TR-064 Support – WLANConfiguration

Supported by AVM

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History

Date	Version	Changes
2012-01-17	12	Support for more than one Acess Point List action X_SetHighFrequencyBand
2013-08-26	13	Action X_AVM-DE_GetWLANExtInfo added
2013-08-29	14	Argument NewX_AVM-DE_APEnabled for action X_AVM-DE_GetWLANExtInfo added
2013-10-02	15	Added X_AVM-DE_APEnabled to list of state variables Added column Send Events for list of state variables Sort list of state variables
2013-10-02	16	Added variables for action X_AVM-DE_GetWLANExtInfo to list of state variables
2014-06-03	17	Added actions: X_AVM-DE_WPSGetInfo and X_AVM-DE_WPSSetConfig. Added variables: X_AVM-DE_WPSMode, X_AVM-DE_WPSTimeoutSeconds, X_AVM-DE_WPSStatus, X_AVM-DE_WPSClientPIN and X_AVM-DE_WPSAPPIN.
2014-07-28	18	Change names for actions: X_AVM-DE_GetWPSInfo and X_AVM-DE_SetWPSConfig.
2015-11-20	19	Add action SetBasBeaconSecurityProperties add action X_AVM-DE_GetWLANHybridMode add action X_AVM-DE_SetWLANHybridMode add variables to Service State Table:ManualSpeed, MaxSpeedDS, MaxSpeedUS, TrafficMode
2016-02-17	20	Behavior changed: GetTotalAssociations GetGenericAssociatedDeviceInfo GetSpecificAssociatedDeviceInfo now only connected WLAN clients are shown and only at the WLANConfiguration where they connected
2016-03-23	21	https://www.broadband-forum.org/technical/trlist.php added
2016-05-18	22	Action added : X_AVM-DE_GetSpecificAssociatedDeviceInfoByIp
2018-03-23	23	Action added: X_AVM-DE_SetWLANGlobalEnable
2018-08-08	24	Added possible values for X_AVM-DE_APType

urn:WLANConfiguration-com:serviceId:WLANConfiguration1

For details please refer the TR-064 document at https://www.broadband-forum.org/technical/trlist.php.

For the support of device with more than one Access Point more than one WLANConfiguration services are listed in the TR-064 service description.

If the device supports WLAN one service is listed (service #1).

If the device additionally supports a second physical Access Point e.g. FRITZ!Box 7390 support 2.4 GHz and 5 GHz, one more service is listed (service #2).

If the device supports a logical Access Point for guests, one more service is listed (service #2 or #3).

Action List

This chapter contains the supported actions of the service WLAN configuration which are listed incl. arguments.

SetEnable

Argument name	Direction	Related state variable	Remarks
NewEnable	in	Enable	

Table 1: Argument list of action SetEnable

GetInfo

Argument name	Direction	Related state variable	Remarks
NewEnable	out	Enable	
NewStatus	out	Status	
NewMaxBitRate	out	MaxBitRate	Not supported. Returns default string.
NewChannel	out	Channel	
NewSSID	out	SSID	
NewBeaconType	out	BeaconType	
NewMACAddressControlEnabled	out	MACAddressControlEnabled	
NewStandard	out	Standard	Only the highest of the active modes is returned.
NewBSSID	out	BSSID	
NewBasicEncryptionModes	out	BasicEncryptionModes	
NewBasicAuthenticationMode	out	BasicAuthenticationMode	Returns fixed string “none”.
NewMaxCharsSSID	out	MaxCharsSSID	
NewMinCharsSSID	out	MinCharsSSID	
NewAllowedCharsSSID	out	AllowedCharsSSID	
NewMinCharsPSK	out	MinCharsPSK	

Argument name	Direction	Related state variable	Remarks
NewMaxCharsPSK	out	MaxCharsPSK	
NewAllowedCharsPSK	out	AllowedCharsPSK	

Table 2: Argument list of action GetInfo

SetConfig

Argument name	Direction	Related state variable	Remarks
NewMaxBitRate	in	MaxBitRate	
NewChannel	in	Channel	
NewSSID	in	SSID	
NewBeaconType	in	BeaconType	Determines WLAN-encryption to be used. WEP, WPA, WPA2, WPA mixed.
NewMacAddressControlEnabled	in	MacAddressControlEnabled	
NewBasicEncryptionModes	in	BasicEncryptionModes	
NewBasicAuthenticationMode	in	BasicAuthenticationMode	

Table 3: Argument list of action SetConfig

SetSecurityKeys

Argument name	Direction	Related state variable	Remarks
NewWEPKey0	in	WEPKey0	
NewWEPKey1	in	WEPKey1	
NewWEPKey2	in	WEPKey2	
NewWEPKey3	in	WEPKey3	
NewPreSharedKey	in	PreSharedKey	
NewKeyPassphrase	in	KeyPassphrase	

Table 4: Argument list of action SetSecurityKeys

GetSecurityKeys

Argument name	Direction	Related state variable	Remarks
NewWEPKey0	out	WEPKey0	
NewWEPKey1	out	WEPKey1	
NewWEPKey2	out	WEPKey2	
NewWEPKey3	out	WEPKey3	
NewPreSharedKey	out	PreSharedKey	
NewKeyPassphrase	out	KeyPassphrase	

Table 5: Argument list of action GetSecurityKeys

SetDefaultWEPKeyIndex

Argument name	Direction	Related state variable	Remarks
NewDefaultWEPKeyIndex	in	WEPKeyIndex	

Table 6: Argument list of action SetDefaultWEPKeyIndex

GetDefaultWEPKeyIndex

Argument name	Direction	Related state variable	Remarks
NewDefaultWEPKeyIndex	out	WEPKeyIndex	

Table 7: Argument list of action GetDefaultWEPKeyIndex

SetBasBeaconSecurityProperties

Argument name	Direction	Related state variable	Remarks
NewBasicEncryptionModes	in	BasicEncryptionModes	
NewBasicAuthenticationMode	in	BasicAuthenticationMode	

Table 8: Argument list of action SetBasBeaconSecurityProperties

GetBasBeaconSecurityProperties

Argument name	Direction	Related state variable	Remarks
NewBasicEncryptionModes	out	BasicEncryptionModes	
NewBasicAuthenticationMode	out	BasicAuthenticationMode	

Table 9: Argument list of action GetBasBeaconSecurityProperties

GetBSSID

Argument name	Direction	Related state variable	Remarks
NewBSSID	out	BSSID	

Table 10: Argument list of action GetBSSID

GetSSID

Argument name	Direction	Related state variable	Remarks
NewSSID	out	SSID	

Table 11: Argument list of action GetSSID

SetSSID

Argument name	Direction	Related state variable	Remarks
NewSSID	in	SSID	

Table 12: Argument list of action SetSSID

GetBeaconType

Argument name	Direction	Related state variable	Remarks
NewBeaconType	out	BeaconType	

Table 13: Argument list of action GetBeaconType

SetBeaconType

Argument name	Direction	Related state variable	Remarks
NewBeaconType	in	BeaconType	

Table 14: Argument list of action SetBeaconType

GetChannelInfo

Argument name	Direction	Related state variable	Remarks
NewChannel	out	Channel	
NewPossibleChannels	out	PossibleChannels	

Table 15: Argument list of action GetChannelInfo

SetChannel

Argument name	Direction	Related state variable	Remarks
NewChannel	in	Channel	

Table 16: Argument list of action SetChannel

GetBeaconAdvertisement

Argument name	Direction	Related state variable	Remarks
NewBeaconAdvertisementEnabled	out	BeaconAdvertisementEnabled	

Table 17: Argument list of action GetBeaconAdvertisement

SetBeaconAdvertisement

Argument name	Direction	Related state variable	Remarks
NewBeaconAdvertisementEnabled	in	BeaconAdvertisementEnabled	

Table 18: Argument list of action SetBeaconAdvertisement

GetTotalAssociations

Argument name	Direction	Related state variable	Remarks
NewTotalAssociations	out	TotalAssociations	

Table 19: Argument list of action GetTotalAssociations

GetGenericAssociatedDeviceInfo

Argument name	Direction	Related state variable	Remarks
NewAssociatedDeviceIndex	in	TotalAssociations	
NewAssociatedDeviceMACAddress	out	AssociatedDeviceMACAddress	
NewAssociatedDeviceIPAddress	out	AssociatedDeviceIPAddress	
NewAssociatedDeviceAuthState	out	AssociatedDeviceAuthState	
NewX_AVM-DE_Speed	out	X_AVM-DE_Speed	22.01.10
NewX_AVM-DE_SignalStrength	out	X_AVM-DE_SignalStrength	22.01.10

Table 20: Argument list of action GetGenericAssociatedDeviceInfo

GetSpecificAssociatedDeviceInfo

Argument name	Direction	Related state variable	Remarks
NewAssociatedDeviceMACAddress	in	AssociatedDeviceMACAddress	
NewAssociatedDeviceIPAddress	out	AssociatedDeviceIPAddress	
NewAssociatedDeviceAuthState	out	AssociatedDeviceAuthState	
NewX_AVM-DE_Speed	out	X_AVM-DE_Speed	19.09.11
NewX_AVM-DE_SignalStrength	out	X_AVM-DE_SignalStrength	19.09.11

Table 21: Argument list of action GetSpecificAssociatedDeviceInfo

X_AVM-DE_GetSpecificAssociatedDeviceInfoByIp

Argument name	Direction	Related state variable	Remarks
NewAssociatedDeviceIPAddress	in	AssociatedDeviceIPAddress	
NewAssociatedDeviceMACAddress	out	AssociatedDeviceMACAddress	
NewAssociatedDeviceAuthState	out	AssociatedDeviceAuthState	
NewX_AVM-DE_Speed	out	X_AVM-DE_Speed	
NewX_AVM-DE_SignalStrength	out	X_AVM-DE_SignalStrength	

Table 22: Argument list of action GetSpecificAssociatedDeviceInfoByIp

Return code	Description	Related argument
714	NoSuchEntryInArray	AssociatedDeviceIPAddress
402	Invalid Args	AssociatedDeviceIPAddress

Table 23: Return codes of action GetSpecificAssociatedDeviceInfoByIp

X_AVM-DE_SetStickSurfEnable

Argument name	Direction	Related state variable	Remarks
NewStickSurfEnable	in	StickSurfEnable	

Table 24: Argument list of action X_AVM-DE_SetStickSurfEnable

X_AVM-DE_GetIPTVOptimized

Argument name	Direction	Related state variable	Remarks
NewX_AVM-DE_IPTVoptimize	out	X_AVM-DE_IPTVoptimize	

Table 25: Argument list of action X_AVM-DE_GetIPTVOptimized

X_AVM-DE_SetIPTVOptimized

Argument name	Direction	Related state variable	Remarks
NewX_AVM-DE_IPTVoptimize	in	X_AVM-DE_IPTVoptimize	

Table 26: Argument list of action X_AVM-DE_SetIPTVOptimized

GetStatistics

Argument name	Direction	Related state variable	Remarks
NewTotalPacketsSent	out	TotalPacketsSent	
NewTotalPacketsReceived	out	TotalPacketsReceived	

Table 27: Argument list of action GetStatistics

GetPacketStatistics

Argument name	Direction	Related state variable	Remarks
NewTotalPacketsSent	out	TotalPacketsSent	
NewTotalPacketsReceived	out	TotalPacketsReceived	

Table 28: Argument list of action GetPacketStatistics

X_AVM-DE_GetNightControl

Argument name	Direction	Related state variable	Remarks
NewNightControl	out	NightControl	
NewNightTimeControlNoForcedOff	out	NightTimeControlNoForcedOff	

Table 29: Argument list of action X_AVM-DE_GetNightControl

X_SetHighFrequencyBand

The action is listed in the WLA configuration service but only supported on certain OEM devices. Please see WLAN configuration service 2 on FRITZ!Box 7390 for reading and writing 5 GHz WLAN settings.

Argument name	Direction	Related state variable	Remarks
NewEnableHighFrequency	in	EnableHighFrequency	

Table 30: Argument list of action X_SetHighFrequencyBand

X_AVM-DE_GetWLANHybridMode

This action delivers informations about the WLAN-Mode access.

Argument name	Direction	Related state variable	Remarks
NewEnable	out	Enable	
NewBeaconType	out	BeaconType	
NewKeyPassphrase	out	KeyPassphrase	
NewSSID	out	SSID	
NewBSSID	out	BSSID	
NewTrafficMode	out	TrafficMode	
NewManualSpeed	out	ManualSpeed	
NewMaxSpeedDS	out	MaxSpeedDS	
NewMaxSpeedUS	out	MaxSpeedUS	

Table 31: Argument list of action X_AVM-DE_GetWLANHybridMode

X_AVM-DE_SetWLANHybridMode

This action delivers informations about the WLAN-Mode access.

Argument name	Direction	Related state variable	Remarks
NewEnable	in	Enable	
NewBeaconType	in	BeaconType	
NewKeyPassphrase	in	KeyPassphrase	
NewSSID	in	SSID	
NewBSSID	in	BSSID	
NewTrafficMode	in	TrafficMode	
NewManualSpeed	in	ManualSpeed	
NewMaxSpeedDS	in	MaxSpeedDS	
NewMaxSpeedUS	in	MaxSpeedUS	

Table 32: Argument list of action X_AVM-DE_SetWLANHybridMode

X_AVM-DE_GetWLANExtInfo

This action delivers informations about the WLAN-Guest access.

Argument name	Direction	Related state variable	Remarks
NewX_AVM-DE_APEnabled	out	X_AVM-DE_APEnabled	
NewX_AVM-DE_APType	out	X_AVM-DE_APType	
NewX_AVM-DE_TimeoutActive	out	X_AVM-DE_TimeoutActive	
NewX_AVM-DE_Timeout	out	X_AVM-DE_Timeout	
NewX_AVM-DE_TimeRemain	out	X_AVM-DE_TimeRemain	
NewX_AVM-DE_NoForcedOff	out	X_AVM-DE_NoForcedOff	
NewX_AVM-DE_UserIsolation	out	X_AVM-DE_UserIsolation	
NewX_AVM-DE_EncryptionMode	out	X_AVM-DE_EncryptionMode	
NewX_AVM-DE_LastChangedStamp	out	X_AVM-DE_LastChangedStamp	

Table 33: Argument list of action X_AVM-DE_GetWLANExtInfo

X_AVM-DE_SetWLANGlobalEnable

Enables “1” or disables “0” WLAN as if pushing the “WLAN” button on the CPE device.

Argument name	Direction	Related state variable	Remarks
NewX_AVM-DE_WLANGlobalEnable	in	X_AVM-DE_WLANGlobalEnable	

Table 34: Argument list of action X_AVM-DE_ SetWLANGlobalEnable

Code	Description
402	Invalid Arguments
801	String argument too short
802	String argument too long
803	Argument contains invalid characters
820	Internal Error

Table 35: Returncodes of action X_AVM-DE_SetWLANGlobalEnable

X_AVM-DE_GetWPSInfo

Argument name	Direction	Related state variable	Remarks
NewX_AVM-DE_WPSMode	out	X_AVM-DE_WPSMode	
NewX_AVM-DE_WPSStatus	out	X_AVM-DE_WPSStatus	

Table 36: Argument list of action X_AVM-DE_ GetWPSInfo

X_AVM-DE_SetWPSConfig

WPS is supported in different ways:

- Push Button Configuration,
- PIN input; PIN can either be offered by the access point or by the client.

WPS is only supported for either access points or guest access points.
WPS is not supported for both types of access points in parallel.

Argument name	Direction	Related state variable	Remarks
NewX_AVM-DE_WPSMode	in	X_AVM-DE_WPSMode	
NewX_AVM-DE_WPSClientPIN	in	X_AVM-DE_WPSClientPIN	Needed for WPSMode pbc.
NewX_AVM-DE_WPSAPPIN	out	X_AVM-DE_WPSAPPIN	
NewX_AVM-DE_WPSStatus	out	X_AVM-DE_WPSStatus	

Table 37: Argument list of action X_AVM-DE_ SetWPSConfig

Example configurations

WPS Mode	NewX_AVM-DE_WPSMode	NewX_AVM-DE_WPSClientPIN
Push Button Configuration	pbc	empty
PIN offered by AP	pin_ap	empty
PIN offered by client	pin_client	12345678 (valid 8 digit PIN)
Stop running WPS session	stop	empty

Table 38: Example WPS configuration

Service States Table

Variable name	Allowed values (* == default)	Send Events	Data type
AllowedChars KeyPassphrase	01234567890ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz␣!"#$%&'()*+,-./:;<=>?@[\]^_`{|}~(*)	no	String
AllowedCharsPSK	01234567890ABCDEFabcdef (*)	no	String
AllowedCharsSSID	01234567890ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz␣!"#$%&'()*+,-./:;<=>?@[\]^_`{|}~(*)	no	String
AssociatedDeviceAuthState	0 (*)	no	Boolean
AssociatedDeviceIPAddress		no	String
AssociatedDeviceMACAddress		no	String
BasicAuthenticationMode	None	no	String
BasicEncryptionModes	WEPEncryption, None	no	String
BeaconAdvertisementEnabled		no	Boolean
BeaconType	None, Basic, WPA, 11i, WPAand11i	no	String
BSSID		no	String
Channel	0 means auto channel	no	ui1
Enable		no	Boolean
EnableHighFrequency		no	Boolean
KeyPassphrase		no	String
MACAddressControlEnabled		no	Boolean
ManualSpeed		no	Boolean
MaxBitRate	Auto	no	String
MaxCharsKeyPassphrase	63 (*)	no	ui1
MaxCharsPSK	64 (*)	no	ui1
MaxCharsSSID	32 (*)	no	ui1
MaxSpeedDS		no	ui4
MaxSpeedUS		no	ui4
MinCharsKeyPassphrase	8 (*)	no	ui1
MinCharsPSK	64 (*)	no	ui1
MinCharsSSID	3 (*)	no	ui1
NightControl	XML-String	no	String
NightTimeControlNoForcedOff		no	Boolean
PossibleChannels	depends on currently used standard	no	String
PreSharedKey		no	String
SSID		no	String
Standard	a, b, g, n	no	String
Status		no	String
StickSurfEnable	0 (*)	no	Boolean

Variable name	Allowed values (* == default)	Send Events	Data type
TrafficMode		no	String
TotalAssociations	0 (*)	no	ui2
TotalPacketsReceived		no	ui4
TotalPacketsSent		no	ui4
WEPKey0		no	String
WEPKey1		no	String
WEPKey2		no	String
WEPKey3		no	String
WEPKeyIndex		no	ui1
X_AVM-DE_APEnabled		yes	String
X_AVM-DE_APType	normal, guest	no	String
X_AVM-DE_EncryptionMode		no	String
X_AVM-DE_IPTVoptimize	0 (*)	no	Boolean
X_AVM-DE_LastChangedStamp	0 (*)	no	ui4
X_AVM-DE_NoForcedOff		no	String
X_AVM-DE_SignalStrength	0 (*), 0 … 70	no	ui1
X_AVM-DE_Speed	0 (*), 0 … 300	no	ui2
X_AVM-DE_Timeout		no	String
X_AVM-DE_TimeoutActive		no	String
X_AVM-DE_TimeRemain		no	String
X_AVM-DE_UserIsolation		no	String
X_AVM-DE_WLANGlobalEnable	0	no	Boolean
X_AVM-DE_WPSAPPIN	8 digits	no	String
X_AVM-DE_WPSClientPIN	8 digits	no	String
X_AVM-DE_WPSMode	pin_client, pin_ap, pbc, stop	no	String
X_AVM-DE_WPSStatus	off, inactive, active, success, err_common, err_timeout, err_reconfig, err_internal, err_abort	no	String

Table 39: Variable list