

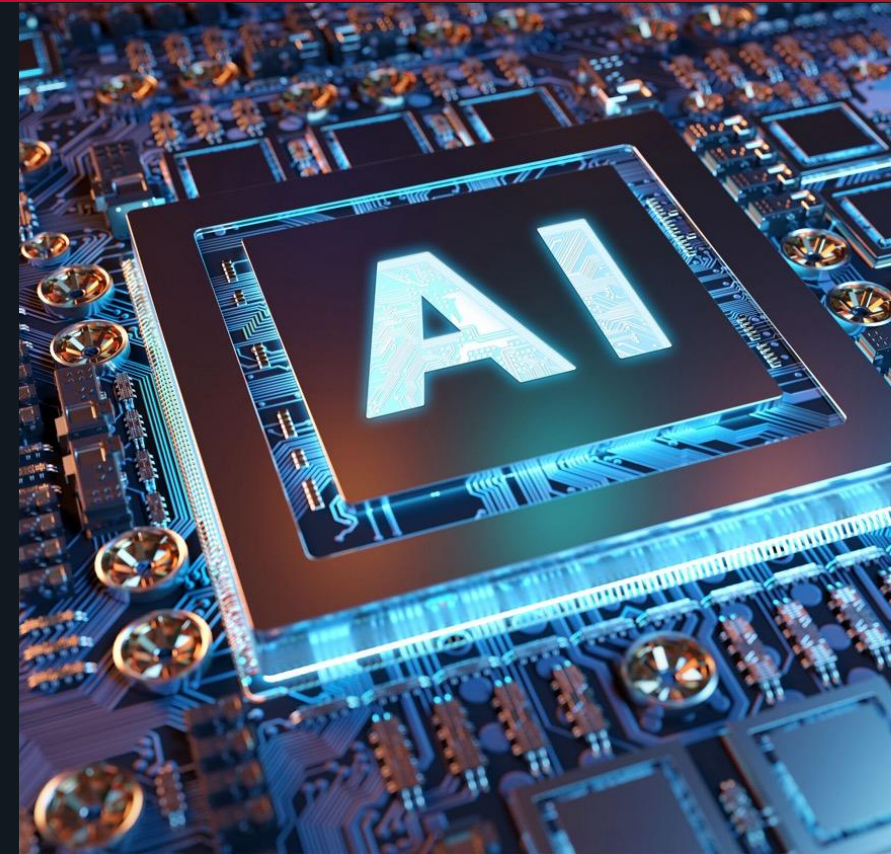
Introducing WLA Agent Manager

2022/12/01

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| Agenda

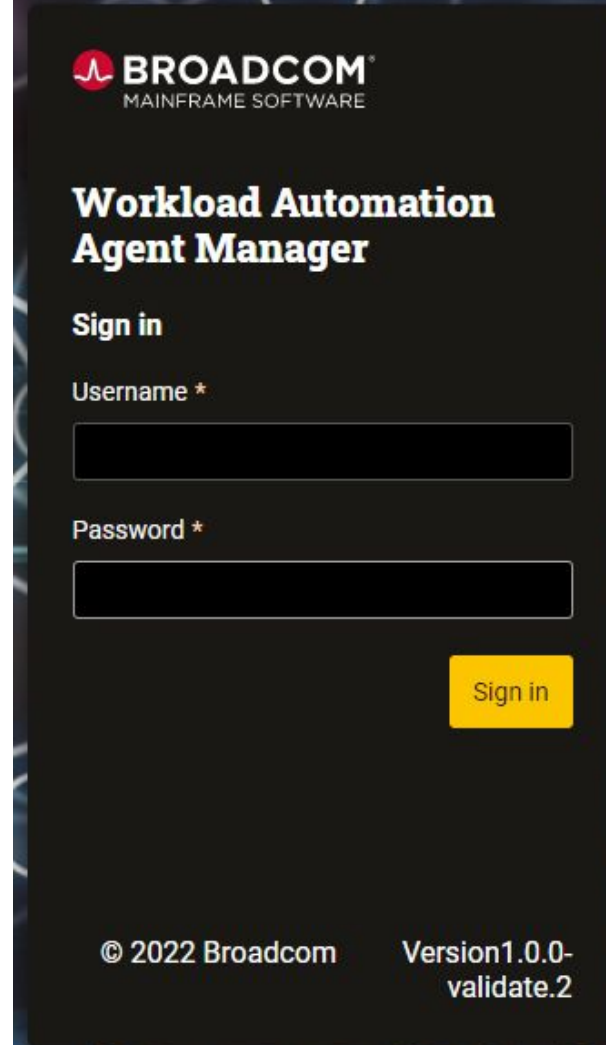
- What is **Workload Automation Agent Manager**?
- WLA Agent Manager **Roadmap**
- **Architecture** Overview
- Needed **Security** Configuration
- **Demo** of WLA AM User Interface
- Associated **REST APIs** Overview
- **Validation** Information

What is WLA Agent Manager?

New Web UI to serve as a single stop for monitoring and management of system agents

Gives Workload Automation Operators a view of the status of all system agents across multiple instances of schedulers in a consolidated view.

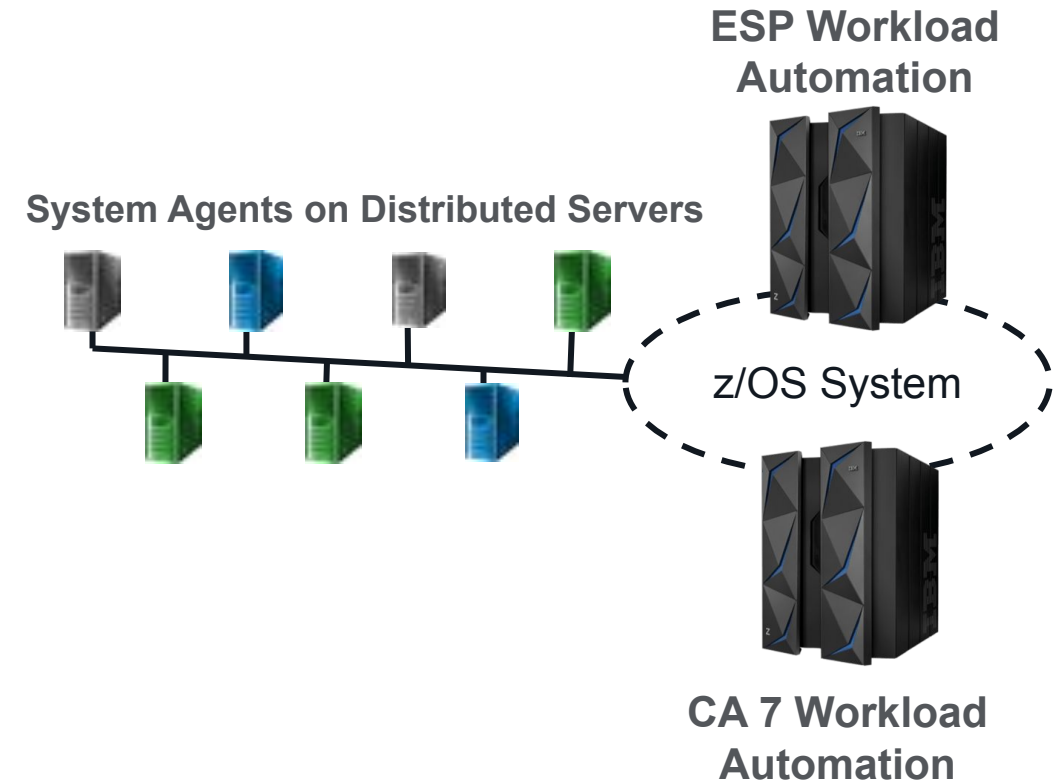
Enables Workload Automation Administrators to monitor, troubleshoot, manage and upgrade thousands of system agents in a single pane of glass.



The image shows a dark-themed login interface for the Broadcom Workload Automation Agent Manager. At the top left is the Broadcom logo with the text 'BROADCOM MAINFRAME SOFTWARE'. Below this is the title 'Workload Automation Agent Manager' in a bold, white font. Under the title is a 'Sign in' heading. There are two input fields: 'Username *' and 'Password *', both with white text and empty text boxes. To the right of the password field is a yellow 'Sign in' button with black text. At the bottom of the page, there is a footer with '© 2022 Broadcom' on the left and 'Version 1.0.0-validate.2' on the right. The background of the slide features a blue and white network diagram with nodes and connecting lines.

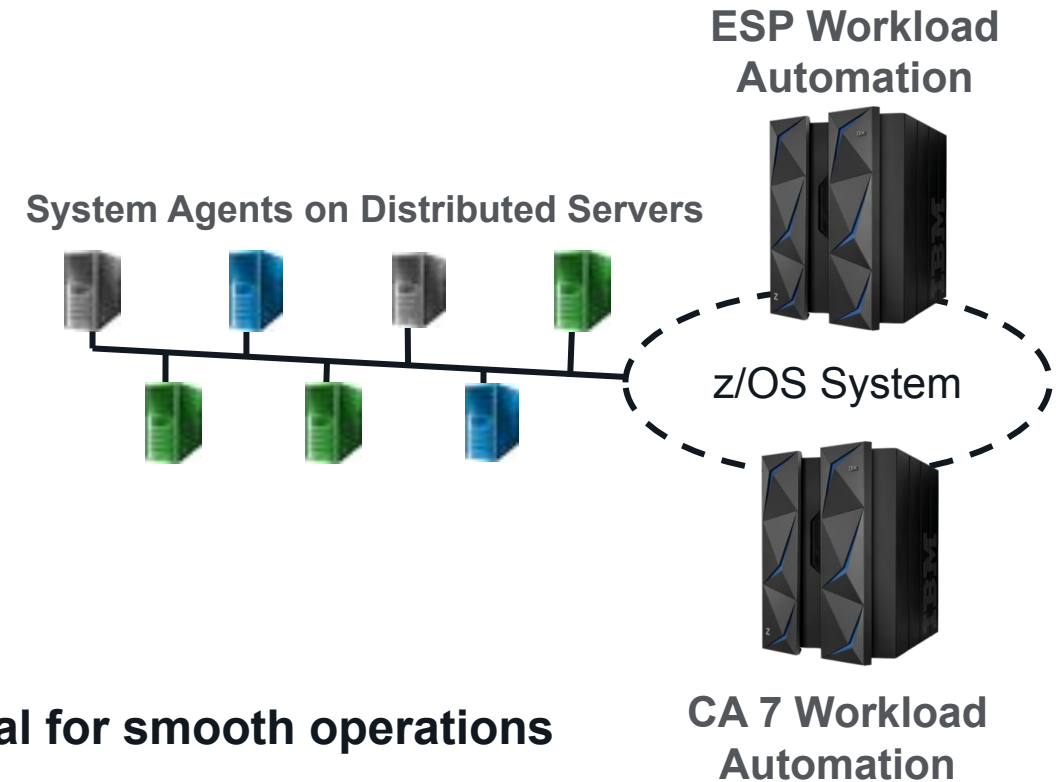
| Why System Agents?

- Key integration component for WLA products
- Enables scheduling on a variety of systems
- Can be extended by business-specific agents



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The need to manage?

- Our customers are running **thousands of agents**
- Readiness of the agents to process workload is **critical for smooth operations**
- **Challenging maintenance** due to the involvement of multiple departments
- Difficulties in understanding the overall **state of the scheduling environments**

Solution?



WLA Agent Manager

#1 Quickly and easily displays where agents are installed, agent status, and detailed information about each agent

#2 Issues commands to agents, retrieves log files, performs configuration changes to the agent

#3 Performs agent upgrades

Benefits:

- The view and control of the agents leveraged by schedulers from a single tool
- Gain visibility of agent inventory and plugin distribution
- Identify which agents need maintenance and configuration changes and then execute the updates
- Reduce the amount of SME time dedicated to agent maintenance and overcome hurdles with accessing the agents

| How does it fit with BRCM schedulers?

- Cross-enterprise workload automation helps reduce cost and complexity, and improve service delivery
- WLA Agent Manager is a new component of:
 - ESP Workload Automation
 - CA 7 Workload Automation
- Will be available to ESP & CA 7 customers with active contracts

Roadmap - Done

Validate Drop (November)

- delivered

- Connect multiple schedulers
- Retrieve the list of the agents
- View Agent Info
- Agent Heartbeat for ESP
- Agent inventory export
- Individual agent ping
- Retrieve agent log file
- Agent commands
 - STOP
 - RESTART
 - QUIESCE
 - UNQUIESCE
- Associated ESP and CA 7 REST endpoints

Release v1 (Early 2023)

- under construction

- **Possibility to upgrade the agent**
 - **Staging of updates**
 - **Upgrade execution**
- Installers and Versions management
- Specific log files download
- Possibility to edit agent parm file
- Incorporation of gathered feedback
- Associated ESP and CA 7 REST endpoints

Future Releases

- under consideration

- Arbitrary agent version rollback
- Last scheduled job info
- Information on licence consumption
- Agent Notes
- Scheduled upgrade

Roadmap - Now

Validate Drop (November)

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Roadmap - Later

Validate Drop (November)

- **delivered**

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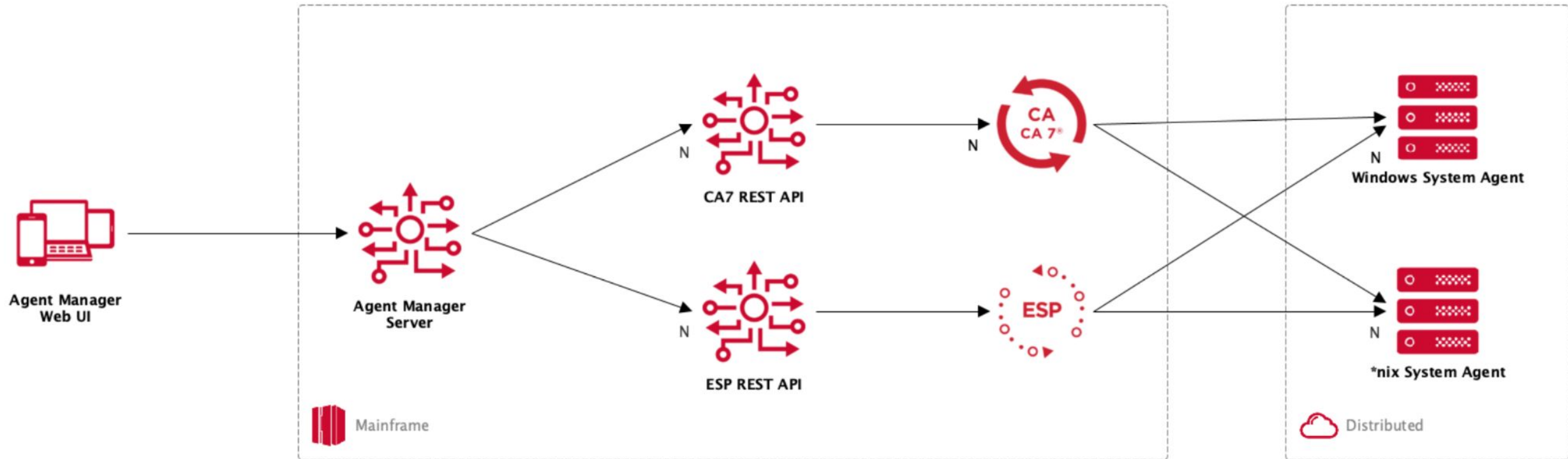
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Architecture Overview



- CA7 and ESP REST Server Agent Management APIs can be used independently of Agent Manager
- Agent Manager Server aggregates agent data from multiple Scheduler REST API instances, thus you can manage all your agents centrally
- Agent Manager Server is only deployable on Mainframe USS to provide z/OS built-in security

| Security

- Agent Manager functions are role-based access controlled (RBAC)
- Roles are assigned by writing rules in your external security manager to grant the appropriate access
 - An “**ADMIN**” role is assigned if the user has **READ** access to the **WAM.ADMIN** resource of FACILITY resource class
 - An “**OPERATOR**” role is assigned if the user has **READ** access to the **WAM.OPERATOR** resource of FACILITY resource class
- Users with a role of **OPERATOR** can:
 - See the list of Agents for the defined Schedulers
 - See the list of defined Schedulers
- Users with a role of **ADMIN** can do everything an **OPERATOR** can do, plus:
 - Maintain the Scheduler definitions
 - Perform actions on the Agents: quiesce, unquiesce, stop, restart, retrieve logs, retrieve Agent parms, etc.

| Security (continued)

- Agent Manager uses the Scheduler's REST APIs to perform functions on behalf of the user
- Agent Manager users must have Scheduler security permissions to send messages to an Agent
- Agent Manager uses a "service account" for communicating with the Scheduler
 - The service account credentials are specified when defining the Scheduler to Agent Manager
 - The service account is used to refresh the Agent list in the background
 - The service account must have security permission to get a list of Agents

WLA Agent Manager Web User Interface Demo

ESP REST AM Endpoints

Agents			^
GET	/api/v1/agents	Retrieves a list of agents	✓ 🔒
GET	/api/v1/agents/{agent}/details	Agent details	✓ 🔒
GET	/api/v1/agents/{agent}/logs	Get Agent logs	✓ 🔒
GET	/api/v1/agents/{agent}/parm	Get agentparm.txt	✓ 🔒
POST	/api/v1/agents/{agent}/parm	Update agentparm.txt	✓ 🔒
POST	/api/v1/agents/{agent}/ping	Agent Ping	✓ 🔒
POST	/api/v1/agents/{agent}/quiesce	Agent Quiesce	✓ 🔒
POST	/api/v1/agents/{agent}/restart	Agent Restart	✓ 🔒
POST	/api/v1/agents/{agent}/stop	Agent Stop	✓ 🔒
POST	/api/v1/agents/{agent}/unquiesce	Agent Unquiesce	✓ 🔒

CA 7 REST AM Endpoints

Agent Management CA 7 agent management				
GET	/api/v1/agent/{agent-name}/details	Get Agent details	✓	🔒
GET	/api/v1/agent/{agent-name}/loglist	Get list of log files	✓	🔒
GET	/api/v1/agent/{agent-name}/logs	Get Agent logs	✓	🔒
GET	/api/v1/agent/{agent-name}/parms	Get Agent parameters	✓	🔒
GET	/api/v1/agent/{agent-name}/ping	Ping Agent	✓	🔒
PUT	/api/v1/agent/{agent-name}/restart	Restart Agent	✓	🔒
PUT	/api/v1/agent/{agent-name}/stop	Stop Agent	✓	🔒
GET	/api/v1/agent/list	List agents	✓	🔒

WAM UI - Upgrades Mocks

Agent Manager

Agents

Schedulers

Installers and Versions

Help & Support

username123

Log Out

Use Dark Mode

Agents

View Details

Retrieve Logs

Refresh

Export

Commands

Upgrade

Status

Agent Name

Version

Build

Agent ID

Operating System

Scheduler Type

Scheduler Name

Instance

Plugins

Offline

AGENT_123456

12.0

6181

lvntest0

Linux for amd64

ESP

ESP-Instance 01

EC2, Spark, Azure

Offline

AGENT_987654

12.0

6181

lvntest0

Linux for amd64

ESP

ESP-Instance 02

Spark, Azure, Ora

Offline

MACCO01ESP

12.0

6181

10.90.5

Windows 8 for amd64

CA7

CA7-Instance 01

Azure, Oracle, Oo

Online (Updating)

K8S-Ewing

12.0

6181

wadev-oc-3.dhcp.br...

980

Linux for amd64

CA7

CA7-Instance 02

EC2, Spark

Online

K8S-LVN

12.0

6181

wadev-oc-3.dhcp.br...

1420

Linux for amd64

CA7

CA7-Instance 03

EC2, Spark, Azure

Online

R12PATCH

12.0

6181

wadev-oc-3.dhcp.br...

900

Windows 8 for amd64

ESP

ESP-Instance 03

EC2, Spark, Azure

Online

WA_AGENT1

12.0

6181

lvntest006872.pbc.br...

1200

Windows 8 for amd64

ESP

ESP-Instance 04

Spark, Azure, Ora

Online

agentlib

11.4

946

kaori01-rh7-1.lvn.bro...

1420

Windows 8 for amd64

ESP

ESP-Instance 05

Azure, Oracle, Oo

Online

KAORI01-C07

11.5

1933

kaori0co70-2.lvn.bro...

1420

Linux for amd64

CA7

CA7-Instance 04

Spark, Azure, Ora

Online

KAOR102

11.5

1933

kaori0co70-2.lvn.bro...

980

Linux for amd64

ESP

ESP-Instance 06

EC2, Spark, Azure

Online

R12

12.0

6181

lvntest012345.pbc.br...

820

Linux for amd64

ESP

ESP-Instance 07

Oracle, Oozie

Online

LVNDEV_01

12.0

6181

lvntest015723.pbc.br...

1420

Linux for amd64

ESP

ESP-Instance 08

EC2, Spark, Azure

Offline

LVNDEV_02

12.0

6181

lvntest015723.pbc.br...

1046

Linux for amd64

ESP

ESP-Instance 09

EC2, Spark, Azure

Offline

LVNDEV_03

12.0

6181

lvntest05723.pbc.br...

1220

Linux for amd64

CA7

CA7-Instance 05

EC2, Spark, Azure

Online

LVNDEV_04

12.0

6181

lvntest05723.pbc.br...

1420

Linux for amd64

CA7

CA7-Instance 06

EC2, Spark, Azure

Online

LVNDEV_05

12.0

6181

lvntest05723.pbc.br...

902

Linux for amd64

CA7

CA7-Instance 07

EC2, Spark, Azure

25 per page

1 - 25 of 40

Jump to page

#

<<

<

1

2

>

>>

18

WAM UI - Upgrades Mocks

Agent Manager

Agents

Schedulers

Installers and Versions

Installers and Versions

Add

Edit

Remove

	Machine Type ↑↓	Description ↑↓	Installer File ↑↓	Major Version ↑↓	Minor Version ↑↓	Service Pack ↑↓	Maintenance Level ↑↓
<input type="radio"/>	Linux_X86_64	lorum ipsum	setup.bin	12	1	00	00
<input type="radio"/>	Linux_390_64	lorum ipsum	setup.bin	12	1	00	00
<input type="radio"/>	windows_x86_64	lorum ipsum	setup.exe	12	0	00	00
<input type="radio"/>	Solaris_x86_64	lorum ipsum	setup.bin	12	0	00	00
<input type="radio"/>	hpux_ia_64	lorum ipsum	setup.bin	12	1	00	00

25 per page

1 - 1 of 1

Jump to page

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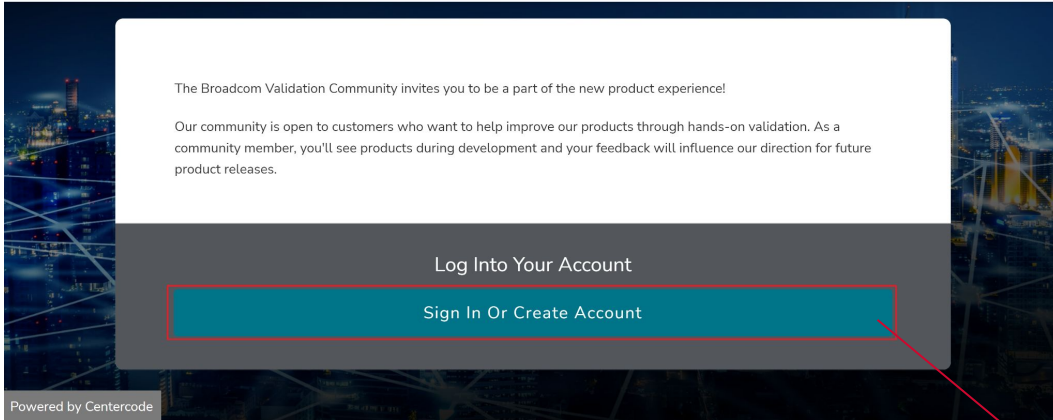
Help & Support

username123

Involved or Interested in WLA AM Validation?

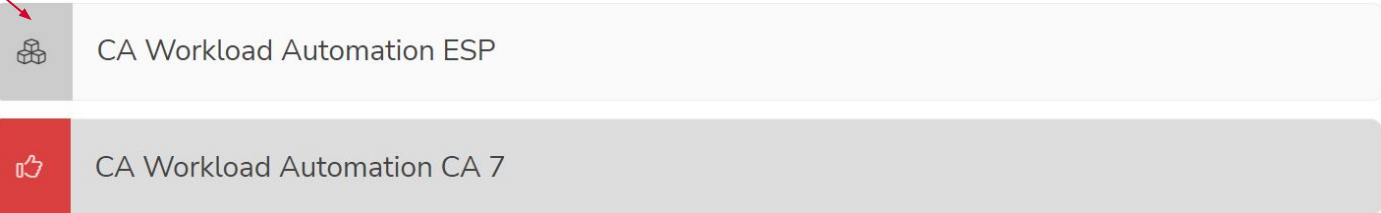


Welcome to the Broadcom Validation Community.



- Sign in to validate.broadcom.com so that you can participate in various validation projects, get access to pre-releases, invitation to development reviews, recordings and other materials.

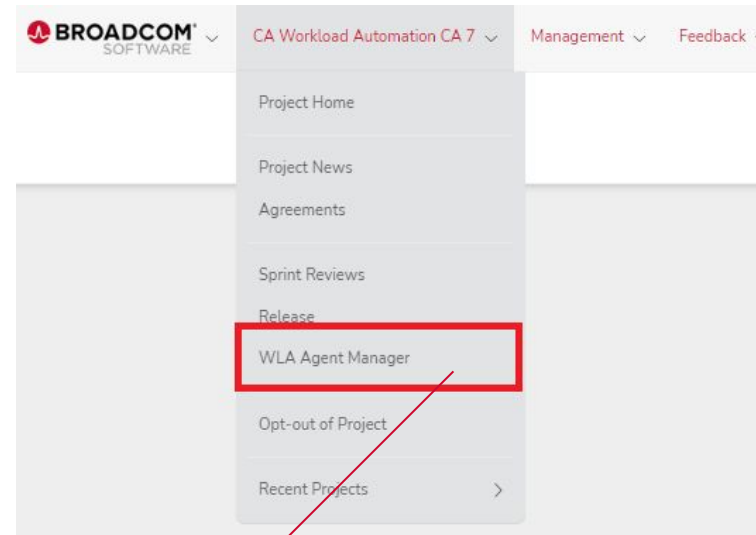
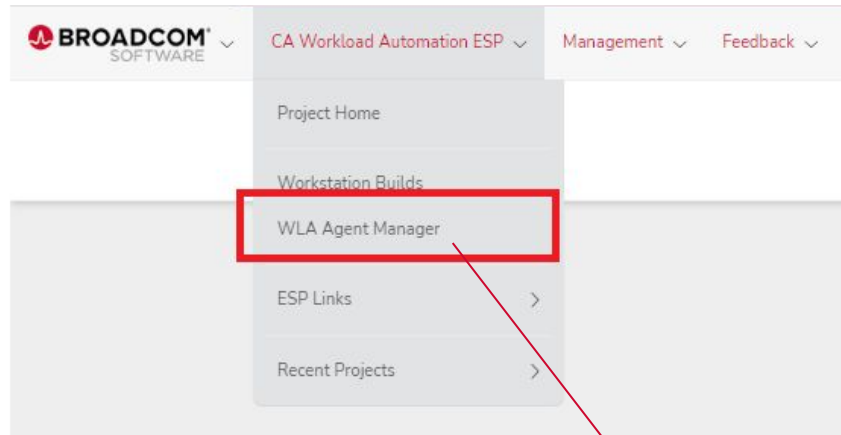
- Search for ESP or CA 7 project to get access to WLA Agent Manager related materials



Or reach out directly to daniel.remta@broadcom.com with an ask for invitation to ESP or CA 7 validation project.

Where to Find the Materials at Validate?

- “WLA Agent Manager” in the project menu



TITLE	DATE
Agent Manager Validate Drop v2	2 Weeks ago
Development review 2022/11/09	2 Weeks ago
Development review 2022/08/18	3 Months ago
Agent Manager	3 Months ago

| Before We Conclude

- Please leave feedback for the session and for Workload Automation Agent Manager
- While filling the feedback please let us also know:
 - 1) Would you like to follow-up with us and bring more of your colleagues?
 - 2) Would you like to participate in a short remotely-done usability study (30 - 60 mins) to get a hands-on experience with the tool?
 - 3) Are you considering installing the validate version and/or would you like any form of help from Broadcom?
 - 4) Do you use ESP or CA 7 REST APIs already? And are you interested in a more detailed session to explore APIs-related Agent Management?



Thank You