APN AND BASIC NETWORK CONFIGURATION CRADLEPOINT IBR1700-1200MB

Background on Cradlepoint Routers:

Cradlepoint provides their web based NetCloud management system to configure their routers. You will need to have the account subscription you used to purchase the routers. For example: *NetCloud Mobile Essentials Package with IBR1700-1200M-B*, *5-yr*.

The router will also need to be registered and licensed with Cradlepoint as a part of the Essentials Package.

You can also do the initial configurations locally. NetCloud configurations take priority. To log in locally, scan for a WiFi SSID similar to "IBR1700-b9f" (b9f are the last three characters of the routers MAC address).

The password will be the last 8 characters of the router's MAC address. Then go to <u>http://192.168.0.1</u> The user is admin and the password is the same as the WiFi password.

NetCloud Manager by Cradlepoint:

https://accounts.cradlepointecm.com/#/login



When you get a NetCloud account, you will receive the following message from Cradlepoint:

Welcome to Cradlepoint. To ensure a successful onboarding experience with Cradlepoint, please follow these three steps to begin your journey:



Step 1: Set your password <u>here</u>. Your user name is <u>first.last@company.com</u>, <u>bookmark</u> the page, and <u>update your profile</u>.

Cradlepoint Connect is your online community where you will **Learn** how to use NetCloud with best practices, **Connect** with Cradlepoint experts, and **Engage** in streamlined technical support.

Step 2: Explore <u>NetCloud Manager</u>.

NetCloud is Cradlepoint's cloud-based network management platform that simplifies deployment, monitoring, and management of your network. Please visit the <u>How-To/Getting Started</u> section in Cradlepoint Connect to learn more about the NetCloud platform.

Your NetCloud credentials have been sent in a separate email. If you believe you have not received the NetCloud credentials email, please contact your NetCloud administrator.

Step 3: Register for onboarding with Cradlepoint's Customer Success and Support team.

Your onboarding session with Cradlepoint's Customer Success and Support team will guide you through the tools available to accelerate your success with Cradlepoint solutions and direct you to world-class technical support.

Visit the <u>Calendar</u> in Cradlepoint Connect and register for your onboarding session now. If you need help with onboarding, please contact <u>success@cradlepoint.com</u>.

For Cradlepoint technical support chat, you will need to log into the Cradlepoint Connect portal. You can log in from here: <u>https://customer.cradlepoint.com/s/</u> If you need to register, follow the link above and go to "log in", and then "request access". Here's the support team's number as well for you: **1-855-813-3385**

The following steps will help you to deploy the device:

STEP 1: Insert the Geoverse SIM Card:





Remove the cover of the Cradlepoint 1200M-B module.



Insert the SIM (size 2FF-mini, full cut-out) into SIM1 slot, metal contacts up and notch in. It will click into place. Depress again to remove.

Please note: the smaller *"micro-SIM"* (3FF; 15.0mm x 12.0mm x 0.76mm) and *"nano-SIM"* (4FF; 12.3mm x 8.8mm x 0.67mm) cards *will NOT fit* in the Cradlepoint's SIM card slot.

STEP 2: Configure Access Point Name (APN):

← → C 🔒 cradlepointecm.com/ecm.html#dashboard/account 🖈 🖸 🔯 🥥 🛠 🛸 [M Paused] **∂Net**Cloud[®] Account: Geo lughes 👻 🚺 **.** 🔇 👜 Dashboard Modem Usage Clients Health GeoView 109.2 MB 0 / 0 1/0 0 / 0 1 0 bytes 0 bytes GROUPS 🖗 networks Ð INSIGHTS Displaying last 30 days SCHEDULER Connected Modem Count by **Device Count by Product** Connected Modem Count by Servi... Home Carrier Registered Carrier INTEGRATIONS MARKETPLACE ৯ RESOURCES No data to display No data to display IBR1700

Log into your NetCloud Manager account.

On the left-hand column menu, select Devices. If your device is registered through Cradlepoint, it will show up in the view.

← → C a cradlepointecm.com/ecm.html#devices/routers	🖈 🗳 🔯 🥝 🛠 🛪 [M Paused) 🗄
& NetCloud [™]	▲ Account: Geon Ighes ▼ 3
	Q Search 😮
C DASHBOARD Routers Access Points Network Interfaces Rogue AP	
ڬ DEVICES 🧭 Configuration 👻 🔞 NetCloud OS 👻 🤤 Commands 👻 🚱 Remote Connect 👻 🤮 Move	😳 Settings 🚯 Export 👻 Filter: All 👻 🤣 🚻
୍ତ୍ତି GROUPS 🖉 🏟 Name Description Asset Identifier Product	MAC Address IP Address Group NetCloud OS Configuration
NETWORKS 9 Geoverse - IBR1700 Lab Demo IBR1700	00:30:44:32:CB:9F 63.158.207.170 7.1.20 (2019-08 Synched C
🖾 ALERTS & LOGS	
tien scheduler	
术 tools	
A3 ACCOUNT	
₩ ² marketplace	
© RESOURCES	,
4 // / Dana t of 1 X X	Displaying 1 - 1 of 1

Select the device you would like to configure. Click on the Configuration drop-down and select Edit. You should see the various WAN Device Interfaces.

With the 1200M-B module you will see two modems, one for each SIM. If you are only using the Geoverse SIM, configure both the same so you can insert the SIM in either port.

Edit Configuration (Geoverse - IBR1700)												
0	🍫 Co	nnec	tion Manager > Devices									
CONNECTION MANAGER Devices Auto VPN Networks	WA	N C	Device Interface Profiles &	Priority								
				-				Avail	ability			
			Profile Name	Conditions	~	Ð	ł++	\odot	((•))	¥	لىد	ц,
	≣,	al.	Modem-59b6f78d	type is Modem + tech is LTE/3G +		\$	٥	\$	\$	٥	\$	٢
	≣∘	al.	Modem-2b62f32	type is Modem + tech is LTE/3G +		\$	•	\$	\$	٥	\$	\$
	≣∘		Ethernet	type is Ethernet		\$	\$	\$	\$	٥	\$	\$
YAY SYSTEM	≣∘	((t·	WiFi as WAN	type is WWAN		\$	\$	\$	\$	٥	\$	\$
	≣∘	al.	LTE-only Modems	type is Modem + tech is LTE		\$	\$	\$	\$	٥	\$	\$
	≣∘	all.	LTE/3G Multi-mode Modems	type is Modem + tech is LTE/3G		\$	\$	\$	\$	۰	\$	\$
	≣÷	al.	3G-only Modems	type is Modem + tech is 3G		\$	\$	\$	\$	٥	\$	\$

To configure the modem, click on the modem and then select Edit. Select Modem and configure Modem Connection Mode as 'Force LTE', Carrier Select as 'Generic', Network Selection Mode as 'Auto', and make sure 'Enable Band 48' is selected. Click Save.

🗘 WAN Int	erface Profile		@ &					
General	Modem Connection Mode:	Force LTE V	A					
IPv4 Configuration	Carrier Select:	Generic ~						
IPv6 Configuration	Enable Aux Antenna:							
Modem	Enable GPS:							
CDMA	GPS Signal Source:	No Change V						
SIM/APN/Auth	Network Selection Mode:	Auto ~						
Filter Criteria	Enable eHRPD:							
	Network-Initiated Alerts:	When Disconnected						
	Functional Mode:	IPPT v						
	NOTE:	Only NAT mode allows user access to the modem web U						
	AT Config Script:							
	AT Dial Script:							
	Canc	cel Save						

To set the Geoverse APN on the modem, select SIM/APN/Auth on the left-hand column. Configure Authentication Protocol as 'Auto', Access Point Name (APN) as 'Default Override', and APN as 'geoverse.xxxx' (xxxx provided to you by your Geoverse representative). Click Save.

General	SIM Card Lock:	No Change
IPv4 Configuration	SIM PIN:	
IPv6 Configuration	Show PIN:	
Modem	Authoritication Destand	Aug.
CDMA	Authentication Protocol:	Auto
SIM/APN/Auth	Username:	
Filter Criteria	Password:	
	Access Point Name (APN):	Default Override
	APN:	geoverse.bellevue
I		



STEP 3: Configure other interfaces:

On the left-hand column menu, select Networking. From here you can configure the local LAN client side of the device: WiFi, ethernet ports, DHCP server, VLANs, etc.

4↓	ê 🕸	Name	Descript	tion	Asset Identifier	Product M	AC Address	IP Addre	ss Group	NetCloud O	S Configuratio
1 🕗	Edit Con	figuration (Geoverse - IBR1700	0								000
			0	() Networking > Loc	al Networks > WiFi Rad	dio #1 (2.4 GHz)					0
	• •	CONNECTION MANAGER	^	Wireless Radio: E	nable Disable						3¢t Help
	88	DENTITIES			es Points / SSID	e .					
	•	ETWORKING		/ Edit O D	uplicate Settings	3					
	Loc	al Networks WiFi Radio #1 (2 4 GHz)	- 11	WiFi Name (SSI	D) Security Mode	Hidden		Isolate	WMM	Enabled	
		WiFi Radio #2 (5 GHz)		IBR1700-b9f	WPA2 Personal (.	No		No	Yes	Yes	
		WiFi Radio #3 (5 GHz)		Public-b9f	Open	No		Yes	Yes	No	
		Ethernet Ports									
		Hotspot Services DHCP Server									
		Local IP Networks		WIFI Settings							
		MAC Filter & Logging		Re	gion Selection: USA	~					
	v.,∕	N Interfaces		Channel Se	lection Method: Smart S	Selection ~					
	► Tun	nels		Channel Sele	ction Schedule: Once	~					
	Rou	Jung .			Client Timeout: 300						
		s S Servers			TX Power:		. 100	96			
	WiF	i as WAN, or Client		F	RTS Threshold:		2347	bytes			
	Clie NH	ent Data Usage RP	11	Fragmenta	tion Threshold:		 2346 	bytes			
		ECURITY	-		DTIM:		1				-
								View	Pending Changes	Commit Changes	Discard Changes

Under "Local IP Networks', you can configure the LAN.

2	Edit Configuration (Geoverse - IBR1700)		000
		Image: Imag	8
	S CONNECTION MANAGER	Local IP Networks	et Help
		🔾 Add 🧪 Edit 🔇 Remove	
	NETWORKING	Primary LAN 192.168.0.1 255.255.255.0 Enabled	
	Local Networks WFi Radio #1 (2.4 GHz) WFi Radio #2 (5 GHz) WFi Radio #2 (5 GHz) Ethernet Ports Hotspot Gervices	Multicast Provy: Disabled Attached Interfaces: DHCP Relay: Disabled - Virtual LAN (802 Tq): VLAN: 2-lan: Port(s): 1U, 2U, 3U, 4U DHCP Relay: Disabled - WiFi Access Point: WiFi (2.4 GHz): IBR1700-b9F Schedule: Disabled - WiFi Access Point: WiFi (2.6 GHz): IBR1700-b9F.5g VRRP: Disabled - WiFi Access Point: WiFi (6 GHz): IBR1700-b9F.5g IPv4 Routing Mode: IAT - WiFi Access IPv4 Routing Mode: SLAC with DHCP Access Control: Admin Access	
	DHCP Server	Guest LAN 192.168.10.1 255.255.255.0 Enabled	
	Local IP Networks MAC Filter & Logging VLAN Interfaces Tunnels Routing OoS DNIS Servers	Multicast Proxy: Disabled Attached Interfaces: DHCP Server: Enabled -WiFi Access Point: WiFi (2.4 GHz): Public-b9f DHCP Relay: Disabled -WiFi Access Point: WiFi (5 GHz): Public-b9f Schedule: Disabled -WiFi Access Point: WiFi (5 GHz): Public-b9f-5g VRRP: Disabled -WiFi Access Point: WiFi (5 GHz): Public-b9f-5g IPv4 Routing Mode: NAT	
	WiFi as WAN, or Client Client Data Usage NHRP		
		• (•
		View Pending Changes Commit Char	Iges Discard Changes



Provide the device IP address.

Edit Configuration (Geoverse - IBR	1700)				
	C Primary	/ LAN Editor		0	8
CONNECTION MANAGE	General Settings	Provide a unique IPv4 address rang	e for this network.		
88 IDENTITIES	IPv4 Settings	IP Address:	192.168.0.1		
	IPv6 Settings	Netmask:	255.255.255.0		
	Interfaces	IPv4 Routing Mode:	NAT (default)		
	Access Control	Always Provy APP:			
WiFi Radio #1 (2.4 GHz)	IPv4 DHCP	Always Floxy ARE.			
WiFi Radio #2 (5 GHz)	Multicast Proxy				
WiFi Radio #3 (5 GHz)	IPv6 Addressing				
Ethernet Ports	Schedule				
DHCP Server	VRRP				
Local IP Networks	STP				
MAC Filter & Logging	Wired 802.1X				
VLAN Interfaces					
➤ Tunnels					
▶ Routing					
QoS DNC Commu					
WiFi as WAN, or Client					
Client Data Usage					
NHRP			Coursel Cours		
			Gancer Save		
				View Beading Changes	Commit Channes Discours

Enable DHCP.

CONNECCION MANAGE CONNECCION MANAGE Ceneral Settings UPS Sett	Edit Configuration (Geoverse - IBR17	ŋ		00
	CONNECTION MANAGER CONNECTION MANAGER CONNECTION MANAGER CONNECTION MANAGER CONNECTION MANAGER CONNECTION CON	General Settings Optionally provide custom DHCP settings. IPv4 Settings DHCP Setver Interfaces Access Control IPv4 DHCP Enable DHCP Server: I auto Multicast Proxy IPv6 Addressing Schedule VRRP STP Wired 802.1X	00	
Cancel Save	NHRP 8 SECURITY	Cancel Save		

Select Interfaces for the LAN.

Edit Configuration (Geoverse - IBR17	/00)						0 Q
CONNECTION MANAGER	Ceneral Settings IPv4 Settings IPv6 Settings Interfaces	/ LAN Editor Select the network interfaces which will be Available Interfaces Name	attache	d to this network. Selected Interfaces Name	00	9	
Local Networks WFI Radio #1 (2.4 GHz) WFI Radio #2 (5 GHz) WFI Radio #3 (5 GHz) Ethernet Ports Hotspot Services DHCP Server Local IP Networks MAC Filter & Logging	Access Control IPv4 DHCP Multicast Proxy IPv6 Addressing Schedule VRRP STP Wired 802.1X		> < ~	VLAN: 2-lar: Port(s): 1U, 2U, 3 WiFi (2.4 GHz): IBR1700-b9f WiFi (5 GHz): IBR1700-b9f-5g WiFi (5 GHz): IBR1700-b9f-5g	30, 40		
		Cance		Save			•
					View Pending Changes	Comm	it Changes Discard Change

<u>STEP 4:</u> Verify Operations:

On the left-hand column menu, select Devices. If your device is registered through Cradlepoint, it will show up in the view. Click on the device 'Name' that you want to verify.

NetCloud by Cra	adlepoint X	+											-		×
\leftrightarrow \rightarrow C	cradlepointecm.co	om/ecm.html#devid	es/routers					(2 ☆	ø	>)	* 🔘	Paused	:
∂Net Clo								Acco	unt: Geove	rse ·				•	0
Ø	🛞 🖾 Devices												Q Sea	rch	Θ
C DASHBOARD	Routers Access	Points Network I	nterfaces Ro	ogue AP											
🖶 DEVICES	🔗 Configuration 🔻	🔞 NetCloud OS 🔻 🌔	Commands 🔻	🔗 Remote Connect 🔻	🚯 Move 👩 Setti	ngs 🕓 Expo	ort 🔻 Filter: All 🔻							0	ш
Scoups	■ 4 + 🖻 🗇	Name	Description	Asset Identifier	Product MAC	Address	IP Address	Group	NetCloud	l OS	Config	uration	NCOS State	ıs Accou	int
Metworks		Geoverse - IBR1700	Lab Demo	1	IBR1700 00:30	:44:32:CB:9F	63.158.207.170		7.1.20 (2	019-08	Synche	d	Complete	Geove	erse
🖾 ALERTS & LOGS															
INSIGHTS															
SK TOOLS															
RESOURCES	4														Þ
	(of 1 > >>>											Dis	playing 1 - 1	of 1

You will see the summary of the device's performance.

geoverse

NetCloud by Cr	dlepoint × +			- 0
← → C (cradlepointecm.com/ecm.html#devices/dashboard?id=1721184		२ 🛧 🔮 🔟 🛛 🔅 뵭 (M Paused
∂Net Clou	and the second se		Account: Ge	hael Hughes 🔻
Charlemarko Dashednarko Charlemarko Devices Charlemarko Genoups Charlemarko NETWORKS Charlemarko ALERTS & LOGS Charlemarko NESIGNTS	Routlers > Geoverse - IBR7700 Geoverse - IBR1700 Lab Demo Total Usage Health Summary Interfaces Geoview License Containers Details	ROUP ACCOUNT Geoverse - Michael Hughes		¢ € L
前 SCHEDULER ※ TOOLS			6	🖥 Last 7 Davs 🔻
 № № ACCOUNT ₩ MARKETPLACE @ RESOURCES 	Connection Status Usage by WA MC400 1200M B (SIM1) GEOVERSE I MC400 1200M B (SIM2) Etherne Usage by WA Usage by WA Etherne Etherne No Trend Du	Moderns Wifl as WAN 24.9 MB 0.0 B ta + 22.6% No Trend Data	WAN Uptime Use of the second	Office
	GeoView Backstage Dance Studio Bight Horizons at Sunset Health Department Google To the faragate Way, Bellovue, WA 98005, USA	Recent Alerts	No data to display	

Select 'Interfaces'. You can verify the WAN IP address and its gateway assigned to the device from the LTE network.

							Account:	Geoverse - Michael	
CASHBOARD DEVICES GROUPS NETWORKS	Routers > Geov Geover Lab Demo	rerse - IBR1700	ONLINE STATUS ONLINE	PRODUCT IBR1700	GROUP	ACCOUNT Geoverse - Michael Hughes			
Alerts & Logs Insights Scheduler	Home Da	Interfaces Health GeoView	Liconse Container	s Details					
TOOLS	4al	Name ↑	Model		Device Type	Carrier		Details	
INTEGRATIONS		ethernet-lan			ethernet			Summany	
ACCOUNT		othornot won			- the second			Summary	
MARKETPLACE		ediente-wart			euremet			Name: Model:	mdm-59b6f78d MC400 1200M-B (SII
RESOURCES	θ	mdm-59a7b4d0	MC400 1200M	1-B (SIM2)	mdm			Online Status:	Connected
	🗢 all	mdm-59b6f78d	MC400 1200M	1-B (SIM1)	mdm	Unknown		Connection State: Uptime:	Connected 3 days, 19 hours, 8 minutes
		wian-wireless0			wlan			IP Address: Primary DNS:	192.168.2.28
		wian-wireless0_2			wlan			Secondary DNS: Gateway:	8.8.4.4 192.168.2.29
	lh. O	wwan-GEOVERSE PRIVATE	LTE:2		wwan			Netmask: Port:	255.255.255.248
	IK K Pa	ige 1 of1 > >1					Displaying 1 – 7 of 7	ID: Device Type: Service Type: UID: Manufacturer: Family: Last Undato:	55003303 mdm LTE 59b6f78d Cradlepoint Inc. wan 2020 10



Scrolling down on the Details, you can verify operations on Band 48 and verify the IMSI, APN, and signal strengths.

\leftrightarrow \rightarrow C	cradlepointecm.com/ecm.html#devices/dashboard?id	l=1721184&framerou	te=%2Fdevices	%2Frouters%2Frouter%2F1721	184%2Fho Q 🖞	🗸 🖸 🔯 🝳 🛠 🗯 🚺 Paused
∂Net Clo	ud [™]				Account:	Geoverse - Michael Hugi
DASHBOARD DEVICES GROUPS GO NETWORKS ALERTS & LOGS	Readers > Geoverse - IBRITOO Geoverse - IBR1700 Lab Demo Data Usage Health	S PRODUCT IBR1700	GROUP	ACCOUNT Geoverse - Michael Hughes		$\mathbb{Q}\left(\overline{0} \xrightarrow{\overline{0}} \xrightarrow{\overline{0}} \overline{0} \xrightarrow{\overline{0}} \xrightarrow{\overline{0}} \overline{0} \xrightarrow{\overline{0}} $
	Summary Interfaces GeoView License Contai	ners Details				
CHEDULER	/jd Name ↑ Model ethernet.tan		Device Type ethernet	Carrier		Details >
₩ MARKETPLACE	ethernet-wan		ethernet			Modem FW Version: 32.00.153
RESOURCES	e mdm-59a7b4d0 MC400 12	200M-B (SIM2)	mdm			Modem FW Status: Asset:true
	MC400 1	200M-B (SIM1)	mdm	Unknown		RF Band: 48 Carrier: Unknown Service
	wtan-wireless0		wlan			Registered Carrier: n/a Home Carrier: Unknown
	wtan-wireless0_2		wlan			Cell ID: 338 (0x152)
	di wwan-geoverse i private lte:2		wwan			Modem Identifier
	K C Page 1 of > St				Dispoying 1 – 7 of 7	Incode Incode 3200Mz (SMI) Product: MCAO 2200Mz (SMI) Esnial Number: 357926100044598 Santal Number: 357926100044598 MBI: 397926100044598 MBI: 397926100044598 MBI: 397926100044598 MBI: 397926100044598 MBI: 397926100044598 MBI: 397926100044598 MSI: 397926100044598 MSI: 397926100044598 MSI: 397926100044598 MSI: 397926100044598 Signal Quality A Signal Quality A Signal Quality A Signal Cuality A Signal Cuality A Signal Cuality A Signal Cuality A Signal Strength: 100 ECIO: BSRR: Signal Strength: 7 Signal Strength: 7

STEP 5: Enjoy connectivity wherever you go.

As long as the option under Devices, then Modem, then Network Selection is configured as 'Auto', the device should be able to roam when taken off-net from the Geoverse network. In order to prevent roaming, change Network Selection to 'Home Only'.

🗘 WAN Int	erface Profile	00	Э
General	Enable Aux Antenna:		*
IPv4 Configuration	Enable GPS:		
IPv6 Configuration	GPS Signal Source:	No Change	
Modem	Network Selection Mode:	Auto	
CDMA	Enable eHRPD:	Auto	
SIM/APN/Auth	Network-Initiated Alerts:	Home only	
Filter Criteria	Functional Mode:	Manual Smart	
	NOTE:	Only NAT mode allows user access to the modern web UI	
	AT Config Script:		
	AT Dial Script:		
	Enable Band 30:		•
		Cancel Save	