Wi-Fi Standard

Purpose
The purpose of this standard is to establish authority over the operation of Wi-Fi service on campus and to ensure the successful and secure operation of the same. Without a standard, proper operation of the campus Wi-Fi service may be affected resulting in a negative impact to the academic and administrative function of the university.

Scope
The scope of this standard applies to the main Carbondale campus and to any off-campus property where the Office of Information Technology operates a Wi-Fi service or where the Plant & Service Operation operates a Wi-Fi network.

Standard
Only two campus entities are permitted to operate Wi-Fi networks on the SIU Carbondale campus and affiliated locations. Those entities are:

- Information Technology Network Engineering Team, hereafter known as NET
• Plant & Service Operation, hereafter known as PSO

Any Wi-Fi device found operating on the SIU Carbondale campus that is not operated by NET or PSO will be considered a rogue device and will have its data network access turned off. The definition of rogue in this context does allow for devices transmitting with a hidden SSID. Exceptions for Wi-Fi and related research or instruction specifically related to Wi-Fi technologies must be preapproved and can be requested via email to wireless@siu.edu. Other sources of Wi-Fi interference, such as cordless phones and microwave ovens, must be permanently removed from service.

All wireless networks will use WPA2-AES as a minimum encryption level for wireless networks. Pre-Shared Keys are allowed for pre-approved networks; however, the password must adhere to the campus password standard. With the exception of the facilities SSID, all other networks shall use the SIU Network ID and passwords for authentication.

NET manages and maintains 2.4Ghz and 5Ghz spectrums assigned to data networking communications by the FCC. These NET managed Wi-Fi networks are for access to campus e-resources, the Internet and Internet II.

Plant & Service Operation manages and maintains 2.4Ghz spectrum assigned to data network communications by the FCC. These PSO managed networks are for communications related to operation of campus control systems and related purposes.

Both NET and PSO will work cooperatively to resolve any signal conflict issues.

A production Wi-Fi network known as eduroam will be made available. The eduroam network SSID is...

• For use by current faculty, staff and students.
• For use by other entities who are affiliated with SIU Carbondale, such as guest lecturers, Recreation Center users and the Board of Trustees.
• For use by university visitors from institutions who also participate in eduroam.
• Not for use by unaffiliated Carbondale community members.

A production Wi-Fi network known as siu-guest will be made available.

• The siu-guest network SSID is for use by guests to SIUC, for example, parents, vendors and other people who have a relationship with the university.
• The siu-guest network is not for use by current faculty, staff, and students or by any other individuals affiliated with the university.
• The siu-guest network is not for use by the Carbondale community at large.
• The siu-guest password will be changed, and distributed three times annually by NET.
• NET will maintain a list of entities on campus responsible for distributing the siu-guest password.
• The siu-guest network will be available in the residence halls for the first two weeks of the fall semester only.
• The siu-guest password...
  o Is not to be displayed publicly
  o Is to be distributed as requested
  o Is to be distributed only to people who have an affiliation with the University
  o Is not to be distributed to unaffiliated Carbondale community members

A restricted Wi-Fi network known as SIU-limited will be made available. The SIU-limited network SSID...
• Will be available only in the residence halls.
• Is intended for use by game stations, TV applications and other devices and services that are not WPA2-AES capable.
• Will be restricted to only those campus e-resources that are essential for proper operation of the device or service. For example, the campus DNS and Internet access.
• Is not for use by devices that are WPA2

A restricted Wi-Fi network known as facilities will be made available. The facilities network SSID...
• Is for support of university facilities such as digital signage and electronic door locks.
• Is not encrypted and does not require a password.
• Is a hidden SSID, where exceptions are made for locations that have IoT devices that cannot connect to hidden SSIDs.
• Requires the customer register the MAC address of the device.
• Only registered MAC addresses are allowed to use this SSID.

Note: The Recreation Center has the facilities SSID unhidden to support a stationary bike.

Configuration of Wi-Fi enabled devices for eduroam shall use the approved wireless adapter configuration tool to manage wireless adapter settings where possible.

NET will restrict the number of SSIDs in use to minimize the impact of beacon frames but may add SSIDs as deemed appropriate by the Information Technology administration.
Use of the SIU Carbondale Wi-Fi network must be consistent with the Acceptable Use Policy found here.

Exceptions to anything contained herein are rare, but will be considered on a case-by-case basis. Request for exceptions must be submitted to wireless@siu.edu.

Roles and Responsibilities

All SIU personnel including, but not necessarily limited to, faculty, staff, Civil Service, Administrative Professional, outsourced contractual workers, guests, volunteers, temporary extra help, student workers, graduate assistants, and undergraduate assistants are required to abide by the requirements and standards established within this standard.

Definitions

**Affiliated:** as defined in the context of appropriate use of a state owned resource, meaning Wi-Fi and Internet bandwidth, an affiliated person is one who should have access to state owned resources by virtue of their employment at SIU, their status as a student, or an external person with whom the university has a contract or legal agreement. This list is not intended to be all-inclusive. The purpose of using the word “affiliated” is to delineate between a legitimate user of state owned resources and those who consume those resources inappropriately or illegally. See Roles and Responsibilities.

**SSID:** in simple terms, SSID is the technical name for a Wi-Fi network. At SIU Carbondale, the most commonly used SSIDs are eduroam and siu-guest.

**Ghz:** abbreviation for gigahertz, where a hertz is one cycle and a gigahertz is 1 billion cycles. In context, gigahertz describes the frequency band the radio transmits on.

**FCC:** an abbreviation for Federal Communications Commission. The Federal Communications Commission is the federal government entity that regulates interstate and international communications by radio, television, wire, satellite, and cable in all 50 states, the District of Columbia and U.S. territories.

**PSO:** an abbreviation for Plant & Service Operation.

**NET:** an abbreviation for Network Engineering Team.
COMPLIANCE

Non-compliance will result in the disabling of network access for rogue Wi-Fi devices until the owner agrees to permanently remove the device from service and/or to turn off/stop all device wireless transmissions. Repeat offences will be reported to the appropriate Vice Chancellor or Provost.

REFERENCES

None.

AUTHORITY


REVISION HISTORY

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
<th>Revision Date</th>
<th>Author</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>Standard is approved by CIO.</td>
<td>5/22/2018</td>
<td>Deputy Director, Office of Information Technology, Network Engineering &amp; Telecommunications Services</td>
</tr>
<tr>
<td>1.1</td>
<td>Reviewed. Hyperlinks updated, added ISP to Authority. Added details of the ‘facilities’ SSID network.</td>
<td>03/26/2020</td>
<td>Director of Information Security, Deputy Director of Network Engineering</td>
</tr>
</tbody>
</table>