

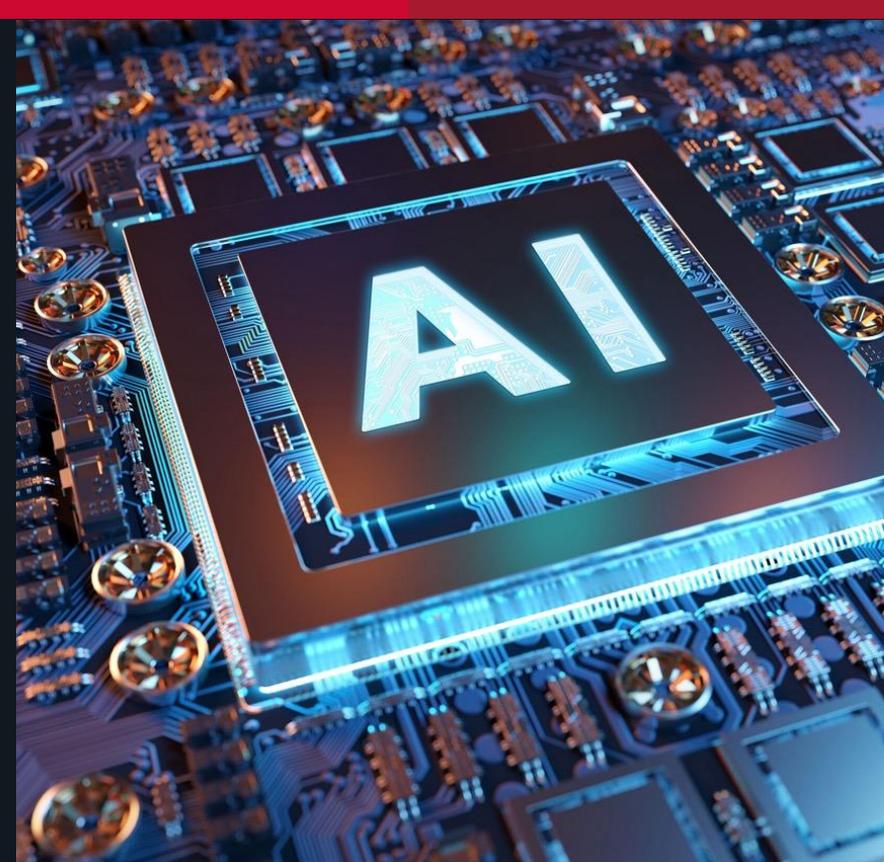
Introducing WLA Agent Manager

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| Agenda

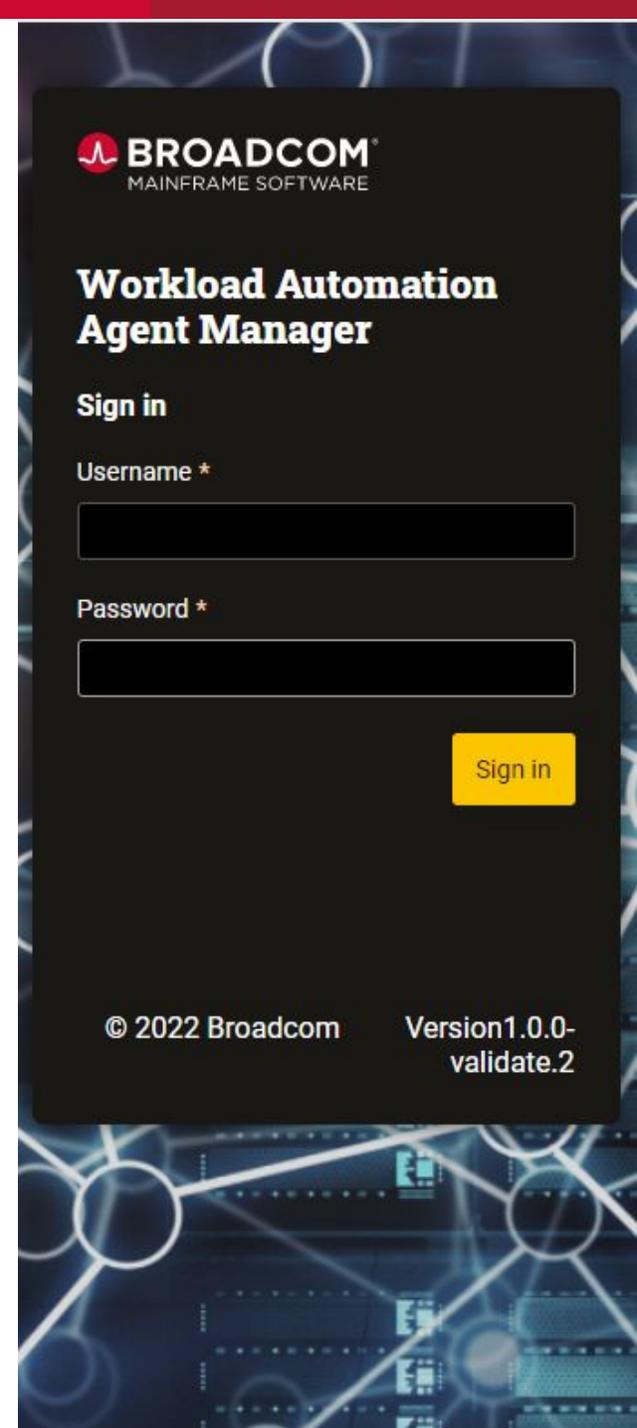
- What is **Workload Automation Agent Manager**?
- WLA Agent Manager **Roadmap**
- **Architecture** Overview
- Needed **Security** Configuration
- **Demo** of WLA AM User Interface
- Associated **REST APIs** Overview
- **Validation** Information

What is WLA Agent Manager?

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

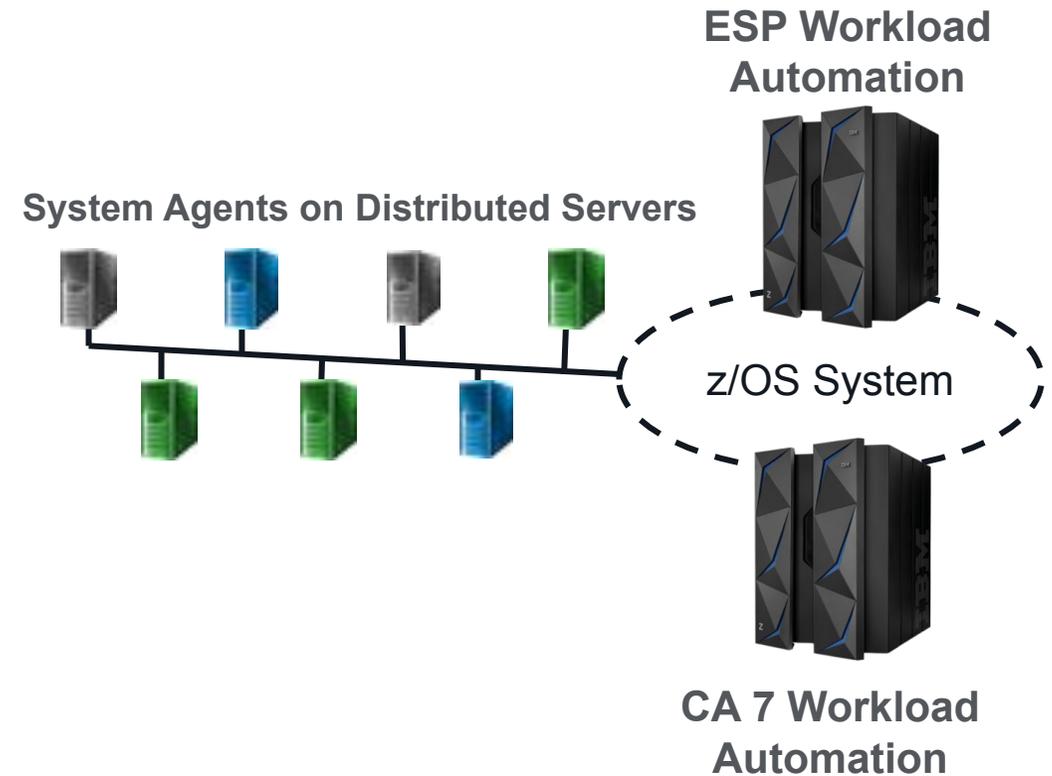
Gives Workload Automation Operators a view of the status of all system agents across multiple instances of schedulers in a consolidated view.

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



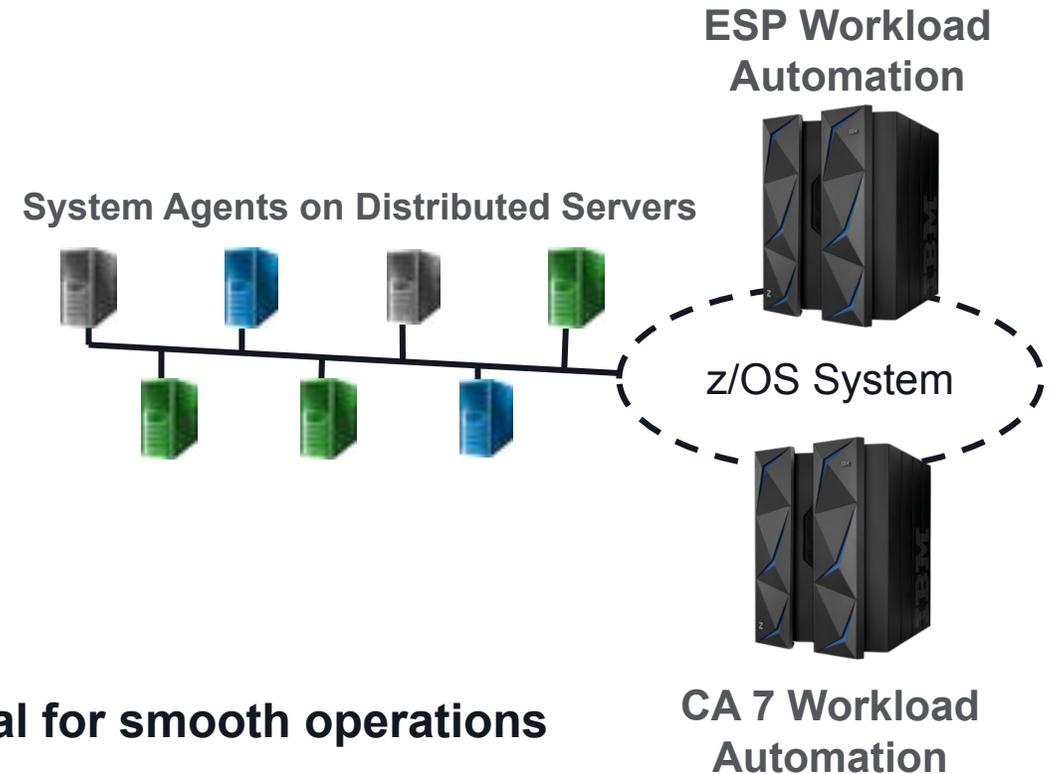
Why System Agents?

- 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

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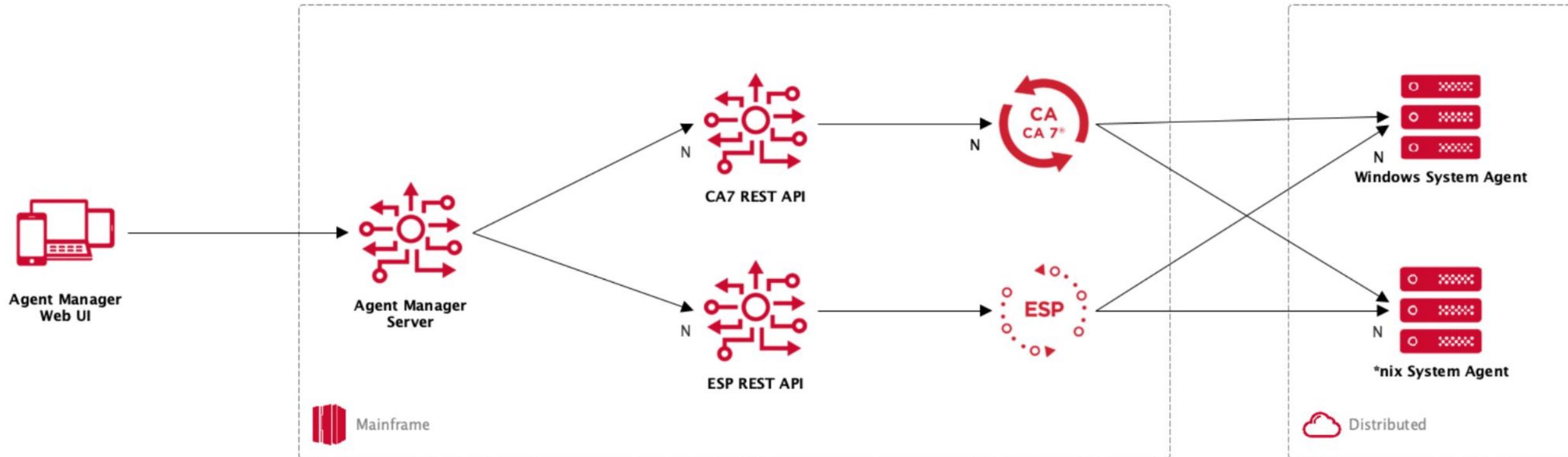
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Architecture Overview



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

The screenshot displays the 'Agents' section of the WAM UI. The interface includes a sidebar with navigation options: 'Agent Manager', 'Agents', 'Schedulers', and 'Installers and Versions'. The main area features a table of agents with columns for Status, Agent Name, Version, Build, Agent ID, Operating System, Scheduler Type, Scheduler Name, Instance, and Plugins. A dropdown menu is open over the 'Upgrade' button, listing actions: 'Stage Agent', 'Upgrade Agent', 'Cancel Scheduled Upgrade', 'Rollback Upgrade', and 'Manage Installers and Versions'. The table shows various agent statuses, including 'Offline' and 'Online (Updating)'. At the bottom, there are pagination controls showing '25 per page' and '1 - 25 of 40' items, along with a 'Jump to page' field and navigation arrows.

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	CA70001	Azure, Oracle, Oo
Online (Updating)	K8S-Ewing	12.0	6181	wadev-oc-3.dhcp.br...	Linux for amd64	CA7	CA7-Instance 02	CA7002	EC2, Spark
Online	K8S-LVN	12.0	6181	wadev-oc-3.dhcp.br...	Linux for amd64	CA7	CA7-Instance 03	CA7003	EC2, Spark, Azure
Online	R12PATCH	12.0	6181	wadev-oc-3.dhcp.br...	Windows 8 for amd64	ESP	ESP-Instance 03		EC2, Spark, Azure
Online	WA_AGENT1	12.0	6181	lvntest006872.pbc.br...	Windows 8 for amd64	ESP	ESP-Instance 04		Spark, Azure, Ora
Online	agentlib	11.4	946	kaori01-rh7-1.lvn.bro...	Windows 8 for amd64	ESP	ESP-Instance 05		Azure, Oracle, Oo
Online	KAORI01-C07	11.5	1933	kaori0co70-2.lvn.bro...	Linux for amd64	CA7	CA7-Instance 04	CA70004	Spark, Azure, Ora
Online	KAOR102	11.5	1933	kaori0co70-2.lvn.bro...	Linux for amd64	ESP	ESP-Instance 06		EC2, Spark, Azure
Online	R12	12.0	6181	lvntest012345.pbc.br...	Linux for amd64	ESP	ESP-Instance 07		Oracle, Oozie
Online	LVNDEV_01	12.0	6181	lvntest015723.pbc.br...	Linux for amd64	ESP	ESP-Instance 08		EC2, Spark, Azure
Offline	LVNDEV_02	12.0	6181	lvntest015723.pbc.br...	Linux for amd64	ESP	ESP-Instance 09		EC2, Spark, Azure
Offline	LVNDEV_03	12.0	6181	lvntest05723.pbc.br...	Linux for amd64	CA7	CA7-Instance 05	CA70004	EC2, Spark, Azure
Online	LVNDEV_04	12.0	6181	lvntest05723.pbc.br...	Linux for amd64	CA7	CA7-Instance 06	CA70005	EC2, Spark, Azure
Online	LVNDEV_05	12.0	6181	lvntest05723.pbc.br...	Linux for amd64	CA7	CA7-Instance 07	CA70006	EC2, Spark, Azure

WAM UI - Upgrades Mocks

The screenshot displays the 'Installers and Versions' section of the WAM UI. The interface includes a sidebar with navigation options: Agent Manager, Agents, Schedulers, and Installers and Versions (highlighted). The main content area features a table with columns for Machine Type, Description, Installer File, Major Version, Minor Version, Service Pack, and Maintenance Level. A context menu is open over the second row, showing 'Edit Installer and Version' and 'Remove Installer and Version' options. The table contains five rows of data, each with a radio button, a colored dot, a machine type, a description, an installer file, and version/service pack information.

	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 # 1

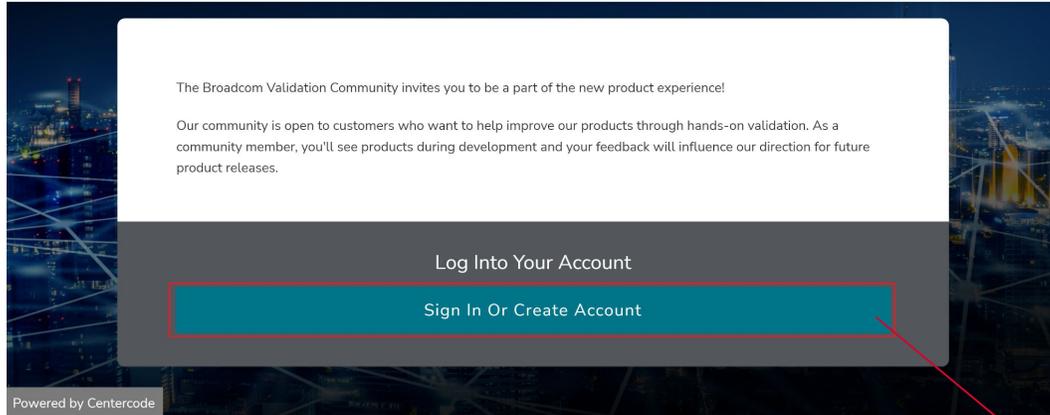
Help & Support

username123

Involvement or Interested in WLA AM Validation?

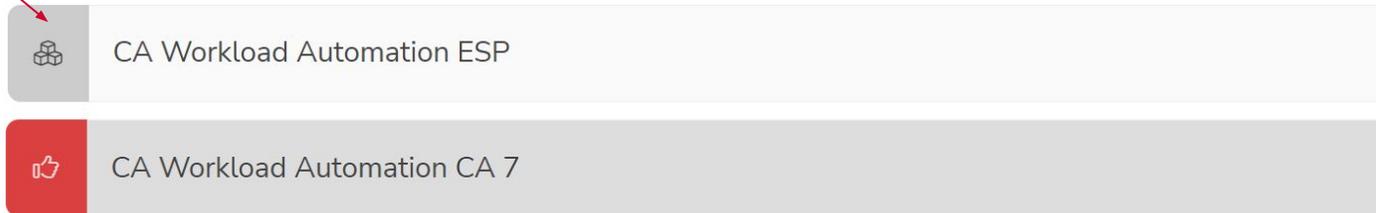


Welcome to the Broadcom Validation Community.



- 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.

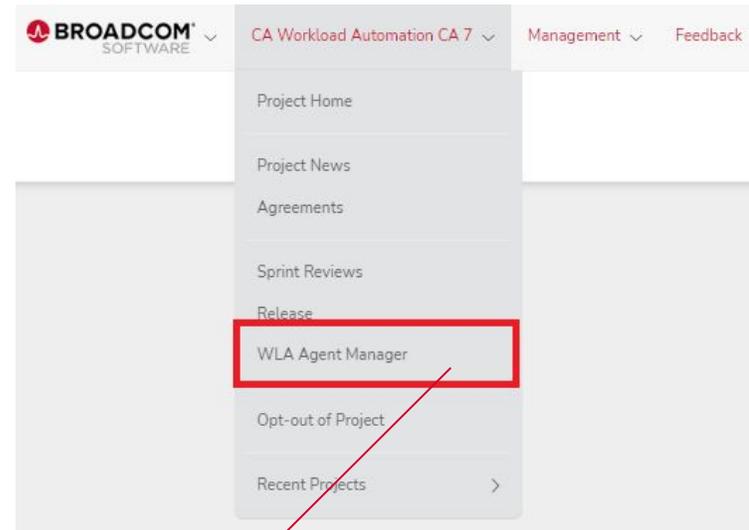
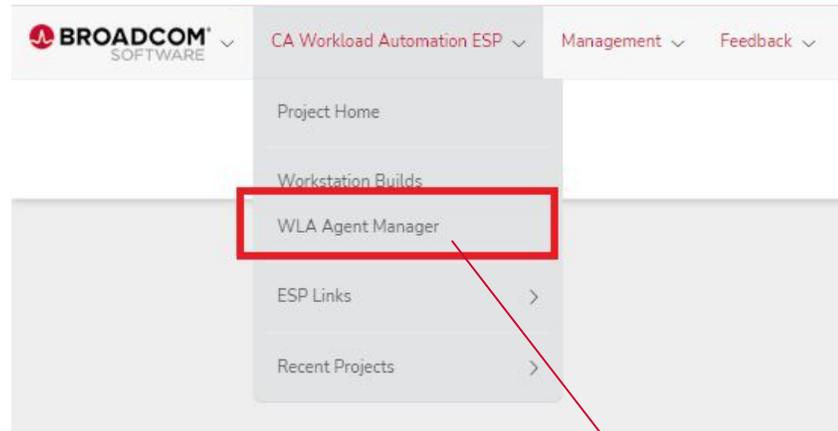
- Search for ESP or CA 7 project to get access to WLA Agent Manager related materials



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