

# bizhub Security: Hard Disk Drive Data Protection

bizhub Office/Workgroup Product Reference Guide







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# Introduction

## **Konica Minolta Security Standards**

Konica Minolta realized early on the importance of security issues in the digital age, where the risk of seriously damaging security breaches rises dramatically alongside rapidly growing worldwide communication possibilities.

In response to these threats, Konica Minolta has taken a leading role in developing and implementing security-based information technology in our multifunctional products. Ever since the introduction of the first Konica Minolta MFP, Konica Minolta has strived to develop and implement technology that safeguards the confidentiality of electronic documents.

The most important IT based security standard in the world is ISO 15408, also known as Common Criteria certification. Konica Minolta has newly introduced multifunctional bizhub products validated to Common Criteria EAL3 security standards. Common Criteria (CC) is the only internationally recognized standard for IT security testing. Printers, copiers and software with the ISO 15408 certification are security evaluated, and guarantee the security levels that companies look for today. With the CC certification users can rest assured that on Konica Minolta's multifunctional devices their confidential data remain confidential.

The Konica Minolta security standards provide protection in more than one respect, securing the network and network access, ensuring secure, authorized access to individual output devices, restricting functionalities where required, and protecting all personal user data and information content processed on the bizhub output systems.

Konica Minolta takes the security concerns of its customers seriously. This is why almost all of Konica Minolta's comprehensive security functionality is standard on the new-generation bizhub systems. After all, users should not have to pay for capabilities that are an essential requirement for protecting customers' sensitive information in the digital age!

This document specifically discusses the various Konica Minolta products that utilize a Hard Disk Drive within the MFP, the potential temporary or long term data stored on these drives and the built in methods of protecting and/or deleting the stored data.



### **HDD Best Practices**

#### Konica Minolta Recommended HDD Best Practices

Konica Minolta bizhub MFP's offer standard, effective data protection from unauthorized access using features like HDD Encryption, HDD Lock Password, Overwrite Temporary Data, Overwrite All Data and automated box data deletion. Konica Minolta highly recommends enabling these features and functions in order to properly protect a customer's sensitive data.

HDD Encryption The bizhub uses a standard AES 128 bit encryption algorithm to secure the

entire HDD and all of its contents.

HDD Lock Password By applying a 20 character password to the BIOS of the HDD the HDD is

now protected from unauthorized access whether the drive is moved to

another MFP or removed entirely.

and fax data immediately after the job has completed.

area this feature will wipe or scrub **all** existing data on the HDD and reset

the drive back to factory default.

Automated Box Data

Deletion The various boxes created and utilized on a bizhub MFP can be set to

automatically delete any information inside the box by the MFP administrator. Boxes like User Box, Secure Print, Encrypted PDF, etc.

#### What's Next...

The following pages will assist in determining which Konica Minolta product utilize a hard disk drive or other non-volatile storage, what is stored on those HDD's and which security features and functions are available for securing these drives.

Konica Minolta highly recommends that each customer assess and determine their own security needs and risks before enabling the bizhub security features and functions at the Multi Function Printer (MFP).

Konica Minolta provides a Security User Manual for each bizhub model. These manuals will provide a Security Checklist, insight into each security feature/function and a step-by-step procedure to enable each feature/function.

Konica Minolta also provides Technical and Professional Services to assistance and consulting. Please contact your local Konica Minolta sales representative for more information or visit our website at http://kmbs.konicaminolta.us/content/products/subcategories/as security.html

bizhub Model Name	Explanation of Stored HDD Data and the data that is wiped from HDD	bizhub Security Features				
IName	the data that is wiped from fibb	250 GB	S	HDD Capacity		
	User registration data	Yes	9	HDD Encryption Key		
	Deletes all user-related data that has been		9	HDD Lock Password		
	registered	Yes	0			
	Box registration data/file  • Deletes all User Box-related information	Yes	0	Temporary Data Overwrite		
bizhub C652	and files saved in User Box	Yes	5	All Data Overwrite		
bizhub C652DS	Secure Print ID/Password/Document	S = Sta	andard	d Accessory / O = Optional Accessory		
bizhub C552	Deletes all Secure Print Document-related information and files saved					
bizhub C552DS	ID & Print file			tilize a standard Hard Disk Drive for		
bizhub C452 bizhub C452DS	Deletes all ID & Print files saved in ID &	temporary of	or lon	g term image storage.		
bizhub C360	Print User Box	Those mod	ole o	an aperior the entire HDD using the		
bizhub C380	Image files:  • Image files saved other than Secure			an encrypt the entire HDD using the tion Key feature. The data stored on		
bizhub C220	Print Documents, ID & Print files and User Box files			encrypted using AES 128-bit key		
	<ul> <li>Image files of jobs in job queue state</li> </ul>			D is encrypted its data cannot be		
bizhub 423	Data files left in the data space used as			HDD is removed from the MFP.		
bizhub 363	<ul><li>image files</li><li>Temporary data files generated during</li></ul>					
bizhub 283*	print image file processing	l <b>_</b>	<b>.</b> .			
bizhub 223*				Overwrite can be enabled after each		
	Destination recipient data files			int, Scan, Copy and Fax. Depending		
* HDD Optional	Deletes all destination recipient data including e-mail addresses and telephone	on the job file size temporarily swapped data me stored on the HDD. This data is immediately de				
	numbers			as soon as the data is no longer		
	Encryption Key	necessary to end the job in action.  • Overwrite modes are 1 time to US Navy/DoD				
	Clears the currently set Encryption Key     Administrator Password					
	Clears the currently set password,	sta	andar	d or 3 times to US AirForce standard.		
	resetting it to the factory setting					
	SNMP Password	Overwrite All Data can be enabled when the machi				
	<ul> <li>Clears the currently set password, resetting it to the factory setting (MAC</li> </ul>	is to be discarded, or is terminated at the end of the leasing contract, the Overwrite All Data function overwrites and erases all data stored in all spaces of the HDD. The function also resets all passwords				
	address)					
	WebDAV Server Password					
	Clears the currently set password,					
	resetting it to the factory setting (sysadm)  Account registration data			ctory settings. The HDD Overwrite		
	Deletes all account track-related data that	Method offe	ers th	e choice of eight different modes,		
	has been registered	standards.	nig w	ith 8 specific Government approved		
	S/MIME certificate data	Standards.				
	Deletes the currently set S/MIME certificate					
	SSL certificate			word is a standard security feature.		
	Deletes the currently set SSL certificate			ne MFP hard disk is automatically		
	Network Setting     Clears the currently set network settings			assword. This 20 character password		
	(DNS Server setting, IP Address setting,	the hard dis		ard disk BIOS and prevents access to		
	SMTP Server setting, NetWare Setting,	inc naid dis	n ua	u.		
	NetBIOS setting and AppleTalk Printer					
	Name setting), resetting it to the factory setting					
	Option License Keys					
	,					
	Optional Loadable Drivers					

bizhub Model Name	Explanation of Stored HDD Data and the data that is wiped from HDD	bizhub Security Features				
		60 GB	S	HDD Capacity		
	User registration data	Yes	0	HDD Encryption Key		
	Deletes all user-related data that has been	Yes	S	HDD Lock Password		
	registered  Box registration data/file	Yes	S	Temporary Data Overwrite		
	Deletes all User Box-related information	Yes	9	All Data Overwrite		
bizhub C650 bizhub C550	and files saved in User Box		on do ro			
bizhub C550 bizhub C451	Secure Print ID/Password/Document  • Deletes all Secure Print Document-related	3 = 30	anuaru	I Accessory / O = Optional Accessory		
DIZITOD 0431	information and files saved					
bizhub C353	Deletes all ID & Print files saved in ID &	These mod	lels ut	ilize a standard Hard Disk Drive for		
bizhub C353P	Print User Box	temporary	or long	g term image storage.		
bizhub C253	Image files:	l				
bizhub C201	Image files saved other than Secure Print Documents, ID & Print files and User Box files			an encrypt the entire HDD using the		
bizhub 8650	Image files of jobs in job queue state			tion Key feature. The data stored on encrypted using AES 128-bit key		
DIZITOD 0030	<ul> <li>Data files left in the data space used as</li> </ul>			D is encrypted its data cannot be		
	image files • Temporary data files generated during			HDD is removed from the MFP.		
	print image file processing					
				Overwrite can be enabled after each		
	Destination recipient data files  • Deletes all destination recipient data			nt, Scan, Copy and Fax. Depending e temporarily swapped data might be		
	including e-mail addresses and telephone			D. This data is immediately deleted		
	numbers			as soon as the data is no longer		
	Encryption Key     Clears the currently set Encryption Key	necessary to end the job in action.  • Overwrite modes are 1 time to US Navy/DoD				
	Administrator Password					
	<ul> <li>Clears the currently set password,</li> </ul>	St	andar	d or 3 times to US AirForce standard.		
	resetting it to the factory setting  SNMP Password	Overwrite A	All Dat	a can be enabled when the machine		
	Clears the currently set password,			d, or is terminated at the end of the		
	resetting it to the factory setting (MAC			the Overwrite All Data function		
	address) WebDAV Server Password			rases all data stored in all spaces of		
	Clears the currently set password,			nction also resets all passwords ctory settings. The HDD Overwrite		
	resetting it to the factory setting (sysadm)			e choice of eight different modes,		
	Account registration data     Deletes all account track-related data that			ith 8 specific Government approved		
	has been registered	standards.				
	S/MIME certificate data	LIDD:	ь.	and the control of th		
	Deletes the currently set S/MIME     actificate			vord is a standard security feature. ne MFP hard disk is automatically		
	certificate SSL certificate			assword. This 20 character password		
	<ul> <li>Deletes the currently set SSL certificate</li> </ul>			ard disk BIOS and prevents access to		
	Network Setting	the hard dis	sk dat	a.		
	<ul> <li>Clears the currently set network settings (DNS Server setting, IP Address setting,</li> </ul>					
	SMTP Server setting, NetWare Setting,					
	NetBIOS setting and AppleTalk Printer					
	Name setting), resetting it to the factory setting					
	HDD Lock Password     Deletes the current HDD Password					
	Deletes the current HDD Fassword					
	Option License Keys					
	Optional Loadable Drivers					
	<u> </u>					

bizhub Model Name	Explanation of Stored HDD Data and the data that is wiped from HDD	bizhub Security Features				
Name	the data that is wiped from Fibe	40 GB	S	HDD Capacity		
	User registration data	Yes	0	HDD Encryption Key		
	Deletes all user-related data that has been registered	Yes	S	HDD Lock Password		
	Box registration data/file	Yes	S	Temporary Data Overwrite		
hi-hb C450	Deletes all User Box-related information	Yes	S	All Data Overwrite		
bizhub C450 bizhub C450P	and files saved in User Box		ndor	A Accessory / O = Optional Accessory		
bizhub C352	Secure Print ID/Password/Document  • Deletes all Secure Print Document-related	3 = 318	inuar	Accessory / O = Optional Accessory		
bizhub C352P	information and files saved	Those med	مام بيا	ilize a standard Hard Disk Drive for		
bizhub C351	Image files:			g term image storage.		
	Image files saved other than Secure Print Documents and User Box files	temperary c	, 1011	g term image storage.		
bizhub C300	Image files of jobs in job queue state	These mod	els ca	an encrypt the entire HDD using the		
bizhub C252	Destination recipient data files	standard Er	ncryp	tion Key feature. The data stored on		
bizhub C252P	Deletes all destination recipient data	the MFP HI	DD is	encrypted using AES 128-bit key		
bizhub C250	including e-mail addresses and telephone numbers			D is encrypted its data cannot be		
bizhub C250P	Encryption Key	read, even if the HDD is removed from the MFP Temporary Data Overwrite can be enabled after				
	<ul> <li>Clears the currently set Encryption Key</li> </ul>					
	Administrator Password	MFP function Print, Scan, Copy and Fax. Depending on the job file size temporarily swapped data might stored on the HDD. This data is immediately deleted and overwritten as soon as the data is no longer				
	<ul> <li>Clears the currently set password, resetting it to the factory setting</li> </ul>					
	SNMP Password					
	Clears the currently set password,					
	resetting it to the factory setting (MAC address)			the job in action.		
	Network Setting	Overwrite modes are 1 time to US Navy/ standard or 3 times to US AirForce standard				
	<ul> <li>Clears the currently set network settings</li> </ul>	310	indai	d of 5 times to 00 Air orde standard.		
	(DNS Server setting, IP Address setting,	Overwrite A	ll Da	ta can be enabled when the machine		
	SMTP Server setting, NetWare Setting, NetBIOS setting and AppleTalk Printer			d, or is terminated at the end of the		
	Name setting), resetting it to the factory			the Overwrite All Data function		
	setting			rases all data stored in all spaces of		
	HDD Lock Password			nction also resets all passwords ctory settings. The HDD Overwrite		
	Deletes the current HDD Password			e choice of eight different modes,		
				ith 8 specific Government approved		
		standards.				
				word is a standard security feature.		
				ne MFP hard disk is automatically assword. This 20 character password		
				ard disk BIOS and prevents access to		
		the hard dis				

bizhub Model Name	Explanation of Stored HDD Data and the data that is wiped from HDD	bizhub Security Features			
ramo	the data that is wiped from 1155	40/120GB	0	HDD Capacity	
	User registration data	Yes	0	HDD Encryption Key	
	Deletes all user-related data that has	Yes	S	HDD Lock Password	
	been registered  Box registration data/file	Yes	S	Temporary Data Overwrite	
	Deletes all User Box-related information	Yes	9	All Data Overwrite	
bizhub 501	and files saved in User Box				
bizhub 421 bizhub 361	Secure Print ID/Password/Document  • Deletes all Secure Print Document-related	S = Stand	aara	Accessory / O = Optional Accessory	
*120GB HDD	information and files saved	These medals	4:	line a antional Hand Diek Drive for	
	ID & Print file			lize a optional Hard Disk Drive for term image storage.	
bizhub 500	<ul> <li>Deletes all ID &amp; Print files saved in ID &amp; Print User Box</li> </ul>	temperary or	iong	term image storage.	
bizhub 420	Image files:	These models	s ca	n encrypt the entire HDD using the	
bizhub 360	<ul> <li>Image files saved other than Secure</li> </ul>			on Key feature. The data stored on	
*40GB HDD	Print Documents, ID & Print files and User Box files			encrypted using AES 128-bit key size.	
	<ul> <li>Image files of jobs in job queue state</li> </ul>			ncrypted its data cannot be read, s removed from the MFP.	
	Destination recipient data files	even ii tile i iL	וטנ	s removed from the IVIFF.	
	Deletes all destination recipient data	Temporary Da	ata (	Overwrite can be enabled after each	
	including e-mail addresses and telephone numbers			nt, Scan, Copy and Fax. Depending	
	Encryption Key			e temporarily swapped data might be	
	Clears the currently set Encryption Key			D. This data is immediately deleted	
	Administrator Password     Clears the currently set password,			s soon as the data is no longer	
	resetting it to the factory setting	<ul> <li>necessary to end the job in action.</li> <li>Overwrite modes are 1 time to US Navy/Dol standard or 3 times to US AirForce standard</li> </ul>			
	SNMP Password				
	<ul> <li>Clears the currently set password, resetting it to the factory setting (MAC</li> </ul>				
	address)			a can be enabled when the machine	
	WebDAV Server Password			I, or is terminated at the end of the	
	Clears the currently set password,			the Overwrite All Data function ases all data stored in all spaces of	
	resetting it to the factory setting (sysadm)  Account registration data			ction also resets all passwords saved	
	Deletes all account track-related data that	back to factor			
	has been registered			ite Method offers the choice of eight	
	S/MIME certificate data     Deletes the currently set S/MIME			corresponding with 8 specific	
	certificate	Government a	appr	oved standards.	
	SSL certificate	HDD Lock Pa	ISSW	ord is a standard security feature.	
	Deletes the currently set SSL certificate     Network Setting			e MFP hard disk is automatically	
	Clears the currently set network settings			ssword. This 20 character password	
	(DNS Server setting, IP Address setting,			ard disk BIOS and prevents access to	
	SMTP Server setting, NetWare Setting,	the hard disk	data	a.	
	NetBIOS setting and AppleTalk Printer Name setting), resetting it to the factory				
	setting				
	HDD Lock Password				
	Deletes the current HDD Password				
	Option License Keys				
	Optional Loadable Drivers				
	Flash Memory Lock Password				
	Clears the currently set password				
	L				

bizhub Model Name	Explanation of Stored HDD Data and the data that is wiped from HDD	bizhub Security Features			
		40/80GB	0	HDD Capacity	
	User registration data	Yes	0	HDD Encryption Key	
	Deletes all user-related data that has been	Yes	S	HDD Lock Password	
	registered Box registration data/file	Yes	S	Temporary Data Overwrite	
	Deletes all User Box-related information	Yes	8	All Data Overwrite	
bizhub 751 bizhub 601	and files saved in User Box		n do re		
*80GB HDD	Secure Print ID/Password/Document  • Deletes all Secure Print Document-related	3 = 318	muarc	A Accessory / O = Optional Accessory	
00021122	information and files saved	Those mode	ale ut	ilize a optional Hard Disk Drive for	
bizhub 750	ID & Print file			g term image storage.	
bizhub 600	Deletes all ID & Print files saved in ID & Print User Box			ggg	
*40GB HDD	Image files:			an encrypt the entire HDD using the	
	Image files saved other than Secure  Print Page 18 A Bright files and I I am Brown files			tion Key feature. The data stored on	
	Print Documents, ID & Print files and User Box files  • Image files of jobs in job queue state			encrypted using AES 128-bit key D is encrypted its data cannot be	
	image mee or jobe in job quode otate			HDD is removed from the MFP.	
	Destination recipient data files				
	Deletes all destination recipient data including e-mail addresses and telephone			Overwrite can be enabled after each	
	numbers			nt, Scan, Copy and Fax. Depending	
	Encryption Key			te temporarily swapped data might be DD. This data is immediately deleted	
	Clears the currently set Encryption Key     Administrator Password			as soon as the data is no longer	
	<ul> <li>Clears the currently set password,</li> </ul>	necessary t	o end	the job in action.	
	resetting it to the factory setting SNMP Password			te modes are 1 time to US Navy/DoD	
	Clears the currently set password,	sta	ındar	d or 3 times to US AirForce standard.	
	resetting it to the factory setting (MAC	Overwrite A	II Dat	ta can be enabled when the machine	
	address) WebDAV Server Password			d, or is terminated at the end of the	
	Clears the currently set password,			the Overwrite All Data function	
	resetting it to the factory setting (sysadm)			rases all data stored in all spaces of	
	Account registration data     Deletes all account track-related data that			nction also resets all passwords ctory settings.	
	has been registered			rite Method offers the choice of eight	
	S/MIME certificate data			corresponding with 8 specific	
	Deletes the currently set S/MIME certificate	Governmen	t app	roved standards.	
	SSL certificate	UDD Laster	2000	word is a standard as surity facture	
	Deletes the currently set SSL certificate			word is a standard security feature. ne MFP hard disk is automatically	
	Network Setting     Clears the currently set network settings			assword. This 20 character password	
	(DNS Server setting, IP Address setting,			ard disk BIOS and prevents access to	
	SMTP Server setting, NetWare Setting,	the hard dis	k dat	a.	
	NetBIOS setting and AppleTalk Printer Name setting), resetting it to the factory				
	setting				
	HDD Lock Password				
	Deletes the current HDD Password				
	Option License Keys				
	Optional Loadable Drivers				
	Flash Memory Lock Password				
	Clears the currently set password				

bizhub Model Name	Explanation of Stored HDD Data and the data that is wiped from HDD	bizhub Security Features				
		40 GB	0	HDD Capacity		
		Yes	0	HDD Encryption Key		
		Yes	S	HDD Lock Password		
		Yes	S	Temporary Data Overwrite		
bizhub 362	<ul> <li>Enhance Security function</li> <li>Clears the current settings, resetting them</li> </ul>	Yes	S	All Data Overwrite		
bizhub 282	to the default ones.	S = Standard Accessory / O = Optional Accesso				
bizhub 222	User Box Password/file					
	Deletes the User Box Password and all		ilize an optional Hard Disk Drive for			
bizhub 350	files saved in the user box.	temporary of	or ion	g term image storage.		
bizhub 250	Swap data					
bizhub 200	<ul> <li>Deletes all swap data generated in a copy, PC print, or Secure Print Document that is too large in size to fit in the RAM space, representing part of the image files stored in the HDD.</li> </ul>	These models can encrypt the entire HDD using the standard Encryption Key feature. The data stored on the MFP HDD is encrypted using AES 128-bit key size. Once a HDD is encrypted its data cannot be read, even if the HDD is removed from the MFP.				
	Image files	Temporary Data Overwriting: Delete by overwriting data and temporary files that are saved in the HDD and memory, but that are no longer necessary. Overwrites with $0x00 \rightarrow 0x00 \rightarrow 0x00$ .				
	<ul> <li>Deletes overlay image files and all image files stored in the HDD.</li> </ul>					
	Destination recipient data files     Deletes all destination recipient data including e-mail addresses and telephone numbers					
	Clears the currently set password.      Clears the currently set password.      Clears the currently set Encryption Key.      Administrator Code (Administrator Password)     Clears the currently set password, resetting it to the factory setting	Overwrite All Data can be enabled when the machir is to be discarded, or is terminated at the end of the leasing contract, the Overwrite All Data function overwrites and erases all data stored in all spaces of the HDD. The function also resets all passwords saved back to factory settings.  The HDD Overwrite Method offers one mode; Government approved - US Air Force (AFSSI5020).				
		When enab protected b	led thy a pa the h	word is a standard security feature. The MFP hard disk is automatically assword. This 20 character password ard disk BIOS and prevents access to a.		







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