entire hosting of mail server	FZJ																0
	Exchange	DWGD				Yes	Yes								Yes			3